CITY OF ROHNERT PARK
SOUTHEAST SPECIFIC PLAN PROJECT

DRAFT ENVIRONMENTAL IMPACT REPORT

SCH#2003112011

Prepared For:

CITY OF ROHNERT PARK
PLANNING DEPARTMENT

Prepared By:

EIP ASSOCIATES

December 2005

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City of Rohnert Park
Southeast Specific Plan Project EIR

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Introduction

PURPOSE OF ENVIRONMENTAL IMPACT REPORT (EIR)

This Environmental Impact Report (EIR) has been prepared for the City of Rohnert Park Southeast Specific Plan. The Southeast Specific Plan includes the construction of up to 499 residential units and up to 20,000 square feet of commercial/retail space inclusive of 36 live/work residential units on an 80 acre parcel of land. The 36 live/work residential units are included in the total 499 residential unit count. This EIR has been prepared in conformance with the provisions of the California Environmental Quality Act (CEQA) Guidelines as amended.[1]

The purpose of the EIR is to provide the City of Rohnert Park, public agencies and the public in general with detailed information about the environmental effects of implementing the Southeast Specific Plan (herein referred to as the "project"), to examine and institute methods of mitigating any adverse environmental impacts should the Southeast Specific Plan be approved, and to consider alternatives to the Southeast Specific Plan as proposed.

CEQA provides that public agencies should not approve projects for construction until all feasible means available have been employed to substantially lessen the significant environmental effects of such projects. "Feasible" means capable of being accomplished in a successful manner within a reasonable period of time taking into account economic, environmental, social and technological factors.[2]

This EIR specifically addresses the Southeast Specific Plan and its development components as proposed, and is therefore "project specific". The Final EIR will be considered by officials of the City of Rohnert Park, acting as Lead Agency for the project under CEQA, prior to any decisions being made on the proposed Southeast Specific Plan. Certification of the Final EIR by the City of Rohnert Park City Council as complete and adequate in conformance with CEQA does not grant any approvals for the project or its development components. The merits of the Southeast Specific Plan and its development components will be considered after the EIR is certified by the City of Rohnert Park City Council.

EIR SCOPING

Public Scoping Meeting

The City of Rohnert Park Planning Commission conducted an EIR public scoping meeting for the Southeast Specific Plan at the 7 PM Planning Commission meeting of November 13, 2003 at the City Council Chambers located at 6750 Commerce Boulevard, Rohnert Park. The purpose of the public scoping meeting was to allow agency representatives, individuals and the public at large to express the environmental issues felt necessary to be addressed in the EIR for the Southeast Specific Plan, and for the Planning Department to record those expressed concerns.

To advertise for the public scoping meeting, the Planning Department announced the scoping meeting time and place in the EIR Notice of Preparation (see below), and mailed notices to property owners and residents within a 300 foot radius of the Southeast Specific Plan site as well as to others who had expressed an interest in the Plan's development.

Notice of Preparation – Southeast Specific Plan

On October 29, 2003, the City of Rohnert Park Planning Department issued a Notice of Preparation (NOP) that an EIR would be prepared for the Southeast Specific Plan. The NOP response period extended for 30 days from the time of receipt of the NOP. The NOP was submitted to 75 City, County and State agencies, businesses, civic groups, committees and associations having jurisdiction or interest over environmental resources and/or conditions within the project area (e.g., Penngrove Advisory Committee, City of Cotati, California Regional Water Quality Control Board, Sonoma County Permit and Resource Management Department, Caltrans), and the Governor's Office of Planning and Research (State Clearinghouse for EIRs). The purpose of the Notice was to allow the various private and public entities to transmit their concerns and comments on the scope and content of the EIR, focusing on specific information related to each group's interest or agency's statutory responsibility early in the environmental review process.

In response to the NOP, letters of comment were received from the following (see Appendix A of this EIR, Notice of EIR Preparation and Letters of Response):

State Agencies
Governor's Office of Planning and Research, State Clearinghouse
California Department of Transportation (Caltrans)

Regional Agencies
Bay Area Air Quality Management District

Local Agencies
Sonoma County Local Agency Formation Commission
Sonoma County Permit and Resource Management Department
City of Cotati

As a result of the November 13, 2003 public scoping meeting and correspondence received as a result of issuing the NOP for this EIR, major issues to be studied in the EIR were determined as follows (presented in alphabetical order):[3]

- Aesthetics
- Air Quality
- Biological Resources
- Geology, Soils and Seismicity
- Hydrology and Water Quality
- Land Use[4]
- Noise
- Public Services
- Relationship to Plans and Planning Policy
- Traffic and Circulation
- Utilities

Accordingly, the environmental effects of implementing the Southeast Specific Plan and its development components are analyzed in this EIR under each major topic as listed above. It should be noted that the CEQA Guidelines define the effects of a project as changes from the environmental setting (existing conditions) that are attributable to the project. Short-term construction impacts as well as the long-term operational impacts are analyzed as appropriate for the various topics.

STANDARD FOR ADEQUACY

Section 15151 of the CEQA Guidelines specifies that an EIR should be prepared on a project with a sufficient degree of analysis to provide decision-makers with information that enables them to make a decision that intelligently takes account of environmental consequences. Where a particular project effect is too speculative for evaluation, discussion of the effect is to be concluded.

The standards for adequacy are described in CEQA.[5]

- An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible.
- Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts.
- The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.

EFFECT ON THE ENVIRONMENT

The environmental impacts resulting from implementing the Southeast Specific Plan and its development components are considered in this EIR. Current environmental conditions under which the project would be implemented are considered in determining impact significance. If it is determined that a potential impact is too speculative for evaluation, this condition is so noted and the discussion of impact is terminated.

In accordance with Sections 15143 and 15145 of the CEQA Guidelines, this EIR focuses on the significant effects on the environment resulting from implementing the project. Each major topic (e.g., Hydrology, Biological Resources), provides criteria for evaluating whether an environmental impact is significant or less than significant. These criteria, known as *thresholds of significance,* and as presented in each technical section of this EIR, are as approved by the City of Rohnert Park for use in EIRs where Rohnert Park serves as Lead Agency. As explained in Section 15002(g) of the CEQA Guidelines, a significant effect on the environment is defined as a substantial adverse change in the physical conditions which exist in the area affected by the proposed project. For purposes of this EIR a less than significant environmental impact is one in which there is no long or short-term substantial adverse change in the physical conditions which exist in the area affected by the proposed project.

Determining that a mitigation measure reduces a significant impact to a less than significant level rests with understanding the criteria for determining a significant impact. If the criteria for determining a significant impact is not met, the impact is considered less than significant. For one or more significant unavoidable impacts that cannot be substantially mitigated, the Lead Agency (in this case the City of Rohnert Park), under CEQA must prepare a Statement of Overriding Considerations in which the Lead Agency sets forth its views in writing on the ultimate balancing of the merits of approving a project despite the environmental impacts which would result from project implementation. This process requires consideration of the decision maker (the Lead Agency), to balance the benefits of a proposed project against its unavoidable environmental risks in determining whether to approve a project. The Statement is preserved in the record of project approval (if a project is approved), and is prepared after the Final EIR has been completed.

It should be noted that the Southeast Specific Plan as defined further in this EIR is first treated as a single undertaking in order to establish the potential environmental impacts under buildout as a worst case scenario. The various development components under the project as currently proposed, or that reasonably could occur in the future, are then identified as necessary and environmental impacts assessed consistent with the magnitude of each component as compared to the project as a whole. In this way, the potential range of development up to and including the maximum that could occur on the project site, and the relative contribution of each development component as currently proposed to the whole may be assessed and compared for purposes of comprehension.

ECONOMIC AND SOCIAL EFFECTS

Section 15131 of the CEQA Guidelines specify that economic or social effects of a project shall not be treated as significant effects on the environment. However, "an EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes."[6] Accordingly, this EIR focuses on physical changes that would be caused through implementing the Southeast Specific Plan and its development components.

CUMULATIVE IMPACT ASSESSMENT

Cumulative impacts are discussed at the end of each technical section of this EIR. Cumulative impact refers to two or more individual effects, which, when considered together compound or increase the environmental impact under consideration or other related environmental impacts. For example, a project may have possible environmental effects which are individually limited but 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, other current projects and probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Further, as noted in CEQA Guidelines Section 15130 (a), "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 as significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable." Section 15130 (a) (3) goes on to note, "A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact."

Depending on subject area, i.e., *Visual Quality*, the discussion of cumulative impacts is more general in character due to the more general relationship of the subject matter to the City as a whole. On the other hand, the discussion of cumulative impacts is broken down into specific subject areas where possible in other technical sections of the EIR such as in the section entitled *Public Services*. Throughout the EIR, the cumulative impact analysis is based on the projected future level of growth in Rohnert Park as described in the Rohnert Park 2020 General Plan, inclusive of various Specific Plan Areas as documented in the General Plan.

The City is currently processing development applications that include the requirement for EIR preparation for five Specific Plan Areas (including the Southeast Specific Plan Area) within its Sphere of Influence. There is also a redevelopment proposal within the City Center area (known as the City Center project), and there is an additional designated Specific Plan Area identified as a growth area located in unincorporated Sonoma County that will require preparation of a Specific Plan. Each is described as follows:

- **University District:** The University District Specific Plan Area consists of 20 assessor's parcels on about 297 acres. The application requests 1,610 residential units and about 250,000 square feet of commercial land uses. The entire Specific Plan Area has the potential for 1,610 residential units and 350,000 square feet of commercial space under the City's General Plan.[7]
- **Northeast Specific Plan Area:** The Northeast Specific Plan Area consists of 36 assessor's parcels on about 272 acres. A Specific Plan Application has been submitted covering 122 acres and 11 of the parcels. The application requests 1,063 residential units. The entire Specific Plan Area has the potential for 1,085 residential units under the City's General Plan.[8]
- **Southeast Specific Plan Area:** The Southeast Specific Plan Area which is the subject of this EIR, consists of two assessor's parcels on 80 acres. The Specific Plan Application submitted requests 499 residential units and 20,000 square feet of commercial/retail space.
- **Northwest Specific Plan Area:** The Northwest Specific Plan Area consists of about 170 acres, for which a Specific Plan Application has been submitted for the southern portion of the Specific Plan Area covering approximately 102 acres on 16 assessor's parcels. The application requests 495 residential units and 495,000 square feet of commercial/industrial use. The entire Specific Plan Area has the potential for 900 residential units, 480,000 square feet of commercial space, 260,000 square feet of office space and 560,000 square feet of industrial space under the City's General Plan.[9]
- **Wilfred Dowdell Specific Plan Area:** The Wilfred Dowdell Specific Plan Area consists of about 25 acres. Future land uses include about 300,000 square feet of commercial space for which a Specific Plan Application has been submitted.

- **Canon Manor Specific Plan Area:** Canon Manner is a 237 acre subdivision consisting of about 118 developed residential parcels and 109 vacant parcels, and a 20 acre commercial golf range. The Canon Manor Specific Plan Area encompassing the entire subdivision will require preparation of a Specific Plan prior to approval of any development in Canon Manor with the amount of development controlled by the underlying land use designations.
- **City Center:** The City Center area around City Hall Drive is planned to include a new City Hall, the public library and commercial and residential uses as a primary use. About 180 high-density residential units are envisioned above ground floor commercial uses with the sites designated as "Mixed Use" by the General Plan diagram. The project is within the City's redevelopment area.

In addition, the Graton Rancheria Resort Hotel/Casino Project is proposed to be located on 360 acres of unincorporated land about one-half mile west of U.S. 101. This project is proposed to include a 300 room hotel, five restaurants, a 2,000 seat theater and a casino with up to about 1,900 slot machines.

Data regarding each of the five Specific Plan areas is presented in Table 1 on the next page. Figure 2-2 in Section 2, *Project Description,* shows the location of the cumulative development projects described above.

Traffic volumes for the 2020 horizon year were determined by increasing the land use assumptions factored into the City's traffic model to reflect the year 2020 land use projections of the City of Rohnert Park, Sonoma County and Metropolitan Transportation Commission. The growth projections have also been updated to reflect current information regarding the proposed Graton Rancheria Resort Hotel/Casino Project.

MITIGATION MONITORING AND REPORTING

Amendments to the California Environmental Quality Act (CEQA) require public agencies to adopt mitigation monitoring and reporting programs, for changes to a project to mitigate or avoid significant effects on the environment. The monitoring and reporting program provides the Lead Agency with the means for tracking and implementing mitigation measures as documented in a project EIR. The monitoring and reporting program need not be a component of the EIR. The program is part of the project approval process, not necessarily part of the impact analysis process. A mitigation monitoring and reporting program will be included with the City of Rohnert Park findings for the Southeast Specific Plan and its development components.

Table 1
Table of Specific Plan Areas[1]

	Northeast Plan	Northwest Plan (per General Plan)[2]	Southeast Plan	University District	Wilfred-Dowdell
Total Acreage	272 acres	170 acres	80 acres	297 acres	24.77 acres
Residential Units					
Rural/Estate Residential	97		27	25	
Large Lot (NE Plan only)	114				
Low Density	552		168	318	
Medium Density	100		268	537	
High Density	200	800-900		630	
Mixed Use			36	100	
Total Units	**1,063 Units**	**800-900 Units**	**499 Units**	**1,610 Units**	**N/A**
Second Units				122	
Total w/Second Units[3]				**1,732 Units**	
Commercial Sq. Ft.		40-50 acres	20,000 sf	Max.250,000 sf	302,114 sf
Office Acreage		15-25 acres			
Industrial Acreage		55-65 acres			
Parks	17.6 acres	2-4 acres	5.8 acres	14.4 acres	
Open Space	56.9 acres			63.4 acres	

Notes:

1 Data as of November 5, 2004. Source: City of Rohnert Park Planning Department.

2 The portions of the Northwest Specific Plan that are north and south of Wilfred Avenue are being processed separately. A Preliminary Plan for the south portion has been reviewed and proposes 495 residential units, 39-51 acres of commercial, 12-24 acres of industrial, and a 2 acre park. A plan for the north portion has not been submitted.

3 The Northeast Specific Plan area could have second units on the single-family residential lots, however, only the University District applicants have factored this potential into their unit estimates. Second units are considered affordable units and are not subject to the 225 units/year growth cap.

Endnotes—Introduction

1 *CEQA, California Environmental Quality Act, Statutes and Guidelines*, Guidelines as amended December 1, 2003, published by the Governor's Office of Planning Research.

2 Public Resources code 21061.1.

3 The subjects of hazardous materials and cultural resources were not determined to be studied in detail in the EIR. In a 2001 Phase I Site Assessment by Harris & Lee Environmental Sciences, it was indicated that a record review and site investigations revealed no Environmental Conditions (contaminants) respecting the site, nor did any other site present a likely impact to the subject (project) site. However project generating hazardous materials handling and disposal is addressed in Section 3.11 of this EIR, *Utilities*. In addition, in a 2002 cultural resources evaluation of the project site by Archaeological Resource Service, it was noted that the results of a literature search and surface examination showed that archaeological monitoring of future proposed excavations was not warranted (cultural resources is further discussed in Section 3.2 of this Draft EIR, Land Use).

4 Agricultural land uses are discussed in Section 3.2, *Land Use*.

5 CEQA Guidelines Section 15151.

6 CEQA Guidelines Section 15131.

7 City of Rohnert Park General Plan, Table 2.4-1, Land Use Program, University District Specific Plan Area.

[8] City of Rohnert Park General Plan, Table 2.4-4, Land Use Program, Northeast Specific Plan Area.

[9] City of Rohnert Park General Plan, Table 2.4-2, Land Use Program, Northwest Specific Plan Area.

Section 1
Summary

1.1 SOUTHEAST SPECIFIC PLAN PROJECT

The Southeast Specific Plan project site is located in southeast Rohnert Park, outside the City Limits but within the City's Sphere of Influence and 20-year Urban Growth Boundary.[1] Primary vehicular access to the Southeast Specific Plan project site would be via Valley House Drive and Bodway Parkway. The Southeast Specific Plan (the project) includes the construction of up to 499 residential units and up to 20,000 square feet of commercial/retail space inclusive of 36 live/work residential units on an 80 acre parcel of land. The 36 live/work residential units are included in the total 499 residential unit count. The 20,000 gross square feet of commercial space and 499 residential units are considered as the total project in this EIR as a worst case scenario. Depending on market conditions, it is possible that not all of the commercial space envisioned for the project would be constructed.

The objectives of the project are to incorporate into the City of Rohnert Park specific lands to provide opportunities for housing, and mixed use (housing with commercial development), and to integrate a variety of housing types in accordance with City policy for development of the Southeast Specific Plan site. The Southeast Specific Plan has been prepared in response to the City of Rohnert Park's Municipal Ordinance No. 671, Chapter 17.57 which outlines the requirements for the preparation, adoption and implementation of Specific Plans. The Southeast Specific Plan site is identified in the City's General Plan. The purpose of the Specific Plan is to provide a means for ensuring that the Specific Plan site is developed under a master plan that is consistent with the provisions of the General Plan.

The Southeast Specific Plan establishes the amount, type and location of urban development proposed for development within the Southeast Specific Plan site. The Southeast Specific Plan also provides development standards and design guidelines for development and recommends specific actions to implement the Specific Plan and financing methods and sources to fund improvements.

1.2 PROJECT DESCRIPTION

Residential land uses, inclusive of connecting roads and all necessary utilities, are planned to include three types of single-family dwellings:

- The Rural Estate Residential land use would accommodate up to two single-family detached units per gross acre for a total of up to 27 residential units on 13.4 acres located in the east portion of the Specific Plan site.
- The Low Density Residential land use would accommodate up to 4.6 units per gross acre for a total of up to 168 units on 36.1 acres located in the east/central portion of the Specific Plan site.

- The Medium Density Residential land use would accommodate up to 12 units per gross acre for a total of up to 268 units on 22.3 acres in the central and west portions of the Specific Plan site.

Overall, up to approximately 499 residential units inclusive of 36 live/work residential units would be accommodated within the Specific Plan site area. A Specific Plan Mixed Use land use classification would include up to 20,000 square feet of building area in the southwest portion of the Specific Plan project site to include business offices and retail shops and services compatible with residential development to include 36 live/work units. A 5.8-acre parcel also is planned to function as a neighborhood-scale park and serve as a landscaped focal point for the Specific Plan site.

1.3 AREAS OF CONTROVERSY, ISSUES TO BE RESOLVED

California Tiger Salamander: An important issue facing development proposals in the Santa Rosa – Rohnert Park area concerns an amphibian known as the California tiger salamander. On July 22, 2002, the U.S. Fish and Wildlife Service in an emergency action listed the Sonoma County population of California tiger salamander as Endangered under the Federal Endangered Species Act. The U.S. Fish and Wildlife Service designated potential salamander habitat that included a wide corridor that encompasses much of Santa Rosa, parts of Bennett Valley, all of Rohnert Park and Cotati and the Santa Rosa Plain west to Sebastopol. The objective is to protect the species and ensure that development is undertaken in a manner that is least disruptive to the species. The emergency listing provided this population with the full protection of the Federal Endangered Species Act for a period of 240 days, expiring on March 19, 2003. More recently, the California tiger salamander was listed as Threatened under the Federal Endangered Species Act on August 4, 2004. How the Southeast Specific Plan project could affect the salamander is addressed in Section 3.3 of this EIR, *Biological Resources*.

Cumulative Development & Growth: Another issue involves cumulative development impacts and growth in the City of Rohnert Park. Cumulative impact refers to two or more individual effects, which, when considered together, compound or increase an environmental impact under consideration or other related environmental impacts. At the time of preparing this EIR, four other Specific Plan areas in the City of Rohnert Park were having EIRs prepared including the University District Specific Plan, Northeast Specific Plan the Wilfred/Dowdell Specific Plan and the Northwest Specific Plan. No EIR was being prepared for the Canon Manor Specific Plan as no annexation proposal was in effect at the time.[2] Cumulative impact discussions are provided at the end of each technical section of this EIR (i.e., *Biological Resources, Hydrology and Water Quality*).

Ordinance No. 667 adding Chapter 17.66, the *Growth Management Program* to the Rohnert Park Municipal Code was adopted by the City Council on July 24, 2001. The *Program* is to assure that the rate of population growth will not exceed the average annual growth rates established in the General Plan so that new residential development and mixed-use developments with a residential component occur concurrently with the necessary infrastructure and public service improvements. One of the many purposes of the *Program* is to ensure that the development in each Specific Plan area is coordinated with the provisions of the *Program* itself. The *Program* contains a formula for applying a

"Trigger Cap" which is the threshold at which a cap on residential development will be established. Its purpose is to maintain an average population growth rate of one percent per year. However, at the time of preparing this EIR, Growth management decisions regarding each of the Specific Plan components described above had not been discussed by the City Council. In a cumulative context, the growth issue is still pending with respect to the various Specific Plan area proposals. The Specific Plan residential allocations requested were not yet considered by the City Council and while the total number of units for each Specific Plan area will not change, the timing of construction has not been resolved. Growth inducements are discussed in Section 4 of this EIR, *Growth Inducements*.

Project Alternatives: Important to any decision being made on implementing the Southeast Specific Plan project is the examination of project alternatives. This EIR presents four alternatives for the project, inclusive of No Project, an Alternative Project Site discussion, a Reduced Density Project and the Environmentally Superior Alternative. Excluding the No Project alternative, which is required under the California Environmental Quality Act (CEQA), these alternatives focus on project development scenarios in the attempt to avoid or substantially lessen any significant environmental effects of the Southeast Specific Plan project. A fundamental issue is whether the Southeast Specific Plan project proposal and subsequent residential development within the Specific Plan area would be approved by City of Rohnert Park officials as proposed. This EIR serves to provide information so that decision makers, responsible agencies and the public are fully informed of the environmental consequences of these decisions. The subject of alternatives is addressed in Section 6 of this EIR, *Alternatives to the Proposed Project*.

1.4 MAJOR EIR CONCLUSIONS

Impacts and Mitigation Measures

The following presents the major conclusions and findings of the EIR. Table 1-1 summarizes the environmental impacts and mitigation measures as contained in the body of the EIR. The description of some impacts and mitigation measures in Table 1-1 has been abbreviated consistent with the format of a summary section, and the reader is referred to the main EIR text for a complete discussion of environmental impacts and mitigation measures (refer to the numbering sequence for location). A summary of each alternative to the Southeast Specific Plan project as addressed in this EIR is also provided following Table 1-1.

TABLE 1-1
CITY OF ROHNERT PARK
SOUTHEAST SPECIFIC PLAN
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
SOUTHEAST SPECIFIC PLAN PROJECT			
3.1 Aesthetics			
Views and Appearances: Would the project have a substantial adverse effect on a scenic vista or substantially degrade the existing visual character or quality of the site and its surroundings? (Impact Criteria #1 and #2)			
No significant adverse visual quality impact has been identified for the Southeast Specific Plan project. The project would not: • under Impact Criterion #1 have a substantial adverse effect on a scenic vista, or; • under Impact Criterion #2 substantially degrade the existing visual character or quality of the site and its surroundings. However, although no significant visual quality impact has been identified for the project, Mitigation Measure 3.1-1 is provided to reduce the potential for any adverse visual impact.	(LS) (LS)	Mitigation Measure 3.1-1 Planning and design for the project shall conform to the provisions regarding neighborhood and community design as contained in the Rohnert Park General Plan Community Design Element which provides a clear set of design goals and policies to be considered by the City in its review of community design under the Site Plan and Architectural Review section of the Zoning Ordinance. Considerations include concepts of overall neighborhood design and structure; block and street patterns; transitions in development densities from urban to rural lands; off-street parking configurations; pedestrian and bicycle circulation; building design variety, form and materials; open space areas, landscaping and lighting; and other features of community design.	(LS)
Impact 3.1-2 Project construction would require site grading, construction materials stockpiling and storage, and the use of construction equipment which would appear out of character with the setting. This impact would be localized and short-term, lasting during the actual period of construction.	(S)	Mitigation Measure 3.1-2 The stockpiling and storage of construction materials and equipment shall be minimized to the extent practicable. Staging areas shall be located away from Petaluma Hill Road, a County designated Scenic Corridor, and as close to or within the areas of construction as possible.	(LS)

Legend: (S) Significant Adverse Impact (SU) Significant, Unavoidable Adverse Impact (PS) Potentially Significant Adverse Impact (LS) Less than Significant Adverse Impact (B) Beneficial Impact

TABLE 1-1
CITY OF ROHNERT PARK
SOUTHEAST SPECIFIC PLAN
SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
Project Lighting: Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area? (Impact Criterion #3)			
No significant adverse lighting impact has been identified for the Southeast Specific Plan project. However, Mitigation Measure 3.1-3 is provided to avoid the potential for an adverse lighting effect.	(LS)	Mitigation Measure 3.1-3 Project night lighting along streets, parking areas and any public spaces should be focused downward and/or shielded to avoid glare and point sources of light interfering with the vision of on- and off-site residents and motorists on local roadways. Night lighting for streets would need to minimally conform with City standards regarding street lighting. Lighting elements should be recessed within their fixtures to prevent glare. A specialist in lighting design should be consulted during project design to determine light source locations, light intensities and type of light source.	(LS)
Cumulative Development Cumulative impacts regarding *Aesthetics* – less than significant (LS), no mitigation required.			
3.2 Air Quality			
Based on the various transportation control measures available to the project, the project would not conflict with or obstruct implementation of the applicable air quality plan (Impact Criterion #1).	(LS)	No mitigation measure is required.	—

Legend: (S) Significant Adverse Impact (SU) Significant, Unavoidable Adverse Impact (PS) Potentially Significant Adverse Impact (LS) Less than Significant Adverse Impact (B) Beneficial Impact

TABLE 1-1
CITY OF ROHNERT PARK
SOUTHEAST SPECIFIC PLAN
SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
Construction Period Emissions: Would the project violate air quality standards? (Impact Criterion #2)			
Impact 3.2-1 Construction activities associated with development of the Southeast Specific Plan project could generate substantial dust emissions and thus contribute to an existing or projected air quality violation. This would be a short term impact lasting during the period of construction.	(S)	Mitigation Measure 3.2-1A Implement construction dust control measures as outlined in the EIR. To reduce particulate matter emissions during project excavation and construction phases, the project contractor(s) should comply with the dust control strategies developed by the Bay Area Air Quality Management District. Mitigation Measure 3.2-1B To facilitate control of dust during construction and demolition phases, the project sponsor should include a dust control coordinator in construction contracts. All construction sites should have posted in a conspicuous location the name and phone number of a designated construction dust control coordinator who can respond to complaints by suspending dust-producing activities or providing additional personnel or equipment for dust control. Mitigation Measure 3.2-1C The project contractor(s) should implement measures to reduce the emissions of pollutants generated by heavy-duty diesel-powered equipment operating at the project site during project excavation and construction phases as outlined in the EIR.	(LS)
The project would not: • under Impact Criterion #3 result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).	(LS)	No mitigation measure is required.	—

Legend: (S) Significant Adverse Impact (SU) Significant, Unavoidable Adverse Impact (PS) Potentially Significant Adverse Impact (LS) Less than Significant Adverse Impact (B) Beneficial Impact

TABLE 1-1
CITY OF ROHNERT PARK
SOUTHEAST SPECIFIC PLAN
SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
• under Impact Criterion #4 expose sensitive receptors to substantial pollutant concentrations.	(LS)	No mitigation measure is required.	—
• under Impact Criterion #5 create objectionable odors affecting a substantial number of people.	(LS)	No mitigation measure is required.	—
Cumulative Development			
Cumulative impacts regarding *Air Quality* – less than significant (LS), no mitigation required.			
3.3 Biological Resources			
No significant adverse biological resources impacts have been identified for the Southeast Specific Plan Project.			
The project would not:			
• under Impact Criterion #1 have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	(LS)	No mitigation measure is required.	—
• under Impact Criterion #2 have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;	(LS)	No mitigation measure is required.	—
• under Impact Criterion #3 have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, etc.) through direct removal, filling, hydrological interruption, or other means;	(LS)	No mitigation measure is required.	—

Legend: (S) Significant Adverse Impact (SU) Significant, Unavoidable Adverse Impact (PS) Potentially Significant Adverse Impact (LS) Less than Significant Adverse Impact (B) Beneficial Impact

TABLE 1-1
CITY OF ROHNERT PARK
SOUTHEAST SPECIFIC PLAN
SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
• under Impact Criterion #4 interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;	(LS)	No mitigation measure is required.	—
• under Impact Criterion #5 conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or	(LS)	No mitigation measure is required.	—
• under Impact Criterion #6 conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.	(LS)	No mitigation measure is required.	—
Cumulative Development			
Cumulative impacts regarding *Biological Resources* – less than significant (LS), no mitigation required.			
3.4 Geology, Soils and Seismicity			
No significant adverse soils, geology and seismicity impacts have been identified for the Southeast Specific Plan project. A regulatory framework is in effect inclusive of the California Building Code, the Seismic Hazards Mapping Act and the policies and regulations of the City of Rohnert Park that provides significant protection against risks resulting from poor soil conditions and seismic groundshaking. Conformance with all applicable regulations shows the project would not:			
• under Impact Criterion #1 expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death involving:	(LS)	No mitigation measure is required.	—

Legend: (S) Significant Adverse Impact (SU) Significant, Unavoidable Adverse Impact (PS) Potentially Significant Adverse Impact (LS) Less than Significant Adverse Impact (B) Beneficial Impact

TABLE 1-1
CITY OF ROHNERT PARK
SOUTHEAST SPECIFIC PLAN
SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
– rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; – strong seismic groundshaking; – seismic-related ground failure, including liquefaction or landslides;			
• under Impact Criterion #2 result in substantial soil erosion or the loss of topsoil;	(LS)	No mitigation measure is required.	—
• under Impact Criterion #3 be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse; or	(LS)	No mitigation measure is required.	—
• under Impact Criterion #4 be located on expansive soil, as defined in Table 18 1 A of the California Building Code (2001), creating substantial risks to life or property.	(LS)	No mitigation measure is required.	—
Cumulative Development Cumulative impacts regarding *Geology, Soils and Seismicity* – less than significant (LS), no mitigation required.			

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TABLE 1-1
CITY OF ROHNERT PARK
SOUTHEAST SPECIFIC PLAN
SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
3.5 Hydrology and Water Quality			
No significant adverse hydrology and water quality impacts have been identified for the Southeast Specific Plan project. Each hydrologic-related aspect of the project would be controlled by regional or local regulations or policies that monitor and limit the potential runoff volume and rate, erosion, flooding, and surface/groundwater quality linked to chemical contaminants or sedimentation. Conformance with all applicable regulations shows the project would not:			
• under Impact Criterion #1 violate any water quality standards or waste discharge requirements;	(LS)	No mitigation measure is required.	—
• under Impact Criterion #2 substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level;	(LS)	No mitigation measure is required.	—
• under Impact Criterion #3 substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;	(LS)	No mitigation measure is required.	—
• under Impact Criterion #4 substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site;	(LS)	No mitigation measure is required.	—
• under Impact Criterion #5 create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems;	(LS)	No mitigation measure is required.	—

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TABLE 1-1
CITY OF ROHNERT PARK
SOUTHEAST SPECIFIC PLAN
SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
• under Impact Criterion #6 introduce typical stormwater pollutants into ground or surface water in substantial quantities;	(LS)	No mitigation measure is required.	—
• under Impact Criterion #7 substantially increase the amount of impervious surface coverage;	(LS)	No mitigation measure is required.	—
• under Impact Criterion #8 result in discharge, directly or through a storm drain system, into surface waters;	(LS)	No mitigation measure is required.	—
• under Impact Criterion #9 alter ground water or surface water quality, temperature, dissolved oxygen or turbidity;	(LS)	No mitigation measure is required.	—
• under Impact Criterion #10 place housing with a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map; or	(LS)	No mitigation measure is required.	—
• under Impact Criterion #11 place within a 100-year flood hazard area structures that would impede or redirect flood flows.	(LS)	No mitigation measure is required.	—
Cumulative Development			
Cumulative impacts regarding *Hydrology and Water Quality* – less than significant (LS), no mitigation required.			

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TABLE 1-1
CITY OF ROHNERT PARK
SOUTHEAST SPECIFIC PLAN
SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
3.6 Land Use			
Plan Consistency: Would the project conflict with applicable land use plans or policies? (Impact Criterion #1)			
Cultural Resources: No adverse impacts have been determined regarding cultural resources under existing plans and policies. However, Mitigation Measure 3.6-1 is provided to ensure the protection of any archaeological resources that may be discovered during grading and excavation of the project site in accordance with General Plan Policy EC-3.	(LS)	Mitigation Measure 3.6-1 Construction specifications, inclusive of utilities, should note that operators of site grading and excavation equipment be instructed to be observant for unusual or suspect archaeological materials that may surface from below during site grading and excavation operations. In the event that unknown archaeological remains are discovered during subsurface excavation and construction, land alteration work in the vicinity of the find should be halted and a qualified archeologist consulted. Prompt evaluations could then be made regarding the find and a resource management plan that is consistent with CEQA requirements could then be implemented. If prehistoric archeological deposits are discovered, local Native American organizations should be consulted and involved in making resource management decisions. All applicable State and local legal requirements concerning the treatment of cultural materials and Native American burials should be enforced.	(LS)

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TABLE 1-1
CITY OF ROHNERT PARK
SOUTHEAST SPECIFIC PLAN
SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
Impact 3.6-2	(SU)	Mitigation Measure 3.6-2	(SU)
Agricultural Resources: Although the project site is not designated as Prime Farmland, Unique Farmland or Farmland of Statewide Importance by the U.S. Department of Agriculture National Resources Conservation Service, buildout of the Southeast Specific Plan project site would result in the loss of about 80 acres of land designated as Farmlands of Local Importance by the State Department of Conservation and Sonoma County Board of Supervisors. This would be a significant and unavoidable land use impact with respect to Sonoma County land use policies.		No mitigation measure is available for the loss of Farmlands of Local Importance. The loss of Farmlands of Local Importance would remain significant and unavoidable under Impact Criterion #1 regarding conflicting with County land use plans or policies.	
The project would not:			
• under Impact Criterion #2 conflict with any applicable habitat conservation plan or natural community conservation plan; or	(LS)	No mitigation measure is required.	—
• under Impact Criterion #3 physically divide an established community.	(LS)	No mitigation measure is required.	—
Cumulative Development			
The project would not be consistent with Sonoma County's policies for the protection of agriculturally suitable land. While no major physical disruption of an existing developed portion of the community is anticipated under the project, the loss of agricultural land is considered a significant and unavoidable land use impact. To the extent other specific Plan proposals or other development would require the conversion of agriculturally suitable land or land that is under agricultural use, the identified land use impact would be significant and unavoidable in a cumulative context.			

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TABLE 1-1
CITY OF ROHNERT PARK
SOUTHEAST SPECIFIC PLAN
SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
3.7 Noise			
Noise Levels On Site: Would the project expose persons to noise levels in excess of adopted standards? (Impact Criterion #1)			
Impact 3.7-1 Future residents of the Southeast Specific Plan site could be exposed to exterior traffic noise levels that exceed City standards.	(PS)	Mitigation Measure 3.7-1 Outdoor activity areas and the residences beyond shall be set back a minimum of 199 feet from the centerline of Petaluma Hill Road, 73 feet from the centerline of Valley House Drive east of Bodway Parkway extending to the site entry on Valley House Drive, 63 feet from the centerline of Valley House Drive west of Petaluma Hill Road extending to the site entry on Valley House Drive, and 64 feet from the centerline of Bodway Parkway. This mitigation measure would reduce noise impact 3.7-1 to a less than significant level.	(LS)
The project would not:			
• under Impact Criterion #2 exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels; or	(LS)	No mitigation measure is required.	—
• under Impact Criterion #3 generate a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.	(LS)	No mitigation measure is required.	—

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TABLE 1-1
CITY OF ROHNERT PARK
SOUTHEAST SPECIFIC PLAN
SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
Construction Period Noise Levels: Would the project cause a temporary increase in ambient noise levels? (Impact Criterion #4)			
Impact 3.7-2 Construction activities associated with the Southeast Specific Plan project could generate substantial temporary or periodic increases in noise levels.	(S)	Mitigation Measure 3.7-2 The project contractor(s) should implement measures to reduce the noise levels generated by construction equipment operating at the project site during project grading and construction phases. The project sponsor should include in construction contracts requirements or measures shown to be equally effective as further specified in this EIR.	(LS)
Cumulative Development			
Cumulative impacts regarding *Noise* – less than significant (LS), no mitigation required.			
3.8 Public Services			
No significant adverse public services impacts have been identified for the Southeast Specific Plan project. The project would not:			
• under Impact Criterion #1 result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically-altered governmental facilities, the construction of which would cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for fire and police protection, schools, or other public facilities;	(LS)	No mitigation measure is required.	—
• under Impact Criterion #2 include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment; or	(LS)	No mitigation measure is required.	—

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TABLE 1-1
CITY OF ROHNERT PARK
SOUTHEAST SPECIFIC PLAN
SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
• under Impact Criterion #3 increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.	(LS)	No mitigation measure is required.	—
Cumulative Development			
Police and Fire Services, Schools, Emergency Services and Recreation			
The Southeast Area Plan project, coupled with cumulative development, would be expected to increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated, which would be a significant impact. The City would be responsible for implementing General Plan Open Space Element goals and policies regarding the maintenance and management of parks and related facilities which would reduce the facility deterioration impact to a less than significant level.			
3.9 Relationship to Plans and Planning Policy			
Southeast Specific Plan project site annexation and development has been found to be generally consistent with the Goals and Policies of the Rohnert Park General Plan. In those cases where partial consistency is noted, mitigation measures are provided to bring site annexation and project development into consistency with the provisions of the General Plan.			
Cumulative Development			
The Relationship to Plans and Planning Policy analysis does not address cumulative development, but rather focuses on the Southeast Specific Plan project as proposed for a consistency analysis with the Rohnert Park General Plan.			
3.10 Traffic and Circulation			
Traffic Volumes and Level of Service (LOS): Would the project increase traffic and create congestion? (Impact Criterion #1)			
Impact 3.10-1 Traffic increases resulting from the Southeast Specific Plan project coupled with the currently approved projects would result in		Although significant, unavoidable impacts are as noted for two intersections, mitigation measures are provided for informational purposes in this EIR.	

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TABLE 1-1
CITY OF ROHNERT PARK
SOUTHEAST SPECIFIC PLAN
SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
intersection levels of service at or worse than the applicable level of service threshold at the intersections of Adobe Road & Petaluma Hill Road, East Cotati Avenue & Bodway Parkway, and Railroad Avenue & Petaluma Hill Road.		Mitigation Measure 3.10-1	
For the intersection of East Cotati Avenue & Bodway parkway this would be a significant impact.	(S)	The intersection of East Cotati Avenue and Bodway Parkway would require a signal retiming to a 50 second cycle length to achieve LOS C.	(LS)
For the intersections of Adobe Road & Petaluma Hill Road, and Railroad Avenue & Petaluma Hill Road this would be a significant and unavoidable adverse impact because these two intersections are located outside the City where a regional approach to mitigation requiring the participation of more than one jurisdiction would be required, and would be beyond the sole control of the City of Rohnert Park.	(SU)	The intersection of Adobe Road & Petaluma Hill Road (listed as being significantly and unavoidably impacted), would require a signalized right-turn lane (a so-called, "overlap") to be added to the westbound Adobe Road approach, an additional dedicated left turn lane for the westbound and northbound approaches (converting the existing northbound through-left to an exclusive through lane) and protected signal phases for the north and southbound left turn lanes for the AM and PM peak hour conditions and would then be in the acceptable LOS range (LOS A-D). This intersection is within the community of Pengrove (in the jurisdiction of Sonoma County).	(SU)
		The intersection of Railroad Avenue and Petaluma Hill Road (listed as being significantly and unavoidably impacted), could be returned to an acceptable LOS levels (LOS A-D for the County) by signalizing the intersection.	(SU)
		With mitigation, Impact 3.3-1 would be reduced to a less than significant level with respect to the intersection of East Cotati Avenue and Bodway Parkway only.	

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TABLE 1-1
CITY OF ROHNERT PARK
SOUTHEAST SPECIFIC PLAN
SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
Hazards: Would the project create safety hazards? (Impact Criterion #2)			
Impact 3.10-2	(S)	Mitigation Measure 3.10-2	(LS)
An increased demand for transit services resulting from project development would increase bus dwell times at adjacent bus stops and potentially block traffic along Petaluma Hill Road, increasing hazards to vehicles and pedestrians.		Bus pullouts with appropriate curbs and gutters for bus stops along Petaluma Hill Road near the project site should be constructed concurrent with the widening of the road in the future as well as adequate pedestrian access paths/sidewalks to the bus stops from the project site.	
The project would not:			
• under Impact Criterion #3 provide inadequate emergency access or access to nearby uses;	(LS)	No mitigation measure is required.	—
• under Impact Criterion #4 provide insufficient parking or capacity on-site or off-site;	(LS)	No mitigation measure is required.	—
• under Impact Criterion #5 establish hazards or barriers for pedestrians or bicyclists;	(LS)	No mitigation measure is required.	—
• under Impact Criterion #6 conflict with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks); or,	(LS)	No mitigation measure is required.	—
• under Impact Criterion #7, generate rail, waterborne or air traffic impacts.	(LS)	No mitigation measure is required.	—
Cumulative Development			
Intersections			
Under cumulative development in the year 2020, traffic growth with or without the Southeast Specific Plan project would result in intersection levels of service at or worse than the applicable level of service threshold at the intersections of:			
• Adobe Road & Petaluma Hill Road (LOS F, AM and PM peak hours)			
• Main Street & Old Redwood Highway (LOS F, AM and PM peak hours)			

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TABLE 1-1
CITY OF ROHNERT PARK
SOUTHEAST SPECIFIC PLAN
SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation

- East Cotati Avenue & Camino Colegio (LOS D, PM peak hour)
- East Cotati Avenue & Bodway Parkway (LOS D, PM peak hour)
- East Cotati Avenue & Petaluma Hill Road, (LOS F, PM peak hour) and

Additionally, the queue of vehicles at the northbound left turn lane at Valley House & Petaluma Hill Road would exceed the existing length of the left turn lane. This is considered a significant impact.

For the intersections of East Cotati Avenue & Camino Colegio, East Cotati Avenue and Bodway Parkway, and East Cotati Avenue & Petaluma Hill Road this is considered a significant impact while for the intersections of Adobe Road & Petaluma Hill Road, and Main Street & Old Redwood Highway this is considered a significant and unavoidable impact because these intersections are located outside the City where a regional approach to mitigation requiring the participation of more than one jurisdiction would be required, and would be beyond the sole control of the City of Rohnert Park. Although significant and unavoidable impacts are as noted, mitigation measures are provided for informational purposes with respect to those significant and unavoidable impacts.

Mitigation would be as follows to achieve acceptable levels of service:

- Adobe Road & Petaluma Hill Road – would require a signalized right-turn lane added to the westbound Adobe Road approach, an additional dedicated left turn lane for the westbound and northbound approaches and protected signal phases for the north and southbound left turn lanes for AM and PM peak hour conditions.
- Main Street & Old Redwood Highway - would require an additional through lane added to both the north and southbound approaches on Old Redwood Highway.
- East Cotati Avenue & Camino Colegio – would require decreasing the signal cycle lengths from 100 seconds to 70 seconds.
- East Cotati Avenue & Bodway Parkway - would require conversion of the existing southbound exclusive right turn lane to a signalized right turn lane.
- East Cotati Avenue & Petaluma Hill Road – would require adding a dedicated east bound right turn lane and restriping the current shared left-right lane to a dedicated left turn lane.
- The queue of vehicles at the northbound left turn lane at Valley House & Petaluma Hill Road would require extending the length of the northbound left turn pocket at to approximately 705 feet.

With mitigation as indicated, the cumulative development impacts would be reduced to a less than significant level except for the intersections of Adobe Road & Petaluma Hill Road, and Main Street & Old Redwood Highway where the LOS impact would remain significant and unavoidable under cumulative development.

US 101

Under cumulative (future) development in the year 2030, traffic growth within the region, inclusive of the Southeast Specific Plan project, would cause US 101 to operate in the level of service E and F range during the AM and PM peak hours. This would occur with or without the Southeast Specific Plan project and would be due to cumulative development. This would be a significant and unavoidable adverse impact.

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TABLE 1-1
CITY OF ROHNERT PARK
SOUTHEAST SPECIFIC PLAN
SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
No mitigation measure is identified to reduce the US 101 level of service impact to a less than significant level. The US 101 level of service impact would remain significant and unavoidable.			
3.11 Utilities			
No significant adverse utilities impacts have been identified for the Southeast Specific Plan project. The project would not:			
• under Impact Criterion #1 result in a determination by the wastewater treatment provider that serves the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments, or require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;	(LS)	No mitigation measure is required.	—
• under Impact Criterion #2 require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;	(LS)	No mitigation measure is required.	—
• under Impact Criterion #3 require new or expanded entitlement or resources for water supplies;	(LS)	No mitigation measure is required.	—
• under Impact Criterion #4 be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs;	(LS)	No mitigation measure is required.	—
• under Impact Criterion #5 conflict with federal, state, or local statutes and regulations related to hazardous waste disposal; or	(LS)	No mitigation measure is required.	—
• under Impact Criterion #6 require or result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	(LS)	No mitigation measure is required.	—

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TABLE 1-1
CITY OF ROHNERT PARK
SOUTHEAST SPECIFIC PLAN
SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
Cumulative Development			
Wastewater, Storm Water, Domestic Water Supply, Solid Waste, Hazardous Waste Disposal and Energy			
Cumulative impacts regarding *Utilities* – less than significant (LS), no mitigation required.			

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Alternatives

The analysis of alternatives is an important element of an EIR and is necessary to assure that the full range of options is examined, thus providing a complete understanding of the effects of full project implementation, partial project implementation, or no project. The purpose of the discussion of alternatives in an EIR is to focus on alternatives which are capable of avoiding or substantially lessening any significant environmental effects of a project, even if these alternatives would impede to some degree the attainment of the project objectives or would be more costly.

The range of alternatives is to include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects.[3] Among the factors that may be taken into account when addressing the feasibility of alternatives for inclusion in an EIR are site suitability, economic viability, availability of infrastructure, general plan consistency, or other plans or regulatory limitations, including jurisdictional boundaries. Any project approvals could be conditioned on the findings of the alternatives analysis.

The range of alternatives presented includes the following:

- No Project
- Alternative Project Site
- Reduced Density Project
- Environmentally Superior Alternative

No Project

Under the No Project Alternative, there would be no site annexation and there would be no Southeast Specific Plan development project as currently proposed. Therefore, current use all or part of the site for hay production would be expected to continue into the future for an unspecified period of time (the loss of agriculturally suitable land on the project site is noted as a significant and unavoidable adverse impact with project development).

The annexation area would remain within unincorporated Sonoma County and within the City of Rohnert Park Urban Growth Boundary (UGB). Therefore, development of the site under the No Project alternative would not be expected to occur at the intensities specified in the Rohnert Park General Plan and would leave open the option for development under current Diverse Agriculture county zoning at 10 to 60 acres per residential unit. If developed under County jurisdiction, site development potential would be reduced to a maximum of about eight residential units, significantly less than under the Southeast Specific Plan as proposed.

Under the No Project alternative, the project site would generally continue to be under-utilized given its available access, and the potential availability of public services and utilities in considering the public service and utility enhancements anticipated on a City-wide level in the future. The No Project alternative would not conform with the goals and policies of the Rohnert Park General Plan Housing

Element to promote opportunities for housing and facilitate housing development, to provide for a range of housing types within the community, to address the housing needs of all economic segments and to provide for affordable housing opportunities. Given the opening for some other form of development within the project site under County jurisdiction, and the absence of other definitive proposals for development, the specific environmental impacts that could result from possible future development cannot realistically be determined at this time. A residential project of lesser magnitude on the site as noted would be expected to have reduced visual, traffic, noise and construction air quality impacts as compared to the Southeast Specific Plan project as proposed. The unavoidable and significant level of service impacts identified for specified intersections and US 101 would be expected to occur with or without the Southeast Specific Plan project.

Alternative Project Site

Other areas in Rohnert Park where the project conceivably could be located include lands that are not yet developed, such as another site currently designated as a Specific Plan site in the Rohnert Park General Plan or at another vacant site within the UGB. In either case, a Specific Plan would need to be prepared and a General Plan amendment completed under this alternative. Cumulative traffic impacts and the loss of 80 acres of agriculturally suitable farmland are identified as significant and unavoidable impacts for the project. Should an alternative location be determined possible for the project, under cumulative development traffic growth with or without the Southeast Specific Plan project would be expected to result in US 101 level of service impacts and intersection levels of service at or worse than the applicable level of service thresholds for various intersections within and outside the City Limits. Locating the project within another currently proposed Specific Plan area or adjacent lands would not eliminate the farmland impact as identified for the Southeast Specific Plan as proposed.

At another location, the Southeast Specific Plan project as proposed would not be consistent with the General Plan provisions for Specific Plan areas as currently established. It is not confirmed that the Southeast Specific Plan project sponsor would acquire, control or have access to a site the project sponsor does not own, inclusive of land that is not agriculturally suitable. Further, there is no substantial evidence to conclude that this alternative would avoid or substantially lessen the unavoidable traffic and circulation effects resulting from cumulative development. Therefore, no significant environmental advantage is identified for an alternative project location as examined.

Reduced Density Project

Assuming overall development of the Southeast Specific Plan site would occur at a mid-point between the Rural Estate Residential site designation and Low Density Residential site designation, namely four units per acre, a total of 296 residential units would be developed under this alternative as compared to 499 units as currently proposed. This would be a 41 percent reduction in the number of units proposed to be constructed and 27 percent to 41 percent less than the 410 to 510 minimum-maximum housing units permitted for the Southeast Specific Plan site as noted in the General Plan. In this case, a new Specific Plan would need to be prepared in accordance with General Plan Policy LU-22 because the project density would be less than the project as proposed as recognized in the General Plan. In addition, this alternative would not necessarily conform with the goals and policies of the General Plan

Housing Element to promote opportunities for housing and facilitate housing development, provide for a range of housing types within the community, address the housing needs of all economic segments and provide for affordable housing opportunities.

A project of reduced density would still result in the need for the City to provide for additional police, fire, schools, emergency services and recreation personnel and equipment to accommodate cumulative development within the City to the year 2020, regardless. Existing regulations to reduce stormwater runoff, prevent erosion and sedimentation, and protect residents and the public from soils/geologic and seismic hazards would apply to a reduced density project and for the Southeast Specific Plan project as proposed. Development of the project at a reduced density would also result in the loss of about 80 acres of land designated as Farmlands of Local Importance. As noted for the project as proposed, this impact cannot be avoided under the Reduced Density alternative because of the increased population, increased surface paving, the construction of residences and increased traffic throughout the project area in general and there would be no parcels of substantial size left over after development to promote efficient agricultural use of the land. Construction air quality impacts would require mitigation as specified, and project site residents would be exposed to exterior traffic noise levels that exceed City standards in the future unless adequate setbacks were maintained as mitigation. Therefore it appears none of the significant effects of the Southeast Specific Plan project as proposed would be avoided or substantially reduced to less than significant levels under the Reduced Density alternative.

It is concluded however, a project of reduced density would provide more space to physically implement visual and noise mitigation measures that rely primarily on the establishment of building setbacks.

Environmentally Superior Alternative

Under the Reduced Density Project alternative, project buildout at four units per acre would not eliminate the unavoidable significant adverse agricultural land use or intersection level of service impacts identified for the project, under approved and cumulative development scenarios, and mitigation would still be required for construction air quality, noise and potential visual impacts. However, it is noted that a Reduced Density Project could provide specified benefits in that it would facilitate mitigation to reduce the identified significant visual and noise impacts to less than significant levels. The Reduced Density project would allow for greater flexibility in the establishment of roadway setbacks to preserve views to regional hillsides, provide for a more effective transition in development density across to the site extending to the UGB, facilitate building setbacks from Petaluma Hill Road to mitigate traffic noise exposure, assist in positioning the residential units to adjust for side and front yard setbacks and the location of units with respect to project site roadways, and facilitate design of the project landscape development component in accordance with the provisions of the Southeast Specific Plan Design Guidelines prior to City Design Review. Therefore, the Reduced Density Project alternative is identified as the Environmentally Superior alternative. However, this alternative would not fully address General Plan goals and policies to promote opportunities for housing in Rohnert Park.

1.5 PROJECT SCHEDULING AND REQUIRED APPROVALS

Project Scheduling

The Southeast Specific Plan notes that the project would be developed in several phases according to market demand, with roads to be constructed at each stage of development to provide access to the new residences. With up to 499 residential units proposed, the actual construction timetable could encompass a period of years, as yet undetermined. The construction period would ultimately depend on the City's implementation of Ordinance No. 667 adding Chapter 17.66, the *Growth Management Program* to the Rohnert Park Municipal Code to assure that the cumulative rate of population growth in the City will not exceed the average annual growth rate of one percent per year. Should approvals for the Southeast Specific Plan be granted by the City of Rohnert Park in early 2006, construction would be expected to begin in late 2006 – early 2007 when project construction documents would be completed and grading and building permits issued by the City.

Required Approvals

Further consideration regarding Southeast Specific Plan adoption, annexation and residential development would occur by City of Rohnert Park officials after certification of the Southeast Specific Plan EIR. If adopted by the City of Rohnert Park as proposed, the Southeast Specific Plan would become the guiding document that provides the development standards and design guidelines for development. More detailed design and construction plans to be prepared would be subject to City review for consistency with the provisions of the Specific Plan

City of Rohnert Park

If approved by the City Council, the Rohnert Park General Plan Diagram would be amended to reflect a reconfiguration of the City Limit line to include the Southeast Specific Plan project site and change the General Plan Diagram to more accurately reflect the configuration of the Specific Plan land uses. With annexation, the Specific Plan site would be zoned in accordance with Section 17.06.090 of the City's Zoning Ordinance, *Specific Plan Zoning District*, the purpose of which is to facilitate the General Plan provisions for the preparation, adoption and implementation of Specific Plans.

Site development plans per the Specific Plan Zoning District would be subject to further review by the City for consistency with the Specific Plan. City approval of Tentative Subdivision Maps would be required. Design and construction plans and specifications would be reviewed and/or amended and approved by the City in accordance with Section 17.25.030 of the Zoning Ordinance for *Site Plan and Architectural Review* prior to issuing grading and construction permits. Conformance with Ordinance No. 677 (Municipal Code Chapter 17.70), regarding the provision of affordable housing would be required.

Local Agency Formation Commission (LAFCO)

A final determination regarding annexation as proposed would be acted upon by the Sonoma County LAFCO. The City would need to submit an annexation request to LAFCO for review and approval. Under State law, LAFCO applications require a Plan for Providing Public Services, the purpose of which is to enable the Commission to determine the City's ability to provide services in a timely and financially feasible manner.

Sonoma County Water Agency

The Sonoma County Water Agency would review project design plans for compliance with County Flood Control Design Criteria to ensure that a project would not increase the potential for flooding.

Regional Water Quality Control Board (RWQCB)

Regulations pertaining to storm water discharges associated with construction activity were issued by the U.S. Environmental Protection Agency in 1990. The regulations prevent the pollution of storm water through the control of erosion, sedimentation and toxic or hazardous materials at construction sites. These regulations are administered by the Regional Water Quality Control Boards (North Coast Region) through the National Pollution Discharge Elimination System (NPDES) Program.

Pollution reduction design and permitting would be required as part of the permanent drainage system for the post-construction period as well as for the construction phases of the project. A Storm Water Pollution Prevention Plan would be required that identifies the potential sources of sediment and other potential pollutants, and ensures the reduction of sediment and other pollutants in the storm water discharged from a construction site.

Endnotes — Summary

1 The City Limits define the incorporated limits of the City of Rohnert Park, the Sphere of Influence describes the ultimate service area of the City, and the Urban Growth Boundary is the line within which all urban development is to be contained as provided for in the current Rohnert Park General Plan

2 While no EIR has been prepared for the Canon Manor Specific plan, a Draft EIR has been prepared and issued by Sonoma County regarding a Canon Manor Assessment District: Sonoma County Department of Transportation and Public Works, *Canon Manor West Subdivision Assessment District, Draft Environmental Impact Report Volumes I and II*, June 28, 2004, SCH #2003112088.

3 State CEQA Guidelines, Section 15126.6 (c).

Section 2
Project Description

2.1 PROJECT LOCATION AND SPONSOR

The Southeast Specific Plan (the project) includes the construction of up to 499 residential units and up to 20,000 square feet of commercial/retail space inclusive of 36 live/work residential units on an 80 acre parcel of land as described further herein. The 36 live/work residential units are included in the total 499 residential unit count. The 20,000 gross square feet of commercial space and 499 residential units are considered as the total project in this EIR as a worst case scenario. Depending on market conditions, it is possible that not all of the commercial space envisioned for the project would be constructed. The Southeast Specific Plan project site is located in southeast Rohnert Park, outside the City Limits but within the City's Sphere of Influence and 20-year Urban Growth Boundary. The City Limits define the incorporated limits of the City of Rohnert Park, the Sphere of Influence describes the ultimate service area of the City, and the Urban Growth Boundary is the line within which all urban development is to be contained as provided for in the current Rohnert Park General Plan[1] (see Figures 2-1 and 2-2, *Regional and Site Location Maps*). The Southeast Specific Plan site would require incorporation into the City of Rohnert Park for development to proceed as proposed (see Figure 2-3, *Southeast Rohnert Park Specific Plan Map*).

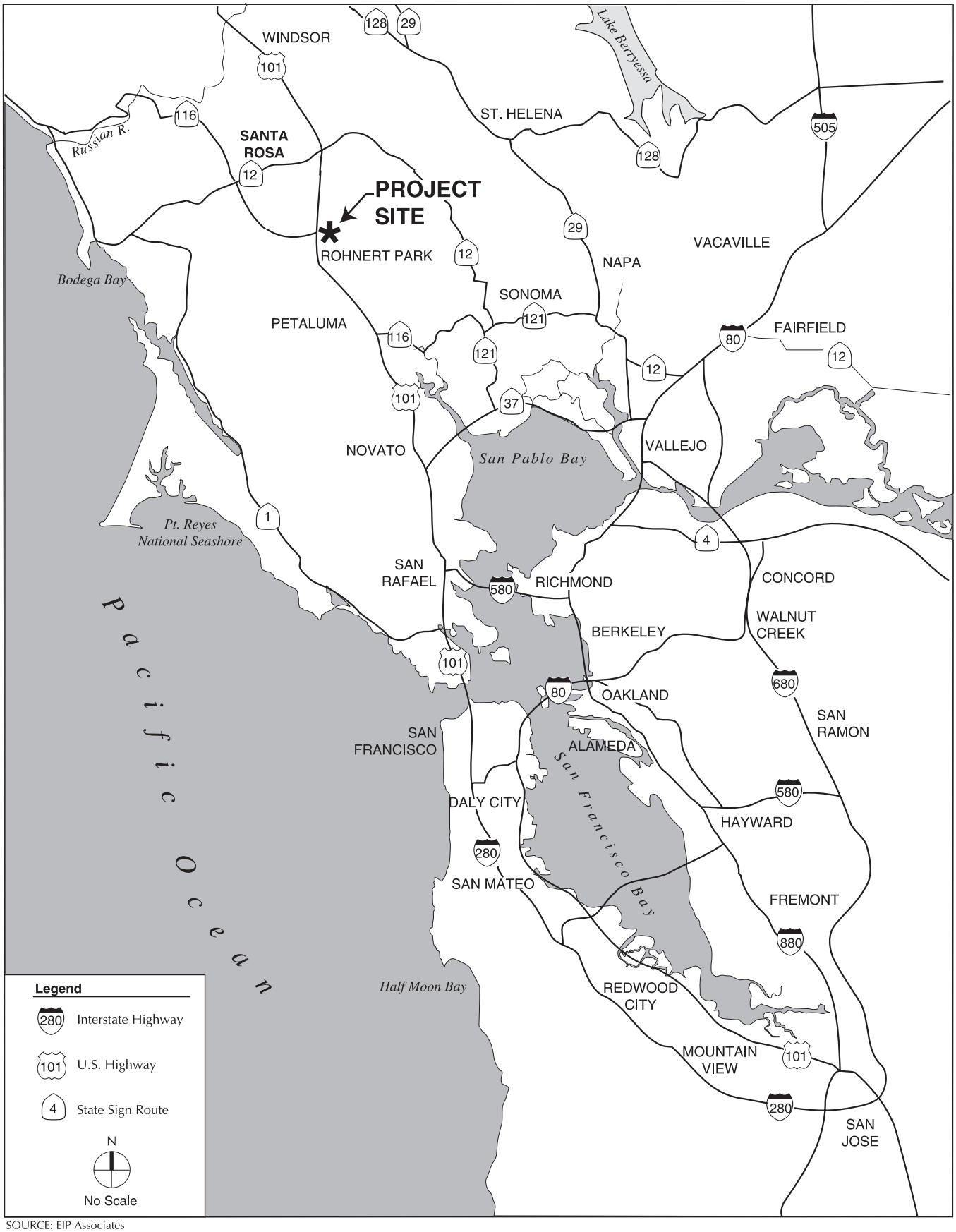
Rohnert Park's neighboring cities include Santa Rosa about seven miles north of Rohnert Park and Cotati, immediately to the south of Rohnert Park. As shown in Figure 2-3, the approximate 80-acre Southeast Specific Plan site is bounded on the north by the Canon Manor Specific Plan site, on the east by Petaluma Hill Road, on the south by Valley House Drive and on the west by Bodway Parkway. The Southeast Specific Plan site is predominately flat with no significant natural or manmade features (a residence is located in the northeast corner of the site), and has historically been used for the growing and harvesting of hay.

The Specific Plan site is rectangular in shape and consists of two parcels. One parcel contains 79.7 acres while a smaller 0.06-acre parcel forms a continuous strip of land extending along Valley House Drive between Bodway Parkway and Petaluma Hill Road, for a total of 79.76 acres. The project sponsor is Clement C. Carinalli/Willow Glen Partners, LLC.

2.2 PROJECT BACKGROUND AND FEATURES

Southeast Specific Plan

The Southeast Specific Plan has been prepared in response to the City of Rohnert Park's Municipal Ordinance No. 671, Chapter 17.57, SP-Specific Plan District of the Municipal Code.[2] This chapter outlines the requirements for the preparation, adoption and implementation of Specific Plans. The



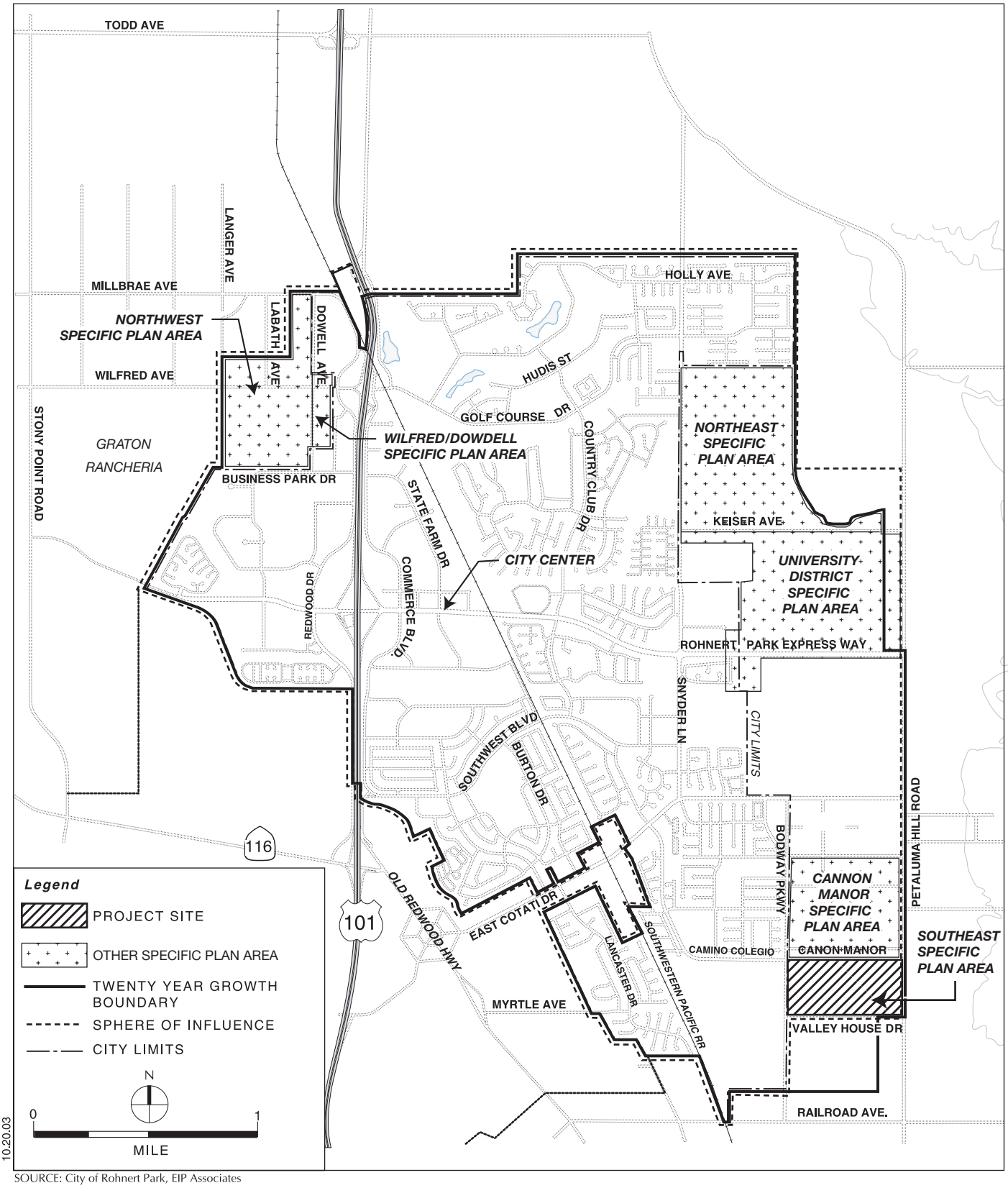
1.30.03

SOURCE: EIP Associates

EIP

CITY OF ROHNERT PARK SOUTHEAST SPECIFIC PLAN

FIGURE 2-1: REGIONAL LOCATION MAP

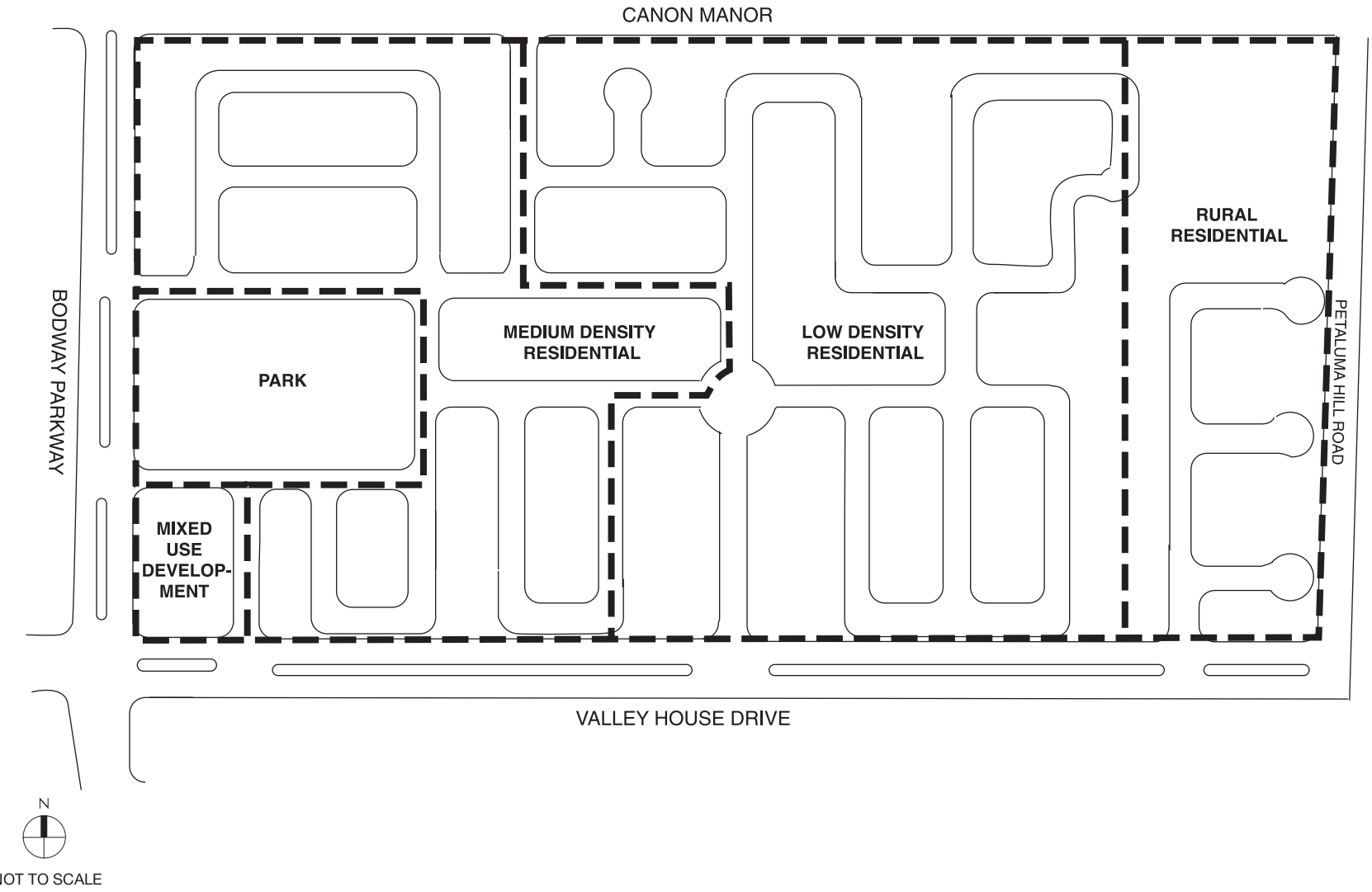


SOURCE: City of Rohnert Park, EIP Associates

EIP

CITY OF ROHNERT PARK SOUTHEAST SPECIFIC PLAN

FIGURE 2-2: SITE LOCATION MAP



10.20.03

SOURCE: Southeast Rohnert Park Specific Plan, W. Hezmalhalch, Architects, Inc.

FIGURE 2-3: SOUTHEAST ROHNERT PARK SPECIFIC PLAN DIAGRAM

Southeast Specific Plan site is identified in the City's General Plan. The purpose of the Specific Plan is to provide a means for ensuring that the Specific Plan site is developed under a master plan that is consistent with the provisions of the General Plan.

There are two primary phases of activity that the Specific Plan process entails. The first is the submission of a Preliminary Application that is then followed with the Specific Plan. A Preliminary Application for the Southeast Specific Plan was submitted to the City of Rohnert Park in February of 2002 and reviewed by the Planning Commission in April, 2002, and the City Council in May, 2002. In preparing the Preliminary Application, a variety of engineering and technical studies were undertaken to both document the existing conditions on the Specific Plan site as well as to develop some preliminary concepts for the layout of proposed land uses and activities for the Specific Plan site. The Specific Plan reflects the information contained in the Preliminary Application as well as the subsequent refinement of Plan concepts.

The Southeast Specific Plan contains the following five chapters: 1) *Land Use*, which establishes the land use pattern and standards for land uses allowed in the Specific Plan area. *2) Circulation*, which establishes the circulation system to accommodate vehicular and pedestrian movement based on the transportation requirements generated by the land uses in the Specific Plan area. 3) *Public Services*, which describes the basic improvements to be included for providing access and circulation, water supply, sanitary sewers and storm drainage. 4) *Design Guidelines*, which address site planning, building and open space relationships, architecture and land design and public access; and 5) *Implementation*, which provides information on the actions needed to implement the Specific Plan project and phasing.

The Specific Plan establishes the amount, type and location of urban development proposed for development within the Southeast Specific Plan site. The Specific Plan also provides development standards and design guidelines for development and recommends specific actions to implement the Specific Plan and financing methods and sources to fund improvements.

Project Objectives and Description

The objectives of the project are to incorporate into the City of Rohnert Park specific lands within the southeast portion of the City located within the Urban Growth Boundary, to provide opportunities for housing, and mixed use (housing with commercial development), to integrate a variety of housing types in accordance with City policy for the Southeast Specific Plan site, and to coordinate the adoption of the Southeast Specific Plan in a manner that provides for the systematic implementation of the General Plan as is consistent with the growth management and public facilities goals and policies of the General Plan.

As stated in the Southeast Specific Plan: "*Following guidance provided by the General Plan, as adopted in July of 2000 and amended in 2002, the proposed development to be accommodated in the SESPA may be characterized as a residential community adjacent to the existing Canon Manor*

residential development ------- land uses are contemplated within the Classification System that the Citiy of Rohnert Park has established and adopted in the General Plan." [3]

Several different densities of housing are planned to be accommodated within the Specific Plan area totaling up to 499 dwelling units as described below. In addition, up to 20,000 square feet of commercial/retail space inclusive of 36 multi-family residential units and about 5.8 acres of community park space are envisioned (see Figure 2-3, *Southeast Rohnert Park Specific Plan Map*).

Residential: Residential land uses, inclusive of connecting roads and all necessary utilities, are planned to include three types of single-family dwellings (see also Table 2-1).

- The Rural Estate Residential land use would be the lowest density of the three residential types, accommodating up to two single-family detached units per gross acre for a total of up to 27 residential units on 13.4 acres located in the east portion of the Specific Plan site (see Figure 2-3); there would be no maximum size for residential units developed within this land use classification.
- The Low Density Residential land use is intended for single-family dwellings which may be either detached or attached, and each unit would have ground floor living area and private outdoor open space. The Low Density Residential land use would accommodate up to 4.6 units per gross acre for a total of up to 168 units on 36.1 acres located in the east/central portion of the Specific Plan site.
- The Medium Density Residential classification envisions detached or attached single-family housing accommodating up to 12 units per gross acre for a total of up to 268 units on 22.3 acres in the central and west portions of the Specific Plan site. Overall, up to approximately 499 residential units inclusive of 36 live/work residential units (see Mixed Use land use discussion below), would be accommodated within the Specific Plan site area.

Mixed Use: The Mixed Use Classification envisions a development pattern that encompasses business, office, retail shops and may include institutions and service organizations compatible with residential development and a pedestrian environment inclusive of to 36 live/work units. Commercial/retail uses would include up to 20,000 square feet of building area in the southwest portion of the Specific Plan project site.

Recreation: A 5.8-acre parcel fronting Bodway Parkway is planned to accommodate neighborhood-scale park development and serve as a landscaped focal point for the Specific Plan area. Vehicular circulation into and out of the Specific Plan area to/from Bodway Parkway would be on the north and south sides of the park.

Infrastructure: The Southeast Specific Plan project includes the provision of on-site roads and utilities necessary to serve the project. On-site water, sanitary sewer, storm sewer, energy and road construction would be provided to serve the new residents and commercial development as proposed and paid for by the project sponsors. The project would include the installation of a 438,000 gallon water tank of an approximate 56-foot diameter and 24-foot height to be located at the northwest corner of the project site near Bodway Parkway and set into the ground to reduce its visibility. The tank would be installed for purposes of water storage and maintenance of fire protection pressure as required by the City. On-site construction activities are as addressed in this EIR. Off-site infrastructure

needed to serve the project site would also be paid for by the project sponsor through the various permitting, permit and engineering fees required by the City. Based on engineering studies prepared for the project, off-site infrastructure includes the following:[4]

- Circulation – provision of an eight-foot wide sidewalk/bikeway along the easterly side of Bodway Parkway along the project west frontage. Additional circulation (intersection) improvements would be required of the Southeast Specific Plan Project and cumulative development as specified further in this EIR (see Section 3.3, Traffic and Circulation).
- Water – provision of a new twelve-inch water main extending from the Bodway Parkway/Camino Colegio intersection, extending south along Bodway Parkway to East Railroad Avenue and westerly to the Sonoma County Water Agency 33-inch diameter Aqueduct (a distance of about 5,400 feet). The use of recycled water may be included for use in the project.[5]
- Sanitary Sewer – provision of a sewer lift station to be constructed near the corner of Bodway Parkway and Valley House Drive on the existing Agilent Technologies site (effluent is to be pumped to the City's existing trunk line sewer near the northwest corner of the Sonoma State University property and Copeland Creek).
- Storm Sewer – storm water is to be metered to a drainage collection system that currently exists in Bodway Parkway (metering is proposed to attenuate the post-development runoff so that discharge into the existing collection system would be at the same rate as pre-development conditions).
- Energy – extension of gas and electric distribution lines from existing facilities now existing and adjacent to the project site.

Table 2-1 compares the Southeast Specific Plan proposal land use elements to the land use elements as contained in Table 2.4-3 of the Land Use Element of the Rohnert Park General Plan.

Table 2-1
Southeast Specific Plan Land Use Development Program

Land Use	General Plan		Specific Plan	
	Gross Acres	Units	Gross Acres	Units
Rural/Estate Residential	22 – 28	30 – 50 (Up to 2.0 U/Ac.)[1]	13.4	27 (Up to 2.0 U/Ac.)
Low Density Residential	28 – 32	145 – 165 (4 to 6 U/Ac.)	36.1	168 (Up to 4.7 U/Ac.)
Medium Density Residential	18 – 22	180 – 220 (6.1 to 12 U/Ac.)	22.3	268 (Up to 12.0 U/Ac.)
Mixed Use Development	10 – 14	55 – 75 180,000 – 220,000 GSF Commercial/Retail	2.16	36 Res. and 20,000 GSF Com./Ret.[2]
Open Space	15	-	-	-
Parks	5 – 8	-	5.8	-
Total	98 – 119	410 – 510 Res. plus 180,000 – 220,000 GSF Commercial/Retail	79.76[3]	499 Res. Or 463 residents and 20,000 GSF Com./Ret.[4]

Table 2-1 (Continued)
Southeast Specific Plan Land Use Development Program

Source: City of Rohnert Park, *Southeast Specific Plan*, Final Draft, Parsons, 2003, page 40, and City of Rohnert Park, *General Plan, Land Use and Growth Management Element*, Table 2.4-3, page 2-38, as revised 10/02.

Notes:

1. U/Ac. = dwelling units per gross acre.
2. Includes 36 residential units and up to 20,000 gross square feet of commercial/retail space.
3. As indicated in Table 2-1, the total area included within the Southeast Specific Plan area is about 80 acres, which is less than the range of gross acreage shown in the General Plan (from 98 to 119 acres). According to the Specific Plan, this discrepancy is due to an error in measurement of the land area located between Bodway Parkway, Valley House Drive, Petaluma Hill Road and the Canon Manor subdivision which occurred during the General Plan preparation process.
4. A difference between the General Plan and Specific Plan land use allocations is in the amount of land potentially to be dedicated to Mixed Use development. The commercial/retail component as originally proposed was analyzed from the point of view of the potential for market support and found to be infeasible; therefore, a smaller area of up to 20,000 gross square feet of commercial/retail development is included as potential development in the Southeast Specific Plan. For further information see *Final Report – Southeast Specific Plan Market Analysis*, Economic and Planning Systems, February 2002, on file at the Rohnert Park Planning Department, 6750 Commerce Boulevard, Rohnert Park, CA, 94928.

2.3 PROJECT SCHEDULING

No construction scheduling has been developed for the Southeast Specific Plan project at the time of preparing this EIR. The Southeast Specific Plan notes that the project would be developed in several phases according to market demand, with roads to be constructed at each stage of development to provide access to the new residences while "*ensuring a logical roadway pattern is available for service and fire and life safety equipment as needed and appropriate.*" Assuming the Specific Plan would be adopted by the City of Rohnert Park and various project approvals secured by the project sponsors as indicated below, the necessary infrastructure of roads and utilities to support development of the Southeast Specific Plan site would need to be installed first, prior to construction of the residential units.

With up to 499 residential units proposed, the actual construction timetable could encompass a period of years, as yet undetermined. The construction period would ultimately depend on the City's implementation of Ordinance No. 667 adding Chapter 17.66, the *Growth Management Program* to the Rohnert Park Municipal Code. The *Program* is to assure that the rate of population growth will not exceed the average annual growth rates established in the General Plan and as further described in the *Program*. An objective is to ensure new residential development and mixed-use developments with a residential component occurs concurrently with the necessary infrastructure and public service improvements and maintain an average population growth rate of one percent per year. Other factors influencing the rate of project buildout would include market conditions as noted previously and the demand for housing in the Rohnert Park/central Sonoma County area. Should approvals for the Specific Plan be granted by the City of Rohnert Park in early 2006, construction would be expected to begin in late 2006 – early 2007 when project construction documents would be completed and grading and building permits issued by the City.

2.4 REQUIRED APPROVALS

General

Further consideration regarding Southeast Specific Plan adoption, annexation and residential development within the Specific Plan area would occur by City of Rohnert Park officials after certification of the Southeast Specific Plan EIR. The EIR must be certified by the Rohnert Park City Council as complete and adequate under CEQA prior to considering Specific Plan adoption, annexation and any approvals being given to construction within the Specific Plan site area.

If adopted by the City of Rohnert Park as proposed, the Southeast Specific Plan would become a public document which establishes the amount, type and location of urban development to be permitted in the Southeast Specific Plan area. The Specific Plan would also become the guiding document that provides the development standards and design guidelines for development within the Southeast Specific Plan site area and specific actions to implement the plan and financing methods and sources to fund utility systems to serve the Specific Plan area. More detailed design and construction plans for the Specific Plan area would be subject to City review for consistency with the provisions of the Specific Plan.

The following describes the approvals that would be required.

City of Rohnert Park

The Southeast Specific Plan has been submitted by Clement C. Carinalli/Willow Glen Partners, LLC to the City of Rohnert Park and, upon completion of environmental review under CEQA, would come before the Rohnert Park Planning Commission and City Council for review and public hearings. If approved by the City Council, the Rohnert Park General Plan Diagram would be amended to reflect a reconfiguration of the City Limit line to include the Southeast Specific Plan project site and change the General Plan Diagram to more accurately reflect the configuration of the Specific Plan land uses (road layout, and size and configuration of the Rural Residential, Low Density Residential, Medium Density Residential, Mixed Use and Parks land uses) as represented within the Southeast Specific Plan. These adjustments would not reflect any substantive departure from existing general plan goals and policies, but would further the existing goals and policies by providing greater land use specificity and an updating of the General Plan Diagram to be consistent with any approvals of the Southeast Specific Plan.

If approved, the Specific Plan would be implemented as an ordinance. With annexation, the Specific Plan site would be zoned in accordance with Section 17.06.090 of the City's Zoning Ordinance, *Specific Plan Zoning District*, the purpose of which is to facilitate the General Plan provisions for the preparation, adoption and implementation of Specific Plans in specified areas of the community, and applies to all areas designated in the General Plan for a Specific Plan.

When the project sponsors would move forward to implement the Specific Plan project, the site development plans per the specific Plan Zoning District would be subject to further review by the City for consistency with the Specific Plan. City approval of Tentative Subdivision Maps for the portions of

the annexation area proposed for development would be required. The City of Rohnert Park would use the EIR and Specific Plan in conducting specific design review of the project and for conformance with the provisions of the General Plan. Design and construction plans and specifications would be reviewed and/or amended and approved by the City in accordance with Section 17.25.030 of the Zoning Ordinance for *Site Plan and Architectural Review* and the adopted mitigation measures as specified in the Mitigation Monitoring and Reporting Program prepared for the Southeast Specific Plan project prior to issuing grading and construction permits. Further, conformance with Ordinance No. 677 (Municipal Code Chapter 17.70), regarding the provision of affordable housing would be required. Ordinance 677 requires that at least 15 percent of all new dwelling units in a residential development of five or more units shall be affordable to low- and moderate- income households, or that equivalent housing in-lieu fees be paid prior to the issuance of a building permit.[6]

Local Agency Formation Commission (LAFCO)

A final determination regarding annexation as proposed would be acted upon by the Sonoma County Local Agency Formation Commission (LAFCO). The City would need to submit an annexation request to LAFCO for review and approval. Under State law, LAFCO applications require a Plan for Providing Public Services, the purpose of which is to enable the Commission to determine the City's ability to provide services in a timely and financially feasible manner. LAFCO's requirements for the Plan for Providing Public Services may be determined to be met by submission of this EIR because of the infrastructure information included in the document. LAFCO requires the entire width of any road adjacent to an annexation boundary be included in the annexation area.

Sonoma County Water Agency

The Sonoma County Water Agency would review project design plans for compliance with County Flood Control Design Criteria to ensure that a project would not increase the potential for flooding.

Regional Water Quality Control Board (RWQCB)

Regulations pertaining to stormwater discharges associated with construction activity were issued by the U.S. Environmental Protection Agency in 1990. The regulations prevent the pollution of storm water through the control of erosion, sedimentation and toxic or hazardous materials at construction sites. These regulations are administered by the Regional Water Quality Control Boards (North Coast Region) through the National Pollution Discharge Elimination System (NPDES) Program.

Pollution reduction design is required as part of the permanent drainage system for the post-construction period as well as for the construction phases of a project. A permit is required for construction projects that are greater than one acre in extent. A Storm Water Pollution Prevention Plan is required that identifies the potential sources of sediment and other potential pollutants, and ensures the reduction of sediment and other pollutants in the storm water discharged from a construction site. A monitoring program is required to aid the implementation of, and assure compliance with the Pollution Prevention Plan.

Additionally, the RWQCB has jurisdiction over wetlands where a proposed project does not require a federal permit, but involves removal or placement of material into Waters of the State. In these cases, the project must receive a permit for Waste Discharge Requirements or a Waiver of Waste Discharge Requirements from the RWQCB.

Endnotes – Project Description

[1] Rohnert Park 2020, *General Plan*, Adopted by the City Council, July 2000, (Fourth Edition). Originally, the Rohnert Park General Plan designated an approximate 275 acre area as the Southeast Specific Plan extending south of Valley House Drive to Railroad Avenue. In 2002, the City acted to de-annex the land south of Valley House Drive from the City of Rohnert Park. Therefore, the Southeast Specific Plan area as indicated in the General Plan as revised includes the approximate 80 acre parcel north of Valley House Drive and east of Petaluma Hill Road.

[2] City of Rohnert Park, *Southeast Specific Plan*, Final Draft, Parsons, 2003. California Law, specifically Section 65450-65457 of the Government Code, empowers cities to employ Specific Plans to provide for the systematic implementation of the General Plan by linking the implementing policies of the General Plan with the individual development proposals in a defined area (the Specific Plan area). A Specific Plan is to conform to the various principles and requirements of State Planning and Zoning Law, Article 8, Specific Plans of Chapter 3, Local Planning by providing: (1) the distribution, location, and extent of the uses of land, including open space within the area covered by the Specific Plan; (2) the proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the Specific Plan and needed to support the land uses described in the Plan; (3) standards and criteria by which development will proceed, and standards for the conservation, development, and utilization of natural resources, where applicable; and (4) a program of implementation measures including regulations, programs, public works projects; (5) financing measures necessary to carry out actual development as envisioned in the Specific Plan; and (5) a statement of the relationship of the Specific Plan to the provisions of the General Plan.

[3] *Southeast Specific Plan*, Op. Cit. page 28.

[4] Civil Design Consultants Inc., *Southeast Rohnert Park Specific Plan, Public Services Plan,* April, 2003.

[5] The Southeast Specific Plan provides for the inclusion of low-flow devices and the use of drought-tolerant landscaping to conserve water use. The use of recycled water, although not specifically documented in the Southeast Specific Plan as being included in the project, could be implemented in accordance with the City of Santa Rosa Incremental Recycled Water Program (IRWP) Master Plan (the Santa Rosa Subregional System for recycled water) as planning for the distribution, storage and potential use of recycled water continues. Currently, recycled water is not available to the project site.

The IRWP has been prepared to deal with additional recycled wastewater disposal methods that will be needed to accommodate projected growth in the Cities of Santa Rosa and Rohnert Park. A Draft Program EIR on the IRWP was released May 16, 2003. Responses to comments on the Draft EIR are available in the Final EIR published October 20, 2003. The Program EIR was certified by the City of Santa Rosa on November 6, 2003. Since that time, the City has identified a "preferred program" for the IRWP. It provides a flexible range of options to reuse recycled water to be generated by new growth to 2020. Further information regarding the IRWP and EIR is available at http://www.recycledwaterprogram.com/ When additional capacity is needed, all partners in the subregional wastewater disposal system, which includes Rohnert Park, will be encumbered with the requirement to contribute to the development of additional facilities.

According to the Rohnert Park *Public Facilities Finance Plan, Final,* May 25, 2004 prepared by Harris & Associates (page 2-7), other utilities improvements in the Finance Plan included water, sewer and recycled water mains to the University District Specific Plan Area and Northeast Specific Plan Area as follows:

Recycled Water Main: a 12-inch diameter recycled water main beginning at Hinebaugh Creek west of the Northwest Pacific Railroad Tracks, continuing parallel to the railroad tracks to Rohnert Park Expressway and

continuing along Rohnert Park Expressway to Snyder Lane. At Snyder Lane each development would use a different alignment to bring recycled water to its property.

Water Transmission: a 12-inch diameter pipeline beginning at Hinebaugh Creeek west of the Northwest Pacific Railroad Tracks, continuing parallel to the railroad tracks to Rohnert Park Expressway and continuing along Rohnert Park Expressway to Snyder Lane. At Snyder Lane the east side developments would use a different alignment to bring recycled water to its property.

Sewer Main: a wastewater main that would start at Snyder Lane, run west along the Rohnert Park Expressway right-of-way, continue northwest along the Northwest Pacific Railroad right-of-way, and under the freeway to J. Rogers Lane. The main diameter would vary from 18 to 30 inches.

[6] Municipal Code Chapter 17.70 establishes "a Housing Trust Fund and an inclusionary requirement or an in-lieu fee on developers of residential development projects to mitigate the impacts caused by these development projects on the rising land prices for a limited supply of available residential land. The fees will be used to defray the costs of providing affordable housing for very low-, low-, and moderate- income households in the City of Rohnert Park."

Section 3
Environmental Setting, Impacts and Mitigation Measures

3.1 AESTHETICS

Introduction

This section of the EIR examines the visual quality and community character implications of annexing the approximate 80-acre Southeast Specific Plan project site to the City of Rohnert Park, and buildout of the Specific Plan site. Buildout includes the entire 80-acre annexation area in accordance with the provisions of the Rohnert Park General Plan *Land Use and Growth Management Element*.

Anticipated changes in visual conditions with buildout of the Specific Plan project site coupled with anticipated changes in community character are examined. The term "community character" refers to the overall impression of new development in combination with existing area development one would expect to obtain upon buildout of the Southeast Specific Plan project site. It is recognized that the perception of visual conditions and the assessment of visual impact would vary, depending on the mind-set of the viewer and individual sense of esthetics, as explained further herein. However, standards of impacts significance are established on which to base the assessment of visual impact.

Setting

Southeast Specific Plan Project Site and Surroundings

The Southeast Specific Plan site is located in the most southeasterly portion of Rohnert Park, immediately outside the City Limits but within City's Sphere of Influence and Urban Growth Boundary. The Southeast portion of Rohnert Park, inclusive of the Specific Plan project site area as a whole, is visually diverse because of the mixture of open spaces and developed areas that currently exist.

As one proceeds north toward the Specific Plan site along Petaluma Hill Road, views encompass a semi-rural landscape. The landscape is predominately flat with scattered homes and associated appurtenant structures, and undeveloped and/or managed agricultural land exists throughout the area. The dominant land form in the area consists of the oak and grass-covered, north-south trending Sonoma Mountains about six miles east of the project site area with Sonoma Mountain rising to an elevation of about 2,300 feet. The Sonoma Mountains serve as the principal background feature terminating views east from Rohnert Park and the project area in contrast to the flat terrain that includes the City of Rohnert park and the project site.

Valley House Drive bordering the south margin of the project site is a two-lane road oriented in an east-west direction affording important views of the Sonoma Mountains to the eastbound traveler.

Bodway Parkway is a four lane arterial with landscaped edges and center median bordering the west margin of the project site. Recent residential development predominates on the west side of Bodway Parkway in the project area. East of Bodway Parkway the project site and semi-rural residential/agricultural development as described above predominates. Older agricultural structures and single-family residences widely spaced on large land parcels provide reminders of local agricultural history and activities that in the past predominated throughout the greater Rohnert Park area. Views of the Sonoma Mountain hillsides and ridgelines to the east take on added importance in the field of view where there are fewer trees and buildings to obstruct regional views.

Because Petaluma Hill Road abuts the east margin of the Specific Plan project site where large numbers of people pass each day, the project site remains as an important undeveloped harvested field as currently seen from this arterial. The project site is also highly visible from Valley House Road and Bodway Parkway as noted above. Because the Southeast Specific Plan project site is undeveloped and open, with the exception of a single-family residence and several appurtenant structures, there are no significant roadway corridors leading through the site to control sightlines or the field of view as would be found along a street in a developed urban area with buildings closely defining the street alignment. The Sonoma Mountains serve as a scenic backdrop and provide visual relief from urban development west of the project site.

At the current time, the Southeast Specific Plan project site does not provide a strong sense of "place" or contain well defined entry points. The Specific Plan site is flat as mentioned previously, and there are no slopes or variations in terrain to provide visual interest. Other than remaining as a relatively open, mostly undeveloped parcel of land, the project site area retains no substantial visual significance by virtue of the lack of any unique landscape features such as rock outcroppings or specimen trees.

Overall, the Southeast Specific Plan site retains the suggestion of a land area in a state of transition because of its location between the urban, developed areas of Rohnert Park to the west and semi-rural landscape to the east, north and south. The appearance of the annexation area in a state of transition is reinforced due to a sense of partial enclosure provided by the recent construction of residential subdivisions east and south of the site. Because of the absence of development on the project site, there is a feeling of openness with no significant objects to obstruct the view outward to regional hillsides, inclusive of the Sonoma Mountains and adjacent lands.

Development north and west of the annexation area consists mostly of single-family residences and the Agilent Technologies Manufacturing center immediately to the west (see Section 3.6 Land Use). Past agricultural activities are evident in the assorted structures that remain today, and some agricultural activities continue at this time, including the harvesting of hay on the Southeast Specific Plan project site. To illustrate visual conditions within and surrounding the annexation area, a series of photographs are provided on Figures 3.1-1 through 3.1-3. The following summarizes what is shown in the photographs:

- **Figure 3.1-1A** is a view looking northeast across the Specific Plan project site toward Petaluma Hill Road and the Sonoma Mountains in the background. The photograph was taken from the southwest edge of the Specific Plan site near the intersection of Valley House Drive and

Bodway Parkway. As indicated in Figure 3.1-1A, the site had recently been tilled. Note the lack of physical features on the project site and semi-rural development further to the east.

- **Figure 3.1-1B** is a view looking northeast across the Specific Plan project site toward the Sonoma Mountains. The photograph was taken from near the intersection of Valley House Drive and Bodway Parkway. The photograph shows Valley House Drive and adjacent property to the south outside the Specific Plan site near the south margin of the Specific Plan project site. Note tree plantings along the north and south sides of Valley House Drive. The photograph provides an indication of the general character of semi-rural conditions found around the project site.
- **Figure 3.1-2A** is a view directly east along Valley House Drive at the south margin of the project site. The uniform spacing of tree plantings along this section of road indicates anticipated urban development in the area by the roadway planners.
- **Figure 3.1-2B** is a view looking north along Petaluma Hill Road near the east margin of the Specific Plan project site. Petaluma Hill Road is a Sonoma County designated Scenic Corridor while the Sonoma Mountains are included in Scenic Landscape Units in the County General Plan *Open Space Element*.
- **Figure 3.1-3A** is a view north along Bodway Parkway near the intersection of Bodway Parkway and Valley House Drive. Note the Southeast Specific Plan project site on the right side of the photograph. The tree plantings along Bodway Parkway are evenly spaced in the median and along both edges of the street, typical of urban development street plantings.
- **Figure 3.1-3B** is a view south along Bodway Parkway as seen from the north end of the Southeast Specific Plan project site. This view illustrates the general change in visual conditions as one moves off the project site into the Parkway environment, from a uniform harvested field to a more complex urban setting.

General Plan Considerations

The Rohnert Park General Plan *Land Use and Growth Management Element,* Figure 2.4-1, *Specific Plan Areas*, designates the project site as the *Southeast Specific Plan Area*. The *General Plan Diagram*, Figure 2.2-1, further delineates the project site with a mixture of residential development densities and Mixed Use, generally as described in this EIR in Section 2, *Project Description*. Development of the project site is further documented in the *Southeast Specific Plan Area* discussion of the General Plan *Land Use Element* and as diagrammed on Figure 2-3 in this EIR. Conformance of the Southeast Specific Plan project with the provisions of the General Plan is as documented in Section 3.9 of this EIR, *Relationship to Plans and Planning Policy*. Although the project site lies in unincorporated Sonoma County, there are aspects of the City's General Plan that are important with respect to visual quality as would be influenced by the Specific Plan project itself.

For example, the Sonoma County General Plan Schematic Map of Designated Scenic Resource Areas (Figure OS-2), shows Petaluma Hill Road extending north-south through central Sonoma County as a Scenic Corridor. In addition, much of the area comprising the Sonoma Mountains east of Rohnert Park is designated as a Scenic Landscape Unit.[1] A Scenic Corridor is defined as *"a strip of land of high visual quality along a certain roadway."* A Scenic Landscape Unit is defined as *"a landscape of special scenic importance in Sonoma County which provides important visual relief from urban densities."*

3.1-1A: View northeast across project site toward Petaluma Hill Road and Sonoma Mountains.

3.1-1B: View northeast across Valley House Drive and project site.

SOURCE: EIP Associates, Inc.

EIP

CITY OF ROHNERT PARK SOUTHEAST SPECIFIC PLAN

FIGURE 3.1-1: PROJECT PHOTOGRAPHS

3.1-2A: View east along Valley House Drive.

3.1-2B: View north along Petaluma Hill Road.

SOURCE: EIP Associates, Inc.

FIGURE 3.1-2: PROJECT PHOTOGRAPHS

3.1-3A: View north along Bodway Parkway (project site to the lright).

3.1-3B: View south along Bodway Parkway (project site to the left).

SOURCE: EIP Associates, Inc.

FIGURE 3.1-3: PROJECT PHOTOGRAPHS

The County General Plan goes on to note: *"Preservation of these scenic resources is important to the quality of life of County residents and the tourists and agricultural economy. ---- As the county urbanizes, maintenance of the openness of these areas provides important visual relief from urban densities."*[2] County Open Space Goal OS-3 states: *"Identify and preserve roadside landscapes which have a high visual quality as they contribute to the living environment of local residents and to the county's tourism economy."*

It should also be noted that the City of Rohnert Park has entered into an agreement with Sonoma County that provides for "First Priority Areas" along Petaluma Hill Road to be retained as areas for limited development to compensate for development within the Rohnert Park/Santa Rosa Community Separator as a result to changes in the Sphere of Influence and annexations. Community Separators are intended to remain as open space, agriculture and rural residential development to avoid corridor-style urbanization and suburban sprawl. The Agreement notes that "first priority shall be given to lands adjacent to the Rohnert Park Urban Growth Boundary, lands that would serve as greenbelt around the City, and view corridors along Petaluma Hill Road." The idea is to provide for some flexibility in changing the form and location of Community Separators, provided there is no net loss of Separator acreage. The Agreement specifically references potential annexations of land within the Northwest or Wilfred-Dowdell areas of the Rohnert Park Sphere of Influence and that "Rohnert Park, shall adopt an adequate mechanism to ensure that the required mitigation for the loss of Community Separator land will occur through acquisition of open space lands and/or development rights within the priority areas ---." Exhibit B of the Agreement indicates the Southeast Specific Plan project site is opposite a First Priority Area (located on the east side of Petaluma Hill Road), and that the project site itself is not in a priority area but is within the Rohnert Park Planning Area. Thus, the preservation of visual resources along Petaluma Hill Road is emphasized by the Agreement to mitigate for Community Separators.

Impacts and Mitigation Measures

Introduction

Visual conditions surrounding and within the Southeast Specific Plan project site result from the interplay of developed and undeveloped conditions, which vary considerably from point to point depending on viewer location. The future appearance (and thus visual quality and community character), of the Southeast Specific Plan project site would be the result of existing conditions plus future development as time passes.

Standards of Significance

Visual quality is the perceived aesthetic value of an area and is based on a combination of inherent natural features and physical conditions, either natural, man-made or both. The analysis of visual quality considers many elements that establish the character of the scene. These include the shape of the land, existing vegetation, water, color, structural elements and light among other considerations. In addition, the alteration or disturbance of the existing landscape over time is to be considered.

Finally, changes resulting from a proposed action or series of actions are evaluated. Aspects of community character or what a community appears to represent or signify to the observer result from the interplay of the physical elements that lead to the judgement of visual quality.

Visual quality and the aesthetic value of a given location in its current condition is also a subjective judgement by the observer. The standards for determining the significance of visual impact from development are based on professional judgements and commonly accepted planning and design principles as generally expressed in the CEQA Guidelines and approved by the Rohnert Park City Council. A development project would normally have a significant adverse visual impact if the project would:

- **Impact Criterion #1:** Have a substantial adverse effect on a scenic vista.
- **Impact Criterion #2:** Substantially degrade the existing visual character or quality of the site and its surroundings.
- **Impact Criterion #3:** Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Visual impact would be measured by the amount of visual change adversely affecting an area's perceived aesthetic value or conditions of the setting. A highly visible change resulting from constructing a project that is incompatible with the setting or is not pleasing to look at would contribute to generating a significant adverse visual impact. Factors to be considered include the physical layout of constructed elements with respect to each other and existing structures, the open and closed spaces so defined between structural elements, the density or intensity of development, scale relationships between existing and proposed structures, site landscaping, and other features of development. For example, significant differences in mass or form or open space between existing and new structures would be expected to generate adverse visual impacts under normal circumstances.

Project Evaluation

In considering the visual impact of implementing the Southeast Specific Plan project, viewpoint location with respect to the project site would influence visual impact perception. The elements of building height, color, density of building placement, open space, lighting, paving design and associated pedestrian amenities would have the greatest visual influence from close-in viewpoints. As the observer moves away from the site, specific details regarding the physical elements of the project would become less important in defining visual impact, while building mass, street alignments and view corridors would remain of importance.

The Southeast Specific Plan project basically consists of four development components as addressed in this EIR: the Rural/Estate Residential component; the Low Density Residential component; the Medium Density Residential component; and the Mixed-Use component. The basic concepts for the location of these project components in addition to concepts for circulation and location of the project park have been developed for the project and would serve to guide and assist in defining future development potential and appearance on the Specific Plan site (see Figure 2-3, *Specific Plan Map* in Section 2, *Project Description*).

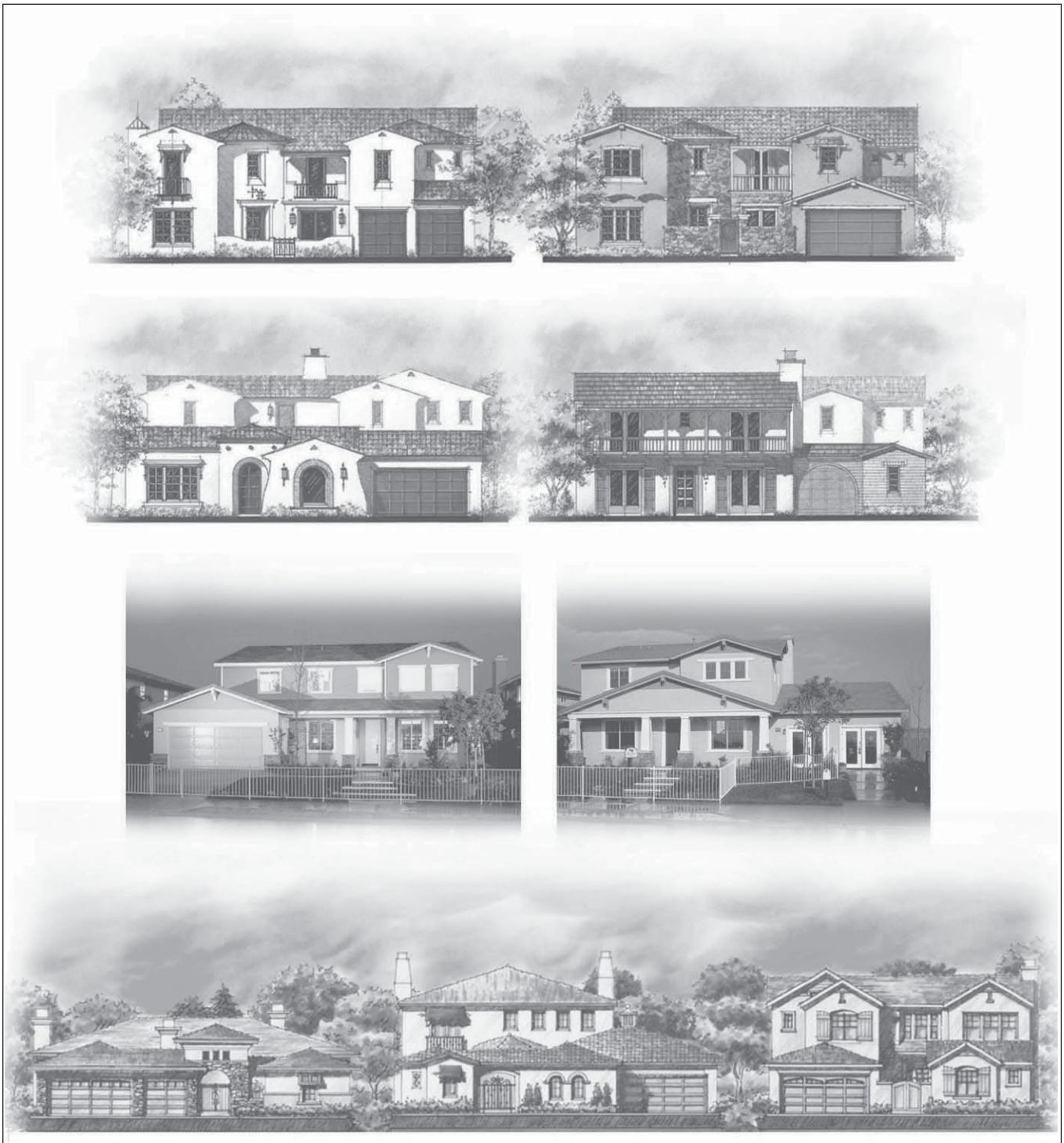
For clarification purposes, Figures 3.1-4, 3.1-5, 3.1-6 and 3.1-7 are illustrations of the anticipated architectural character and appearances of the various housing types as envisioned in the Southeast Specific Plan. Residential building heights would range up to two stories in height, and if commercial space is to be built, building heights could reach three stories as indicated in Figures 3.1-4 through 3.1-7. As indicated in the Southeast Specific Plan Design Guidelines,[3] architectural styles could range from the Cottage Style "derived from the medieval Norman and Tudor domestic architecture" resulting in the English and French "cottage look" after the adoption of stone and brick veneer techniques in the 1920s; the Craftsman Style "inspired by the English Arts and Crafts Movement of the late 19th century with broad overhangs with exposed rafter tails at the eaves and trellises over the porches"; the Spanish Colonial Style, "also known as Spanish Eclectic [as] an adaptation of Mission Revival enriched with additional Latin American details and elements" with plans "informally organized around a courtyard"; the Italianate Style with "traditional classical elements such as the symmetrical façade, squared tower entry forms, arched windows, quoined corners and bracketed eaves"; and the Mediterranean Style where "portals, loggias, porticos, verandahs and terraces are all common due to the pragmatic need of shading the interior and the desire to create outdoor rooms to take advantage of the temperate climate."

Views and Appearances: ***Would the project have a substantial adverse effect on a scenic vista or substantially degrade the existing visual character or quality of the site and its surroundings? (Impact Criteria #1 and #2)***

Buildout within the Southeast Specific Plan project site would result in the conversion of an open field subject to annual harvesting to urban development, extending the pattern of residential development west of the Specific Plan area easterly to the Sphere of Influence and Urban Growth Boundary. Overall, the change in visual appearances on the Specific Plan site would be noticeable but less than significant.

Project construction would introduce into the Southeast Specific Plan project site new buildings for residential and commercial use at up to a maximum of 12 units per gross acre in the 22.3 acre medium density residential area. The 2.16 acre mixed use area of the project site would contain up to 20,000 gross square feet of commercial development and up to 36 residential units at a maximum of about 14 units per acre. New urban development would be established on the Specific Plan site which is currently an undeveloped landscape. There would also be increased pavement provided for road construction, parking areas and sidewalks. Site landscaping would be provided for visual interest, site enhancement and for erosion control. Area lighting would be provided for nighttime safety and security.

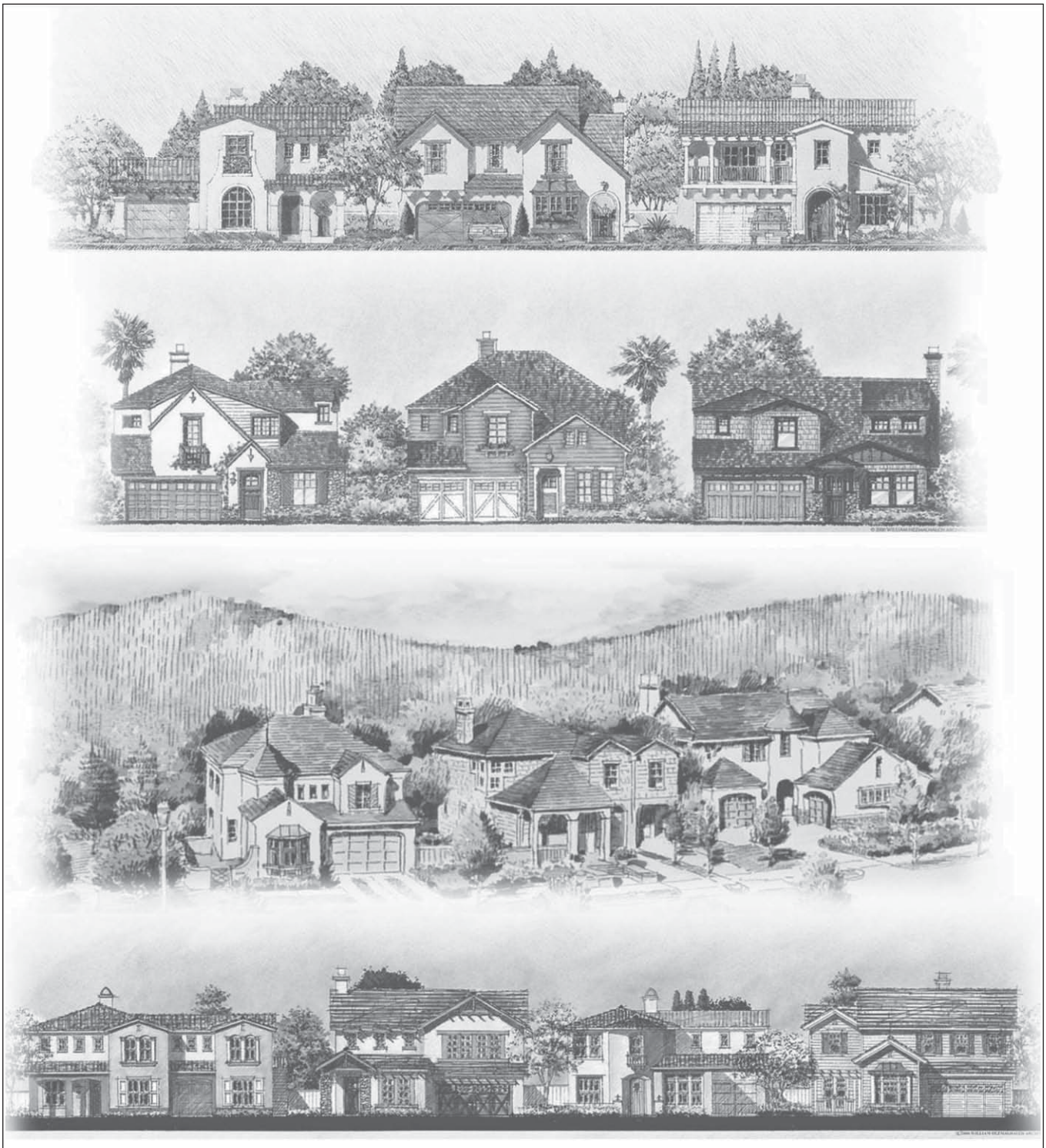
Buildout of the Southeast Specific Plan site in accordance with the provisions of the Specific Plan and in conformance with the City of Rohnert Park General Plan would tend to repeat the residential development profile and development density generally found northwest of the Specific Plan site encompassing much of eastern Rohnert Park inclusive of the development surrounding Magnolia Park and generally bounded by Bodway Parkway on the east, Camino Colegio on the south and west, and Cotati Avenue on the north. It is noted also that buildout of the Specific Plan site would result in the



No Scale

SOURCE: William Hezmalhach, Architects, Inc.

FIGURE 3.1-4: TYPICAL SOUTHEAST SPECIFIC PLAN RURAL / ESTATE RESIDENTIAL UNITS



No Scale

SOURCE: William Hezmalhach, Architects, Inc.

FIGURE 3.1-5: TYPICAL SOUTHEAST SPECIFIC PLAN LOW DENSITY RESIDENTIAL UNITS

No Scale

SOURCE: William Hezmalhach, Architects, Inc.

FIGURE 3.1-6: TYPICAL SOUTHEAST SPECIFIC PLAN MEDIUM DENSITY RESIDENTIAL UNITS

No Scale

SOURCE: William Hezmalhach, Architects, Inc.

FIGURE 3.1-7: TYPICAL SOUTHEAST SPECIFIC PLAN RETAIL / TOWNHOUSE RESIDENTIAL UNITS

conversion of undeveloped, vacant land to an urban condition fronting Petaluma Hill Road, a County Scenic Corridor, opposite the Sonoma Mountains Scenic Landscape Unit.

However, project buildout from two to 14 residential units per acre would be consistent with the General Plan and much of Rohnert Park's suburban residential development pattern. Rohnert Park's residential development pattern is characteristically suburban, with low to medium density residential neighborhoods located predominately between U.S. Highway 101 and Petaluma Hill Road. Correspondingly, project buildout would be consistent with the Sonoma County General Plan which states: *"Generally, concentrated growth allows greater efficiency and economy in providing public services, conserves agriculture and resource lands, and preserves the rural character desired by many of the county's residents."*[4]

The Southeast Specific Plan *Plan Goals Chapter* recites a number of goals and policies as contained in the City of Rohnert Park General Plan regarding community design, urban form and the preservation of views. The Specific Plan then goes on to describe how the Specific Plan in its design, inclusive of building layout and landscape development, would conform with the goals and policies as contained in the City's General Plan. This information is provided in Section 3.9 of this EIR, *Relationship to Plans and Planning Policy*, and is not repeated here for brevity. Although no significant adverse visual impact is identified for the Southeast Specific Plan project, with mitigation as defined below, it is considered that if the Southeast Specific Plan site is built out as proposed and fully conforms with the goals and policies of the General Plan for site development, any potential for adverse visual impacts would be further avoided. There would be no significant and adverse blockage of views to the Sonoma Mountains and County Scenic Landscape Units from publicly accessible vantage points of surrounding roadways if building density, setbacks and tree planting limitations are accomplished as proposed and as required in Community Design Goal CD-D of the General Plan for the Southeast Specific Plan site. An urban edge would be maintained (Goal CD-F), road edge landscape treatments would not obstruct views (Policies CD-5 and CD-6), street setbacks would be maintained (Policy CD-7), a transition in density would be maintained from west to east (Policy CD-9), minimal density rural estate residential uses would be located nearest Petaluma Hill Road (Policies CD-13 and CD-52), and solid walls would not be constructed around the project site (Policy CD-14) with building setbacks (in lieu of masonry privacy walls) used for noise mitigation implemented as specified (see Section 3.7, Noise). Thus, Petaluma Hill Road would be maintained as a County designated Scenic Corridor (Open Space Goal OS-D).

Mitigation Measure 3.1-1

Planning and design of the Southeast Specific Plan project shall conform to the provisions regarding neighborhood and community design as contained within the City of Rohnert Park General Plan *Community Design Element*. The purpose of the *Community Design Element* is to provide a clear set of design goals and policies to project sponsors and project designers to be considered by Planning Department staff, the Planning Commission in its review of community design under the Site Plan and Architectural Review section of the Zoning Ordinance and the City Council in the evaluation of the project proposal. In addition, the City's *Community*

Design Element is intended to inspire creativity, the provisions of which may be required as conditions of project approval.

Considerations include concepts of overall neighborhood design and structure; block and street patterns; transitions in development densities from urban to rural lands; increased setbacks along scenic corridors; off-street parking configurations; pedestrian and bicycle circulation; building design variety, form and materials; open space areas, landscaping and lighting; and other features of community design. Conformance review during the City's Design Review process prior to the issuance of grading and construction permits would help to ensure that the overall change in visual conditions in the area would remain less than significant.

Impact 3.1-2

Project construction would require site grading, construction materials stockpiling and storage, and the use of construction equipment. As a change from current site conditions, and with the adjacent location of Petaluma Hill Road as a County Designated Scenic Corridor, this is considered a potentially significant visual impact. This construction impact would be localized and short-term, lasting during the actual period of construction at specific locations within the Southeast Specific Plan site construction areas.

Mitigation Measure 3.1-2

The stockpiling and storage of construction materials and equipment prior to use and installation shall be minimized to the extent practicable. Although construction staging areas have not been designated at this time, such staging areas shall be located away from Petaluma Hill Road and as close to or within the areas of construction as possible, out of the way of community traffic and pedestrian use. Mitigation Measure 3.1-2 applies to the installation of roads and utility services as well as the construction of building structures and would reduce Impact 3.1-2 to a less than significant level.

Project Lighting: *Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area? (Impact Criterion #3)*

Street and landscape lighting has not yet been designed for the project. Project lighting would be required to be designed and implemented in accordance with the findings of project design review conducted by the City. Although no significant adverse impact has been identified regarding project lighting, Mitigation Measure 3.1-3 is provided to further avoid the potential for an adverse lighting effect.

Mitigation Measure 3.1-3

Night lighting along Southeast Specific Plan streets, parking areas and any public spaces should be focused downward and/or shielded to avoid glare and point sources of light interfering with the vision of on- and off-site residents and motorists on local roadways. Night lighting for streets would need to minimally conform with City standards regarding street lighting.

Lighting elements should be recessed within their fixtures to prevent glare. A specialist in lighting design should be consulted during project design to determine light source locations, light intensities and type of light source.

New lighting levels provided should be compatible with general illumination levels in existing areas to avoid a noticeable contrast in light emissions, consistent with the need to provide for safety and security. The overall objective would be to establish area lighting that would be adequate for safety and surveillance, but minimize the potential effects on nighttime views from locations around and within the specific Plan site area.

Cumulative Development

The discussion of cumulative development impacts is as described in the *Introduction* section of this EIR under the title *Cumulative Impact Assessment* and includes collectively the Specific Plan Areas and projects as described therein.

As indicated above, Southeast Specific Plan project development would not result in adverse visual quality impacts with mitigation fully implemented. Additionally, planned land uses with respect to other Specific Plan Areas and potential future residential development within the Canon Manor Specific Plan area would be required to be consistent with General Plan Goals and Policies respecting development as illustrated on the General Plan Diagram. The planning and design of these projects must conform to the provisions regarding neighborhood and community design as contained within the City of Rohnert Park General Plan *Community Design Element*, as would be the case for the Southeast Specific Plan as noted previously. As each Specific Plan area would be built out in conformance with the goals and policies of the General Plan for site development, the potential for adverse visual impacts would be avoided from the standpoint of cumulative development.

As noted in the General Plan EIR regarding Community Character, General Plan policies would reduce the impacts on visual quality to a less than significant level.[5]

As discussed in the General Plan EIR, patterns of new residential development would provide greater connections between neighborhoods and stronger orientation to open space and creek corridors which would be a beneficial impact (Impact 4.2a). Development of the mixed-use, pedestrian-oriented University District and City Center would result in a beneficial change in community character (Impact 4.2-b). Although development could block existing views of the eastern ridgeline from points along the eastern edge of Rohnert Park which would be a significant and adverse impact (Impact 4.2-c), General Plan policies are established to mitigate the impact to a less than significant level. This includes restricting the height of community plantings along Petaluma Hill Road, minimizing the disruption of existing views by new development, providing adequate street setbacks and maintaining view corridors to avoid the potential for view blockage. Other General Plan policies are established to avoid altering the visual character of the urban edge. In sum, the General Plan EIR concludes there would be no adverse community character or related visual impacts under the General Plan policies and provisions as stated in the General Plan EIR.

Endnotes — Visual Quality

[1] Sonoma County General Plan, *Open Space Element*, Figure OS-2, Schematic Map of Designated Scenic Resource Areas.

[2] Sonoma County General Plan, Op. Cit., Open Space Element, page 179.

[3] Parsons, *City of Rohnert Park, Southeast Specific Plan,* Final Draft, 2003, Section 7, *Design Guidelines*.

[4] Sonoma County General Plan, March 23, 1989, revised to reflect amendments and corrections as of April 9, 1991, and March 1, 1994, Land Use Element, page 30.

[5] Rohnert Park General Plan, op. cit., pages 4-25 through 4-35.

3.2 AIR QUALITY

Introduction

This section of the EIR evaluates the potential impacts on air quality resulting from implementation of the Southeast Specific Plan project. This includes the potential for the Specific Plan project to conflict with or obstruct implementation of an applicable air quality plan, to violate an air quality standard or contribute substantially to an existing or projected air quality violation, to result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment, to expose sensitive receptors to substantial pollutant concentrations, or to create objectionable odors affecting a substantial number of people.

Setting

Air Quality Background

The City of Rohnert Park is located within the San Francisco Bay Area Air Basin; named so because its geographical formation is that of a basin, with the surrounding mountains trapping the air and its pollutants in the valleys or basins below. This area includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, the western half of Solano and the southern half of Sonoma counties. The regional climate within the Bay Area is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. The air quality within the Bay Area is primarily influenced by a wide range of emissions sources—such as dense population centers, heavy vehicular traffic, and industry—and meteorology.

Air pollutant emissions within the Bay Area are generated by stationary, area-wide, and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Stationary sources occur at an identified location and are usually associated with manufacturing and industry. Examples are boilers or combustion equipment that produce electricity or generate heat. Area-wide sources are widely distributed and produce many small emissions. Examples of area-wide sources include residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and consumer products such as barbeque lighter fluid and hair spray. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, racecars, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment such as when fine dust particles are pulled off the ground surface and suspended in the air during high winds.

Both the federal and State governments have established ambient air quality standards for outdoor concentrations of various pollutants in order to protect public health. The national and State ambient air quality standards have been set at levels where concentrations could be generally harmful to human

health and welfare, and to protect the most sensitive persons from illness or discomfort with a margin of safety. Applicable standards are identified below.

The air pollutants for which national and state standards have been promulgated and which are most relevant to air quality planning and regulation in the Bay Area include ozone, carbon monoxide (CO), respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), sulfur dioxide (SO_2), and lead. In addition, toxic air contaminants are of concern in the Bay Area. Each of these is briefly described below.

- *Ozone* is a gas that is formed when reactive organic gases (ROG) and nitrogen oxides (NOx)—both byproducts of internal combustion engine exhaust—undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are conductive to its formation.
- *Carbon Monoxide* is a colorless, odorless gas produced by the incomplete combustion of fuels. CO concentrations tend to be the highest during the winter morning, with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines—unlike ozone—and motor vehicles operating at slow speeds are the primary source of CO in the Bay Area, the highest ambient CO concentrations are generally found near congested transportation corridors and intersections.
- *Respirable Particulate Matter* (PM_{10}) and *Fine Particulate Matter* ($PM_{2.5}$) consists of extremely small, suspended particles or droplets 10 microns and 2.5 microns or smaller in diameter. Some sources of particulate matter, like pollen and windstorms, are naturally occurring. However, in populated areas, most particulate matter is caused by road dust, diesel soot, combustion products, abrasion of tires and brakes, and construction activities.
- *Sulfur dioxide* (SO_2) is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal, and from chemical processes occurring at chemical plants and refineries.
- *Lead* occurs in the atmosphere as particulate matter. The combustion of leaded gasoline is the primary source of airborne lead in the Bay Area. The use of leaded gasoline is no longer permitted for on-road motor vehicles so most such combustion emissions are associated with off-road vehicles such as racecars. Other sources of lead include the manufacturing and recycling of batteries, paint, ink, ceramics, ammunition, and secondary lead smelters.
- *Toxic Air Contaminants* refer to a diverse group of air pollutants that can affect human health, but have not had ambient air quality standards established for them. This is not because they are fundamentally different from the pollutants discussed above, but because their effects tend to be local rather than regional.

Regulatory Setting

Air quality within the Bay Area is addressed through the efforts of various federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for improving the air quality within the Bay Area are discussed below.

Federal

The U.S. Environmental Protection Agency (U.S. EPA) is responsible for setting and enforcing the federal ambient air quality standards for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. The U.S. EPA also has jurisdiction over emissions sources outside state waters (outer continental shelf), and establishes various emissions standards for vehicles sold in states other than California.

As part of its enforcement responsibilities, the U.S. EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the SIP.

State

The California Air Resources Board (ARB), a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and State air pollution control programs within California. In this capacity, the ARB conducts research, sets California Ambient Air Quality Standards, compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the SIP. The ARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hair spray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

In 1998, following a 10-year scientific assessment process, the ARB identified particulate matter from diesel-fueled engines as a toxic air contaminant. The ARB has since addressed this issue by preparing and approving the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* (approved on September 28, 2000). This plan represents the State's comprehensive plan to substantially reduce diesel particulate emissions throughout the state. The plan contains the following three components:

1. New regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines and vehicles to reduce diesel PM emissions by about 90 percent overall from current levels;

2. New retrofit requirements for existing on-road, off-road, and stationary diesel-fueled engines and vehicles where determined to be technically feasible and cost effective; and

3. New phase 2 diesel fuel regulations to reduce the sulfur content levels of diesel fuel to no more than 15 parts per million to provide the quality of diesel fuel needed by the advanced diesel PM emission controls.

Regional

The Bay Area Air Quality Management District (BAAQMD) is the primary agency responsible for comprehensive air pollution control in the entire San Francisco Bay Area Air Basin, including the southwestern area of Solano County. To that end, the BAAQMD, a regional agency, works directly with the Association of Bay Area Governments, the Metropolitan Transportation Commission, and local governments and cooperates actively with all federal and state government agencies. The BAAQMD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emissions sources, and enforces such measures through educational programs or fines, when necessary.

The BAAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources. It has responded to this requirement by preparing a sequence of Ozone Attainment Plans and Clean Air Plans that comply with the federal Clean Air Act and the California Clean Air Act, accommodate growth, reduce the pollutant levels in the Bay Area, meet federal and state ambient air quality standards, and minimize the fiscal impact that pollution control measures have on the local economy. The Ozone Attainment Plans are prepared for the federal ozone standard, and the Clean Air Plans are prepared for the state ozone standards. The most recent Ozone Attainment Plan was adopted by the BAAQMD Board of Directors on October 2001 and demonstrates attainment of the federal ozone standard in the Bay Area by 2006. The current regional Clean Air Plan was adopted by the Board of Directors on December 20, 2000. It identifies the control measures that would be implemented through 2006 to reduce major sources of pollutants. These planning efforts have substantially decreased the population's exposure to unhealthful levels of pollutants, even while substantial population growth has occurred within the Bay Area. The Clean Air Plan predicts that regional ozone concentrations will decrease by 1.2 percent per year or 9.0 percent over the twelve years after it was adopted. As noted previously, 2003 marked the third consecutive year that ambient ozone concentrations throughout the Bay Area did not exceed national standards.

Although no plans are currently required to demonstrate attainment of federal or state particulate matter standards, the Clean Air Plan discusses this pollutant since the health effects of particulates can be serious, and many of the measures identified in the Plan to reduce ozone precursor emissions will also reduce ambient concentrations of particulate matter.

Although the BAAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate the air quality issues associated with plans and new development projects within the Bay Area. Instead, the BAAQMD has used its expertise and prepared the *BAAQMD CEQA Guidelines* to indirectly address these issues in accordance with the projections and programs of the Ozone Attainment Plan and Clean Air Plan. The purpose of the *BAAQMD CEQA Guidelines* is to assist Lead Agencies, as well as consultants, project proponents, and other interested parties, in evaluating potential air quality impacts of projects and plans proposed in the Bay Area. Specifically, the *BAAQMD CEQA Guidelines* explain the procedures that the BAAQMD recommends be followed during environmental review processes required by CEQA. The *BAAQMD CEQA Guidelines* provide direction on how to evaluate potential air quality impacts, how to determine whether these impacts are

significant, and how to mitigate these impacts. The BAAQMD intends that by providing this guidance, the air quality impacts of plans and development proposals will be analyzed accurately and consistently throughout the Bay Area, and adverse impacts will be minimized. It should be noted that the *BAAQMD CEQA Guidelines* were published in December 1999 after the ARB's identification of diesel engine particulate matter as a toxic air contaminant.

Local

Local jurisdictions, such as the City of Rohnert Park, have the authority and responsibility to reduce air pollution through its police power and decision-making authority. Specifically, the City is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The City of Rohnert Park is also responsible for the implementation of transportation control measures as outlined in the Clean Air Plan. Examples of such measures include bus turnouts, energy-efficient streetlights, and synchronized traffic signals.

City of Rohnert Park environmental plans and policies recognize community goals for air quality. Chapter 6.4 of the Rohnert Park General Plan identifies goals and policies that help the City contribute to regional air quality improvement efforts. Relevant General Plan air quality goals and policies are discussed in Section 3.9 of this EIR, *Relationship to Plans and Planning Policy*. The Rohnert Park General Plan is considered to be consistent with the Clean Air Plan.

In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces the implementation of such mitigation. The City does not, however, have the expertise to develop plans, programs, procedures, and methodologies to ensure that air quality within the City and region will meet federal and state standards. Instead, the City relies on the expertise of the BAAQMD and utilizes the *BAAQMD CEQA Guidelines* as the guidance document for the environmental review of plans and development proposals within its jurisdiction.

Existing Regional Air Quality

The average daily emissions inventory for the entire Bay Area and Sonoma County is summarized in Table 3.2-1. As shown, exhaust emissions from mobile sources generate the majority of ROG, NOx, and CO in the Bay Area. Stationary sources generate the most SOx in the Bay Area, and area-wide sources generate the most airborne particulates.

Measurements of ambient concentrations of the criteria pollutants are used by the U.S. EPA and the ARB to assess and classify the air quality of each regional air basin, county, or, in some cases, a specific urbanized area. The classification is determined by comparing actual monitoring data with national and state standards. If a pollutant concentration in an area is lower than the standard, the area is classified as being in "attainment" for that pollutant. If the pollutant concentration exceeds the standard, the area is classified as a "nonattainment" area. If there are not enough data available to determine whether the standard is exceeded in an area, the area is designated "unclassified."

Table 3.2-1
2003 Estimated Average Daily Emissions

Emissions Source	Emissions in Tons per Day					
	ROG	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
San Francisco Bay Area Air Basin						
Stationary Sources	91.9	78.2	42.3	58.7	15.8	12.1
Area-Wide Sources	94.0	19.1	174.5	0.6	164.6	57.2
Mobile Sources	250.7	491.5	2,218.6	12.1	21.3	17.1
Natural (non-anthropogenic) Sources	0.2	0.0	3.0	--	0.5	0.4
Total Emissions	**436.9**	**588.9**	**2,438.4**	**71.4**	**202.1**	**86.8**
Sonoma County - San Francisco Bay Area Air Basin						
Stationary Sources	3.7	0.9	1.0	0.0	0.7	0.4
Area-Wide Sources	7.7	1.2	17.6	0.1	12.9	5.7
Mobile Sources	15.4	29.0	139.5	0.2	1.3	1.0
Natural (non-anthropogenic) Sources	0.0	--	0.1	--	0.0	0.0
Total Emissions	**26.9**	**31.0**	**158.2**	**0.3**	**14.9**	**7.1**

Source: California Air Resources Board, 2004.

The U.S. EPA and the ARB use different standards for determining whether the Bay Area is an attainment area. Under national standards, the Bay Area is currently classified as a nonattainment area for ozone. However, 2003 marked the third consecutive year that ambient ozone concentrations throughout the Bay Area did not exceed national standards. This condition does not constitute a formal redesignation of the Bay Area into the attainment category. The next step is for the ARB to submit to the U.S. EPA a plan demonstrating how the area will continue to maintain the national standard for 10 years. Once the plan is submitted, the ARB can request the U.S. EPA to redesignate the Bay Area as an attainment area for ozone. The Bay Area is in attainment or designated as unclassified for all other pollutants under national standards.

Under state standards, the Bay Area is designated as a nonattainment area for ozone and PM_{10}, and an attainment area for all other pollutants.

Existing Local Air Quality

The BAAQMD monitors ambient air pollutant concentrations through a series of monitoring stations located throughout the Bay Area. The nearest monitoring station is located approximately seven miles north of Rohnert Park in Santa Rosa. The ambient air pollution concentrations monitored at this location are considered to be representative of southern Sonoma County. Table 3.2-2 identifies the national and state ambient air quality standards for relevant air pollutants along with the ambient pollutant concentrations that have been measured at the Santa Rosa monitoring station through the period of 2001 to 2003.

Table 3.2-2
Summary of Ambient Air Quality in the Project Vicinity

Air Pollutants Monitored at the Santa Rosa Monitoring Station	Year 2001	2002	2003
Ozone			
Maximum 1-hour concentration measured	0.086 ppm[1]	0.077 ppm	0.096 ppm
Days exceeding national 0.12 ppm 1-hour standard	0	0	0
Days exceeding state 0.09 ppm 1-hour standard	0	0	1
Maximum 8-hour concentration measured	0.063 ppm	0.060 ppm	0.079 ppm
Days exceeding national 0.08 ppm 8-hour standard	0	0	0
Respirable Particulate Matter (PM_{10})			
Maximum 24-hour concentration measured (national)	73.7 $\mu g/m^3$[2]	60.2 $\mu g/m^3$	34.2 $\mu g/m^3$
No. of days exceeding national 150 μg/m3 24-hour standard	0	0	0
Maximum 24-hour concentration measured (state)	78.1 $\mu g/m^3$	63.6 $\mu g/m^3$	36.3 $\mu g/m^3$[2]
Days exceeding state 50 μg/m3 24-hour standard	3	2	0
National annual arithmetic mean (AAM)	21.0 $\mu g/m^3$	19.7 $\mu g/m^3$	16.4 $\mu g/m^3$
Does measured AAM exceed national 50.0 $\mu g/m^3$ AAM standard?	No	No	No
State AAM	--[3]	--	16.9 $\mu g/m^3$
Does measured AAM exceed state 20.0 $\mu g/m^3$ AAM standard?	--	--	No
Fine Particulate Matter ($PM_{2.5}$)			
Maximum 24-hour concentration measured	75.9 $\mu g/m^3$	50.7 $\mu g/m^3$	38.8 $\mu g/m^3$
No. of days exceeding national 65 μg/m3 24-hour standard	1	0	0
National and state AAM	10.8 $\mu g/m^3$	10.5 $\mu g/m^3$	8.8 $\mu g/m^3$
Does measured AAM exceed national 15.0 $\mu g/m^3$ AAM standard?	No	No	No
Does measured AAM exceed state 12.0 $\mu g/m^3$ AAM standard?	No	No	No
Carbon Monoxide (CO)			
Maximum 8-hour concentration measured	2.40 ppm	2.10 ppm	1.77 ppm
Number of days exceeding national and state 9.0 ppm 8-hour standard	0	0	0
Nitrogen Dioxide (NO_2)			
Maximum 1-hour concentration measured	0.057 ppm	0.054 ppm	0.055 ppm
Days exceeding state 0.25 ppm 1-hour standard	0	0	0
AAM	0.013 ppm	0.013 ppm	0.012 ppm
Does measured AAM exceed national 0.0534 ppm AAM standard?	No	No	No

Source: California Air Resources Board, 2004.

Notes:
1 ppm = parts by volume per million of air.
2 $\mu g/m^3$ = micrograms per cubic meter.
3 Data not available.

Existing uses surrounding the proposed project site consist of residential, agricultural, educational uses and open space. Air pollutant emissions are generated in the local vicinity by stationary and area-wide sources, such as space and water heating, landscape maintenance from leaf blowers and lawn mowers, consumer products, and mobile sources, primarily automobile and truck traffic. Motor vehicles are the primary source of pollutants in the local vicinity.

Traffic-congested roadways and intersections have the potential to generate localized high levels of CO. Localized areas where ambient concentrations exceed national and/or state standards for CO are termed CO "hotspots." The BAAQMD considers CO as a localized problem requiring additional analysis when a project is likely to subject sensitive receptors to CO hotspots. Land uses such as primary and secondary schools, hospitals, and convalescent homes are considered to be sensitive receptors to poor air quality because the very young, the old, and the infirm are more susceptible to respiratory infections and other air quality-related health problems than the general public. Residential uses are considered sensitive because people in residential areas are often at home for extended periods of time, so they could be exposed to pollutants for extended periods. Recreational areas are considered moderately sensitive to poor air quality because vigorous exercise associated with recreation places a high demand on the human respiratory function.

The BAAQMD recommends the use of CALINE4, a dispersion model for predicting CO concentrations, as the preferred method of estimating pollutant concentrations at sensitive receptors near congested roadways and intersections. For each intersection analyzed, CALINE4 adds roadway-specific CO emissions calculated from peak-hour turning volumes to ambient CO air concentrations. For this analysis, localized CO concentrations were calculated based on a simplified CALINE4 screening procedure developed by the BAAQMD. The simplified procedure is intended as a screening analysis, which identifies a potential CO hotspot. This methodology assumes worst-case conditions and provides a screening of maximum, worst-case CO concentrations. However, the emission factors used in the analysis have been updated to EMFAC 2002 by the EIR analysts.[1]

Maximum existing 8-hour CO concentrations for the intersections are included in the project traffic analysis that would be most affected by the traffic generated by the Southeast Specific Plan project and cumulative development. The results of these calculations are presented in Table 3.2-3 for representative receptor locations at 25, 50, and 100 feet from each roadway. These distances were selected because they represent locations where a person may be living or working for more than eight hours at a time. The 8-hour national and state ambient air quality standard is 9.0 ppm.

Existing Project Site Emissions

A single family residence with appurtenant structures is located in the northeast portion of the Specific Plan site. The remainder of the Specific Plan area is a harvested hay field. Emissions are generated by stationary and area-wide sources from these uses, and from residents, employees, and supply vehicles driving to and from these uses. Fugitive dust emissions are also generated when the hay crops are harvested and the area is plowed for the next crop. These activities often generate more fugitive emissions than grading activities would on a similar site since hay fields are typically harvested and

plowed when the crops and ground are very dry, whereas construction grading sites are typically watered down for dust control several times per day.

Table 3.2-3
Existing Localized Carbon Monoxide Concentrations

	8-Hour CO Concentrations in Parts Per Million		
Intersection	**25 Feet**	**50 Feet**	**100 Feet**
Adobe Road & Petaluma Hill Road	3.2	2.9	2.6
Main Street & Old Redwood Highway	2.5	2.3	2.2
E. Cotati Avenue & Old Redwood Highway	2.6	2.4	2.2
E. Cotati Avenue & Camino Colegio	2.4	2.2	2.1
E. Cotati Avenue & Snyder Lane	2.4	2.2	2.1
E. Cotati Avenue & Bodway Parkway	2.5	2.3	2.2
E. Cotati Avenue & Petaluma Hill Road	2.7	2.5	2.3
Valley House Drive & Bodway Parkway	2.2	2.1	2.0
Valley House Drive & Petaluma Hill Road	2.6	2.4	2.2
Railroad & Petaluma Hill Road	2.4	2.2	2.1

Source: EIP Associates, 2004. Based on year 2004 emission factors.

Note:

National and state 8-hour standard is 9.0 ppm.

Impacts and Mitigation Measures

Standards of Significance

Based on the City of Rohnert Park thresholds of significance, air quality impacts would be considered significant if one or more of the following conditions were created by implementation of the Southeast Specific Plan project.

- **Impact Criterion #1:** Conflict with or obstruct implementation of the applicable air quality plan.
- **Impact Criterion #2:** Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- **Impact Criterion #3:** Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- **Impact Criterion #4:** Expose sensitive receptors to substantial pollutant concentrations.
- **Impact Criterion #5:** Create objectionable odors affecting a substantial number of people.

The thresholds discussed below are currently recommended by the BAAQMD in the *BAAQMD CEQA Guidelines* to determine the significance of air quality impacts associated with the Southeast Specific Plan.

Consistency with the 2000 Clean Air Plan

The *BAAQMD CEQA Guidelines* (published in December, 1999), do not identify a threshold or methodology to determine whether a general development project would conflict with or obstruct implementation of the Clean Air Plan. In response, the EIR analysts contacted the BAAQMD to discuss this issue and formulate such a methodology. BAAQMD staff stated that a proposed general development project would not conflict with or obstruct implementation of the Clean Air Plan if it implements transportation control measures from the Clean Air Plan.[2]

Construction Period Emissions

Construction–related activities are generally short-term in duration, and the BAAQMD does not recommend any thresholds of significance for their associated emissions. Instead, the BAAQMD bases the determination of significance on a consideration of the control measures to be implemented. If all appropriate emissions control measures recommended by the *BAAQMD CEQA Guidelines* are implemented for a project, then construction emissions are not considered significant. Currently these control measures only apply to emissions of fugitive dust. Emission controls are not required for the emissions generated by construction vehicle engines.

One of the reasons that construction-level air quality emissions are not compared with a quantified threshold is that the construction industry is an existing source of emissions within the Bay Area, and the entire state. In general, construction equipment operates at one site for a short time, and when finished, moves on to a new construction site. The same situation occurs for the construction employees who make a living going from one site to another doing similar construction work. For those reasons, construction exhaust emissions are included in the regional emission inventory that is the basis for regional air quality plans. Further as shown in Table 4 on page 12 of the *Revised San Francisco Bay Area Ozone Attainment Plan for the 1-Hour National Ozone Standard* (2001), construction equipment comprises a good portion of the past, existing, and future (through 2006) emission inventory within the Bay Area. Also, Table 1 on page 3 of the *Bay Area 2000 Clean Air Plan* states that PM_{10} emissions from "other sources" include construction operations for the past, present, and future (2006) emissions inventory. These are the reasons that the BAAQMD does not expect these emissions to impede attainment or maintenance of ozone or CO standards in the Bay Area.

Operational Emissions – Daily Emissions of ROG, NOx, and PM_{10}

The BAAQMD currently recommends that projects with operational motor vehicle emissions that exceed any of the following thresholds be considered significant. These thresholds apply to the operational motor vehicle emissions associated with individual projects only; they do not apply to construction-related emissions. The operational emissions that are generated by individual projects and exceed these thresholds are also considered to be cumulatively considerable by the BAAQMD.

- 80.0 pounds per day (ppd) of ROG
- 80.0 ppd of NOx
- 80.0 ppd of PM_{10}

Operational Emissions – Toxic Air Contaminants

The BAAQMD recommends that projects that could emit carcinogenic or toxic air contaminants that exceed the maximum individual cancer risk of 10 in one million or a hazard index greater than 1 be considered significant.

Project Evaluation

Clean Air Plan Consistency: *Would the project conflict with the regional Clean Air Plan? (Impact Criterion #1)*

The 2000 Clean Air Plan, discussed previously, was prepared to accommodate growth, reduce the pollutant levels in the Bay Area, meet federal and state ambient air quality standards, and minimize the fiscal impact that pollution control measures have on the local economy. Likewise, Chapter 6.4 of the Rohnert Park General Plan, discussed previously, identifies goals and policies that help the City contribute to regional air quality improvement efforts. General Plan air quality goals and policies that are applicable to the Southeast Specific Plan are discussed in Section 3.9, *Relationship to Plans and Planning Policy*. The Southeast Specific Plan is consistent with each of these goals and policies.

Chapter 4 of the *BAAQMD CEQA Guidelines* also identifies a number of measures that can be implemented to reduce the air quality impacts of new development projects. Several of these measures are included in the design of the proposed project and would help to reduce the emissions that would otherwise be generated by the project. Specific measures recommended in the *BAAQMD CEQA Guidelines* that are features of the Southeast Specific Plan project include the following:

- Provide on-site shops and services for employees, such as cafeteria, bank/ATM, dry cleaners, convenience market, etc. (each of these are permitted under the proposed mixed-use land uses and could provide services for local residents, and employees.);
- Provide safe, direct access for bicyclists to adjacent bicycle routes;
- Provide direct, safe, attractive pedestrian access from project to transit stops and adjacent development;
- Provide neighborhood-serving shops and services within or adjacent to residential project; and
- Provide interconnected street network, with regular grid or similar interconnected street pattern.

In addition to these measures, the future environment around the Southeast Specific Plan site would provide amenities that would help to encourage non-motor vehicle transportation by future residents, customers, and employees. These amenities include the following:

- Sidewalks and walking paths to most destinations in the surrounding area;

- Street trees that provide moderate coverage of the sidewalks and pedestrian paths;
- Most destinations within the vicinity accessible by pedestrians;
- Some streets have enhanced safety for pedestrians (e.g., separations between streets and pedestrian paths);
- A moderate amount of visually interesting walking paths;
- Existing transit service within walking distance of the project area;
- A few bicycle routes have paved shoulders to provide increased safety;
- Safe bicycle routes to educational facilities in close proximity to the project area.

Based on this information, the Southeast Specific Plan project would implement various transportation control and trip reduction measures that are consistent with the BAAQMD's goals for reducing regional air pollutants. Therefore, there would be no significant adverse air quality impact under Impact Criterion #1 regarding conflicting with or obstructing the implementation of an applicable air quality plan.

Construction Period Emissions: *Would the project violate air quality standards? (Impact Criterion #2)*

Impact 3.2-1

Construction activities associated with development of the Southeast Specific Plan project could generate substantial dust emissions. This would be a significant impact under Impact Criterion #2 regarding the substantial contribution to an existing or projected air quality violation.

As discussed previously, construction–related activities are generally short-term in duration and the BAAQMD does not recommend any thresholds of significance for construction-related emissions. Instead, the BAAQMD bases the determination of significance on a consideration of the control measures to be implemented. At this time, the only construction-related control measures the BAAQMD recommends are those related to dust. If all appropriate emissions control measures recommended by the *BAAQMD CEQA Guidelines* relating to dust are implemented for a project, then construction emissions are not considered significant. Conversely, if all of the appropriate emissions control measures recommended by the BAAQMD are not implemented, then construction emissions are considered significant.

Mitigation Measure 3.2-1A includes all appropriate dust control measures recommended by the BAAQMD. Mitigation Measure 3.2-1B is proposed to provide a resource for local residents to address air quality issues that may occur during construction. According to the South Coast Air Quality Management District's *CEQA Air Quality Handbook*, these types of measures would reduce by at least 50 percent the amount of fugitive dust generated by excavation and construction activities.[3] Therefore, construction-related air quality impacts would be reduced to a less than significant level. Mitigation Measure 3.2-1C would reduce even further the emissions generated by heavy-duty diesel-powered construction equipment operating at the project site.

Mitigation Measure 3.2-1A

Implement recommended dust control measures. To reduce particulate matter emissions during project excavation and construction phases, the project contractor(s) should comply with the dust control strategies developed by the BAAQMD. The project sponsor should include in construction contracts the following requirements or measures shown to be equally effective.

- Cover all truck hauling soil, sand, and other loose construction and demolition debris from the site, or require all such trucks to maintain at least two feet of freeboard;
- Water all exposed or disturbed soil surfaces in active construction areas at least twice daily;
- Use watering to control dust generation during demolition of structures or break-up of pavement;
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved parking areas and staging areas;
- Sweep daily (with water sweepers) all paved parking areas and staging areas;
- Provide daily clean-up of mud and dirt carried onto paved streets from the site;
- Enclose, cover, water twice daily or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.);
- Limit traffic speeds on unpaved roads to 15 mph;
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways;
- Replant vegetation in disturbed areas as quickly as possible;
- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more);
- Install wheel washers for all existing trucks, or wash off the tires or tracks of all trucks and equipment leaving the site;
- Install wind breaks at the windward side(s) of construction areas;
- Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 miles per hour over a 30-minute period or more; and
- To the extent possible, limit the area subject to excavation, grading, and other dust-generating construction activity at any one time.

Mitigation Measure 3.2-1B

Designate a dust control coordinator. To facilitate control of dust during construction and demolition phases, the project sponsor should include a dust control coordinator in construction contracts. All construction sites should have posted in a conspicuous location the name and phone number of a designated construction dust control coordinator who can respond to complaints by suspending dust-producing activities or providing additional personnel or equipment for dust control.

Mitigation Measure 3.2-1C

Reduce emissions from heavy-duty diesel-powered equipment. The project contractor(s) should implement measures to reduce the emissions of pollutants generated by heavy-duty diesel-powered equipment operating at the project site during project excavation and construction phases. The project sponsor should include in construction contracts the following requirements or measures shown to be equally effective.

- Keep all construction equipment in proper tune in accordance with manufacturer's specifications;
- Use late model heavy-duty diesel-powered equipment at the project site to the extent that it is readily available in the San Francisco Bay Area;
- Use diesel-powered equipment that has been retrofitted with after-treatment products (e.g., engine catalysts) to the extent that it is readily available in the San Francisco Bay Area;
- Use low-emission diesel fuel for all heavy-duty diesel-powered equipment operating and refueling at the project site to the extent that it is readily available and cost effective in the San Francisco Bay Area (this does not apply to diesel-powered trucks traveling to and from the site);
- Utilize alternative fuel construction equipment (i.e., compressed natural gas, liquid petroleum gas, and unleaded gasoline) to the extent that the equipment is readily available and cost effective in the San Francisco Bay Area;
- Limit truck and equipment idling time to five minutes or less;
- Rely on the electricity infrastructure surrounding the construction sites rather than electrical generators powered by internal combustion engines to the extent feasible.

Operational Emissions: ***Would the project violate air quality standards or result in an increase of a criteria pollutant? (Impact Criterion #2 and #3)***

Operational emissions generated by both stationary and mobile sources would result from normal day-to-day activities at the Southeast Specific Plan site after occupation. Stationary area source emissions would be generated by the consumption of natural gas for space and water heating devices, the operation of landscape maintenance equipment, and the use of consumer products. Mobile emissions would be generated by the motor vehicles traveling to and from the Specific Plan site.

The analysis of daily operational emissions has been prepared utilizing the URBEMIS 2002 computer model recommended by the BAAQMD using the vehicle trip numbers and vehicle trip reduction characteristics and amenities discussed above. The estimated daily emissions associated with the Specific Plan are identified in Table 3.2-4 along with the thresholds of significance recommended by the BAAQMD. As shown, the average daily emissions associated with the Southeast Specific Plan would not exceed the thresholds of significance recommended by the BAAQMD.

Table 3.2-4
Project Daily Operational Mobile Source Emissions

	Emissions in Pounds Per Day				
Mobile Emission Source	**ROG**	**NOx**	**CO**	**SO_2**	**PM_{10}**
Rural and Low Density Residential	6.48	4.77	66.11	0.10	16.76
Medium Density Residential	6.72	4.51	62.56	0.10	15.86
Park	0.06	0.02	0.20	0.00	0.05
Commercial/Retail	1.56	1.06	13.57	0.02	3.15
Total Emissions	**14.82**	**10.36**	**142.45**	**0.22**	**35.83**
BAAQMD Thresholds	**80.00**	**80.00**	**NT**	**NT**	**80.00**
Significant Impact?	**No**	**No**	**No**	**No**	**No**

Source: EIP Associates, 2004. Based on year 2020 emission factors.

Note:
NT: No threshold.

Because the BAAQMD does not apply their recommended thresholds to emissions generated by area sources such as natural gas for heating and cooling, landscape maintenance equipment, and consumer products, the City of Rohnert Park does not consider these emissions when evaluating the operational impacts of proposed projects. For informational purposes, however, the net increase in total emissions associated with the Southeast Specific Plan project is identified in Table 3.2-5 for both the summer and winter seasons. The winter season analysis assumes that every home within the Specific Plan area has a fireplace and burns an average of 0.01 cords of wood per season.

Therefore, while operational activities associated with the Southeast Specific Plan project would generate new air emissions, such emissions would be a less-than-significant under Impact Criterion #2 regarding the substantial contribution to an existing or projected air quality violation and Impact Criterion #3 regarding a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment. Although the operational impacts of the Southeast Specific Plan project would not exceed the thresholds of significance recommended by the BAAQMD, and would not be considered significant, the following enhancements are recommended to reduce even further the stationary and area source emissions associated with the project and further the BAAQMD's efforts to reduce such emissions. The project sponsor should include in construction contracts the following requirements or measures shown to be equally effective.

- Use solar or low-emission water heaters in the residential and retail buildings;
- Provide energy-efficient heating, cooling, and other appliances, such as cooking equipment, refrigerators, and dishwashers;
- Provide energy-efficient and automated controls for air conditioning;
- Install ozone destruction catalyst on air conditioning systems, in consultation with the BAAQMD;
- Use light colored roof materials to reflect heat;

- Where feasible and appropriate, use light colored parking surface materials;
- Plant shade trees in parking lots to reduce evaporative emissions from parked vehicles;
- If fireplaces are provided in new residential uses, install the low-emitting commercial fireplaces available at the time of development; and
- Require that commercial landscapers providing services at the project site use electric or battery-powered equipment, or other internal combustion equipment that is either certified by the California Air Resources Board or is three years old or less at the time of use, to the extent that such equipment is reasonably available and competitively priced in the San Francisco Bay Area.

Table 3.2-5
Total Project Daily Operational Emissions

	Emissions in Pounds Per Day				
Emission Source	**ROG**	**NOx**	**CO**	**SO_2**	**PM_{10}**
Summer Season					
Water and Space Heating	0.36	4.66	1.98	--	0.01
Landscape Maintenance Equipment	0.17	0.04	1.68	0.04	0.00
Consumer Products	22.65	--	--	--	--
Motor Vehicles	14.82	10.36	142.45	0.22	35.83
Total Emissions:	**38.00**	**15.06**	**146.10**	**0.26**	**35.84**
Winter Season					
Water and Space Heating	0.36	4.66	1.98	--	0.01
Fireplaces	35.04	0.40	38.65	0.06	5.29
Consumer Products	22.65	--	--	--	--
Motor Vehicles	14.23	16.05	155.13	0.19	35.83
Total Emissions:	**72.28**	**21.11**	**195.76**	**0.25**	**41.13**

Source: EIP Associates, 2004. Based on year 2020 emission factors.

Note:
Subtotals may not appear to add correctly due to rounding in the URBEMIS 2002 model.

Localized CO Concentrations: *Would the project cause exposure to pollutants? (Impact Criterion #4)*

As was done to assess existing CO concentrations, the simplified CALINE4 screening procedure was used to predict future CO concentrations at the study-area intersections in the vicinity of the Specific Plan area in the year 2020 with cumulative development projects and without traffic mitigation. The results of these calculations are provided in Table 3.2-6. As shown, future CO concentrations near these intersections would not exceed the national and state 9.0 ppm 8-hour ambient air quality standard for CO. With traffic mitigation, localized CO concentrations would be slightly lower than those shown in Table 3.2-6. Therefore, implementation of the Southeast Specific Plan project and cumulative development would not expose any sensitive receptors located in close proximity to these intersections to substantial pollutant concentrations. Therefore, there would be no significant adverse air quality

impact under Impact Criterion #4 regarding the exposure of sensitive receptors to substantial pollutant concentrations.

Table 3.2-6
Predicted Future Year 2020 Localized Carbon Monoxide Concentrations

	8-Hour CO Concentrations in Parts Per Million		
Intersection	**25 Feet**	**50 Feet**	**100 Feet**
Adobe Road & Petaluma Hill Road	2.2	2.1	2.0
Main Street & Old Redwood Highway	2.3	2.1	2.0
E. Cotati Avenue & Old Redwood Highway	2.0	2.0	1.9
E. Cotati Avenue & Camino Colegio	2.0	2.0	1.9
E. Cotati Avenue & Snyder Lane	2.0	1.9	1.9
E. Cotati Avenue & Bodway Parkway	2.2	2.1	2.0
E. Cotati Avenue & Petaluma Hill Road	2.2	2.1	2.0
Valley House Drive & Bodway Parkway	1.9	1.9	1.9
Valley House Drive & Petaluma Hill Road	2.0	1.9	1.9

Source: EIP Associates, 2004. Based on year 2020 emission factors.

Note:

National and state 8-hour standard is 9.0 ppm.

Toxic Air Contaminants: *Would the project cause exposure to pollutants: (Impact Criterion #4)*

Diesel particulate emissions, a known toxic air contaminant, would occur from delivery trucks traveling to and from the Specific Plan area. To address diesel particulate emissions, statewide programs and regulations are presently being developed and implemented by the ARB and U.S. EPA to reduce the risks of exposure to diesel exhaust. These programs include emission control requirements along with subsidies for upgrading older diesel engines to low-emissions models. In light of the available information, the effects of the toxic emissions from existing and future vehicle operations in the Southeast Specific Plan area are not expected to be substantial.

Toxic or carcinogenic air pollutants are not expected to occur in any meaningful amounts in conjunction with operation of the proposed land uses within the Specific Plan area. Only small quantities of common forms of hazardous or toxic substances, such as cleaning agents, which are typically used or stored in conjunction with residential and commercial uses, would be present. Most uses of such substances would occur indoors. Based on the common uses expected on the site, any emission would be minor.

Therefore, there would be no significant adverse air quality impact under Impact Criterion #4 regarding the exposure sensitive receptors to substantial pollutant concentrations.

Airborne Odors: ***Would the project create objectionable odors? (Impact Criterion #5)***

The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source, the wind speeds and direction, and the sensitivity of the receiving location each contribute to the intensity of the impact. While offensive odors rarely cause any physical harm, they can be unpleasant and cause distress among the public and generate citizen complaints.

Construction activities occurring in association with the Southeast Specific Plan would generate airborne odors associated with the operation of construction vehicles (i.e., diesel exhaust) and the application of architectural coatings. These emissions would occur during daytime hours only and would be isolated to the immediate vicinity of the construction site and activity. As such, they would not affect a substantial number of people.

Potential operational airborne odors could result from cooking activities associated with the new residential and possible restaurant buildings. These odors would be similar to existing residential and restaurant uses in Rohnert Park and would be confined to the immediate vicinity of the new buildings. The other potential source of odors would be new trash receptacles at the new buildings and neighborhood park planned for the project. The receptacles would have lids and be emptied on a regular basis, before potentially substantial odors have a chance to develop.

Therefore, there would be no significant adverse air quality impact under Impact Criterion #5 regarding the creation objectionable odors affecting a substantial number of people.

Cumulative Impact Assessment

Clean Air Plan Consistency: *Would the project conflict with the regional Clean Air Plan? (Impact Criterion #1)*

The discussion of cumulative development impacts is as described in the *Introduction* section of this EIR under the title *Cumulative Impact Assessment* and includes collectively the Specific Plan Areas and projects as described therein.

Cumulative development is not expected to result in a significant impact in terms of conflicting with, or obstructing implementation of, the 2000 Clean Air Plan. The Clean Air Plan was prepared to accommodate growth, to reduce the high levels of pollutants within the Bay Area, to return clean air to the region, and to minimize the impact on the economy. Consequently, as long as new development projects make efforts to reduce the number of vehicle trips associated with their land uses, implementation of the Clean Air Plan would not be obstructed by such growth.

Growth in Rohnert Park has not exceeded projections, and the City limits the amount of development that can occur on an annual basis and also implements transportation control measures from the Clean Air Plan. Further, the Southeast Specific Plan project would implement transportation control and trip reduction measures in its design that are consistent with the BAAQMD's goals for reducing regional air

pollutants such as ozone and particulates. Therefore, the impact of the Southeast Specific Plan project would not be cumulatively considerable under Impact Criterion #1 regarding conflicting with or obstructing implementation of the applicable air quality plan.

Construction Period Emissions: ***Would the project violate air quality standards? (Impact Criterion #2)***

Assuming that cumulative development implements all appropriate dust control measures recommended by the BAAQMD, the *BAAQMD CEQA Guidelines* deem the construction-related air quality impact of cumulative development would be less than significant. In the case of the Southeast Specific Plan, Mitigation Measure 3.2-1A includes all appropriate dust control measures recommended by the *BAAQMD CEQA Guidelines*. Mitigation Measure 3.2-1B is proposed to provide a resource for local residents to address air quality issues that may occur during construction. Mitigation Measure 3.2-1C would reduce the emissions generated by heavy-duty diesel-powered construction equipment operating at the project site. With these mitigation measures, which are in excess of that recommended by the *BAAQMD CEQA Guidelines*, the construction-related air quality impacts of the Southeast Specific Plan would not be cumulatively considerable under Impact Criterion #2.

Operational Emissions: ***Would the project violate air quality standards or result in an increase of a criteria pollutant? (Impact Criterion #2 and #3)***

Under the *BAAQMD CEQA Guidelines*, "any proposed project that would individually have a significant air quality impact . . . would also be considered to have a significant cumulative air quality impact." As discussed previously, the daily operational emissions of ROG, NOx, and PM_{10} from the Southeast Specific Plan would not exceed the thresholds in the *BAAQMD CEQA Guidelines*. Therefore, these emissions would also not be considered cumulatively considerable.

Localized CO Concentrations: ***Would the project cause exposure to pollutants? (Impact Criterion #4)***

The previous discussion above for the Southeast Specific Plan project for the year 2020 as relates to localized CO concentrations applies to the Southeast Specific Plan project under cumulative development conditions. As indicated, there would be no significant adverse air quality impact under Impact Criterion #4 regarding the exposure of sensitive receptors to substantial pollutant concentrations.

Toxic Air Contaminants: ***Would the project cause exposure to pollutants: (Impact Criterion #4)***

Cumulative development is not expected to expose sensitive receptors to substantial toxic pollutant concentrations. Cumulative development expected in the area around the Southeast Specific Plan area is expected to mainly consist of residential and commercial uses, which do not result in toxic emissions at levels that can be considered substantial. In addition, regulations and laws relating to toxic air

pollutants would also protect sensitive receptors from substantial concentrations. This would be a less-than-significant impact under Impact Criterion #4 regarding the exposure sensitive receptors to substantial pollutant concentrations.

Airborne Odors: *Would the project create objectionable odors? (Impact Criterion #5)*

Cumulative development would not have a significant impact in terms of the creation of objectionable odors affecting a substantial number of people. Projects projected to be built in the area around the Southeast Specific Plan area include residential, commercial, and possibly restaurant uses. Odors resulting from the construction of these projects are not likely to affect a substantial number of people, due to the fact that construction activities do not usually emit offensive odors. Other odor impacts resulting from these projects are also not expected to affect a substantial amount of people, as garbage from these projects would be stored in designated areas and in containers as required by City and County Health Department regulations, and restaurants are typically required to have ventilation systems that avoid substantial adverse odor impacts. This would be a less-than-significant impact under Impact Criterion #5 regarding the creation objectionable odors affecting a substantial number of people.

Endnotes — Air Quality

1 The emission factors used in the BAAQMD's localized CO screening procedure are based on EMFAC7G, which is out of date by several years and has been superceded by newer emission factor models, the current version of which is EMFAC 2002.

2 Interview with Henry Hilken, Principal Environmental Planner, Bay Area Air Quality Management District, June 24, 2004.

3 South Coast Air Quality Management District, *CEQA Air Quality Handbook*, November 1993, pages 11-15 and 11-16.

3.3 BIOLOGICAL RESOURCES

Introduction

This section of the EIR discusses existing biological resources surrounding and within the Southeast Specific Plan project site, and evaluates potential impacts on these resources in accordance with specified impact significance criteria. Information on biological resources is based on the "*Results of 2001 Survey for Special-Status Plant Species, Southeast Specific Plan Area*," the "*Jurisdictional Delineation, Willowglen Partners Property*," the "*Southeast Specific Plan Area California Tiger Salamander Survey Report*," field surveys conducted by study team biologists in February and March 2004, and a review of other available data sources as enumerated herein.

Setting

Biological Conditions

The southern Sonoma County area is biologically diverse. The Santa Rosa Plain, which contains much of Sonoma County, has been recognized as a unique feature within California that is capable of supporting sensitive habitats such as vernal pools and the plants and animals that use these habitats.[1] Most of the Rohnert Park area drains into local creeks and then into Laguna de Santa Rosa, a tributary to the Russian River. The Russion River (over 16 miles northwest of the Specific Plan Project site area) supports runs of federally protected salmonids including Chinook (*Oncorhynchus tshawytscha*), coho (*O. kisutch*), and steelhead (*O. mykiss*).

The 80 acre Southeast Specific Plan project site is predominantly flat, has historically been used for growing hay. No wetlands[2] and no special status plants[3] are located on the property.

Vegetation and Plant Communities

The Southeast Specific Plan site was walked, inspected, and plant species identified. The site contains one dominant vegetative habitat type, annual grassland. This habitat is characterized by introduced grass species such as wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), soft brome (*B. hordeaceus*), and perennial ryegrass (*Lolium perenne*). In addition to these grass species, several other herbaceous weedy plants were observed including black mustard (*Brassica nigra*), yellow star thistle (*Centaurea solstitialis*), vetch (*Vicia sativa*), prickly lettuce (*Lactuca serriola*), sticky tarweed (*Holocarpha virgata*) field bindweed (*Convolvulus arvensis*), curly dock (*Rumex crispus*), Italian thistle (*Carduus pycnocephalus*), and bur clover (*Medicago polymorpha*).

Wildlife and Wildlife Habitat

The grassland habitat within the Southeast Specific Plan project site supports a variety of wildlife. Small mammal burrows were observed on the periphery of the site, which could support rodent species, including Botta's pocket gopher (*Thomomys bottae*), moles (*Scapanus* spp), and California

meadow vole (*Microtus californicus*). Bird species observed included western meadowlark (*Sturnella neglecta*), and red-winged blackbird (*Agelaius phoeniceus*).

Special Status Plant and Wildlife Species

Special-status species, also referred to as "sensitive" species, are those meeting the criteria in CEQA Section 15380 and include species listed as threatened, endangered, or proposed for listing, candidates for listing, species of concern to the U.S. Fish and Wildlife Service (USFWS), and species of special concern to the California Department of Fish and Game (CDFG). This term also includes those species designated by Federal, State, local, or scientific organizations as needing protection because of their rarity or threats to their existence.

Special Status Plant Species

The California Natural Diversity Data Base (CNDDB) and the California Native Plant Society (CNPS) data reports for the 7.5-minute Cotati USGS quadrangle lists nine sensitive plant species that occur within the quadrangle, none of which occur on the project site (Appendix B).[4,5] Of these nine, three are associated with woodland or forest habitats which are not found in the project site. Special status plant surveys were conducted by Laurence P. Stromberg, focused on the six remaining plants, plus an additional eight plants that are listed in the Santa Rosa Plain Vernal Pool Ecosystem Preservation Plan,[6] prepared for the Santa Rosa Plain Vernal Pool Task Force. These surveys focused on an area that included the project site and south to Railroad Avenue and were conducted on five days in March and April 2001. The surveys were consistent with rare plant survey guidelines established by the CDFG. The report concluded that suitable habitat for wetland vegetation occurred primarily to the southwest and southeast areas outside of the Southeast Specific Plan project site. The Corps determined that no jurisdictional wetlands exist on the project site, supporting the conclusion that the project site does not support special status plant habitat.

Special Status Wildlife Species

Several special-status wildlife species occur or potentially occur within the general project site area. Information regarding potentially occurring special-status wildlife species in the vicinity of the Southeast Specific Plan project site was gathered from the CNDDB, environmental documents, field surveys conducted for this project, and conversations with local biologists. These sources combined, include the identification of four species of amphibians and reptiles, and five species of birds (Appendix B). No special status animals were observed within the Southeast Specific Plan project site during field surveys, but habitat is suitable for several species.

Habitat required by many of the sensitive species reported from the greater Santa Rosa area is not available within the Southeast Specific Plan project site. For example, tricolored blackbirds (*Agelaius tricolor*) require tulles or bulrush stands within marsh habitat for nesting. Those species for which habitat is not available and are not likely to occur within the Southeast Specific Plan project site are not discussed further within this report but are presented in Appendix B. Brief species accounts for those species which could occur within the Southeast Specific Plan project site follows.

California Tiger Salamander (*Ambystoma californiense*)

The California tiger salamander was listed as threatened under the Federal Endangered Species Act (FESA) on August 4, 2004.[7] Several days after listing the tiger salamander, the USFWS proposed to designate critical habitat for this species; however, critical habitat was not proposed for the Santa Rosa Plain because of ongoing collaborative management efforts.[8] Tiger salamanders are also a CDFG species of special concern.[9]

California tiger salamanders require standing water for reproduction and larval development. Migration from grassland aestivation habitat to breeding locations begins with fall rains. Breeding has been recorded between November and March and eggs have been observed between December and February.[10] Adults do not remain within ponds following the completion of breeding, but return to the grasslands. Eggs hatch within 2-4 weeks and larvae remain within the ponds for 3-6 weeks.[11] Metamorphosis from larvae to juvenile forms generally occurs in early summer as pools begin to dry out. The adult and juvenile salamanders spend most of the year in small rodent burrows in grassland and oak savanna habitats.

Removal of breeding habitat in the form of wetlands, stock ponds, and vernal pools adjacent to grasslands throughout California has resulted in a depletion of this species. The loss of grassland adjacent to suitable breeding habitat could result in abandonment of the breeding habitat. The construction of roads and other barriers to migration has interrupted migratory corridors used by this species resulting in reduced numbers of breeding populations.

There are no known breeding populations of California tiger salamander within the Southeast Specific Plan project site.[12] Trapping efforts on the project site did not result in the detection of California tiger salamanders in the fall and winter of 2003-2004[13] or the fall and winter of 2004-2005.[14] The CNDDB reports a 1972 occurrence of California tiger salamanders on Railroad Avenue and Petaluma Hill Road, approximately 0.5 miles south of the site.[15] However, according to the CNDDB record, Dr. Mark Jennings considers the site extirpated since no further observations have been recorded.[16] The project site supports no wetland habitat that could be used for breeding, and ponds located east, south, and southwest of the site are not known to support California tiger salamander.[17] Marginal aestivation habitat is located on the site (small mammal burrows were observed in February 2004), but Petaluma Hill Road and East Railroad Avenue separate the site from the nearby ponds, creating a barrier to dispersal if breeding were to occur in the ponds. Given this above, it is concluded that California tiger salamanders do not occur on the site or migrate to the site.

Burrowing Owl (*Athene cunicularia*)

The Southeast Specific Plan project site is within the range of the western burrowing owl, a Federal and State species of concern, which is also protected by the Federal Migratory Bird Treaty Act. Burrowing owls are year-round residents in open grasslands and shrub habitats where they use small mammal burrows and artificial structures for nesting and cover. Burrowing owls often nest in roadside embankments, on levees, and along irrigation canals in areas with low growing vegetation. They can exhibit high site fidelity, often reusing burrows year after year. Occupancy of suitable burrowing owl

habitat can be verified at a site by observation of a pair of burrowing owls during the spring and summer months, or, alternatively, by the presence of molted feathers, cast pellets, prey remains, eggshell fragments, or excrement (guano or must), near or at a burrow. The project site supports tall grassland habitat, and no ground squirrel burrows were present on the site. Burrowing owls have not been reported breeding within Sonoma County since 1986 according to the Sonoma County Breeding Bird Atlas.[18] CNDDB reports an observation in late December, approximately 1.3 miles north of the site,[19] but this bird was most likely a migrant as no nest burrow was located. Given the tall vegetation and absence of ground squirrel burrows, it is unlikely that burrowing owls would use the site for nesting activities, but wintering birds could use it as foraging habitat.

Loggerhead Shrike (*Lanius ludovicianus*)

The loggerhead shrike is a Federal Species of Concern and a California Species of Special Concern. It is a resident of open habitats with scattered shrubs and trees, and open-canopied oak and pine woodlands. The shrike nests in shrubs or small trees and is known to breed in Sonoma County, but not within the Southeast Specific Plan project site.[20] The shrike is an opportunistic feeder that preys on insects, small mammals, reptiles, amphibians, small birds, and carrion. While perch sites, and foraging habitat are available for the loggerhead shrike within the Southeast Specific Plan project site, nesting habitat is absent. No loggerhead shrikes were observed during spring 2004 field surveys.

White-tailed Kite (*Elanus leucurus*)

This small raptor, also a Federal Species of Concern, is most frequently observed as it hovers over open fields in search of the small mammals upon which it preys. Nests are typically built in relatively isolated trees surrounded by suitable foraging habitat. The nests are usually placed above dense foliage in such a manner that they are open from above but not visible from below. Within Sonoma County the open grasslands and oak woodlands of the southern portion of the County are the preferred nesting habitats.[21] No white-tailed kites or habitat suitable for nesting were observed during fieldwork for this project.

Regulatory Setting

Several Federal, State, and regional agencies have jurisdictional responsibilities regarding permit approvals and other regulatory actions for public improvements and private development projects that may affect biological resources within the San Francisco Bay area. Some of the permits and regulatory actions discussed below may require mitigation measures to be implemented to offset potential adverse impacts resulting from development activities.

Federal Regulations

Federal Endangered Species Act of 1973

Section 3 of the Federal Endangered Species Act (FESA) defines an endangered species as any species or subspecies of fish, wildlife, or plants "in danger of extinction throughout all or a significant portion

of its range." A threatened species is defined as any species or subspecies "likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Designated endangered and threatened species, as listed through publication of a final rule in the *Federal Register*, are fully protected from a "take" without an incidental take permit administered by the USFWS under Section 10 of the FESA. Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct (50 CFR 17.3). The term "harm" in the definition of "take" in the Act means an act that actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering (50 CFR 17.3). The term "harass" in the definition of "take" means an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering (50 CFR 17.3). Proposed endangered or threatened species are those for which a proposed regulation, but not a final rule, has been published in the Federal Register.

Section 7 of the FESA requires that Federal agencies ensure that their actions are not likely to jeopardize the continued existence of a listed species or destroy or adversely modify its critical habitat. This obligation requires Federal agencies to consult with the USFWS on any actions (issuing permits including Section 404 permits, issuing licenses, providing Federal funding) that may affect listed species to ensure that reasonable and prudent measures will be undertaken to mitigate impacts on listed species. Consultation with USFWS can be either formal or informal depending on the likelihood of the action to adversely affect listed species or critical habitat. Once a formal consultation is initiated, USFWS will issue a Biological Opinion (either a "jeopardy" or a "no jeopardy" opinion) indicating whether the proposed agency action will or will not jeopardize the continued existence of a listed species or result in the destruction or modification of its critical habitat. A permit cannot be issued for a project with a "jeopardy" opinion unless the project is redesigned to lessen impacts.

In the absence of any Federal involvement, as in a privately-funded project on private land with no Federal permit, only Section 10(a) of the FESA can empower the USFWS to authorize incidental take of a listed species provided a habitat conservation plan (HCP) is developed. To qualify for a formal Section 10(a) permit, strict conditions must be met including a lengthy procedure involving discussions with USFWS and local agencies, preparation of a HCP, and a detailed Section 10(a) permit application (only required when dealing with the National Marine Fisheries Service and marine or anadramous fish).

Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act (MBTA) makes it unlawful to "take" (kill, harm, harass, etc.) any migratory bird listed in 50 CFR 10, including their nests, eggs, or products. Migratory birds include geese, ducks, shorebirds, raptors, songbirds, and many others.

State Regulations

California Endangered Species Act

The California Endangered Species Act (CESA) declared that deserving plant or animal species will be protected by the State because they are of ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the State. CESA established State policy to conserve, protect, restore, and enhance endangered species and their habitats. Under State law, the California Fish and Game Commission officially lists and formally designates plant and animal species as rare, threatened, or endangered. Listed species are generally given greater attention during the land use planning process by local governments, public agencies, and landowners than are species that have not been listed.

CESA authorizes that "Private entities may take plant or wildlife species listed as endangered or threatened under the Federal ESA and CESA, pursuant to a Federal incidental take permit issued in accordance with Section 10 of the Federal ESA, if the California Department of Fish and Game (CDFG) certifies that the incidental take statement or incidental take permit is consistent with CESA" (Fish & Game Code § 2080.1(a)).

California Environmental Quality Act - Treatment of Listed Plant and Animal Species

Both the Federal and State Endangered Species Acts protect only those species formally listed as threatened or endangered (or rare in the case of the State list). Section 15380 of CEQA Guidelines, however, independently defines "endangered" species of plants, fish or wildlife as those whose survival and reproduction in the wild are in immediate jeopardy and "rare" species as those who are in such low numbers that they could become endangered if their environment worsens. Therefore, a project will normally have a significant affect on the environment if it will substantially affect a rare or endangered species or the habitat of the species. The significance of impacts to a species under CEQA, must be based on analyzing actual rarity and threat of extinction despite legal status or lack thereof.

State of California - Sections 3503, 3503.5, 3800 of the Fish and Game Code

These sections of the Fish and Game Code prohibit the "take, possession, or destruction of birds, their nests or eggs." Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered a "take."

Impacts and Mitigation Measures

Standards of Significance

Based on the City of Rohnert Perk thresholds of significance, biological resources impacts would be considered significant if one or more of the following conditions were created by implementation of the Southeast Specific Plan.

- **Impact Criterion #1:** Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in

local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

- **Impact Criterion #2:** Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- **Impact Criterion #3:** Have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, etc.) through direct removal, filling, hydrological interruption, or other means.
- **Impact Criterion #4:** Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- **Impact Criterion #5:** Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- **Impact Criterion #6:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.

Impacts in any of the above categories would be considered *significant and unavoidable* effects if they could not be (a) eliminated, (b) avoided or minimized by redesign or relocation of some components of the project, (c) reduced to a less-than-significant level, or (d) compensated for by replacement of equal habitat extent and value.

Project Evaluation

Habitat Modification: *Would the project adversely affect sensitive species through habitat modification? (Impact Criterion #1)*

The Southeast Specific Plan project site contains grassland considered suitable as foraging habitat by birds of prey that include special status (sensitive) species. About 80 acres of grassland habitat would be removed to allow for project construction that is suitable for foraging by species such as the white-tailed kite, loggerhead shrike, northern harrier (*Circus cyaneus*) and red-tail hawk (*Buteo jamaicensis*). However, this is considered less than significant because birds of pray which could occur within the project site are not substantially dependent on the site for foraging. The loss of this community would not constitute a significant impact to biotic resources due to its relative abundance locally and regionally, and to the degraded nature of much of this community on the project site and presence of non-native species. The project would therefore result in a minimal loss of foraging habitat and would not have a substantial adverse effect on habitat modification under Impact Criterion #1.

Riparian Habitat, Wetlands: *Would the project adversely affect riparian or wetland habitat? (Impact Criteria #2 and #3)*

As noted previously, there are no wetlands located on the project site. Annual grasslands are the dominant vegetative habitat type. Additionally, the project would not interrupt water supply for

adjacent but off site wetlands. Therefore, project construction would not have a substantial adverse effect on any riparian habitat or federally-protected wetlands under Impact Criteria #2 and #3.

Wildlife Movement, Local Policies and Plans: ***Would the project adversely affect wildlife movement, conflict with local policies or plans protecting biological resources? (Impact Criteria #4, #5 and #6)***

Habitat fragmentation is the process by which a continuous block of habitat is broken into smaller pieces. True fragmentation also typically results in less habitat being available and increases edge habitat. [22] A variety of forces can be focused on wildlife populations in different manner when habitat is fragmented. These forces can include increases in predation pressure, vulnerability to disturbance, separation from other populations, and decreased dispersal success. [23] The effect of fragmentation of habitat on a particular species depends on the species. Larger or more mobile animals (e.g., deer and birds) are capable of traversing intermediate or marginal quality habitats to reach higher quality areas and may be less affected by habitat fragmentation than more sessile species (e.g., amphibians and reptiles). [24]

At this time, the Southeast Specific Plan project site is not crossed by major roads or paths. Development of the project site would create areas of residences, access roads and walkways that connect the different parts of the project site. Smaller vertebrates such as rodents, and snakes would find that site development would create a series of difficult barriers to movement. Rural residential properties located north of the site may support terrestrial wildlife that migrate to adjacent undeveloped habitat areas. Larger animals like raccoons, and skunks would cross the roadways and paths. While some may be struck by vehicles and killed, the reduction in numbers would unlikely affect the populations of these species within the region. Site development would not cause populations of these species to drop below self-sustaining levels. Further, the project site is currently separated from undeveloped habitat by Petaluma Hill Road, Valley House Drive, and from more urbanized areas to the west by Bodway Parkway. Given these existing barriers, the impact associated with development of the project would be less than significant. In view of the above, the project would not adversely affect wildlife movement under Impact Criterion #4 and no mitigation would be required.

There are no specimen trees on the project site that would need to be removed prior to site development and the project would not conflict with a local tree preservation policy or ordinance under Impact Criterion #5. The southeast Specific Plan site is not known to be included within a habitat conservation plan or natural community conservation plan or other regional or state conservation plan and would therefore not conflict with Impact Criterion #6 or the discussion of plans under Impact Criterion #2.

Cumulative Development

The discussion of cumulative development impacts is as described in the *Introduction* section of this EIR under the title *Cumulative Impact Assessment* and includes collectively the Specific Plan Areas and projects as described therein.

No significant biological resources impacts have been identified for the Southeast Specific Plan project. Therefore, there is no evidence to suggest that the project would contribute to any potentially cumulative considerable adverse biological resource impacts that may result from cumulative project development.

Endnotes — Biological Resources

1 USFS (U.S. Forest Service) No Date. Ecological Subregions of California: 263Aj, Coastal Hills – Santa Rosa Plain. Available on line at: http://www.fs.fed.us/r5/projects/ecoregions/263aj.html

2 Willowglen Partners Property (APN 047-111-030), approved by the United States Army Corps of Engineers in October, 2002 (Corps File # 27185N).

3 Stromberg, L.P., Ph. D. Results of 2001 Survey for Special-Status Plant Species, Southeast Specific Plan Area, Rohnert Park, California, May 25, 2001.

4 CNDDB (California Natural Diversity Data Base) 2004. Rarefind report for the Cotati 7.5 minute USGS quadrangle. Commercial Version, information dated January 05, 2004.

5 CNPS (California Native Plant Society) 2003. Inventory of rare and endangered plants (online edition, v6.2). Rare Plant Scientific Advisory Committee, David P. Tibor, convening editor. California Native Plant Society. Sacramento, California. Accessed on Mar. 18, 2004 from http://www.cnps.org/inventory.

6 CH2MHill, 1995. Santa Rosa Plain Vernal Pool Ecosystem Preservation Plan – Phase I, Final Report. Prepared for the Santa Rosa Plain Vernal Pool Task Force.

7 Federal Register, 2004. Endangered and Threatened Wildlife and Plants; Determination of threatened Status for the California Tiger Salamander; and Special Rule Exemption for Existing Routine Ranching Activities. Final Rule. Vol. 69, No. 149, pp 47212 – 47248.

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9 CDFG (California Department of Fish and Game), 2004. Special animals list – August. Available online at: http://www.dfg.ca.gov/hcpb/species/lists.shtml

10 Petranka, J.W., 1998. Salamanders of the United States and Canada. Smithsonian Institution Press.

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3.4 GEOLOGY, SOILS AND SEISMICITY

Introduction

Soils, geology and seismicity conditions are important aspects of all development projects in the San Francisco Bay Area. Although most projects have little or no effect on geology, any project involving construction will have some effect on soils and topography; and all may be affected by certain geologic events, such as earthquakes and are protected through existing building codes and regulations.

This section of the EIR discusses the regional geologic and seismic characteristics influencing the Southeast Specific Plan area; the local faulting, soils and soil resource conditions; the potential effects of seismicity; and the potential effects of planning and development on soil resources. Erosion and sedimentation issues are addressed in Section 3.5, *Hydrology and Water Quality*, of this EIR because they are, primarily, related to turbidity and depositional effects in local and regional water bodies.

Setting

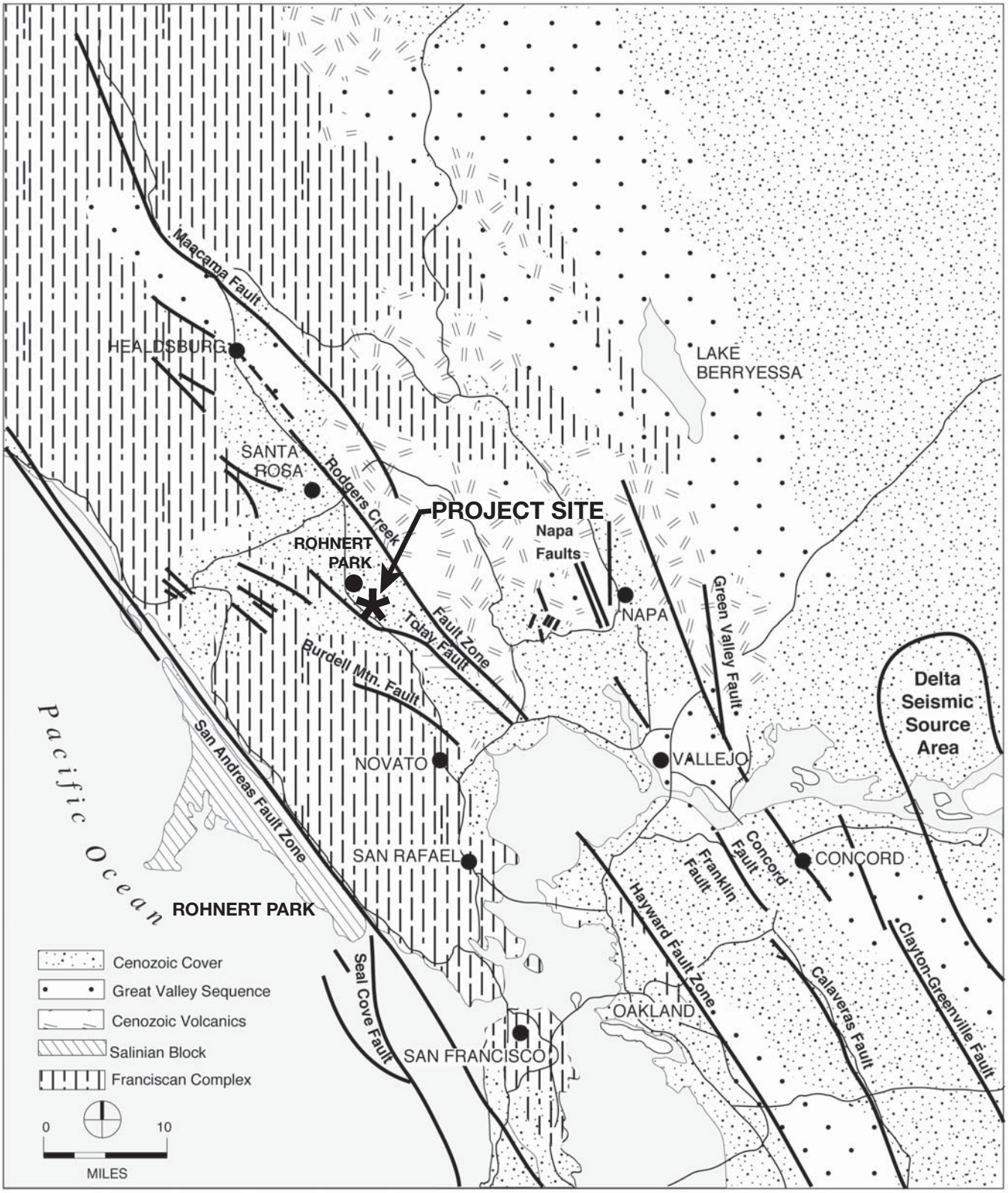
Regional Characteristics

Geology

The regional geologic framework of the Bay Area (Figure 3.4-1), Sonoma County, and the City of Rohnert Park in particular, can be understood through the theory of plate tectonics. Earth's mantle is composed of several large plates that move relative to each other. The San Andreas Fault Zone is at the junction of two such plates. The Pacific plate, on the west side of the fault zone, is moving north relative to the North American plate on the east side. All of the geologic formations in Sonoma County are on the North American plate. One of the results of plate movement is the regional rock deformation that is expressed in the general northwest trend of valleys and ridges in Sonoma County. This is visible, for example, in the orientation of the Rodgers Creek fault about 2.5 miles northeast of the Specific Plan area, and in the orientation of the Sonoma Mountains between three and four miles east of Rohnert Park. Another result of plate movement, discussed below, is the regional seismicity that Rohnert Park has in common with the rest of the Bay Area.[1]

Seismicity

The City of Rohnert Park, including the project area, lies within the San Andreas Fault System, which is approximately 44 miles wide in the Bay Area.[2] The principal active faults, on which there is evidence of displacement during Holocene time (the last 11,000 years), include the San Andreas, San Gregorio, Hayward, Rodgers Creek, West Napa, Calaveras, Concord, and Green Valley faults.[3] Figure 3.4-1 shows the approximate position of the major fault zones, the general distribution of the major groups of rock units, and the location of the project area in relation to these features.



SOURCE: California Geological Survey, 2001 and U.S. Geological Survey, 1994

FIGURE 3.4-1: REGIONAL GEOLOGIC MAP

Table 3.4-1 contains the estimated maximum parameters for earthquakes on known major faults potentially affecting the Specific Plan area. Terms that may be unfamiliar to the general public are defined in the glossary prior to the endnotes of this section.

Table 3.4-1
Estimated Maximum Parameters
For Major Known Faults Affecting the Southeast Rohnert Park Specific Plan Area

Fault	Rodgers Creek	San Andreas	West Napa	Hayward
Moment Magnitude[1]	7.1	7.9	6.7	7.1
Duration of Strong Shaking (seconds)[2]	18-30	30-60	18-30	30-60
Maximum Intensity (MMI)[3]	VIII-IX	VII	VII	VII
Peak Horizontal Accelerations in Rock and Stiff Soil (Gravity)[4]	>0.6	0.2 - 0.3	0.3 – 0.4	0.3 – 0.4
Approximate Distance and Direction from Site to Fault (Miles)	2.5 NE	16 SW	20 E	30 SSE

Source: EIP Associates.

Notes:

1. For the purposes of describing the size of the design (or scenario) earthquake of a particular fault segment, **moment magnitude** (M_w) of the characteristic earthquake for that segment has replaced the concept of a maximum credible earthquake of a particular Richter magnitude. This has become necessary because the Richter Scale "saturates" at the higher magnitudes; that is, the Richter scale has difficulty differentiating the size of earthquakes above magnitude 7.5. The M_w scale is proportional to the area of the fault surface that has slipped, and thus, is directly related to the length of the fault segment. Although the numbers appear lower than the traditional Richter magnitudes, they convey more precise (and more useable) information to geologic and structural engineers.
2. Duration of ground motion at 0.5 g within 10 miles of the fault. Estimates based on relationships developed by Bolt, 1973.
3. Estimated Modified Mercalli Intensity damage level based on relationships developed by Perkins and Boatwright, 1995, or Richter, 1958 (San Andreas fault only).
4. Estimates based on relationships developed by Seed and Idriss, 1972, Joyner and Boore, 1981, Campbell and Sadigh, 1983.

The City of Rohnert Park, Sonoma County, and the rest of the Bay Area, are in one of the most active seismic regions in the United States. Each year, low and moderate magnitude earthquakes occurring within or near the Bay Area are felt by residents of the City and County. Since the mid-nineteenth century about 150 local earthquakes have been felt in Sonoma County. About ten of these temblors caused some damage in the County; those of 1906 and 1969 being the most destructive. The April 1906 earthquake on the San Andreas fault, estimated at about Moment Magnitude (M_W) 7.9 (M8.3 on the Richter scale - see Glossary), practically destroyed the business district of the nearby City of Santa Rosa, causing 61 reported deaths, although only chimney falls were reported from the Rohnert Park area.[4] Similarly, the October 1969 earthquakes on the Healdsburg fault registered M5.6 and M5.7, causing injuries and several million dollars of building and utility damage in Sonoma County, but relatively minor damage in Rohnert Park. More recently, the M_W 6.9 (M7.1) Loma Prieta earthquake of October 1989 on the San Andreas fault, caused severe damage throughout the Bay Area, but, again, not extensively in Rohnert Park. The incorporation of earthquake safety design for

construction in the City, through the use of the California Building Code (see below) as adopted by the City of Rohnert Park (Title 15 of the City's *Municipal Code*), has ensured that no known structures in the City would be specifically hazardous during an earthquake.[5]

The major fault zones of the San Andreas Fault System were the sources of all these earthquakes, and are expected to be the sources of most future earthquakes in the area.[6] It is necessary to design structures and facilities in Rohnert Park to withstand the anticipated effects of seismic vibration from distant, as well as nearby, sources.[7] Recognizing this necessity, the City and County General Plan Safety Elements specifically identify the Rodgers Creek fault, about 2.5 miles northeast of the Specific Plan area, as a potential source of seismic activity that must be taken into consideration during the planning of development in the City and County. The County identifies several splinter faults within about 0.75 mile west of the Rodgers Creek fault in the Rohnert Park-Cotati and Environs Planning Area that the County considers potentially active, but have not been included in an Alquist-Priolo Earthquake Fault Zone (see below).[8]

On the basis of research conducted since the 1989 Loma Prieta earthquake, the United States Geological Survey (USGS) and other scientists conclude that there is a 62 percent probability of at least one M_w 6.7 or greater earthquake, capable of causing widespread damage, striking the San Francisco Bay region before 2032. The Hayward-Rodgers Creek fault system has the highest probability (27 percent) of generating a M_w 6.7+ earthquake in this timeframe.[9] Earthquakes of this magnitude are sufficient to create ground accelerations in bedrock and in stiff unconsolidated sediments severe enough to cause major damage to structures and foundations not designed specifically to resist the lateral forces generated by earthquakes, and to underground utility lines not designed with sufficient flexibility to accommodate expected seismic ground motion.[10]

There are several other active and potentially active fault zones that could affect the Southeast Specific Plan area. These include faults that are historically active (during the last 200 years), those that have been active in the geologically recent past (about the last 11,000 years, referred to as the Holocene epoch), and those that have been active at some time during the Quaternary geologic period (the last 1.6 million years). The Rodgers Creek, San Andreas, West Napa, and Hayward fault zones are all, at least partially, historically active. Parts of each of these major fault zones have been classified as Holocene or Quaternary depending on the age of the evidence of the most recent movement.[11]

A characteristic earthquake on the entire San Andreas fault (M_w 7.9) probably is the largest that would affect the Specific Plan area; however, a characteristic earthquake on the Rodgers Creek fault (M_w 7.1) would be so much closer to any point in the Specific Plan area that its effects would be at least as severe. Other faults that exist in the vicinity of the City of Rohnert Park are pre-Quaternary in origin, generally being related to the Coastal thrust belt or the Coast Range thrust. They were active tens of millions of years ago, but have shown no evidence of activity during the last 1.6 million years.[12]

Project Vicinity Characteristics

Topography[13]

The ground surface in the Specific Plan area is a nearly level plain that slopes very gently to the southwest: the average gradient is about one percent. Elevations are between 133 and 165 feet above mean sea level. An unnamed tributary to Lichau Creek east of Petaluma Hill Road parallels the east boundary of the Specific Plan area, but no natural or man-made channels cross the area.

Soils[14]

The soils of Sonoma County belong to two major groups related to the substrate on which the soils have developed. The major soil groups are divided into 15 associations which are subdivided into soil types based on a variety of distinguishing characteristics, such as texture, slope, and agricultural capability. One major soil group is represented in the Specific Plan area: the basin soils of the lowlands. The soil association in the plan area is the Clear Lake-Reyes, developed on the unconsolidated deposits of flood plains, low terraces and alluvial fans. The soil types in the plan area are Clear Lake clay and Clear Lake clay loam. The clay occurs throughout the western two-thirds of the site: the clay loam occurs in the southeast corner of the site area (about one-third of the site). These soils are slowly permeable, highly expansive, highly corrosive to untreated steel and concrete, with poor soil strength (high compressibility), and of low to moderate liquefaction potential. These native soils range in thickness from four to eight feet. In their undisturbed state, runoff is slow and erosion hazard is low. About five to eight acres near the eastern edge of the Specific Plan area are mantled with as much as five feet of artificial fill that is more coarse than the native soils, being sandy clay containing fragments of wood and concrete.

Both the City and County General Plan Safety Elements identify the project area as having moderate potential for liquefaction. Even though surface soils may have low potential, liquefaction can occur at depth if the water table is within about 50 feet below the ground surface in pockets of fine-grained, uniformly sized sand, such as can exist in alluvial deposits. In general, areas underlain by poorly sorted older alluvium are less liquefaction-prone than those underlain by the younger fine sand deposits. Although no groundwater was encountered during the project geotechnical investigation, the water table in the project area can vary seasonally to as little as five feet below the ground surface. No loose or soft layers were encountered by the geotechnical investigation between 4 feet and 26.5 feet (maximum depth of investigation) in the Plan area. Consequently, liquefaction may need to be addressed at specific construction sites if subsurface conditions such as depth to water table, uniformity of grain size and mix of grain size are found to vary substantially from those encountered during the geotechnical investigation.

Soils with low erosion potential in their natural condition can become erosion-prone when disrupted unless specific measures are taken to control erosion. Because the major adverse effects of potential erosion are turbidity and sedimentation in drainage ways, this issue is discussed in Section 3.8, *Hydrology and Water Quality,* of this EIR.

Geologic Units[15]

The Specific Plan area is underlain by geologically young fluvial deposits. They consist of interbedded alluvial fine sand, silt and silty clay. These unconsolidated sediments are easy to excavate; however, the soils do not provide sufficient strength for unsupported cuts to stand in relatively steep slopes during an entire construction season. The clayey portions of the material are prone to expansion and do not drain easily. The slightly coarser-grained sediments drain more readily, although slowly and there is a possibility of encountering pockets of liquefiable sand.

Faults[16]

The known active fault traces closest to the project area are those of the Rodgers Creek fault, about 2.5 miles northeast of the Specific Plan area (Figure 3.4-1). This is the only fault in the vicinity of Rohnert Park that is zoned by the State under the Alquist-Priolo Earthquake Fault Zoning Act of 1972. No other Earthquake Fault Zones or known active faults traces cross or trend toward the Specific Plan area. The nearby traces of the Rodgers Creek fault in the Earthquake Fault Zone are historically active, but show little evidence of ground surface rupture during the last 11,000 years, a relatively short time in terms of geologic activity. The Rodgers Creek fault is capable of generating a characteristic earthquake of M_w 7.1 and peak horizontal ground accelerations in excess of 0.6 g (60 percent of the force of gravity).

Groundshaking intensities associated with this event are expected to be IX (violent) on the Modified Mercalli Intensity (MMI) Scale.[17] MMI IX generally will cause some damage to specially designed structures, serious damage in structures of good workmanship, and heavy damage in ordinarily substantial buildings, foundations and underground utilities such as water pipelines. Seismic ground response of this intensity in the near-source area of the fault trace would cause severe damage to older buildings, roadways, and infrastructure that were not constructed to resist earthquake forces; however, there are no structures on the site. For new buildings, roads and infrastructure constructed to current California Building Code Zone 4 seismic-resistance standards and criteria, using site-specific parameters to address the proximity of the fault, the damage potential would be somewhat lower, but still considerable.[18]

Landslides[19]

No landslide deposits have been mapped within the Specific Plan area or in the immediate vicinity. The California Geological Survey slope stability map of southern Sonoma County categorizes Specific Plan area as an area of the greatest relative stability because there are no slopes steeper than about one percent.

Applicable Policies and Regulations

State Policies and Regulations

The major State legislation regarding earthquake fault zones is the *Alquist-Priolo Earthquake Fault Zoning Act*. In 1972, the State of California began delineating Earthquake Fault Zones (called Special Studies Zones prior to 1994) around active and potentially active faults to reduce fault-rupture risks to structures for human occupancy.[20] The Act has resulted in the preparation of maps delineating Earthquake Fault Zones to include, among others, recently active segments of the Rodgers Creek fault. The Act provides for special seismic design considerations if developments are planned in areas adjacent to active or potentially active faults.[21] The Southeast Rohnert Park Specific Plan area is not crossed by any Alquist-Priolo Earthquake Fault Zone.

The major State regulations protecting the public from geo-seismic hazards, other than surface faulting, are contained in California Code of Regulations, Title 24, Part 2, the *California Building Code* and California Public Resources Code, Division 2, Chapter 7.8, *The Seismic Hazards Mapping Act*. Both these regulations generally apply to public buildings (and a large percentage of private buildings) intended for human occupancy.

The major State legislation regarding mineral resource zones is the *Surface Mining and Reclamation Act of 1975*. One purpose of the act is to classify mineral resources in the State and to transmit the information to local governments which regulate land use in each region of the State. Local governments are responsible for designating lands that contain regionally significant mineral resources in the local General Plans to assure resource conservation in areas of intensive competing land uses. The law has resulted in the preparation of Mineral Land Classification Maps delineating Mineral Resource Zones (MRZ) 1 through 4 for aggregate resources (sand, gravel and stone).

The Southeast Rohnert Park Specific Plan Area is in an area zoned as MRZ-1, defined as an area where there is adequate information to indicate that no significant mineral deposits are present. The closest Mineral Resource Sector identified by the MRZ mapping is Sector F, approximately 3.5 miles west of the site.[22]

City of Rohnert Park Policies and Regulations

Two City policies for protection from seismic and geologic hazards are addressed in Section 7.1, Seismic and Geologic Hazards, of the General Plan Health and Safety Element (Chapter 7). The Seismic and Geologic Hazards Goal is to minimize the risk to life and property from seismic and geologic hazards in Rohnert Park.

- Policy HS-1 requires new construction to use site preparation, grading, and foundation designs in accordance with site-specific soil conditions, and requires submittal of a preliminary soils report, prepared by a registered civil engineer.
- Policy HS-2 continues the requirement that all new buildings in the City be built in conformance with the seismic requirements of the Uniform Building Code and Uniform Plumbing Code, as adopted by the City in its Municipal Code.

See Section 3.9, *Relationship to Plans and Planning Policy*, of this EIR, for additional information.

The current California Building Code is the basis for the City of Rohnert Park Building Code. In addition to state amendments to the Uniform Building Code, jurisdictional authorities such as the City are permitted to develop local amendments, when deemed necessary. As required by law, the City has made findings based on local climatic, geologic and topographical conditions that allows for the adoption of a number of local code amendments considered necessary primarily because of the existence of unusual and deleterious soil conditions. These amendments are incorporated in Title 15 of the City's *Municipal Code* to ensure seismic and soil safety design for construction.

Impacts and Mitigation Measures

Standards of Significance

Based on the City of Rohnert Park thresholds of significance, soils, geology, and seismicity impacts would be considered significant if one or more of the following conditions were created by implementation of the Southeast Specific Plan.

- **Impact Criterion #1:** Expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death involving:
  - 1.1 Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;
  - 1.2 Strong seismic groundshaking;
  - 1.3 Seismic-related ground failure, including liquefaction; or
  - 1.4 Landslides.
- **Impact Criterion #2:** Result in substantial soil erosion or the loss of topsoil.
- **Impact Criterion #3** Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
- **Impact Criterion #4:** Be located on expansive soil, as defined in Table 18-1-A of the California Building Code (2001), creating substantial risks to life or property.

Adverse impacts in any of these categories would be considered unavoidable significant effects of the project, if they could not be (a) reduced to an acceptable level of risk, (b) eliminated, or (c) avoided by using existing techniques, generally recognized by geotechnical consultants in the Bay Area to be applicable and feasible.

Project Evaluation

Fault Rupture: ***Would the project expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning***

Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Impact Criterion #1.1)

Based on a comparison of the Southeast Specific Plan development scheme as proposed and conditions outlined in the Setting portion of this section of the EIR showing that the Specific Plan area is about 1.5 miles from known traces of any potentially active fault and about 2.5 miles from known traces of the nearest zoned active fault (the Rodgers Creek fault), fault-line surface rupture would not be a substantial hazard within the Specific Plan area. Therefore, there would be no significant adverse impact under Impact Criterion #1.1 regarding fault rupture potential.

Groundshaking: ***Would the project expose people or structures to the potentially adverse effects of strong seismic groundshaking? (Impact Criteria #1.2 and #1.3)***

From a review of regional and local geo-seismic conditions, it is apparent that the City of Rohnert Park will be subjected to at least one major earthquake during the useful economic life of structures in the Specific Plan area.[23] The design earthquake for the project area is estimated by the U.S. and California Geological Survey to be a M_w 7.1 earthquake on the Rodgers Creek fault, creating peak horizontal ground accelerations that could be greater than 0.6g because the Plan area is within 3.1 miles of the fault (the near-source area). The resulting vibration could cause damage to buildings, roads and infrastructure (primary effects), and could cause ground failures such as liquefaction or settlement in alluvium and poorly compacted fill (secondary effects). Because the Specific Plan area is 2.5 miles from known traces of the Rodgers Creek fault, violent seismically induced groundshaking would occur in the Specific Plan area.

Structures within the Specific Plan area would be underlain by alluvial materials that, in their natural state, could respond poorly to loading during seismic ground motion. The older alluvium contains slightly more coarse materials than the younger alluvium, and, therefore, may be less susceptible to failure caused by earthquake vibrations.

To reduce the primary and secondary risks associated with seismically induced groundshaking, it is necessary to take the location and type of subsurface materials into consideration when designing foundations and structures in the Specific Plan area. In the City of Rohnert Park, residential, commercial and institutional buildings; bridges; pedestrian overcrossings; and all associated infrastructure are required to reduce the exposure to potentially damaging seismic vibrations through seismic-resistant design, in conformance with Chapter 16, Structural Design Requirements, Division IV, Earthquake Design, of the *California Building Code*. Because the Specific Plan area is in the "near-source" area (within 3.1 miles of a known active fault) of the Rodgers Creek fault, Section 1629, Criteria Selection, of the Building Code requires special seismic design factors be applied to the project including:

- The use of California Building Code Seismic Zone 4 Standards as the minimum seismic-resistant design for all proposed facilities;

- Additional seismic-resistant earthwork and construction design criteria, based on the site-specific recommendations of a California Certified Engineering Geologist in cooperation with the project's California-registered geotechnical and structural engineers;
- An engineering analysis that demonstrates satisfactory performance of alluvium or fill where either forms part or all of the support, especially where the possible occurrence of liquefiable soils exists; and,
- An analysis of soil expansion potential and appropriate remediation (compaction, removal/replacement, etc.) prior to using any expansive soils for foundation support.

Based on a comparison of the Southeast Specific Plan development scheme as proposed with the geo-seismic conditions outlined in the Setting portion of this section of the EIR showing that a regulatory framework exists to address earthquake safety issues, seismically induced groundshaking would not be a substantial hazard within the Specific Plan area. Therefore, there would be no significant adverse impact under Impact Criteria #1.2 and #1.3 regarding strong seismic groundshaking.

Landslides: ***Would the project expose people or structures to landslides? (Impact Criterion #1.4)***

Based on a comparison of the Southeast Specific Plan development scheme as proposed with the conditions outlined in the Setting portion of this section of the EIR showing that the Specific Plan area is nearly level and flat, landslides would not be a substantial hazard within the Specific Plan site. Therefore, there would be no significant adverse impact under Impact Criterion #1.4 regarding landslides.

Erosion: ***Would the project result in substantial soil erosion? (Impact Criterion #2)***

As addressed Section 3.5, *Hydrology and Water Quality*, of this EIR, erosion and sediment transport control are required by City, County, and Regional Water Quality Control Board regulations through general plan policies and regulatory permits. An Erosion and Sediment Transport Control Plan must be prepared for the project prior to the commencement of grading. An erosion control professional, or landscape architect or civil engineer specializing in erosion control, must design the Erosion and Sediment Transport Control Plan and be on-site during the installation of erosion and sediment transport control structures, to supervise the implementation of the designs and the maintenance of facilities throughout the site clearing, grading and construction periods.

Based on a comparison of the Southeast Specific Plan development scheme as proposed with the conditions outlined in the Setting portion of Section 3.5, *Hydrology and Water Quality*, of this EIR showing that a regulatory framework exists to address erosion and sediment transport control issues, erosion would not be a substantial hazard within the Specific Plan area. Therefore, there would be no significant adverse impact under Impact Criterion #2 regarding erosion.

Unstable Soils: ***Would the project be located on unstable soils? (Impact Criteria #3 and #4)***

The existence of expansive, compressible and corrosive soils throughout the Specific Plan area makes it necessary to ensure the soils used for foundation support are sound. Using unsuitable soils would have the potential to create future problems of building settlement and utility line disruption. When weak soils are re-engineered specifically for stability prior to use, these potential effects can be reduced or eliminated. An acceptable degree of soil stability can be achieved by the required incorporation of soil treatment programs (grouting, compaction, drainage control, etc.) in the excavation and construction plans to address site-specific soil conditions. The site-specific analysis is the mainstay of foundation support design in areas where unsuitable conditions are suspected. Such analyses contain recommendations for ground preparation and earthwork specific to the site, that become an integral part the construction design.

As part of the construction permitting process, the City requires completed reports of soil conditions at the specific construction sites to identify potentially unsuitable soil conditions. The evaluations must be conducted by registered soil professionals, and measures to eliminate inappropriate soil conditions must be applied, depending on the soil conditions. The design of foundation support must conform to the analysis and implementation criteria described in the City's Building Code, Chapters 16, 18, and A33. Adherence to the City's codes and policies ensures the maximum practicable protection available for users of buildings and infrastructure and their associated trenches, slopes, and foundations.

Based on a comparison of the Southeast Specific Plan development scheme as proposed with the conditions outlined in the Setting portion of this section of the EIR showing that a regulatory framework exists to address weak soils issues, unstable geologic and soil units would not be a substantial hazard within the Specific Plan Area. Therefore, there would be no significant adverse impact under Impact Criteria #3 and #4 regarding unstable soils.

Cumulative Development

The discussion of cumulative development impacts is as described in the *Introduction* section of this EIR under the title *Cumulative Impact Assessment* and includes collectively the Specific Plan Areas and projects as described therein.

The context for the analysis of cumulative soils, geology and seismicity impacts is the City of Rohnert Park, including all cumulative growth therein, as represented by full implementation of the Rohnert Park 2020 General Plan. The Southeast Specific Plan project would increase the number of people and structures that could be exposed to potential effects related to seismic hazards such as groundshaking, or liquefaction. Implementation of the Plan would increase the number of structures that could be subject to the effects of expansive soils or other soil constraints that could affect structural integrity, roadways, or underground utilities. Site preparation and development would create temporary and/or permanent ground surface changes that could alter erosion rates. Potentially adverse environmental effects associated with seismic hazards, as well as those associated with expansive soils, topographic alteration, and erosion, usually are site-specific and generally do not combine with similar effects that could occur with other projects in the City. Implementation of the provisions of the City's Building

Code and grading ordinances, the National Pollution Discharge Elimination System permit requirements, and General Plan Health and Safety Policies HS-1 and -2 would ensure that potential site-specific impacts would be maintained at less than significant levels. Consequently, the impacts of project implementation would not be cumulatively considerable.

Glossary

Alquist-Priolo Earthquake Fault Zone: In 1972 the State of California began delineating special studies zones (called Earthquake Fault Zones since January 1994) around active and potentially active faults in the state. The zones are revised periodically, and extend 200 to 500 feet on either side of identified fault traces. No structures for human occupancy may be built across an identified active fault trace. An area of 50 feet on either side of an active fault trace is assumed to be underlain by the fault, unless proven otherwise. Proposed construction within the Earthquake Fault Zone is permitted only following the completion of a fault location report prepared by a California Registered Geologist.

Characteristic Earthquake: The moment magnitude (see below) of the seismic event considered representative of a particular fault segment, based on seismologic observations and statistical analysis of the probability that a larger earthquake would not be generated during a given time frame. In the Bay Area, the characteristic earthquake for the Peninsula segment of the San Andreas fault has a moment magnitude (M_W) of 7.1; the entire Hayward fault, a M_W of 7.3; and the Rodgers Creek fault, M_W 7.1. The term "characteristic earthquake" replaces the term "maximum credible earthquake"(see below) as a more reliable descriptor of future fault activity.

Horizontal Ground Acceleration: The speed at which soil or rock materials are displaced by seismic waves. It is measured as a percentage of the acceleration of gravity (0.5g = 50 percent of 32 feet per second squared, expressed as an horizontal force). Peak horizontal ground acceleration is the maximum acceleration expected from the characteristic earthquake predicted to affect a given area. Repeatable acceleration refers to the acceleration resulting from multiple seismic shocks. Sustained acceleration refers to the acceleration produced by continuous seismic shaking from a single, long-duration event.

Maximum Credible Earthquake (MCE): The largest Richter magnitude (M) seismic event that appears to be reasonably capable of occurring under the conditions of the presently known geological framework. This term has been replaced by "characteristic earthquake," which is considered a better indicator of probable seismic activity on a given fault segment within a specific time frame.

Modified Mercalli Intensity (MMI) Scale: A 12-point scale of earthquake intensity based on local effects experienced by people, structures, and earth materials. Each succeeding step on the scale describes a progressively greater amount of damage at a given point of observation. Effects range from those which are detectable only by seismicity recording instruments (I) to total destruction (XII). Most people will feel Intensity IV ground motion indoors and Intensity V outside. Intensity VII frightens most people, and Intensity IX causes alarm approaching panic. The scale was developed in 1902 by Giuseppi Mercalli for European conditions, adapted in 1931 by American seismologists Harry Wood and Frank Neumann for conditions in North America, and modified in 1958 by Dr. Charles F. Richter to accommodate modern structural design features.

Moment Magnitude (M_W): A logarithmic scale used by modern seismologists to measure the amount of energy released by an earthquake. For the purposes of describing this energy release (i.e. the "size" of the earthquake on a particular fault segment for which seismic-resistant construction must be designed) the moment magnitude (M_W) of the characteristic earthquake for that segment has replaced the concept of a maximum credible earthquake of a particular Richter magnitude. This has become necessary because the Richter scale "saturates" at the higher magnitudes; that is, the Richter scale has difficulty differentiating the size of earthquakes above M 7.5. The M_W scale is proportional to the area of the fault surface that shifts (slips) during an earthquake, and, thus is directly related to the length of the rupture. It reflects the amount of "work" (in the sense of classical physics) done by the earthquake. Although the numbers of the M_W scale may appear lower than those of the traditional

Richter magnitudes, they convey more precise (and more useable) information to geologic and structural engineers.

Richter Magnitude Scale: A logarithmic scale developed in 1935 to 1936 by Dr. Charles F. Richter and Dr. Beno Gutenberg to measure earthquake magnitude (M) by the amount of energy released, as opposed to earthquake intensity as determined by local effects on people, structures, and earth materials (for which, see Modified Mercalli Intensity Scale). Each whole number on the Richter scale represents a 10-fold increase in amplitude of the waves recorded on a seismogram and about a 31-fold increase in the amount of energy released by the earthquake. Because the Richter scale tends to saturate above about M 7.5, it is being replaced in modern seismologic investigations by the moment magnitude (Mw) scale (see above).

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3.5 HYDROLOGY AND WATER QUALITY

Introduction

This section of the EIR discusses local and regional hydrologic conditions with respect to the Southeast Specific Plan project, including drainage facilities, flood hazards, water quality (particularly as affected by erosion), and groundwater issues. The setting is described, followed with an analysis of the potential for hydrologic impacts in accordance with specified impacts significance criteria. The primary sources of information on which the analysis in this section is based include site observations; text and figures in the City of Rohnert Park *Draft Southeast Specific Plan*;[1] maps and tables in the Health and Safety Element of the City of Rohnert Park *General Plan*;[2] pertinent data on hydrology and water quality previously compiled for the 2003 Southeast Specific Plan;[3] maps, tables and text in the City of Rohnert Park 2005 Final Water Supply Assessment[4] ([WSA] a summary of which is included as Appendix C in this EIR), information from the Federal Emergency Management Agency (FEMA), the City of Rohnert Park, the Sonoma County Water Agency, and the North Coast Regional Water Quality Control Board (Region 1).

Setting

Project Area Characteristics

Ground Features

The topography, soils, subsurface materials, and geologic structure of the Southeast Specific Plan area are discussed in Section 3.4 of this EIR, *Geology, Soils, and Seismicity*. The distribution and relationship of these features influences the location, form, and quality of surface water and groundwater. In turn, these features are shaped, to a greater or lesser extent, by standing and flowing water, whether on the ground surface or beneath it. Most soils in the vicinity of Rohnert Park, for example, were eroded by flowing water from upland slopes and deposited as river channel or pond sediments in a structural valley between ridges of bedrock. In the vicinity of the Southeast Specific Plan area, the bedrock ridges of the Sonoma Mountains to the east were the source of sediments that formed the Santa Rosa Plain in the Russian River and Petaluma Valley Watersheds. The generally fine-grained nature of the soils on the Plain and in the Valley tends to retard percolation to the water table, but the underlying sediments contain sufficient medium- to coarse-grained material to allow limited passage of groundwater.

Surface Water Drainage

The Southeast Specific Plan area is a gently sloping plain containing a cultivated field and a single residence in the northeast corner. Elevations are between 133 and 165 feet above mean sea level (msl). The ground surface is nearly level and slopes very gently to the southwest at an average gradient of about one percent. Overland drainage generally is toward the southwest through the Southeast Specific

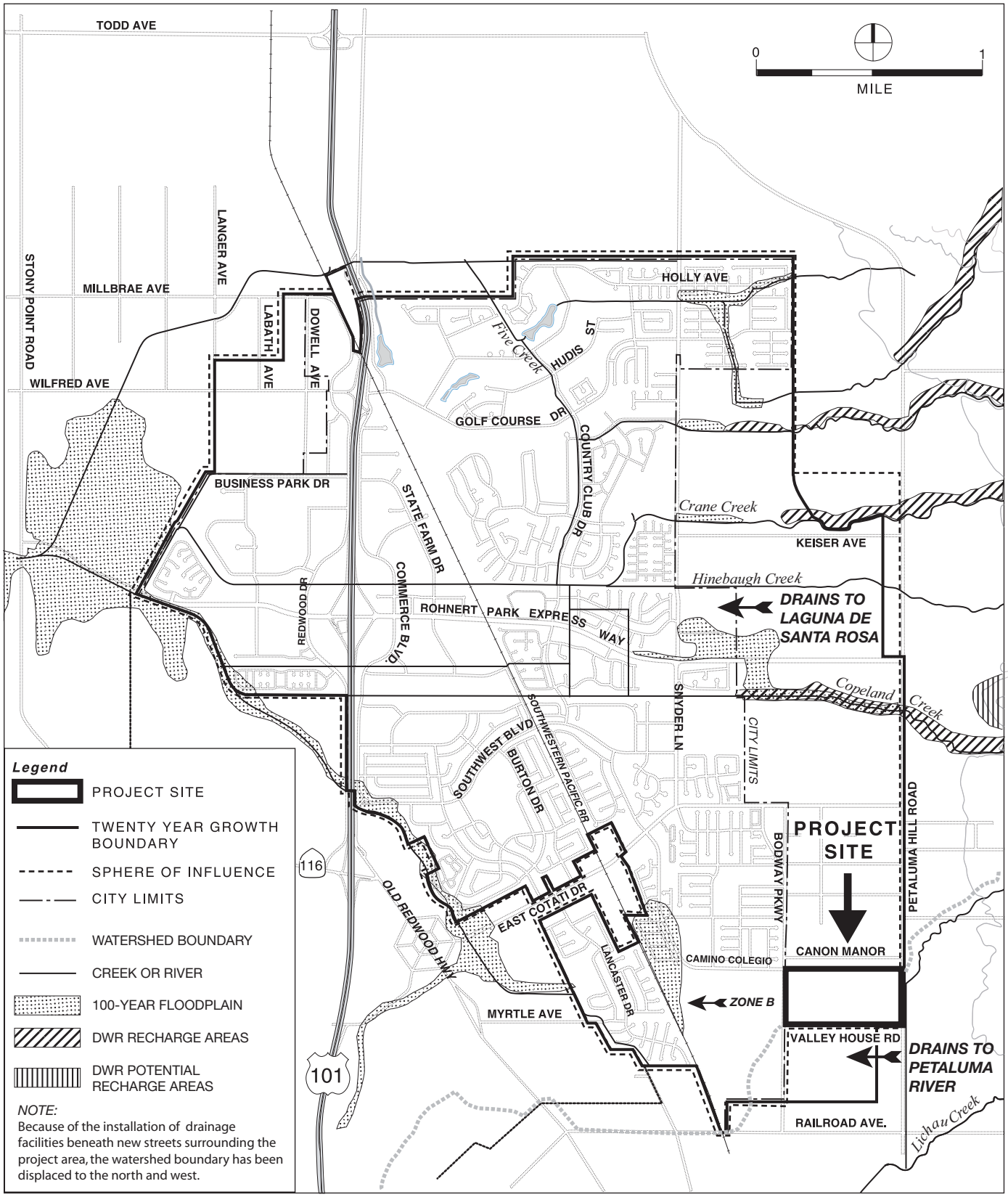
Plan area and the surrounding vicinity. There is a drainage channel along the east side of Petaluma Hill Road that is tributary to Lichau Creek about 0.6 mile south of the Southeast Specific Plan area (see Figure 3.5-1). Overland flow from the Sonoma Mountains toward the Southeast Specific Plan area is intercepted by roadside drainage ways, such as the one along Petaluma Hill Road, which divert the flow toward Lichau Creek. Precipitation falling in the Southeast Specific Plan area is intercepted by similar drainage ways flowing south along Bodway Parkway and west along Valley House Drive, which are tributary to the Laguna de Santa Rosa.

Lichau Creek is in the Petaluma River watershed, which drains to San Pablo Bay. The natural divide between the Petaluma River watershed and the Laguna de Santa Rosa watershed, which drains to the Russian River, crosses the Southeast Specific Plan site from northeast to southwest. The extension of urban and suburban land uses into the vicinity north and west of the Southeast Specific Plan area during the last 25 years has altered the natural watershed divide through grading and the installation of storm drains. Drainage patterns near the natural divides occasionally have been diverted from one watershed to another by the construction of channels, roadside ditches and culverts. Consequently, drainage patterns inside the City Limits now tend to reflect roads and railway embankments more than natural land contours. Westerly and southwesterly drainage from the Southeast Specific Plan site is intercepted by Bodway Parkway and carried to the Laguna de Santa Rosa. Southerly drainage from the Specific Plan area formerly went to Lichau Creek which crosses the Southern Pacific right-of-way about one mile south-southwest of the Southeast Specific Plan site, turns southeast through Penngrove, and joins the other upper tributaries to the Petaluma River about 2.5 miles south of the Southeast Specific Plan site. This flow is now diverted west along Valley House Drive into the Laguna de Santa Rosa watershed.

The Santa Rosa Plain receives an average rainfall ranging from 28 to 40 inches per year. The Petaluma Valley generally receives between 24 and 28 inches annually. Average annual rainfall in the vicinity of the Southeast Specific Plan site, near the boundary between the Plain and the Valley, is about 23 inches, with almost 80 percent of this total occurring between the months of December and March. Rainfall intensities range from 1.2 to 1.4 inches per hour, for a one-hour duration, 100-year recurrence interval storm. The most recent major flooding event in the vicinity was in 1995, when heavy “El Nino” rains in the lower Russian River watershed generated “bank full” flow conditions in many streams on the Plain. The Southeast Specific Plan area was not affected severely by these storms.[5]

Flood Hazard

The Sonoma County Water Agency (SCWA) is responsible for most of the maintenance of major streams and flood control facilities throughout the Santa Rosa Plain. In Rohnert Park, storm drainage is under joint management of the City and the SCWA. The City, including the Southeast Specific Plan site, drains to the Russian River. The City maintains responsibility for the system of underground pipes that provides for minor and intermediate drainage, while the SCWA maintains the system of open channels that diverts major drainage flows west towards the Laguna de Santa Rosa. Open channels and pipe systems in the City are designed to meet SCWA standards and comply with the National Flood



SOURCE: City of Rohnert Park (2002), California Department of Water Resources (2004), Federal Emergency Management Agency (1981 through 1991), EIP Associates (2004).

EIP

CITY OF ROHNERT PARK SOUTHEAST SPECIFIC PLAN

FIGURE 3.5-1: REGIONAL HYDROLOGIC MAP

Hazard Insurance Program. The SCWA reviews drainage plans and general designs of specific land development proposals for their hydraulic adequacy. Comprehensive stormwater management programs have been undertaken by the SCWA to remove the flood hazard designation applied by FEMA from most areas in the affected watersheds. Consequently, a storm water detention facility for the Southeast Specific Plan site would be located in the park adjacent to the Mixed-Use portion of the site. The storm water would be metered to the existing system in Bodway Parkway to ensure that discharge into the existing collection system would be the same rate as at present.

The City's General Plan Health and Safety Element, and the latest FEMA Flood Insurance Rate Maps, indicate that the Southeast Specific Plan area is outside any 100-year or 500-year flooding zones.[6] Nonetheless, there are reaches of the Laguna de Santa Rosa downstream from the Southeast Specific Plan site that are subject to the 100-year flood (see Figure 3.5-1).[7] For the most part, the Laguna de Santa Rosa's main channel contains the 100-year flood, although shallow floodwater (as deep as one foot) does spread into low-lying areas along some reaches. The Laguna de Santa Rosa is constricted where it crosses Stony Point Road, causing shallow floodwater to spread along both sides of the channel.

Surface Water Quality

Surface water quality of the region is monitored by the Regional Water Quality Control Board (RWQCB), North Coast Region (Region 1). Under the RWQCB *Water Quality Control Plan* (the Basin Plan), the specific beneficial uses for inland streams on the Santa Rosa Plain include municipal and domestic supply, agricultural supply, industrial process supply, groundwater recharge, water contact recreation, non-contact water recreation, wildlife habitat, cold freshwater habitat, warm freshwater habitat, fish migration, and fish spawning. Not all of these uses are necessarily present in the vicinity of the Southeast Specific Plan area. Present and potential water quality problems identified by the RWQCB in the Basin Plan include increased surface runoff, sedimentation, the disposal of municipal wastes and wastewater, and the dispersal of hazardous materials associated with agricultural runoff.[8]

Surface water quality in the project area is influenced by the three separate sources of water that contribute to the flow in local drainage channels and swales: 1) natural streamflow, 2) stormwater and irrigation runoff, and 3) direct discharges. Natural streamflow is limited, and depends on the slow drainage of groundwater through surface seeps and springs in the foothills east of Rohnert Park and in the surrounding Santa Rosa Plain. This water generally is free of contamination, although it often contains high concentrations of dissolved minerals and other naturally occurring solids. Stormwater and irrigation runoff enter streams as overland flow, carrying the dissolved or suspended residue of both natural and human land uses. This residue can include sand, silt, clay, organic fertilizers and pesticides, heavy metals, oil and grease, animal waste, decaying forest litter, and debris. Only industrial plants and wastewater treatment facilities discharge directly into streams. These facilities are regulated directly by the RWQCB, which grants permits for waste discharges and enforces the treatment provisions set forth in each permit.

The sand, silt and clay carried by stormwater runoff are the products of continuing soil erosion in the upland portions of the watersheds northeast of the City. As the topography flattens toward the southwest, soil-forming materials are deposited and accumulate slowly, gradually reducing channel capacity which can force flood waters farther into the surrounding floodplain. The increase in stormwater runoff from urbanization of the Santa Rosa Plain and the Petaluma Valley has caused longer duration, high velocity flows in many of the easily eroded natural stream channels. The Central Sonoma Watershed Project has provided maintenance and upgrading for channels tributary to the Russian River to eliminate the FEMA flood hazard designation from much of the Santa Rosa Plain. The Southeast Specific Plan area is more than 1.5 miles distant from any area subject to regular or frequent flooding.

Groundwater[9]

The City of Rohnert Park is at the southern end of the Santa Rosa Plain in the California Coast Ranges north of San Francisco Bay. The Santa Rosa Plain drains to the northwest toward the Russian River and then to the Pacific Ocean. The broad gentle plain on which the City lies is known as the Cotati Valley, which is designated as the Santa Rosa Plain Subbasin by the California Division of Water Resources.

A Quaternary sequence (less than 1.6 million years old) of alluvial deposits (river-laid gravel, sand, silt, and clay) forms the surface of the Cotati Valley. In the Rohnert Park area, groundwater is produced largely from the upper 800 feet of these sedimentary deposits. The Quaternary deposits are interfingered and underlain by a late Tertiary sequence (less than 23.7 million years old) of volcanic and sedimentary rocks known as the Wilson Grove (Merced), Petaluma, and Sonoma Volcanics. The two sequences are between 8,500 and 10,000 feet thick.

The 2005 Final Water Supply Assessment (WSA) indicates the City's wells are in a very complex aquifer system that is divided into four vertical zones, which do not represent laterally extensive aquifers. The vertical zones of the aquifer system were designated as follows.

- Shallow (0 to 200 foot depth),
- Intermediate (200 to 600 foot depth),
- Deep (600 to 800 foot depth), and
- Lower (depths greater than 800 feet).

Most City wells are constructed to depths of 600feet or less. A few wells extend to depths of about 800 feet, and three wells extend to as much as 1,500 feet.

The shallow zone consists largely of fine-grained clays and sandy clays with a few thin sand to gravel beds. In the northern part of the City, most sands occur near the margins of the Cotati Valley. More sand occurs further south, possibly deposited by alluvial fan sources in the Copeland Creek and Lichau Creek areas. The depositional system was small alluvial fans grading into a fluvial plain or possibly a lake.

The intermediate zone contains most of the City's wells, constructed with perforated intervals between depths of 200 to 600 feet. This zone is a complex sequence of thin (and rare of thick) sand to sand-and-gravel beds, interbedded with clay to sandy clay beds. The correlation of individual sand and gravel beds is generally poor between wells. Locally, sand sequences can be roughly outlined based on sand bed thickness, but lateral correlations are more difficult. The intermediate zone appears to be the most complex stratigraphically of the four zones.

The deep zone underlies the intermediate zone at depths between 600 to 800 feet. The deep zone in the north contains an upper layer of about 100 to 150 feet of thin to thick sand and gravel beds with interbeds of clay. These beds thin rapidly or pinch out to the south. It is unclear whether the deposits in the deep zone represent Tertiary sedimentary deposits or Quaternary non-marine deposits.

Part of the lower zone is fine-grained clays at depths between 800 and 1,500 feet. The deposits are believed to be older Tertiary sedimentary units. It is difficult to correlate the lower zone laterally beneath the City. Because of the fine-grained nature of this zone, and the limited potential aquifer thickness, it is a poor choice for groundwater production.

In contrast, other parts of the zone are thick to massive "lava sands with hard streaks" below 900 feet and extending to 1,300 feet. This unit is on the uplifted eastern side of the Sonoma State fault and probably is part of the Sonoma Volcanics, or possibly the older Tolay Volcanics. One well in this unit yielded 2,000 gallons per minute (gpm) following construction, but water quality problems, including high boron concentrations and hydrogen sulfide gas, caused the well to be sealed off below 800 feet.

The WSA investigated and mapped groundwater elevations in the Santa Rosa Plain Subbasin, producing two elevation contour maps for the shallow zone and one for the intermediate/deeper zone. The maps show that the flow of groundwater in both zones generally is northwest toward the Laguna de Santa Rosa, but that the flow in the Cotati Valley is divided between a Laguna de Santa Rosa (northwest) component and a Petaluma Valley Groundwater Basin (southeast) component. The divide between the two groundwater regimes cannot be mapped precisely with existing data, but is known to pass through the Southeast Specific Plan area.

The spring 1951 shallow-zone groundwater elevations in the Plan area ranged from about 125 feet msl to about 155 feet msl, rising to the northeast.[10] The spring 2004 shallow-zone elevations were between 135 feet msl and 150 feet msl, rising to the northeast.[11] A monitored well southwest of the Plan area showed that the shallow-zone groundwater elevation had risen about 3 feet between 1993 and 2003. The spring 2004 intermediate/deeper-zone groundwater elevations in the Plan area are interpolated as being about 90 feet msl.[12]

Groundwater occurrence is not continuous throughout the basin. Because the basin contains complex and discontinuous water-bearing formations, groundwater flow in the region is compartmentalized, with both vertical and horizontal barriers creating a variety of water table elevations and a complicated pattern of groundwater quality. Division of the basin into semi-isolated groundwater bodies also implies that these units tend to remain localized, barring any substantial changes in pumping patterns.

Recharge of groundwater occurs through percolation of rainfall and seepage from streams or swales, primarily where land slopes are relatively gentle, and soils and geologic materials are permeable. Recharge and potential recharge areas occur east of the City along stream beds, at the heads of alluvial fans, and on some portions of the Sonoma Volcanics. Soil permeability is the most important factor in determining the recharge potential of an area. Recharge classifications based on soil permeability and slope include:

- *Recharge Area* - soils with infiltration rates greater than 1.5 centimeters per hour (cm/hr) (0.6 in/hr) and slopes less than 15 percent (6.75 degrees).
- *Potential Recharge Area* - soils with infiltration rates greater than 1.5 cm/hr and a range of slopes; if the slopes are less than 15 percent, the area is classified as a Recharge Area.
- *Slow Recharge Area* - soils with infiltration rates less than 1.5 cm/hr or slopes greater than 15 percent.

The Southeast Specific Plan area is classed as a Slow Recharge Area.[13] The alluvial deposits are unconsolidated, poorly sorted, relatively fine-grained rock fragments (clay, silt, sand, or gravel-sized particles) which provide limited recharge of surface water percolating to the water table. Clay layers in the subsurface form caps above the water table that slow the percolation of rainwater, causing prolonged ponding in lowest portions of the Plan area. None of the important direct recharge zones along the major rivers in the Santa Rosa Plain Subbasin include the Plan area. A portion of the west half of the Plan area is considered to have some potential for groundwater recharge by the Sonoma County General Plan Resource Conservation Element[14] and is designated as proposed open space in the WSA.

Groundwater Quality[15]

Groundwater produced from 31 City wells meets primary state drinking water standards. Overall mineral content for all zones, are well below the recommended secondary Maximum Contaminant Level (MCL). Other water quality considerations include nitrate, arsenic, iron, and manganese concentrations. Nitrate concentrations in City wells perforated in the intermediate zone or in multiple zones ranges from not detected about half the primary drinking water standard concentrations (primary MCL). In one well just northwest of the Plan area nitrate concentrations increased sharply to about half the primary MCL in 1996. It has been concluded that the source of these nitrates is household septic systems, particularly where nitrate levels in some private wells exceed the primary MCL.

Arsenic occurs naturally in the deep and lower groundwater zone (well depths greater than 600 feet). Arsenic concentrations in these deeper wells are at levels near or above the pending federal MCL effective 2006. A new California MCL for arsenic is in progress. It will be no higher than the federal MCL and could be lower. In the future, treatment for arsenic may be required for any groundwater developed from the lower zone.

Naturally occurring iron and manganese concentrations occasionally exceed the secondary MCLs for these constituents in certain wells. One well north-northwest of the Plan area had an iron concentration that exceeded the secondary MCL.

Organic chemicals introduced through known point sources could influence groundwater quality conditions. Underground storage tanks are a common point source, but the majority of these in the City have undergone remediation. The four known underground storage tank sites closest to the Plan area (southwest, northwest, north, and northeast) have completed their respective remediation procedures.

Applicable Plans, Policies, and Regulations

Water resources are regulated by a variety of statutes at the local, state, and federal level. Agencies having jurisdiction with respect to water resources include the City of Rohnert Park, the Sonoma County Water Agency, the State Water Resources Control Board and Regional Water Quality Control Board, and the U.S. Environmental Protection Agency.

The major requirements to which the proposed project would be subject include the Clean Water Act, as enforced by the U.S. Army Corps of Engineers and the Environmental Protection Agency; the Porter-Cologne Water Quality Control Act and related Code sections administered by the State Water Resources Control Board, notably the National Pollutant Discharge Elimination System (NPDES) permits, and the waste discharge requirements for storm water discharges from small municipal separate storm sewer systems (MS4) ; and, permitting and licensing requirements which occur during development review by the local jurisdiction. The applicable plans, policies and regulations are outlined below.

City of Rohnert Park General Plan

The *Health and Safety* Element of the General Plan contains policies applicable to water resources, with which proposed developments are required to comply. Figures 7.2-1 and –2 of the Health and Safety Element indicate that the Southeast Specific Plan site is not in a 100-year or 500-year flood zone and is in an area of highly expansive non-erosive soil.

The General Plan's drainage, erosion, stormwater, and flooding goals are to minimize the risk to life and property from flooding, and to control erosion and sedimentation, to provide flood protection and protect water quality. Policies designed to meet these goals that relate directly to the Southeast Specific Plan project include:

- HS-4: Ensure that the City's regulations pertaining to subdivision design, zoning, building, and grading ordinances and policies continue to include measures to minimize erosion and sedimentation.
- HS-5: As part of the building permit process, require all development projects to comply with hydrology and drainage policies incorporated in the Specific Plan. Require the project proponent to design and construct a storm drain system in accordance with the SCWA Flood Control Design Criteria (latest revision), specific to the project. Encourage the use of environmentally sensitive drainage improvements including flow reduction and flood bypass systems in order to ensure protection of surface water quality and stream integrity.
- HS-6: As part of the building permit process, require new development greater than five acres in size to prepare and implement a site-specific storm water pollution prevention plan (SWPPP)

that effectively reduces discharges of stormwater containing sediment and other pollutants resulting from site construction activities. In addition, require all projects, regardless of size, to comply with any other stormwater provisions of the Specific Plan.

See Section 3.9 of this EIR, *Relationship to Plans and Planning Policy*, for further policy conformance information.

Sonoma County Water Agency (SCWA)

The SCWA reviews project plans for proposed on-site drainage systems, as well as for all new or upgraded facilities that may be required off-site in the City of Rohnert Park. The SCWA reviews projects for conformance with the Agency's Flood Control Design Criteria, and recommends site-specific improvements be in compliance with those criteria. Culverts and drainage systems must be designed to accommodate the runoff from a 25-year storm. In addition, all structures must be protected from flooding expected to occur during a 100-year storm.

State Regional Water Quality Control Board (RWQCB)/State Water Resources Control Board

The RWQCB has jurisdiction over the Petaluma River and its tributaries. The RWQCB is required by law to develop, adopt and implement a Basin Plan for the entire region. The principal elements of the Basin Plan are a statement of beneficial water uses which the RWQCB protects, water quality objectives needed to protect the designated beneficial water uses, and strategies and time schedules for achieving specified water quality objectives. The water quality objectives are achieved primarily through the establishment and enforcement of waste discharge requirements.

The State Water Resources Control Board has developed water quality objectives for priority pollutants. The objectives are contained in a document entitled *"Development of Water Quality Control Plans for: Inland Surface Waters of California and Enclosed Bays and Estuaries of California"* adopted 11 April 1991. Alternatives for developing state-wide water quality objectives address three major areas of protection: (1) aquatic life; (2) human health, and (3) exposure to chlorinated dibenzodioxins and dibenzofurans. Among the other provisions pertaining to the above-stated objectives are (a) all point and non-point discharges (including urban runoff) must comply with the identified water quality objectives; and (b) effluent limits are to be imposed, either through NPDES permits or MS4 waste discharge requirements, such that the water quality objectives shall not be exceeded in the receiving water outside a designated mixing zone.

U.S. Environmental Protection Agency

The 1972 amendments to the Clean Water Act prohibit the discharge of pollutants to navigable waters from a point source unless the discharge is authorized by an NPDES permit. Industries that have direct stormwater discharges to navigable waters are required to obtain permits. It is within the existing authority of the RWQCB to issue an NPDES permit for any stormwater outfall to the waters of the United States. The RWQCB requires that an NPDES permit be obtained for construction grading activities for all projects greater than one acre. This permit requires implementation of nonpoint source control of stormwater runoff through the application of a number of Best Management Practices

(BMPs). These practices are meant to reduce the amount of constituents entering streams and other water bodies.

A BMP Program, as required by the RWQCB's NPDES permit, describes stormwater management practices (structural and operational measures), to control the quantity and quality of stormwater runoff. Practices include onsite detention and treatment, reporting of spills, implementing "good housekeeping" techniques to reduce contamination of surface water, preventive maintenance, inspection and record-keeping, security measures, and employee training. A Spill Prevention Control and Countermeasure Plan is included in the program. If construction is scheduled to occur throughout the year or is unlikely to be restricted to the dry months of the year, the BMPs must be implemented to ensure that sediment is confined to the construction area and not transported off-site.

The permit also requires the implementation of MS4 post-construction (i.e., operational period) stormwater management for new development projects. The City would be required to develop, implement, and enforce a program to address stormwater runoff from new development projects that disturb one or more acres. A combination of structural and/or non-structural BMPs appropriate for the community would be incorporated in the program. The use of an ordinance or other regulatory mechanism to address post-construction is required to the extent allowable under State or local law. Adequate long-term operation and maintenance of BMPs must be ensured.

Construction-period and operational-period erosion control also is required by the City, County, and the RWQCB through general plan policies and regulatory permits (NPDES permit in the case of the RWQCB).

The City of Rohnert Park, in conjunction with the Sonoma County Water Agency, is developing a Storm Water Management Plan to reduce pollutants and runoff flows to the maximum extent practicable from all new development and significant redevelopment projects. The Storm Water Management Plan requirements apply to all projects or phases of projects for which permit applications have not yet been deemed complete. Applicable projects that are under the City's jurisdiction and are within the NPDES Permit Boundary are required to design and implement storm water source and treatment control BMPs. Applicable project descriptions are summarized below.

- Development projects that create one acre (43,560 square feet) or more of new impervious surface.
- Streets, roads, highways, and freeways that create one acre (43,560 square feet) or more of new impervious surface. This category includes any newly constructed paved surface used for the transportation of pedestrians, bicycles and motorized vehicles.
- Redevelopment projects that are located on an already developed site and result in the addition of and/or reconstruction of one acre (43,560 square feet) or more of new impervious surface.
- Development and redevelopment projects that are located directly adjacent to a natural waterway, modified natural waterway, or constructed channel, or that require a new storm drain outfall to such waterway, regardless of project size or impervious surface. This requirement is intended to protect environmentally sensitive areas.

Preparation of the City's Storm Water Management Plan complies with the terms of the Phase 1 NPDES for Storm Water Discharges from the Rohnert Park area and with General Plan Policy HS-3.

Impacts and Mitigation Measures

Standards of Significance

Based on the City of Rohnert Park thresholds of significance, hydrology and water quality impacts would be considered significant if one or more of the following conditions were created by implementation of the Southeast Specific Plan:

- **Impact Criterion #1:** Violate any water quality standards or waste discharge requirements.
- **Impact Criterion #2:** Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.
- **Impact Criterion #3:** Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.
- **Impact Criterion #4:** Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.
- **Impact Criterion #5:** Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems.
- **Impact Criterion #6:** Introduce typical storm water pollutants into ground or surface water.[16]
- **Impact Criterion #7:** Substantially increase the amount of impervious surface coverage.
- **Impact Criterion #8:** Result in discharge, directly or through a storm drain system, into surface waters.
- **Impact Criterion #9:** Alter ground water or surface water quality, temperature, dissolved oxygen or turbidity.
- **Impact Criterion #10:** Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
- **Impact Criterion #11:** Place within a 100-year flood hazard area structures that would impede or redirect flood flows.

Adverse impacts in any of these categories would be considered unavoidable significant effects of the project, if they could not be (a) reduced to an acceptable level of risk, (b) eliminated, or (c) avoided by using existing techniques, generally recognized by hydraulic/hydrologic specialists in the Bay Area to be applicable and feasible.

For those areas on the Southeast Specific Plan site in which new residential, mixed use, or recreational development is proposed, existing hydrology and water quality conditions described in the environmental setting have been reviewed to determine whether hydrologic-related impacts could occur with project implementation, based on the City of Rohnert Park thresholds of significance.

Project Evaluation

Standards and Requirements: *Would the project violate any water quality standards or waste discharge requirements? (Impact Criteria #1 through #11)*

Based on a comparison of the proposed Southeast Specific Plan development components with the physical conditions and regulatory environment outlined in the Setting portion of this section of the EIR, implementation of the Specific Plan project would have a less than significant potential to violate existing water quality standards or waste discharge requirements. Each hydrologic-related aspect of the project would be covered by regional or local regulations or policies that monitor and limit potential project effects on runoff volume and rate, erosion, flooding, groundwater recharge, and surface/groundwater quality linked to chemical contaminants or sedimentation. The following discussion evaluates each of the City's thresholds of significance to substantiate this conclusion based on hydrologic conditions as documented in the Setting discussion and as further addressed and documented in the 2005 Final Water Supply Assessment (WSA), a summary of which appears as Appendix C of this EIR.

Groundwater Supply and Recharge: *Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge? (Impact Criterion #2)*

The construction of impervious surfaces on the Southeast Specific Plan site would reduce infiltration to the water table. The City of Rohnert Park, the Sonoma County Water Agency, and the DWR recognize not more than half of the Southeast Specific Plan site as having minor potential as a groundwater recharge zone because of the underlying alluvial fan. All the agencies acknowledge that the high clay content of the surface soils and subsurface geologic materials at the project site reduces the permeability of the area, and that high water table conditions in the shallow aquifer retard the downward migration of groundwater to the deeper alluvial aquifers which provide potable water in the vicinity of the Southeast Specific Plan area. Consequently, the Southeast Specific Plan site is not considered a major or important recharge zone.

Nonetheless, some recharge does occur to the shallow water table of the surface aquifer (the Shallow aquifer described in the WSA). Although implementation of the Southeast Specific Plan project would not reduce groundwater recharge significantly, there exists some potential, however small, for adverse effects on groundwater quality and reserves in the long-term, although not for the potable water supply. This potential effect would remain less than significant through the application of stormwater runoff management (both quality and rate) and erosion/sedimentation control, as described under Impact Criteria #3, #4, and #5, below. As noted previously in the Setting discussion, a stormwater detention basin would be provided in the park proposed for the west side of the Southeast Specific Plan site. The basin would slow runoff collected by the storm drain system, allowing sufficient time for percolation into the water table in the Shallow aquifer (see discussion under Impact Criterion #4). The west side of the Southeast Specific Plan site is lower in elevation and somewhat higher in percolation potential than the east side, making the park an appropriate location for the detention basin.

The WSA (a summary of which appears as Appendix C of this EIR) explains that most of the City's potable water supply wells draw from the Intermediate aquifer, with a few drawing from the Deep and Lower aquifers. These aquifers receive almost no recharge from the Shallow aquifer in the Southeast Specific Plan Area because the intervening clay and sandy clay deposits prevent substantial downward percolation. Consequently, the delay of recharge to the Shallow aquifer in the Southeast Specific Plan Area, and the concentration of recharge in the park, would have a less-than-significant effect on the amount of groundwater available to the City in the other three aquifers throughout the groundwater basin. Therefore, there would be a less-than-significant impact under Impact Criterion #2 regarding groundwater supply or recharge.

Drainage Patterns: ***Would the project substantially alter the existing drainage pattern of the site or area resulting in erosion or siltation? (Impact Criterion #3)***

Grading, excavation and construction activities onsite would replace the existing pattern of overland drainage with landscaped areas and storm drains, but would not change the courses of nearby off-site drainage ways. Such activities could have adverse effects on downstream water quality through erosion, the transport of sediments and dissolved constituents entering the receiving waters, and increasing turbidity and contaminant load. Although the amount of surface alteration necessary to accommodate implementation of the Specific Plan project is not considered a significant geologic change in itself, the alteration of topography to create building pads and utility corridors raises issues of erosion potential and downstream deposition of soil particles, even in the relatively flat alluvial plain. Even shallow cuts of less than a foot, or the process of placing fill for leveling or foundation support, have the potential to create erodible surfaces and slopes if the cuts and fills are not specifically designed to protect their surfaces from wind and water. If substantial amounts of material need to be imported to fill low areas on the site, or exported to remove expansive soils, the additional issue of fugitive particles from the hauling must be addressed. During the construction period, soils would be exposed to the erosive forces of wind and stormwater runoff. When de-vegetated and excavated, soils would be subject to gullying under the influence of moderate to heavy rains, if required preventive action were not taken.

Because the Southeast Specific Plan project would involve grading of an area that is greater than one acre, it would be subject to the conditions of the General Construction Activity NPDES permit from the Regional Water Quality Control Board. This permit requires that the development of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP is required to identify the sources of sediment and other pollutants on-site, and to ensure the reduction of sediment and other pollutants in stormwater discharged from the site. A monitoring program is required to aid the implementation of, and assure compliance with, the SWPPP. The permit requirements of the RWQCB must be satisfied prior to project construction.

As part of the SWPPP, an Erosion and Sedimentation Control Plan must be prepared for the Southeast Specific Plan area prior to grading. An erosion control professional, or landscape architect or civil engineer specializing in erosion control must design the Erosion and Sediment Transport Control Plan. The Association of Bay Area Governments recommends the control plan be designed using concepts

similar to those formulated by ABAG, as appropriate, based on the specific erosion and sediment transport control needs of each area in which grading, excavation, and construction is to occur. A few of the most critical techniques to be considered include, but is not limited to, the following types of erosion control methods.

- Whenever feasible, confine grading and activities related to grading (excavation, construction, preparation and use of equipment and material storage), to the dry season (April through September).
- Discharge grading and construction runoff into small drainages at frequent intervals to avoid the buildup of large potentially erosive flows.
- Stabilize disturbed areas as quickly as possible, either by vegetative or mechanical methods.
- Trap sediment before it leaves the site with such techniques as check dams, sediment ponds, or siltation fences.
- Control landscaping activities carefully with regard to the application of fertilizers, herbicides, pesticides or other hazardous substances. Provide proper instruction to all landscaping personnel on the construction team.

During the installation of the erosion and sediment transport control structures, an erosion control professional is required to be onsite to supervise the implementation of the designs and the maintenance of facilities throughout the site clearing, grading and construction period.

Following construction, the permit requires the implementation of long-term measures to manage runoff throughout the operational period of the project. BMPs to prevent on- or off-site erosion would be required in the stormwater management program. A combination of structural and/or non-structural BMPs would ensure that the disruption of existing drainage patterns caused by implementation of the project would not create channel modification downstream from the project site. To meet the permit requirements, it would be necessary to use the proposed stormwater detention basin not just to reduce the volume and rate of runoff, but to reduce it to a level that could be demonstrated to cause no erosional damage off-site. The permit requires a monitoring and reporting program to ensure adequate long-term operation and maintenance of the BMPs.

Because the permit requirements of the RWQCB must be satisfied prior to implementation of the project, the effects on on-site drainage pattern disruption on off-site erosion and sedimentation would be less-than-significant. Therefore, there would be no significant adverse impact under Impact Criterion #3 regarding erosion and siltation.

Drainage Patterns: *Would the project substantially alter the existing drainage pattern of the site or area resulting in flooding? (Impact Criterion #4)*

Construction within the Southeast Specific Plan site would create about 37 acres of impervious surface area, and more than double the stormwater runoff volume. At present, less than two percent of the 80-acre project site is covered by impervious paved surfaces. Because of the heavy soil and low topographic relief, the existing agricultural land produces about 20 percent runoff, similar to an area that is about 20 percent covered with impervious surfaces. Buildout of the Southeast Specific Plan site

would replace most of the existing agricultural land use with home sites, sidewalks, and roads. Although specific site designs have not been developed yet, the increase in impervious surface area can be estimated by using the site cover acreages as proposed for the project and comparing the results to existing conditions. The estimate of proposed impervious cover in Table 3.5-1 takes the road system infrastructure into consideration.[17]

Table 3.5-1
Southeast Specific Plan Project
Existing and Proposed Site Coverage

Land Use	Acres		Percent of Site		Percent Impervious	
	Existing	Proposed	Existing	Proposed	Existing	Proposed
Fallow Crop Land	78.1	0	97.6	0	20	0
Rural Estate Residential (detached homes)	1.9	15.3	2.4	19.1	30	30
Low Density Residential (attached or detached homes)	0	36.1	0	45.1	0	50
Medium Density Residential (attached or detached homes)	0	22.3	0	27.9	0	60
Mixed Use (commercial/retail)	0	0.5	0	0.6	0	70
Recreation (neighborhood-scale park)	0	5.8	0	7.3	0	20
TOTALS	**80**	**80**	**100**	**100**	**<21***	**~47***

*Total impervious area is calculated by multiplying percent of site by percent of impervious surface for each type of land use and adding the results.

Using these assumptions, the calculation indicated in Table 3.5-1 shows the existing percent imperviousness of the entire Southeast Specific Plan site to be slightly over 20 percent.[18] A similar calculation indicates the percent of imperviousness at buildout would be just under 47 percent.[19] Approximately 37.5 acres of the Southeast Specific Plan site would be covered by impervious surfaces such as residential and commercial buildings, roads, sidewalks, driveways, and parking lots.

In addition to the increased volume of runoff produced by these surfaces, the rate of drainage would increase because water flows faster over concrete and asphalt than it does through a ploughed field. Using a conservative estimate of about one cubic foot per second (1 cfs) of runoff for each impervious acre, the rate of stormwater runoff from the site would increase from its present 16.2 cfs to about 37.5 cfs at maximum buildout. This is a conservative estimate because landscaping and irrigated areas could be incorporated into individual lot designs, thereby reducing runoff rate and volume at the source. City's General Plan Policy HS-5 requires the project to design and construct a storm drain system for the site that would conform to the SCWA Flood Control Design Criteria (latest revision),

and encourages the use of environmentally sensitive drainage improvements, including flow reduction and flood bypass systems, to ensure the protection of surface water quality and stream integrity.

The 21.3 cfs difference in runoff rate would need to be detained until the storm runoff peak had passed so it would be possible to maintain the predevelopment runoff rate. The stormwater detention basin proposed for the park on the west side of the project site would fulfill this function. No specific design for the basin is available; however, if the entire 5.8 acres of proposed park space comprised a one-foot-deep detention basin, more than 250,000 cubic feet of water could be held for infiltration or later release. This is about twice the amount of runoff the built out site would produce during a 100-year/1-hour storm (see also Impact Criterion #3, above). The inclusion of the stormwater detention basin on the project site as a basic project feature would maintain the potential for on- and off-site flooding impacts to exist at a less-than-significant level. Therefore, there would be a less-than-significant impact under Impact Criterion #4 regarding drainage patterns or flooding.

For informational purposes, traditional designs for managing runoff emphasize maintaining the efficiency of conduits (i.e. pipes and channels) in transporting stormwater to downstream locations where the water is later released and/or stored. Stormwater runoff often is managed using this approach, although many opportunities for improving water quality are lost. End of pipe strategies such as detention basins and ponds are important components of an overall stormwater management system, but may be more complex and costly than strategies that start at the source.

Small collection and infiltration strategies, located at the point where runoff initially meets the ground, repeated consistently over an entire project area, will yield the greatest runoff control and water quality improvements for the least cost. This approach assists in detaining a portion of the stormwater generated by impervious surfaces so that the rate of stormwater leaving the site is equal to or less than existing conditions. Additional runoff that is generated can be stored or infiltrated on or near the site. The Bay Area Stormwater Management Agencies Design Guidance Manual provides methods that can be used to modify roadway, landscaping and drainage facilities to incorporate design elements such as sediment traps, gravel strips and/or trenches, concave planting areas (vegetated swales), permeable substrate (pavement), and stormwater infiltration basins.[20] This approach is advocated by the Regional Water Quality Control Board.

Runoff Volume: ***Would the project create or contribute runoff that would exceed drainage system capacity? (Impact Criterion #5)***

Any new development has the potential to exceed the capacity of existing or planned stormwater drainage systems unless controls are applied to maintain runoff at or below the capacity of the systems. The discussion under Impact Criterion #4, above, explains the estimated increase in runoff volume and the detention basin proposed to control volume and rate of runoff from the project site. With the basin in place and operative there would be no increase in runoff rate over the predevelopment level. The increased runoff volume would be controlled through evaporation and infiltration from the basin and by metering the outflow (see Impact Criterion #3, above, regarding control of erosive flows created by excess runoff volume). Consequently, there would be no significant impact under Impact Criterion #5 regarding runoff volumes exceeding the drainage system capacity.

Water Supply Quality: ***Would the project introduce typical stormwater pollutants? (Impact Criterion #6)***

Increased runoff from the construction of impermeable surfaces on the site could lower the quality of stormwater runoff and infiltrating groundwater. The major contributor of contaminants to runoff and infiltrating groundwater is the land surface over which the water passes. In developed areas, driveways, parking lots, sidewalks, streets and gutters are connected directly to storm drains that collect and guide stormwater runoff. Between rainstorms materials accumulate on these surfaces from debris dropped or scattered by individuals, street sweepings, debris and other particulate matter washed into roadways from adjacent areas, wastes and dirt from construction and renovation or demolition, fecal droppings from animals, remnants of household refuse dropped during collection or scattered by animals or wind, oil and various residues contributed by automobiles, and fallout of air-borne particles.

During rainfall, stormwater may take several paths when it reaches the ground surface. As water fills surface depressions, it seeps into the ground where the ground is permeable. Where the rate of rain reaching the ground exceeds the rate of infiltration, a film of water builds up on the ground surface. Once this film is of sufficient depth (about 0.1 inch), the water collecting on the ground surface begins to flow. The initial flow of each storm often contains the highest concentrations of pollutants, but this is not always the case because the phenomenon is dependent on the duration of the preceding dry weather period, rainfall patterns, rainfall intensity, the chemistry of individual pollutants, and other site-specific conditions.

If uncontrolled, the accumulation of urban pollutants could have a detrimental cumulative effect because overland flow from paved surfaces and landscaped areas carry many of the above-listed contaminants, thereby contributing to the deterioration of the quality of stormwater runoff and infiltrating groundwater. The eventual result would be the deterioration of water quality in downstream receiving waters. Reaches of drainage-ways downstream from the project site would carry stormwater runoff to Petaluma Creek and, eventually, to San Pablo Bay, which would be subject to water quality deterioration.

The previous discussions of erosion and sedimentation control and storm-drainage system design provide documentation of the requirements to reduce turbidity and capacity effects. The City's Policy HS-5 encourages the use of environmentally sensitive drainage improvements to ensure the protection of surface water quality and stream integrity. The Specific Plan includes guidelines for the use of such systems as easily cleanable sediment catch basins, debris screens, and grease separators or similar water quality protection devices in the drainage facilities serving the project (i.e., vegetated swales, buffer strips, a detention pond in the park), labeling storm drain inlets to educate the public about the water quality implications associated with dumping hazardous liquids and debris into receiving waters, and cleaning and/or sweeping of roadways on a regular and frequent basis. Therefore, there would be no significant adverse impact under Impact Criterion #5 regarding pollution and drainage system capacity.

The discussion under Impact Criteria #3 and #4 covers water quality issues expected to be encountered during the implementation of the Southeast Specific Plan project. That discussion, plus the discussion of stormwater pollutants under Impact Criterion #6 indicates that potentially adverse water quality conditions would be less-than-significant because of existing regulatory requirements to be imposed on the project prior to project implementation. Therefore, there would be a less-than-significant impact under Impact Criterion #6 regarding water supply quality.

Impervious Coverage: ***Would the project increase impervious surfaces? (Impact Criterion #7)***

The discussions under Impact Criteria #2, #4 and #6 include consideration of an increase in impervious surfaces under the Southeast Specific Plan project. No significant adverse impacts regarding an increase in impervious surfaces are identified.

Discharge: ***Would the project discharge into surface waters? (Impact Criterion #8)***

The discussion under Impact Criteria #3 and #4 includes consideration of surface water drainage under the Southeast Specific Plan project. No significant adverse impacts regarding surface waters are identified.

Water Quality: ***Would the project alter water quality, temperature, dissolved oxygen or turbidity? (Impact Criterion #9)***

The discussion under Impact Criteria #2, #3, #4, #5 and #6 cover the range of water quality and stormwater pollutant issues expected to be encountered during implementation of the Southeast Specific Plan project as noted previously. No significant adverse water quality impacts are identified for the Southeast Specific Plan project.

Flooding: ***Would the project place housing within a 100-year flood hazard area? (Impact Criterion #10 and #11)***

Section 7.2, Drainage, Erosion, Stormwater, and Flooding of the City's General Plan and Community-Panel Number 060375 0860 B of FEMA's Flood Insurance Rate Maps for Sonoma County both place the Southeast Specific Plan area outside the 500-year zone. Consequently, the Southeast Specific Plan area also would be outside the 100-year flood hazard area. Therefore, there would be no significant adverse impact under Impact Criterion #10 or #11 regarding flooding.

Cumulative Development

The discussion of cumulative development impacts is as described in the *Introduction* section of this EIR under the title *Cumulative Impact Assessment* and includes collectively the Specific Plan Areas and projects as described therein.

The context for the analysis of cumulative hydrology and water quality impacts is the upper Laguna de Santa Rosa watershed and cumulative growth therein. Subsurface hydrologic conditions as described in the Setting discussion of this section of the EIR are based on hydrologic conditions as documented in the findings contained in the 2005 Final Water Supply Assessment (WSA), the summary of which is included in Appendix C of this EIR and is abstracted briefly in the following five paragraphs.

The WSA was prepared to assist the City in satisfying the requirements of Senate Bill 610 (SB 610) and City Resolution Number 2004-95 (the Water Policy Resolution). The WSA includes demands that would occur as the City reached buildout under the General Plan, as well as the demands of other pumpers in the groundwater basin. Six development projects that meet the review criteria of SB 610 and/or the Water Policy Resolution were included in the analysis.

- University District Specific Plan Area Development
- Northeast Specific Plan Area Development
- Southeast Specific Plan Area Development
- Northwest Specific Plan Area Development
- Wilfred Dowdell Specific Plan Area Development
- Stadium Lands Development

The City has three sources of water supply: the Sonoma County Water Agency's Russian River System, recycled water, and local groundwater. The Agency's System has a current water right of 75,000 acre-feet per year (AFY). The Agency provides wholesale water to eight Prime Contractors, one of which is the City of Rohnert Park. The City's allocation is 7,500 AFY and a peak month pumping allocation of 15.0 million gallons per day (mgd). The City is the largest urban recycled water user in Sonoma County with a current average use of more than 1,000 AFY. Planned recycled water use is more than 1,300 AFY. The City pumps groundwater from 42 wells in the Laguna de Santa Rosa watershed of the Santa Rosa Plain Subbasin of the Santa Rosa Valley Groundwater Basin. The City's wells are in a very complex aquifer system, as described in the Groundwater portion on this section of the EIR. Groundwater produced from the City's wells meets primary state drinking water standards.

The WSA evaluated groundwater supply sufficiency for the upper portion of the Laguna de Santa Rosa watershed. The Water Policy Resolution specified new development projects not be approved if they would contribute to the City exceeding an average groundwater pumping rate of 2.3 mgd (2,577 AFY). Pumpage data from 1970 to the present were evaluated to determine historical groundwater level trends and their relationship to total pumpage. In 2003, total City pumpage was 3,556 AFY of an estimated 7,078 AFY for all pumpers. Because the WSA evaluated water supply sufficiency based on a 20-year projection, future City pumpage projected to 2025 assumed buildout of the Specific Plan Areas and maximum pumpage of 2,577 AFY, consistent with the Water Policy Resolution. The total 2025 pumpage for all pumpers was predicted to be 7,350 AFY, a slight increase from total current pumpage, but a notable decrease from recent historical pumpage (1990 – 1997 average 8,700 AFY).

Groundwater level trends in the shallow zone wells have been stable since 1975, irrespective of pumpage or changes in climate conditions. Pumpage of intermediate zone wells (the majority of the City's pumpage) had a greater effect on intermediate zone groundwater levels than changes in climate conditions, declining as pumping increased through 1990, stabilizing through 1997, and rising as pumping decreased through 2003. The groundwater level recovery indicated there were no overdraft conditions in the intermediate zone. The WSA stated there was no indication of overdraft conditions elsewhere in the subbasin in any zone.

The WSA described soil recharge characteristics, estimated groundwater recharge in the watershed, summarized the three available water supplies and the demands anticipated by the General Plan through 2025 and confirmed that sufficient groundwater supply was available during the 20-year projection period to meet the projected demand associated with the proposed subdivisions, in addition to existing and other planned groundwater uses. It described the actions the City and the Sonoma County Water Agency have taken to assure the water supply is available, including water conservation ordinances, extension of the transmission system, expansion of the recycled water system, and the adoption of fees to fund the construction.

The City water demand projections in the WSA used projections for all of the proposed specific plans in the City, including the Southeast Specific Plan. The WSA determined that the City's current and projected water supply would be sufficient to meet the City's water demand requirements during the 20-year projection period. Because the Southeast Specific Plan area demand was included in the WSA analysis, the cumulative impact would be *less than* significant and would not contribute to cumulatively considerable adverse and water supply impacts in the watershed.

The Southeast Specific Plan project would increase structural cover and surface paving on the Southeast Specific Plan site, thus generating increased flows during storms and increased on- and off-site erosion potential, particularly during construction, but also throughout the operational period. Site development could lead to decreased water quality as explained in this section of the EIR. Site preparation and development would create temporary and permanent ground surface changes that could affect erosion rates or patterns of runoff. Potential adverse hydrology and water quality effects associated with site development, although site-specific in nature, could combine with similar effects that could occur as a result of other projects in the watershed. Implementation of the legal requirements explained in this section of the EIR would ensure that potential site-specific impacts relating to the Southeast Specific Plan project would be *less than significant* and would not contribute to cumulatively considerable adverse hydrology and water quality impacts in the watershed.

Endnotes – Hydrology and Water Quality

1 City of Rohnert Park, *Southeast Specific Plan*, Final Draft, Parsons, 2003.

2 City of Rohnert Park, *General Plan, Fourth Edition*, adopted July 2000.

3 Parsons, *City of Rohnert Park Southeast Specific Plan Final Draft*, 2003.

4 Winzler & Kelly, Consulting Engineers, *City of Rohnert Park Final City-Wide Water Supply Assessment*, adopted 25 January 2005.

[5] State of California, The Resources Agency, *Santa Rosa Plain Subbasin*, February 2004.

[6] a) Federal Emergency Management Agency (FEMA), National Flood Insurance Program (NFIP), *Flood Insurance Rate Map (FIRM), Sonoma County, California*, Community-Panel Number 060375 0860 B, Revision Date 02 April 1991.

b) City of Rohnert Park, *General Plan, Fourth Edition*, Chapter 7: Health and Safety, Section 7.2 Drainage, Erosion, Stormwater, and Flooding, adopted July 2000.

[7] a) FEMA, NFIP, *FIRM, Sonoma County, California*, Community-Panel Number 060375 0855 B, Revision Date 02 April 1991.

b) FEMA, NFIP, *FIRM, Sonoma County, California*, Community-Panel Number 060375 0860 B, Revision Date 02 April 1991.

c) FEMA, NFIP, *FIRM, Sonoma County, California*, Community-Panel Number 060375 0865 B, Revision Date 02 April 1991.

d) FEMA, NFIP, *FIRM, Sonoma County, California*, Community-Panel Number 060375 0870 B, Revision Date 02 April 1991.

e) FEMA, NFIP, *FIRM, Sonoma County, California*, Community-Panel Number 060377 0001 D, Revision Date 05 December 1996.

f) FEMA, NFIP, *FIRM, Sonoma County, California*, Community-Panel Number 060379 0001 C, Revision Date 29 September 1989.

g) FEMA, NFIP, *FIRM, Sonoma County, California*, Community-Panel Number 060379 0002 C, Revision Date 29 September 1989.

h) FEMA, NFIP, *FIRM, Sonoma County, California*, Community-Panel Number 060380 0001 B, Revision Date 01 June 1981.

i) FEMA, NFIP, *FIRM, Sonoma County, California*, Community-Panel Number 060380 0002 B, Revision Date 01 June 1981.

[8] Regional Water Quality Control Board – Region 1, *Water Quality Control Plan for the North Coast Region,* May 1996, Section 2 - Beneficial Uses, pages 2-1 through 2-7.

[9] The information regarding groundwater is based on information contained in the following:

a) State of California, The Resources Agency, *Santa Rosa Plain Subbasin*, February 2004.

b) Winzler & Kelly, Consulting Engineers, *City of Rohnert Park Final City-Wide Water Supply Assessment*, adopted 25 January 2005.

[10] Winzler & Kelly, Consulting Engineers, *City of Rohnert Park Final City-Wide Water Supply Assessment*, adopted 25 January 2005, pages 3-19 through 3-21 and Figure 3-21.

[11] Winzler & Kelly, Consulting Engineers, *City of Rohnert Park Final City-Wide Water Supply Assessment*, adopted 25 January 2005, pages 3-19 through 3-21 and Figure 3-22.

[12] Winzler & Kelly, Consulting Engineers, *City of Rohnert Park Final City-Wide Water Supply Assessment*, adopted 25 January 2005, pages 3-19 through 3-21 and Figure 3-23.

[13] Winzler & Kelly, Consulting Engineers, *City of Rohnert Park Final City-Wide Water Supply Assessment*, adopted 25 January 2005, pages 3-23 through 3-25 and Tables 3-3 and 3-5.

[14] County of Sonoma Permit and Resource Management Department, "Figure RC-2g, Schematic Map of Areas Subject to Resource Conservation Policy Requirements, Rohnert Park – Cotati and Environs Planning Area," in *Sonoma County General Plan, Resource Conservation Element*, adopted 23 March 1989.

[15] Winzler & Kelly, Consulting Engineers, *City of Rohnert Park Final City-Wide Water Supply Assessment*, adopted 25 January 2005.

[16] "Typical storm water pollutants" include, but are not limited to: paints, varnishes and solvents; hydrocarbons and metals from vehicle use or business operations; non-hazardous solid wastes and yard wastes; sediment from construction activities (including silts, clays, slurries, concrete rinsates, etc.); ongoing sedimentation due to changes in land cover/land use; nutrients, pesticides, herbicides and fertilizers (e.g., from landscape

maintenance); hazardous substances and wastes; sewage, fecal coliforms, animal wastes and pathogens; dissolved and particulate metals; other sediments and floatables; metals and acidity from mining operations.

[17] a) Chow, V.T., "Hydrology of Agricultural Lands," Figure 21-21 Values of *C* for Use in Rational Formula, page 21-38 in *Handbook of Applied Hydrology*, McGraw-Hill, San Francisco, 1964.

b) Chow, V.T., "Runoff," Figure 14-1 Values of Runoff Coefficient *C*, page 14-8 in *Handbook of Applied Hydrology*, McGraw-Hill, San Francisco, 1964.

[18] Existing percent impervious for Specific Southeast Specific Plan area:
[(78.1 x 0.2) + (1.9 x 0.3)] 4 80.0 = 0.2024

[19] Buildout percent impervious for Specific Southeast Specific Plan area:
[(15.3 x 0.3) + (36.1 x 0.5) + (22.3 x 0.6) + (0.5 x 0.7) + (5.8 x 0.2)] 4 80.0 = 0.4691

[20] Bay Area Stormwater Management Agencies Association, *Start at the Source, Design Guidance Manual for Stormwater Quality Protection,* Tom Richman & Associates, 1999, Chapter 2.

3.6 LAND USE

Introduction

This section discusses the existing and planned land uses within and surrounding the Southeast Specific Plan project site. Conditions of the setting are first established followed with an analysis of the potential for land use impacts in accordance with specified impacts significance criteria. The potential for land use incompatibilities as a result of potential development are examined, as well as avoiding the potential for the disruption of existing land uses as a result of development. It is recognized that long-term disturbances that would diminish the quality of a particular land use or community characteristic would be considered potentially significant. Incompatibilities in land use through the expansion of urban development adjacent to existing land uses may create land use incompatibilities through changes in air quality, increased noise, increased traffic and changes in appearances as documented in other technical sections of this EIR.

Setting

City of Rohnert Park

The Rohnert Park City limits encompass an area of about 6.9 square miles (4,400 acres). Residential land use is the predominant land use in Rohnert Park, occupying about 45 percent of the City's land area.[1] About a quarter of the remaining land area is in industrial, commercial or office use. Most of the City is built out within the existing City limits, with about 190 acres remaining as vacant land. Most housing units are single-family detached units with an average citywide housing density of about eight units per net acre. But the existing neighborhoods have a wide range of densities and a variety of housing types, including multifamily dwellings and apartments. Commercial and industrial development is typically auto-oriented and major retail areas are clustered around the U.S. 101 interchanges at Rohnert Park Expressway and Wilfred Avenue.

To the southwest, Rohnert Park shares its boundaries with the City of Cotati. Open space, agricultural and rural residential land uses surround the City on all other sides. To the north, Santa Rosa's Urban Growth Boundary (UGB) comes to within 1,000 feet of Rohnert Park at its closest Point. Much of the area on the eastern side of Rohnert Park are mostly fallow or used for grazing.

Southeast Specific Plan Site and Environs

The current City Limits follow Bodway Parkway along the west margin of the Southeast Specific Plan site. The Southeast Specific Plan site is undeveloped, with a single residence and appurtenant structure located in the northeast portion of the property which would remain in place with project construction. As noted previously, the site has historically been used for the production of hay and continues in such use today. The project site is not currently operating under a Williamson Act contract which would otherwise give specified property tax advantages to land used for agricultural purposes.

On the east side of Petaluma Hill Road which borders the east margin of the project site, there is a mix of agricultural and semi-rural residential land uses. Agricultural uses east of the City Limits include the cultivation of truck crops, hay production and horse boarding. A major industrial campus, the Agilent Technologies Manufacturing Center with 780,000 square feet of space is located immediately west of the Southeast Specific Plan project site, on the east side of Bodway Parkway. This facility is now unoccupied since the firm of Agilent Technologies recently relocated to facilities in Santa Rosa leaving the campus available for other commercial and/or industrial users. An additional 77 acres to the south of the existing facility are zoned for industrial development.

Abutting the north margin of the project site adjacent to Petaluma Hill Road is the Canon Manor Specific Plan area (Canon Manor West – CMW), generally indicated as Rural Estate Residential (up to two dwelling units per acre) on the Rohnert Park General Plan Diagram. CMW is in an unincorporated area located immediately east of the City Limits but within the City's Sphere of Influence and UGB, and covers an area of about 250 acres. The original subdivision approved for development in 1956 included 188 residential lots.[2] If CMW were to be annexed to the City, buildout under the Rohnert Park General Plan for the Canon Manor Specific Plan area would allow up to several hundred additional residential units.

Abutting the north margin of the Canon Manor Specific Plan area is Sonoma State University (SSU). The 214 acre SSU campus lies outside the eastern City Limits but within the City's UGB. It supports 7,000 full time equivalent students and 1,200 employees. SSU has prepared a recent update to its campus-wide Master Plan (SSU Draft 1999 Master Plan), which includes the expansion of residential, classroom and other facilities. At buildout, the proposed Master Plan would increase the number of students to 10,000.

Abutting the north margin of SSU, mostly north of Rohnert Park Expressway, is the University District Specific Plan area. The University District Specific Plan area is contiguous with the eastern City Limit. The Specific Plan area encompasses about 297 acres located on each side of Hinebaugh Creek, south of Keiser Avenue, west of Petaluma Hill Road and north of Copeland Creek. The Land Use Program as stated in the General Plan Land Use and Growth Management Element includes up to about 1,600 residential units, up to 20 to 40 acres of mixed-use (commercial/residential) development and up to about 100 acres of parks and open space.

Further north, abutting the University District Specific Plan area is the Northeast Specific Plan area bounded by Keiser Avenue to the south, Snyder Lane to the west, Moura Lane to the north, and Crane Creek and Petaluma Hill Road to the east. The Specific Plan area includes about 272 acres. The Land Use Program as stated in the General Plan includes the development of up to 1,085 dwelling units and 12 acres of parks.

The four specific plan areas encompass about 900 acres within the City's UGB and Sphere of Influence on the east side of Rohnert Park. At the time of preparing this EIR, EIRs were being prepared for the University District and Northeast Specific Plans. Also, a Draft EIR prepared by the County of Sonoma for CMW had been released. This EIR focused on resolving a public health hazard due to groundwater

contamination. Annexation and buildout of CMW would require the preparation and approval of a Specific Plan for the area as well as preparation of an EIR on the Specific Plan.

Jurisdictional Considerations

The Southeast Specific Plan project site contains two parcels totaling about 80 acres. The project site is located outside the City Limits in unincorporated Sonoma County but within the 20 year UGB which outlines the limits of urban growth under the current Rohnert Park General Plan as noted previously (see Figures 2-1 and 2-2, *Regional and Site Location Maps*). The UGB contains the City of Rohnert Park proper and unincorporated lands that may eventually be annexed and served by the City of Rohnert Park. The Southeast Specific Plan site would require incorporation into the City of Rohnert Park for development to proceed as proposed.

The Southeast Specific Plan site (annexation area) lies within the planning area of both the City of Rohnert Park and Sonoma County. As such, there are three agencies involved in determining future land uses within the Southeast Specific Plan annexation area: The City of Rohnert Park, Sonoma County and the County Local Agency Formation Commission (LAFCO). LAFCO includes both City and County representatives and is responsible for reviewing any requests for City annexation of lands within their sphere-of-influence. LAFCO's sphere-of-influence includes land within the City's ultimate urban boundary that has not yet been annexed by the City and includes the Southeast Specific Plan area. LAFCO is guided by a number of key objectives in the review of annexation requests including the ability to provide adequate utilities and public services, the orderly expansion of urban development, and the preservation of agricultural land.

General Plan Considerations

Rohnert Park General Plan: The Rohnert Park General Plan *Land Use and Growth Management Element,* Figure 2.4-1, *Specific Plan Areas*, designates the project site as the *Southeast Specific Plan Area*. The *General Plan Diagram*, Figure 2.2-1, further delineates the project site with a mixture of residential development densities and Mixed Use, generally as described in this EIR in Section 2, *Project Description*. Development of the project site is further documented in the *Southeast Specific Plan Area* discussion of the General Plan *Land Use Element* and as diagrammed on Figure 2-3 in this EIR.

The Rohnert Park General Plan land use classifications, which represent adopted City policy, are meant to be broad enough to give the City flexibility in implementation but clear enough to provide sufficient direction to carry out the General Plan. Four residential land use classifications are established for the Southeast Specific Plan project site to provide for development of a full range of housing types. Densities are stated as a number of housing units per gross acre of developable land. As noted previously, based on the maximum allowable densities for the Southeast Specific Plan site under existing General Plan designations, the annexation area would yield up to 499 residential units if completely developed as proposed which would be near the upper limit of the General Plan designation of 510 units. The Low Density Residential category at four to six units per acre is typical of the densities in existing single family subdivisions in Rohnert Park.

The Land Use Element of the City General Plan requires the preparation of specific plans prior to development in any of the designated growth areas within the UGB. While this requirement tends to lengthen the review and approval process, it is considered necessary by the City to ensure that development occurs in a manner consistent with established land use and design criteria, environmentally-sensitive areas are conserved, and adequate infrastructure is provided.

Sonoma County General Plan: Land use plans and policies of Sonoma County are contained in the Sonoma County General Plan. County Land Use Plan maps designate land within the Southeast Specific Plan project site as Diverse Agriculture which provides for the enhancement and protection of land where soil, climate and water conditions "*support farming but where small acreage intensive farming and part time farming activities are predominant*".[3] The primary purpose of this category is to protect agricultural uses. The site is also zoned Diverse Agriculture (DA, minimum 20 acres per dwelling) under the Sonoma County Zoning Ordinance, the purpose of which is "*to enhance and protect those land areas where soil, climate, and water conditions support farming but where small acreage intensive farming and part-time farming activities are predominant, but where farming may not be the principal occupation of the farmer, and to implement the provisions of the diverse agriculture land use category of the General Plan ---.*"[4]

The Southeast Specific Plan site area has been designated as Farmlands of Local Importance by the State Department of Conservation and Sonoma County Board of Supervisors due to its potential productivity.[5] This is true with other areas in the Petaluma Valley as well. The site is not designated as Prime Farmland, Unique Farmland or Farmland of Statewide Importance by the USDA Natural Resources Conservation Service.

The Sonoma County General Plan also addresses land uses surrounding the UGB. On most lands surrounding the east and south sides of Rohnert Park, the Sonoma County General Plan designates the area as Diverse Agriculture as well. The Canon Manor Specific Plan area is designated Rural Residential, which provides for low density development where there are fewer urban services but access to County maintained roads is available.

An important land use issue relates to the concept of community separation. The Sonoma County General Plan designates "community separators" intended to provide open space buffers between the urban areas of cities located within the County. While the Southeast Specific Plan site is not located immediately next to a community separator, land use planning in the area does require consideration of the preservation of open space features including urban separators (this subject is discussed further in Section 3.1 of this EIR, *Aesthetics*).

Impacts and Mitigation Measures

Introduction

The Southeast Specific Plan project would consist of annexing the approximate 80 acre project site to the City of Rohnert Park. In annexations, the evaluation of land use impacts normally includes identifying any potential conflicts with applicable land use plans, policies or regulations with

jurisdiction over the project. Considerations include the potential impacts of changes in the type and intensity of land uses and the compatibility of those changes with existing or planned adjacent uses. A significant impact may be identified when a proposed change in type or intensity of land uses is not compatible with existing or approved land uses on or adjacent to a project site. A significant impact may also be identified where a project would contribute to cumulative adverse land use changes resulting from development of a proposed project and other approved, proposed and planned projects in the vicinity which would result in substantial changes to the land use pattern in the vicinity.

Standards of Significance

Based on the City of Rohnert Park thresholds of significance, land use impacts would be considered significant if one or more of the following conditions were created by implementation of the Southeast Specific Plan.

- **Impact Criterion #1:** Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the General Plan, the Zoning Ordinance or any specific plan), adopted for the purpose of avoiding or mitigating an environmental effect.
- **Impact Criterion #2:** Conflict with any applicable habitat conservation plan or natural community conservation plan.
- **Impact Criterion #3:** Physically divide an established community.

Project Evaluation

Plan Consistency: *Would the project conflict with applicable plans or policies? (Impact Criterion #1)*

Rohnert Park General Plan Goals and Policies: An evaluation of the conformance of implementing the Southeast Specific Plan with the City of Rohnert Park General Plan goals and policies is provided in Section 3.9, *Relationship to Plans and Planning Policy*. The analysis shows that the Southeast Specific Plan project would generally be in conformance with the goals and policies of the General Plan. Where partial conformance with the General Plan is noted, mitigation measures are established to bring the Southeast Specific Plan into compliance with the goals and policies of the General Plan.

If annexed, the City of Rohnert Park General Plan Diagram would be amended to reflect a reconfiguration of the City Limit line to include the Southeast Specific Plan project site and change the General Plan Diagram to more accurately reflect the road layout, and size and configuration of the Rural Residential, Low Density Residential, Medium Density Residential, Mixed Use and Parks land uses as represented within the Southeast Specific Plan. These adjustments would not reflect any substantive departure from existing general plan goals and policies, but would further the existing goals and policies by providing greater land use specificity and an updating of the General Plan Diagram to be consistent with any approvals of the Southeast Specific Plan.

If annexed, the applicable zoning would be the Specific Plan District under the City of Rohnert Park Zoning Ordinance. The Specific Plan Zoning District applies to all areas designated in the General

Plan for a Specific Plan. Land uses must be in accordance with the provisions as specified in the Specific Plan and consistent with the General Plan.

In view of the above, the Southeast Specific Plan project and its development components would not conflict with applicable City land use plans, policies or regulations thus obviating the potential for incompatible land uses. As a residential project reflective of the density of residential development generally prevalent in Rohnert Park, the Southeast Specific Plan project would represent a continuation of established residential land uses within the UGB.

General Plan Historic and Archaeological Resources: It should be noted that the General Plan Historic and Archaeological Resources Element states that portions of Rohnert Park's east side are considered to have the potential to contain archaeological resources and that adequate measures for the protection of unknown archaeological resources may need to be incorporated in future construction plans. While a 2002 cultural resources evaluation of the site showed that archaeological monitoring of future proposed excavations was not warranted,[6] and no impacts to cultural resources were identified, the following mitigation measure is provided to ensure the protection of any archaeological resources that may be discovered during grading and excavation of the project site in accordance with General Plan Policy EC-3.

Mitigation Measure 3.6-1

Construction specifications, inclusive of all utilities required for the project, should note that operators of site grading and excavation equipment be instructed to be observant for unusual or suspect archaeological materials[7] that may surface from below during site grading and excavation operations.

In the event that unknown archaeological remains are discovered during subsurface excavation and construction, land alteration work in the vicinity of the find should be halted and a qualified archeologist consulted. Prompt evaluations could then be made regarding the find and a resource management plan that is consistent with CEQA requirements could then be implemented. If prehistoric archeological deposits are discovered, local Native American organizations should be consulted and involved in making resource management decisions. All applicable State and local legal requirements concerning the treatment of cultural materials and Native American burials should be enforced.

If subsequent investigations result in the recording of prehistoric archeological sites that cannot be avoided and preserved, and the importance of the cultural deposits cannot be determined from surface evidence, then subsurface testing programs should take place to make such determinations. Testing procedures should be designed to specifically determine the boundaries of sites, the depositional integrity and the cultural importance of the resources, as per CEQA criteria. These investigations should be conducted by qualified professionals knowledgeable in regional prehistory. The testing programs should be conducted within the context of appropriate research considerations and should result in detailed technical reports that define the exact disturbance implications for important resources and present

comprehensive programs for addressing such disturbances. Measures similar to the ones described below would also apply:

Avoidance of an archaeological site through modification of the roadway plan line that would allow for the preservation of the resource.

Covering or "capping" sites with a protective layer of fill. This could be a good way of mitigating situations where public access may be increased as a result of development. Archaeological monitoring during the filling process would be recommended.

In circumstances where archaeological deposits cannot be preserved through avoidance or capping, data recovery through excavation would be the alternative. This measure would consist of excavating those portions of the site(s) that would be adversely affected. The work should be accomplished within the context of detailed research and in accordance with current professional standards. The program should result in extraction of sufficient volumes of archaeological data so that important regional research considerations can be addressed. The excavation should be accomplished by qualified professionals and detailed technical reports should result.

In considering subsurface testing and excavations of prehistoric archaeological sites, consultation with the local Native American community is essential; all aspects of the programs, including the treatment of cultural materials and particularly the removal, study and reinternment of Native American burials should be addressed. All applicable State and local legal requirements concerning these issues should be strictly adhered to.

Sonoma County General Plan/Agricultural Resources

Impact 3.6-2

Buildout of the Southeast Specific Plan project site would result in the loss of about 80 acres of land designated as Farmlands of Local Importance. This would be a significant and unavoidable land use impact with respect to Sonoma County land use policies.

As noted previously, the project site area has been designated as Farmlands of Local Importance by the State Department of Conservation and Sonoma County Board of Supervisors. Although agriculture is considered a secondary use of the site under the County General Plan designation of the site as Diverse Agriculture where farming may not be the principal occupation of the farmer, in view of the County's existing land use protection measures, the Southeast Specific Plan project would be counter to the County's planned long-term agricultural activity. County General Plan policies and the Zoning Ordinance are intended to protect Diverse Agriculture lands as mentioned previously. Item 2.7.3 of the County General Plan Land Use Element regarding the Policy for Diverse Agricultural Areas states: *This category shall enhance and protect those land areas where soil, climate, and water conditions support farming but where small acreage intensive farming and part time farming activities are predominant. ----- The primary purpose of this category is to protect a full range of agricultural uses*

and to limit further residential intrusion consistent with the policies of the Agricultural Resources Element. The Agricultural Resources Element policies call for preserving agricultural land.

In view of the above, and the fact that the extent of Farmlands of Local Importance is diminishing, and Farmlands of Local Importance remaining within the UGB are increasingly less suitable for agricultural use because of surrounding urban development, Impact 3.6-2 is considered significant and unavoidable. Agriculturally suitable land parcels are being divided into smaller segments and access for agricultural equipment is becoming more difficult because of urban development as would be the case with the Southeast Specific Plan. The development of residential uses near existing agricultural areas could lead to increased pressure for termination of the agricultural activity.

Mitigation Measure 3.6-2

No mitigation measure is available for the loss of Farmlands of Local Importance. The loss of Farmlands of Local Importance would remain significant and unavoidable under Impact Criterion #1 regarding conflicting with County land use plans or policies.

Land Use Conflicts: *Would the project conflict with a habitat or community conservation plan? (Impact Criterion #2)*

The Southeast Specific Plan site is not known to be included within a habitat conservation plan or natural community conservation plan. Refer to the discussion above regarding applicable land use plans, policies, or regulations (see also Section 3.3 of this EIR, *Biological Resources*, regarding wildlife habitat values of the project site). The Southeast Specific Plan project would not conflict with a habitat or community conservation plan under Impact Criterion #2.

Community Configuration: *Would the project divide an established community? (Impact Criterion #3)*

The Southeast Specific Plan site is for the most part vacant and surrounded by rural residential and agricultural land uses as noted previously. Existing streets surround the project site on east, west and south sides. Off-site land uses would not be affected by the Specific Plan project. For example, while new streets would need to be constructed on the approximate 80 acre project site to provide access to development internal to the site as proposed, project development would not require off-site land acquisition for the construction of new streets or require the reconfiguration of land parcels to facilitate site development or circulation systems. The Southeast Specific Plan project would provide for a connection to Sturtevant Drive through the Canon Manor Specific Plan site immediately to the north.

Site development, to the exclusion of specified utility extensions (sewer, water, energy provisions as explained in Section 3.11, *Utilities*), would be solely contained within the Southeast Specific Plan site as it exists today. Utilities constructed off-site as necessary to serve site development would be constructed along existing roadway corridors and not extend through intensively developed parcels requiring the disruption, division or substantial alteration of existing land uses. Therefore, the

Southeast Specific Plan project would not physically divide an established community under Impact Criterion #3. In addition, the project would not displace any existing housing.

Cumulative Development

The discussion of cumulative development impacts is as described in the *Introduction* section of this EIR under the title *Cumulative Impact Assessment* and includes collectively the Specific Plan Areas and projects as described therein.

Land uses proposed for the Southeast Specific Plan project appear generally consistent with the overall direction of the City's plans for the future of the Southeast Specific Plan area as expressed in the City's General Plan. The project would not be consistent with Sonoma County's policies for the protection of agriculturally suitable land. As noted previously, the project site is designated as Farmlands of Local Importance by the State Department of Conservation and Sonoma County Board of Supervisors due to its potential productivity.

While no major physical disruption of an existing developed portion of the community is anticipated under the project, the loss of agricultural land is considered a significant and unavoidable land use impact. To the extent other specific Plan proposals inclusive of the Canon Manor Specific Plan, University District Specific Plan, Northeast Specific Plan, Northwest Specific Plan, Wilfred/Dowdell Specific Plan or other development as explained previously would require the conversion of agriculturally suitable land or land that is under agricultural use, the identified land use impact would be significant and unavoidable in a cumulative context. As noted in the General Plan Draft EIR, "Because the county is experiencing a net total loss of this [agricultural] resource, Rohnert Park's contribution to this impact is considered a significant cumulative impact."[8]

Endnotes — Land Use

1 Rohnert Park General Plan, *Revised Draft Environmental Impact Report*, May, 2000, Land Use Chapter, page 4-2.

2 The Canon Manor West subdivision is designated as Rural Residential on the Sonoma County General Plan Land Use Map and is also identified as an Urban Service Area. Annexation of the subdivision to the City of Rohnert Park would require that the subdivision roads be improved to City public road standards and become public roadways. Sonoma County formed the Canon Manor West Subdivision Assessment District to finance the extension of infrastructure improvements to the subdivision to resolve a public health hazard caused by failing septic systems and contaminated wells. An EIR was prepared to evaluate the environmental impacts that would result from the extension of infrastructure improvements including public water and sewer and the construction of road and drainage improvements (Canon Manor West Subdivision Assessment District, *Draft Environmental Impact Report*, Sonoma County Department of Transportation and Public Works, June 28, 2004, SCH #2003112088).

3 County of Sonoma, Land Use Plan Map, Rohnert Park – Cotati and Environs, Figure LUI-5g, Planning Area 7. Sonoma County General Plan Land LUse Element, 2.7.3, *Policy for Diverse Agricultural Areas,* page 50.

4 Sonoma County Code, Chapter 26, *the Zoning Regulations*, Article 08, Sec. 26-08-005.

[5] According to the California Department of Conservation, Office of Land Conservation, Farmland Mapping and Monitoring Program (FMMP), "Farmland of Local Importance" is either currently producing crops, or has the capability of production. "Farmland of Local Importance" is land other than "Prime Farmland," "Farmland of Statewide Importance" or "Unique Farmland". This land may be important to the local economy due to its productivity. It does not include publicly owned lands for which there is an adopted policy preventing agricultural use.

"Farmland of Local Importance" was initially identified by a local advisory committee convened in each county by the FMMP in cooperation with the Soil Conservation Service and county board of supervisors. Authority to recommend changes to the category of "Farmland of Local Importance" rests with the board of supervisors in each county. The FMMP presents each draft map to the board of supervisors for their review. After the presentation of a draft map by the FMMP, the board of supervisors has a 60-day review period in which to request any needed modifications. An extension may be granted upon request. The board of supervisors may then approve or not approve the "Farmland of Local Importance" category of the map. The FMMP accepts the recommendation of the board of supervisors if it is consistent with the general program guidelines.

[6] Archaeological Resource Service, A Cultural Resources Evaluation of the Southeast Specific Plan Area, in Rohnert park, Sonoma County, California, submitted for Redwood Equities, A.R.S. Project 01-012, January 22, 2002.

[7] Archaeological materials include features such as concentrations of artifacts or culturally modified soil deposits including trash pits older than fifty years of age.

[8] Rohnert Park General Plan, Revised Draft Environmental Impact Report, SCH No. 99062114, May, 2000, Section 5.4, *Cumulative Impacts*, Page 5-7, *Open Space and Farmland*.

3.7 NOISE

Introduction

This section of the EIR evaluates the potential noise impacts resulting from implementation of the Southeast Specific Plan project. The purpose of this analysis is twofold: (1) to evaluate the Southeast Specific Plan in terms of its design to ensure that noise levels at the Specific Plan site will not exceed standards adopted by the City of Rohnert Park; and (2) to evaluate the noise impact of the Southeast Specific Plan on the surrounding (off-site) areas.

Setting

Fundamentals of Sound and Environmental Noise

Sound

Sound is technically described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Since the human ear is not equally sensitive to a given sound level at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale ("dBA") provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Environmental Noise

Noise, on the other hand, is typically defined as unwanted sound. A typical noise environment consists of a base of steady "background" noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These can vary from an occasional aircraft or train passing by to virtually continuous noise from, for example, traffic on a major highway. Table 3.7-1 lists representative noise levels for the environment.

Several rating scales have been developed to analyze the adverse effect of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise upon people is largely dependent upon the total acoustical energy content of the noise, as well as the time of day when the noise occurs. Those that are applicable to this analysis are as follows:

- L_{eq} – The equivalent energy noise level is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

Table 3.7-1
Representative Environmental Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	—110—	Rock Band
Jet Fly-over at 100 feet		
	—100—	
Gas Lawnmower at 3 feet		
	—90—	
		Food Blender at 3 feet
Diesel Truck going 50 mph at 50 feet	—80—	Garbage Disposal at 3 feet
Noisy Urban Area during Daytime		
Gas Lawnmower at 100 feet	—70—	Vacuum Cleaner at 10 feet
Commercial Area		Normal Speech at 3 feet
Heavy Traffic at 300 feet	—60—	
		Large Business Office
Quiet Urban Area during Daytime	—50—	Dishwasher in Next Room
Quiet Urban Area during Nighttime	—40—	Theater, Large Conference Room (background)
Quiet Suburban Area during Nighttime		
	—30—	Library
Quiet Rural Area during Nighttime		Bedroom at Night, Concert Hall (background)
	—20—	
		Broadcast/Recording Studio
	—10—	
Lowest Threshold of Human Hearing	—0—	Lowest Threshold of Human Hearing

Source: California Department of Transportation, 1998.

- L_{dn} – The Day-Night Average Noise Level is a 24-hour average L_{eq} with a 10 dBA "penalty" added to noise during the hours of 10:00 P.M. to 7:00 A.M. to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.
- L_{min} – The minimum instantaneous noise level experienced during a given period of time.
- L_{max} – The maximum instantaneous noise level experienced during a given period of time.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day, night, or over a 24-hour period. Environmental noise levels below 60 dBA are generally considered low, moderate in the 60 to 70 dBA range, and high above 70 dBA. Examples of low daytime levels are isolated natural settings that can provide noise levels as low as 20 dBA, and quiet suburban residential streets that can provide noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of low-moderate level noise environments are urban

residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with more noisy urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA).

When evaluating changes in 24-hour community noise levels, a difference of 3 dBA is a barely-perceptible increase to most people. A 5 dBA increase is readily noticeable, while a difference of 10 dBA would be perceived as a doubling of loudness. Except in a carefully controlled laboratory condition, a change of 1 dBA is very difficult to perceive.

Noise levels from a particular source generally decline as distance to the receptor increases. Other factors such as the weather and reflecting or shielding also help intensify or reduce the noise level at any given location. A commonly used rule of thumb for roadway noise is that for every doubling of distance from the source, the noise level is reduced by about 3 dBA at acoustically "hard" locations (i.e., the area between the noise source and the receptor is nearly complete asphalt, concrete, hard-packed soil, or other solid materials) and 4.5 dBA at acoustically "soft" locations (i.e., the area between the source and receptor is normal earth or has vegetation, including grass). Noise from stationary or point sources is reduced by about 6 to 7.5 dBA for every doubling of distance at acoustically hard and soft locations, respectively. Noise levels are also generally reduced by 1 dBA for each 1,000 feet of distance due to air absorption. Noise levels may also be reduced by intervening structures – generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. The manner in which older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 dBA with closed windows. The exterior-to-interior reduction of newer homes is generally 30 dBA or more with closed windows.

Groundborne Vibration

Vibration is sound radiated through the ground. The rumbling sound caused by the vibration of room surfaces is called groundborne noise. The ground motion caused by vibration is measured as particle velocity in inches per second and in the U.S. is referenced as vibration decibels (VdB).

The background vibration velocity level in residential and educational areas is usually around 50 VdB. The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Most perceptible indoor vibration is caused by sources within buildings such as the operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration velocity level, and 100 VdB, which is the general threshold where minor damage can occur in fragile buildings.

The general human response to different levels of groundborne vibration velocity levels is described in Table 3.7-2.

Table 3.7-2
Human Response to Different Levels of Groundborne Vibration

	Human Reaction
65 VdB	Approximate threshold of perception for many people.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.

Source: Federal Railroad Administration, 1998.

Regulatory Setting

City of Rohnert Park General Plan

The California Government Code requires that a noise element be included in the general plan of each county and city in the state. Each local government's goals, objectives, and policies for noise control are established by the noise element of the general plan and the passage of specific noise ordinances.

The Noise Element of the Rohnert Park General Plan establishes policies for the compatibility of new land uses with various noise levels. These policies have been used to set and adopt exterior and interior noise compatibility criteria for various land uses within the City. The purpose of these criteria is to reduce the various potential effects of noise on people, including sleep disturbance, reduced physical and mental performance, annoyance, and interference with speech communication. The Noise Element identifies 60 dBA L_{dn} as the established standard for exterior noise and 45 dBA L_{dn} as the established interior noise standard for all residential uses. It also discourages the use of visible sound walls for new development project, except for those located along US 101 and along the Northwestern Pacific Railroad right-of-way. The General Plan requires the control of equipment or mitigation measures for any noise-emitting construction equipment or activity.

City of Rohnert Park Municipal Code

Chapter 17.12.030 of the Rohnert Park Zoning Ordinance includes various noise level standards for land uses in the City, inclusive of maximum levels and duration.

The City of Rohnert Park has also adopted a Noise Ordinance (Chapter 9.44 of the Rohnert Park Municipal Code), which identifies ambient base noise levels, noise standards for various sources, specific noise restrictions, exemptions, and variances for sources of noise within the city. The Noise Ordinance applies to all noise sources with the exception of any vehicle that is operated upon any public highway, street or right-of-way, or to the operation of any off-highway vehicle, to the extent

that it is regulated in the State Vehicle Code, and all other sources of noise that are specifically exempted.

The Noise Ordinance limits construction activity within a residential zone or a radius of 500 feet there from to the hours of 8:00 A.M. through 6:00 P.M. when the potential noise levels would cause discomfort or annoyance to a reasonable person of normal sensitiveness residing in the area. Other restrictions are as explained in Chapter 17.12.020 of the Zoning Ordinance.

Existing Noise Levels

Existing uses surrounding the Specific Plan project site consist of residential, agricultural, educational, uses and open space. Although other noise sources occur in the vicinity, vehicular traffic is the primary source of noise at, and around, the Southeast Specific Plan site.

Existing daytime noise levels were measured at three locations within the Southeast Specific Plan area and surrounding vicinity on October 7, 2004. These locations are identified in Figure 3.7-1 and are individually discussed below:

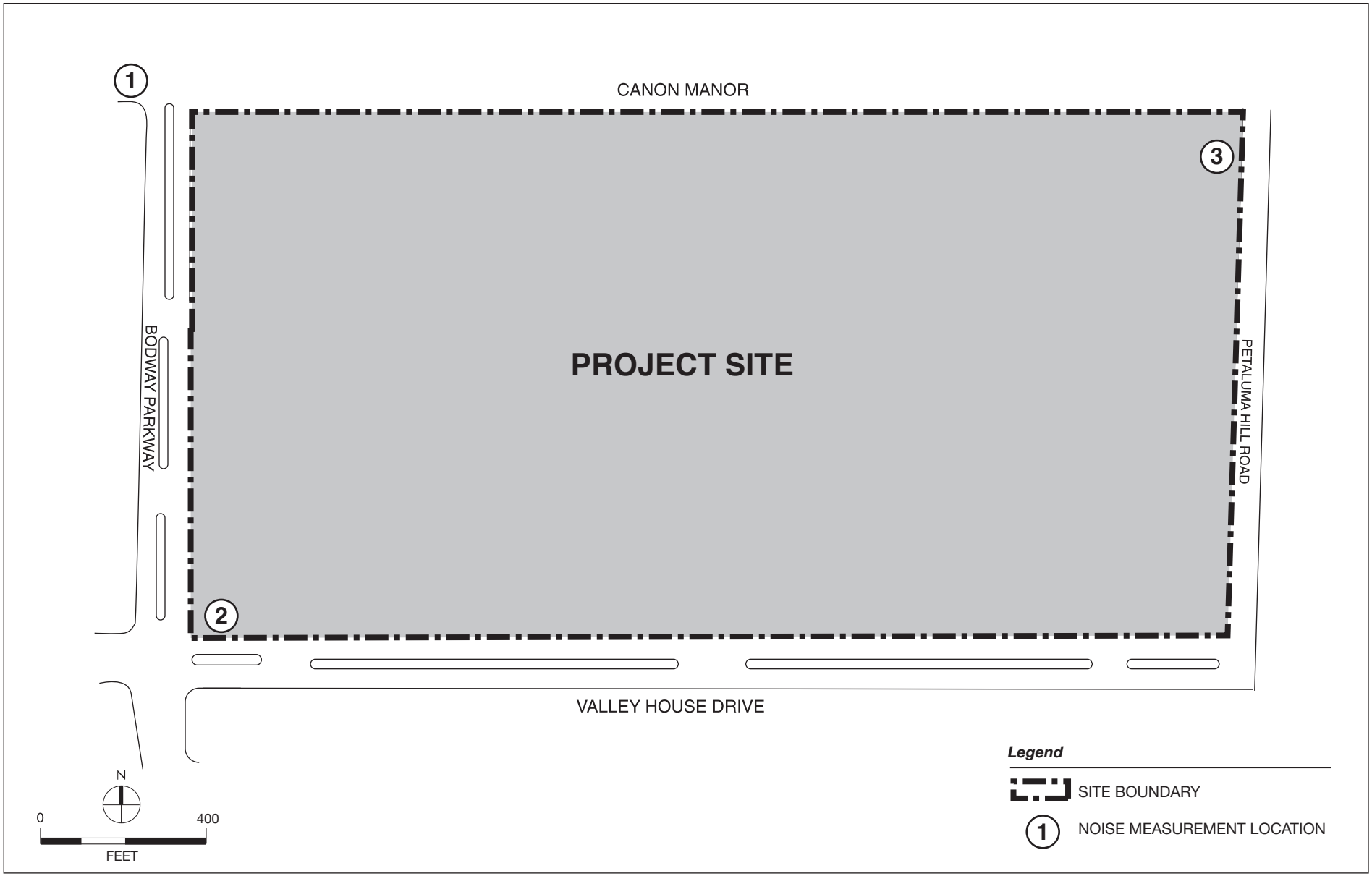
- **Location 1** is at the northwest corner of the intersection of Camino Colegio and Bodway Parkway. Residential uses are located near this location. Noise levels where measured approximately 50 feet from the centerline of each roadway outside of the existing perimeter walls for the residential development.
- **Location 2** is at the southwest corner of the Southeast Specific Plan site. Noise levels were measured approximately 50 feet from the centerline of Valley House Drive and 100 feet from the centerline of Bodway Parkway.
- **Location 3** is at the northeast corner of the Southeast Specific Plan site in front of the existing residence at the site. Noise levels were measured approximately 50 feet from the centerline of Petaluma Hill Road.

The average noise levels measured at each of these locations are identified in Table 3.7-3. These daytime noise levels are characteristic of a suburban environment.

Table 3.7-3
Daytime Noise Levels Measured at the Project Site

		Noise Level Statistics		
Noise Measurement Location	**Primary Noise Sources**	**L_{eq}**	**L_{min}**	**L_{max}**
1. Intersection of Camino Colegio & Bodway Pkwy	Vehicular traffic on Camino Colegio & Bodway Parkway	60.4	36.1	78.2
2. Southwest corner of Southeast Specific Plan site	Vehicular traffic on Valley House Drive and Bodway Parkway	66.1	37.3	88.3
3. Northeast corner of Southeast Specific Plan site	Vehicular Traffic on Petaluma Hill Road	74.1	43.8	88.4

Source: EIP Associates, 2004.



10.20.03

SOURCE: EIP Associates

EIP

CITY OF ROHNERT PARK SOUTHEAST SPECIFIC PLAN

FIGURE 3.7-1: NOISE MEASUREMENT LOCATIONS

Existing roadway noise levels were also calculated for the roadway links in the vicinity of the Southeast Specific Plan site that have noise sensitive uses facing the roadways and would be affected by project-generated traffic. The average peak traffic hour noise levels along these roadway segments are presented in Table 3.7-4.

Table 3.7-4
Existing Roadway Noise Levels at Locations Off Site

	Roadway Segment	dBA Ldn at 100 Feet[1]
East Cotati Avenue	East of Bodway Parkway	60.3
	West of Bodway Parkway	62.1
	West of Camino Colegio	62.1
Bodway Parkway	South of E. Colati Avenue	54.6
	North of valley House Drive	56.3
Main Street	South of Adobe Road	58.2
Old Redwood Highway	North of E. Colati Avenue	66.8
	South of E. Colati Avenue	63.8
	South of Main Street	64.0
Petaluma Hill Road	North of E. Coati Avenue	65.4
	South of E. Colati Avenue	65.2
	North of Valley House Drive	65.2
	South of Valley House Drive	65.7
	South of E. Railroad Avenue	65.0
Valley House Drive	East of Bodway Parkway	57.5
	West of Petaluma Hill Road	57.5

Source: EIP Associates, 2004.

Notes:

[1] Distance is from the centerline of the roadway segment to the receptor location. Noise levels do not account for shielding from intervening structures.

Existing Groundborne Vibration Levels

Aside from seismic events, the greatest regular sources of groundborne vibration in the Southeast Specific Plan area and the City of Rohnert Park are construction activities and roadway truck traffic. At the time this EIR was prepared, no construction activities likely to generate high groundborne vibration velocity levels (e.g., demolition, pile driving, or blasting) were occurring in the vicinity of the Southeast Specific Plan site. Heavy trucks currently transport materials along Petaluma Hill Road and Bodway Parkway. These trucks typically generate groundborne vibration velocity levels of around 63 vibration decibels (VdB), and these levels could reach 72 VdB where trucks pass over bumps in the road.[1]

[1] Federal Railroad Administration, 1998, *High Speed Ground Transportation Noise and Vibration Impact Assessment*.

Impacts and Mitigation Measures

Noise Analysis Methodology

The analysis of the existing and future noise environments presented in this analysis is based on noise level monitoring, noise prediction modeling, and empirical observations. Existing noise levels were monitored at selected locations at the Southeast Specific Plan project site using a Larson-Davis Model 720 precision sound level meter, which satisfies the American National Standards Institute (ANSI) for general environmental noise measurement instrumentation. Noise modeling procedures involved the calculation of existing and future vehicular noise levels along individual roadway segments in the Specific Plan project vicinity. This task was accomplished using the Federal Highway Administration (FHWA) Highway Noise Prediction Model (FHWA-RD-77-108). The model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (energy rates) utilized in the FHWA Model have been modified to reflect average vehicle noise rates identified for California by Caltrans. The Caltrans data show that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels. Traffic volumes utilized as data inputs in the noise prediction model were provided through the traffic analysis prepared for this EIR. The peak hour traffic volumes were assumed to represent ten percent of the 24-hour average daily traffic volumes.

Standards of Significance

Based on the City of Rohnert Park thresholds of significance, noise impacts would be considered significant if one or more of the following conditions were created by implementation of the Southeast Specific Plan project.

- **Impact Criterion #1:** Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinances, or applicable standards of other agencies.
- **Impact Criterion #2:** Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.
- **Impact Criterion #3:** A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- **Impact Criterion #4:** A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

The noise standards adopted by the City are discussed previously in this EIR section. These standards would apply to the residential uses that would be constructed in the Southeast Specific Plan area.

The *CEQA Guidelines* do not define the levels at which groundborne vibration is considered "excessive." This analysis uses the Federal Railway Administration's vibration impact thresholds for sensitive buildings, residences, and institutional land uses. These thresholds are 80 VdB at residences

and buildings where people normally sleep (e.g., nearby residences) and 83 VdB at institutional buildings.

The CEQA Guidelines also do not define the levels at which temporary and permanent increases in ambient noise are considered "substantial." For the purpose of this analysis, a permanent increase in roadway traffic noise levels of 3.0 dBA L_{dn} over ambient noise levels without the project is considered to be substantial and, therefore, significant. As discussed previously in this section, a noise level increase of 3 dBA is barely perceptible to most people, a 5 dBA increase is readily noticeable, and a difference of 10 dBA would be perceived as a doubling of loudness.

Project Evaluation

Noise Levels On Site: *Would the project expose persons to noise levels in excess of adopted standards? (Impact Criterion #1)*

Impact 3.7-1

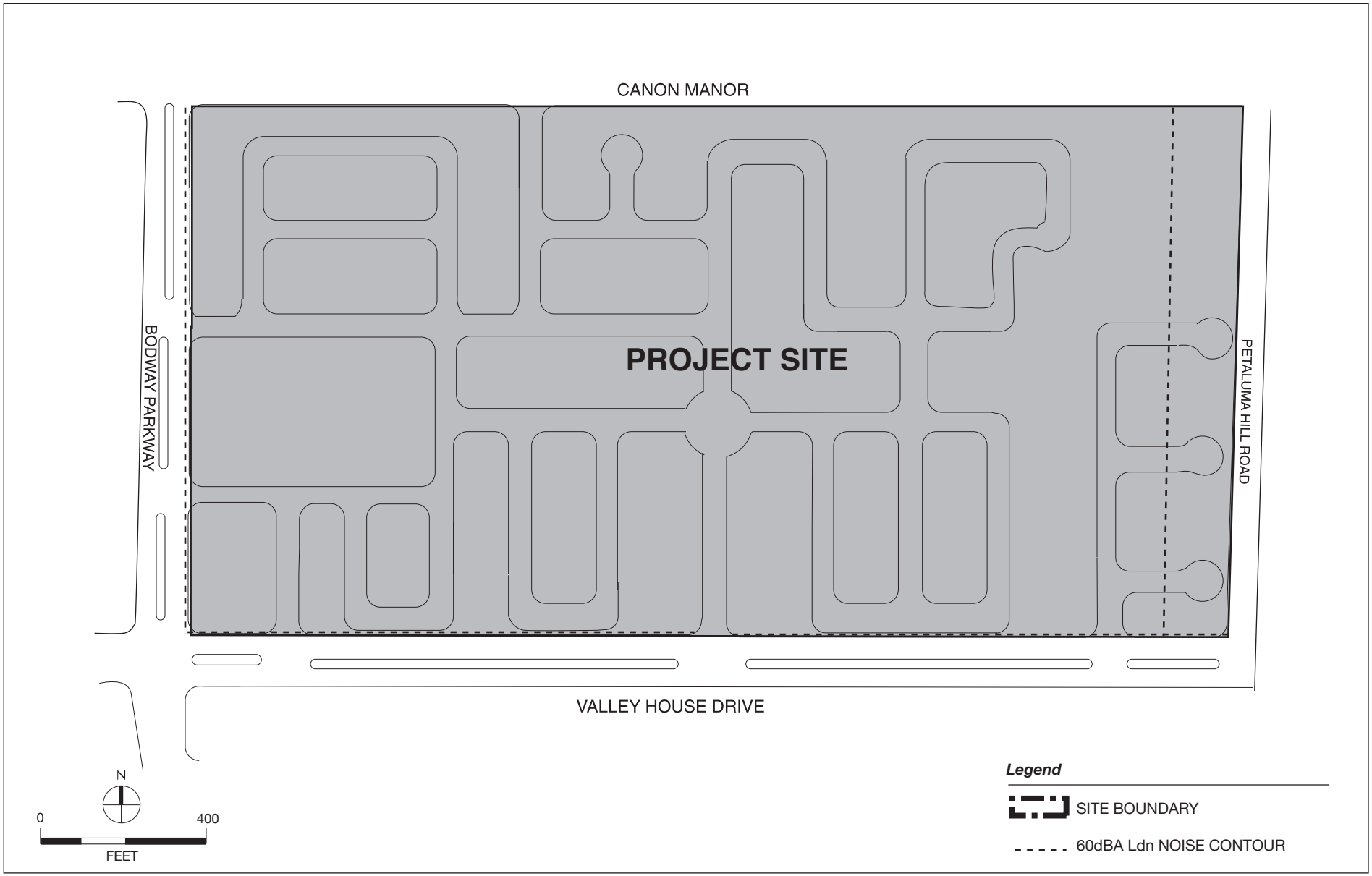
Future residents of the Southeast Specific Plan site could be exposed to exterior traffic noise levels that exceed City standards. This would be a potentially significant impact under Impact Criterion #1 regarding exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinances, or applicable standards of other agencies.

Future noise levels at the Southeast Specific Plan site would continue to be dominated by vehicular traffic on Petaluma Hill Road, Valley House Drive, and Bodway Parkway. Other sources of noise would include new stationary sources (such as outdoor ventilation and air conditioning equipment) and increased activity throughout the site. Figure 3.7-2 identifies the future (year 2020) average daily 60 dBA L_{dn} roadway noise contour for the Specific Plan area without any assumptions for noise reductions.

Heating, ventilation, and air conditioning (HVAC) systems would be installed for the new buildings within the Southeast Specific Plan area. Residential HVAC systems result in noise levels that average between 40 and 50 dBA L_{eq} at 50 feet from the equipment. These noise levels would not exceed the City's exterior noise standards.

Mitigation Measure 3.7-1

Outdoor activity areas and the residences beyond shall be set back a minimum of 199 feet from the centerline of Petaluma Hill Road, 73 feet from the centerline of Valley House Drive east of Bodway Parkway extending to the site entry on Valley House Drive, 63 feet from the centerline of Valley House Drive west of Petaluma Hill Road extending to the site entry on Valley House Drive, and 64 feet from the centerline of Bodway Parkway.



SOURCE: William Hezmalhalch Architects, Inc. (Site Plan), EIP Associates (Noise Contours).

EIP

CITY OF ROHNERT PARK SOUTHEAST SPECIFIC PLAN

FIGURE 3.7-2: FUTURE NOISE LEVEL CONTOURS ON SITE

The implementation of Mitigation Measure 3.7-1 would reduce noise impact 3.7-1 to a less than significant level under Impact Criterion #1 regarding the exposure of persons to noise levels in excess of established standards.

Table 3.7-5 presents the future average daily exterior and interior noise levels associated with Petaluma Hill Road, Valley House Drive, and Bodway Parkway assuming that solid masonry privacy walls are constructed around the perimeters of the Specific Plan site. These perimeter privacy walls are typical of new residential projects in suburban areas. As discussed previously, exterior-to-interior reduction of newer residential units is generally 30 dBA or more.

Table 3.7-5
Predicted Future Noise Levels at Locations On Site

	Noise Levels in dBA L_{dn}				
	Future Exterior Noise Levels	**City Exterior Noise Standard**	**Assumed Exterior to Interior Noise Reduction**	**Future Interior Noise Level**	**City Interior Noise Standard**
Residential Units along Petaluma Hill Road – First Floor and Back Yard 50 feet from Centerline & 7-Foot Wall	60.5	60.0	-30.0	30.5	45.0
Residential Units along Petaluma Hill Road – First Floor and Back Yard 50 feet from Centerline & 8-Foot Wall	59.1	60.0	-30.0	29.1	45.0
Residential Units along Petaluma Hill Road – Second Floor 50 feet from Centerline	69.2	--	-30.0	39.2	45.0
Residential Units along Petaluma Hill Road – First Floor and Back Yard 60 feet from Centerline & 7-Foot Wall	59.7	60.0	-30.0	29.7	45.0
Residential Units along Petaluma Hill Road – Second Floor 60 feet from Centerline	68.0	--	-30.0	38.0	45.0
Residential Units along Bodway Parkway– First Floor and Back Yard 50 feet from Centerline & 6-Foot Wall	55.8	60.0	-30.0	25.8	45.0
Residential Units along Bodway Parkway– Second Floor 50 feet from Centerline	62.0	--	-30.0	32.0	45.0
Residential Units along Village House Drive west of Petaluma Hill Road - First Floor and Back Yard 50 feet from Centerline & 6-Foot Wall	55.6	60.0	-30.0	25.6	45.0
Residential Units along Village House Drive west of Petaluma Hill Road – Second Floor 50 feet from Centerline	61.8	--	-30.0	31.8	45.0
Residential Units along Village House Drive east of Bodway Parkway - First Floor and Back Yard 50 feet from Centerline & 6-Foot Wall	56.6	60.0	-30.0	26.6	45.0
Residential Units along Village House Drive east of Bodway Parkway – Second Floor 50 feet from Centerline	62.8	--	-30.0	32.8	45.0

Source: EIP Associates, 2004.

Based on the information in Table 3.7-5, future exterior noise levels in the outdoor activity areas of the homes located along Bodway Parkway and Valley House Drive, as well as interior noise levels throughout the Plan area would not exceed City standards with the construction of masonry privacy walls. Future exterior noise levels within the outdoor activity areas of the homes located along Petaluma Hill Road could exceed City standards if the homes are located 50 feet from the roadway centerline and if the perimeter wall is less than eight feet in height. This would be a potentially significant noise impact under Impact Criterion #1 regarding exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinances, or applicable standards of other agencies.

As an option to the setbacks as called for in Mitigation Measure 3.7-1, the following mitigation measures would also ensure that exterior noise levels within outdoor activity areas of residential units located within the Southeast Specific Plan site would not exceed City standards, and future on-site noise level impacts would be reduced to a less than significant level.

- Construct a 6 to 7 foot high solid masonry privacy wall around the perimeter of the Southeast Specific Plan site.
- New residential uses within the Southeast Specific Plan site shall be located a minimum of 60 feet from the centerline of Petaluma Hill Road with the masonry privacy wall in place.

However, because the construction of solid masonry privacy walls around the Specific Plan site would not be in conformance with General Plan Community Design Element policy CD-14 prohibiting the use of solid walls along urban use edges (i.e., fences must be "visually permeable" to create soft edges), Mitigation Measure 3.7-1 that provides sufficient setbacks so that outdoor activity areas would be outside the 60 dBA L_{dn} roadway noise contour as indicated in Figure 3.7-2 is recommended.

Construction Period Groundborne Vibration: *Would the project expose persons to excessive groundborne vibration/noise levels? (Impact Criterion #2)*

Construction activities that would occur in the Southeast Specific Plan area have the potential to generate low levels of groundborne vibration. Table 3.7-6 identifies various vibration velocity levels for the types of construction equipment that would operate at the Southeast Specific Plan site during construction.

Table 3.7-6
Vibration Source Levels for Construction Equipment

	Approximate VdB				
	25 Feet	**50 Feet**	**60 Feet**	**75 Feet**	**100 Feet**
Large Bulldozer	87	81	79	77	75
Loaded Trucks	86	80	78	76	74
Jackhammer	79	73	71	69	67
Small Bulldozer	58	52	50	48	46

Source: Federal Railroad Administration, 1998.

Construction activities could primarily affect the existing residence located in the northeastern corner of the Southeast Specific Plan site and the residential neighborhood located northwest of the intersection of Bodway Parkway and Camino Colegio. Construction activities could potentially affect new residential uses within the Canon Manor Specific Plan area if they are constructed prior to the development within the Southeast Specific Plan area. Future residents of the Southeast Specific Plan area could also be exposed to construction-related groundborne vibration if their units are occupied prior to the completion of other phases within the Specific Plan site area.

Residences outside the Specific Plan site are located more than 50 feet from the edge of the proposed construction area. However, construction could occur within 25 feet of the homes within the Specific Plan Site for short periods of time. Based on the information presented in Table 3.7-6, vibration levels could reach up to 87 VdB at the residential structures located within the Plan area. This would exceed the 80 VdB threshold for residences and buildings where people normally sleep. However, the construction activities and their associated noise levels would be limited to daytime hours between 8:00 A.M. through 6:00 P.M. in accordance with Section 9.44.120 of the Rohnert Park Municipal Code and would not occur during recognized sleep hours for residences. Therefore, the impact under Impact Criterion #2 regarding the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels would be less than significant due to the limited hours of operation and sleeping hours.

When the Southeast Specific Plan project is completed and operational, background vibration levels would be expected to average around 50 VdB, as discussed previously in this section. This is substantially less than the 80 VdB threshold for residential buildings. Therefore, this would be a less-than-significant noise impact under Impact Criterion #2 regarding the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels

Operational Roadway Noise Levels: *Would the project result in a substantial increase in ambient noise levels? (Impact Criterion #3)*

Locations in the vicinity of the Southeast Specific Plan site would experience less than significant changes in noise levels as a result of an increase in the on-site population and resulting increase in motor vehicle trips. The changes in future noise levels at the selected noise-sensitive locations along the study-area roadway segments in the project vicinity are identified in Table 3.7-7. As shown, the Southeast Specific Plan project would increase local noise levels by a maximum of 1.2 dBA L_{dn}, which is inaudible/imperceptible to most people and would not exceed the identified thresholds of significance. This would be a less-than-significant noise impact under Impact Criterion #3 regarding a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Table 3.7-7
Project Roadway Noise Impacts

		dBA Ldn at 100 Feet[1]			
	Roadway Segment	**Existing + Approved Developments Traffic**	**Existing + Approved + Project Traffic**	**Increase**	**Significance Threshold**
East Cotati Avenue	E of Bodway Pkwy	60.7	60.8	0.1	3.0
	W of Bodway Parkway	62.4	62.5	0.1	3.0
	W of Camino Colegio	62.2	62.6	0.4	3.0
Bodway Parkway	S of E. Colati Ave	54.6	55.7	1.1	3.0
	N of Valley House Dr	56.3	57.5	1.2	3.0
Main Street	S of Adobe Rd	58.2	58.5	0.3	3.0
Old Redwood Highway	N of E. Colati Ave	66.9	67.0	0.1	3.0
	S of E. Colati Ave	63.8	63.8	0.0	3.0
	S of Main St	64.0	64.1	0.1	3.0
Petaluma Hill Road	N of E. Coati Ave	65.4	65.5	0.1	3.0
	S of E. Colati Ave	65.3	65.4	0.1	3.0
	N of Valley House Dr	65.3	65.4	0.1	3.0
	S of Valley House Dr	65.7	65.9	0.2	3.0
	S of E. Railroad Ave	65.1	65.3	0.2	3.0
Valley House Drive	E of Bodway Pkwy	57.5	58.4	0.9	3.0
	W of Petaluma Hill Rd	57.5	58.5	1.0	3.0

Source: EIP Associates, 2004.

Notes:

[1] Distance is from the centerline of the roadway segment to the receptor location. Noise levels do not account for shielding from intervening structures.

Construction Period Noise Levels: *Would the project cause a temporary increase in ambient noise levels? (Impact Criterion #4)*

Impact 3.7-2

Construction activities associated with the Southeast Specific Plan could generate substantial temporary or periodic increases in noise levels. This would be a significant impact under Impact Criterion #4 regarding a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Project development would require the use of heavy equipment for site grading and excavation, the installation of utilities, paving, and building fabrication. Development activities would also involve the use of smaller power tools, generators, and other sources of noise. During each stage of development, there would be a different mix of equipment operating and noise levels would vary based on the amount of equipment in operation and the location of the activity.

The U.S. EPA has compiled data regarding the noise generating characteristics of specific types of construction equipment and typical construction activities, which are presented in Table 3.7-8 and Table 3.7-9, respectively. These noise levels would diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 84 dBA measured at 50 feet from the noise source to the receptor would reduce to 78 dBA at 100 feet from the source to the receptor, and reduce by another 6 dBA to 72 dBA at 200 feet from the source to the receptor.

Table 3.7-8
Noise Ranges of Typical Construction Equipment

Construction Equipment	Noise Levels in dBA Leq at 50 feet[1]
Front Loader	73–86
Trucks	82–95
Cranes (moveable)	75–88
Vibrator	68–82
Saws	72–82
Pneumatic Impact Equipment	83–88
Jackhammers	81–98
Pumps	68–72
Generators	71–83
Compressors	75–87
Concrete Mixers	75–88
Concrete Pumps	81–85
Back Hoe	73–95
Tractor	77–98
Scraper/Grader	80–93
Paver	85–88

Source: U.S. EPA, 1971 as presented in City of Los Angeles, 1998.

Notes:

[1] Machinery equipped with noise-control devices or other noise-reducing design features do not generate the same level of noise emissions as that shown in this table.

Table 3.7-9
Typical Outdoor Construction Noise Levels

Construction Phase	Noise Levels at 50 Feet (dBA L_{eq})	Noise Levels at 50 Feet with Mufflers (dBA L_{eq})
Ground Clearing	84	82
Excavation, Grading	89	86
Foundations	78	77
Structural	85	83
Finishing	89	86

Source: U.S. EPA, 1971 as presented in City of Los Angeles, 1998.

The nearest sensitive receptor that would be subject to construction-related noise is the existing residence located in the northeastern corner of the Southeast Specific Plan project site and the residential neighborhood located northwest of the intersection of Bodway Parkway and Camino Colegio. Construction could potentially affect new residential uses within the Canon Manor Specific Plan area if they are constructed prior to the development within the Southeast Specific Plan area. Future residents of the Southeast Specific Plan area could also be exposed to construction related noise if the units are occupied prior to the completion of other phases within the Specific Plan area.

Construction activities would generate typical noise levels of up to 82 dBA L_{eq} at these residences during ground clearing, and 86 dBA L_{eq} at these residences during excavation, grading and finishing. Most of the types of exterior construction activities associated with the Southeast Specific Plan would not generate continuously high noise levels, although occasional single-event disturbances from grading and construction are possible. The construction activities and their associated noise levels would be limited to daytime hours between 8:00 A.M. through 6:00 P.M. in accordance with Section 9.44.120 of the Rohnert Park Municipal Code and would be temporary in nature. The resulting noise would, however, be considered a potentially significant noise impact under Significance Criterion #4 regarding a substantial temporary or periodic increase in ambient noise levels in the project vicinity.

In accordance with Policy NS-4 of the Rohnert Park General Plan, Mitigation Measure 3.7-2 is recommended to reduce the potential noise impacts associated with development under the Southeast Specific Plan project to less-than significant levels.

Mitigation Measure 3.7-2

Reduce noise levels associated with construction activities and heavy-duty construction equipment. The project contractor(s) should implement measures to reduce the noise levels generated by construction equipment operating at the project site during project grading and construction phases. The project sponsor should include in construction contracts the following requirements or measures shown to be equally effective.

- Stationary construction equipment that generates noise levels in excess of 65 dBA L_{eq} shall be located as far away from existing residential areas as possible. If required to minimize potential noise conflicts, the equipment shall be shielded from noise sensitive receptors by using temporary walls, sound curtains, or other similar devices;
- Heavy-duty vehicle storage and start-up areas shall be located a minimum of 150 feet from occupied residences where feasible;
- An information sign shall be posted at the entrance to each construction site that identifies the permitted construction hours and provides a telephone number to call and receive information about the construction project or to report complaints regarding excessive noise levels.

Cumulative Development

The discussion of cumulative development impacts is as described in the *Introduction* section of this EIR under the title *Cumulative Impact Assessment* and includes collectively the Specific Plan Areas and projects as described therein.

Noise Levels On Site: ***Would the project expose persons to noise levels in excess of adopted standards? (Impact Criterion #1)***

The previous discussion above for the Southeast Specific Plan project regarding localized future noise levels on site would apply equally to the Southeast Specific Plan under cumulative development conditions. This is because the previous discussion is based on the noise levels associated with cumulative roadway traffic in the year 2020 that includes cumulative development traffic with the addition of traffic generated by the Southeast Specific Plan.

Construction Period Groundborne Vibration: ***Would the project expose persons to excessive groundborne vibration/noise levels? (Impact Criterion #2)***

Cumulative development in Rohnert Park should not result in the exposure of people to or the generation of excessive groundborne vibration, due to the localized nature of vibration impacts and the fact that all construction would not occur at the same time and at the same location. The Canon Manor Specific Plan area is located adjacent to the Southeast Specific Plan area. The potential exists for construction activities to occur simultaneously on both sites. However, high groundborne vibration would continue to be isolated within close proximity to the individual pieces of construction equipment. All construction activities that would occur in close proximity to occupied residences would be limited to daytime hours between 8:00 A.M. through 6:00 P.M. in accordance with Section 9.44.120 of the Rohnert Park Municipal Code. Therefore, they would not occur during recognized sleep hours for residences. As such, the impact of the Southeast Specific Plan would not be cumulatively considerable under Impact Criterion #2 regarding exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

With regard to cumulative groundborne vibration due to operations, it is not expected that growth in Rohnert Park would lead to a cumulatively considerable impact. Rohnert Park is a mixture of residential, retail, and commercial land uses. These land uses would not result in excessive groundborne vibration, and consequently a cumulatively considerable impact in this area would not occur. Because background operational vibration levels under the Southeast Specific Plan project are expected to be about 50 VdB, which is well below the sensitivity threshold of sensitive land uses, the operational impact of the Southeast Specific Plan project would not be cumulatively considerable under Impact Criterion #2 regarding exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

Operational Roadway Noise Levels: ***Would the project result in a substantial increase in ambient noise levels? (Impact Criterion #3)***

Cumulative noise impacts would occur primarily as a result of increased traffic on local roadways due to the Southeast Specific Plan project and other projects within the study area. Therefore, cumulative traffic-generated noise impacts have been assessed based on the contribution of the Southeast Specific Plan project to the future year 2020 cumulative base traffic volumes in the project vicinity. The noise levels associated with existing traffic volumes, cumulative base traffic volumes without the Southeast

Specific Plan, and cumulative base traffic volumes with the Southeast Specific Plan are identified in Table 3.7-10.

Table 3.7-10
Cumulative Project Roadway Noise Impacts

		dBA Ldn at 100 Feet[1]			
	Roadway Segment	**Existing + Traffic**	**Year 2020 + Project Traffic**	**Increase**	**Significance Threshold**
East Cotati Avenue	E of Bodway Pkwy	60.3	62.1	1.8	3.0
	W of Bodway Parkway	62.1	60.9	-1.2	3.0
	W of Camino Colegio	62.1	63.5	1.4	3.0
Bodway Parkway	S of E. Colati Ave	54.6	57.5	2.9	3.0
	N of Valley House Dr	56.3	58.6	2.3	3.0
Main Street	S of Adobe Rd	58.2	61.0	2.8	3.0
Old Redwood Highway	N of E. Colati Ave	66.8	68.0	1.2	3.0
	S of E. Colati Ave	63.8	64.8	1.0	3.0
	S of Main St	64.0	66.4	2.4	3.0
Petaluma Hill Road	N of E. Coati Ave	65.4	66.6	1.2	3.0
	S of E. Colati Ave	65.2	66.0	0.8	3.0
	N of Valley House Dr	65.2	65.8	0.6	3.0
	S of Valley House Dr	65.7	66.2	0.5	3.0
	S of E. Railroad Ave	65.0	66.0	1.0	3.0
Valley House Drive	E of Bodway Pkwy	57.5	59.5	2.0	3.0
	W of Petaluma Hill Rd	57.5	58.5	1.0	3.0

Source: EIP Associates, 2004.

Notes:

[1] Distance is from the centerline of the roadway segment to the receptor location. Noise levels do not account for shielding from intervening structures.

As shown, cumulative development along with the Southeast Specific Plan would increase local noise levels by a maximum of 2.9 dBA L_{dn}, which would not exceed 3.0 dBA L_{dn} and not be substantial.

Table 3.7-11 shows the contribution of the Southeast Specific Plan project to the cumulative traffic noise levels. As shown, the Southeast Specific Plan project would contribute a maximum of 1.0 dBA L_{dn}, which is inaudible/imperceptible to most people. Therefore, the contribution of the Southeast Specific Plan project to the cumulative impact would not be cumulatively considerable under Impact Criterion #3 regarding a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Table 3.7-11
Project Contribution to Cumulative Project Roadway Traffic Noise Impacts

		dBA Ldn at 100 Feet[1]			
	Roadway Segment	Year 2020 Base Traffic	Year 2020 + Project Traffic	Increase	Significance Threshold
East Cotati Avenue	E of Bodway Pkwy	62.0	62.1	0.1	3.0
	W of Bodway Parkway	60.7	60.9	0.2	3.0
	W of Camino Colegio	63.2	63.5	0.3	3.0
Bodway Parkway	S of E. Colati Ave	56.8	57.5	0.7	3.0
	N of Valley House Dr	57.8	58.6	0.8	3.0
Main Street	S of Adobe Rd	60.9	61.0	0.1	3.0
Old Redwood Highway	N of E. Colati Ave	67.9	68.0	0.1	3.0
	S of E. Colati Ave	64.8	64.8	0.0	3.0
	S of Main St	66.3	66.4	0.1	3.0
Petaluma Hill Road	N of E. Coati Ave	66.5	66.6	0.1	3.0
	S of E. Colati Ave	65.9	66.0	0.1	3.0
	N of Valley House Dr	65.6	65.8	0.2	3.0
	S of Valley House Dr	66.0	66.2	0.2	3.0
	S of E. Railroad Ave	65.9	66.0	0.1	3.0
Valley House Drive	E of Bodway Pkwy	58.8	59.5	0.7	3.0
	W of Petaluma Hill Rd	57.5	58.5	1.0	3.0

Source: EIP Associates, 2004.

Notes:

[1] Distance is from the centerline of the roadway segment to the receptor location. Noise levels do not account for shielding from intervening structures.

Construction Period Noise Levels: *Would the project cause a temporary increase in ambient noise levels? (Impact Criterion #4)*

Future construction in the vicinity of the Southeast Specific Plan project site is not expected to result in a cumulatively significant impact in terms of substantial temporary or periodic increases in ambient noise levels. Noise impacts are localized in nature and decrease substantially with distance. The Canon Manor Specific Plan area is located adjacent to the Southeast Specific Plan area. The potential exists for construction activities to occur simultaneously on both sites. However, substantial construction-related noise would continue to be isolated within close proximity to the individual pieces of construction equipment. All construction activities that would occur in close proximity to occupied residences would be limited to daytime hours between 8:00 A.M. through 6:00 P.M. in accordance with Section 9.44.120 of the Rohnert Park Municipal Code. In accordance with Policy NS-4 of the Rohnert Park General Plan, both projects are expected to include measures to reduce potential noise impacts associated with construction to less-than significant levels. Because Mitigation Measure 3.7-2 would reduce the potential noise impacts associated with construction under the Southeast Specific Plan

project to less-than-significant levels, the contribution of the Southeast Specific Plan project to the potential cumulative construction impact would not be cumulatively considerable under Impact Criterion #4 regarding a substantial temporary or periodic increase in ambient noise levels in the project vicinity.

3.8 PUBLIC SERVICES

Introduction

This section of the EIR describes existing public services that would serve the Southeast Specific Plan project site and addresses any potential impacts the project would have on public service providers. The setting is described followed by an analysis of the potential for public service impacts in accordance with specified impacts significance criteria. Public services described in this section include police, fire, emergency services, schools and parks. The project development parameters that would create public service impacts are discussed in Section 2, *Project Description*.

Setting

Police and Fire[1]

The City's Department of Public Safety (DPS) provides police and fire protection services to Rohnert Park residents. Once the Southeast Specific Plan project area is annexed to the City of Rohnert Park, DPS would provide police and fire services to this area. DPS is divided into the Police Services Division and the Fire Services Division and provides police, fire, and other related services under a single administrative umbrella. DPS employs Public Safety Officers who are cross-trained in fire fighting and law enforcement and serve as patrol officers and firefighters.

The Rohnert Park Department of Public Safety Communications Center (Dispatch Center) screens, prioritizes, and dispatches calls for appropriate police and/or fire resources. The Dispatch Center is currently staffed with one dispatch supervisor and 12 full-time dispatchers that work four 10-hour days per week. The unit's multi-frequency equipment is capable of handling police, fire, and medical emergencies. The Dispatch Center handles all incoming 911, emergency, and non-emergency calls for service.

DPS uses a 4-minute response time standard for emergencies. In 2003, the average police and fire emergency response times were 4 minutes and 22 seconds and 4 minutes and 20 seconds, respectively. The average police and fire non-emergency response times were 7 minutes and 3 seconds and 6 minutes and 25 seconds, respectively. During 2003, the Dispatch Center handled a total of 34,133 police and fire events; 31,365 for police services and 2,768 for fire protection services.

There is no officer-to-population ratio standard adopted for Rohnert Park. The appropriate number of cross-trained officers is determined by DPS based on response time performance, crime rates, size of service area, and other variables that contribute to service needs. The City Council authorizes the number of employees that can be hired by DPS based on needs for adequate service levels.

Police

The City Council has authorized 58 Public Safety Officers for the Department of Public Safety in order to meet existing services needs; 46 Public Safety Officers are assigned to the Police Services Division. Based on the Rohnert Park population of about 43,000 people, the existing need for City Public Safety Officers is 1.4 per 1,000 people. DPS has a current total of 52 Public Safety Officers. DPS has six Public Safety Officer-vacancies. When all vacancies are filled, DPS will meet its existing need for 1.4 Public Safety Officers per 1,000 people. In addition to Public Safety Officers, DPS is authorized to staff one Director, one Commander, four Lieutenants (one assigned to the Fire Division), 12 Sergeants (two assigned to the Fire Division), five Community Service Officers (one assigned to the Fire Division), 13 dispatchers and nine and a half support personnel. Community Service Officers primarily enforce municipal codes, penal codes, and vehicle codes through issuing citation and criminal complaints and perform some law enforcement-related reporting duties. There are currently vacancies for six Public Safety Officers and one Community Service Officer.

In carrying out police services, patrol officers work in teams and are assigned to a geographical area known as a beat. Rohnert Park occupies about 4,416 acres (6.9 square miles) and is divided into three 1,472-acre (2.3-square-mile) beats for patrolling purposes. Patrol teams are composed of three Public Safety Officers and one Sergeant. Patrol shifts are divided into a day shift, a swing shift, and a graveyard shift in one 24-hour period. The Southeast Specific Plan project area is not part of a designated beat and is not regularly patrolled because it is currently outside the City limits. However, calls for service or other types of enforcement or investigations sometimes require the Police Services Division to provide service outside the City limits.

Fire

The Fire Services Division is a fully integrated operation within DPS. There are currently 15 DPS authorized sworn positions for the Fire Services Division: one Lieutenant, two Sergeants, and 12 Public Safety Officers. A Fire Inspector and Community Service Officer are also assigned to the Fire Division. While only 15 positions are designated to the Fire Services Division, all DPS cross-trained officers are expected to supplement engine crews to respond to fires. Thus, the existing authorized firefighter-to-population ratio is also 1.4 firefighters per 1,000 people. Additionally, Rohnert Park operates under the County Law Enforcement and Fire Mutual Aid Agreements, and has Automatic Aid Agreements with the Rancho Adobe Fire District and Rincon Valley Fire District. Requests for mutual aid from other agencies are made through the Dispatch Center and, if available, the requested resources are sent to Rohnert Park. The City's minimum firewater pressure standard is between 50 and 55 pounds per square inch (PSI).

Under the Fire Services Division, the following four fire stations serve the City:

- Station One at Headquarters, 500 City Hall Drive, is an "on call" station that is not staffed in a traditional, round-the-clock method. Personnel working in this building are assigned to other responsibilities and staff a fire engine when an emergency occurs. Station One is located approximately 1.8 miles from the Southeast Specific Plan project site.
- Station Two at County Club Drive and Golf Course Drive is staffed in a traditional fashion.[2] Station Two is located approximately 2.1 miles from the Southeast Specific Plan project site.

- Station Three on Southwest Boulevard at Boris Court is an "on call," unstaffed station that responds with off duty personnel and members of the City's volunteer contingent. Station Three is located approximately 1.3 miles from the Southeast Specific Plan project site.
- Station Four, located at East Cotati Avenue and Snyder Lane, is staffed in a traditional fashion. Station Four is located approximately 0.6 mile from the Southeast Specific Plan project site.

Emergency[3]

The California Health and Safety Code requires that each county which develops an emergency medical services program to designate a local Emergency Medical Services (EMS) agency. Consistent with this requirement, the Sonoma County Department of Health Services has been designated as the local EMS agency, also known as the Coastal Valleys Emergency Medical Services Agency (CVEMSA), for Sonoma, Napa, and Mendocino Counties. CVEMSA develops plans for the delivery of emergency medical services (paramedic treatment, ambulance transport, trauma services, etc.) and incorporates medical emergency agencies and facilities into an emergency medical care delivery system that is focused on rapid access to emergency locations, patient assessment, and stabilization of patients and their transportation.

CVEMSA operations are coordinated through written agreements with providers, facilities, and counties, policies and procedures, training standards, quality improvement programs, and other mechanisms. Rohnert Park coordinates its planning with CVEMSA to keep emergency plans on the City level up to date. DPS has developed and maintains a City-wide Standardized Emergency Management System consistent with the California Emergency Services Act. DPS has been designed to function as an Emergency Operations Center for the City. DPS also maintains a hazardous materials response plan and hazardous materials response personnel who mitigate minor incidents and work closely with the County's hazardous materials team during larger incidents.

In July 1999, the Sonoma County Department of Health Services entered into an exclusive franchise contract with Sonoma Life Support to provide emergency ambulance and Advanced Life Support (ALS) services to a specified portion of the County, including Rohnert Park. Sonoma Life Support is the only emergency/ALS ambulance provider for Rohnert Park. CVEMSA monitors Sonoma Life Support to ensure it maintains the required service levels.

Sonoma Life Support operates a 24-hour-a-day ALS ambulance that is assigned to Rohnert Park. A single ambulance station serves Rohnert Park. The station is housed in a leased space generally located near the center of the City. A paramedic and other necessary personnel staff the station at all times. By policy, an ALS ambulance is required to have one licensed paramedic and one certified Emergency Medical Technician-1.[4] Providers are required to maintain a minimum drug and equipment inventory in all in-service ambulances as specified by CVEMSA. The ambulance contains full communications, including radio and phone, linking the ambulance with hospitals in Santa Rosa and Petaluma.

Units located elsewhere in the County provide backup service as needed. Back-up units include two ambulances in Petaluma and six to eight ambulances in the Sebastopol and Santa Rosa areas. As the primary unit is deployed, it is usually replaced by a Specialized Life Support ambulance that is moved to Rohnert Park from Santa Rosa. Additionally, when emergency medical system levels (i.e., the number of

ambulances available for response) are high, an additional Basic Life Support ambulance is moved into the area. Upon occasion, a paramedic-staffed Quick Response Vehicle is also deployed.

The Rohnert Park station receives an estimated average of six to seven calls daily or 2,190 to 2,555 calls annually. The current CVEMSA response time standard for Rohnert Park is 7 minutes or less, 90 percent of the time. The Southeast Specific Plan project area, being outside the City limits, has a designated response time standard of 14 minutes or less, 90 percent of the time. Sonoma Life Support currently meets these standards.

Schools[5]

Rohnert Park schools are operated under the authority of the Cotati-Rohnert Park Unified School District (CRPUSD). CRPUSD is comprised of 14 schools, including eight elementary schools, two middle schools, one comprehensive high school, one technology high school, one necessary small high school, and one continuation high school. CRPUSD has a total student capacity of about 8,500 students. The 2003/2004 school year student enrollment was approximately 7,230.[6] Therefore, the CRPUSD student population is below capacity by about 1,270 students. Table 3.8-1 shows the student capacity and enrollment at the various educational levels. Additionally, CRPUSD has experienced an average of 200 students per year declining total enrollment rate within the last four years (see Figure 3.8-1).

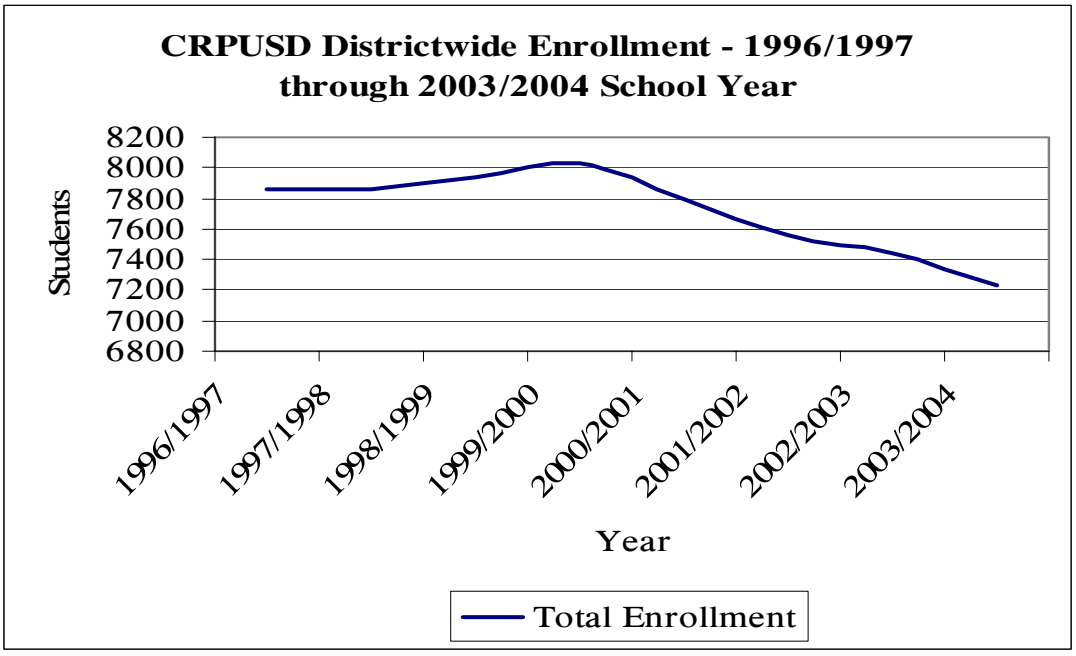
Table 3.8-1
Cotati-Rohnert Park Unified School District Student Capacity and Enrollment – 2003/2004

Grade	Existing Capacity	2003/2004 Enrollment	Existing Student Deficit
K-5 (elementary)	4,152	3,205	947
6-8 (middle school)	2,000	1,803	197
9-12 (high school)	2,400	2,222	178
TOTAL	**8,552**	**7,230**	**1,322**

Source: CRPUSD, 2004; *District Enrollment History Report,* September 2003, http://www.crpusd.sonoma.edu/Business/DistrictEnrollmentHistory.pdf, Accessed August 26, 2004.

Sonoma State University (SSU) is located about 1.9 miles north of the Southeast Specific Plan project site, SSU is just outside the City limits but is within the City's 20-year Urban Growth Boundary (UGB). There are currently 7,400 full time students enrolled at SSU, with about 1,800 living on campus. The revised Master Plan for SSU (approved in 2000) identified development that would accommodate an ultimate capacity of 10,000 fulltime students.[7] The identified development includes additions to the main campus and a musical arts center and university housing on about 89 acres adjacent to the main campus. The development also includes a public safety building to house SSU's Police Services Department.

Figure 3.8-1



Source: EIP Associates, 2004; CRPUSD, *District Enrollment History Report,* September 2003, http://www.crpusd.sonoma.edu/Business/DistrictEnrollmentHistory.pdf, Accessed August 26, 2004.

Recreation[8]

Rohnert Park currently has 469 acres of park and recreation land managed by the Recreation Department.[9] Out of this number, about 116 acres are dedicated to the City's 14 neighborhood parks, mini-parks, and Roberts Lake, a five-acre man-made lake. Neighborhood parks include various amenities such as shaded picnic areas, tot-lots and playgrounds, and green areas for field sports. The City's two municipal golf courses, located at 100 Golf Course Drive, cover 310 acres. The remaining 43 acres are occupied by recreation facilities, such as a community center. Community centers include a senior center, sports and fitness center, and community garden.

CRPUSD schools include playing fields and other urban open space areas that are open for public use during non-school hours. Most schools within the CRPUSD are located adjacent to City parks. The total acreage of CRPUSD lands is 180 acres. Assuming that 30 percent of CRPUSD lands are occupied by buildings, then the amount of recreational lands that school facilities would add to City parklands is about 126 acres.[10] Therefore, the City contains about 595 acres of recreational land in parks, mini-parks, community centers, golf courses, and schools.[11] (Rohnert Park also has 96 acres of creekside open space and 26 acres of open space adjacent to street rights-of-way.) The City follows a standard of 5 acres of parkland per 1,000 residents. Assuming a current population of about 43,000, Rohnert Park contains about 2.7 acres of parkland for every 1,000 residents, including neighborhood parks and mini-parks.[12,13] Including other City-operated recreational facilities, golf courses, and recreational lands in schools, Rohnert Park contains about 13.8 total acres of recreational land for every 1,000 residents.[14] The

Recreation Services Manager of the Rohnert Park Recreation Department has stated that the existing parkland and recreational acreage meets the present demand.

There are no recreational facilities within the Southeast Specific Plan project area. The nearest parks are the 13-acre Magnolia park and pool and the 5-acre Ladybug park and pool. These parks are located 0.2 and 2 miles from the Southeast Specific Plan project site, respectively.

Impacts and Mitigation Measures

Standards of Significance

Based on City of Rohnert Park thresholds of significance, public services impacts would be considered significant if one or more of the following conditions were created by implementation of the Southeast Specific Plan project.

- **Impact Criterion #1:** Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically-altered governmental facilities, the construction of which would cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:
    i. Fire and police protection;
    ii. Schools; and
    iii. Other public facilities;
- **Impact Criterion #2:** Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment; or
- **Impact Criterion #3:** Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

Project Evaluation

Police and Fire Services: *Would the project require the provision of new Department of Public Safety facilities resulting in substantial adverse environmental impacts? (Impact Criterion #1.i)*

DPS has the responsibility of providing police as well as fire protection services. The City of Rohnert Park police and fire protection services are provided by cross-trained officers that respond to law enforcement incidents and supplement engine crews that respond to fires as noted previously. According to the DPS Police Commander, generally, moderate to high density residential areas generate the most calls for service.

The Southeast Specific Plan project would result in the construction of a maximum of 499 dwelling units. Based on a population of 2.66 persons per household and 100 percent occupancy, the Southeast Specific Plan project would add 1,327 residents to the City of Rohnert Park.[15] Based on the existing ratio of 1.4 Public Safety Officers per 1,000 population, the new 1,327 residents would generate a need for two

additional Public Safety Officers. However, the inclusion of Southeast Specific Plan project site into the City limits would necessitate the creation of an additional beat (for a total of 4 beats). A new beat would necessitate six new Public Safety Officers, one Sergeant, one Community Safety Officer and additional support staff. Corresponding auxiliary vehicles and equipment would also need to be provided. While the Southeast Specific Plan project would result in a need to create an additional beat and hire more DPS personnel, it would not necessitate the construction of new or expansion of existing Police Services Division facilities.

The Southeast Specific Plan project area would be served by Fire Station 4 located at East Cotati Avenue and Snyder Lane, approximately 0.6 miles from the project site. The project would be expected to increase the number of calls for service Fire Station 4 responds to. However, the inclusion of the Southeast Specific Plan project site by itself into the City limits would not warrant the construction of an additional fire station or the expansion of the existing fire stations.[16]

Therefore, there would be no significant adverse environmental impact under Impact Criterion #1.i resulting from the construction of new or expansion of existing police and/or fire protection facilities.

Schools: ***Would the project require the provision of new or physically altered school facilities resulting in substantial adverse environmental impacts? (Impact Criterion #1.ii)***

Previous estimates by CRPUSD indicate an average student yield of 0.4 elementary school students, 0.1 middle school students, and 0.2 high school students per household, including single- and multiple-family dwellings.[17] The 499 dwelling units proposed for the Southeast Specific Plan project area would thus, produce a maximum of 200 elementary school students, 50 middle school students, and 100 high school students, for a total of 350 students. The schools that would serve the Southeast Specific Plan project area upon occupancy include Monte Vista Elementary, Mountain Shadows Middle School, Rancho Cotate High School, and Technology High School. Table 3.8-2 indicates current capacity and 2003/2004 school year enrollment at these schools. These schools have a student deficit ranging from 61 to 232 students.

Based on Table 3.8-2, the Southeast Specific Plan project may cause the capacity at Monte Vista Elementary School to be exceeded by 139 students. The project would not result in an exceedance of capacity at Mountain Shadows Middle School, Rancho Cotati and Technology High Schools. The potential exceedance of student capacity at Monte Vista Elementary School would be offset by the total CRPUSD elementary school student deficit of 947 students on a District-wide basis (see Table 3.8-1). Additionally, the estimated maximum number of students projected to be yielded by the project is a conservative estimate because it assumes 100 percent occupancy of the proposed dwelling units. Furthermore, it is important to note that not all 350 new students generated by the Southeast Specific Plan project would enter the CRPUSD in one year. The increase in students would occur over an extended period of time measured in years, consistent with the City's *Growth Management Program* to assure that the rate of population growth would not exceed the average annual growth rates established in the General Plan to maintain sufficient public service availability. Therefore, the current surplus capacity would enable CRPUSD to accommodate additional students generated by the project within its existing facilities. Thus, there would be no

significant adverse environmental impacts under Impact Criterion #1.ii resulting from the construction of new or expansion of existing school facilities.

Table 3.8-2
Capacity and Enrollment at Monte Vista Elementary, Mountain Shadows Middle School, Rancho Cotate High School, and Technology High School

School (Grade)	Capacity	2003/2004 Enrollment	Existing Student Deficit	Number of Students Generated by Southeast Specific Plan project	2003/2004 Enrollment Plus Number of Students Generated by Southeast Specific Plan project[1]
Monte Vista Elementary (K-5)	660	599	61	200	799
Mountain Shadows Middle School (6-8)	1,000	936	64	50	986
Rancho Cotate High School (9-12)	2,000	1,894	106	100[2]	1944
Technology High School (9-12)	400	168	232		218

Source: CRPUSD, 2004; EIP Associates, 2004.

Notes:

1. The data in this column assumes that the current enrollment will continue to stay the same. This is a conservative assumption because CRPUSD enrollment has been in decline for the last four years.
2. For the purposes of this analysis, Rancho Cotate High School and Technology High School were each assigned 50 percent of the total high school students generated by Southeast Specific Plan project.

In addition, Section 65996 of the State Government Code explains that payment of school impact fees enabled by the Leroy F. Greene School Facilities Act of 1998 is deemed to constitute full and complete mitigation for school impacts. The CRPUSD has enacted development fees in accordance with the Leroy F. Greene School Facilities Act and levies these fees on development projects with its service area. The project sponsor, Clement C. Carinalli/Willow Glen Partners, LLC, would be required to pay $1.65 per square foot of residential development and $0.27 for square foot per commercial development for the purposes of school improvements. Fulfillment of this requirement is considered full mitigation and would ensure that student enrollments affecting schools would remain less than significant.

Emergency Services: ***Would the project require the provision of new or physically altered emergency service facilities resulting in substantial adverse environmental impacts? (Impact Criterion #1. iii)***

The Southeast Specific Plan project site is currently outside the City limits and has a designated CVEMSA response time standard of 14 minutes, 90 percent of the time.[18] Annexation of the Specific Plan Project site into the City would require an improvement of this standard to the current City standard of 7 minutes, 90 percent of the time. Additionally, assuming a population of 2.66 persons per household and 100 percent occupancy, the proposed 499 dwelling units would add 1,327 residents to the Southeast Specific Plan project area.

The improved response time standard for the 80-acre Southeast Specific Plan project area and the increase in population therein would generate an additional demand on emergency medical services. Accordingly, Sonoma Life Support would need to increase its existing number of ambulances and trained personnel serving the City in order to meet the increase in demand. However, a new facility to accommodate the additional ambulances and trained personnel would not be necessary as there are already crew quarters on the east site of U.S. 101.[19] Since the project would not require the provision of new or physically altered emergency service facilities, there would be no significant adverse environmental impact under Impact Criterion #1.iii.

Recreation: ***Would the project require new or physically altered recreational facilities resulting in substantial adverse environmental impacts or result in substantially accelerated physical deterioration? (Impact Criterion #2 and #3)***

The City of Rohnert Park calculates parkland needs based on a population of 3.2 persons per single-family residence and 2.0 persons per multi-family residence. Thus, the City standard of 5 acres of parkland for every 1,000 residents requires that 7.8 acres of parkland be developed to meet the demand of an additional 1,554 residents in the Southeast Specific Plan project area. The proposed 5.8 acres of parkland would thus be deficient by 2.0 acres. However, based on current utilization of parklands, the Recreation Services Manager of the Recreation Department has estimated that the proposed 5.8 acres of parkland included in the Southeast Specific Plan project would be adequate to serve the new Specific Plan project residents. Also, the 2.0-acre parkland deficit would be offset by the surplus of existing recreational lands, which include City-operated recreational facilities, golf courses, and recreational lands in schools. The existing ratio of recreational land for every 1,000 residents is 13.7. As such, the additional 1,554 residents from the project would not require an expansion of the Senior Center, public pools, Fitness Center, or other recreational centers in Rohnert Park. According to the City's Recreation Manager, these facilities are adequate to meet the projected demand because they are currently operating below capacity.

Also, the City's Recreation Manager has estimated that although new residents generated by the Southeast Specific Plan project would increase the demand for recreational facilities, the increased use in comparison to the existing use profile on a City-wide basis would not significantly accelerate deterioration of existing recreational facilities. The Recreation Department is more concerned about the age of facilities rather than an increase in use because of the Southeast Specific Plan project. Since the project would not require the construction of new recreational facilities that might have an adverse physical effect on the environment or accelerate the deterioration of the City's existing recreational facilities, there would be no significant adverse environmental impacts under Impact Criteria #2 and #3 regarding recreational facilities.

Cumulative Development

The discussion of cumulative development impacts is as described in the *Introduction* section of this EIR under the title *Cumulative Impact Assessment* and includes collectively the Specific Plan Areas and projects as described therein.

Police and Fire Services: ***Would the project coupled with cumulative growth require the provision of new Department of Public Safety facilities resulting in substantial adverse environmental impacts? (Impact Criterion #1.i)***

Based on the existing ratio of 1.4 Public Safety Officers for every 1,000 population, the cumulative development under the City's 2020 General Plan would require a total of 71 cross-trained Public Safety Officers.[20] The City Council has authorized 58 Public Safety Officers for the Department of Public Safety. Therefore, cumulative development would result in the need for 13 additional cross-trained Public Safety Officers.[21] Additionally, the proposed Graton Rancheria Resort Hotel/Casino Project would add 300 hotel rooms and increase the City's daytime population. This would place additional demand on the Department of Public Safety.

However basing the anticipated demand for Public Safety Officers on sheer population numbers does not take into account the demographic considerations based on current and anticipated patterns of land use. For example, in order to service the entire area within the Urban Growth Boundary, upon buildout five police beats would be necessary. The two new beats would require an estimated additional 12 Public Safety Officers, two Sergeants, two Community Safety Officers and additional support staff such as detectives, dispatchers, school resource officers and records personnel. Auxiliary vehicles and equipment would also be needed. Furthermore, City emergency equipment is housed on the east side of the U.S. Highway 101. If an emergency, such as an earthquake, were to close the crossings of this Highway, DPS would have difficulty assisting those on the west side of the City.[22] This problem would be exacerbated by proposed development, such as the Northwest Specific Plan and the Wilfred/Dowdell Specific Plan, on the west side of the City. Thus, cumulative development would require not only additional DPS personnel but also the construction of a new public safety station to accommodate the changes and diversification of land uses anticipated by 2020. General Plan policy HS-25 recommends the construction of a new public safety station in the Northwest Specific Plan Area.

To adequately serve the east area of the City under buildout, DPS anticipates that a 3-bay fire station in the east area of the City would be required. The station would need to be large enough to accommodate sleeping arrangements for at least six firefighters with enough office space for at least three on-duty personnel. The three bays would be needed for a Type I engine, Type III engine, and Water Tender. DPS anticipates that the location of the fire station would be in the area of Bodway Parkway and East Cotati Avenue, in order to adequately serve the expanded eastern portions of the City.

General Plan policies provide for additional police and fire manpower and equipment to accommodate cumulative development within the City. However, an increase in the demand for police and fire services would not constitute a significant public services impact. An increase in demand for public services could lead to potentially significant environmental impacts only if constructing or expanding a new facility was required that adversely affected the physical environment as noted in the City's thresholds of significance. Therefore, to the extent new DPS facilities would be required in the future as would be limited under the City's *Growth Management Program*,[23] the City would be responsible for determining and implementing any needed environmental impact mitigation measures associated with new facility construction or operation[24] under Impact Criterion #1.i.

Schools: ***Would the project coupled with cumulative growth require the provision of new or physically altered school facilities resulting in substantial adverse environmental impacts? (Impact Significance Criterion #1.ii)***

Cumulative development would result in an additional 4,450 dwelling units through growth and annexation of the University District Specific Plan area, the Northeast Specific Plan area, the Northwest Specific Plan area, the Wilfred/Dowdell Specific Plan area and the Canon Manor Specific Plan area immediately north of the Southeast Specific Plan project site.[25] Current CRPUSD boundaries do not include the Northwest Specific Plan area and the Wilfred/Dowdell Specific Plan area in the west side of the City, or the Northeast Specific Plan area and part of the University District Specific Plan area in the east side of the City. Efforts are underway to adjust CRPUSD boundaries to include Rohnert Park's UGB so that all areas to be annexed would be part of CRPUSD's area of responsibility. CRPUSD targets that the new and expanded boundaries would be established within two years. The Southeast Specific Plan project site falls within the current CRPUSD boundaries.

The Rohnert Park General Plan, based on Association of Bay Area Governments Projections, indicates that enrollment at elementary, middle, and high school levels would increase upon buildout in 2020. Table 3.8-3 presents enrollment estimates based upon buildout under two scenarios: with the existing CRPUSD boundaries and with the expanded CRPUSD boundaries that includes cumulative development under the City's General Plan.

Table 3.8-3
Enrollment Estimates Upon UGB Buildout
(With Existing CRPUSD Boundaries/With Expanded CRPUSD Boundaries)

Grade	Existing (2003/2004) Capacity[1]	Current (2003/2004) Enrollment	Buildout Enrollment (2020)	Change in Enrollment from 2003/2004 to 2020	Student Surplus or (Deficit)
K-5	4,152	3,205	3,289/3,604	84/399	(863)/(548)
6-8	2,000	1,803	1,930/2,114	127/311	(70)/114
9-12	2,400	2,222	2,514/2,754	292/532	114/354
TOTAL	**8,552**	**7,230**	**7,733/8,472**	**503/1,242**	**(819)/(80)**

Source: City of Rohnert Park General Plan, 2000; and CRPUSD, 2004.

Note:

[1] The existing CRPUSD capacity is not expected to change for at least another 3 to 5 years and in the near term would not be affected by boundary changes. Capacity estimates are not available for 2020.

Table 3.8-3 indicates that with the existing CRPUSD boundaries, all grade levels except 9-12 and CRPUSD as a whole would have sufficient capacity to accommodate projected growth. Table 3.8-3 also indicates that with the expanded CRPUSD boundaries grade levels K-5 would have sufficient capacity to accommodate projected growth while grade levels 6-8 and 9-12 would not. CRPUSD anticipates that it would be able to accommodate the growth in students even if it exceeds the existing capacity because more

buildings can be added to most existing school sites and CRPUSD owns 22 acres of undeveloped land that can serve as a site for a new school.[26]

As explained previously, the payment of development fees, in accordance with the Leroy F. Green School Facilities Act, is considered to be full mitigation of school impacts. Since project sponsors would be required to pay development fees, the Southeast Specific Plan project's contribution to cumulative school impacts would be less than significant.

In addition, General Plan policies provide for additional school facilities to accommodate cumulative development. However, an increase in the demand for new school facilities would not constitute a significant public services impact. An increase in demand for new school facilities could lead to potentially significant environmental impacts only if constructing or expanding new facilities were required that adversely affected the physical environment as noted in the City's thresholds of significance. Therefore, to the extent new school facilities would be required in the future as would be limited under the City's *Growth Management Program*, the CRUPSD would be responsible for determining and implementing any needed environmental impact mitigation measures associated with new school facility construction or operation under Impact Criterion #1.ii.

Emergency Services: ***Would the project coupled with cumulative growth require the provision of new or physically altered emergency medical service facilities resulting in substantial adverse environmental impacts? (Impact Criterion #1. iii)***

In order to adequately serve the Southeast Specific Plan project site and other development within the City, Sonoma Life Support would most likely need to provide two ambulances stationed in the overall catchment area. A new facility to accommodate the Southeast Specific Plan, however, would not be required.[27]

Cumulative development would require emergency preparedness that exceeds the capabilities of existing programs. General Plan policies provide for additional emergency services manpower and equipment to accommodate cumulative development within the City. However, an increase in the demand for emergency services would not constitute a significant public services impact. An increase in demand for emergency services could lead to potentially significant environmental impacts only if constructing or expanding a new facility was required that adversely affected the physical environment as noted in the City's thresholds of significance. Therefore, to the extent new emergency service facilities would be required in the future as would be limited under the City's *Growth Management Program*, the City would be responsible for determining and implementing any needed environmental impact mitigation measures associated with new facility construction or operation under Impact Criterion #1.iii.

Recreation: ***Would the project coupled with cumulative growth require new or physically altered recreational facilities resulting in substantial adverse environmental impacts or result in substantially accelerated physical deterioration? (Impact Criterion #2 and #3)***

Impact 3.8-1

The Southeast Area Plan project, coupled with cumulative development, would be expected to increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. This would be a significant impact.

The General Plan anticipates an additional 4,450 dwelling units under cumulative development. Assuming a population of 3.2 persons per single-family unit and 2.0 persons per multi-family unit (with 10 percent of all residential units constructed as multi-family units) and 100 percent occupancy, the 4,450 additional dwelling units would generate approximately 13,706 additional residents. Based on the City standard of 5 acres of parkland per 1,000 residents, cumulative development would require about 68 additional acres of neighborhood and community parkland.[28] Upon buildout in 2020, the City anticipates an addition of about 60 to 91 acres of parkland, excluding mini-parks, and greenways, which may be required for non-residential developments in urban settings. Therefore, the additional parkland to be built as part of cumulative development would satisfy the City standard of 5 acres for every 1,000 residents. This represents a conservative analysis because the population estimate of 13,706 persons is based on 100 percent occupancy of the additional 4,450 dwelling units and does not account for projected vacancies. Including projected vacancies, the General Plan has anticipated an additional population of 9,400 upon buildout.[29] Based on a standard of 5 acres of parkland per 1,000 residents and an additional population of 9,400 persons upon buildout, cumulative development would require about 47 additional acres of neighborhood and community parkland.

The above notwithstanding, the 5.8 acres of parkland to be developed as part of the Southeast Specific Plan project would offset the project's contribution to the cumulative demand resulting from cumulative development because it would be sufficient along with the appropriate improvement credits and in-lieu fees, to serve the additional population in the Southeast Specific Plan project site. However, the project would contribute to an increased use of the City's Senior Center, public pools, Sports and Fitness Center, or other recreational centers. While the Southeast Specific Plan project by itself would not result in significant accelerated deterioration of these facilities, cumulative development is projected to result in the accelerated deterioration of the existing facilities. According to the City's Recreation Director, an additional 9,400 residents would cumulatively result in accelerated deterioration of the City's Senior Center, Sports & Fitness Center, and outdoor pools so that the expansion or alteration of these facilities would be necessitated.[30]

General Plan policies provide for additional parkland with cumulative growth. Open Space Element Policy OS-11 provides: "As part of the update of the Subdivision Regulations, establish parkland dedication or in lieu fees at a standard of five acres of community and neighborhood parks per 1,000 new residents." Because the General Plan would result in an increase in park acreage, this is considered a beneficial

impact. As a public service feature, an increase in the demand for recreational parkland and recreational facilities would not constitute a significant public services impact.

Recreational facilities could lead to potentially significant environmental impacts only if constructing or expanding recreational facilities adversely affected the physical environment as noted in the City's thresholds of significance. Therefore, to the extent new parkland or recreational facilities would be required in the future as would be limited under the City's *Growth Management Program*, the City would be responsible for determining and implementing any needed environmental impact mitigation measures associated with new facility construction or operation under Impact Significance Criterion #2. However, as noted above, the Southeast Area Plan project, coupled with cumulative development, would be expected to increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. This would be a significant impact under Impact Criterion #3.

Mitigation Measure 3.8-1

The City would be responsible for implementing General Plan Open Space Element goals and policies regarding the maintenance and management of parks and related facilities. Specifically, Goal OS-H calls for adequate funding for the maintenance of parks and recreation facilities, Policy OS-10 through preparation of the *Parks, Recreation, and Open Space Master Plan* calls for the maintenance of existing facilities, and Policy OS-14 requires cooperation with the Cotati-Rohnert Park School District for the maintenance and management of park/school sites. Implementation of this mitigation measure would reduce Impact 3.8-1 to a less than significant level under Impact Criterion #3.

Endnote — Public Services

1 Information contained in this subsection was obtained from the City of Rohnert Park Public Safety Department website www.ci.rohnert-park.ca.us/publicsafety/staff.cfm, accessed on January 29, 2003, and from written and personal communications with Ted Giesige, Police Commander, Rohnert Park Department of Public Safety, February, March and August 2004.

2 Traditional fashion staffing = Six Public Safety Officers work alternating 24-hour shifts to staff the station with two officers/firefighters 24 hours per day, seven days per week.

3 Information contained in this subsection was obtained from the *City of Rohnert Park General Plan* Fourth Edition, adopted July 2000, accessible at www.rpcity.org/cityhall/generalplan.cfm, accessed on January 29, 2003; from the Coastal Valleys Regional Emergency Medical Services Agency website www.sonoma-county.org/cvrems/about.htm, accessed on February 27, 2004; and from written communication with Mike Duvall, EMS Regional Administrator, Coastal Valleys Regional EMS Agency, February 5, 2004.

4 *City of Rohnert Park Southeast Specific Plan*, Chapter 7.5, Emergency Management, p. 7-22, 2003.

5 Information contained in this subsection was obtained from the Cotati-Rohnert Park Unified School District website www.crpusd.sonoma.edu/district.html, accessed on January 30, 2004; and written communications with Ann Huber, Assistant Superintendent.

6 The total enrollment of 7,230 students does not include 173 students in special day classes, 25 students in independent study center and 38 students in community day school.

7 Sonoma State University Facilities Services Department, *Sonoma State University Master Plan Revision EIR Addendum*, August 22, 2001.

[8] Information contained in this subsection was obtained from the *City of Rohnert Park General Plan,* Fourth Edition, adopted July 2000, accessible at www.rpcity.org/cityhall/generalplan.cfm, accessed on January 29, 2003; and written communications with Guy Miller, Recreation Director, Rohnert Park Recreation Department, February 2, 2004.

[9] City of Rohnert Park General Plan Revised Draft Environmental Impact Report, p. 4-172, May 2000. Guy Miller, Recreation Director of the Recreation Department has stated that there has not been an increase in the acreage of park land since 2000.

[10] *City of Rohnert Park General Plan* Fourth Edition, adopted July 2000.

[11] 469 acres of parkland and recreational facilities + 126 acres of CRPUSD recreational facilities = 595 acres.

[12] The population count is based on an annual average growth rate of 1 percent and a 1999 population of 41,000, as indicated in the *City of Rohnert Park General Plan,* Fourth Edition, adopted July 2000.

[13] 116 acres of neighborhoods and mini-parks ÷ 43,000 Rohnert Park residents x 1,000 = 2.7 acres per 1,000 people.

[14] 595 acres of neighborhood and min-parks, golf courses, recreational facilities and school recreational facilities ÷ 43,000 Rohnert Park residents x 1,000 = 13.8 acres per 1,000 people.

[15] Association of Bay Area Governments (ABAG), *Forecasts for the San Francisco Bay Area to the Year 2030, Projections 2003*. 2.66 persons per household are projected for the years 2015 and 2020. The Rohnert Park General Plan Land Use and Growth management Element uses a figure of 2.62 persons per household for the year 2020, but this figure is based on *ABAG Projections 1998* which is over six years old. Therefore, for this EIR, the updated figure of 2.66 persons per household is used and would represent a worst-case scenario for purposes of environmental review.

[16] Ted Giesige, Police Commander, Rohnert Park Department of Public Safety, electronic communication with EIP Associates, August 27, 2004.

[17] CRPUSD, *Developer Study*, 2001.

[18] Mike Duvall, EMS Regional Administrator, Coastal Valley Regional EMS Agency, written communication with EIP Associates, February 5, 2004.

[19] Mike Duvall, EMS Regional Administrator, Coastal Valleys Regional EMS Agency, electronic communication with EIP Associates, February 2005.

[20] 50,400 residents in 2020 ÷ 1,000 x 1.4 (existing ratio of Public Safety Officers to 1,000 people) = 70.56 Public Safety Officers.

[21] 71 Public Safety Officers required to meet the existing ratio of 1.4 Public Safety Officers per 1,000 people by year 2020 – 58 existing Public Safety Officers = 13 additional Public Safety Officers to meet the 1.4 Public Safety Officer per 1,000 people ratio.

[22] City of Rohnert Park General Plan Revised Environmental Impact Report, p. 4-163, July 2000.

[23] The General Plan Growth Management Element calls for the preparation and adoption of a Growth Management Ordinance that implements the various growth management policies of the General Plan. Toward this end Ordinance No. 667 adding Chapter 17.66, the Growth Management Program to the Rohnert Park Municipal Code was adopted by the City Council on July 24, 2001. The Program is to assure that the rate of population growth will not exceed the average annual growth rates established in the General Plan and as further described in the Program so that new residential development and mixed-use developments with a residential component occur concurrently with the necessary infrastructure and public service improvements. Refer to Section 4 of this EIR, *Growth Inducement*, for further information.

[24] This EIR assesses effects on public services and facilities in the context of changes wrought by the 1995 appellate court decision of *Goleta Union School District v. The Regents of the University of California*. This decision stipulates that public service resources (equipment, personnel) and facility impacts associated with increased demand for public services and facilities may be social and economic impacts that do not require extensive assessment or mitigation under CEQA. Under the decision, an increase in demand for public services and facilities could lead to potentially significant environmental impacts only if the service or facility provider needed to construct or expand a new facility, the operation or construction of which might adversely affect the physical environment. Further, the courts found that the affected public service or facility agency would be responsible for selecting the method of responding to increased demand, such as constructing a new facility, and it would be

responsible for implementing any needed environmental impact mitigation measures associated with new facility construction or operation.

[25] *City of Rohnert Park General Plan* Fourth Edition, adopted July 2000.

[26] Ann Huber, Assistant Superintendent, CRPUSD, electronic communication with EIP Associates, March 2, 2004.

[27] Mike Duvall, EMS Regional Administrator, Coastal Valleys Regional EMS Agency, electronic communication with EIP Associates, February 2005.

[28] This estimate, which was extracted from the 2000 General Plan, is based on an additional population of about 11,700 persons under cumulative development and a 100 percent occupancy rate of the additional 4,450 homes anticipated to be built under cumulative development. The General Plan estimate of 9,400 additional persons upon buildout includes projected vacancies. Therefore, the estimated 60 additional acres of neighborhood and community parkland is a conservative estimate.

[29] *City of Rohnert Park General Plan,* Fourth Edition, adopted July 2000.

[30] Guy Miller, Recreation Services Manager, Rohnert Park Recreation Department, written communication with EIP Associates, February 2, 2004.

3.9 RELATIONSHIP TO PLANS AND PLANNING POLICY

Introduction

All incorporated cities and counties in California are required to develop, implement and periodically revise a plan for the comprehensive regulation of land use within territory that pertains to their planning activities. The Rohnert Park General Plan fulfills this requirement for the City of Rohnert Park.[1] The Rohnert Park General Plan is the most current comprehensive long-term plan for the physical development of the City. This section of the EIR evaluates the Southeast Specific Plan project and its development components for consistency with the relevant goals and policies of the Rohnert Park General Plan.

City of Rohnert Park General Plan

The General Plan has been termed the constitution of community land use; it is the highest expression of desired community character. In California, all other land use policies and permits must ultimately conform to the goals and policies of the General Plan. The General Plan serves primarily as a policy document and is used as a point of reference by public officials when making decisions on such things as specific plans, subdivisions, capital improvements, neighborhood rehabilitation and public acquisitions.

The Southeast Specific Plan and its development components must be consistent with the relevant goals and policies of the General Plan. Although the Southeast Specific Plan elaborates "on the ways in which the Specific Plan is responsive" to the goals and policies of the City General Plan, [2] the following pages contain an independent evaluation of the Southeast Specific Plan and its development components with the provisions of the General Plan. Goal and policy issues include those relating to land use, growth management, community design, transportation, open space, public facilities, environmental resources, and related subject areas. The goal and policy provisions presented in this analysis are direct quotations from the Rohnert Park General Plan. If General Plan inconsistency or potential General Plan inconsistency issues are identified, mitigation measures are noted as required to bring the Southeast Specific Plan project and its development components into consistency with the General Plan Goal or policy being considered. The mitigation measures are as developed in each of the technical EIR sections (i.e., *Hydrology and Water Quality, Biological Resources*), following this section of the EIR.

As noted in the Rohnert Park General Plan (page 1-4): "*The General Plan articulates a vision for the city, but it is not merely a compendium of ideas and wish lists. Broad objectives such as 'quality of life' and 'community character' are meaningful only when translated into tangible, feasible actions. Thus, while each element of the General Plan articulates long-term goals, it also includes action-oriented policies that outline concrete and achievable steps to attain these goals*." Overall, the General Plan outlines a vision for the long-range physical and economic development of the City, establishes a

basis for judging whether specific development proposals are in harmony with the stated vision, and provides the basis for setting priorities for detailed plans and capital improvements.

The following consistency analysis utilizes a table format to make the analysis easy to read and the conclusions accessible to the public and decision makers. This analysis pertains to the whole of the Southeast Specific Plan project area.

Table 3.9-1
Consistency Analysis of Southeast Specific Plan and its Development Components with the Relevant Provisions of the Rohnert Park General Plan

Goals and Policies ⬇	Consistency Analysis ⬇
Land Use and Growth Management Element	
Goal LU-G: Require preparation of specific plans for strategic new growth areas with complex land use programs.	**Consistent:** A Specific Plan for the Southeast Specific Plan area has been prepared, consistent with the requirements of the Rohnert Park General Plan (Parsons, *City of Rohnert Park Southeast Specific Plan*, Final Draft, 2003), and in response to Ordinance No. 671, Chapter 17.57 of the Municipal Code that requires the preparation of Specific Plans.
Goal LU-H: Maintain land use patterns that maximize residents' accessibility to parks, open space, and neighborhood shopping centers.	**Consistent:** The Southeast Specific Plan is proposed to contain a 5.8-acre neighborhood-scale park and serve as a focal point for the Specific Plan project site. Up to 20,000 square feet of commercial/ retail space is also proposed to be constructed.
Goal LU-I: Provide a range of housing types in type and price, including large-lot homes and housing oriented to students. Provide a variety of housing in all neighborhoods and reserve sites, where appropriate, for housing types that would ensure that Rohnert Park remains an inclusive community.	**Consistent:** Housing types are proposed to range from Rural Estate Residential at two units per acre (27 units), Low Density Residential at 4.7 units per acre (168 units), Medium Density Residential at 12 units per acre (268 units) and 36 live/work units. The project sponsor would be required to comply with City Ordinance No. 677 regarding the provision of affordable housing.
Policy LU-2: Require sites designated as Mixed Use—University District, City Center, Southwest Shopping Center, and near Bodway Parkway/Valley House Road—to be developed with a variety of residential and non-residential uses, in accordance with the delineated land use program for the Specific Plan areas in this chapter.	**Consistent:** Refer to the discussions above regarding Goal LU-G and goal LU-I. 20,000 square feet of commercial/retail space is proposed to be included in the project.
Policy LU-6: Locate new Medium and High Density Residential development adjacent to parks, creekways or other open space, in order to maximize residents' access to recreational uses, or adjacent to a Mixed Use or Neighborhood Commercial Center, to maximize access to services.	**Consistent:** The project would be constructed within the City's Urban Growth Boundary which outlines the limits of urban growth under the current Rohnert Park General Plan and would facilitate access to services. The project is proposed to contain a 5.8-acre neighborhood-scale park and serve as a focal point for the Specific Plan project site.

Table 3.9-1 (Continued)
Consistency Analysis of the Southeast Specific Plan and its Development Components with the Relevant Provisions of the Rohnert Park General Plan

Goals and Policies ⬇	Consistency Analysis ⬇
Policy LU-7: Encourage new neighborhood commercial facilities and supermarkets to be located to maximize accessibility to all residential areas. *The intent is to ensure that convenience shopping facilities such as supermarkets and drugstores are located close to where people live and facilitate access to these on foot or bicycles*.	**Consistent:** 20,000 square feet of commercial/retail space is proposed to be included in the project. Implementation would depend on market feasibility and the ability of commercial/retail uses to be self-supportive.
Policy LU-8: Require that residential development projects comply not only with the stipulated maximum density for the range, but the minimum density as well. *Because of limited land supply, it is vital that minimum residential densities are adhered to for achieving General Plan buildout. Maintaining minimum densities is critical not only to achieve the intent of the General Plan Diagram and a balance and variety of housing types, but also to foster a compact urban form, and ensure that services, such as transit, can be provided and access to facilities is maintained*.	**Consistent:** The Southeast Specific Plan project would generally be consistent with the provisions of the Southeast Specific Plan Area development requirements as specified in the *Land Use and Growth Management Element* of the General Plan. Housing types are proposed to range from Rural Estate Residential at two + units per acre (27 units), Low Density Residential at 4.7 units per acre (168 units), Medium Density Residential at 12 units per acre (268 units) and 36 live/work units.
Policy LU-10A: Coordinate the adoption of each specific plan in a manner that provides for the systematic implementation of the General Plan, as is consistent with the growth management and public facilities goals and policies of this General Plan. In order to carry out this policy, the City Council may elect to adopt one specific plan at a time, determine priorities for the adoption of each specific plan, initiate the preparation of a specific plan, or otherwise take action to ensure that the adoption of specific plans adhere to the growth management and public facilities goals and policies of this General Plan.	**NA:** Policy LU-10A is City Policy. A Specific Plan for the Southeast Specific Plan area has been prepared, consistent with the requirements of the Rohnert Park General Plan (Parsons, *City of Rohnert Park Southeast Specific Plan*, Final Draft, 2003), and in response to Ordinance No. 671, Chapter 17.57 of the Municipal Code that requires the preparation of Specific Plans.
Policy LU-10B: Include within each specific plan, standards and criteria by which development will be phased and standards for the conservation, development, and utilization of natural resources.	**Consistent:** The Southeast Specific Plan contains standards and criteria excerpted from the Rohnert Park General Plan by which development would be guided. Project phasing (rate of development) would be controlled by the City's implementation of Ordinance No. 667 adding Chapter 17.66, the *Growth Management Program* to the Rohnert Park Municipal Code. The *Program* is to assure that the rate of population growth will not exceed the average annual growth rates established in the General Plan. An objective is to ensure new residential development and mixed-use developments with a residential component occurs concurrently with the necessary

Table 3.9-1 (Continued)
Consistency Analysis of the Southeast Specific Plan and its Development Components with the Relevant Provisions of the Rohnert Park General Plan

Goals and Policies ⬇	Consistency Analysis ⬇
	infrastructure and public service improvements and maintain an average population growth rate of one percent per year. In a cumulative context, the growth issue is still pending with respect to the various Specific Plan proposals in Rohnert Park.
Policy LU-10C: Permit hospitals, schools, police and fire stations, parks and other facilities that serve a vital public interest, subject to findings and necessary environmental review, to be located in a specific plan area, even if a specific plan for the area has not been adopted.	**Consistent:** The Southeast Specific Plan contains approximately 5.8 acres fronting Bodway Parkway which is planned to accommodate a neighborhood park and serve as a landscaped focal point for the Specific Plan area. Hospitals, schools, police and fire stations are not included in the Specific Plan proposal.
Southeast Specific Plan Area	
Policy LU-22: Require preparation of a Specific Plan prior to approval of any development in the southeast area. *The Specific Plan shall include a neighborhood park approximately five to eight acres in size, as specified in OS-12. Development shall be in accordance with the development program outlined in Table 2.4-3.*	**Consistent:** Refer to the discussion immediately above regarding Policy LU-10C and the issue of parks. A Specific Plan has been prepared for the southeast area. The Southeast Specific Plan contains standards and criteria excerpted from the Rohnert Park General Plan by which development would be guided.
Policy LU-23: Permit neighborhood-oriented retail, offices, financial, business and personal services, and other similar neighborhood-compatible uses.	**Consistent:** The Southeast Specific Plan includes the construction of up to 499 residential units and up to 20,000 square feet of commercial/retail (mixed use) space.
Policy LU-25: Allow residential uses, as long as they do not front Bodway Parkway.	**Consistent:** Residential uses are planned to front roadways interior to the project site. The west margin of the planned 5.8 acre neighborhood park would face Bodway Parkway.
Policy LU-26: Allow the Mixed Use area to be developed with a mix of residential and commercial uses, or with either one of those uses without the other.	**Consistent:** Refer to the discussion above under Policy LU-23.
Goal GM-A: Recognize the availability of housing as a vital issue of statewide importance. Cooperate with other local governments and the State in addressing regional housing needs, and balance regional and State considerations with the community's interest in preserving Rohnert Park's quiet, safe, small-town feeling and desire for carefully planned and managed growth.	**Consistent:** Project phasing (rate of development) would be controlled by the City's implementation of Ordinance No. 667 adding Chapter 17.66, the Growth Management Program to the Rohnert Park Municipal Code. An objective is to ensure new residential development and mixed-use developments with a residential component occurs concurrently with the necessary infrastructure and public service improvements and maintain an average population growth rate of one percent per year. The project would also be subject to conformance with City Ordinance No. 677 regarding the provision of affordable housing.

Table 3.9-1 (Continued)
Consistency Analysis of the Southeast Specific Plan and its Development Components with the Relevant Provisions of the Rohnert Park General Plan

Goals and Policies ⬇	Consistency Analysis ⬇
Goal GM-D: Maintain a balance of land uses and a variety of housing types over time.	**Consistent:** Residential development would include the Rural Estate residential land use accommodating up to two + single-family detached units per gross acre for a total of up to 27 residential units; the Low Density Residential land use accommodating up to 4.7 units per gross acre for a total of up to 168 units; and the Medium Density Residential land use accommodating up to 12 units per gross acre for a total of up to 268 units. Overall, up to approximately 499 residential units inclusive of 36 Mixed Use residential units would be within the Specific Plan site area.
Goal GM-E: Promote contiguous urban development and maintain a compact form over successive stages of the city's development.	**Consistent:** The Southeast Specific Plan project would be consistent with Goal GM-E and with County General Plan Goal LU-3 in that development would occur within the Urban Growth Boundary as an extension of existing residential development that exists west of Petaluma Hill Road.
Goal GM-F: Ensure all new development provides necessary public facilities to support the development.	**Consistent:** Infrastructure needed to serve the project would be provided by the service providers (sewers, water, energy), with on-site facilities and necessary related fees paid for by the project sponsor/homeowners.
Goal GM-G: Require all urban development in the Rohnert Park Planning Area to be located within the Urban Growth Boundary; prohibit urban development outside the Urban Growth Boundary.	**Consistent:** Refer to the discussion above under Goal GM-E. The project would occur within the Rohnert Park Urban Growth Boundary.
Policy GM-9: Require that each specific plan include a Public Facilities Financing Plan that explains how streets, water, wastewater, solid waste, and parks, all meeting City standards, will be provided to the project.	**Consistent:** As noted in the Implementation chapter of the Southeast Specific Plan: "The Specific Plan will be implemented through a combination of private and public actions, although the public actions will largely be confined to the review and approvals process, while the responsibility for the development of the facilities and services within the project are will be the responsibility of the private sector." This includes infrastructure improvements as noted in the Implementation chapter.
Policy GM-10: Require that economic, physical and legal feasibility (Policy GM-9) include the method of financing or otherwise paying for the facilities and the plan for receiving approval of all regulatory agencies.	**Consistent:** Refer to the discussion immediately above regarding Policy GM-9. Financing of the project would be provided for through the project sponsors, and as may be required by the City of Rohnert Park for items such as area-wide traffic and circulation improvements.
Policy GM-14: Require new development to dedicate land to the City in the appropriate amount and location for parks and recreational space in accordance with the General Plan Diagram, the Specific Plan for the area, and the City's park dedication requirements.	**Consistent:** The Southeast Specific Plan as proposed contains approximately 5.8 acres planned for neighborhood park use and would serve as a landscaped focal point for the Specific Plan area. This would be consistent with the General Plan calling for between five and eight acres of park space.

Table 3.9-1 (Continued)
Consistency Analysis of the Southeast Specific Plan and its Development Components with the Relevant Provisions of the Rohnert Park General Plan

Goals and Policies ⬇	Consistency Analysis ⬇
Community Design Element	
Goal CD-A: Create pedestrian-oriented activity centers that serve as community focal points.	**Consistent:** Refer to the discussion above under Policy GM-14 regarding parks and community focal points.
Goal CD-B: Establish strong connections between adjacent neighborhoods and between neighborhoods and activity centers, in order to encourage walking and biking.	**Consistent:** The Southeast Specific Plan Map contains a system of internal roadways with a connection to the Canon Manor Specific Plan Area to the north. Connections from the Southeast Specific Plan site to Bodway Parkway and Valley House Drive which surround the site on west and south sides respectively would also be provided.
Goal CD-C: Establish an open space network that links residential neighborhoods, parks, and open space areas.	**Consistent:** The park discussed above under Policy GM-14 above would serve the Southeast Specific Plan area within the greater Citywide complex of park and open space areas.
Goal CD-D: Preserve and enhance views of the eastern ridgeline.	**Consistent with Mitigation:** There would be no significant blockage of views to the Sonoma Mountains and County Scenic Landscape Units from publicly accessible vantage points of surrounding roadways if building density, setbacks and tree planting limitations are accomplished as required in Community Design Goal CD-D. An urban edge would be maintained (Goal CD-F), road edge landscape treatments would not obstruct views (Policies CD-5 and CD-6), street setbacks would be maintained (Policy CD-7), a transition in density would be maintained from west to east (Policy CD-9), minimal density rural estate residential uses would be located nearest Petaluma Hill Road (Policies CD-13 and CD-52), and solid walls would not be constructed around the project site (Policy CD-14) with building setbacks (in lieu of masonry privacy walls) used for noise mitigation implemented as specified (see Section 3.1.1, *Noise*). Thus, Petaluma Hill Road would be maintained as a County designated Scenic Corridor (Open Space Goal OS-D). Mitigation as established in this EIR provides that planning and design of the project conform to General Plan requirements regarding neighborhood and community design which are to be reviewed specifically by Planning Department staff, the Planning Commission in its review of community design under the Site Plan and Architectural Review section of the Zoning Ordinance, and City Council. Conformance review would occur during the City's Design Review process prior to the issuance of grading and construction permits.
Goal CD-F: Maintain a distinct urban edge, while creating a gradual transition between urban uses and open space.	**Consistent with Mitigation:** Refer to the discussion above under Goal CD-D.

Table 3.9-1 (Continued)
Consistency Analysis of the Southeast Specific Plan and its Development Components with the Relevant Provisions of the Rohnert Park General Plan

Goals and Policies ⬇	Consistency Analysis ⬇
Policy CD-5: Ensure that any landscape treatment along Petaluma Hill Road does not obstruct views of the eastern ridgelines from the street.	**Consistent with Mitigation:** Refer to the discussion above under Goal CD-D.
Policy CD-6: As part of any development along Petaluma Hill Road, ensure planting, if any, does not obstruct views of the ridges from the city's eastern neighborhoods. In no case shall trees or shrubs that exceed 25 feet in height upon maturity be used.	**Consistent with Mitigation:** Refer to the discussion above under Goal CD-D.
Policy CD-7: Minimize disruption of existing views by new development. Along Bodway Parkway, north of Valley House Drive, require any new development on the eastern side of the street, with the exception of the Mixed Use Center, to be set back at least 50 feet from the edge of the street right-of-way. (See also Policy CD-49.)	**Consistent with Mitigation:** Refer to the discussion above under Goal CD-D.
Policy CD-9: Ensure that development intensities provide adequate transition from urban to open space uses on the City's east side, as indicated on the General Plan Diagram.	**Consistent with Mitigation:** Refer to the discussion above under Goal CD-D.
Policy CD-10: As part of implementing plans and programs, permit clustering of Estate Residential development, with resultant pockets of open space along the city's eastern edge.	**Consistent with Mitigation:** Refer to the discussion above under Goal CD-D.
Policy CD-11: Require all development along the city's eastern edge to plant trees and other vegetation along the city edge, in order to maintain the open space appearance along Petaluma Hill Road.	**Consistent with Mitigation:** Refer to the discussion above under Goal CD-D.
Policy CD-13: Allow only Rural Estate Residential uses or open space and recreation uses along Petaluma Hill Road.	**Consistent with Mitigation:** Refer to the discussion above under Goal CD-D. The project includes Rural Estate Residential uses within that (eastern) portion of the site closest to Petaluma Hill Road.
Policy CD-14: Ensure that design treatment at the edge of urban uses results in "soft" edges by: Prohibiting the use of solid walls along these edges (i.e., fences must be visually permeable; using materials and design to promote soft edges (such as use of wooden or other rustic materials for fences, etc.).	**Consistent with Mitigation:** Refer to the discussion above under Goal CD-D. Noise setbacks from adjacent roadways are established for mitigation as opposed to solid masonry walls surrounding the Southeast Specific Plan project site.

Table 3.9-1 (Continued)
Consistency Analysis of the Southeast Specific Plan and its Development Components with the Relevant Provisions of the Rohnert Park General Plan

Goals and Policies ⬇	Consistency Analysis ⬇
Goal CD-H: Promote a mix of uses and variety of housing types and sizes with residential neighborhoods.	**Consistent:** Housing types are proposed to range from Rural Estate Residential at two units per acre (27 units), Low Density Residential at 4.7 units per acre (168 units), Medium Density Residential at 12 units per acre (268 units) and 36 live/work units. Up to 20,000 square feet of commercial/retail space is also proposed for construction. The project sponsor would be required to comply with City Ordinance No. 677 regarding the provision of affordable housing.
Policy CD-17: Allow townhomes and multifamily dwellings to be integrated with single-family residences.	**Consistent:** Up to about 499 residential units inclusive of 36 live/work (townhouse) units are proposed.
Policy CD-27: Allow sound walls only for development along U.S. 101 and the NP Railroad.	**Consistent:** Sound walls for the Southeast Specific Plan project site are not recommended in this EIR.
Southeast Specific Plan Area **Policy CD-49**: Locate the proposed Mixed Use Commercial area along Bodway Parkway to increase accessibility. Require buildings to front on Bodway with parking located behind buildings.	**Consistent:** The Mixed Use development portion of the project would be constructed at the intersection of Bodway Parkway and Valley House Drive with parking located behind the buildings in accordance with the City's design review procedures (see the discussion above under Goal CD-D).
Policy CD-50: Provide Medium Density Residential uses adjacent to mixed-use/commercial areas. Require the commercial center to provide landscaping to screen parking and provide a buffer between the residential and commercial uses.	**Consistent:** Medium density residential uses would be provided surrounding the Mixed Use development portion of the project. Landscaping, screening and buffers would need to be provided in accordance with Policy CD-50 and the City's design review procedures (see the discussion above under Goal CD-D).
Policy CD-51: Ensure that the proposed neighborhood park is located adjacent to the Medium Density Residential area.	**Consistent:** The neighborhood park is proposed to be constructed within the Medium Density residential portion of the project.
Policy CD-52: Allow only Estate Residential uses along Petaluma Hill Road in order to provide transition between developed and undeveloped areas.	**Consistent:** Rural Residential uses are proposed within the east portion of the project site adjacent to Petaluma Hill Road.
Transportation Element	
Goal TR-C: Build new roads and improve existing roadways, where necessary, in conjunction with new development.	**Consistent:** Roadways internal to the project site would be constructed to serve the project residents and businesses. Mitigation measures are established to maintain and/or improve Levels of Service at study intersections.
Goal TR-H: Coordinate with regional agencies on transportation improvements in the Rohnert Park Planning Area.	**Consistent:** Out-of-City traffic impacts are discussed in this EIR, Section 3.10 *Traffic and Circulation*. Mitigation measures are provided, although unavoidable and significant Level of Service impacts on a regional basis are noted that require resolution through collaboration between adjacent jurisdictions.

Table 3.9-1 (Continued)
Consistency Analysis of the Southeast Specific Plan and its Development Components with the Relevant Provisions of the Rohnert Park General Plan

Goals and Policies ⬇	Consistency Analysis ⬇
Policy TR-2: Require mitigation measures, as needed, for new development that increases traffic such that LOS levels fall below the established minimum standard. Ensure that mitigation measures are coordinated with roadway improvements programmed for funding through transportation-related impact fees.	**Consistent:** Mitigation measures are established to maintain local Levels of Service. Refer also to the discussion above under Goal TR-H.
Goal TR-K: Reduce the need for roadway improvements by making more efficient use of existing roads, bikeways, transit service and other transportation facilities and services.	**Consistent:** The Southeast Specific Plan specifies", "*Pedestrian and bicycle circulation within the SESPA will be facilitated by a network of sidewalks and bicycle lanes which will be developed along with the roadway system. A promenade for pedestrians will be located in an east-west corridor linking the entire development from the mixed-use area to the rural estate lots*."[3] No off-site construction as part of the project is anticipated that would permanently establish barriers for pedestrians or bicyclists. All circulation features would be subject to Design Review by the City.
Policy TR-31: Require project proponents to provide bus stops and shelters in conjunction with new development.	**Consistent:** Mitigation Measure 3.10-2 requires that bus pullouts with appropriate curbs and gutters for bus stops along Petaluma Hill Road near the project site be constructed concurrent with the widening of this road in the future as well as adequate pedestrian access paths/sidewalks to the bus stops from the project site. The project sponsor should be responsible for paying the cost of implementing the mitigation measure.
Goal TR-N: Promote safe, efficient and comfortable circulation for cyclists and pedestrians throughout Rohnert Park.	**Consistent:** The project's increased demand for transit services would encourage greater ridership on preexisting transit lines, resulting in greater use and effectiveness of existing transit resources and pedestrian and bicycle circulation within the Southeast Specific Plan site as facilitated by a network of sidewalks and bicycle lanes to be developed along with the roadway system.
Open Space, Parks and Public Facilities Element	
Goal OS-D: Maintain and enhance the Petaluma Hill Road scenic corridor.	**Consistent with Mitigation:** Refer to the discussion above under Goal CD-D.

Table 3.9-1 (Continued)
Consistency Analysis of the Southeast Specific Plan and its Development Components with the Relevant Provisions of the Rohnert Park General Plan

Goals and Policies ⬇	Consistency Analysis ⬇
Policy OS-2: Encourage dedication of the open space buffers along the west side of Petaluma Hill Road as part of the University District, Northeast and Southeast Specific Plans.	**Discretionary:** General Plan policy OS-2 indicates that a buffer of about 100 acres in size is located along Petaluma Hill Road in the southeast Specific Plan area and is shown on Figure 2.4-1. However, this policy and Plan map were prepared prior to deleting from the project that portion of the Southeast Specific Plan site south of Valley House Drive. Therefore, the dedication of an open space buffer along Petaluma Hill Road within the project Rural Residential area under the current project proposal would be a policy decision on the part of the City. The City would have the option of proceeding with this requirement for the project. Building setbacks as called for under the Reduced Density Alternative evaluated in this EIR (Section 6), would facilitate the creation of an open space buffer as noted in Policy OS-2.
Goal OS-G: Develop additional parkland in the city to meet the standards of required park acreage for new residents.	**Consistent:** The project is proposed to contain a 5.8-acre neighborhood-scale park and serve as a focal point for the Specific Plan project site.
Policy OS-12: Acquire and develop new parks in the approximate locations and sizes shown on Figure 5.2-1 and Table 5.2-2.	**Consistent:** The project is proposed to contain a 5.8-acre neighborhood-scale park and serve as a focal point for the Specific Plan project site.
Policy PF-9: Require developers to install or pay for new sewer lines and other sewer improvements needed to accommodate new development.	**Consistent:** The project sponsor would be required to pay for on-site sewer lines and related fees in order to provide sewer service for new project residences.
Goal PF-E: Provide sufficient quantities of water for Rohnert Park residents and businesses, while ensuring that safe groundwater yield is not exceeded.	**Consistent:** A Water Supply Assessment indicates that sufficient water is available to serve the project without exceeding limitations placed on the extraction of groundwater supplies (see Appendix A of this EIR).
Environmental Conservation Element	
Goal EC-B: Protect special status species and supporting habitats within Rohnert Park, including species that are State or federally listed as Endangered, Threatened or Rare.	**Consistent:** Biological studies conduced for the Southeast Specific Plan project did not locate special status plant species on the project site, although the site is considered to have suitable habitat for several special status animal species. No significant biological impacts are identified for the project.
Policy EC-4: Cooperate with State and federal agencies to ensure that development does not substantially affect special status species appearing on any State or federal list of Rare, Endangered, or Threatened species. Require assessments of biological resources prior to approval of any development within 300 feet of any creeks, high potential wetlands, or habitat areas of identified special status species, as depicted in Figure 6.2-1.	**Consistent:** No State or federal Rare, Endangered or Threatened plant or animal species were located on the project site, although the site does contain habitat suitable for foraging by birds of prey that include species of concern. See the discussion above under Goal EC-B. Site inspections show that the site does not include any wetlands.

Table 3.9-1 (Continued)
Consistency Analysis of the Southeast Specific Plan and its Development Components with the Relevant Provisions of the Rohnert Park General Plan

Goals and Policies ⬇	Consistency Analysis ⬇
Goal EC-E: Comply with the Regional Water Quality Control Board's regulations and standards to maintain and improve the quality of both surface water and groundwater resources.	**Consistent:** Measures are described that require conformance with the Regional Water Quality control Board's regulations and standards to maintain and improve water quality and protect groundwater resources (Section 3.5 of this EIR, *Hydrology and Water Quality)*.
Goal EC-F: Enhance the quality of surface water and groundwater resources and prevent their contamination.	**Consistent:** Measures are described that require conformance with the Regional Water Quality control Board's regulations and standards to maintain and improve water quality and protect groundwater resources (Section 3.5 of this EIR, *Hydrology and Water Quality)*.
Goal EC-G: Undertake steps to minimize the depletion of groundwater resources.	**Consistent:** A Water Supply Assessment indicates that sufficient water is available to serve the project without exceeding limitations placed on the extraction of groundwater supplies (see Appendix C of this EIR).
Policy EC-17: Work with the relevant agencies to ensure that groundwater supplies are not contaminated in the recharge areas east of the city.	**Consistent:** Measures are described that require conformance with the Regional Water Quality control Board's regulations and standards to maintain and improve water quality and protect groundwater resources (Section 3.5 of this EIR, *Hydrology and Water Quality)*.
Policy EC-23: Use the City's development review process and the California Environmental Quality Act (CEQA) regulations to evaluate and mitigate the local and cumulative effects of new development on air quality.	**Consistent:** Air quality impacts are evaluated in this EIR (Section 3.2, *Air Quality*). Mitigation measures to reduce construction dust to less than significant levels as recommended by the Bay Area Air Quality Management District are specified in this EIR.
Policy EC-24: Adopt the standard construction dust abatement measures included in BAAQMD's CEQA Guidelines.	**Consistent:** Air quality Mitigation Measures 3.2-1A, B and C describe the BAAQMD's construction dust abatement measures that are to be included in the project.
Policy EC-26: Encourage new residential development and remodeled homes to install clean-burning fireplaces and wood stoves.	**Consistent:** Although not listed as a mitigation measure, the EIR recommends if fireplaces are provided in the new project residences, low-emitting commercial fireplaces available at the time of development should be utilized.
Health and Safety Element	
Goal HS-A: Minimize the risk to life and property from seismic and geologic hazards in Rohnert Park.	**Consistent:** Regulatory requirements and standards designed to minimize the risk to life and property from seismic and geologic hazards are presented in this EIR in Section 3.4, *Geology, Soils and Seismicity*.

Table 3.9-1 (Continued)
Consistency Analysis of the Southeast Specific Plan and its Development Components with the Relevant Provisions of the Rohnert Park General Plan

Goals and Policies ⬇	Consistency Analysis ⬇
Policy HS-1: Require new construction to utilize site preparation, grading, and foundation designs in accordance with site specific soil conditions. Require submittal of a preliminary soils report, prepared by a registered civil engineer.	**Consistent:** Regulatory requirements and standards designed to minimize the risk to life and property from seismic and geologic hazards are presented in this EIR in Section 3.4, *Geology, Soils and Seismicity*.
Policy HS-2: Continue requiring all new buildings in the city to be built under the seismic requirements of the Uniform Building Code and Uniform Plumbing Code.	**Consistent:** Regulatory requirements and standards designed to minimize the risk to life and property from seismic and geologic hazards are presented in this EIR in Section 3.4, *Geology, Soils and Seismicity*.
Goal HS-B: Minimize the risk to life and property from flooding.	**Consistent:** The project site is not in a flood prone area and stormwater runoff will be retained on the site so as not to exceed pre-construction runoff conditions as proposed under the Southwast Specific Plan.
Goal HS-C: Control erosion and sedimentation to provide flood protection and protect water quality.	**Consistent:** Measures are described in this EIR that require conformance with the Regional Water Quality control Board's regulations and standards to maintain and improve water quality and protect groundwater resources (Section 3.5 of this EIR, *Hydrology and Water Quality)*. See also the discussion above under Goal HS-B regarding flooding.
Policy HS-3: Prepare and implement a Storm Water Management Plan to ensure protection of the surface and groundwater resources.	**Consistent:** Required Storm Water Management Plans are described in Section 3.5 of this EIR, *Hydrology and Water Quality)*.
Policy HS-5: As part of the building permit process, require all development projects to comply with hydrology and drainage policies incorporated in the applicable Specific Plans. Require the project proponent to design and construct a storm drain system in accordance wit the SCWA Flood Control Design Criteria (latest revision), specific to the project. Encourage the use of environmentally sensitive drainage improvements including flow reduction and flood bypass systems in order to ensure protection of surface water quality and stream integrity.	**Consistent:** Required hydrology and drainage policies, measures, devices and techniques to prevent erosion, flooding, sedimentation and the management of storm water runoff and water quality are described in Section 3.5 of this EIR, *Hydrology and Water Quality*. The project includes a storm water detention facility to be located in the park adjacent to the Mixed-Use portion of the site. The storm water would be metered to the existing system in Bodway Parkway to ensure that discharge into the existing collection system would be the same rate as at present.
Policy HS-6: As part of the building permit process, require new development greater than five acres in size to prepare and implement a site-specific storm water pollution prevention plan (SWPPP) that effectively reduces discharges of stormwater containing sediment and other pollutants resulting from site construction activities.	**Consistent:** Refer to the discussion above under Policy HS-5. The project would include a SWPPP.

Table 3.9-1 (Continued)
Consistency Analysis of the Southeast Specific Plan and its Development Components with the Relevant Provisions of the Rohnert Park General Plan

Goals and Policies ⬇	Consistency Analysis ⬇
Goal HS-D: Reduce the generation of solid waste and recycle those materials that are used, to slow the filling of local and regional landfills, in accord with the California Integrated Waste Management Act of 1989 (AB939).	**Consistent:** The City offers recycling services to all residential, commercial and multi-family customers. Rohnert Park Disposal is responsible for providing recycling services to all residential, commercial and multi-family customers. The County Integrated Waste Management Plan includes a Source Reduction and Recycling Element (SRRE), which is comprised of the following four main elements: source reduction, recycling, composting, and special waste. The SRRE puts forth goals and objectives to help meet AB 939 waste diversion requirements.
Policy HS-12: Continue to work toward reducing solid waste and increasing recycling, in compliance with the Sonoma County Integrated Waste Management Plan.	**Consistent:** Refer to the discussion above regarding Goal HS-D.
Policy HS-13: As part of development review and environmental analysis, ensure that new multifamily residential and all non-residential development comply with the City's Source Reduction and Recycling Element (SRRE) and Household Hazardous Waste Element (HHWE), as well as the Sonoma County Integrated Waste Management Plan (CoIWMP).	**Consistent:** Refer to the discussion above regarding Goal HS-D. The project sponsor would be responsible for ensuring that project residents are aware of the SRRE, HHWE and ColWMP when the project residences are first sold.
Noise Element	
Goal NS-B: Minimize the exposure of noise-sensitive uses – including residences, schools, churches, hospitals, and other public uses – to excessive noise levels.	**Consistent:** Measures to reduce the exposure of new residents on the project site to increased noise levels are described in Section 3.7 of this EIR, *Noise*. Noise setbacks from adjacent roadways are established for mitigation as opposed to solid masonry walls surrounding the Southeast Specific Plan project site.
Policy NS-2: For all residential uses, establish 45 dB Ldn as the standard for interior noise levels and 60 dB Ldn as the standard for exterior noise levels. Require appropriate siting of residential uses and/or mitigation measures to meet the standards.	**Consistent:** Measures to reduce the exposure of new residents on the project site to increased noise levels are described in Section 3.7 of this EIR, *Noise*. See also the discussion above under Goal NS-B.
Policy NS-4: Continue to require control of noise or mitigation measures for any noise-emitting construction equipment or activity.	**Consistent:** Measures to reduce the exposure of residents to construction noise are described in Section 3.7 of this EIR, *Noise*.
Policy NS-6: Require buffers or site planning techniques for all new development within 65 dB Ldn noise contours.	**Consistent:** Noise setbacks from adjacent roadways are established for mitigation as opposed to solid masonry walls surrounding the Southeast Specific Plan project site. The Reduced Density Project alternative is identified as Environmentally Superior in that it would facilitate additional space in which to provide for adequate setbacks to mitigate road noise.

Table 3.9-1 (Continued)
Consistency Analysis of the Southeast Specific Plan and its Development Components with the Relevant Provisions of the Rohnert Park General Plan

Goals and Policies ⬇	Consistency Analysis ⬇
Policy NS-7: Require new development within existing or projected 65 dB Ldn noise contours to undergo a technical acoustical analysis, which shall serve as the basis for designing mitigation measures.	**Consistent:** An acoustical analysis has been conducted for the project. Refer to the discussion above under Policy NS-6.
Housing Element	
Goal HO-A: Promote opportunities for housing development to accommodate projected growth and facilitate mobility within the ownership and rental markets.	**Consistent:** The Southeast Specific Plan project does not specifically call for rental housing, nor is rental housing called for in the Rohnert Park General Plan for the project. Opportunities for housing presented by the project would be controlled by the City's implementation of Ordinance No. 667 adding Chapter 17.66, the *Growth Management Program* to the Rohnert Park Municipal Code. The *Program* is to assure that the rate of population growth will not exceed the average annual growth rates established in the General Plan. An objective is to ensure new residential development occurs concurrently with the necessary infrastructure and public service improvements and maintain an average population growth rate of one percent per year. The growth issue is still pending with respect to the various Specific Plan proposals in Rohnert Park.
Policy HO-2: Facilitate residential development within the growth areas.	**Consistent:** On objective of the project is to provide housing to the public. Refer to the discussion above under Goal HO-A.
Policy HO-4: Promote a diversity of housing types, including single-family detached and attached residences, mobilehomes, multi-family rental and ownership units, second units, and units combined with non-residential uses.	**Consistent:** The Southeast Specific Plan project does not specifically call for rental housing, mobilehomes, or second units, nor are such housing units called for in the Rohnert Park General Plan for the project. The project would promote a diversity of housing types in that the project housing types are proposed to range from Rural Estate Residential at two units per acre (27 units), Low Density Residential at 4.7 units per acre (168 units), Medium Density Residential at 12 units per acre (268 units) and 36 live/work units. The project sponsor would be required to comply with City Ordinance No. 677 regarding the provision of affordable housing.
Goal HO-C: Address to the maximum extent feasible the housing needs of all economic segments of the present and future community, giving highest priority to lower-income households.	**Consistent:** Refer to the discussion above under Policy HO-4.
Policy HO-6: Facilitate the availability of market-rate housing to low- and moderate-income, first-time home buyers.	**Consistent:** The project sponsor would be required to comply with City Ordinance No. 677 regarding the provision of affordable housing.
Policy HO-9: Require the provision of affordable housing as part of residential development throughout the community.	**Consistent:** The project sponsor would be required to comply with City Ordinance No. 677 regarding the provision of affordable housing.

Endnotes – Relationship to Plans and Planning Policy.

[1] *Rohnert Park 2020, A Plan for the Future, General Plan*, Adopted by the City Council, July, 2000.

[2] City of Rohnert Park, *Southeast Specific Plan*, Final Draft, Parsons, 2003, Section 3, *Plans Goals and Policies*.

[3] Parsons, *Southeast Specific Plan, Final Draft*, Circulation Element, page 44.

3.10 TRAFFIC AND CIRCULATION

Introduction

This section of the EIR addresses the potential traffic and circulation impacts of the Southeast Specific Plan project. An analysis of cumulative development impacts to the year 2020 is also provided. Mitigation measures to reduce any identified significant traffic and circulation impacts to less than significant levels are established as required in accordance with specified impacts significance criteria. It is important to note that study area roads and intersections include those both within and outside the Rohnert Park City Limits and/or Sphere of Influence.

Due to the level of detail contained in the traffic and circulation study for this EIR, the following table of contents is provided for reader orientation.

Setting

Existing Conditions

Study Area Roadways and Intersections (Figure 3.10-1)

Roadways

In the vicinity of the Southeast Specific Plan project site, the principal north/south regional roadway is Petaluma Hill Road, which abuts the easterly boundary of the project site. The principal east/west roadway is East Cotati Avenue to the north of the project site and Railroad Avenue to the south of the project site. Both East Cotati Avenue and Railroad Avenue provide access to the U.S. 101 Freeway.

- East Cotati Avenue is a four-lane street with bicycle lanes and a center landscaped median west of Bodway Parkway, and narrows to two lanes with no median between Bodway Parkway and Petaluma Hill Road.
- Bodway Parkway is a divided collector road between E. Cotati Avenue and Valley House Drive. Between E. Cotati and Middlebrook Avenue it is four lanes, and south of Middlebrook Avenue it is two lanes. It has a posted speed limit of 30 miles per hour and no parking. There are several stop signs along Bodway parkway between East Cotati Avenue and Valley House Drive.
- Main Street (Penngrove) is a two-lane road through the small Penngrove business district. Its posted speed limit is 25 miles per hour. Main Street south of Adobe Road carried 11,200 weekday vehicles in May 2001.
- Old Redwood Highway is a two-lane high-speed road between Cotati and Petaluma. It is classified as a primary arterial in the County's 1989 General Plan. Within Petaluma, it widens to four lanes and connects to a full interchange with U.S. 101, and to Petaluma Boulevard North. The posted speed limit varies, but generally is 45 miles per hour between the Petaluma city limits and Hatchery Road, 40 miles per hour between Hatchery Road and Penngrove Avenue, and 50 miles per hour between Penngrove Avenue and just north of West Railroad Avenue. North of West Railroad Avenue the speed limit is 40 miles per hour again. Weekday traffic volumes are 19,500 vehicles, as measured by the Sonoma County Department of Transportation and Public Works (DTPW), north of Ely Road in May 2001.
- Petaluma Hill Road is a two lane, high-speed road that connects Penngrove and Rohnert Park to Santa Rosa. Because of severe congestion on U.S. 101 that it parallels, Petaluma Hill Road often serves as a reliever route with high traffic volumes. Posted speed limits are 35 miles per hour from Adobe Road to Formschlag Lane; 45 miles per hour between Formschlag and Rohnert Park Expressway; and 55 miles per hour north of Rohnert Park Expressway. The weekday traffic volume is approximately 6,000 vehicles/day north of Roberts Road, as measured by DTPW in October 2001.
- Railroad Avenue is a two lane rural road, connecting Stony Point Road on the west with Petaluma Hill Road on the east (as well as serving residences to the east of Petaluma Hill Road). It has many substandard shoulders and design features (e.g., a deep drainage ditch to one side). It is stop sign controlled at Petaluma Hill Road. The posted speed limits on East Railroad Avenues are 45 miles per hour, and on West Railroad Avenue 35 miles per hour.

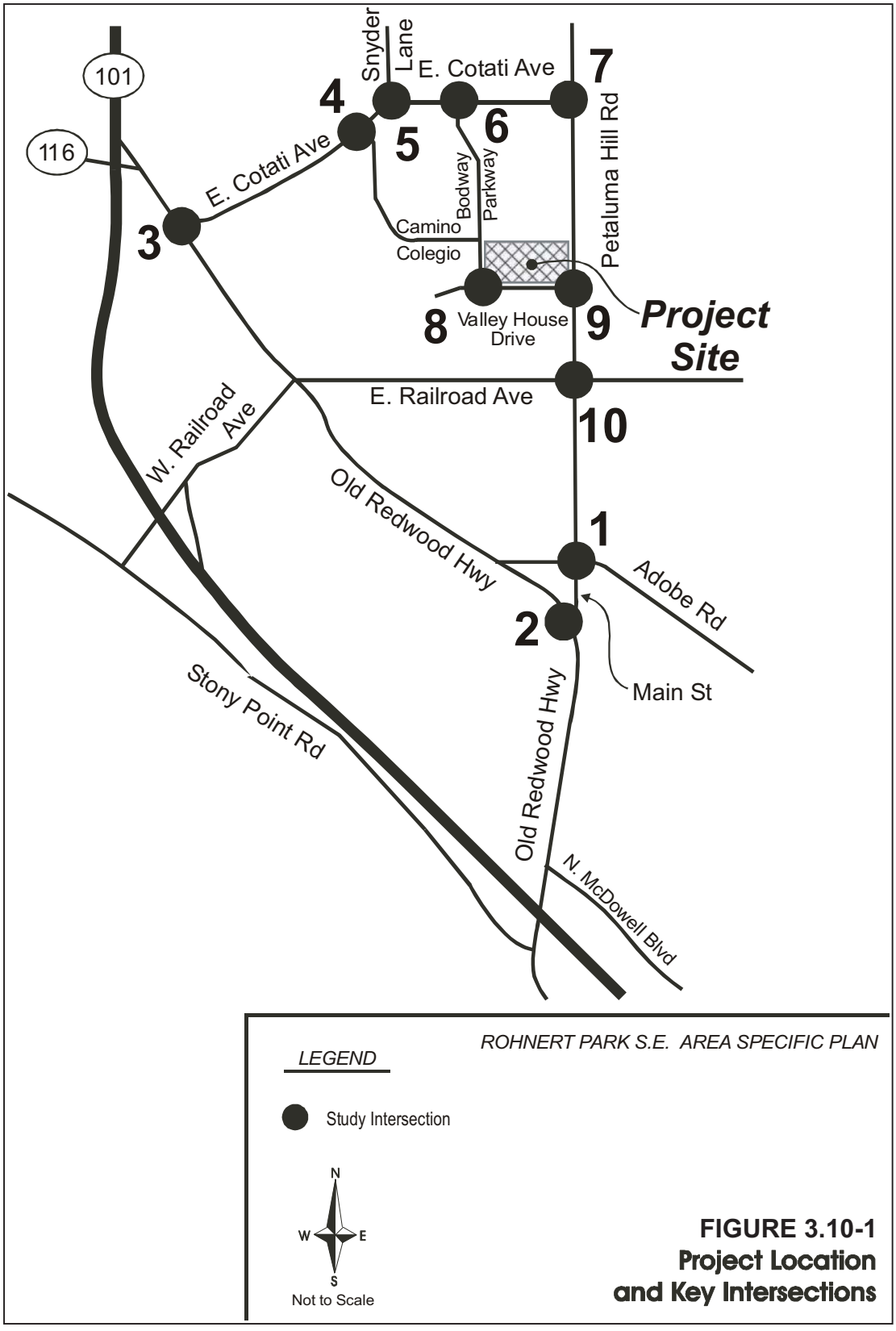


FIGURE 3.10-1
Project Location and Key Intersections

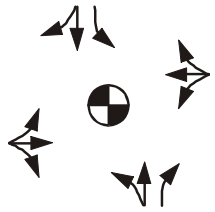
- Valley House Drive is a short 2-lane road, connecting Bodway Parkway and Petaluma Hill Road. It has a posted speed limit of 35 miles per hour. The intersection with Petaluma Hill Road is currently signalized. The entrance to the Agilent Technologies plant is located on the west leg of the Valley House Drive/Bodway Parkway intersection.

Intersections

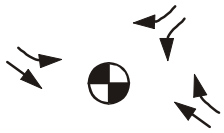
Existing traffic lane configurations and traffic controls at the study area's key intersections are shown in Figure 3.10-2. All but two of the key intersections are presently signalized. The unsignalized intersections are Valley House/Bodway Parkway and Railroad Avenue/Petaluma Hill Road.

- *The Adobe Road/Petaluma Hill Road (Main Street) intersection* is signalized, with two phases – one for each street. Left turns are made permissively during the appropriate phase, and only the northbound approach has a separate left-turn lane. The northbound approach of Main Street has a left-turn lane and a shared through/right-turn lane, while the southbound approach has a shared through/left-turn lane and a right-turn lane. The Adobe Road approaches each have a single shared approach lane for all turning movements. Pedestrian crosswalks are provided on all approaches.
- *The Main Street/Old Redwood Highway intersection* is a signalized T-intersection. The southbound Old Redwood Highway approach has a through lane and a left-turn lane, with protected left-turn phasing. The northbound approach has a through lane and a right-turn lane. The westbound Main Street approach has a left-turn lane and a right-turn lane. Pedestrian crosswalks are provided across the intersection south leg and east leg.
- *The East Cotati Avenue/Old Redwood Highway intersection* is signalized, with exclusive left-turn lanes and protected left-turn phasing on all approaches. All approaches have three lanes, and all but the northbound Old Redwood Highway approach provide a left-turn lane, through lane, and right-turn lane. The northbound approach provides a left-turn lane, a through lane, and a shared through/right-turn lane. Pedestrian crosswalks are provided on all approaches.
- *The East Cotati Avenue/Camino Colegio intersection* is signalized, with exclusive left-turn lanes and protected left-turn phasing on all approaches. The northbound Colegio has single left-turn, through and right-turn lanes while the southbound approach has a left-turn lane and a shared through/right-turn lane. Pedestrian crosswalks are provided on all approaches.
- *The East Cotati Avenue/Snyder Lane (Maurice Avenue) intersection* is signalized with protected phasing. Both the eastbound and westbound approaches have one left turn lane, two through lanes and one right turn lane. The southbound approach has one lane for each movement while the northbound approach has one left turn lane, one through lane and one shared through-right turn lane. Both the southbound and westbound approaches have a right turn overlap. Pedestrian crosswalks are provided on all approaches.
- *The East Cotati Avenue/Bodway Parkway (Sonoma State Drive) intersection* is signalized with protected left turn phasing eastbound and westbound. The northbound approach has one lane for each movement. The southbound approach has a shared through-left turn lane and a right turn lane. The eastbound approach has one left turn lane, one through lane, and a shared through-right turn lane. The westbound approach has a left turn lane and one shared through-right turn lane. Pedestrian crosswalks are provided on all approaches.

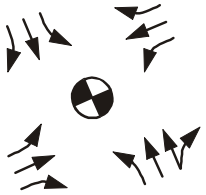
1 Adobe & Petaluma HIll



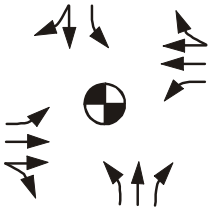
2 Main St & Old Redwood Hwy



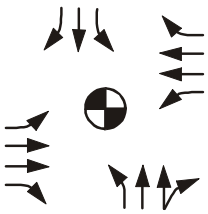
3 E Cotati & Old Redwood Hwy



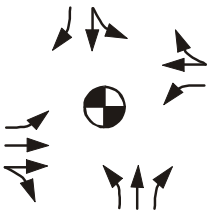
4 E Cotati & Camino Colegio



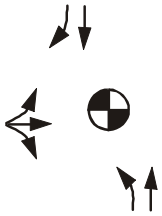
5 E Cotati & Snyder Ln



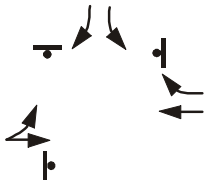
6 E. Cotati & Bodway Pkwy



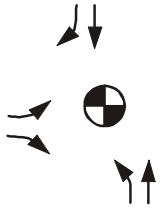
7 E. Cotati & Petaluma Hill Rd



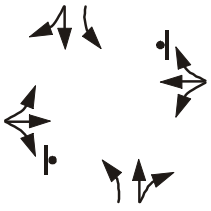
8 Valley House & Bodway Pkwy

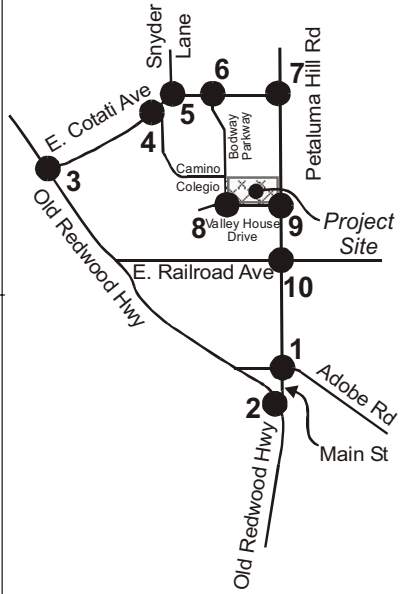


9 Valley House & Petaluma Hill



10 Railroad & Petaluma Hill





LEGEND

- Traffic lanes
- Stop sign control
- Traffic Signal

N
W E
S
Not to Scale

ROHNERT PARK S.E. AREA SPECIFIC PLAN

FIGURE 3.10-2
EXISTING LANES AND CONTROLS

- *The East Cotati Avenue/Petaluma Hill Road intersection* is a signalized T-intersection with protected left-turn phasing on the northbound approach. Both the northbound and southbound approaches have one lane for each direction. The eastbound approach shares a wide single lane, so there is sufficient width for several vehicles to queue up side-by-side, slightly increasing the capacity of this approach.
- *The Valley House Drive/Bodway Parkway intersection* is an all-way stop controlled intersection. The eastbound approach of Valley House Drive has a shared left-turn/through lane while the westbound approach to the intersection has separate through and right-turn lanes. The southbound approach of Bodway Parkway has single left-turn and right-turn lanes. A pedestrian crosswalk is provided crossing the Bodway Parkway approach.
- *The Valley House Drive/Petaluma Hill Road intersection* is signalized, with protected left-turn phasing and exclusive left-turn lanes on both Petaluma Hill Road approaches and a right-turn lane on the southbound approach. The Valley House Drive approach has a shared through/left-turn lane and a right-turn lane. The westbound approach to the intersection serves a rural access roadway and has a single lane. The approaches of Valley House Drive and the rural access road operate together when the signal is green for that direction. Pedestrian crosswalks are provided crossing the Valley House Drive approach.
- *The East Railroad Avenue/Petaluma Hill Road intersection* is an unsignalized intersection with exclusive left-turn lanes on both Petaluma Hill Road approaches. The eastbound East Railroad Avenue approach has a shared left-turn/through lane and a right-turn lane. The westbound approach to the intersection serves as a rural access roadway that has a single lane. The approaches of East Railroad Avenue are stop controlled while Petaluma Hill Road is uncontrolled.

Transit Services and Non-Motorized Facilities

Sonoma County Transit operates Route 44 that travels near the project site on Petaluma Hill Road. Route 44 runs between Petaluma (4th and C Street) and Coddington Mall in Santa Rosa, with connections to other routes at the 2nd Street Transit Mall in Santa Rosa. On weekdays there are 12 or 13 buses per day in each direction, with headways that vary from 22 minutes to 2 hours and 45 minutes, depending on the time of day. On Saturday and Sunday there are 4 busses per day with headways of 2 hours and 30 minutes to 3 hours and 30 minutes. The nearest bus stops for Route 44 are at the intersection of Valley House Drive and Petaluma Hill Road.

In 1995 the City of Rohnert Park prepared and adopted the 1995 Bicycle Master Plan to establish a complete network of bikeways that connects all the different parts of the city. The Plan established three bikeway classifications:

- Class I Paved paths on separate rights-of-way.
- Class II Striped lanes within roadways, separate from vehicular travel lanes, parking, bus stops, and sidewalks.
- Class III Designated bicycle routes within roadways, shared with either pedestrians or motorists.

Since then, many of the Class II bike paths outlined in the Master Plan have been implemented, and some Class I bikeways have been completed. The improvements have increased safety, facilitated

bicycle access to sites throughout the city, allowed for greater choice in transportation modes, and improved recreational amenities. Figure 3.10-3 shows the planned bicycle facilities in the vicinity of the study area.

Traffic Volumes

Existing traffic volumes in the vicinity of the Southeast Specific Plan project site were determined by collecting morning and afternoon peak hour turning movement counts at the key intersections. Counts from 1999 and 2001 were available from a previous traffic study[1] prepared in 2003 for seven of the key locations. New counts were taken for the remaining three locations. The new counts were taken on Tuesday, November 13, 2003. Even though the counts were taken in three different years, the magnitudes of the volumes appear to be consistent and no adjustment was needed to normalize the counts.

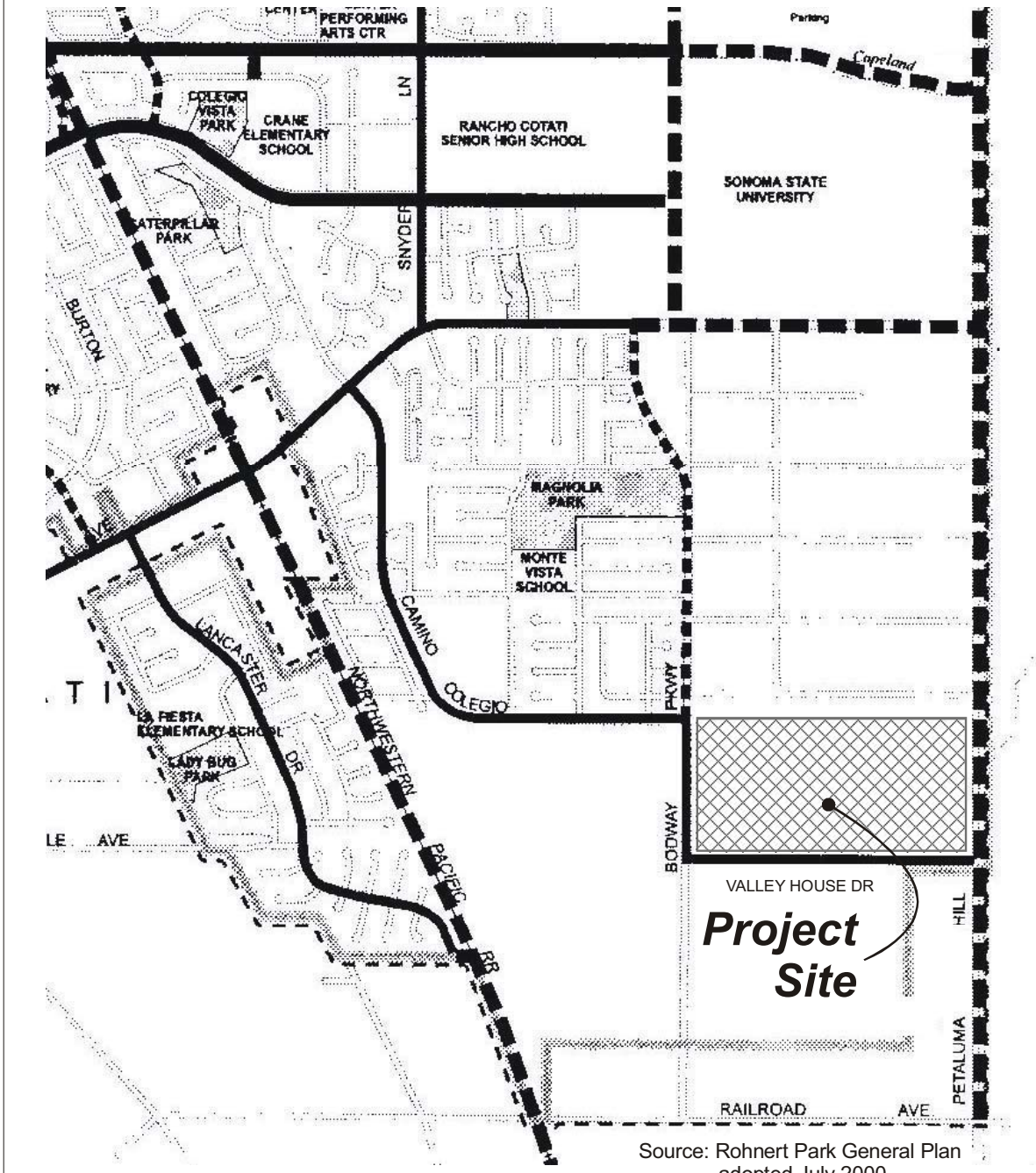
The date for each intersection count was performed is provided below:

1. Adobe Road & Petaluma Hill Road — March 2001 and November 2003
2. Main Street & Old Redwood Highway — November 2003
3. E. Cotati Avenue & Old Redwood Highway — November 2003
4. E. Cotati Avenue & Camino Colegio — March 1999
5. E. Cotati Avenue & Snyder Lane — March 2001
6. E. Cotati Avenue & Bodway Parkway — March 2001
7. E. Cotati Avenue & Petaluma Hill Road — March 2001
8. Valley House Drive & Bodway Parkway — March 2001
9. Valley House Drive & Petaluma Hill Road — March 2001
10. Railroad Avenue & Petaluma Hill Road — March 2001

Figures 3.10-4 and 3.10-5 present the existing AM and PM peak hour traffic volumes at the key intersections. Each peak hour is the four consecutive 15-minute periods with the highest traffic volume during the two-hour period counted. The morning count period was from 7:00 to 9:00 a.m. and the afternoon count period was from 4:00 p.m. to 6:00 p.m. The morning peak hour typically occurs between 7:30 and 8:30 a.m. and the afternoon peak hour typically occurs between 4:15 and 5:15 p.m., although there is some variation by location.

Levels of Service

The methodology used to analyze intersection level of service (LOS) is that outlined in the Transportation Research Board's *Highway Capacity Manual*, 2000. Level of service is a qualitative indication of the level of delay and congestion experienced by motorists using an intersection. Levels of service are designated by the letters A through F, with A being the best conditions and F being the worst (high delay and congestion).



Source: Rohnert Park General Plan adopted July 2000

LEGEND

- Class I Bike Path (existing)
- Class I Bike Path (proposed)
- Class II Bike Lane (existing)
- Class II Bike Lane (proposed)
- Class III Bike Route

N W E S

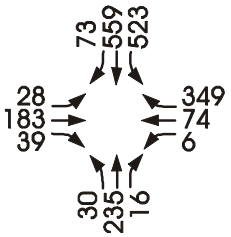
Not to Scale

ROHNERT PARK S.E. AREA SPECIFIC PLAN

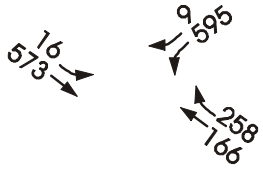
PLANNED BICYCLE FACILITIES IN PROJECT VICINITY

FIGURE 3.10-3
Bicycle System in the Vicinity of the Study Area

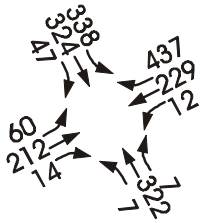
1 Adobe & Petaluma HIll



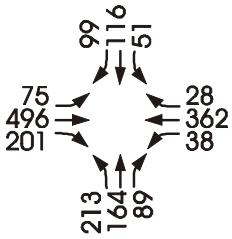
2 Main St & Old Redwood Hwy



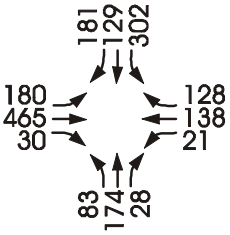
3 E Cotati & Old Redwood Hwy



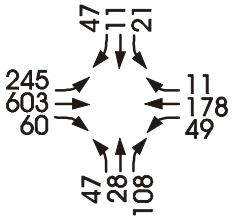
4 E Cotati & Camino Colegio



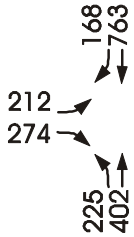
5 E Cotati & Snyder Ln



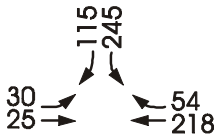
6 E. Cotati & Bodway Pkwy

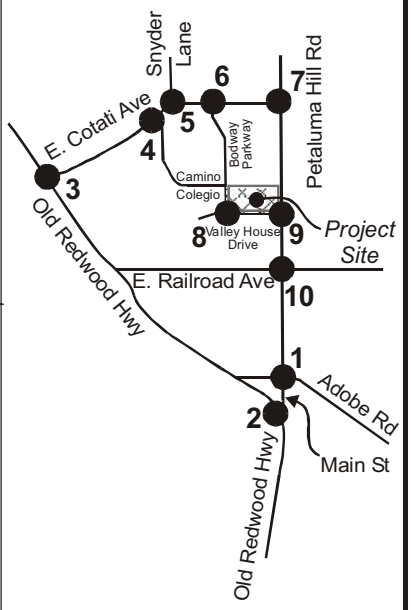


7 E. Cotati & Petaluma Hill Rd

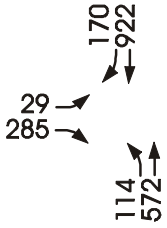


8 Valley House & Bodway Pkwy

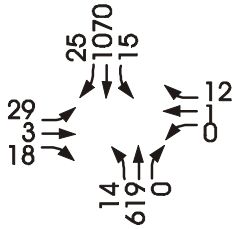




9 Valley House & Petaluma Hill



10 Railroad & Petaluma Hill



LEGEND

12 → Peak Hour
399 → Turning Movement
110 → Volumes

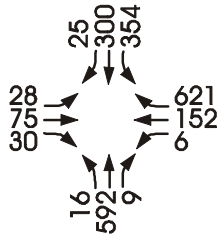
Not to Scale

ROHNERT PARK S.E. AREA SPECIFIC PLAN

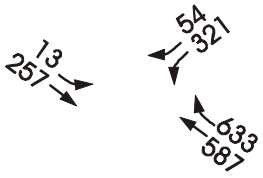
FIGURE 3.10-4
EXISTING AM PEAK HOUR TRAFFIC VOLUMES

Count Dates: Nov 2003, Mar 2001, Mar 1999

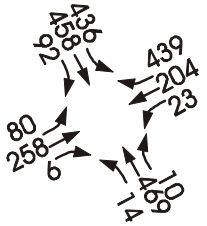
1 Adobe & Petaluma HIll



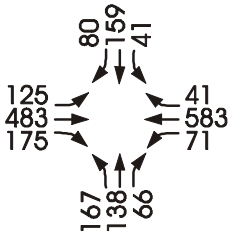
2 Main St & Old Redwood Hwy



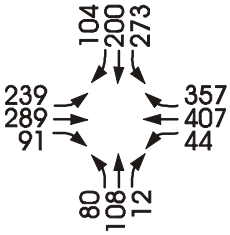
3 E Cotati & Old Redwood Hwy



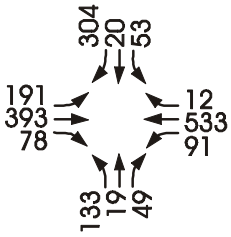
4 E Cotati & Camino Colegio



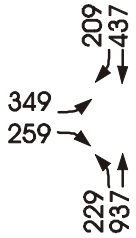
5 E Cotati & Snyder Ln



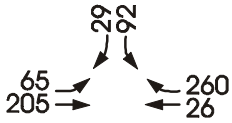
6 E. Cotati & Bodway Pkwy

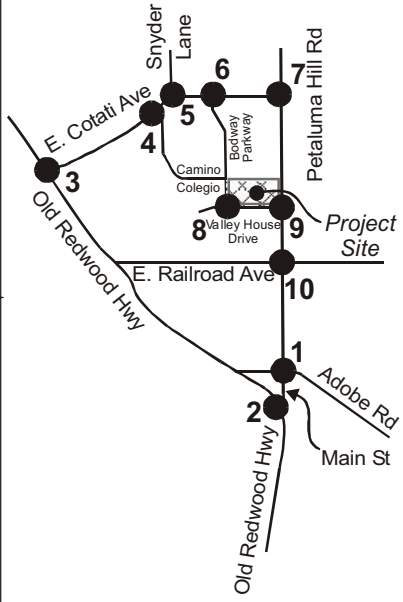


7 E. Cotati & Petaluma Hill Rd

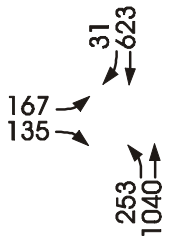


8 Valley House & Bodway Pkwy

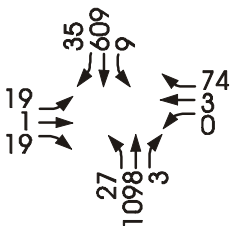




9 Valley House & Petaluma Hill



10 Railroad & Petaluma Hill



LEGEND

12 Peak Hour
399 Turning Movement
110 Volumes

N
W E
S

Not to Scale

ROHNERT PARK S.E. AREA SPECIFIC PLAN

FIGURE 3.10-5
EXISTING PM PEAK HOUR TRAFFIC VOLUMES

Count Dates: Nov 2003, Mar 2001, Mar 1999

Unsignalized Intersection Analysis

Some of the intersections analyzed are unsignalized, with stop sign control only on the minor street approaches. At these types of intersections, most of the major street traffic is undelayed, and by definition have acceptable conditions. The minor traffic movements (the major street left-turn movements and the minor street movements) are all susceptible to delay of varying degrees. Generally, the higher the major street traffic volumes, the greater the delay for the minor movements.

The methodology for unsignalized intersections calculates an average total delay per vehicle for each of the minor movements, based on the availability of adequate gaps in the major street through traffic. A level of service designation is assigned to individual movements or to combinations of movements (in the case of shared lanes) based upon delay. Unsignalized intersection levels of service reported are for each movement (or group of movements) based upon the respective average delay per vehicle. Table 3.10-1 presents the average delay criteria used to determine the level of service at unsignalized intersections.

Table 3.10-1
Level of Service Criteria - Unsignalized Intersections

Level of Service	Average Delay[1] (seconds/veh)
A	0.0 - 10.0
B	10.1 - 15.0
C	15.1 - 25.0
D	25.1 - 35.0
E	35.1 - 50.0
F	>50.0

Source: *Highway Capacity Manual*, Transportation Research Board, Special Report No. 209, Washington DC, 2000.

Note:
[1] Weighted average delay

Signalized and All-Way Stop Intersection Analysis

At signalized intersections and at all-way stop intersections, the level of service is determined by the weighted average delay for all vehicles entering the intersection in seconds. The methodology for this type of intersection calculates a single weighted average delay and LOS for the intersection. The average delay criteria used to determine the level of service at signalized intersections is presented in for signalized intersections. The average delay criteria used to determine the level of service at all-way stop intersections is the same as that presented in Table Table 3.10-1.

Table 3.10-2
Level of Service Criteria - Signalized Intersections

Level of Service (LOS)	Average Delay[1] (secs/veh)	Description
A	$\leq$ 10.0	**Very Low Delay:** This level of service occurs when progression is extremely favorable and most vehicles arrive during a green phase. Most vehicles do not stop at all.
B	10.1-20.0	**Minimal Delays:** This level of service generally occurs with good progression, short cycle lengths, or both. More vehicles stop than at LOS A, causing higher levels of average delay.
C	20.1-35.0	**Acceptable Delay:** Delay increases due to only fair progression, longer cycle lengths, or both. Individual cycle failures (*to service all waiting vehicles*) may begin to appear at this level of service. The number of vehicles stopping is significant, though many still pass through the intersection without stopping.
D	35.1-55.0	**Approaching Unstable/Tolerable Delays:** The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	55.1-80.0	**Unstable Operation/Significant Delays:** This is considered by many agencies the upper limit of acceptable delays. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.
F	> 80.0	**Excessive Delays:** Describes operations with average delay in excess of 60 seconds per vehicle. This level, considered to be unacceptable to most drivers, often occurs with oversaturation (i.e., when arrival flow rates exceed the capacity of the intersection). It may also occur at high v/c ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Source: *Highway Capacity Manual 2000*, Transportation Research Board, Washington DC
Note:
1. Weighted average of delay on all approaches. This is the measure used by the *Highway Capacity Manual* to determine level of service.

Level of Service Significance

The City of Rohnert Park's adopted Level of Service (LOS) Standard is contained in the *Our Place Rohnert Park 2020 General Plan*. This standard allows for a minimum operation of LOS C for intersections on arterial and collector streets, except that some intersections have a stated minimum standard of LOS D, including the East Cotati Avenue/Snyder Lane intersection. This policy further states that LOS D or lower operation is acceptable for an intersection that is operating at LOS D or lower at the time an application for a development project is submitted, if there are no feasible improvements to achieve a higher level of service. The existing LOS may not, however, deteriorate further due to the proposed development project. At unsignalized intersections, if traffic signal warrants are not met and minor movements have LOS D, E, or F conditions even with all other reasonable improvement measures, then further mitigation is not required. This latter criterion is

justified because in such cases the number of vehicles that experience the LOS F conditions is usually quite small and until the traffic volumes reach the signal warrant levels, the overall operation and safety of the intersection would be better with the stop sign control.

These standards constitute the criteria for determination of the significance of the project's traffic impacts for intersections within the City of Rohnert Park's jurisdiction, subject to the determination of each Rohnert Park intersection's existing level of service and the feasibility of each intersection's proposed mitigations. If a Rohnert Park intersection is currently operating at LOS D or lower and its proposed mitigations are not feasible, then the LOS standard of significance for that intersection becomes its existing LOS.

Several project study intersections are within the jurisdiction of Sonoma County. At these intersections, the project would have a significant traffic impact if the project's traffic would cause an intersection currently operating an acceptable level of service (LOS D or better) to operate below the standard (LOS E or F). If the intersection currently operates or is projected to operate below the County standard (at LOS E or F), the project's impact is significant and cumulatively considerable if it causes the delay to increase by five seconds or more. These criteria apply to all signalized, all-way stop controlled, and side street controlled intersections with project traffic volumes over 30 vehicles per hour per approach or per exclusive left turn movement. The current study will use these criteria for intersections within the County's jurisdiction.

Existing Levels of Service

Using the peak hour volumes indicated of Figures 3.10-4 and 3.10-5, existing intersection levels of service were calculated.[2] Table 3.10-3 presents the LOS results for the key intersections at the existing traffic volume levels. There are three locations that experience peak hour conditions that are below the applicable LOS standards as explained below. In addition, it should be noted that the intersection of Main Street & Old Redwood Highway is generally perceived to carry high traffic volumes that degrade LOS there below acceptable levels. However, since the nearby Agilent plant dramatically scaled down its operations, traffic volumes, average delay, and vehicle queue lengths at this intersection have substantially declined. Traffic volumes for this intersection collected in November of 2003 and used in this analysis reflect these changes. The current perceptions of motorists that this intersection is still unacceptable are likely due to the bottleneck conditions that occur at the Adobe/Petaluma Hill intersection where vehicle queues extend back into the Main Street/Old Redwood Highway intersection. Changes to the Adobe/Petaluma Hill intersections that improve traffic conditions there would likely have a beneficial affect on the perceived conditions at Main Street/Old Redwood Highway as well.

Table 3.10-3
Existing Levels of Service

Intersections	Control[1]	AM Peak Hour Delay[2] (secs)	AM LOS[3]	PM Peak Hour Delay[2] (secs)	PM LOS[3]
1 Adobe Rd & Petaluma Hill Rd	Sig	24.4	C	***115.9***	***F***
2 Main St & Old Redwood Highway	Sig	20.5	C	16.9	B
3 E. Cotati Ave & Old Redwood Highway	Sig	24.6	C	28.4	C
4 E. Cotati Ave & Camino Colegio	Sig	31.1	C	31.3	C
5 E. Cotati Ave & Snyder Lane	Sig	28.4	C	27.4	C
6 E. Cotati Ave & Bodway Parkway	Sig	17.6	B	***36.3***	***D***
7 E. Cotati Ave & Petaluma Hill Rd	Sig	35.1	D	38.0	D
8 Valley House Dr & Bodway Parkway	AWSC	11.1	B	10.3	B
9 Valley House Dr & Petaluma Hill Rd	Sig	25.8	C	20.4	C
10 Railroad Ave & Petaluma Hill Rd	Unsig				
Northbound left turn		10.7	B	8.9	A
Southbound left turn		8.8	A	10.7	B
Eastbound approach		***90.5***[4]	***F***	***99.7***[4]	***F***
Westbound approach		15.6	C	27.2	D

Notes:

[1] Sig = Signalized, Unsig = unsignalized, AWSC = All-way stop control[2] Weighted average delay

[3] LOS = Level of Service

[4] At this level of delay, the calculation methodology may be unreliable – use these delays as relative indicators only.

- The Adobe Road/Petaluma Hill Road intersection experiences LOS F conditions in the PM peak hour. Since this intersection falls within the County's jurisdiction it does not currently meet LOS standards. These conditions are produced by a heavy left-turn movement on the southbound approach and a heavy right-turn movement on the westbound approach. Long traffic queues occur on these approaches in the PM peak hour, and to a lesser degree in the AM peak hour also. This is already a signalized intersection, and there are no changes to the signal timing plan that would improve these conditions. The only way to improve peak hour conditions at this location would be to add lanes for one or more of the critical movements at this location; however, there has been opposition by Penngrove residents to capacity enhancing improvements at this location.
- The intersection of East Cotati Avenue & Bodway Parkway has LOS D conditions in the PM peak hour and since it is in the City of Rohnert Park's jurisdiction, it does not meet minimum LOS standards. These conditions are produced by a heavy southbound-right and westbound through movements. Long traffic queues occur on these approaches in the PM peak hour. These conditions could be mitigated to acceptable LOS levels by adjusting the signal cycle length from 90 to 50 seconds.
- LOS standards are not exceeded at the intersection of East Cotati Avenue & Petaluma Hill Road.

- At the Railroad/Petaluma Hill intersection, the eastbound minor street approach experiences LOS F conditions in both peak hours. Since this intersection falls within the County's jurisdiction, and since the project-generated volumes at this location are greater than 30 on an approach, this intersection does not currently meet LOS standards. Signalizing the intersection can mitigate LOS at this location.

Existing Signal Warrant Status

The potential need for traffic signals at unsignalized intersections was evaluated. The Caltrans signal warrant criteria using peak hour traffic volumes were used to make this evaluation. Signal warrant criteria include traffic volume levels above which it is presumed that the need for a traffic signal is warranted. Traffic signals tend to reduce the potential for right-angle type collisions but also tend to increase the potential for rear-end collisions. The signal warrant volumes represent the threshold point at which the potential for more rear-end collisions is offset by the potential for fewer more severe right-angle collisions. When the signal warrant volumes are exceeded, an intersection should be considered for signalization; however, the decision to install a traffic signal should not be based solely upon the warrants. Delay, congestion, approach conditions, driver confusion, future land use or other evidence of the need for right of way assignment beyond that provided by stop signs must be demonstrated. The results of signal warrant analysis indicate that neither of the unsignalized intersections in the study area (at Valley House Drive & Bodway Parkway and Railroad & Petaluma Hill Road) currently meets the traffic signal warrant levels.

Approved Projects

Approved Project Trip Generation

There are numerous approved but not yet completed developments within the City, but only a few are located close enough to the study intersections to add significant traffic to them. The traffic analysts identified four such approved developments for inclusion in the Existing + Approved Project analysis case and they are listed in Table 3.10-4.

Table 3.10-5 summarizes the estimated trip characteristics of the approved developments. The trip rates in this table are derived from published trip generation studies for similar types of developments, such as those published by the Institute of Transportation Engineers (ITE). The estimated peak hour trip generation by these projects amounts to about 60 trips in the AM peak hour and about 217 trips in the PM peak hour. The daily trip generation is estimated to be about 3,097 trips.

These trips were assigned to the study roadways using a directional distribution pattern derived from the Sonoma County General Plan Update travel model for 2020, as discussed further in a later portion of this analysis. Approved project trips that would head to the east of Rohnert Park and not travel through any of the study intersections were excluded from the analysis. The resulting traffic to be added by these developments to the key intersections is shown in Figures 3.10-6 and 3.10-7 for the AM and PM peak hours, respectively.

Table 3.10-4
Approved Developments

Development	Amount	Units	Location
Masma Construction apartments	16.0	DUs	North side of E. Cotati west of Camino Colegio
Park Gardens apartments	20.0	DUs	South side of E. Cotati west of Camino Colegio
Wolf's Den primarily restaurants	19.0	KSF	Southeast corner of E. Cottati & Bodway Parkway
Oak View Senior Assisted Living Apartments	200 270	DUs DUs	Northeast corner of Rohnert Park Expressway & Snyder

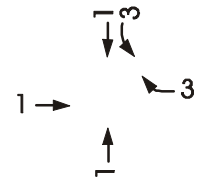
Table 3.10-5
Approved Development Estimated Trip Generation

			Peak Hours					
			AM			PM		
Land Use	Per	Daily Rates	In	Out	Total	In	Out	Total
Apartments	Du	6.5	0.09	0.38	0.47	0.38	0.20	0.58
Congregate Care (assisted)	Unit	2.15	0.04	0.02	0.06	0.10	0.07	0.17
Senior Attached (apartments)	Unit	3.48	0.04	0.03	0.07	0.06	0.04	0.10
Quality Restaurants	Ksf	89.95	0.41	0.41	0.81	5.02	2.47	7.49

APPROVED PROJECTS

			Peak Hours					
			AM			PM		
Land Use	Size	Daily Rates	In	Out	Total	In	Out	Total
Masma Constr. apartments	16.0 du	105	2	6	8	6	3	9
Park Gardens apartments	20.0 du	132	2	8	10	8	4	12
Wolf's Den restaurants	19.0 K sf	1,709	8	8	16	95	47	142
Oak View Senior – assisted	200 units	430	7	5	12	19	15	34
Oak View Senior – apartments	207 units	720	9	5	14	12	8	20
	TOTALS:	**3,907**	**28**	**31**	**60**	**140**	**78**	**217**

1 Adobe & Petaluma HIll

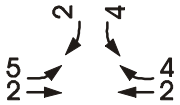


2 Main St & Old Redwood Hwy

3 E Cotati & Old Redwood Hwy

4 E Cotati & Camino Colegio

5 E Cotati & Snyder Ln

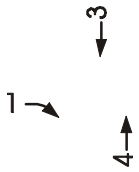


6 E. Cotati & Bodway Pkwy

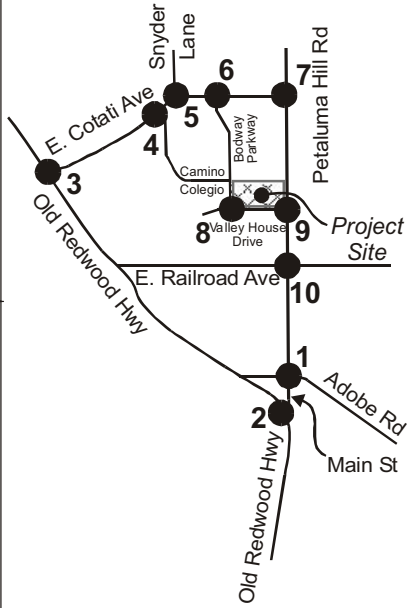
7 E. Cotati & Petaluma Hill Rd

8 Valley House & Bodway Pkwy

9 Valley House & Petaluma Hill



10 Railroad & Petaluma Hill



LEGEND

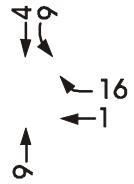
12 → Peak Hour
399 → Turning Movement
110 → Volumes

Not to Scale

ROHNERT PARK S.E. AREA SPECIFIC PLAN

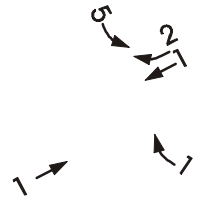
FIGURE 3.10-6
APPROVED PROJECTS
AM PEAK HOUR
TRAFFIC VOLUMES

1 Adobe & Petaluma HIll

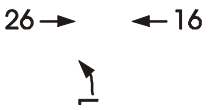


2 Main St & Old Redwood Hwy

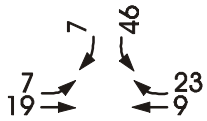
3 E Cotati & Old Redwood Hwy



4 E Cotati & Camino Colegio

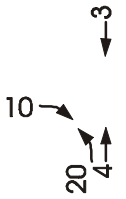


5 E Cotati & Snyder Ln

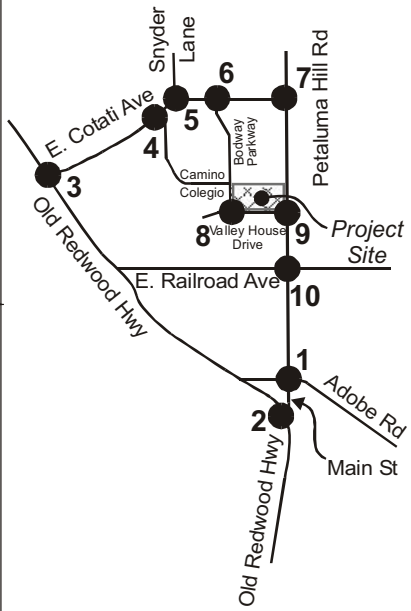


6 E. Cotati & Bodway Pkwy

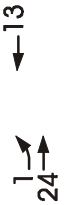
7 E. Cotati & Petaluma Hill Rd



8 Valley House & Bodway Pkwy



9 Valley House & Petaluma Hill



10 Railroad & Petaluma Hill

LEGEND

12 Peak Hour
399 Turning Movement
110

N
W E
S
Not to Scale

ROHNERT PARK S.E. AREA SPECIFIC PLAN

FIGURE 3.10-7
APPROVED PROJECTS
PM PEAK HOUR
TRAFFIC VOLUMES

Existing + Approved Projects Levels of Service

Table 3.10-6 presents the LOS results for the key intersections at the Existing + Approved Projects volume levels. There would still be three locations that would experience peak hour conditions that are worse than the applicable LOS standards as described below.

Table 3.10-6
Existing + Approved Projects Levels of Service

			AM Peak Hour		PM Peak Hour	
			Delay[2]		Delay[2]	
	Intersections	Control[1]	(secs)	LOS[3]	(secs)	LOS[3]
1	Adobe Road & Petaluma Hill Road	Sig	25.9	C	***137.8***[4]	***F***
2	Main Street & Old Redwood Highway	Sig	20.6	C	17.9	B
3	E. Cotati Avenue & Old Redwood Highway	Sig	24.6	C	28.5	C
4	E. Cotati Avenue & Camino Colegio	Sig	31.0	C	31.2	C
5	E. Cotati Avenue & Snyder Lane	Sig	28.5	C	29.0	C
6	E. Cotati Avenue & Bodway Parkway	Sig	17.6	B	***36.8***	***D***
7	E. Cotati Avenue & Petaluma Hill Road	Sig	36.0	D	41.3	D
8	Valley House Drive & Bodway Parkway	AWSC	11.2	B	10.3	B
9	Valley House Drive & Petaluma Hill Road	Sig	26.1	C	21.1	C
10	Railroad Avenue & Petaluma Hill Road	Unsig				
	Northbound left turn		10.7	B	9.0	A
	Southbound left turn		8.8	A	10.9	B
	Eastbound approach		***94.5***[4]	***F***	***127.5***[4]	***F***
	Westbound approach		15.7	C	***29.7***	***D***

Notes:
1 Sig = Signalized, Unsig = unsignalized, AWSC = All-way stop control
2 Weighted average delay
3 LOS = Level of Service
4 At this level of delay, the calculation methodology may be unreliable – use these delays as relative indicators only.

- The Adobe Road/Petaluma Hill Road intersection would continue to have LOS F conditions in the PM peak hour, but the average delay would increase. This is already a signalized intersection, so the only way to improve these peak hour conditions would be to add lanes for one or more of the critical movements at this location. If a signalized right-turn (a so-called, "overlap") lane were to be added to the westbound Adobe Road approach, an additional dedicated left turn lane for the westbound and northbound approaches (converting the existing northbound through-left to an exclusive through lane) and protected signal phases for the north and southbound left turn lanes, the AM and PM peak hour conditions would be in the acceptable LOS range meeting the applicable County standards.
- LOS standards are not exceeded at the intersection of East Cotati Avenue & Petaluma Hill Road.

- The intersection of Cotati Avenue & Bodway Parkway would continue to have LOS D conditions in the PM peak hour, with average delays increasing by less than one second per vehicle. These conditions could be mitigated to acceptable LOS levels (in the LOS A-C range) for this City of Rohnert Park intersection by adjusting the signal cycle length from 90 to 50 seconds.
- At the Railroad Avenue/Petaluma Hill Road intersection, the eastbound approach would experience LOS F conditions in both peak hours. The average delays for the eastbound approach would increase when compared to the existing conditions in both the AM and PM peak hours. This is an unsignalized intersection but the signal warrant check described in the preceding section shows that this location would still not meet the traffic signal warrant levels. However, signalization would mitigate this intersection to acceptable LOS levels (in the LOS A-D range) for this intersection in the County's jurisdiction.

Existing + Approved Projects Signal Warrant Status

The potential need for traffic signals at the key intersections was also evaluated for the Existing + Approved Project traffic volume levels. Signal warrant analysis results indicate that neither of the key unsignalized intersections (at Valley House Drive & Bodway Parkway and Railroad & Petaluma Hill Road) would meet the traffic signal warrant levels with the approved development peak hour traffic added.

Future Conditions

Possible Future Roadway Modifications

As part of its current update of the 1989 General Plan, Sonoma County has been considering several possible modifications to the circulation system around Penngrove and the eastern Petaluma Valley. These modifications are being considered in response to the rapidly growing traffic volumes and congestion that have occurred in the area in the past 10 years. All modifications assume an extension of Bodway Parkway, from its present terminus at Valley House Drive, to E. Railroad Avenue, a new northbound freeway off-ramp at West Railroad Avenue and U.S. 101, and a widening of Old Redwood Highway from U.S. 101 to Railroad Avenue from two to four lanes.

At the time of preparing this EIR, the County was still evaluating road and intersection improvement options. A public meeting to review study results was held in January 2004, and additional meetings may be scheduled, since some of the modifications could affect a large number of road users and residents. The General Plan Update will also consider the impacts of adding lanes to U.S. 101.

For the purposes of this traffic impact analysis, the extension of Bodway Parkway from its present terminus at Valley House Drive to E. Railroad Avenue, along with a new southbound freeway on-ramp at West Railroad Avenue and U.S. 101 has been assumed.

Future (2020) Traffic Levels

The future traffic volumes without the project were estimated from future traffic volume projections of the Rohnert Park traffic model (2004 update). The year 2000 and year 2020 (Future) model

projections (with the project) were used. The difference between year 2000 PM peak hour volumes and the year Future PM peak hour volumes was added to the PM traffic counts conducted for this study. The resulting Future approach and departure volumes were then used along with the existing counted volumes to estimate the Future PM peak hour turning volumes with the project.

AM peak hour Future volumes (with project) were estimated by calculating the ratio of AM to PM 2000 peak hour volumes for each intersection movement, and applying this ratio to its corresponding intersection Future PM peak hour movement. Wherever existing (2000) turning movement volumes were greater in than those calculated for the Future AM peak hour, the existing volumes were substituted.

"Future No Project" scenario volumes were estimated by entering these "Future With Project" volumes into the intersection analysis software (Traffix), estimating the project trip generation for the Southeast Area Specific Plan, and removing (subtracting) these project-generated trips from each intersection's "Future With Project" traffic volumes, producing an estimate of "Future No Project" volumes. Wherever existing count volumes were higher than estimated "Future No Project" volumes, existing volumes were substituted.

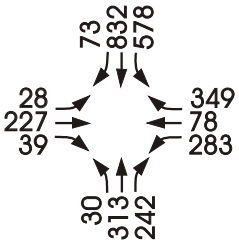
The results of these estimates are presented in Figures 3.10-8 and 3.10-9 for the AM and PM peak hours, respectively.

Future Levels of Service

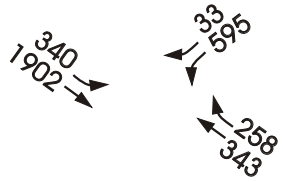
Table 3.10-7 presents the Future LOS results without the project. For this case, there are five locations where the LOS would be below the City or County threshold for a significant impact.

- The Adobe Road/Petaluma Hill Road intersection would have LOS F conditions in the PM peak hours – as seen in the Existing + Approved scenario – as well as in the AM peak hour. The addition of non-project traffic growth would also cause the average delay experienced by motorists to increase by an amount greater than the County's critical threshold of five seconds. This is already a signalized intersection, so the only way to improve these peak hour conditions would be to add lanes for one or more of the critical movements at this location. If a signalized right-turn (a so-called, "overlap") lane were to be added to the westbound Adobe Road approach, an additional dedicated left turn lane for the westbound and northbound approaches (converting the existing northbound through-left to an exclusive through lane) and protected signal phases for the north and southbound left turn lanes, the AM and PM peak hour conditions would be in the acceptable LOS range (LOS A-D).
- The Main Street/Old Redwood Highway intersection would have LOS F conditions in both the AM PM peak hour periods. This is already a signalized intersection, so the only way to improve these peak hour conditions would be to add lanes for one or more of the critical movements at this location. If an additional through lane were added on both the north and southbound approaches, the AM and PM peak hour conditions would be in the acceptable LOS range (LOS A-D).

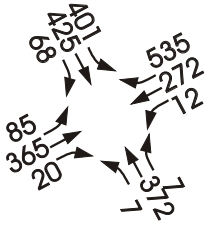
1 Adobe & Petaluma HIll



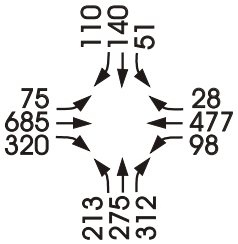
2 Main St & Old Redwood Hwy



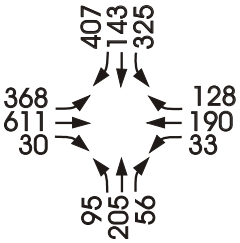
3 E Cotati & Old Redwood Hwy



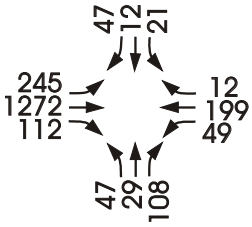
4 E Cotati & Camino Colegio



5 E Cotati & Snyder Ln

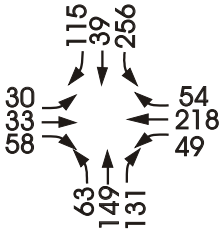


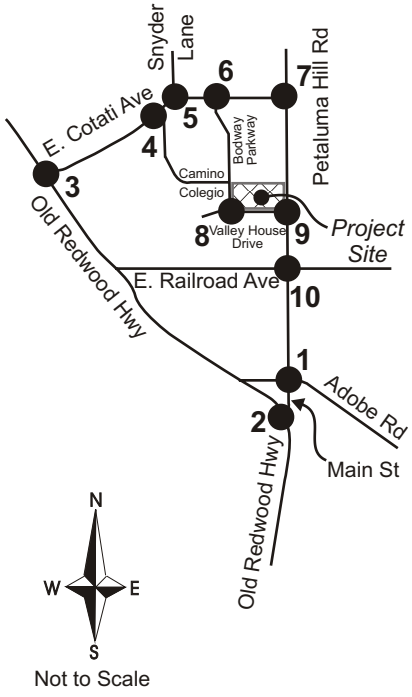
6 E. Cotati & Bodway Pkwy



7 E. Cotati & Petaluma Hill Rd

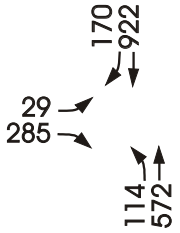
8 Valley House & Bodway Pkwy



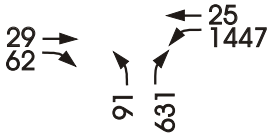


Not to Scale

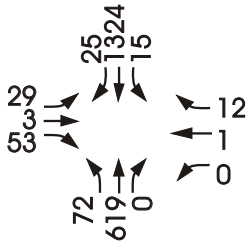
9 Valley House & Petaluma Hill



10 S. Sweeper (Railroad & Petaluma Hill)



11 Railroad & Petaluma Hill



LEGEND

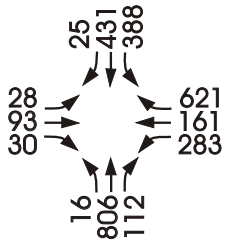
12 → Peak Hour
399 → Turning Movement
110 → Volumes

Note: Where Forecasted Volumes were less than Existing, Existing Volumes were used.

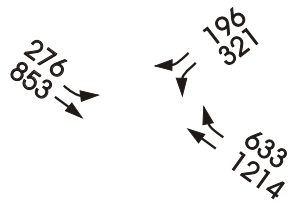
ROHNERT PARK S.E. AREA SPECIFIC PLAN

Figure 3.10-8
Cumulative No Project AM Peak Hour Traffic Volumes

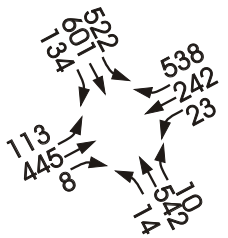
1 Adobe & Petaluma HIll



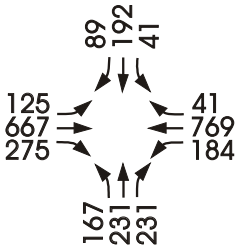
2 Main St & Old Redwood Hwy



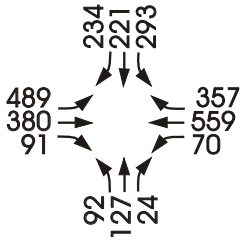
3 E Cotati & Old Redwood Hwy



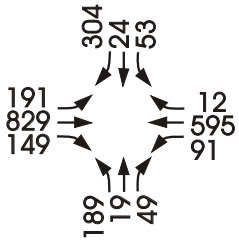
4 E Cotati & Camino Colegio



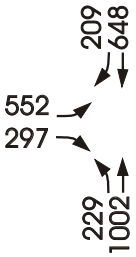
5 E Cotati & Snyder Ln



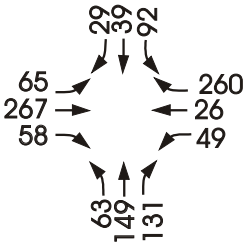
6 E. Cotati & Bodway Pkwy

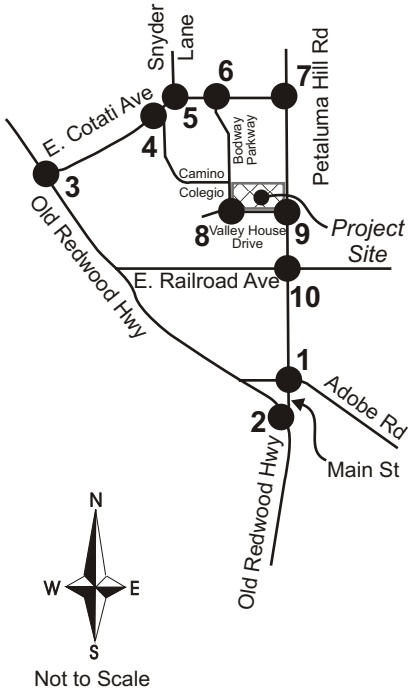


7 E. Cotati & Petaluma Hill Rd



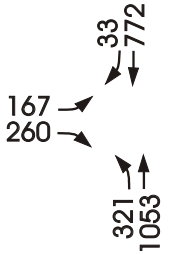
8 Valley House & Bodway Pkwy



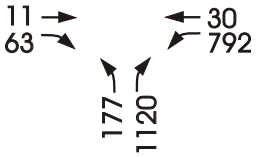


Not to Scale

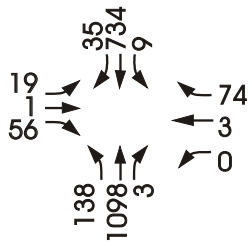
9 Valley House & Petaluma Hill



10 S. Sweeper (Railroad & Petaluma Hill)



11 Railroad & Petaluma Hill



LEGEND

12 → Peak Hour
399 → Turning Movement
110 → Volumes

Note: Where Forecasted Volumes were less than Existing, Existing Volumes were used.

ROHNERT PARK S.E. AREA SPECIFIC PLAN

Figure 3.10-9
Cumulative No Project PM Peak Hour Traffic Volumes

Table 3.10-7
Future (2020) Levels of Service (No Project)

	Intersections	Control[1]	AM Peak Hour Delay[2] (secs)	AM Peak Hour LOS[3]	PM Peak Hour Delay[2] (secs)	PM Peak Hour LOS[3]
1	Adobe Rd & Petaluma Hill Rd	Sig	***99.3***	***F***	***363.5***	***F***
2	Main St & Old Redwood Highway	Sig	***202.5***	***F***	***82.7***	***F***
3	E. Cotati Ave & Old Redwood Highway	Sig	27.8	C	34.3	C
4	E. Cotati Ave & Camino Colegio	Sig	30.9	C	33.6	C
5	E. Cotati Ave & Snyder Lane	Sig	29.2	C	46.7	D
6	E. Cotati Ave & Bodway Parkway	Sig	13.9	B	***37.9***	***D***
7	E. Cotati Ave & Petaluma Hill Rd	Sig	***90.9***	***F***	***94.7***	***F***
8	Valley House Dr & Bodway Parkway	AWSC	13.4	B	16.2	C
9	Valley House Dr & Petaluma Hill Rd	Sig	21.9	C	32.3	C
10	Railroad & Petaluma Hill Road	Sig	17.5	B	13.8	B

Notes:

[1] Unsig = unsignalized, AWSC = All-way stop control

[2] Weighted average delay

[3] LOS = Level of Service

[4] At this level of delay, the calculation methodology may be unreliable – use these delays as relative indicators only.

- LOS standards are not exceeded at the intersection of East Cotati Avenue & Snyder Lane.
- The intersection of East Cotati Avenue & Bodway Parkway would have LOS D conditions in the PM peak hour. This is already a signalized intersection, so the only way to improve these peak hour conditions would be to add lanes for one or more of the critical movements at this location. If a free right-turn lane were to be added to the southbound Bodway Parkway approach, the PM peak hour conditions would be in the acceptable LOS range for the City of Rohnert Park (LOS A-C).
- At the intersection of East Cotati Avenue & Petaluma Hill Road, AM and PM peak hour conditions would reach LOS F. This is already a signalized intersection, so the only way to improve these peak hour conditions would be to add lanes for one or more of the critical movements at this location. If an additional left turn lane is added to the eastbound approach and the existing shared left-right turn lane is redesignated as an exclusive right turn lane, AM and PM peak hour conditions would be brought to an acceptable LOS range for the County (LOS A-D).
- While the level of service at Valley House & Petaluma Hill Road would remain acceptable with the addition of cumulative (future) traffic according to the County's LOS significance criteria, the length of the vehicle queue in the northbound through lanes (forecast to be roughly 660 feet) would block access to the left turn pocket (currently roughly 100 feet), creating longer queues and further congestion.

Future (2020) No Project Signal Warrant Status

The potential need for traffic signals at the key intersections was also evaluated for the Future No Project traffic volume levels. Results indicate that neither of the key intersections (at Valley House

Drive & Bodway Parkway and Railroad & Petaluma Hill Road) would just meet the traffic signal warrant levels with the project's peak hour traffic added.

Impacts and Mitigation Measures

Standards of Significance

A project would normally have a significant adverse traffic and circulation impact if it would:

Impact Criterion #1: Cause an increase in traffic that 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).

For intersections within the City of Rohnert Park's jurisdiction, the City's LOS standards apply. Several project study intersections are within the jurisdiction of Sonoma County. At these intersections, the County's LOS standards apply. Table 3.10-8 shows the applicable LOS standard for each intersection.

- **Impact Criterion #2:** Create hazards to safety from design features (e.g., sharp curves or dangerous intersections) or incompatible uses.
- **Impact Criterion #3:** Provide inadequate emergency access or access to nearby uses.
- **Impact Criterion #4:** Provide insufficient parking or capacity on-site or off-site.
- **Impact Criterion #5:** Establish hazards or barriers for pedestrians or bicyclists.
- **Impact Criterion #6:** Conflict with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks).
- **Impact Criterion #7:** Generate rail, waterborne or air traffic impacts.

Table 3.10-8
Level of Service Standards by Intersection

	Intersections	Control[1]	Jurisdiction	LOS[2] Standard
1	Adobe Rd & Petaluma Hill Rd	Sig	Sonoma Co.	D
2	Main St & Old Redwood Highway	Sig	Sonoma Co.	D
3	E. Cotati Ave & Old Redwood Highway	Sig	Rohnert Park	C
4	E. Cotati Ave & Camino Colegio	Sig	Rohnert Park	C
5	E. Cotati Ave & Snyder Lane	Sig	Rohnert Park	D
6	E. Cotati Ave & Bodway Parkway	Sig	Rohnert Park	C
7	E. Cotati Ave & Petaluma Hill Rd	Sig	Sonoma Co.	D
8	Valley House Dr & Bodway Parkway	AWSC	Rohnert Park	C
9	Valley House Dr & Petaluma Hill Rd	Sig	Sonoma Co.	D
10	Railroad Ave & Petaluma Hill Rd	Unsig	Sonoma Co.	D

Notes:
[1] Sig = Signalized, Unsig = unsignalized, AWSC = All-way stop control
[2] LOS = Level of Service

Project Evaluation

Trip Generation

The project site plan is shown on Figure 2-3 in Section 2, *Project Description*. The Southeast Specific Plan project includes the construction of up to 27 rural residential dwelling units, 168 low-density residential dwelling units, 268 medium density residential units, 36 mixed-use (live/work) residential units, a 5.8-acre park, and up to 20,000 square feet of commercial floor space.

Table 3.10-9 summarizes the estimated trip characteristics of the project. The trip rates in this table are derived from published trip generation studies for similar types of developments, such as those published by the Institute of Transportation Engineers (ITE). The estimated peak hour trip generation by the site amounts to about 303 trips in the AM peak hour and about 426 trips in the PM peak hour. The site's daily trip generation is estimated to be about 4,691 trips.

Table 3.10-9
Project's Estimated Trip Generation

			Peak Hour Rates					
			AM			PM		
Land Use	per	Daily Rates	In	Out	Total	In	Out	Total
Rural Residential	du	9.57	0.19	0.56	0.75	0.65	0.36	1.01
Low Density Residential	du	9.57	0.19	0.56	0.75	0.65	0.36	1.01
Medium Density Residential	du	6.59	0.09	0.38	0.47	0.38	0.20	0.58
Mixed Use Residential (Live/Work)	du	6.59	0.09	0.38	0.47	0.38	0.20	0.58
Commercial/Retail	ksf	40.67	0.43	0.28	0.71	1.11	1.48	2.59
Park	acs	1.59	0.01	0.00	0.01	0.07	0.10	0.17

SOUTHEAST AREA SPECIFIC PLAN

			Peak Hour Trips					
			AM			PM		
Land Use	size	Daily Trips	In	Out	Total	In	Out	Total
Rural Residential	27 du	258	5	15	20	17	10	27
Low Density Residential	168 du	1,608	32	95	126	109	61	170
Medium Density Residential	268 du	1,766	25	101	126	103	53	155
Mixed Use Residential (Live/Work)	36 du	237	3	14	17	14	7	21
Commercial/Retail	20.0 ksf	813	9	6	14	22	30	52
Park	5.8 acs	9	0	0	0	0	1	1
	TOTALS:	**4,691**	74	231	303	265	162	426

Trip Distribution

The directional distribution of the project's trips was estimated using the Sonoma County General Plan Update Travel Model for 2020. The trips of the traffic zone containing the project were selectively assigned to the roadway network, and directional percentages were computed from this assignment. The resulting distribution percentages are shown on Figure 3.10-10. The resulting traffic to be added by the project to the key intersections is shown on Figures 3.10-11 and 3.10-12 for the AM and PM peak hours, respectively.

Traffic Volumes and Level of Service (LOS): *Would the project increase traffic and create congestion? (Impact Criterion #1)*

Impact 3.10-1

Traffic increases resulting from the Southeast Specific Plan project coupled with the currently approved projects would result in intersection levels of service at or worse than the applicable level of service threshold at the intersections of Adobe Road & Petaluma Hill Road, East Cotati Avenue & Bodway Parkway, and Railroad Avenue & Petaluma Hill Road. For the intersection of East Cotati Avenue & Bodway Parkway this would be a significant impact, while for the intersections of Adobe Road & Petaluma Hill Road, and Railroad Avenue & Petaluma Hill Road this would be a significant and unavoidable adverse impact.

Table 3.10-10 shows the Intersection levels of service for Existing + Approved + Project development, both before and after mitigation measures are applied. The projected traffic volumes that would be produced under Existing + Approved conditions with the project would cause the intersection Adobe Road & Petaluma Hill Road to have LOS F conditions in the PM peak hour. The intersection of East Cotati Avenue and Bodway Parkway would be LOS D during the PM peak hour. At the unsignalized intersection of Railroad Avenue and Petaluma Hill Road, the LOS would reach F for the eastbound approach during both peak periods with more than 30 project vehicles per approach and with an increase of more than five seconds of average delay per vehicle compared to existing conditions.

While the intersection of East Cotati and Snyder Lane would drop to LOS D in the PM peak hour, the City of Rohnert Park's adopted LOS standards specify that LOS A through D are acceptable at this intersection. Therefore, according to the City of Rohnert Park's LOS criteria, the intersection of East Cotati and Snyder Lane does not meet the significance criteria in the Approved + Project scenario.

The impact is listed as significant for the intersection of East Cotati Avenue and Bodway Parkway because the intersection is located within the City of Rohnert Park, the City has sole jurisdiction, and the impact as identified can be mitigated to a less than significant level. The intersections of Adobe Road and Petaluma Hill Road, and Railroad Avenue and Petaluma Hill Road, are located outside the City where a regional approach to mitigation requiring the participation of more than one jurisdiction

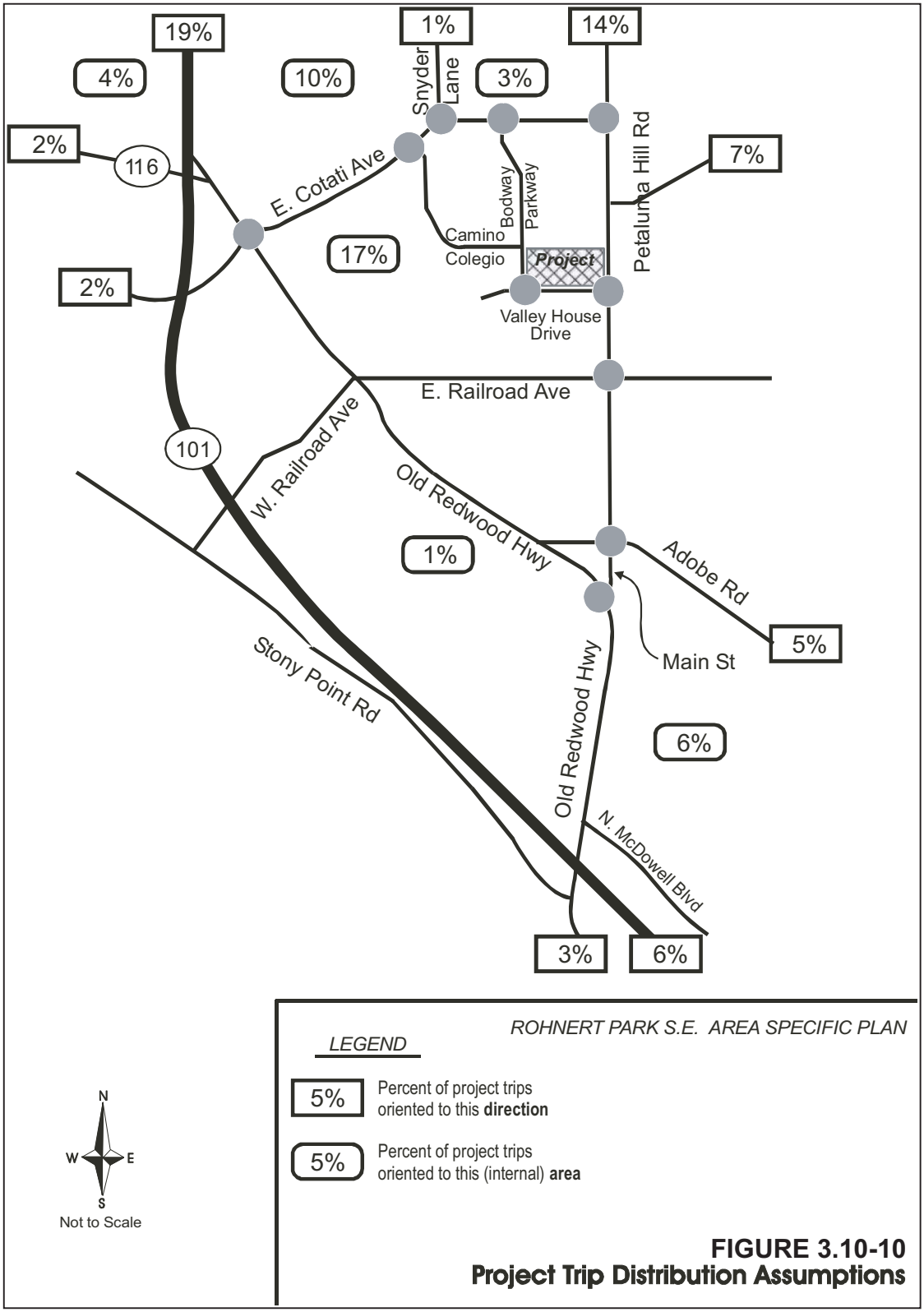
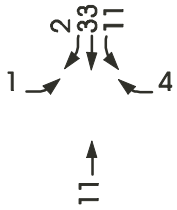
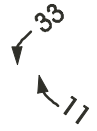


FIGURE 3.10-10
Project Trip Distribution Assumptions

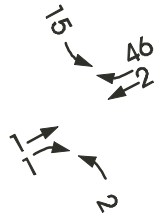
1 Adobe & Petaluma HIll



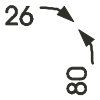
2 Main St & Old Redwood Hwy



3 E Cotati & Old Redwood Hwy

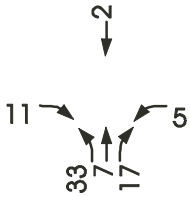


4 E Cotati & Camino Colegio



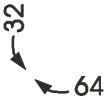
5 E Cotati & Snyder Ln

6 E. Cotati & Bodway Pkwy

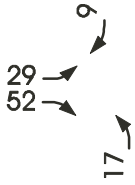


7 E. Cotati & Petaluma Hill Rd

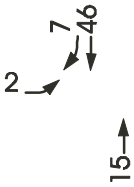
8 Valley House & Bodway Pkwy

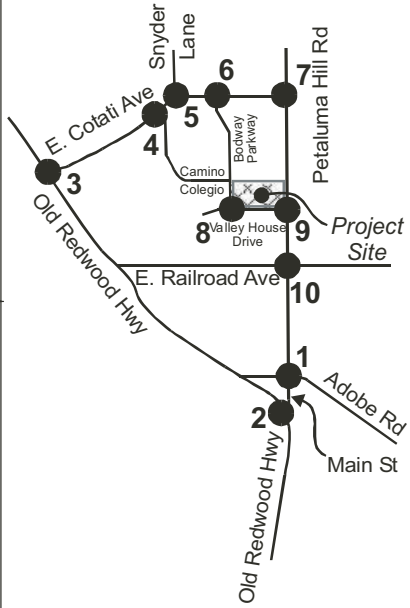


9 Valley House & Petaluma Hill



10 Railroad & Petaluma Hill





LEGEND

12 → Peak Hour
399 → Turning Movement
110 → Volumes

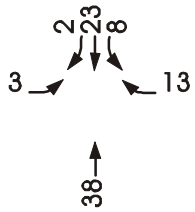
N
W E
S

Not to Scale

ROHNERT PARK S.E. AREA SPECIFIC PLAN

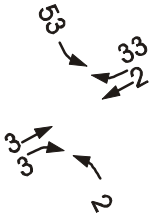
FIGURE 3.10-11
PROJECT ONLY
AM PEAK HOUR
TRAFFIC VOLUMES

1 Adobe & Petaluma HIll



2 Main St & Old Redwood Hwy

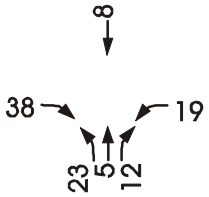
3 E Cotati & Old Redwood Hwy



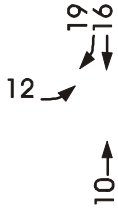
4 E Cotati & Camino Colegio

5 E Cotati & Snyder Ln

6 E. Cotati & Bodway Pkwy

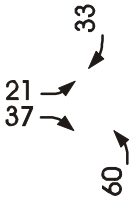


7 E. Cotati & Petaluma Hill Rd

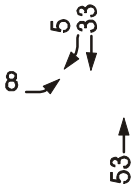


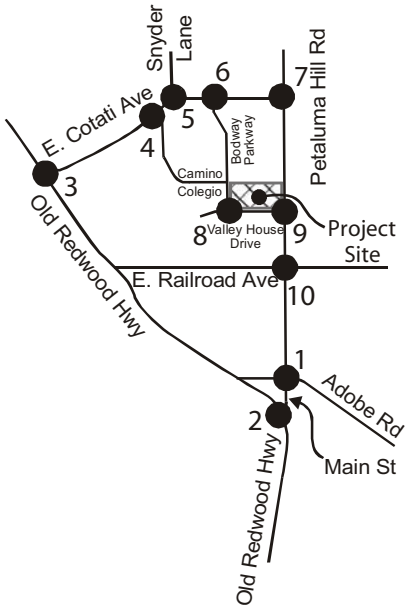
8 Valley House & Bodway Pkwy

9 Valley House & Petaluma Hill



10 Railroad & Petaluma Hill





LEGEND

12 → Peak Hour
399 → Turning Movement
110 → Volumes

Not to Scale

ROHNERT PARK S.E. AREA SPECIFIC PLAN

FIGURE 3.10-12
PROJECT ONLY
PM PEAK HOUR
TRAFFIC VOLUMES

Table 3.10-10
Existing + Approved + Project, Unmitigated and Mitigated Levels of Service

			Existing				Existing+Approved+Project				Mitigated Existing+Approved+Project			
			AM Peak Hour Delay[2]		PM Peak Hour Delay[2]		AM Peak Hour Delay[2]		PM Peak Hour Delay[2]		AM Peak Hour Delay[2]		PM Peak Hour Delay[2]	
	Intersections	Control[1]	(secs)	LOS[3]	(secs)	LOS[3]	(secs)	LOS[3]	(secs)	LOS[3]	(secs)	LOS[3]	(secs)	LOS[3]
1	Adobe Rd & Petaluma Hill Rd	Sig	24.4	C	***115.9***	***F***	28.8	C	***133.9***	***F***	18.4	B	26.7	C
2	Main St & Old Redwood Highway	Sig	20.5	C	16.9	B	22.0	C	21.0	C	22.0	C	21.0	C
3	E. Cotati Ave & Old Redwood Highway	Sig	24.6	C	28.4	C	24.5	C	28.8	C	24.5	C	28.8	C
4	E. Cotati Ave & Camino Colegio	Sig	31.1	C	31.3	C	32.6	C	31.7	C	32.6	C	31.7	C
5	E. Cotati Ave & Snyder Lane	Sig	28.4	C	27.4	C	28.4	C	29.6	C	28.4	C	29.6	C
6	E. Cotati Ave & Bodway Parkway	Sig	17.6	B	***36.3***	***D***	19.2	B	35.5	D	19.2	B	35.5	D
7	E. Cotati Ave & Petaluma Hill Rd	Sig	35.1	D	38.0	D	38.0	D	43.9	D	38.0	D	43.9	D
8	Valley House Dr & Bodway Parkway	AWSC	11.1	B	10.3	B	11.9	B	11.9	B	11.9	B	11.9	B
9	Valley House Dr & Petaluma Hill Rd	Sig	25.8	C	20.4	C	32.4	C	24.5	C	32.4	C	24.5	C
10	Railroad Ave & Petaluma Hill Rd	Sig.	--	--	--	--	--	--	--	--	6.8	A	9.1	A
	Northbound left turn	Unsig.	10.7	B	8.9	A	11.0	B	9.1	A	--	--	--	--
	Southbound left turn		8.8	A	10.7	B	8.8	A	11.2	B	--	--	--	--
	Eastbound approach		***90.5***	***F***	***99.7***	***F***	***121.1***	***F***	***273.4***	***F***	--	--	--	--
	Westbound approach		15.6	C	***27.2***	***D***	16.3	C	32.8	D	--	--	--	--

Notes:

[1] Sig = Signalized, Unsig = unsignalized, AWSC = All-way stop control

[2] Weighted average delay

[3] LOS = Level of Service

[4] At this level of delay, the calculation methodology may be unreliable – use these delays as relative indicators only.

would be required, and would be beyond the sole control of the City of Rohnert Park. Thus impacts related to operation of the Adobe Road and Petaluma Hill Road, and Railroad Avenue and Petaluma Hill Road intersections are listed as significant and unavoidable.

Although significant unavoidable impacts are noted above, mitigation measures for those intersections where significant unavoidable impacts are identified are provided for informational purposes in this EIR. This is consistent with Rohnert Park General Plan Transportation Chapter Policies TR-21 A and B, regarding the promotion of inter-jurisdictional coordination to mitigate the impacts of increased traffic.

Mitigation Measure 3.10-1

The intersection of Adobe Road & Petaluma Hill Road (listed as being significantly and unavoidably impacted), would require the addition of the following: (1) a signalized right-turn lane (a so-called, "overlap") to be added to the westbound Adobe Road approach, (2) an additional dedicated left turn lane for the westbound and northbound approaches (converting the existing northbound through-left to an exclusive through lane) and (3) protected signal phases for the north and southbound left turn lanes for the AM and PM peak hour conditions. With these three measures, the intersection of Adobe Road and Petaluma Hill Road would function within the acceptable County LOS A-D range. This intersection is within the community of Pengrove (in the jurisdiction of Sonoma County).

The intersection of East Cotati Avenue and Bodway Parkway in the City of Rohnert Park would require a signal retiming to a 50 second cycle length to achieve LOS C.

The intersection of Railroad Avenue and Petaluma Hill Road (listed as being significantly and unavoidably impacted), could be returned to an acceptable LOS (LOS A-D for the County) by signalizing the intersection.

With mitigation as indicated above, Impact 3.10-1 would be reduced to a less than significant level with respect to the intersection of East Cotati Avenue and Bodway Parkway only.

Because the above intersection impacts would be caused by growth within the region, the project sponsor should be responsible for paying a "fair share" of the total cost of implementing the above mitigation measures. The financial contribution should be proportional to the project's contribution to the total increase in traffic resulting from new development. The City of Rohnert Park would be committed to securing its share of funding for implementing intersection improvements because of regional growth based on the fair share that would be allocated to each project development in Rohnert Park and adjacent communities. The financial contributions should be based on each project's contribution to traffic affecting the respective intersections as noted above.

Hazards: ***Would the project create safety hazards? (Impact Criterion #2)***

Impact 3.10-2

An increased demand for transit services resulting from project development would increase bus dwell times at adjacent bus stops and potentially block traffic along Petaluma Hill Road, increasing hazards to vehicles and pedestrians. Safety hazards would compound through the current lack of curbs and gutters along Petaluma Hill Road adjacent to the bus stops nearest the project which presents difficulties for patrons boarding and alighting buses. This is considered a significant impact.

The Southeast Specific Plan project would generate an estimated demand of 45 to 68 transit trips per day. Most of these trips would be on Sonoma County Transit's Route 44, which runs along Petaluma Hill Road. The increased demand for transit services at the site would increase bus dwell times for Route 44 at bus stops (located at the intersection of Valley House Drive and Petaluma Hill Road) and potentially block traffic along Petaluma Hill Road. The current lack of curbs and gutters along Petaluma Hill Road would also present difficulties for patrons boarding and alighting buses, adding to dwell times and reducing safety. It is noted that the increased demand for transit services would encourage greater ridership on preexisting transit lines, resulting in greater use and effectiveness of existing transit resources.

With respect to construction traffic hazards, because the project site is for the most part level, the amount of earthwork required to build the project would not be expected to be significant. Some additional truck traffic (primarily for delivery of building materials) would occur for several months during the early phases of the project. Usually, such trips are distributed throughout the day and do not adversely affect peak hour traffic. Construction workers typically arrive on the site early in the morning, prior to the morning peak commute traffic (which occurs 7:30-8:30 AM), and generally leave before the highest afternoon peak hour begins (usually beginning between 4 and 4:30 PM). For these reasons, construction-related vehicles are not expected to have a significant impact on existing traffic levels of service.

Mitigation Measure 3.10-2

Bus pullouts with appropriate curbs and gutters for bus stops along Petaluma Hill Road near the project site should be constructed concurrent with the widening of this road in the future as well as adequate pedestrian access paths/sidewalks to the bus stops from the project site. The project sponsor should be responsible for paying the cost of implementing the above mitigation measure. With mitigation as indicated above, Impact 3.10-2 would be reduced to a less than significant level.

Emergency Access: ***Would the project provide inadequate emergency access? (Impact Criterion #3)***

As indicated on Figure 2-3 in Section 2, *Project Description*, project site access would be provided at three locations on Valley House Drive, two locations on Bodway Parkway and one location connecting to the Canon Manor Specific Plan area to the north for a total of six access/egress points. Rohnert Park General Plan Policy HS-24 requires adequate access for emergency vehicles, "*including adequate street width and vertical clearance, on new streets*" which would be designed for the project in accordance with the Street Standard Emergency Management Plan established by the Rohnert Park Department of Public Safety subject to approval by the City. Therefore, there would be no adverse impact under Impact Criterion #3.

Parking: ***Would project parking be insufficient? (Impact Criterion #4)***

All project parking would be interior to the Southeast Specific Plan project site and provided in accordance with City of Rohnert Park residential subdivision parking requirements subject to approval by the City. Therefore, there would be no adverse impact under Impact Criterion #4.

Barriers: ***Would the project establish barriers for pedestrians or bicyclists? (Impact Criterion #5)***

The Southeast Specific Plan specifies", "*Pedestrian and bicycle circulation within the SESPA will be facilitated by a network of sidewalks and bicycle lanes which will be developed along with the roadway system. A promenade for pedestrians will be located in an east-west corridor linking the entire development from the mixed-use area to the rural estate lots*."[3] No off-site construction as part of the project is anticipated that would permanently establish barriers for pedestrians or bicyclists. All circulation features would be subject to Design Review by the City as explained in Section 3.6, *Visual Quality*, and subject to City approval. Therefore, there would be no adverse impact under Impact Criterion #4.

Transportation Policies: ***Would the project conflict with policies supporting alternative transportation modes. (Impact Criterion #6)***

The Southeast Specific Plan and its development components must be consistent with the relevant goals and policies of the General Plan. The Southeast Specific Plan and its development components are evaluated for conformance with the provisions of the General Plan in Section 2.1, *Relationship to Plans and Planning Policy*. No conflicts of the project respecting policies supporting alternative transportation modes are noted for the project. As noted above, the project's increased demand for transit services would encourage greater ridership on preexisting transit lines, resulting in greater use and effectiveness of existing transit resources and pedestrian and bicycle circulation within the Southeast Specific Plan site as facilitated by a network of sidewalks and bicycle lanes to be developed along with the roadway system. Therefore, there would be no adverse impact under Impact Criterion #6.

In addition, for informational purposes, bicycle needs are intended to be met by the City through a combination of the existing Class I bike path along Camino Colegio which runs from the intersection of Camino Colegio and Bodway Parkway (at the northwest corner of the project site) and its connection to the existing Class II bike lanes that run along East Cotati Avenues in the project area as well as planned Class II bike lane facilities that will run along the eastern edge of the project site on Petaluma Hill Road and along Bodway Parkway leading from the project site to the Sonoma State University campus.

Transportation Modes: *Would the project generate rail, waterborne or air traffic impacts. (Impact Criterion #7)*

The project is a residential project, not a project associated with manufacturing or transportation facilities. The project would not generate or produce large quantities of goods requiring transport to consumer destinations thereby taxing rail, waterborne or air traffic. The project site is not located adjacent to a railroad facility, water body or water transport facility or airport. Therefore, other than the resident population that would generate an increase in traffic as addressed in this section of the EIR, there would be no adverse impact under Impact Criterion #7.

Cumulative Development

The discussion of cumulative development impacts is as described in the *Introduction* section of this EIR under the title *Cumulative Impact Assessment* and includes collectively the Specific Plan Areas and projects as described therein.

Intersections

Impact 3.10-3

Under cumulative (future) development in the year 2020, traffic growth with the Southeast Specific Plan project would result in intersection levels of service at or worse than the applicable level of service threshold at the intersections of Adobe Road & Petaluma Hill Road, Main Street & Old Redwood Highway, East Cotati Avenue & Camino Colegio, East Cotati Avenue and Bodway Parkway, and East Cotati Avenue & Petaluma Hill Road. Additionally, the queue of vehicles at the northbound left turn lane at Valley House & Petaluma Hill Road would exceed the existing length of the left turn lane. For the intersections of East Cotati Avenue & Camino Colegio, East Cotati Avenue and Bodway Parkway, and East Cotati Avenue & Petaluma Hill Road this is considered a significant impact while for the intersections of Adobe Road & Petaluma Hill Road, and Main Street & Old Redwood Highway this is considered a significant and unavoidable adverse impact.

Table 3.10-11 shows the Intersection levels of service for future development without and with the project included, before and after mitigation measures are applied. The projected traffic volumes that would be produced under future conditions with the project would cause the intersection Adobe Road

Table 3.10-11
Future (2020) + Project Levels of Service

			Future No Project				Future With Project				Mitigated Future With Project			
			AM Peak Hour Delay[2]		PM Peak Hour Delay[2]		AM Peak Hour Delay[2]		PM Peak Hour Delay[2]		AM Peak Hour Delay[2]		PM Peak Hour Delay[2]	
	Intersections	Control[1]	(secs)	LOS[3]	(secs)	LOS[3]	(secs)	LOS[3]	(secs)	LOS[3]	(secs)	LOS[3]	(secs)	LOS[3]
1	Adobe Rd & Petaluma Hill Rd	Sig	***99.3***	***F***	***363.5***	***F***	***105.5***	***F***	***373.0***	***F***	21.8	C	19.1	B
2	Main St & Old Redwood Highway	Sig	***202.5***	***F***	***82.7***	***F***	***202.5***	***F***	***82.7***	***F***	33.5	C	24.2	C
3	E. Cotati Ave & Old Redwood Highway	Sig	27.8	C	34.3	C	27.7	C	34.9	C	27.7	C	34.9	C
4	E. Cotati Ave & Camino Colegio	Sig	30.9	C	33.6	C	32.7	C	***36.1***	***D***	26.1	C	31.1	C
5	E. Cotati Ave & Snyder Lane	Sig	29.2	C	46.7	D	29.4	C	47.7	D	29.4	C	47.7	D
6	E. Cotati Ave & Bodway Parkway	Sig	13.9	B	***37.9***	***D***	14.8	B	***40.3***	***D***	14.1	B	29.5	C
7	E. Cotati Ave & Petaluma Hill Rd	Sig	***90.9***	***F***	***94.7***	***F***	***94.7***	***F***	***101.0***	***F***	52.4	D	49.8	D
8	Valley House Dr & Bodway Parkway	AWSC	13.4	B	16.2	C	14.1	B	16.5	C	14.1	B	16.5	C
9	Valley House Dr & Petaluma Hill Rd	Sig	21.9	C	32.3	C	26.0	C	39.1	D	26.0	C	42.7	D
10	Railroad & Petaluma Hill Road	Sig	17.5	B	13.8	B	19.6	B	13.8	B	19.7	B	12.7	B

Notes:

[1] Sig = Signal, AWSC = All-way stop control

[2] Weighted average delay

[3] LOS = Level of Service

[4] At this level of delay, the calculation methodology may be unreliable – use these delays as relative indicators only.

& Petaluma Hill Road to have LOS F conditions in both peak hours, the intersection of Main Street & Old Redwood Highway to have LOS F conditions in both peak hours, the intersection of East Cotati Avenue & Camino Colegio to have LOS D conditions in the PM peak hour, the intersection of East Cotati Avenue and Bodway Parkway to have LOS D conditions during the PM peak hour, and the intersection of East Cotati Avenue & Petaluma Hill Road to have LOS F conditions in both peak hours.

The impact is listed as significant for the intersections of East Cotati Avenue & Camino Colegio, East Cotati Avenue & Bodway Parkway, and east Cotati Avenue & Petaluma Hill Road because the intersections are located within the City of Rohnert Park, the City has sole jurisdiction and the impact as identified can be mitigated to a less than significant level. The intersections of Adobe Road & Petaluma Hill Road, and Main Street & Old Redwood Highway are located outside the City where a regional approach to mitigation requiring the participation of more than one jurisdiction would be required, and would be beyond the sole control of the City of Rohnert Park. Thus impacts related to operation of the Adobe Road & Petaluma Hill Road, and Main Street & Old Redwood Highway intersections are listed as significant and unavoidable.

Although significant unavoidable impacts are noted above at two intersections, mitigation measures for those intersections where significant unavoidable impacts are identified are provided for informational purposes in this EIR.

While the intersection of East Cotati & Snyder Lane would drop to LOS D in the PM peak hour, the City of Rohnert Park's adopted LOS standards specify that LOS A through D are acceptable at this intersection.

While the level of service at Valley House & Petaluma Hill Road would remain acceptable with the addition of project traffic, the length of the vehicle queue in the northbound through lane (forecast to be roughly 875 feet) would block access to the left turn pocket (currently roughly 100 feet), creating longer queues and further congestion.

Mitigation Measure 3.10-3

The intersection of Adobe Road & Petaluma Hill Road would require a signalized right-turn (a so-called, "overlap") lane to be added to the westbound Adobe Road approach, an additional dedicated left turn lane for the westbound and northbound approaches (converting the existing northbound through-left to an exclusive through lane) and protected signal phases for the north and southbound left turn lanes for the AM and PM peak hour conditions to reach an acceptable LOS range (LOS A-D) according to the County's level of service standards.

Mitigation for the intersection of Main Street & Old Redwood Highway (within the County's jurisdiction) would require an additional through lane to be added to both the north and southbound approaches on Old Redwood Highway to reach acceptable peak hour conditions (LOS A-D). These improvements are included in the draft transportation improvements of the current (2004) General Plan Update, but there is presently no funding for this project.

LOS for the intersection of East Cotati Avenue & Camino Colegio (within the City of Rohnert Park's jurisdiction) can be brought into the acceptable range if the signal cycle lengths are decreased from 100 seconds as currently programmed, to 70 seconds.

The intersection of East Cotati Avenue and Bodway Parkway (within the City of Rohnert Park) would require addition of a green arrow to the existing southbound right turn only lane (a so-called "overlap"), and reprogramming the signal controller.

The intersection of East Cotati Avenue & Petaluma Hill Road (within the County's jurisdiction) could be mitigated to acceptable LOS levels (LOS A-D) by adding a dedicated east bound right turn lane and restriping the current shared left-right lane to a dedicated left turn lane.

An additional mitigation measure is construction of the so-called "Bodway Extension" near the project site; linking Bodway directly to Railroad Avenue would provide an alternative access route for project trips to the proposed southbound on- and existing northbound off-ramps to U.S. 101 at Railroad Avenue. This new route would draw a portion of project traffic that currently travels south on Petaluma Hill Road to reach U.S. 101. According to the trip distribution percentages, roughly nine percent of project traffic currently travels to (and from) the Old Redwood Highway/Penngrove interchange at 101 to access the freeway or to continue south on Old Redwood Highway. By providing a quicker route between the project and the interchange area, a substantial portion of the project traffic (and other traffic generated in the project's area) would likely travel west on Railroad, relieving traffic conditions at Valley House & Petaluma Hill Road, Railroad & Petaluma Hill Road (both the Soft Sweeper and unsignalized intersections), Adobe Road & Petaluma Hill Road as well as Main Street & Old Redwood Highway. The Bodway Extension would be most effective when it is coupled with proposed improvements to Railroad Avenue, including resurfacing, the addition of shoulders, etc. (this project would require separate environmental review prior to construction).

Finally, the length of the northbound left turn pocket at Valley House & Petaluma Hill Road would need to be increased to an estimated 705 feet (it is currently roughly 100 feet) in length to allow left turning vehicles to access the turn lane pocket unobstructed by the northbound through vehicles queue.

With mitigation as indicated above, Impact 3.10-3 would be reduced to a less than significant level except for the intersections of Adobe Road and Petaluma Hill Road, and Main Street and Old Redwood Highway where the LOS impact would remain significant and unavoidable under cumulative development as noted previously.

Because the above intersection impacts would be caused by growth within the region, the project sponsor should be responsible for paying a "fair share" of the total cost of implementing the above mitigation measures. The financial contribution should be proportional to the project's contribution to the total increase in traffic resulting from new development. The City of Rohnert Park would be committed to securing its share of funding for implementing intersection improvements because of regional growth based on the fair share that would be allocated to each project development in Rohnert Park and adjacent communities.

The financial contributions should be based on each project's contribution to traffic affecting the respective intersections as noted above.

US 101

Impact 3.10-4

Under cumulative (future) development in the year 2030, traffic growth within the region, inclusive of the Southeast Specific Plan project, would cause US 101 to operate in the level of service E and F range during the AM and PM peak hours. This would occur with or without the Specific Plan project and would be due to cumulative development. This would be a significant and unavoidable adverse impact.

The levels of service on US 101 examined here were based on the freeway analysis methodology contained in Chapter 23 of the *Highway Capacity Manual 2000*, "Basic Freeway Segments." The method uses variables such as traffic volumes, geometric configuration of the freeway (i.e., number of lanes, widths of lanes and shoulders), topography, the percentage of heavy vehicles, and free-flow speeds to determine LOS criteria including the "service flow rate." Service flow rates are indicative of the travel demand on a freeway facility and are measured in the number of passenger cars per hour per lane. The ranges of service flow rates associated with the various Levels of Service are indicated in Table 3.10-12.

Table 3.10-12
Freeway Level of Service Criteria

LOS	Maximum Service Flow Rate
A	710 pc/h/ln
B	1,170 pc/h/ln
C	1,680 pc/h/ln
D	2,090 pc/h/ln
E	2,350 pc/h/ln
F	Greater than 2,350

Source: Caltrans Guide for the Preparation of Traffic Impact Studies, December 2002, page 1.
Notes: pc/h/ln = passenger cars per hour per lane
Criteria are for a freeway with 65 mph free-flow speed

Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D for State highways, including freeways, which translates to a maximum desirable service flow rate of 1,680 passenger cars per hour per lane. The existing traffic volumes used in the analysis are shown in Table 3.10-13.

Table 3.10-13
Summary of Existing Freeway Mainline Level of Service
(Top figure is AM peak hour; bottom figure is PM peak hour)

US 101 Freeway Segment	Northbound		Southbound	
	Volume	LOS	Volume	LOS
Todd Road to Hearn/Yolanda Avenue	3,125	C	3,581	D
	2,600	C	3,030	C
E. Washington Street to Old Redwood Highway/Penngrove Exit	2,211	B	3,903	D
	3,854	D	2,625	C

Notes: Volume = in vehicles per hour. LOS = Level of Service.

Demand volume, in vehicles per hour per lane. Actual demand is multiplied by 1.03 to get passenger car equivalents (pce). Volumes are prior to installation of HOV lanes.

The segments of US 101 to the north and south of Rohnert Park Expressway are currently operating acceptably at LOS C or D during the PM peak hour, although backups on the Cotati grade sometimes 'spill back' to the segment south of Old Redwood Highway, causing slowing in that area. Traffic volume projections for US 101 were based on forecasts contained within the *Project Approval/Environmental Documentation on Route 101 in Sonoma County between Old Redwood Highway and Rohnert Park Expressway (KP 12.1/22.4)*.

New HOV lanes are programmed for completion between Rohnert Park Expressway and Wilfred Avenue by 2010. Additional lanes to the south are projected to open in 2012-2015. The year 2030 is used for the freeway analysis, as recommended by Caltrans.

With the addition of HOV lanes, some study segments of US 101 both to the north and south of where the Southeast Specific Plan project traffic would access the freeway would continue to operate acceptably in 2030, but most would operate at LOS D or worse. As indicated in the *Project Study Report (Project Development Report) on Route 101 in Sonoma County between Old Redwood Highway and Rohnert Park Expressway (KP 12.1/22.4)*, Caltrans, 2001, and the *Route 101 HOV Widening Final Environmental Assessment*, Caltrans, 2003, completion of continuous HOV lanes on US 101 in Sonoma County would increase capacity on the freeway and would partially mitigate future traffic congestion. Adverse congestion is still anticipated to occur, however, even with completion of a continuous HOV system between Marin County and Windsor. Failure to maintain operations on US 101 at or above the LOS C/D threshold would be considered a significant impact.

The Southeast Specific Plan project would add traffic to US 101, portions of which currently operate at LOS C or D during the PM peak period both to the north and south of Rohnert Park. The projected number of trips added to the freeway by traffic to or from the Southeast Specific Plan project are shown in Table 3.10-14. This includes buildout of the Specific Plan project.

Table 3.10-14
Total Southeast Specific Plan Project Trips Added to US 101 Mainline

US 101 Segment	AM Peak Hour			PM Peak Hour		
	NB	SB	Total	NB	SB	Total
North of Todd Road Interchange	44	14	58	31	50	81
South of Old Redwood Highway-Penngrove Interchange	4	14	18	16	10	26

The year 2030 AM and PM peak hour freeway service flow rates on US 101 are shown in Table 3.10-15 for northbound and southbound traffic without the Southeast Specific Plan project.

Table 3.10-15
2030 Freeway Mixed-Flow Lanes Volume, No Project
(Top figure is AM peak hour; bottom figure is PM peak hour)

	Northbound		Southbound	
US 101 Freeway Segment	V	LOS	V	LOS
Todd Road to Bellevue Avenue (proposed interchange)	5,601 4,021	F D	4,335 4,572	E F
E. Washington Street to Old Redwood Highway/Penngrove Exit	3,780 3,572	D D	3,271 4,139	D E

Source: Derived from Parsons Transportation Group, 3/23/04.

Notes: Volume = in vehicles per hour. LOS = Level of Service.

Demand volume, in vehicles per hour per lane. Actual demand is multiplied by 1.03 to get passenger car equivalents (pce). Volumes above do not include HOV lanes.

The year 2030 AM and PM peak hour freeway service flow rates on US 101 are shown in Table 3.10-16 for northbound and southbound traffic with the Southeast Specific Plan project.

Table 3.10-16
2030 Freeway Mixed-Flow Lanes Volume, with Southeast Specific Plan Project Traffic Added
(Top figure is AM peak hour; bottom figure is PM peak hour).

	Northbound		Southbound	
US 101 Freeway Segment	V	LOS	V	LOS
Todd Road to Bellevue Avenue (proposed interchange)	5,645 4,052	F D	4,349 4,622	E F
E. Washington Street to Old Redwood Highway/Penngrove Exit	3,784 3,588	D D	3,285 4,149	D E

Notes: Volume = in vehicles per hour. LOS = Level of Service.

Demand volume, in vehicles per hour per lane. Actual demand is multiplied by 1.03 to get passenger car equivalents (pce). Volumes above do not include HOV lanes.

Less than desirable LOS D, E or F operating conditions are projected to occur on US 101 during the AM and PM peak hours in 2030 both northbound and southbound of locations where Southeast specific Plan project traffic would access the freeway.

Traffic associated with the Southeast Specific Plan project would contribute to less than desirable LOS conditions on segments of US 101 as indicated. These conditions would range from D to F, depending on the time of day and direction of travel. Although the Southeast Specific Plan project would not change any letter LOS, cumulative development would represent a cumulatively significant and unavoidable LOS impact on US 101.

Mitigation Measure 3.10-4

No mitigation measure is identified to reduce Impact 3.10-4 to a less than significant level. The City of Rohnert Park, County of Sonoma, and Sonoma County Transportation Authority (SCTA) recognize that US 101 will experience congestion into the foreseeable future, and major capacity enhancements such as freeway expansion or new freeway construction is unlikely. All three jurisdictions concur in various planning and policy documents that long-range solutions to regional mobility must focus on better land use planning that supports transit and alternative transportation modes; stronger jobs-housing balance; ramp metering; and increased support of transportation demand management measures. Thus, Impact 3.10-4 is considered significant and unavoidable.

Endnotes — Traffic and Circulation

1 *Southeast Specific Plan, Traffic Impact Study*, Whitlock & Weinberger Transportation, Inc. January, 2003.

2 Level of Service calculation sheets are in the project file and available for public inspection at the offices of the City of Rohnert Park Planning Department, 6750 Commerce Boulevard, Rohnert Park, CA 94928.

3 Parsons, *Southeast Specific Plan, Final Draft*, Circulation Element, page 44.

3.11 UTILITIES

Introduction

This section of the EIR describes existing utility services that would serve the Southeast Specific Plan project site and addresses any potential impacts the project would have on utility service providers. The setting is described followed by an analysis of the potential for utility service impacts in accordance with specified impacts significance criteria. Utility services described in this section include wastewater, storm water drainage, domestic water supply, solid waste disposal, hazardous waste disposal and energy. The project development parameters that would create utility service impacts are discussed in Section 2, *Project Description*.

Setting

Wastewater[1]

Rohnert Park is a partner in the subregional wastewater disposal system, which reclaims water and distributes it on behalf of the cities of Cotati, Rohnert Park, Santa Rosa, and Sebastopol, and portions of the unincorporated area of Sonoma County. The City of Santa Rosa is the managing partner of the system and has a contractual obligation to meet the wastewater treatment and disposal need of the other partners. Wastewater from the subregional system is treated at the Laguna Water Reclamation Treatment Plant (Laguna Plant), located about 2 miles northwest of Rohnert Park.

The Laguna Plant provides primary, secondary, and tertiary wastewater treatment and has a capacity rating of 21.3 mgd, 3.43 mgd of which is allocated to Rohnert Park.[2] Agricultural and urban irrigation is the primary method used to dispose tertiary wastewater. More than 50 percent of the wastewater treated at the Laguna Plant (nearly 4 billion gallons annually) is reused for urban and agricultural irrigation, including approximately 5,700 acres of farmlands (pastures, hay crops, vineyards, and row crops) as well as golf courses, parks, school grounds, and both public and private urban landscaping.[3] This system is one of the largest reclaimed water agricultural irrigation systems in the country. All of the water produced during the summer months is used for irrigation, and all of the winter water that can be stored is saved for irrigation for the following summer. River discharge of tertiary treated wastewater is conducted only as necessary during wet weather. After treatment, tertiary water is stored in containment ponds. Water levels in the ponds are monitored, and during times when they reach maximum capacity, water is discharged into the Russian River, which empties into the Pacific Ocean. Based on the City of Santa Rosa's National Pollutant Discharge Elimination System (NPDES) permit for the Laguna Plant, discharged water cannot exceed 5 percent of the Russian River flow. However, in dry years, when the river flows at a very low rate, the system could exceed the allowable flow in violation of the conditions of the City's NPDES permit.

In order to address the issue of potentially violating the NPDES permit, in 2003, the City implemented the Geysers Recharge Project, which is designed to transport 11 mgd (or about half of the Laguna

Plant's average dry weather flow) of reclaimed water to the Geysers steamfield for the generation of electricity.[4] The implementation of the Geysers Recharge Project, which included the construction of a 42-mile, 30-to-48-inch diameter underground pipeline, increased the Laguna Plant's capacity from 19.2 mgd to 21.3 mgd.

Since the completion of the Geysers Recharge Project, however, regulatory requirements applicable to reclaimed water discharge into the Russian River and its tributaries have increased and additional regulatory requirements are anticipated in the future.[5] Furthermore, wastewater volumes from population anticipated in the new General Plans of the communities making up the subregional wastewater disposal system cannot be accommodated with the existing Laguna Plant treatment and disposal/reuse capacity. In order to address this issue, an Incremental Recycled Water Program (IRWP) has been proposed. A Draft Program EIR on the IRWP was released on May 16, 2003. Responses to comments on the Draft EIR are available in the Final EIR published October 20, 2003. The Program EIR was certified by the City of Santa Rosa on November 6, 2003. Since that time, a "preferred program" has been identified for the IRWP. It provides a flexible range of options to reuse recycled water generated by new growth to 2020. Further information regarding the IRWP and EIR is available at http://www.recyledwaterprogram.com/. When additional capacity is needed, all partners in the subregional wastewater disposal system, including Rohnert Park, would be encumbered with the requirement to contribute to the development of additional facilities. On full implementation of the IRWP, the Laguna Plant is expected to have a capacity of 25.9 mgd of which 5.15 mgd would be allocated to Rohnert Park.[6] This capacity is expected to accommodate wastewater flows through 2020.

In 2003, the total flow to the Laguna Plant was 7.51 billion gallons or about an average of 21 mgd. Approximately 11 mgd was sent to the Geysers Recharge Project, 7 mgd was used for irrigation, and the remaining 3 mgd was discharged into the Russian River.[7] It is important to note that in a wet year, the Laguna Plant could discharge twice this amount. However, in a wet year the wastewater flow to the Laguna Plant is also increased. For instance, in 1998, which was a wet year, the flow to the plant was approximately 8.65 billion gallons or an average of 23.7 mgd.

In 2003, the average dry weather flow to the Laguna Plant was 16.9 mgd. Presently, Rohnert Park contributes 3.5 mgd to average dry weather flow.[8] As mentioned previously, Rohnert Park's current allocation is 3.43 mgd, or 0.07 mgd below the flow generated by the City. Santa Rosa has an agreement with Rohnert Park which allows some of Santa Rosa's spare capacity to be used by Rohnert Park.

The Rohnert Park Public Works Department is responsible for providing sewer service to City businesses and residents. The City also provides sewer service to the Sonoma State University (SSU) campus.[9] All development within the existing City limits was connected to the sewer service as of 1999. The collection system's underground networks of pipes range in size from 6 to 42 inches in diameter and stretches for about 120 miles under City streets. Every 350 feet there are access holes to maintain the lines and to monitor the system. During a 24-hour period the amount of wastewater coming in fluctuates from 1 to 7 mgd. The peak flows are during the midmorning and the early evening hours. The current average dry weather flow is 3.5 mgd and the current peak wet weather flow is estimated to be approximately 15 mgd.[10] Sewer mains collect wastewater and transport it to a

Rohnert Park pump station, which has a capacity of 26 mgd, located on Redwood Drive.[11,12] From the Rohnert Park pumping station, a 24-inch interceptor sewer main carries the wastewater to the Laguna Plant.[13] The 3.5-mile 24-inch sewer main (pressurized pipeline) was constructed in 1975 and as such, is nearing the end of its reliable service life and has limited capacity to convey current and projected future peak wet weather flows from the City.[14] Accordingly, the City has initiated the Rohnert Park Sewer Interceptor/Outfall Project to increase the reliability and capacity of the wastewater conveyance system from the City's collection system to the Laguna Plant. A new 30-inch pipeline would be designed to function in tandem with the existing 24-inch pipeline. This project would provide a portion of the sewer conveyance system capacity necessary to help the City in meeting the projected demands presented and analyzed in the City of Rohnert Park 2020 General Plan. This project would bring the wastewater system capacity to about 26 mgd.

Storm Water[15]

Rohnert Park's storm drainage system is under joint management by the City and Sonoma County Water Agency (SCWA). The City maintains responsibility for the system of underground pipes that provides for minor and intermediate drainage, while SCWA maintains the system of open channels that diverts major drainage flows west towards the Laguna de Santa Rosa. Both the open channels and pipe systems are designed to meet SCWA standards and comply with the National Flood Hazard Insurance Program. Section 3.5 of this EIR, *Hydrology and Water Quality*, describes storm water drainage facilities in more detail.

Domestic Water Supply[16]

The City of Rohnert Park derives its domestic water supply from several major sources including 31 active municipal wells, 12 active connections to the Sonoma County Water Agency (SCWA) Petaluma Aqueduct (which obtains water from the Russian River), and recycled water.

Municipal Wells

According to the SCWA 2000 Urban Water Management Plan (UWMP), the rated production capacity of the Rohnert Park municipal wells is 6.3 million gallons a day (mgd) and the reliable capacity is 4.0 mgd (two thirds of the rated production capacity with the largest well out of service). For additional details regarding domestic water supply and use, refer to Appendix C of this EIR, *Rohnert Park Final Water Supply Assessment, (Summary)*.

Sonoma County Water Agency

Background: SCWA provides potable water to a total population of about 570,000 people in Sonoma and Marin Counties. Water is delivered, on a wholesale basis, to SCWA customers, collectively known as water contractors, through the SCWA water transmission system. The primary water customers consist of the cities of Santa Rosa, Rohnert Park, Petaluma, Cotati, and Sonoma; and the North Marin, Valley of the Moon, and the Forestville Water Districts. Each of the SCWA water contractors are responsible for maintaining its own distribution system, including storage tanks and

pumping stations.[17] SCWA's relationship with its contractors is governed by the *Eleventh Amended Agreement for Water Supply* (11th Amended Agreement), adopted in 2001. SCWA is currently working to negotiate a *Restructured Agreement for Water Supply* that will replace the 11th Amended Agreement. SCWA and its contractors are also party to a *Memorandum of Understanding Regarding Water Transmission System Capacity Allocation During Temporary Impairment*, which became effective March 2001 and expires in September of 2005.[18]

SCWA's principal water source is from the Russian River watershed. Three major reservoir projects provide water supply for the Russian River watershed: Lake Pillsbury on the Eel River, Lake Mendocino on the East Fork of the Russian River, and Lake Sonoma on Dry Creek. Lake Mendocino and Lake Sonoma provide water for agriculture, municipal, and industrial uses, in addition to maintaining the minimum stream flows required by SCWA water rights permits. These minimum stream flows provide recreation and fish passage for salmon and steelhead. Most of the stream flow in the upper Russian River during the summer is provided by water imported from the Eel River. Stream flows are augmented by releases from Lake Mendocino and Lake Sonoma.

As early as 1954, the SCWA applied to the State Water Resources Control Board, which has the authority over water rights, for rights to appropriate Russian River water. Riparian water rights entitle the owner of land containing or abutting a natural stream the right to use natural flows by direct diversions for beneficial purposes without a permit. If water is to be stored for use in another season, owners must obtain an appropriative water rights permit. As the local project sponsor for the construction of the Coyote Valley and Warm Springs dams, the SCWA retains rights to some of the water stored in these reservoirs and controls the releases from the reservoirs' water supply pools. The SCWA also has rights for direct diversion and re-diversion of water at the Wohler and Mirabel collectors. The SCWA is required to maintain minimum stream flows at various points on the Russian River and Dry Creek, in accordance with its water rights permits. The SCWA currently holds rights to divert 75,000 AFY of water with an annual maximum of 24.4 billion gallons per year from its sources. A secondary source of water for the Agency is its three production wells located west of the City of Santa Rosa, near the Laguna de Santa Rosa.

Water delivery system pipes range in size from 16 inches to 48 inches in diameter. The 33-inch Petaluma Aqueduct, completed in 1962, provides water to Rohnert Park, in addition to the cities of Petaluma and Cotati and the North Marin Municipal Water District (NMMWD). The source of the Petaluma Aqueduct water is the Dry Creek watershed. Dry Creek water is captured behind Warm Springs Dam in Lake Sonoma. This water is released, and conveyed down Dry Creek to the Russian River, where it is then diverted into the SCWA basins.[19] Rohnert Park has 12 active connections to the Petaluma Aqueduct.[20] The Petaluma Aqueduct runs about 1,200 feet southwest of the Southeast Specific Plan area.

Water Supply and Transmission System Project (WSTSP): To continue to provide a safe, economical and reliable water supply to meet the future needs of SCWA's service area, SCWA proposed the Water Supply and Transmission System Project (WSTSP) in 1998. The WSTSP provided for:

- an increase in the Agency's water rights from 75,000 AFY to 101,000 AFY;
- construction of new diversion facilities in the Russian River; and
- construction of new storage and transmission system facilities to allow distribution of increased water supply throughout SCWA's service area.

Due to delays in implementation resulting from litigation and regulatory constraints, facilities associated with the WSTSP have not been constructed. As a result of SCWA's ongoing Federal Endangered Species Act compliance efforts for listed salmonid species and litigation on the WSTSP Environmental Impact Report, SCWA estimates that their new water facilities would not be constructed in the near future. Consequently, current limitations exist on the SCWA transmission system and would continue into the future, hampering summertime water production and service to new development within the service area.

The Water Supply, Transmission, and Reliability Project: In November 2004, SCWA adopted a resolution to prepare an EIR for the Water Supply, Transmission, and Reliability Project. The objective of the Water Supply, Transmission, and Reliability Project would remain similar to that of the WSTSP – to provide a reliable water supply for future needs in the SCWA's service area. It is anticipated that a Draft EIR would be released for public review by May 2006, a Final EIR would be completed by May 2007, and the project could be considered for approval by the early summer of 2007.

The Eleventh Amended Agreement for Water Supply:[21] As described above, SCWA's relationship with its contractors is governed by the 11th Amended Agreement, adopted in 2001. This contractual document outlines how SCWA's proposed 101,000 AFY water right is allocated among the contractors in normal water years. Rohnert Park's entitlement to SCWA water is 15 mgd. Because SCWA has not yet achieved the 101,000 AFY water right, its current diversion rights will remain at 75,000 AFY for the near future.

Water Transmission System Capacity Allocation during Temporary Impairment: The purpose of the MOU is to establish a procedure to optimize allocation of the available supply of SCWA water among the eight contractors during the projected period of temporary impairment of SCWA transmission system capacity. As part of the MOU, a temporary delivery capacity allocation (that remains in effect until September 30, 2005) was developed which includes the water supply delivery schedule for Rohnert Park as presented in Table 3.11-1. The City's peak "average day maximum month for June - September" usage under the Temporary Impairment MOU is curtailed from 15 mgd to 5.3 mgd, although the annual allocation of 7,500 AFY remains unchanged.

Table 3.11-1
Temporary SCWA Delivery Capacity Allocation to Rohnert Park

Year	Delivery Rates (mgd)
2000	4.8
2001	4.8
2002	4.8
2003	5.2
2004 – 2005	5.3

Source: City of Rohnert Park General Plan, 2000.

In 2004, Rohnert Park consumed an average of 1.36 mgd of water from its municipal wells and 4.58 mgd of water from SCWA, for a total of 5.93 mgd. In 2004, the City's population was approximately 41,000. Based on these numbers and the General Plan's projected 2020 buildout population of 50,400, the expected potable water demand in 2020 would be 7.32 mgd.

Water Infrastructure

Rohnert Park's existing water distribution system is divided into two pressure zones. Most of the distribution mains are 6 to 8 inches in diameter. A small number of pipes with diameter of 10 to 12 inches are also used. Approximately 7,500 service connections supply water to residents with an additional 1,000 connections serving commercial businesses and multi-family residents. Seven storage facilities are scattered throughout Rohnert Park's water supply system. One reservoir of 1.3 million gallons, two reservoirs of 1 million gallons and four reservoirs of 0.3 million gallons each make up Rohnert Park's total 4.5 million gallon storage capacity. The primary source of the City's drinking water is supplied by SCWA. SCWA's main aqueduct line runs north to south along the Northwestern Pacific Railroad tracks with 12 turnouts along this route feeding water directly into the City's water distribution system. Thirty one operational wells, used primarily during the summer months, are scattered throughout the City. The water from the wells is pumped directly into the water distribution system.[22]

Water Quality and Treatment

The City water supply and water system are regulated by the State Health Service Department, which requires that the City's water supply be tested on a regular basis to guarantee water quality. Tests are conducted to assure that maximum contaminant levels are not exceeded. The City and SCWA have conducted tests continually, and water supplies have consistently met all standards.

The City periodically obtains well water samples and submits them for laboratory analysis. The laboratory tests are capable of detecting minute levels of bacteria, pesticides, herbicides, fungicides, organic chemicals, inorganic chemicals, nitrates, radioactivity, corrosivity, triholomethanes, iron, manganese, and other substances, for a total of 139 separate items.

The Russian River supply, the source for SCWA water, is filtered by the sand beds beneath the river. The SCWA treats the water with chlorine in the form of chlorine gas for bacterial disinfection, and sodium hydroxide to adjust the pH before it is delivered to the City. The pH treatment complies with U.S. Environmental Protection Agency regulations for copper content in drinking water. Raising the pH helps minimize the leaching of copper and other metals from the distribution pipe in the drinking water.

Water Conservation and Recycling

In 2002, the City signed the California Urban Water Conservation Council's MOU regarding Urban Water Conservation in California. In so doing, the City committed to implement 14 Best Management Practices (BMPs) for reducing general water consumption throughout the City.[23] BMPs included in the MOU include metering with commodity rates for all new connections; system water audits, leak detection, and repair; public education programs; and other practices for water use reduction.

Furthermore, SCWA implements water conservation BMPs and assists its water contractors in implementing water conservation programs. SCWA's 2000 UWMP describes existing and proposed water conservation programs within the SCWA's service area and describes implementation status, implementation schedule, program effectiveness, and estimated water savings for each of its water contractors.

The City of Rohnert Park is the largest urban recycled water user in Sonoma County with a current average use of over 1,000 AFY. Planned recycled water use is expected to reach over 1,300 AFY. Expansion to the City's recycled water system has been documented in the IRWP EIR prepared by the Subregional Water Recycling System. The expanded system is anticipated to be available in 2010.

Expansion of the recycled water system will enable additional schools, parks, and other private and public properties to receive recycled water. In addition, the Community Fields, described in the General Plan and all new parks and irrigated buffer areas associated with the Specific plan Areas will use recycled water. The City is actively entertaining proposals to use recycled water for residential irrigation purposes within each of the Specific Plan Areas further offsetting demands on either the SCWA supply or groundwater supply. The City has adopted a Water Waste Ordinance, which requires the use of recycled water when it is available and of appropriate quality.[24] This Ordinance will assure that the recycled water supply is fully utilized where appropriate.

Expansion of the recycled water system will require the addition of approximately 300 AFY of recycled water storage and modifications to the recycled water distribution facilities in the City. The IRWP Program EIR has provided an overview of these facilities and their potential impacts. The City is currently working with the Subregional System to develop project level proposals.

Water Regulations

SB 221 and SB 610 are recent legislation (effective January 1, 2002) passed to advance water supply planning efforts in the State of California. The two bills coordinate local water supply and land use

decisions to help provide California's cities and counties with adequate water supplies. SB 221 prohibits a city or county from approving a residential subdivision of more than 500 units unless there is written verification that a sufficient water supply is or will be available for the development. SB 610 requires cities and counties to consider water supply assessments (WSA) when considering approval of certain development projects, to determine whether projected water supplies can meet the project's anticipated water demand. The projects as defined include residential development of 500 or more dwelling units. The WSA that would be required as part of the CEQA process would include an identification of existing water supply assessments, water rights, or water service contracts relevant to the identified water supply for the proposed project and water received in prior years pursuant to those entitlements, rights, and contracts. If the water demand for the proposed development has been accounted for in a recently adopted Urban Water Management Plan (UWMP), the water supplier may incorporate information contained in that Plan to satisfy certain requirements of a WSA.[25]

Six planning applications, including the Southeast Specific Plan Area Development, meet the above described requirements and as such, trigger the preparation of the WSA in accordance with SB 610. Therefore, the City of Rohnert Park has prepared a WSA, which was adopted by the Rohnert Park City Council on January 25, 2005. The WSA is fully incorporated herein by reference. A summary of the WSA is included in Appendix C of this EIR.[26]

Solid Waste

The Integrated Waste Division of the Sonoma County Transportation and Public Works Department manages municipal solid waste disposal for the County. The existing solid waste management system includes a blend of private and public sector haulers, facilities, and facility operators. Solid waste transfer and disposal facilities are owned and run by the County and serve cities as well as unincorporated areas.[27] These facilities consist of four transfer stations, the Central Disposal Site, and the Central Landfill. The Sonoma County Transportation and Public Works Department, jointly with the Sonoma County Waste Management Agency (SCWMA), also helps maintain the County Integrated Waste Management Plan (CoIWMP), which is a planning document designed to demonstrate reduction of the amount of solid waste landfilled, long-term ability to ensure the implementation of countywide diversion programs, and the provision of adequate disposal capacity for local jurisdictions. SCWMA, formed in 1992, is the joint powers authority of Sonoma County and its nine cities. The main focus of SCWMA's efforts is the implementation of regional waste diversion programs.[28] In 2003, the County generated 1,165,936 tons of solid waste of which 642,528 tons, or 55 percent were diverted.[29]

The City of Rohnert Park is responsible for solid waste collections and diversions within the incorporated City limits. The City currently holds a contract, which will terminate in 2008, for the collection and disposal of waste with the Rohnert Park Disposal Company.[30] Municipal solid waste is transported to the Central Landfill near Petaluma; the landfill is located approximately 5 miles southwest of Rohnert Park, in unincorporated Sonoma County. The Central Landfill, which opened in 1972 and operates on a 396-acre site, has a permitted remaining capacity to accept 2,500 tons of solid waste per day until 2015, or an estimated remaining cubic yardage capacity of 11,243,928.

Sonoma County is currently in the process of obtaining permits to complete the Central Disposal Site Improvement Program. Two major expansion projects are under construction at the Central Landfill. The first, the Central Disposal Site Operational Improvements, was completed in April 2003 and includes a permanent household hazardous waste collection facility; a semi-enclosed building for tipping of waste from the public; and a Recycle Town Center consisting of storage buildings and canopies for the storage of reusable material, a recycling drop-off and reuse area, and four vehicle scales. The second, the Central Disposal Site East Canyon Expansion Phases I/II, consists, in general, of constructing the next phase of the Central Landfill East Canyon Expansion (Part 2 of Phases I/II). The Part 2 expansion lies immediately adjacent to the to-be-operating Part 1 area of the landfill. The work will include expansion of a geosynthetic liner system, leachate and collection system piping, drainage improvements, roadways, abandonment of groundwater wells, and placement of erosion control. The Central Disposal Site East Canyon Expansion is currently on-hold due to project design permits. Once approvals are obtained to continue construction, the East Canyon Expansion would have six years of capacity. Several studies are in progress that may extend the estimated closure date of the landfill to 2018, with additional siting studies analyzing adjacent canyons for landfill expansion. If these plans are realized, the landfill could accommodate the region's solid waste until 2050.[31]

Regardless if the above-described expansions occur or not, the County disposal system is anticipated to have sufficient capacity through 2020, provided that development within County jurisdictions 1) is within the anticipated growth rate of each jurisdiction's General Plan, 2) provides adequate areas for collecting and loading recyclable materials, and 3) implements a recycling plan for the construction phase of a project.[32]

In terms of regulatory requirements, at the state level the management of solid waste is governed by regulations established by the California Integrated Waste Management Board (CIWMB), which delegates local permitting, enforcement, and inspection responsibilities to Local Enforcement Agencies. In 1997, some of the regulations adopted by the State Water Quality Control Board pertaining to landfills (Title 23, Chapter 15) were incorporated with CIWMB regulations (Title 14) to form Title 27 of the California Code of Regulations.

In 1989, the State Legislature also adopted the California Integrated Waste Management Act (AB 939). AB 939 requires that each county prepare a new Integrated Waste Management Plan. The Plan was required to include a Source Reduction and Recycling Element prepared by each city within the State by July 1, 1991. Each source reduction element included a schedule providing for source reduction, recycling, or composting of 25 percent of solid waste in the jurisdiction by January 1, 1995, and 50 percent by January 1, 2000. SB 2202 (Senate Environmental Quality Committee 2000) made a number of changes to the municipal solid waste diversion requirements under AB 939. These changes included a revision to the statutory requirement for 50 percent diversion of solid waste to clarify that local governments shall continue to divert 50 percent of all solid waste on and after January 1, 2000. Senate Bill 1374 requires local agencies to adopt an ordinance, not later than September 1, 2005, requiring not less than a 75 percent diversion of construction and demolition waste materials from landfills. Additionally, new legislation signed into law on September 29, 2004 (AB 2176) prohibits

local agencies from issuing building permits to a development project unless the development project provides adequate areas for collecting and loading recyclable materials.

In 2001, Rohnert Park disposed of 31,933 tons of solid waste at the Central Disposal Site, which represented 6.5 percent of the 490,428 total tons disposed of at the Central Disposal Site. The City offers recycling services to all residential, commercial and multi-family customers. Rohnert Park Disposal is responsible for providing recycling services to all residential, commercial and multi-family customers. CoIWMP includes a Source Reduction and Recycling Element (SRRE), which is comprised of the following four main elements: source reduction, recycling, composting, and special waste. The SRRE puts forth goals and objectives to help meet the AB 939 waste diversion requirements.

Hazardous Waste Disposal

The U.S. Environmental Protection Agency has authorized the California Department of Toxic Substances Control to enforce hazardous waste laws and regulations in California. Requirements place "cradle-to-grave" responsibility for hazardous waste disposal on the shoulders of hazardous waste generators. Anyone who creates a hazardous waste is considered a hazardous waste generator. Generators must ensure that their wastes are disposed of properly, and legal requirements dictate the disposal requirements for many waste streams (e.g., banning many types of hazardous wastes from landfills). All hazardous waste generators must certify that, at a minimum, they make a good faith effort to minimize their waste and they select the best waste management method available. Hazardous waste laws and regulations are enforced locally by the Rohnert Park Department of Public Works and the SCWMA.

Hazardous Waste is defined as material that meets criteria set forth in the Federal Resource Conservation and Recovery Act.[33] Essentially, hazardous waste is a material that can cause harm to human health or the environment through its reactivity, flammability, corrosivity, or toxicity. Since many materials have these characteristics, the law had defined limits for each hazard class. Any material falling within those limits is considered characteristically hazardous and must be handled as hazardous waste. Waste generated by residents is called 'household hazardous waste'. Examples of some common types of household hazardous waste include: pesticides, automotive products, paints and coatings, pool chemicals, and household cleaners. CoIWMP includes a Household Hazardous Waste Element (HHWE), which puts forth goals and objectives on the provision of special waste and household hazardous waste handling and disposal services over the long term to all community residents. Additionally, the HHWE sets education goals and objectives in order to decrease the improper disposal and the generation of household hazardous waste.

The management of hazardous waste in Rohnert Park occurs under the 1992 HHWE, which was incorporated into the Sonoma County Hazardous Waste Management Plan. The City's household hazardous waste management program, outlined in the HHWE, emphasizes public education, source reduction and recycling, mobile and permanent collection facilities, and hazardous waste load checking. Household hazardous waste is collected and disposed of by licensed haulers.[34] Additionally, the SCWMA sponsors several Household Toxics Roundups a year. Residents of Sonoma County can

dispose of their household toxics at any of these roundups.[35] There are no hazardous material disposal sites in operation in the Rohnert Park area. The Safety Kleen Corporation operates a hazardous materials transfer station in Rohnert Park, however, the company does not treat or dispose of any hazardous materials on the Safety Kleen site in Rohnert Park. [36]

Energy

Pacific Gas and Electric Company (PG&E) is the main provider of gas and electricity in the City of Rohnert Park.[37]

PG&E serves 94,000 square miles of Northern and Central California. California's natural gas supplies come predominantly from California, the Southwestern U.S., the Rocky Mountains, and Canada. PG&E operates with an electrical grid distribution system that channels all energy produced at the different sources into one large energy pool for distribution throughout the service territory.

In 1996, state legislation was enacted which restructured California's electricity market. The legislation requires utilities to purchase all their electricity from the wholesale market. The goal of the legislation was to open the state's energy market to competition, with the expectation that competition would drive down the cost of electricity. The legislation gave the customers of investor-owned utilities, such as PG&E, the ability to choose who provides their electric energy, much the same way they can choose long-distance telephone companies.

California experienced a number of problems related to energy at the same time the electricity industry was restructured. Many power plants were sold to privately owned, out-of-state energy companies. The demand for electricity grew faster than expected during the 1990s due to a number of factors, including the rapid growth in the State's economy, the spread of computer technology, the lack of new power plants since the mid 1980s, the lack of widespread conservation due to relatively low electricity costs to consumers, and the State's population growth. California's population increased 13 percent between 1990 and 2000. The State produces only part of the electricity needs. In 1999, California produced about 82 percent of the electricity it used, whereas the rest was bought from other western states.[38] At the same time, the West, in particular the Northwest, also experienced dramatic growth, which reduced the amount of energy available from that area.[39]

Because most power plants in California are powered by natural gas, the cost of making electricity increased during this same time due to dramatic increases in the price of natural gas during 2000. In January 2001, some utilities, including PG&E, began to experience financial problems. Also, severe drought conditions affected the ability of hydro-electric power plants to generate power. The combination of these factors, including an inadequate number of power plants, high natural gas prices, and drought conditions, led to electricity shortages and blackout conditions during the summer of 2000. The State has taken drastic measures since the summer of 2000 including the construction of new power plants and emphasis on conservation. By the summer of 2001, the state's peak period generating capacity increased by more than 2,500 megawatts (MW). Conservation and efficiency efforts led to a 6.7 percent reduction in overall electricity consumption in California, and a 10 percent

reduction during the summer 2001 peak hours. By October 2001, the impact of all these conservation and efficiency efforts was more than 6,000 MW of savings.[40]

As mentioned above, natural gas prices in California witnessed a dramatic increase in 2000 due to tight supplies and increased demands. California produces only a portion of its natural gas needs and must import the rest. In 1999, 84-percent of the State's natural gas supply was imported.[41] In December 2000 the natural gas prices in Northern California peaked at more than $45 per million British Thermal Units (mmBtu). The prices have since stabilized at $2 to $3 per mmBtu because of increased drilling activities, increased pipeline capacity, and storage facilities introduced over the last year.[42,43]

Title 24 of the California Code of Regulations includes standards mandating energy efficiency measures in new construction projects. The efficiency standards contained in this title apply to new construction of both residential and non-residential buildings, and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The energy efficiency standards are enforced by the local county and city building departments when a project applicant submits plans for a building permit. Title 24 would apply to the proposed project.

Electricity: Rohnert Park

PG&E owns and operates a 115 kilovolt (kv) overhead electric transmission line which runs at the outskirts of Rohnert Park from the Penngrove substation in the south to the Bellevue substation in the north. In addition, PG&E maintains two 21 kv distribution lines from the Bellevue substation. The delivery capacity of the two substations is 50.5 megawatts (mw) while 1999 City needs were met by 40 mw.[44]

Electricity: Southeast Specific Plan Area

Presently, underground 12 kv electric distribution facilities exist at the intersection of Camino Colegio and Bodway Park along Alan Drive, northwest of the project site. Overhead 12 kv electric distribution facilities exist along Petaluma Hill Road, adjacent to the eastern border of Southeast Specific Plan area.[45]

Natural Gas: Rohnert Park

PG&E owns and operates an underground gas transmission line (No. 21) which runs within Rohnert Park and is roughly aligned with U.S. 101. The line is part of a hierarchy of lines that transport gas from out of state into Sonoma County. Distribution within the City is provided by mains operating at pressures of 50 pressure per square inch gauge (psig). The transition from the underground transmission line, operating at several hundred psig, to the distribution mains is effected through dual-run regulator stations.[46]

Natural Gas: Southeast Specific Plan Area

Natural gas distribution facilities in the Southeast Specific Plan area exist at the intersection of Camino Colegio and Bodway Park, along Alan Drive and south a short distance along Petaluma Hill Road.[47]

Impacts and Mitigation Measures

Standards of Significance

Based on the City of Rohnert Park thresholds of significance, utilities impacts would be considered significant if one or more of the following conditions were created by implementation of the Southeast Specific Plan project.

- **Impact Criterion #1:** Result in a determination by the wastewater treatment provider that serves the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments? Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- **Impact Criterion #2:** Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- **Impact Criterion #3:** Require new or expanded entitlement or resources for water supplies;
- **Impact Criterion #4:** Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs;
- **Impact Criterion #5:** Conflict with federal, state, or local statutes and regulations related to hazardous waste disposal; or
- **Impact Criterion #6:** Require or result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.[48]

Wastewater: *Would the project exceed treatment capacity or require new treatment facilities resulting in substantial adverse environmental impacts? (Impact Criterion #1)*

The Southeast Specific Plan project would result in a construction of a maximum of 499 dwelling units and 20,000 square feet of commercial space. It is expected that each new dwelling unit associated with the project would generate approximately 203 gallons of wastewater per day. Commercial uses would generate approximately 125 gallons per day for every 2,500 square feet of building space. The resultant total wastewater generation associated with buildout of the project would be approximately 0.10 mgd,[49] about 2.8 percent of the total Rohnert Park contribution of average dry weather flow.

As discussed above, the subregional wastewater disposal system, of which Rohnert Park is a member city, is in the process of implementing the IRWP, which would address wastewater needs through approximately 2020. Implementation of the IRWP would ensure adequate wastewater capacity for Rohnert Park, including the project, through 2020. In addition, as noted previously, the City has initiated the Rohnert Park Sewer Interceptor/Outfall Project to increase the reliability and capacity of

the wastewater conveyance system from the City's collection system to the Laguna Treatment Plant which would provide a portion of the sewer conveyance system capacity necessary to help the City in meeting the projected demands presented and analyzed in the City of Rohnert Park 2020 General Plan. A Draft Initial Study/Proposed Mitigated Negative Declaration has been prepared for the pipeline project.

To accommodate wastewater flows generated by new residents in the southeast portion of the City, a sewer lift station is planned to be constructed near the corner of Bodway Parkway and Valley House Drive. The sewer lift station would be designed to handle ultimate effluent flows from the Southeast Specific Plan area and the Cannon Manor Subdivision to the north. Gravity mains would bring the effluent to the sewer lift station and the effluent would then be transported through a force main to the City's existing trunk line sewer near the northwest corner of the SSU property and Copeland Creek.

In view of the above, there would be no requirement for additional treatment facilities resulting from the project under Impact Criterion #1. In addition, the Rohnert Park General Plan indicates that the City will be expanding its sewer infrastructure, including an east side trunk sewer line. The Southeast Specific Plan would be required to pay fair share fees toward these facilities, pursuant to the Public Facilities Finance Plan.

Storm Water: ***Would the project require new or expanded drainage facilities resulting in substantial adverse environmental impacts? (Impact Criterion #2)***

The *Hydrology and Water Quality* analysis (Section 3.5 of this EIR), concludes that with the on-site detention basin proposed as part of the project in place and operative, there would be no increase in the peak runoff rate over project predevelopment levels. The increased runoff volume resulting from project development would be controlled through evaporation and infiltration from the basin and by metering the outflow. Therefore, the project would not require new or expanded drainage facilities resulting in environmental impacts under Impact Criterion #2.

Control of the peak runoff rate and volume would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge (see Impact Criterion #2 in Section 3.5 of this EIR, *Hydrology and Water Quality*) and therefore would not adversely affect the adequacy and sufficiency of current and future water supplies derived from underground resources to meet current and future municipal water demands (for additional municipal water supply information, refer to Appendix C, *Rohnert Park Final Water Supply Assessment*).

Domestic Water Supply: ***Would the project require new or expanded water entitlements or resources? (Impact Criterion #3)***

The Southeast Specific Plan project is proposed to include 27 single-family detached Rural/Estate Residential units, 168 single-family either detached or attached Low Density Residential units, and 268 single-family either detached or attached Medium Density Residential units. Additionally, the Southeast Specific Plan includes 36 live/work Mixed Use Residential units, 20,000 square feet of commercial/retail space, and a 5.8-acre park.

As discussed above, the city of Rohnert Park has prepared a WSA, which describes the relationship between projected demands on the City's water supply and the availability of that supply under normal and dry conditions. Chapter 4, City-wide Water Demand, of the WSA projects the anticipated water demand through 2025 based on the anticipated development pattern, which is governed by Chapter 17.66 of the Rohnert Park Municipal Code, the Growth Management Ordinance.[50] The Southeast Specific Plan project is part of anticipated City development and as such, was accounted for in the water demand projections of the WSA.

The following water demand factors were used in estimating the average amount of water demand through 2025:[51]

1. 360 gallons per day per single family detached dwelling unit;[52]
2. 285 gallons per day per single family attached dwelling unit;[53]
3. 160 gallons per day for multifamily dwelling unit; and[54]
4. 1,950 gallons per acre per day for commercial/residential development;[55]

The above water demand factors were applied to the Southeast Specific Plan project to estimate the total amount of water demand. Since it has not yet been determined whether the 168 Low Density Residential units and 268 Medium Density Residential units would be detached or attached, the following conservative analysis assumes that these units would be detached.[56] Additionally, the 36 live/work Mixed Use Residential units are also considered to be detached. Thus, all 499 residential units are assumed to consume 360 gallons of water per day. It is important to note that this is a very conservative estimate. Given the above assumptions, the Southeast Specific Plan would demand 0.18 mgd of water.[57]

Currently, recycled water is not available to the project site.[58] However, the proposed 5.8-acre park could be irrigated with recycled water if recycled water is eventually available to the project site, and if so, would not create a demand for new water. The use of recycled water, although not specifically documented in the Southeast Specific Plan as being included in the project, could be implemented in accordance with the City of Santa Rosa Incremental Recycled Water Program (IRWP) Master Plan (the Santa Rosa Subregional System for recycled water) as planning for the distribution, storage and potential use of recycled water continues.

Table 3.11-2 shows the projected City water demand and supply for the normal year from 2005 through 2025. Table 3.11-3 indicated that the City has sufficient water supplies during a normal year to accommodate anticipated development. The WSA also determined that there are sufficient water supplies to accommodate anticipated development during a dry and multiple-dry years (see Appendix C of this EIR, pages ES-9 through ES-12). Even if the recycled water storage facilities proposed in the board of Public Utilities' Interim Recycled Water Program are not built as planned, so that the supply of recycled water does not increase beyond that available currently, the water supplies would still be sufficient for the project and other planned growth.

In addition, the Southeast Specific Plan project includes the installation of a 438,000 gallon water tank of an approximate 56-foot diameter and 24-foot height to be located at the northwest corner of the

project site near Bodway Parkway and set into the ground to reduce its visibility. The tank would be installed for purposes of water storage and maintenance of fire protection pressure as required by the City. The City of Rohnert Park will determine the final size of the tank.

Table 3.11-2
City of Rohnert Park Estimated Water Demand and Supply for a Normal Year (AFY)

	2005	2010	2015	2020	2025
Demand	7,893	8,570	9,088	9,499	9,499
Supply	10,093	10,309	10,355	10,355	10,355
Sufficiency	2,200	1,739	1,267	856	856

Source: Rohnert Park, *Final Water Supply Assessment*, January 2004.

The Rohnert Park General Plan indicates that the City will be expanding its water infrastructure, including a water transmission line. The Southeast Specific Plan would be required to pay fair share fees towards these facilities, pursuant to the Public Facilities Finance Plan. In order to serve Southeast Specific Plan area residents, a new twelve-inch water main would be constructed.[59] The main would connect to an existing 8-inch main at the intersecton of Bodway Parkway/Camino Colegio and would run south along Bodway Parkway. Static pressures in this portion of the existing Aqueduct vary depending on whether or not downstream pumping is occurring and the water level of the storage tanks. For instance, when the water tanks are full, the static pressure in the Aqueduct is 100 pounds per square inch (psi) and when the storage tanks are empty, the static pressure is 85 psi. Further, when the Lichau Pump Station is operating, to deliver water south to the Petaluma area, the static pressure in the Aqueduct drops from approximately 85 psi to 66 psi.

In order to determine the availability of water for fire flows in the Southeast Specific Plan area, a preliminary hydraulic analysis of the proposed water system was prepared by engineering consultants to the City. The City of Rohnert Park requires at least 30 psi residual pressure in the mains flowing at 1,500 gallons per minute for fire flow. The water flow calculations show that when a demand of 1,500 gallons per minute is calculated for in the most remote point of the Southeast Specific Plan site (the northwest corner of the property), the residual pressure in the main is 31.47 psi. The Southeast Specific Plan site is projected to have 38 fire hydrants.

In summary, the City of Rohnert Park has sufficient water supply and water delivery infrastructure to serve the Southeast Specific Plan project. Accordingly, there would be no significant adverse environmental impact respecting the project under Impact Criterion #3 regarding the need for new or expanded entitlements or resources for water supplies.

Solid Waste: ***Would the project exceed the permitted landfill capacity? (Impact Criterion #4)***

According to the CIWMB's Jurisdictional Profile for SCWMA, in 2000, a resident of Sonoma County generated 1 pound of solid waste per day and an employee in Sonoma County generated 11.7 pounds of solid waste per day.[60] The following analysis examines the impacts of the proposed 499 dwelling units and 20,000 square feet of commercial/retail space. Based on a population of 2.66 persons per household and 100 percent occupancy, the construction of 499 dwelling units would result in 1,327 additional residents. The 20,000 square feet of commercial/retail space would generate about 23 to 57 employees, assuming 100 percent occupancy.[61] Applying the solid waste generation factors to the proposed development, upon buildout, residents of the Southeast Specific Plan project would generate approximately 1,327 pounds of solid waste per day, or 221 tons of solid waste per year.[62] Southeast Specific Plan employees would generate approximately 667 pounds of solid waste per day, or 122 tons of solid waste per year.[63] Thus, upon buildout, Southeast Specific Plan operations would generate about 1,994 pounds of solid waste per day or 364 tons of solid waste per year.

As discussed in the Setting portion of this section, Sonoma County has embarked on long term feasibility and planning studies for replacement of the Central Landfill after the year 2015. In February of 2001, the Board of Supervisors directed the Integrated Waste Division of the Department of Transportation and Public Works to proceed with the steps necessary for implementation of a selected long-term (Horizon Year 2050; Implementation Period 2001 to 2014) solid waste management strategy.[64,65] Regardless if the implementation of a long-term solid waste management strategy occurs or not, the County disposal system is anticipated to have sufficient capacity through 2020, provided that development within County jurisdictions 1) is within the anticipated growth rate of each jurisdiction's General Plan, 2) provides adequate areas for collecting and loading recyclable materials, and 3) implements a recycling plan for the construction phase of a project.[66] The Southeast Specific Plan site is identified in the City's General Plan. Thus, growth associated with the proposed project is included in the growth rates set forth in the City's General Plan. Furthermore, AB 2176 prohibits local agencies from issuing building permits to a development project unless it provides adequate areas for collecting and loading recyclable materials. Accordingly, the Southeast Specific Plan project would be required to provide adequate areas for collecting and loading recyclables. Finally, in order to ensure that the County disposal system has sufficient capacity to accommodate solid waste, the proposed project would need to implement a construction recycling plan.

The recycling plan will be required to address the major materials generated by the project and identify the means to divert these materials away from Sonoma County's Central Disposal Site. Materials which could be included in such a plan include, but are not limited to, solid, brush and other vegetative growth, dimensional lumber, metal scraps, cardboard packaging, and plastic wrap. If desired, the current waste hauler could assist the project sponsor in the development of the recycling plan. Thus, there would be no significant adverse environmental impact respecting the project under Impact Criterion #4 regarding insufficient landfill capacity.

Hazardous Waste Disposal: ***Would the project conflict with hazardous waste disposal regulations? (Impact Criterion #5)***

Households generate hazardous waste as a routine consequence of handling hazardous materials. The U.S. Environmental Protection Agency considers hazardous waste to be a form of pollution because the recycling, treatment, and disposal of hazardous wastes results in air emissions and water discharges at recycling and treatment facilities, and in residuals that must be disposed of in hazardous waste landfills. Commercial businesses are subject to hazardous waste regulations set forth in Title 22 of the California Code of Regulations. Households are exempt from many of these hazardous waste handling requirements. These regulations are intended to minimize the potential hazards to humans and the environment posed by recycling, treating, and disposing of hazardous wastes. These environmental effects occur at recycling, treatment, and disposal facilities typically located far from where the wastes are generated. No hazardous waste recycling, treatment, or disposal facilities are proposed in the Southeast Specific Plan area.

Historically, many small businesses have found complying with hazardous waste regulations to be difficult and expensive.[67] These waste generators have been known to store hazardous wastes indefinitely, flush wastes down sewers, combine hazardous wastes with nonhazardous solid waste for disposal, and pour wastes on the ground.[68] Households have faced similar disposal challenges. To provide households with convenient and affordable hazardous waste management options, SCWMA sponsors several Household Toxics Roundups a year as noted previously in the Setting discussion. Residents of the County can dispose of their household toxics at any of these roundups. The Household Toxics Roundups would continue to be available to serve the new Southeast Specific Plan households.

In summary, due to existing regulations and waste management options, the Southeast Specific Plan households (and commercial businesses) would not be expected to generate substantial conflicts with hazardous waste disposal regulations under Impact Criterion #5.

Energy: ***Would the project require new or expanded energy facilities resulting in substantial adverse environmental impacts? (Impact Criterion #6)***

A review of the existing gas and electric facilities in the Southeast Specific Plan area indicates that such facilities would be adequate to serve the Southeast Specific Plan residential and/or commercial/retail uses. Thus, presently there are no plans to upgrade or extend either the existing electric or gas facilities in the project area.[69] It is recognized that the extension of electrical and gas distribution systems would be necessary on the project site to accommodate new development, however. Such extensions would be provided by PG&E upon the request from the project sponsor.

The energy consumption demands of the Southeast Specific Plan project would conform with the State's Title 24 energy conservation standards so that the proposed project would not be expected to wastefully use gas and electricity. Review of the project's compliance with Title 24 energy efficiency standards and service planning for the project would occur during the permit approval process by the City Building Department. Gas and electric service to the project site would be provided to meet the

needs of the project as required by the California Public Utilities Commission, which obligates PG&E to provide service to its existing and potential customers.

Since the Southeast Specific Plan project would comply with Title 24 conservation standards and would be served by PG&E, the project would not require the construction of new energy generation or supply facilities and there would be no substantial adverse environmental impacts under Impact Criterion #6 regarding the requirement for new or expanded energy facilities.

Cumulative Development

The discussion of cumulative development impacts is as described in the *Introduction* section of this EIR under the title *Cumulative Impact Assessment* and includes collectively the Specific Plan Areas and projects as described therein.

Wastewater: *Would the project, coupled with cumulative development, exceed treatment capacity or require new treatment facilities resulting in substantial adverse environmental impacts? (Impact Criterion #1)*

The subregional wastewater disposal system, of which Rohnert Park is a member city, is in the process of implementing the IRWP, which would address wastewater needs through approximately 2020. Implementation of the IRWP and Sewer Interceptor/Outfall Project would ensure adequate wastewater capacity for Rohnert Park, including the project. Given that there is sufficient capacity in the subregional wastewater disposal system to accommodate the project, in combination with other anticipated City development, there would be no significant adverse environmental impact under Impact Criterion #1 regarding wastewater treatment system capacity.

Storm Water: *Would the project, coupled with cumulative development, require new or expanded drainage facilities resulting in substantial adverse environmental impacts? (Impact Criterion #2)*

As noted previously, the *Hydrology and Water Quality* analysis (Section 3.5 of this EIR), concludes that with the on-site detention basin proposed as part of the project in place and operative, there would be no increase in runoff rate over project predevelopment levels. The increased runoff volume resulting from project development would be controlled through evaporation and infiltration from the basin and by metering the outflow. Therefore, the project would not contribute to the requirement for new or expanded drainage facilities under cumulative development and there would be no significant adverse environmental impact under Impact Criterion #2. The project's incremental effect would not be cumulatively considerable given the project would implement measures that would avoid the need for new or expanded drainage facilities in the effort to alleviate the need for expanded drainage facilities.

Domestic Water Supply: ***Would the project, coupled with cumulative development, require new or expanded water entitlements or resources? (Impact Criterion #3)***

The City water demand projections used in the WSA to determine water supply sufficiency are inclusive of all anticipated development, including the University District Specific Plan, Northeast Specific Plan, Southeast Specific Plan, Northwest Specific Plan, Wilfred Dowdell Specific Plan, and Stadium Lands. The WSA determined that the city's current and projected water supply is sufficient to meet the City's water demand requirements over the next 20 years. Accordingly, the proposed project, in combination with other City development, would not result in a significant adverse environmental impact under Impact Criterion #3 regarding new or expanded water entitlements.

Solid Waste: ***Would the project, coupled with cumulative development, exceed the permitted landfill capacity? (Impact Criterion #4)***

The California Code of Regulations stipulates that the Siting Element of CoIWMP present an integrated strategy to ensure the provision of long-term disposal capacity.[70] The Sonoma County CoIWMP's Siting Element demonstrates the County's ability to provide 15 years of combined permitted disposal capacity from 2003. In order to ensure that sufficient landfill capacity exists in the future, the County is proposing to expand the existing Central Landfill, to site a new landfill and to implement the goals, policies and programs outlined in the SRRE.[71]

The County's disposal system is anticipated to have sufficient capacity through 2020 provided that development within County jurisdictions 1) is within the anticipated growth rate of each jurisdiction's General Plan, 2) provides adequate areas for collecting and loading recyclable materials, and 3) implements a recycling plan for the construction phase of a project.[72] The Southeast Specific Plan project would meet the above three criteria. Accordingly, the project's contribution to exhausting landfill capacity would not be cumulatively considerable and the project would not result in a significant adverse cumulative solid waste impact under Impact Criterion #4.

Hazardous Waste Disposal: ***Would the project, coupled with cumulative development, conflict with hazardous waste disposal regulations? (Impact Criterion #5)***

As indicated previously, due to existing regulations and waste management options, the Southeast Specific Plan households (and commercial businesses as an option to residential development), would not be expected to create substantial public or environmental hazards through the disposal of hazardous wastes. Other cumulative development in Rohnert Park and the project vicinity would be required to comply with the same regulatory requirements for the disposal of hazardous waste materials. Thus, the Southeast Specific Plan households (and commercial businesses) would not be expected to generate substantial conflicts with hazardous waste disposal regulations under Impact Criterion #5.

Energy: ***Would the project, coupled with cumulative development, require new or expanded energy facilities resulting in substantial adverse environmental impacts? (Impact Criterion #6)***

The energy consumption demands generated by the Southeast Specific Plan project and future Rohnert Park development would conform with the State's Title 24 energy conservation standards respecting new construction. Consequently, the Southeast Specific Plan project in combination with other cumulative development in the City would not be expected to wastefully use gas and electricity. Existing and planned gas and electric service to the City would be provided to meet the needs of the of cumulative development customers as required by the California Public Utilities Commission, which obligates PG&E to provide service to its existing and potential customers. Since the Southeast Specific Plan project and future cumulative development would comply with Title 24 conservation standards and would be served by PG&E, new development would not directly require the construction of new energy generation or supply facilities directly attributable to growth in the City and there would be no substantial adverse environmental impacts under Impact Criterion #6 regarding the requirement for new or expanded energy facilities for local service.

Storm Water: ***Would the project, coupled with cumulative development, require new or expanded drainage facilities resulting in substantial adverse environmental impacts? (Impact Criterion #2)***

As noted previously, the *Hydrology and Water Quality* analysis (Section 3.5 of this EIR), concludes that with the on-site detention basin proposed as part of the project in place and operative, there would be no increase in runoff rate over project predevelopment levels. The increased runoff volume resulting from project development would be controlled through evaporation and infiltration from the basin and by metering the outflow. Therefore, the project would not contribute to the requirement for new or expanded drainage facilities under cumulative development and there would be no significant adverse environmental impact under Impact Criterion #2.

With the exception of the University District Specific Plan, there are no data available describing the treatment of future runoff conditions for other planned developments in the City. Nonetheless, a brief description of the City's approach to the consequences of increased runoff provides a context in which to evaluate potential cumulative effects. The General Plan's drainage, erosion, stormwater, and flooding goals are to minimize the risk to life and property from flooding, and to control erosion and sedimentation, to provide flood protection and to protect water quality. Policy HS-5 addresses storm drain systems.

- HS-5: As part of the building permit process, require all development projects to comply with hydrology and drainage policies incorporated in the Specific Plan. Require the project proponent to design and construct a storm drain system in accordance with the Sonoma County Water Agency (SWCA) Flood Control Design Criteria (latest revision), specific to the project. Encourage the use of environmentally sensitive drainage improvements including flow reduction and flood bypass systems in order to ensure protection of surface water quality and stream integrity.

To meet this requirement of reducing the impacts of the development runoff on City and regional drainage system, the University District Specific Plan Draft EIR (Jones & Stokes, July 2005) describes storm water quality management plans and storm drainage detention analyses prepared for that project. The information included in the evaluations is representative of that necessary to meet the City's and SCWA's requirements.

- Calculation of pre-development runoff conditions and post-development runoff scenarios using appropriate engineering methods to evaluate potential changes to runoff through specific design criteria, accounting for increased surface runoff
- Assessment of existing drainage facilities in the project area, and an inventory of necessary upgrades, replacements, redesigns, and/or rehabilitation
- Description of the proposed maintenance program for the onsite drainage system
- Standards for drainage systems to be installed on a project-specific basis
- Proposed design measures to remove structures from 100-year floodplain areas
- Drainage systems designed in accordance with the City's and SCWA's flood control design criteria
- As a performance standard, measures to be implemented must provide for no net increase in peak stormwater discharge relative to current conditions, and ensure that 100-year flooding and its potential impacts are maintained at or below current levels.
- Prior to approving specific development projects, the City would require that project applicants demonstrate that their project is consistent with the recommendations, conclusions, and identified corrective measures of the evaluations.

Through enforcement of the Policy requirements, the City ensures each proposed development implements measures that maintained runoff rates at or below current levels, thereby alleviating the need to expand existing drainage facilitates or construct new ones.

The Southeast Specific Plan project's incremental effect would not be cumulatively considerable because the project would implement measures that would avoid the need for new or expanded drainage facilities.

Endnotes — Utilities

1 Unless otherwise cited, the information in this subsection was derived from the following sources: City of Rohnert Park General Plan, 2000; Rohnert Park, *General Plan Revised Draft Environmental Impact Report*, 2000.

2 Primary wastewater treatment removes settleable and floatable solids from the wastewater stream. Secondary treatment removes additional suspended solids and to reduce the biological oxygen demand via activated sludge (microbial action). Tertiary treatment removes nutrients like nitrogen and phosphorus from the wastewater stream.

3 City of Santa Rosa, 2002-03 Operations and Maintenance Budget.

4 City of Santa Rosa, http://www.geysersproject.com/hu, Accessed September 3, 2004.

5 City of Santa Rosa, http://www.recycledwaterprogram.com/index.htm, Accessed September 3, 2004.

6 Randy Piazza, Environmental Superintendent, Laguna Water Reclamation Treatment Plant, electronic communication with EIP Associates, September 7, 2004.

[7] Randy Piazza, Environmental Superintendent, Laguna Water Reclamation Treatment Plant, electronic communication with EIP Associates, September 7, 2004.

[8] Rohnert Park, Draft Initial Study/Proposed Mitigated Negative Declaration for the Rohnert Park Sewer Interceptor/Outfall Project, December 23, 2004.

[9] Rohnert Park General Plan, Chapter 9, p. 9-61, 2000.

[10] Rohnert Park, Draft Initial Study/Proposed Mitigated Negative Declaration for the Rohnert Park Sewer Interceptor/Outfall Project, December 23, 2004.

[11] Rohnert Park, General Plan Revised Draft Environmental Impact Report, p. 4-152, 2000.

[12] Rohnert Park, Draft Initial Study/Proposed Mtigated Negative Declaration for the Rohnert Park Sewer Interceptor/Outfall Project, December 23, 2004.

[13] Rohnert Park, General Plan Revised Draft Environmental Impact Report, p. 4-149, 2000.

[14] Rohnert Park, Draft Initial Study/Proposed Mitigated Negative Declaration for the Rohnert Park Sewer Interceptor/Outfall Project, December 23, 2004.

[15] Information contained in this subsection was obtained from the 2000 Rohnert Park General Plan, 4th Edition.

[16] Unless otherwise cited, information contained in this subsection was obtained from the 2000 Rohnert Park General Plan Revised Draft Environmental Impact Report and from written and personal communications with Toni Bertolero, Interim City Engineer, City of Rohnert Park, April 2004.

[17] Sonoma County Water Agency, *Urban Water Management Plan*, 2000.

[18] Rohnert Park, *Final Water Supply Assessment*, January 2004.

[19] Rohnert Park, General Plan Revised Draft Environmental Impact Report, p. 4-137, 2000.

[20] Sonoma County Water Agency, Urban Water Management Plan, 2000.

[21] Rohnert Park, *Final Water Supply Assessment*, January 2004.

[22] Mike Bracewell, Public Works Supervisor, Utilities Services, Rohnert Park, electronic communication, February 28, 2005.

[23] Rohnert Park, http://www.ci.rohnert-park.ca.us/services/wcons.cfm, accessed April 27, 2004.

[24] Rohnert Park, *Final Water Supply Assessment*, January 2004.

[25] State of California, official website, Press Release, "Governor Davis Signs Water Supply Planning Bills 10/9/2001" http://www.ca.gov/state/govsite/gov_html, browsed, June 18, 2002; State of California, Senate Bill No. 610.

[26] The full text of the WSA, inclusive of various maps and exhibits, is available for public inspection at the City of Rohnert Park Planning Department, 1750 Commerce Boulevard, Rohnert Park, CA 94928.

[27] Sonoma County Permit and Resource Management Department, *Solid Waste Facilities Memo*, November 21, 2000.

[28] Sonoma County Waste Management Agency, http://www.recyclenow.org/o_agency.html, Accessed September 2, 2004.

[29] Donna Caldwell, Sonoma County Waste Management Agency, personal communication with EIP Associates, March 9, 2005..

[30] Sonoma County Waste Management Agency, *Sonoma County Integrated Waste Management Plan*, p. 1-3, 2003.

[31] Donna Caldwell, Sonoma County Waste Management Agency, personal communication with EIP Associates, March 28, 2003.

[32] Ken Wells, Director, Sonoma County Waste Management Agency, personal communication with EIP Associates, March 1, 2005.

[33] Information in the following paragraph was derived from: Sonoma County Waste Management Agency, *Sonoma County Countywide Integrated Waste Management Plan*, Chapter 5 – Household Hazardous Waste Element, 2003.

[34] Rohnert Park General Plan, Chapter 7, p. 7-19, 2000.

[35] City of Rohnert Park, http://www.rpcity.org/services/wastes.cfm, Accessed September 2, 2004.

[36] Rohnert Park General Plan, Chapter 7, p. 7-19, 2000.

[37] Rohnert Park, General Plan Revised Draft Environmental Impact Report, p. 4-184, 2000.

[38] California Energy Commission website, http://www.energy.ca.gov//energysources.html, California's Major Sources of Energy, June 14, 2001, available in project files, Merced County, UC Merced Planning Office.

[39] Pacific Gas & Electric Company website, http://www.pge.com//current_issues/energycrisis, A Concise Guide to the California Energy Crisis, July 27, 2001, available in project files, Merced County, UC Merced Planning Office.

[40] California Energy Commission, Flex Your Power, *The Summer 2001 Conservation Report*, February 2002.

[41] California Energy Commission website, http://www.energy.ca.gov//energysources.html, California's Major Sources of Energy, June 14, 2001, available in project files, Merced County, UC Merced Planning Office.

[42] California Energy Commission website, http://www.energy.ca.gov/naturalgas/, Weekly Energy Commission Natural Gas Price Updates and Past Updates, browsed June 28, 2002.

[43] California Energy Commission, Natural Gas Infrastructure Issues, Commission Final Report (P-200-01-001), October 2001.

[44] Rohnert Park, General Plan Revised Draft Environmental Impact Report, p. 4-184, 2000.

[45] Robert C. Wattenburger, Senior New Business Representative, Pacific Gas & Electric Company, written communication with EIP Associates, January 20, 2004.

[46] Rohnert Park, General Plan Revised Draft Environmental Impact Report, p. 4-185, 2000.

[47] Robert C. Wattenburger, Senior New Business Representative, Pacific Gas & Electric Company, written communication with EIP Associates, January 20, 2004.

[48] Impact Significance Criterion #6 in not part of the City's Thresholds of Significance used to evaluate project-impacts. Thus, it is included in this section for informational purposes only.

[49] 203 gallons per day per unit x 499 units = 101,297 gallons per day. 125 gallons per day per 2,500 square feet of commercial space x 8 = 1,000 gallons per day. Residential wastewater generation of 101,297 gallons per day + commercial wastewater generation of 1,000 gallons per day = 102,297 gallons of wastewater per day, or 0.10 million gallons per day.

[50] The Growth Management Ordinance has the effect of limiting the number of residential building permits issued to 225 per year.

[51] The calculations are based on the information presented in Tables 4-1 and 4-1 of the WSA.

[52] Year 2005: 3,241 AFY ÷ 7,492 single family detached dwelling units = 0.4326 AFY/dwelling unit or 140,963 gallons per year per dwelling unit. 140,963 ÷ 365 days = 386.2 gallons per day per dwelling unit.

Year 2010: 3,285 AFY ÷ 8,352 single family detached dwelling units = 0.3933 AFY/dwelling unit or 128,157 gallons per year per dwelling unit. 128,157 ÷ 365 days = 351.1 gallons per day per dwelling unit.

Year 2015: 3,437 AFY ÷ 8,733 single family attached dwelling units = 0.3934 AFY/dwelling unit or 128,190 gallons per year per dwelling unit. 128,190 ÷ 365 days = 351.2 gallons per day per dwelling unit.

Year 2020: 3,538AFY ÷ 8,993 single family attached dwelling units = 0.3934 AFY/dwelling unit or 128,190 gallons per year per dwelling unit. 128,190 ÷ 365 days = 351.2 gallons per day per dwelling unit.

Year 2025: 3,538AFY ÷ 8,993 single family attached dwelling units = 0.3934 AFY/dwelling unit or 128,190 gallons per year per dwelling unit. 128,190 ÷ 365 days = 351.2 gallons per day per dwelling unit.

The average water consumption rate from 2005 to 2025 = (386 + 2=351 x 4) ÷ 5 = 358 gallons per day per single family detached dwelling unit, or approximately 360 gallons.

[53] Year 2005: 983 AFY ÷ 3,039 single family attached dwelling units = 0.3234 AFY/dwelling unit or 105,380 gallons per year per dwelling unit. 105,380 ÷ 365 days = 289 gallons per day per dwelling unit.

Year 2010: 1,115 AFY ÷ 3,518 single family attached dwelling units = 0.3169 AFY/dwelling unit or 103,262 gallons per year per dwelling unit. 103,262 ÷ 365 days = 283 gallons per day per dwelling unit.

Year 2015: 1,145 AFY ÷ 3,631 single family attached dwelling units = 0.3153 AFY/dwelling unit or 102,741 gallons per year per dwelling unit. 102,741 ÷ 365 days = 282 gallons per day per dwelling unit.

Year 2020: 1,181 AFY ÷ 3,744 single family attached dwelling units = 0.3154 AFY/dwelling unit or 102,774 gallons per year per dwelling unit. 102,774 ÷ 365 days = 282 gallons per day per dwelling unit.

Year 2020: 1,181 AFY ÷ 3,744 single family attached dwelling units = 0.3154 AFY/dwelling unit or 102,774 gallons per year per dwelling unit. 102,774 ÷ 365 days = 282 gallons per day per dwelling unit.

The average water consumption rate for 2005 to 2025 = (289 + 283 + 282 x 3) ÷ 5 = 284 gallons per day per single family attached dwelling unit, or approximately 285 gallons.

[54] Year 2005: 1,076 AFY ÷ 6,035 multi-family dwelling units = 0.1783 AFY/dwelling unit or 58,099 gallons per year per dwelling unit. 58,099 ÷ 365 days = 159 gallons per day per dwelling unit.

Year 2010: 1,171 AFY ÷ 6,696 multi-family dwelling units = 0.1749 AFY/dwelling unit or 56,991 gallons per year per dwelling unit. 56,991 ÷ 365 days = 156 gallons per day per dwelling unit.

Year 2015: 1,275 AFY ÷ 7,336 multi-family dwelling units = 0.1738 AFY/dwelling unit or 56,663 gallons per year per dwelling unit. 56,663 ÷ 365 days = 155 gallons per day per dwelling unit.

Year 2020: 1,386 AFY ÷ 7,867 multi-family dwelling units = 0.1739 AFY/dwelling unit or 56,666 gallons per year per dwelling unit. 56,666 ÷ 365 days = 155 gallons per day per dwelling unit.

Year 2025: 1,386 AFY ÷ 7,867 multi-family dwelling units = 0.1739 AFY/dwelling unit or 56,666 gallons per year per dwelling unit. 56,666 ÷ 365 days = 155 gallons per day per dwelling unit.

The average water consumption rate from 2005 to 2025 = (159 + 156 + 155 x 3) ÷ 5 = 156 gallons per day per multi-family dwelling unit, or approximately 160 gallons.

[55] Year 2005: 704 AFY ÷ 322 acres of commercial space = 2.186 AFY/acre or 712,311 gallons per year per acre. 712,311 ÷ 365 days = 1,952 gallons per day per acre.

Year 2010: 890 AFY ÷ 407 acres of commercial space = 2.187 AFY/acre or 712,637 gallons per year per acre. 712,637 ÷ 365 days = 1,952 gallons per day per acre.

Year 2015: 955 AFY ÷ 437 acres of commercial space = 2.185 AFY/acre or 711,985 gallons per year per acre. 711,985 ÷ 365 days = 1,951 gallons per day per acre.

Year 2020: 1,021 AFY ÷ 467 acres of commercial space = 2.186 AFY/acre or 712,311 gallons per year per acre. 712,311 ÷ 365 days = 1,952 gallons per day per acre.

Year 2020: 1,021 AFY ÷ 467 acres of commercial space = 2.186 AFY/acre or 712,311 gallons per year per acre. 712,311 ÷ 365 days = 1,952 gallons per day per acre.

The average water consumption rate from 2005 to 2025 = (1,951 + 1,952 x 4) ÷ 5 = 1,952 gallons per acre per day, or approximately 1,950 gallons.

[56] As is indicated by the water demand factors, detached units consume more water than attached units. Accordingly, a conservative analysis would assume that all dwelling units would be detached.

[57] 499 dwelling units x 360 gallons of water per day per unit = 179,640 gallons of water per day, or 0.18 mgd.

20,000 square feet = 0.5 acres. 0.5 acres x 1,950 gallons per acre = 975 gallons per day.

179,640 gallons per day for residential use and 975 gallons per day for commercial use = 180,615 gallons per day, or 0.18 mgd.

[58] Further information regarding the Incremental Recycled Water Program (IRWP) and EIR prepared for the IRWPis available at http://www.recycledwaterprogram.com/. When additional capacity is needed, all partners in the subregional wastewater disposal system, which includes Rohnert Park, will be encumbered with the requirement to contribute to the development of additional facilities.

[59] Information in this paragraph was derived from: Civil Design Consultants, Inc., *Southeast Rohnert Park Specific Plan Public Services Plan*, no date available.

[60] California Integrated Waste Management Board, http://www.ciwmb.ca.gov/Profiles/Juris/JurProfile1.asp?RG=R&JURID=503&JUR=Sonoma+County+Waste+Management+Agency, Accessed September 2, 2004.

[61] The Rohnert Park General Plan does not indicate an average commercial use population density. The rate of square footage per employee has been extracted from the Association of Bay Area Governments 1987 Input-Output Model and Economic Multipliers for the San Francisco Bay Area for retail trade, professional and repair services, and business and professional services.

[62] 1,213 new residents x 1 pound of solid waste per day = 1,213 pounds of solid waste per day. 1,213 pounds of solid waste per day x 365 days = 442,745 pounds of solid waste per year, or 221 tons of solid waste per year.

[63] 57 employees x 11.7 pounds of solid waste per day = 666.9 pounds of solid waste per day. 666.9 pounds of solid waste per day x 365 days = 243,455 pounds of solid waste per year, or 122 tons per year.

[64] Sonoma County Permit and Resource Management Department, Memo to the General Plan 2020 Citizen's Advisory Committee from Denise Peter, Planner III, November 21, 2002.

[65] The solid waste management strategy was recommended in a report prepared for the Sonoma County Department of Transportation and Public Works: Sonoma County Solid Waste Management Alternatives Analysis Project Final Report, SCS Engineers, December 29, 2000.

[66] Ken Wells, Director, Sonoma County Waste Management Agency, personal communication with EIP Associates, March 1, 2005.

[67] Association of Bay Area Governments, The Disposal of Hazardous Waste by Small Quantity Generators: Magnitude of the Problem, June 1985.

[68] Association of Bay Area Governments, Toxics Away! The Alameda County Pilot Collection Program for Small Quantity Generators of Hazardous Wastes, April 1988.

[69] Robert C. Wattenburger, Senior New Business Representative, Pacific Gas and Electric Company, written communication with EIP Associates, January 20, 2004.

[70] Information in the following analysis was derived from the *Sonoma County Integrated Waste Management Plan*, 2003.

[71] It is important to note projects such as construction of a new landfill would undergo their own specific environmental review as required by the California Environmental Quality Act.

[72] Ken Wells, Director, Sonoma County Waste Management Agency, personal communication with EIP Associates, March 1, 2005.

Section 4
Growth Inducement

GROWTH INDUCEMENT

Introduction

Section 15126.2(d) of the *CEQA Guidelines* requires the following review of growth inducement in an EIR:

> *"Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also, discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."*[1]

In summary, CEQA requires a discussion of how a project could increase population, employment, or housing growth in surrounding areas and the impacts resulting from this growth. CEQA Guidelines indicate that a project would normally have a significant effect on the environment if it would induce substantial growth or concentration of population. This section of the EIR discusses the manner in which the Southeast Specific Plan could affect such growth.

Growth Inducement

Growth Defined

When CEQA refers to *induced growth*, CEQA means *all growth – direct* or *indirect*. Growth can be induced in a number of ways, including increases in population, employment, and housing, through the elimination of obstacles to growth, or through the stimulation of economic activity within a region.

Direct growth occurs on a project site and within the facilities to be constructed such as a housing development that would contain an increase in population or a commercial facility that would attract shoppers from other locations. Indirect growth occurs beyond the project site but is stimulated by a proposed project's direct growth. Such growth is tied to increased direct and indirect investment and spending by residents, employees and businesses. Indirect growth stems from the "induced" employment generated by the economic activity resulting from a project. Indirect employment is generated by a direct increase in economic activity. It is due to the increases in spending that would

occur on the part of the businesses, employees, and employee households related to an increase in direct economic activity. It is also due to the additional spending that would occur on the part of suppliers of the goods and services demanded by the projects' direct economic activity (primary and secondary households, businesses and employees). Production, employment, and households would increase with each new round of spending, but at a decreasing rate with each additional round. Indirect growth could have the potential for environmental impacts, but cannot be assumed to automatically create environmental impacts in and of itself.

Southeast Specific Plan

The Southeast Specific Plan project encompassing an area of about 80 gross acres is proposed to accommodate up to 499 residential units and up to 20,000 gross square feet of commercial/retail space. With 499 residential units constructed as proposed, the Southeast Specific Plan project at buildout would accommodate an increase of about 1,327 persons. This assumes a household size of about 2.66 persons per unit in the year 2020 according to the Association of Bay Area Governments.[2] This population increase would incrementally contribute to stimulating the local economy through increased direct and indirect investment and spending by new residents.

Project Construction

Project construction would generate jobs in the construction, materials fabrication and supply industries up until the time of construction completion. The provision of construction jobs would create an indirect demand for local goods and services. Expenditures for construction and expenditures by construction workers would indirectly stimulate employment and sales in the City of Rohnert Park and southern Sonoma County during the construction period. It is not expected that appreciable numbers of people would establish primary residence in the Rohnert Park area or that new businesses would be created as a result of project construction activities given the relatively standard nature of the construction work. Project construction would be expected to employ construction workers already living and working in the Bay Area. As with all economic activity, some of the demand for products and services would be met by firms outside of the local economy. But no significant labor pool from outside the Bay Area would be expected to temporarily or permanently relocate or commute long distances as a result of constructing the Southeast Specific Plan project.

Growth Management & Infrastructure

New residents would result in an increased demand for the provision of utility and public services in the project area. The analysis of the impacts of implementing the Southeast Specific Plan project and its development components finds that the project would contribute to cumulative demands on the water supply, wastewater treatment, drainage facilities, solid waste disposal, energy consumption, police and fire protection services, and recreational and school facilities. It was noted that public service and utility capacities either exist or would need to be locally augmented to accommodate the increased residential population of the Southeast Specific Plan project, although no significant unavoidable adverse public service or utility impacts were identified for the project as proposed.

In addition to the Southeast Specific Plan project area, other Specific Plan project areas as established in the Rohnert Park General Plan on the east side of Rohnert Park include the University District Specific Plan area with up to about 1,600 residential units and 20 to 40 acres of mixed-use (residential/commercial) development, the Northeast Specific Plan area with the potential of up to 1,085 residential units and the Canon Manor Specific Plan area with the potential for up to several hundred additional residential units. This does not include potential development within the Northwest Specific Plan area, the Wilfred/Dowdell Specific Plan area or development within an area known as the "City Center" adjacent to the U.S. 101 corridor which would further stimulate population growth and further demands on public services and utilities if fully implemented. As noted in this EIR, development of the Southeast Specific Plan area as proposed would not have incremental effects that are cumulatively considerable with the exception of the loss of Farmlands of Local Importance. To the extent other specific plan proposals inclusive of the Canon Manor Specific Plan, University District Specific Plan, Northeast Specific Plan, Northwest Specific Plan, Wilfred/Dowdell Specific Plan or other development as explained previously would require the conversion of agriculturally suitable land or land that is under agricultural use, the identified land use impact would be significant and unavoidable in a cumulative context.

The Rohnert Park General Plan[3] identifies where development may occur and acknowledges that additional services and utilities would be needed to support growth that is projected in the General Plan. According to the General Plan, management and the predictability of growth emerged as one of the salient issues that Rohnert Park residents wanted to see the General Plan address.

While General Plan Growth Management Goals specifically call for recognizing the availability of housing as an issue of statewide importance, the General Plan also ensures that growth is paced to achieve General Plan buildout over a 20-year period (representing an annual average population growth rate of one percent), and requires all new development to provide the necessary public facilities and infrastructure to support development.

The General Plan Growth Management Element calls for the preparation and adoption of a Growth Management Ordinance that implements the various growth management policies of the General Plan. Toward this end Ordinance No. 667 adding Chapter 17.66, the *Growth Management Program* to the Rohnert Park Municipal Code was adopted by the City Council on July 24, 2001. The *Program* is to assure that the rate of population growth will not exceed the average annual growth rates established in the General Plan and as further described in the *Program* so that new residential development and mixed-use developments with a residential component occur concurrently with the necessary infrastructure and public service improvements.

One of the many purposes of the *Program* as expressed in the *Program* is to ensure that the development in each Specific Plan area is coordinated with the provisions of the *Program* itself. The *Program* contains a formula for applying a "Trigger Cap" which is the threshold at which a cap on residential development will be established. Its purpose is to maintain an average population growth rate of one percent per year. The *Program* goes on to note that the City Council may establish priority development areas, after calculating the Trigger Cap and determining the need for a residential development cap based on policies in the *Land Use and Growth Management Element* of the General

Plan. At the time of preparing this EIR, Growth management decisions regarding each of the Specific Plan components, either individually or cumulatively, had not been discussed by the City Council. In a cumulative context, the growth issue is still pending with respect to the various Specific Plan area proposals. The City's Growth Management Allocation System (GMAS) is to be implemented through development agreements with the developer of each Specific Plan area or other property that chooses to participate in the GMAS.[4]

Stated differently, a municipality's General Plan, such as the Rohnert Park General Plan, identifies the lands that will be allowed to develop and expected future population. The General Plan as adopted identifies the allowable growth pattern in Rohnert Park and thus highlights the needed expansion or updating of the various regional infrastructure systems that can more specifically be scheduled to maintain adequate services throughout the planning horizon of the General Plan. Without such growth management practices, any expansion of an infrastructure system could be considered growth inducing. Unplanned and uncontrolled growth is generally considered to have significant adverse impacts on the environment. However, in that the Southeast Specific Plan project as well as other Specific Plan projects in Rohnert Park are part of an ongoing and coordinated area-wide planning program that anticipates the demands of projected population growth and accompanying land use changes, then the proposed projects can be considered to be growth accommodating rather than growth inducing.

Therefore, new infrastructure provided for the Southeast Specific Plan project and its development components, while lessening potential obstacles to growth, is considered growth accommodating and not directly growth inducing. As noted previously, new water and sewer infrastructure would be provided to serve the needs of the project with emphasis on transportation improvements in addition to anticipated cumulative area-wide development consistent with the goals and policies of the General Plan (see also Section 3.10, *Traffic and Circulation,* and 3.11*, Utilities,* for additional information).

Growth and the Urban Growth Boundary

Limitations on annual growth would be ensured through enforcement of the City's Growth Management Ordinance as discussed above. In addition, the Southeast Specific Plan project and its development components would occur within the City's Urban Growth Boundary (UGB). Rohnert Park's UGB was adopted in 2000 by Rohnert Park voters (Measure N), and is the boundary in which urban development is to be contained within the timeframe of the General Plan until 2020. The UGB restricts development to a specific geographic area and defines where open space generally begins.

Thus, growth within the UGB is anticipated consistent with the General Plan, and the Southeast Specific Plan project and its development components would appear to be consistent with the City's General Plan to accommodate growth in lieu of inducing substantial growth. General Plan Land Use and Growth Management Element Goal GM-G requires that all urban development in the Rohnert Park Planning Area be located within the UGB and prohibits urban development outside the UGB. While it is acknowledged that there are other areas within the City of Rohnert Park in which to accommodate growth, such as within the other Specific Plan areas as described above, the pace of construction and absorption in these areas, as elsewhere in Rohnert Park, would be consistent with the Growth Management Ordinance and growth decisions to be made by City officials, and the availability of

infrastructure and regional economic conditions in general. Land Use and Growth Management Element goals and policies are based on broad considerations of the City's future growth. The Southeast Specific Plan project and its development components would therefore be consistent with the Land Use and Growth Management Element by focusing growth within the UGB.

Implementation of the General Plan would advance the policies of the City to promote and facilitate growth within the UGB that would minimize the cost and extent of providing infrastructure services by producing a more compact and efficient pattern of development. This in turn would limit the potential for urban sprawl by focusing growth in an urban area and help to slow the rate at which agricultural lands, open space and areas of habitat value outside the UGB may be converted to urban development.

With respect to lands outside the UGB, it is noted that competition can occur between urban and agricultural land uses. Lands east and south of the project site are predominantly semi-rural and some parcels are in agricultural use. Thus, the development of the project site's vacant land could have the potential to affect the agricultural viability of adjacent areas through stimulating further residential development outside the annexation area with the attendant loss of agriculturally suitable land, depending on market conditions. An existing condition regardless of the Southeast Specific Plan project is the fact that the annexation area and adjacent lands are under limited agricultural use because farmers in the area cannot afford to profitably keep the land commercially productive for a number of reasons, including incompatibility with adjacent more highly developed land uses. Correspondingly, it is noted that active agricultural use of lands in east Rohnert Park is limited and the further loss of agriculturally suitable land (land designated as Farmlands of Local Importance) is determined to be a significant and unavoidable adverse impact for which there is no mitigation.

However, various conditions are in place to protect existing land uses outside the UGB from growth within the UGB. For example, policies within the Sonoma County General Plan are designed to encourage the maintenance of agricultural activities. For example, Objective LU-2.4 of the County General Plan Land Use Element states: *"Coordinate with cities to maximize cooperative planning and implementation of the General Plan."* Policy LU-2b states: *"Evaluate all city or city/county projects which affect the unincorporated area for consistency with the County general Plan. Inform the Board of any project which may be inconsistent with the general plan. Work with the applicable city to resolve any inconsistencies in a manner which is consistent with the county general plan."*[5]

In conclusion, growth and the rate of growth shapes both the physical and social structure of communities. While The Southeast Specific Plan project and its development components would represent a contribution to growth, it would be urban growth within the context of the Rohnert Park 2020 General Plan, and would not remove obstacles to growth through the provision of new infrastructure capable of serving regional growth and would not generate significant growth inducing impacts.

Endnotes – Growth Inducement

[1] California Office of Planning and Research, *CEQA – California Environmental Quality Act – Statutes and Guidelines,* as amended December 1, 2001.

[2] Association of Bay Area Governments (ABAG), *Forecasts for the San Francisco Bay Area to the Year 2030, Projections 2003.* 2.66 persons per household are projected for the years 2015 and 2020. The Rohnert Park General Plan Land Use and Growth management Element uses a figure of 2.62 persons per household for the year 2020, but this figure is based on *ABAG Projections 1998* which is over five years old. Therefore, for this EIR, the updated figure of 2.66 persons per household is used and would represent a worst-case scenario for purposes of environmental review.

[3] *Rohnert Park 2020: General Plan*, adopted by the Rohnert Park City Council, July, 2002.

[4] Resolution No. 2003 – 252, A Resolution of the City Council of the City of Rohnert Park Establishing a Growth Management Allocation System, adopted by the City Council on October 28, 2003. The development of land, infrastructure implementation and phasing programs for each property will be the basis for the development agreements between the property owners and the City. These development agreements will define the timing of entitlements, description of the infrastructure, environmental mitigation factors and other development obligations of each property or phase, as well as the commitment of the City for the issuance of building permits.

[5] Sonoma County General Plan, Op. Cit., Land Use Element, pages 30 through 33.

Section 5
Unavoidable Significant Adverse Impacts

In accordance with Section 15126.2(b) of the California Environmental Quality Act (CEQA) Guidelines, this section is to set forth those significant environmental adverse impacts that cannot be mitigated to a less than significant level that would result from implementation of the Southeast Specific Plan project as evaluated in this EIR.

CEQA requires the decision-maker (Lead Agency), to balance the benefits of a proposed project against its unavoidable environmental risks in determining whether to approve a project. Where a decision on a project allows the occurrence of significant effects that are identified in an EIR but are not at least substantially mitigated, the Lead Agency is to state in writing through a Statement of Overriding Considerations the specific reasons to support its action based on the EIR and/or other information in the record. If a Lead Agency makes a Statement of Overriding Considerations, the Statement should be included in the record of the project approval.[1]

For the Southeast Specific Plan project and its development components, inclusive 499 residential units and up to 20,000 square feet of commercial/retail space, mitigation measures are established to mitigate most identified significant or potentially significant impacts to levels of insignificance as described in the various technical sections of this EIR. This includes the mitigation of potential visual quality impacts, traffic impacts respecting intersections within Rohnert Park's jurisdiction, and impacts relating to air quality and noise. No significant environmental impacts were identified for the subject areas of, public services, utilities, biological resources, geology and soils or hydrology. Specified unavoidable significant adverse impacts were noted with respect to land use wherein project buildout would result in the loss of about 80 acres of land designated as Farmlands of Local Importance, and specified intersections outside the jurisdiction of the City of Rohnert Park where a regional approach to mitigation would be required. Thus the project would adversely affect land use and intersection service levels through development in accordance with the City's impact significance criteria regarding applicable land use plans, policies or regulations and intersection service levels.

The unavoidable significant impacts are stated as follows in Section 3.6, *Land Use* and 3.10, *Traffic and Circulation*.

Land Use

Plan Consistency: *Would the project conflict with applicable plans or policies?*

Impact 3.6-1

Buildout of the Southeast Specific Plan project site would result in the loss of about 80 acres of land designated as Farmlands of Local Importance. This would be a significant and unavoidable land use impact with respect to Sonoma County land use policies.

Traffic and Circulation

Traffic Volumes and Level of Service (LOS): *Would the project increase traffic and create congestion?*

Impact 3.10-1

Traffic increases resulting from the Southeast Specific Plan project coupled with currently approved projects would result in intersection levels of service at or worse than the applicable level of service threshold at the intersections of Adobe Road & Petaluma Hill Road, East Cotati Avenue & Bodway Parkway, and Railroad Avenue & Petaluma Hill Road. For the intersection of East Cotati Avenue & Bodway Parkway this would be a significant impact, while for the intersections of Adobe Road & Petaluma Hill Road, and Railroad Avenue & Petaluma Hill Road this would be an unavoidable and significant adverse impact because the intersections of Adobe Road & Petaluma Hill Road, and Railroad Avenue & Petaluma Hill Road are located outside the City where a regional approach to mitigation requiring the participation of more than one jurisdiction would be required, and would be beyond the sole control of the City of Rohnert Park.

Impact 3.10-3

Under cumulative (future) development in the year 2020, traffic growth with or without the Southeast Specific Plan project would result in intersection levels of service at or worse than the applicable level of service threshold at the intersections of Adobe Road & Petaluma Hill Road, Main Street & Old Redwood Highway, East Cotati Avenue & Camino Colegio, East Cotati Avenue and Bodway Parkway, and East Cotati Avenue & Petaluma Hill Road. For the intersections of Adobe Road & Petaluma Hill Road, and Main Street & Old Redwood Highway this is considered an unavoidable and significant adverse impact because the intersections are located outside the City where a regional approach to mitigation requiring the participation of more than one jurisdiction would be required, and would be beyond the sole control of the City of Rohnert Park.

Impact 3.10-4

Under cumulative (future) development in the year 2030, traffic growth within the region, inclusive of the Southeast Specific Plan project, would cause US 101 to operate in the level of service E and F range during the AM and PM peak hours. This would occur with or without the Specific Plan project and would be due to cumulative development.

Endnotes — Unavoidable Significant Adverse Impacts

[1] 14 California Code of Regulations Section 15000, *et seq*.

Section 6
Alternatives

INTRODUCTION

The analysis of alternatives is an important element of an EIR and is necessary to assure that the full range of options is examined, thus providing a complete understanding of the effects of full project implementation, partial project implementation, or no project. This section of the EIR describes alternatives to the Southeast Specific Plan project and its development components as proposed including the No-Project Alternative as required under CEQA.

The purpose of the discussion of alternatives in an EIR is to focus on alternatives that are capable of avoiding or substantially lessening any significant environmental effects of a project, even if these alternatives would impede to some degree the attainment of the project objectives or would be more costly[1] (see Section 2, *Project Description* for a discussion of project objectives).

The range of alternatives is to include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects.[2] Among the factors that may be taken into account when addressing the feasibility of alternatives for inclusion in an EIR are site suitability, economic viability, availability of infrastructure, general plan consistency, or other plans or regulatory limitations, including jurisdictional boundaries.[3] An EIR should include sufficient information about each alternative to allow a meaningful evaluation, analysis and comparison with the project as proposed. Any project approvals could be conditioned on the findings of the alternatives analysis.

As noted in Section 5 of this EIR, *Unavoidable Significant Adverse Impacts*, specified unavoidable significant adverse impacts were noted with respect to land use wherein project buildout would result in the loss of about 80 acres land designated as Farmlands of Local Importance. Also, traffic increases resulting from the Southeast Specific Plan project coupled with currently approved projects would result in intersection levels of service at or worse than the applicable level of service threshold at the intersections of Adobe Road & Petaluma Hill Road, and Railroad Avenue & Petaluma Hill Road which are located outside the City where a regional approach to mitigation requiring the participation of more than one jurisdiction would be required, beyond the sole control of the City of Rohnert Park. Similarly, under cumulative (future) development in the year 2020, traffic growth with the Southeast Specific Plan project would result in intersection levels of service at or worse than the applicable level of service threshold at the intersections of Adobe Road & Petaluma Hill Road, and Main Street & Old Redwood Highway because the intersections are located outside the City where mitigation would be required beyond the sole control of the City of Rohnert Park. These level of service impacts are identified as unavoidable and significant. Under cumulative development in the year 2030, traffic growth within the region, inclusive of the Southeast Specific Plan project, would cause US 101 to operate in the level of service E and F range during the AM and PM peak hours which would occur with or without the Specific Plan project, also identified as an unavoidable and significant impact. All

other identified significant and/or potentially significant impacts can be mitigated to less than significant levels as indicated in the individual technical sections of this EIR. This includes the mitigation of potential visual quality impacts, other specified level of service traffic impacts and impacts relating to construction air quality and noise. No significant environmental impacts were identified for the subject areas of biological resources, public services, utilities, geology, soils and or hydrology.

Thus the range of alternatives presented in this section of the EIR examines differing project development scenarios while seeking alternative and less involved or costly means of mitigating the identified significant and/or potentially significant impacts to less than significant levels. The Southeast Specific Plan project alternatives include the following:

- No Project
- Alternative Project Site
- Reduced Density Project
- Environmentally Superior Alternative

6.1 NO PROJECT

Under the No Project Alternative, there would be no site annexation and there would be no Southeast Specific Plan development project as proposed within the annexation area at this time. There are no other known proposals for development within the annexation area. Therefore, current conditions of using all or part the site for hay production would be expected to continue into the future for an unspecified period of time (the loss of agriculturally suitable land on the project site is noted as a significant and unavoidable adverse impact with project development). The project site would continue to retain its current agricultural (semi-rural) appearance; there would be no utility improvements on the project site to accommodate new residential development as currently proposed, the demand for public services to be provided by the respective Rohnert Park public service providers would not be directly increased to serve new development on the project site, existing drainage conditions would be expected to remain as is for the present, and site biological resource conditions (foraging habitat for birds of prey) would remain largely unchanged.

The annexation area would remain within unincorporated Sonoma County and within the City of Rohnert Park Urban Growth Boundary (UGB). County Land Use Plan maps designate land within the Southeast Specific Plan project site as Diverse Agriculture (10 to 60 acres per residential unit) which provides for agricultural production and processing, community service facilities (schools, churches), residences and visitor serving facilities. The Diverse Agriculture (DA) zoning under the Sonoma County Zoning Ordinance, the purpose of which is *"to enhance and protect those land areas where soil, climate, and water conditions support farming but where small acreage intensive farming and part-time farming activities are predominant, but where farming may not be the principal occupation of the farmer"*, enables the County to limit development until annexation occurs. Thus, development of the Southeast Specific Plan site under the No Project alternative would not be expected to occur at the

intensities specified in the Rohnert Park General Plan and would leave open the option for development under current county zoning.

Under the No Project alternative, the project site would generally continue to be under-utilized given its location within the UGB and available access, and the potential availability of public services and utilities in considering the public service and utility enhancements anticipated in the future on a City-wide level. Given the opening for some other form of development within the project site under County jurisdiction which allows for development at a reduced density as compared to the project as proposed, and the absence of other definitive proposals for development, the specific environmental impacts that could result from possible future development cannot realistically be determined at this time. A residential project of lesser magnitude on the site would be expected to have reduced environmental impacts as compared to the Southeast Specific Plan project as proposed (see the discussion below regarding the *Reduced Density Project* alternative). If developed under County jurisdiction, given the County Diverse Agricultural zoning currently in effect, site development potential would be reduced to a maximum of about eight residential units, significantly less than under the Southeast Specific Plan as proposed. The No Project alternative would not conform with the goals and policies of the Rohnert Park General Plan Housing Element to promote opportunities for housing and facilitate housing development, to provide for a range of housing types within the community, to address the housing needs of all economic segments and to provide for affordable housing opportunities.

Given the cumulative magnitude of existing current proposals for development on other Specific Plan area project sites in Rohnert Park, and as set forth in the Rohnert Park General Plan inclusive of the University District, Northeast, Northwest and Wilfred/Dowdell Specific Plan areas, cumulative development impacts as addressed in this EIR would generally be expected to be as described previously with or without the Southeast Specific Plan project. This cumulative development would not be to the exclusion of the proposed Graton Rancheria Resort Hotel/Casino Project to be located on unincorporated land about one-half mile west of U.S. 101. Traffic, visual, construction air quality, construction noise impacts and loss of agricultural land would be expected to occur on a cumulative development basis as described previously and require mitigation to bring the impacts to less than significant levels (the loss of agriculturally suitable land and poor intersection service levels resulting from increased traffic are indicated as a significant and unavoidable adverse impacts for which there is no mitigation).

6.2 ALTERNATIVE PROJECT SITE

This alternative focuses on alternative locations for development of the Southeast Specific Plan project as proposed. This alternative considers that the project would proceed within the UGB, and must be consistent with the provisions of the Rohnert Park General Plan. The objective is to determine whether any of the significant effects of Southeast Specific Plan project, if fully implemented, would be avoided or substantially lessened by locating the project as described at another location.

Other areas in Rohnert Park where the project conceivably could be located include lands that are not yet developed. The Rohnert Park General Plan acknowledges under buildout conditions, *"approximately 1,260 net acres would be developed within the UGB, including infill sites."*[4] However, most of the City's developable area includes the Specific Plan Areas as identified in this EIR (see Section 3.6, *Land Use*), with development profiles for the Specific Plan areas as detailed in the General Plan. The General Plan *Land Use and Growth Management Element* Policy LU-2 states: *"Require sites designated as Mixed Use -- University District, City Center, Southwest Shopping Center, and near Bodway Parkway/Valley House Road – to be developed with a variety of residential and non-residential uses, in accordance with the delineated land use program for the Specific Plan areas in this chapter."* Thus, growth within the Rohnert Park UGB is anticipated consistent with the General Plan, and another location for the project cannot be ruled out for purposes of examination.

Because of the 499 residential unit project size, development of the Southeast Specific Plan project elsewhere in the City could only be expected to occur on one of the other Specific Plan Area sites, where the parcels would be large enough (80 acres or more), to adequately accommodate the project as proposed. This assumes of course that another Specific Plan project as currently proposed would not move forward at this point in time or in the near future. The alternative would be for the project sponsor to identify another vacant site within the UGB other than a Specific Plan site and prepare a Specific Plan for that site.

Cumulative traffic impacts and the loss of 80 acres of agriculturally suitable farmland are identified as significant and unavoidable impacts. No significant environmental impacts were identified for the subject areas of biological resources, public services, utilities, geology, soils or hydrology. All other construction air quality, noise and potential visual environmental impacts to the exclusion of the significant unavoidable impacts identified previously can be mitigated to less than significant levels.

Should an alternative location be determined possible for the project, under cumulative development (future) to the year 2020, traffic growth with or without the Southeast Specific Plan project would be expected to result in intersection levels of service at or worse than the applicable level of service thresholds for various intersections within and outside the City Limits as explained previously in Section 3.10 of this Draft EIR, *Traffic and Circulation*. The intersections of Adobe Road/Petaluma Hill Road, and Main Street/Old Redwood Highway would remain as significantly and unavoidably impacted because the intersections are located outside the City where a regional approach to mitigation requiring the participation of more than one jurisdiction would be required, and would be beyond the sole control of the City of Rohnert Park. It is acknowledged construction on a site not listed as agriculturally suitable would avoid the significant and unavoidable impact for the Southeast Specific Plan of the loss of 80 acres of land designated as Farmlands of Local Importance. However, according to the State Department of Conservation, Farmland mapping and Monitoring Program for Sonoma County, 2002, all of the other Specific Plan sites in the City plus much of the adjacent land areas are designated as Farmlands of Local Importance. Therefore, project location on any of these site areas would not eliminate the farmland impact as identified for the Southeast Specific Plan as proposed.

At another location, the Southeast Specific Plan project as proposed would not be consistent with the General Plan provisions for Specific Plan areas as currently established. It is not confirmed that the

Southeast Specific Plan project sponsor would acquire, control or have access to a site the project sponsor does not own, inclusive of land that is not agriculturally suitable. A suitable alternative site with infrastructure availability is not identified for the Southeast Specific Plan project as proposed. Further, there is no substantial evidence to conclude that this alternative would avoid or substantially lessen the unavoidable traffic and circulation effects resulting from cumulative development. Therefore, no significant environmental advantage is identified for an alternative project location as examined.

6.3 REDUCED DENSITY PROJECT

The Reduced Density Project seeks to lessen the significant environmental effects of annexation and project construction, inclusive of the loss of agriculturally suitable land and reduced intersection service levels identified as unavoidable and significant impacts.

This alternative would provide for overall buildout of the Southeast Specific Plan site at less than an overall density of 6.25 units per acre as proposed (total project). A Reduced Density Project theoretically could include all Rural Estate Residential development accommodating up to two single-family detached units per gross acre for a total of up to about 148 units, or Low Density Residential development accommodating up to six single-family detached units per gross acre for a total of up to 444 units (figures exclude development of a six acre park parcel). It is recognized however, that this alternative would not necessarily be in conformance for development of the Southeast Specific Plan site as currently provided for in the General Plan Land Use and Growth Management Element.

Assuming overall development of the Southeast Specific Plan site would occur at the mid-point of the ranges noted above, namely four units per acre which would be at the low end of the Low Density Residential range per the General Plan, a total of 296 units would be developed as compared to a total of 499 units as currently proposed and addressed in this EIR. This would be a 41 percent reduction in the number of units proposed to be constructed and 27 percent to 41 percent less than the 410 to 510 minimum-maximum housing units permitted for the Southeast Specific Plan site as noted in the General Plan Land Use and Growth Management Element. In this case, a new Specific Plan would need to be prepared in accordance with General Plan Policy LU-22 because the project density would be less than the project as proposed as recognized in the General Plan. In addition, this alternative would not necessarily conform with the goals and policies of the General Plan Housing Element to promote opportunities for housing and facilitate housing development, provide for a range of housing types within the community, address the housing needs of all economic segments and provide for affordable housing opportunities.

A project of reduced density would still result in the need for the City to provide for additional police, fire, schools, emergency services and recreation personnel and equipment to accommodate cumulative development within the City to the year 2020, regardless. Existing regulations to reduce stormwater runoff, prevent erosion and sedimentation, and protect residents and the public from soils/geologic and seismic hazards would apply to a reduced density project as described for the Southeast Specific Plan project as proposed. Development of the Southeast Specific Plan project at a reduced density would

also result in the loss of about 80 acres of land designated as Farmlands of Local Importance. This impact cannot be avoided under the Reduced Density alternative because of the increased population, increased surface paving, the construction of residences and increased traffic throughout the project area in general and there would be no parcels of substantial size left over after development to promote efficient agricultural use of the land. Construction air quality impacts would require mitigation as specified previously, and project site residents would be exposed to exterior traffic noise levels that exceed City standards in the future unless adequate setbacks were maintained as mitigation. Therefore it appears none of the significant effects of the Southeast Specific Plan project as proposed would be avoided or substantially reduced to less than significant levels under the Reduced Density alternative. It is also noted that under this alternative the cumulative development conclusions would be expected to remain as discussed previously. The unavoidable and significant level of service impacts identified for specified intersections and US 101 would be expected to occur with or without the Southeast Specific Plan project.

However, a project of reduced overall density would provide more space to physically implement visual and noise mitigation measures. Project site buildout at four units per acre under this alternative would allow more flexibility in the establishment of building setbacks from Bodway Parkway and Valley House Drive in the effort to avoid development encroaching on the roadways and assist in preserving views from local roadways to the regional landscape. This alternative would also allow more flexibility in the establishment of building setbacks from Petaluma Hill Road to mitigate traffic noise exposure. In addition, a Reduced Density project could be expected to offer a more perceptible transition from intensive development within the City Limit to the less intensively developed landscape outside the UGB.

6.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

As noted above, excluding the unavoidable and significant cumulative traffic impacts for specified intersections, the No Project alternative would avoid the environmental impacts associated with implementing the Southeast Specific Plan as proposed, leaving open the possibility of site development under current county zoning. However, there are no other known proposals for development within the Southeast Specific Plan project site at this time. Under the No Project alternative, should development within the annexation area occur under the County's Diverse Agriculture designation, development would be substantially more limited than as indicated in the Rohnert Park 2020 General Plan for the Southeast Specific Plan (up to 510 residential units), with reduced visual quality, traffic and construction air quality and noise impacts as compared to the project as proposed.

Under CEQA, if the Environmentally Superior Alternative is the No Project Alternative, then at least one of the other alternatives must be designated as the Environmentally Superior Alternative. In this EIR, in addition to the No Project Alternative, other alternatives examined included an Alternative Project Site and a Reduced Density Project. Under the Alternative Project Site scenario, it was shown that traffic growth with or without the Southeast Specific Plan project would be expected to result in intersection levels of service at or worse than the applicable level of service thresholds for various intersections within and outside the City Limits. The intersections of Adobe Road/Petaluma Hill Road,

and Main Street/Old Redwood Highway would remain as significantly and unavoidably impacted. It is not confirmed that the Southeast Specific Plan project sponsor would acquire, control or have access to a site the project sponsor does not own. No significant environmental advantage is identified for an alternative project location.

Under the Reduced Density Project alternative, it was shown that project buildout at four units per acre would not eliminate the unavoidable significant adverse agricultural land use or intersection level of service impacts identified for the project, under approved and cumulative development scenarios, and mitigation would still be required for construction air quality, noise and potential visual impacts. However, it is noted that a Reduced Density Project could provide specified benefits in that it would facilitate mitigation to reduce the identified significant visual and noise impacts to less than significant levels. For example, the Reduced Density project would allow for greater flexibility in the establishment of roadway setbacks to preserve views to regional hillsides, provide for a more effective transition in development density across to the site extending to the UGB, facilitate building setbacks from Petaluma Hill Road to mitigate traffic noise exposure, assist in positioning the residential units to adjust for side and front yard setbacks and the location of units with respect to project site roadways, and facilitate design of the project landscape development component in accordance with the provisions of the Southeast Specific Plan Design Guidelines prior to City Design Review.[5] Therefore, the Reduced Density Project alternative is identified as the Environmentally Superior alternative. However, as noted previously, the Reduced Density Project alternative would not fully address General Plan goals and policies to promote opportunities for housing.

Endnotes – Alternatives

1 State CEQA Guidelines, Section 15126.6 (b).

2 State CEQA Guidelines, Section 15126.6 (c).

3 State CEQA Guidelines, Section 15126.6 (f) (1).

4 Rohnert Park 2020 General Plan, Land Use and Growth Management Element, page 2-24.

5 Parsons, *Southeast Specific Plan*, Final Draft, 2003, pages 64 and 65, *Landscaping*.

Section 7
Irreversible Environmental Changes that Would Occur from Implementation of the Southeast Specific Plan Project

IRREVERSIBLE ENVIRONMENTAL CHANGES

As indicated previously (see Section 2, *Project Description*), the purpose of the Southeast Specific Plan is to provide a means for ensuring that the Specific Plan site is developed under a comprehensive plan that is consistent with the provisions of the Rohnert Park General Plan. The stated objectives of the Southeast Specific Plan project include incorporating into the City of Rohnert Park specific lands within the southeast portion of the City located within the Urban Growth Boundary, to provide opportunities for housing including low- and moderate-income housing, and to integrate a variety of housing types in accordance with City policy for the Southeast Specific Plan site.

At the current time, the approximate 80-acre Southeast Specific Plan project site would appear not to be utilized to its full potential. Although the Specific Plan project site is tilled and harvested annually for the production of hay, the Specific Plan site is located within the City's Sphere of Influence and Urban Growth Boundary which describe the ultimate service area of the City and limit within which all urban development is to be contained, respectively, as provided for in the Rohnert Park General Plan. In addition, more intensive urban development immediately to the west and semi-rural development surrounding the site on all other sides indicates the Specific Plan site may reasonably be expected at some point in time to be developed with urban land uses. Currently, the site remains vacant with one residence and several ancillary buildings located in the northeast corner of the Specific Plan site accessed via Petaluma Hill Road.

There would be several irreversible environmental changes that would occur in implementing the Southeast Specific Plan project and its development components. Among these irreversible changes would be the conversion of agriculturally utilized land to urban development and thus an intensification of land use resulting from increased development. There would also be the commitment of non-renewable energy resources and non-recyclable (by present technology), material resources used for the construction and operation of the housing planned to be constructed on the site. In addition, residential development throughout the Specific Plan site would involve the irretrievable commitment of existing and expanded infrastructure facilities such as natural gas, electricity, water supply and sewer services to serve the Specific Plan site residents, but not necessarily in a wasteful manner if used in accordance with the guidelines of agencies having jurisdiction over the use of such resources.

Visual change within the Specific Plan site area would be irreversible because of the development of building structures and roads, as well as the development of landscape components (trees, shrubs, groundcovers, lawns, etc.). Another irreversible environmental change associated with Specific Plan site construction would be increased traffic volumes on local roadways such as Valley House Drive and

Bodway Parkway which would provide primary vehicular access to the Specific Plan site, Petaluma Hill Road and existing and new neighborhood streets in the Specific Plan site area due to increases in the resident population. However, mitigation measures are established to mitigate most identified significant or potentially significant impacts to levels of insignificance as described in the various technical sections of this EIR. This includes the mitigation of potential visual quality impacts, traffic impacts with the exception of several intersections that would be affected by approved and cumulative development to 2020, and impacts relating to air quality and noise. No significant environmental impacts were identified for the subject areas of, public services, utilities, biological resources, geology, soils and or hydrology. Significant unavoidable adverse impacts were noted with respect to land use wherein project buildout would result in the loss of about 80 acres of land designated as Farmlands of Local Importance, and specified intersections as noted previously.

The Southeast Specific Plan project and its residential, commercial and park development components would advance the notion of growth within the City of Rohnert Park Sphere of Influence and Urban Growth Boundary, and would not be inconsistent with the goals and policies of the Rohnert Park General Plan (see Section 3.9, *Relationship to Plans and Planning Policy*). The project overall would comprise a more efficient utilization of existing land resources as compared to potential expansion beyond the Urban Growth Boundary.

For example, as noted previously in Section 4, *Growth Inducement*, the Southeast Specific Plan project would facilitate growth on land in a currently designated urban area that would minimize the cost and extent of providing infrastructure services by producing development contiguous with an existing urban area. Land parcels that have been without public water and sewer service in the annexation area would have direct access to expanded sewer and water services planned to serve new residential development. This in turn would assist in limiting the potential for urban expansion in non-urbanized areas to the south and east by focusing growth coinciding with an existing urban area. The Southeast Specific Plan project would therefore contribute to relieving any potential push for residential growth outside the Urban Growth Boundary by accommodating growth within the Urban Growth Boundary. This would be consistent with Rohnert Park General Plan Land Use and Growth Management Policy LU-34 which states: "*Areas in the City Planning area, outside the Urban Growth Boundary, should be maintained in agricultural and open space uses consistent with the land use designation in the Sonoma County General Plan*." Supporting commercial growth resulting from the increased demand for goods and services due to the addition of a resident population would be expected to occur primarily within the City of Rohnert Park itself given the relevant provisions of the General Plan to keep growth and intensified development potential within the Urban Growth Boundary.

Section 8
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