DRAFT
ENVIRONMENTAL IMPACT REPORT

NORTHEAST ROSEVILLE SPECIFIC PLAN

JONES & STOKES ASSOCIATES, INC.
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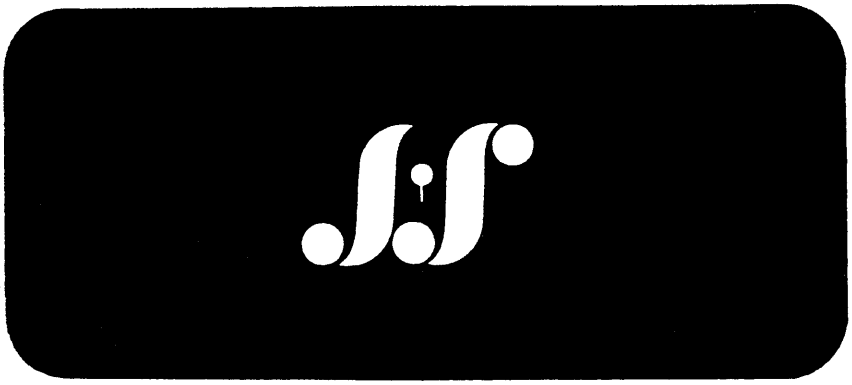

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NORTHEAST ROSEVILLE SPECIFIC PLAN

State Clearinghouse Number 86042805

Lead Agency:

City of Roseville
Planning Department
316 Vernon Street
Roseville, CA 95678
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October 1986

DRAFT E.I.R.--NORTHEAST ROSEVILLE SPECIFIC PLAN

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David Wade Associates	David Wade	735 Sunrise Ave., Roseville 95661

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Chapter 1

INTRODUCTION

This Environmental Impact Report (EIR) has been prepared to assess the impacts of the Northeast Roseville Specific Plan (Specific Plan), pursuant to the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (14 California Administrative Code Section 15000 et seq.). The EIR is an informational document used in the local planning and decision-making process. It is not the purpose of the EIR to recommend approval or denial of a project.

The Northeast Roseville Specific Plan contemplates the development of approximately 851.2 acres for residential, commercial, business park and professional office, and Research and Development (R&D) uses; the retention of 531.3 acres for future urban uses (urban reserve); and 250.3 acres for open space, community park, and agricultural uses.

EIR Requirement

The proposed Northeast Roseville Specific Plan is considered a "project" as defined by CEQA and the Guidelines. The Guidelines require preparation of an Initial Study to evaluate a project's potential effect on the environment (see Appendix 1-1). After reviewing the Initial Study prepared for the project, the City determined that the proposed project may have a significant effect on the environment and required that an EIR be prepared.

Scope of EIR

As provided for in the Guidelines, the focus of the Draft EIR is limited to specific issues and concerns identified as possibly significant in the Initial Study. The EIR is the public document used by the governmental agency to analyze the significant environmental effects of a proposed project, to identify alternatives, and to disclose possible ways to reduce or avoid the possible environmental damage. The EIR must also discuss significant environmental impacts which cannot be avoided, short-term uses versus long-term productivity, irreversible changes, and significant cumulative impacts of all past, present, and reasonably anticipated future projects.

Preparation of the EIR

This EIR has been prepared by Jones & Stokes Associates, Inc. under direction of the City of Roseville Planning Department. The Draft Specific Plan analyzed in this EIR was prepared by AKT Developments in August 1986. Preparation of this EIR was financed by the landowners.

Residential Projects Pursuant to a Specific Plan

Section 15182 of the Guidelines states that no EIR or negative declaration need be prepared for residential projects undertaken pursuant to and in conformity to a Specific Plan. Residential projects covered by this section include, but are not limited to, land subdivisions, zoning changes, and residential planned unit developments. This exemption from additional environmental review may not apply if the City needs to prepare a subsequent EIR or a supplement to an EIR on the Specific Plan.

Organization of EIR

The following chapter of this EIR (Chapter 2, Project Description) describes that proposed project. Chapter 3, Summary of Findings, presents a brief summary of the proposed project and its impacts. Chapters 4-16 are each devoted to a single impact topic. Within each topic, relevant data about the environmental setting are presented, the impacts of the proposed project and each of the alternatives are identified and evaluated in terms of significance, and mitigation measures are suggested for the proposed project and each alternative.

Chapter 17, Cumulative Impacts, assesses the cumulative impacts of development in the City based upon the land uses as adopted by the Roseville City Council on November 6, 1985. Chapter 18, Bibliography, identifies the documents and individuals consulted in preparing this document. Finally, Chapter 19, Report Preparation, lists those individuals and firms involved in preparing this EIR. Technical appendices are included at the end of this report.

Chapter 2

PROJECT DESCRIPTION

Project Location

The Northeast Roseville Specific Plan (Specific Plan) is a long-range planning document for a 1,632.8-acre area located in southern Placer County in the City of Roseville (see Figure 2-1). The Plan area is generally bounded by Interstate 80 (I-80) on the west, Douglas Boulevard on the south, and the City limit line on the east and north (see Figure 2-2).

Plan Area Description

The Plan area is currently undeveloped and is used for grazing. Site vegetation consists primarily of short grasses and oaks. The Johnson Ranch homesite is located in the southeasterly corner of the Plan area. Several collapsed and standing storage sheds can be observed on the site.

Portions of Dry Creek, Secret Ravine Creek, and Miner's Ravine Creek traverse the Plan area. Miner's Ravine Creek also has a tributary in the northeastern quadrant.

The terrain in the northeastern half of the Plan area consists of broad ridgetops and steep stream valleys. The highest elevation in this area is approximately 340 feet above mean sea level and the lowest is approximately 175 feet above mean sea level along Secret Ravine. Several areas in the ravines have been dredged. The most prominent tailings exist along Secret Ravine near I-80.

Gently sloping hills characterize the southwestern portion of the Plan area. The highest elevation in this area is approximately 300 feet above mean sea level; the lowest is 200 feet above mean sea level along Douglas Boulevard.

The Southern Pacific Reservoir and the Roseville Reservoir are located in the northern portion of the Plan area (see Figure 2-3). Neither reservoir has been used since the late 1960s (Jackson pers. comm.).

Three sets of electrical transmission towers cross the Plan area in a southeast to northwest direction. The 90-acre Pacific Gas and Electric Company (PGandE) power easement is 550 feet wide.

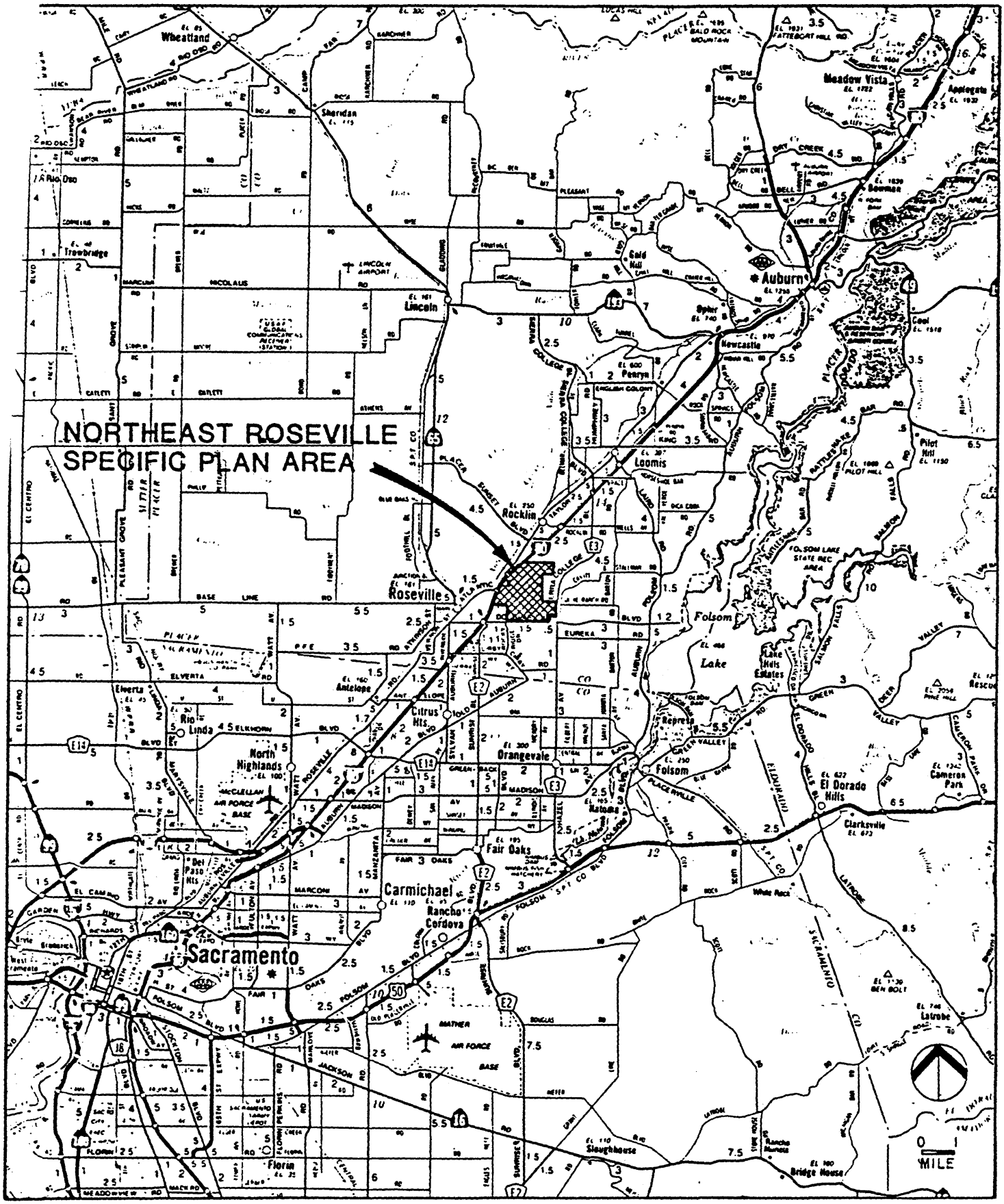


FIGURE 2-1. REGIONAL LOCATION MAP

BASE MAP COURTESY OF AAA

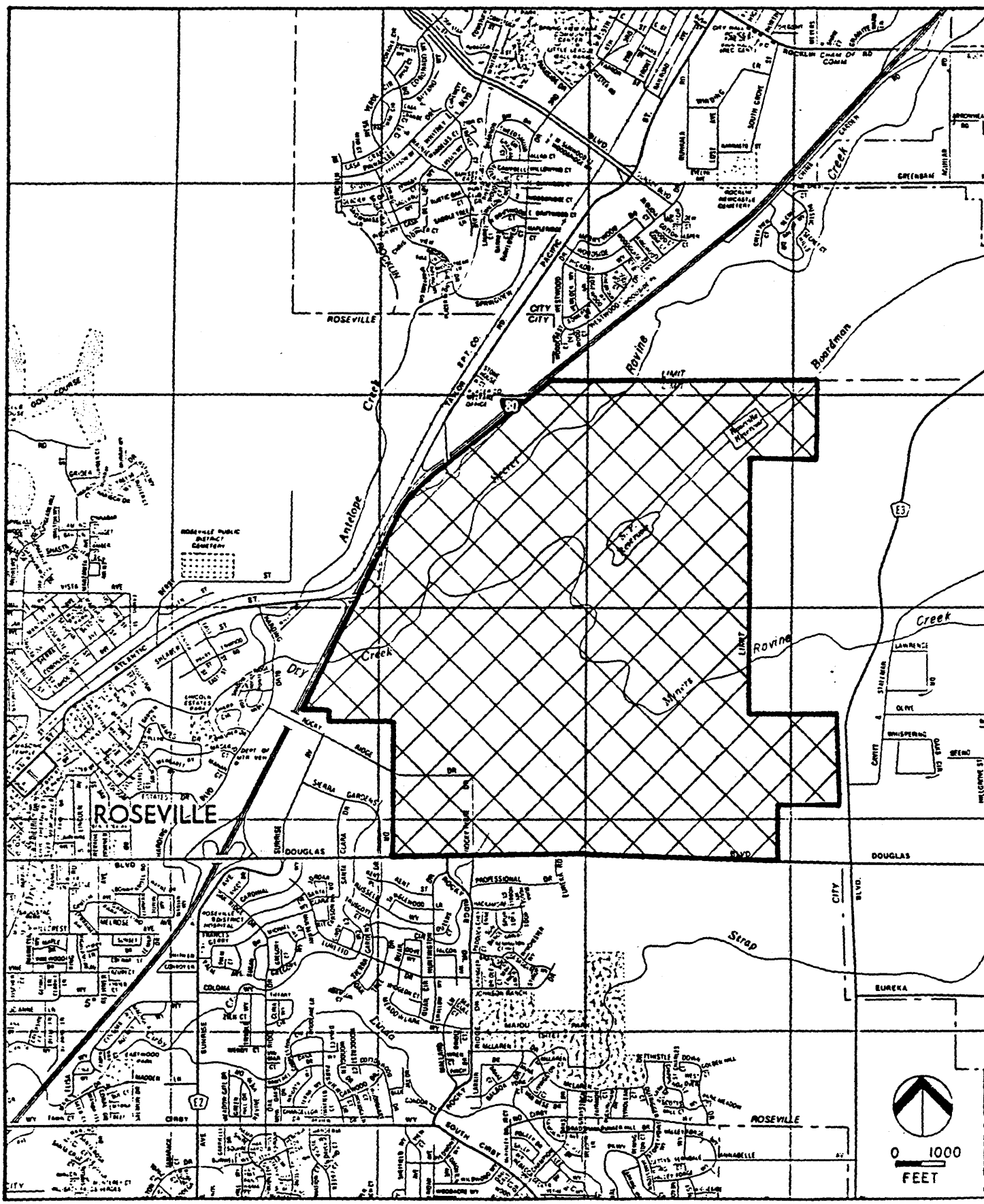


FIGURE 2-2. LOCATION OF NORTHEAST ROSEVILLE SPECIFIC PLAN AREA

BASE MAP COURTESY OF AAA

Planning Background

The Roseville General Plan allows the allocation of an additional 12,000 residential units and 2,000 acres of commercial/business and professional office uses City-wide to the adopted Land Use Plan. In November 1985, the Roseville City Council took action to implement these policies. Of the 12,000 units, 5,000 units were allocated east of I-80 (Dameron pers. comm.).

Description of Proposed Specific Plan

State law authorizes cities and counties to adopt specific plans for implementing their general plans in designated areas. Government Code Section 65451 defines a specific plan to include all detailed regulations, conditions, programs, and proposed legislation, which is necessary or convenient for the systematic implementation of each of the required elements in the general plan.

Once adopted, a specific plan legally affects the approval of subdivisions and capital facilities. The Subdivision Map Act provides that no tentative, final, or parcel map may be approved unless it is consistent with the adopted specific plan. No capital facilities, such as streets and sewers and public buildings, may be approved or constructed unless the local government has reviewed the capital facility for conformity to the adopted specific plan.

AKT Developments prepared the Draft Northeast Roseville Specific Plan in August 1986, pursuant to and in accordance with the Government Code of the State of California, Title 7, Division One, Chapter 3, Sections 65450. The Specific Plan includes goals and objectives and various measures to implement the Plan objectives. The implementation measures are included in the various area plans. Development of the Plan area is proposed to be phased consistent with public facilities and circulation. The Specific Plan also discusses financing and includes a design element and a section on general plan consistency.

Relevant portions of the Specific Plan have been excerpted and are included in this section. These portions are typed in italics to aid the reader.

Plan Goals

The general goals for the Specific Plan include:

1. *Develop the Northeast Area Specific Plan site with a combination of commercial, research and development, business park and professional offices, residential, open space, and community service facilities.*

FIGURE 2-3.

NORTHEAST ROSEVILLE SPECIFIC PLAN

ROSEVILLE CALIFORNIA

LAND USE PLAN

KEY	LAND USE	UNITS	ACRES
R-5.5	RESIDENTIAL 5.5 units/acre	357	65.4
R-9	RESIDENTIAL 9 units/acre	510	73.8
R-10	RESIDENTIAL 10 units/acre	465	46.5
R-12	RESIDENTIAL 12 units/acre	468	39.0
BP	BUSINESS PARK & PROFESSIONAL OFFICE		227.6
COM	COMMERCIAL		177.6
R&D	RESEARCH & DEVELOPMENT		140.2
HC	HIGHWAY COMMERCIAL		50.1
UR	URBAN RESERVE		531.3
OS	OPEN SPACE		83.6
	PARK		15.7
(C)	CHURCH		30.0
AG	AGRICULTURE		151.0
	FIRE STATION		1.0
TOTALS		1800	1632.8

LEGEND

Major Auto Circulation

P.G. & E. Transmission Line Easement

Out Parcel

17 Parcel Number

MORTON AND PITALO, INC.
CIVIL ENGINEERS
1429 ALHAMBRA BLVD SACRAMENTO CALIFORNIA

6-11-86

ANTHONY M. GUZZARDO AND ASSOCIATES INC.
LAND PLANNERS
235 MONTGOMERY STREET SAN FRANCISCO CALIFORNIA

0 300 600 900 1200 1500 1800

2. *Develop the Northeast Area in a manner consistent with all of the City of Roseville's adopted General Plan policies, and in particular, the following:*

   a. *The level of service standards for the City-wide road system.*

   b. *The provision of services in a time consistent with development of the City.*

   c. *The limitation of City-wide population to a total of 92,000 persons.*

   d. *Allowance of growth in a manner that makes efficient use of the land and recognizes the need to preserve environmentally sensitive areas. Confine building to those areas least sensitive to urban development and to preserve those areas inappropriate for urban development for health and safety reasons.*

   e. *Provides a strong, diversified economic base and a balance between new employment and affordable housing. Provides the opportunity for the market place to provide housing for all income ranges and in a time frame contemporaneous with the development of employment-based uses on the site.*

   f. *Growth must occur on the basis that projected revenues shall be sufficient to meet public costs over time.*

   g. *To provide major additional highway capacity across the site that will meet City-wide needs.*

3. *Provide for development that exceeds the established City zoning standards.*

4. *Provide the opportunity for the public to enjoy the habitat and the general environment of the Miner's Ravine Creek.*

5. *Provide for the completion of the City circulation plans as they relate specifically to the Northeast Area Specific Plan.*

6. *Preserve the opportunity for long-term enjoyment of the rare and endangered species of plant found in the vernal pools on-site consistent with a plan for their protection.*

The specific goals, objectives, standards, and implementation measures in the specific plan elements carry out these general principles.

Open Space and Resource Conservation Areas Plan:

Goals:

1. *Preserve environmentally sensitive areas from development by integrating urban development with the natural environment.*

2. *Provide for public enjoyment of the Miner's Ravine and Secret Ravine Creek habitat.*

3. *Preserve the opportunity for long-term enjoyment of the rare and endangered species of plant found in vernal pools on site.*

Objectives:

1. *Prohibit development within the 100-year floodplain as defined by the Nolte Study.*

2. *Protect existing riparian habitat from urban encroachment.*

3. *Protect existing native trees.*

4. *Provide for protection of vernal pools defined as appropriate for retention by the project EIR.*

5. *Access to and through the open space area shall be provided when dedication of such land is accepted by the City of Roseville.*

6. *The urban reserve area shall serve as an open space area available for future urban use until City policy and utility capacity provides for its urbanization.*

7. *Acquire a park site simultaneous with plan approval.*

8. *Provide for development and maintenance of the park and a pedestrian path and access thereto through Miner's Ravine Creek (within the 100-year floodplain) from the easterly boundary of the Plan area to I-80.*

9. *Provide for community garden needs by inclusion of a gardens area within the proposed community park.*

10. *To reflect within the Northeast Area the character and design of streetscapes established by the Southeast Area Plan.*

Residential Areas Plan

Goals:

1. *Within the housing allocation to the Northeast Plan Area, provide a range of housing to meet the needs of a range of household types.*

2. *Make residential sites available at the earliest stage of development in order to provide housing opportunity for all income ranges in proximity to employment areas and in a time frame contemporaneous with the development of employment-based uses City-wide.*

3. *Locate multi-family housing in areas adjacent to major thoroughfares and on the Mehrten Volcanic soil type.*

Objectives:

1. *Develop the residential areas with a building type and at a density consistent with the cost of development in the Mehrten formation.*

2. *Provide 15 percent of high density units to low or very low income range persons.*

3. *Provide housing units in a timeframe consistent with the phased development of the City-wide employment.*

4. *The residential areas will be buffered from adjacent Business Park and Professional Office areas.*

Commercial Areas Plan

Goals:

1. *Assure coordinated and orderly development of the mall site to assure ultimate viability of the site for mall development.*

2. *Develop commercial areas based upon superior landscape and development standards.*

3. *Develop well-planned commercial areas as centers to avoid strip development on Douglas Boulevard.*

4. *Provide nonvehicular access to and amenities within commercial areas.*

Objectives:

1. *Develop a regional mall in phases based upon a predetermined site plan.*

2. *Develop a regional mall consistent with City policy to allow only one major mall to develop within the City limits.*

3. *Develop the nonregional mall commercial areas in a manner consistent with development standards superior to those currently in the City Zoning Code.*

4. *Limit the utilization of commercially designated areas to retail and trade uses (exclude office uses from locating in the commercial areas).*

5. *Obtain landscape improvements superior to those contained in the City Zoning Code for nonmall commercial zones.*

Business Park and Professional Offices Areas Plan

Goals:

1. *Develop independent and well-planned business and office parks within the plan that complement the development occurring along Douglas Boulevard.*

2. *Develop parks to reflect landscape and development standards which are superior to those currently within the City Zoning Code.*

Objectives:

1. *Establish Process & Standards to ensure high quality design.*

2. *Development of uses on the north side of Douglas Boulevard shall mirror to the extent possible the landscape and pedestrian improvements planned for the south side of Douglas Boulevard.*

3. *Limit the intensity of utilization of the Business Park and Professional Offices areas to approximately 10,000 employees and 2,600,000 square feet (sf) of gross building area.*

Research and Development Park Plan

Goal:

1. *Develop a single user research and development and administration facility consistent with the needs of a Fortune 500 corporation.*

Objectives:

1. *Establish a review process and development standards to ensure high quality design.*

2. *Limit the intensity of utilization of the site.*

Circulation Element

Goal:

1. *Provide for the completion of the City circulation plans as they relate specifically to the Northeast Area Specific Plan.*

Objectives:

1. *Phase improvement of the road system to assure a direct relationship between the level of development and the availability of road capacity to assure attainment of the City's level of service standard.*

2. *Provide for alternatives to the automobile as the means of transportation around and through the site.*

Public Facilities Element

Goal:

1. *Develop the Northeast Area in a manner consistent with the City of Roseville's General Plan goals to provide services in a time frame consistent with development of the site and the City.*

Objectives:

1. *Extend sewer service to the site as a precondition to development.*

2. *Allow development to occur only to the extent capacity is available at the sewage treatment plant.*

3. *Avoid introduction of more than one additional sewer line in Antelope and Cirby creeks.*

4. *Reduce the erosive nature of runoff to the creeks by installation of energy dissipaters at outfall locations.*

5. *Route runoff from urban development only into those drainage sheds existing on-site prior to grading.*

6. *Attempt to limit urban runoff to peak flows proximate to their natural condition, timing, amount, and duration or better.*

Goal:

1. *Identify, acquire, and seek dedication of needed public lands for park (as required by State Law and adopted City policy), fire and electric utility purposes where funds are not available.*

Objectives:

1. *Identify, acquire, and seek sufficient park acreage at the time of project approval to meet the park needs of the residential units planned for the Northeast Area Specific Plan.*

2. *Require dedication of needed public lands for park, fire, electric utility, and school purposes where public funds are unavailable.*

3. *To participate in the school districts' effort to provide adequate funding of school facilities for students generated by the project.*

Land Use and Infrastructure Phasing Plan

Development of the Plan area is proposed to be phased in a manner consistent with the provision of support services.

Phase One:

Number of employees to be accommodated: 824

Number of dwelling units to be accommodated: 500

General Level of Development: The community shopping center and 150,000 sf of office space.

Needed Improvements:

Roads:

1. *Douglas Boulevard - Install full curb and gutter from Eureka Road/Atlantic Street to the western property line. Install sidewalk improvements from Rocky Ridge Drive west.*

2. *Rocky Ridge Drive - Install curb, gutter, and sidewalk to the north line of the shopping center.*

3. *Other: Full sidewalk, curb, and gutter for utilized frontage of Douglas Boulevard, Rocky Ridge Drive and/or Lead Hill Road.*

Sewer. Extend line south parallel to Sierra Gardens Drive. Extend a line south to Strap Ravine along the East Roseville Parkway alignment.

Water. Extend line north from south of Douglas Boulevard.

Electricity. Extend the loop system from west of I-80 to Douglas Boulevard.

The balance of public improvements can be installed incrementally as a function of parcel development.

Phase Two:

Number of employees to be accommodated: 4,252

Number of dwelling units to be accommodated: 1,800

General Level of Development: Construct the mall, the highway commercial, first phase of the research and development park, and 100 acres of the office parks.

Needed Improvements:

Roads:

1. *Lead Hill Road - Install two lanes from Rocky Ridge Drive to Atlantic Street.*

2. *Atlantic Street - Install four lanes with median from I-80 to Douglas Boulevard.*

3. *Sunrise Avenue - Install four lanes from the south boundary to the Miner's Ravine.*

4. *Rocky Ridge Drive - Install four lanes from Douglas Boulevard to a point 1,200 feet northeast of the intersection with Atlantic Street.*

5. *State funded improvements to Atlantic Street and Taylor Road.*

6. *East Roseville Parkway and Road A - Install two lanes from Douglas Boulevard to Sierra College Boulevard.*

Sewer. Extend a new trunk sewer parallel to Dry Creek from the confluence of Miner's Ravine Creek and Secret Ravine Creek to the City plant.

Water. Fully extend the water main (approximately 36 inches) from south of Douglas Boulevard to Taylor Road.

The balance of public improvements can be provided incrementally as a function of parcel development.

Phase Three:

Number of employees to be accommodated: 7,900

Number of dwelling units to be accommodated: --

Needed Improvements:

Roads:

1. *Douglas Boulevard - Widen and install curb and gutter from Atlantic Street to East Roseville Parkway.*

2. *Lead Hill Road - Widen to four lanes from the western property to East Roseville Parkway.*

3. *East Roseville Parkway - Install four lanes and landscape median from Douglas Boulevard to Lead Hill Road. Install four lanes and Secret Ravine Creek bridge from Sunrise Avenue to Taylor Road.*

4. *Sunrise Avenue - Install Miner's Ravine Creek bridge and extend four lanes to East Roseville Parkway. Install full six lanes on six-lane portion.*

5. *Atlantic Street - Widen to full six lanes.*

6. *Sierra College Boulevard - Widen to four lanes and install curb and gutter.*

All other utilities have been installed to accommodate this level of development or can be installed incrementally as a function of parcel development.

Phase Four:

Number of employees to be accommodated: 12,150

Number of dwelling units to be accommodated: --

Needed Improvements:

Roads:

1. *East Roseville Parkway - Install six lanes, with landscape median, from Douglas Boulevard to the Miner's Ravine Creek bridge. Install Miner's Ravine Creek bridge and four lanes from Miner's Ravine Creek to Sunrise Avenue.*

2. *Douglas Boulevard - Install curb and gutter and lane improvements from eastern property line to East Roseville Parkway.*

3. *East Roseville Parkway - Construct six lane I-80 overpass from Taylor Road to connect the project on west side of I-80.*

4. *Rocky Ridge Drive - Complete connection to East Roseville Parkway with full four-lane width.*

Phase Five:

Number of employees to be accommodated: 17,525

Needed Improvements:

Roads:

1. *Install urban interchanges at East Roseville Parkway intersections with Douglas Boulevard, Lead Hill Road, and Rocky Ridge Drive if Highway 65 extension or connection is not achieved.*

2. *Install six lanes on East Roseville Parkway.*

Design Element

Goals:

1. *To achieve building densities reflective of the suburban character of the larger community, while preserving old and establishing new open space opportunities for residents, visitors, and employees.*

2. *To orient development toward the vistas and the ravines in such a way that living and working spaces are enhanced.*

3. *To establish a landscape for the Northeast Area Specific Plan that reflects the current site geology and vegetation as well as the climatic conditions which prevail in the Roseville area.*

4. *To provide a landscape that reflects health and safety goals, energy conservation, and achieves screening of unattractive views and features.*

5. *To achieve building design and layout that emphasizes harmony in architectural form and materials within a project and with the character of the immediate area.*

Objectives:

1. *Development of sites which attain the following criteria:*

   a. *Minimize disruption of natural features within the grade and design requirements of suburban development.*

   b. *Reflect and be compatible with the character of surrounding development.*

   c. *Provide a well-designed, functionally complete plan for the entire building site.*

   d. *Recognize the climatological realities of summers and winters in Roseville.*

2. *Development of sites aesthetically attractive in a manner reflective of site geology, intended use, and preexisting site landform.*

3. *Development of an internal site circulation system that minimizes impacts on the surrounding streets.*

Proposed Land Uses

The Specific Plan provides for the development of 866.9 acres (53.1 percent of the Plan area) in urbanized uses; the preservation of 83.6 acres (5.1 percent) in undeveloped open space; the retention of 531.3 acres (32.5 percent) for future urban uses; and the maintenance of 151.0 acres (9.2 percent) in

agricultural uses (see Figure 2-3 for a map of the proposed land uses). As indicated in Table 2-1, a total of 1,800 dwelling units and 7,526,370 square feet (sf) of commercial, office, and research and development uses are provided for in the Specific Plan.

Residential Development. The Specific Plan proposes to develop 1,800 residential dwelling units at densities ranging from 5.5 to 12 units per acre. Figure 2-4 presents a schematic drawing of the proposed residential uses as they would likely develop on parcel 4 (see Figure 2-3). Due to the unique geologic conditions, topography, and electrical transmission line easements, construction would be in cluster housing, townhouses, and apartments with common open spaces. Residential development would occur primarily within the interior of the site along East Roseville Parkway and Sierra College Boulevard.

Commercial Development. The proposed commercial uses (approximately 2.2 million sf) are planned for development as highway commercial along Taylor Road (0.4 million sf or 16.9 percent of total commercial uses); community centers on Douglas Boulevard and Sunrise Avenue (0.6 million sf or 27.2 percent); and a regional shopping center (1.2 million sf or 55.9 percent) between Sunrise Avenue and Rocky Ridge Drive. The highway commercial uses are likely to include a hotel and typical freeway-oriented services, such as fast food restaurants, sit-down chain restaurants, and gas stations.

The community shopping centers are expected to develop with a department store, as an anchor, together with other retail and service-oriented businesses. Figure 2-5 presents an illustrative schematic of parcels 11 and 12. Parcel 12 (southern half) would contain one of the community centers.

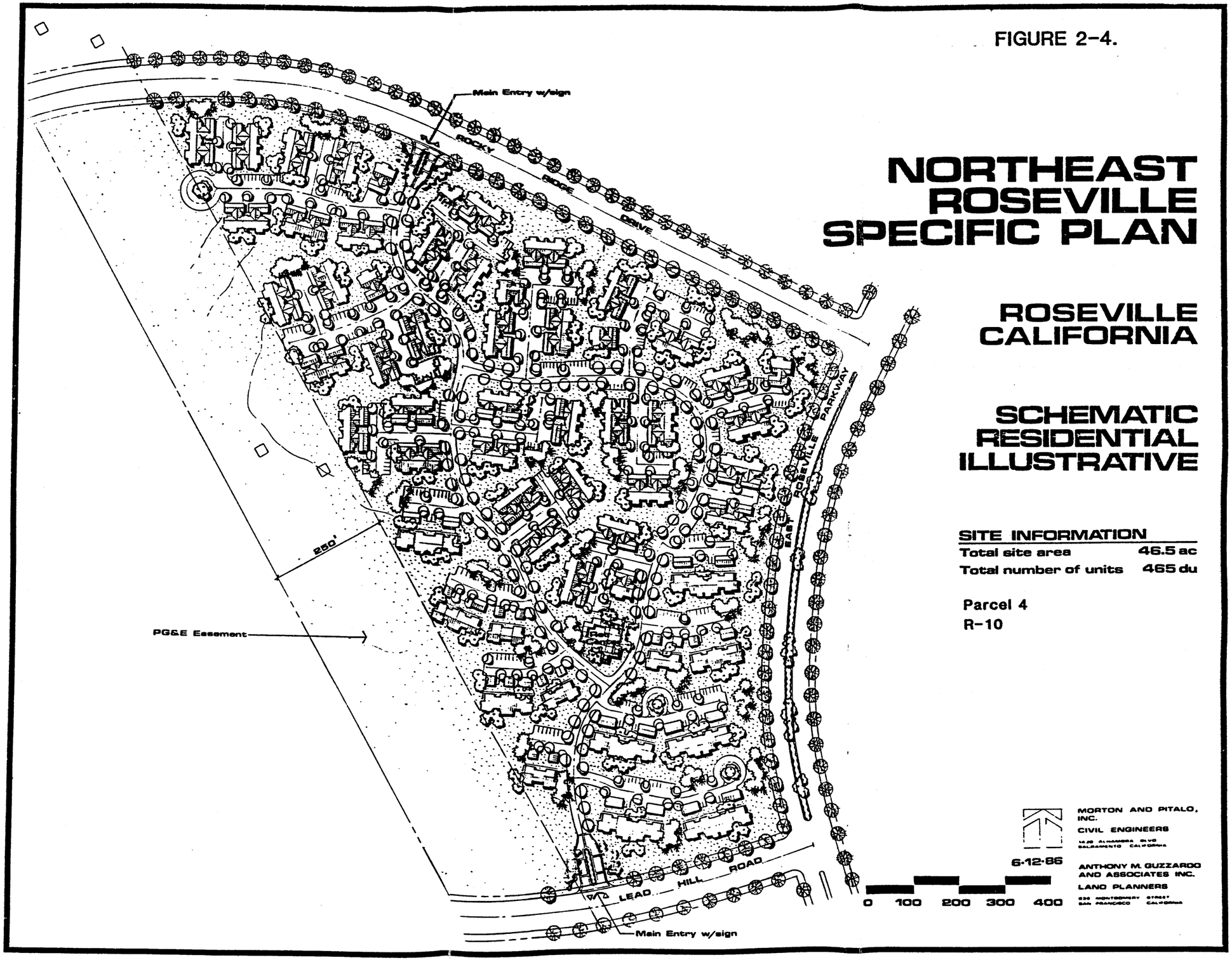
The proposed regional shopping mall (parcel 13) is expected to include major department stores, like Weinstocks or Macy's, and associated retail support uses. The mall would contain distinct architectural themes and be designed to create an aesthetically-pleasing shopping environment (see Figure 2-6).

All commercial areas would have bicycle and pedestrian access to the residential areas of east Roseville.

Business Park and Professional Office Development. Approximately 2.5 million sf of office space are envisioned on Douglas Boulevard and Lead Hill Road. The Specific Plan contemplates two major types of development. The first element is the single user or major tenant type office; the second type would feature a business park with multiple-tenant uses, generally in single-story building configurations.

R&D Park. The proposed R&D park would be developed on parcel 15. Figure 2-7 presents a conceptual design for this park aimed at creating a campus-like environment. Maximum

FIGURE 2-4.



NORTHEAST ROSEVILLE SPECIFIC PLAN

ROSEVILLE CALIFORNIA

SCHEMATIC RESIDENTIAL ILLUSTRATIVE

SITE INFORMATION

Total site area	46.5 ac
Total number of units	465 du

Parcel 4
R-10

6-12-86

0 100 200 300 400

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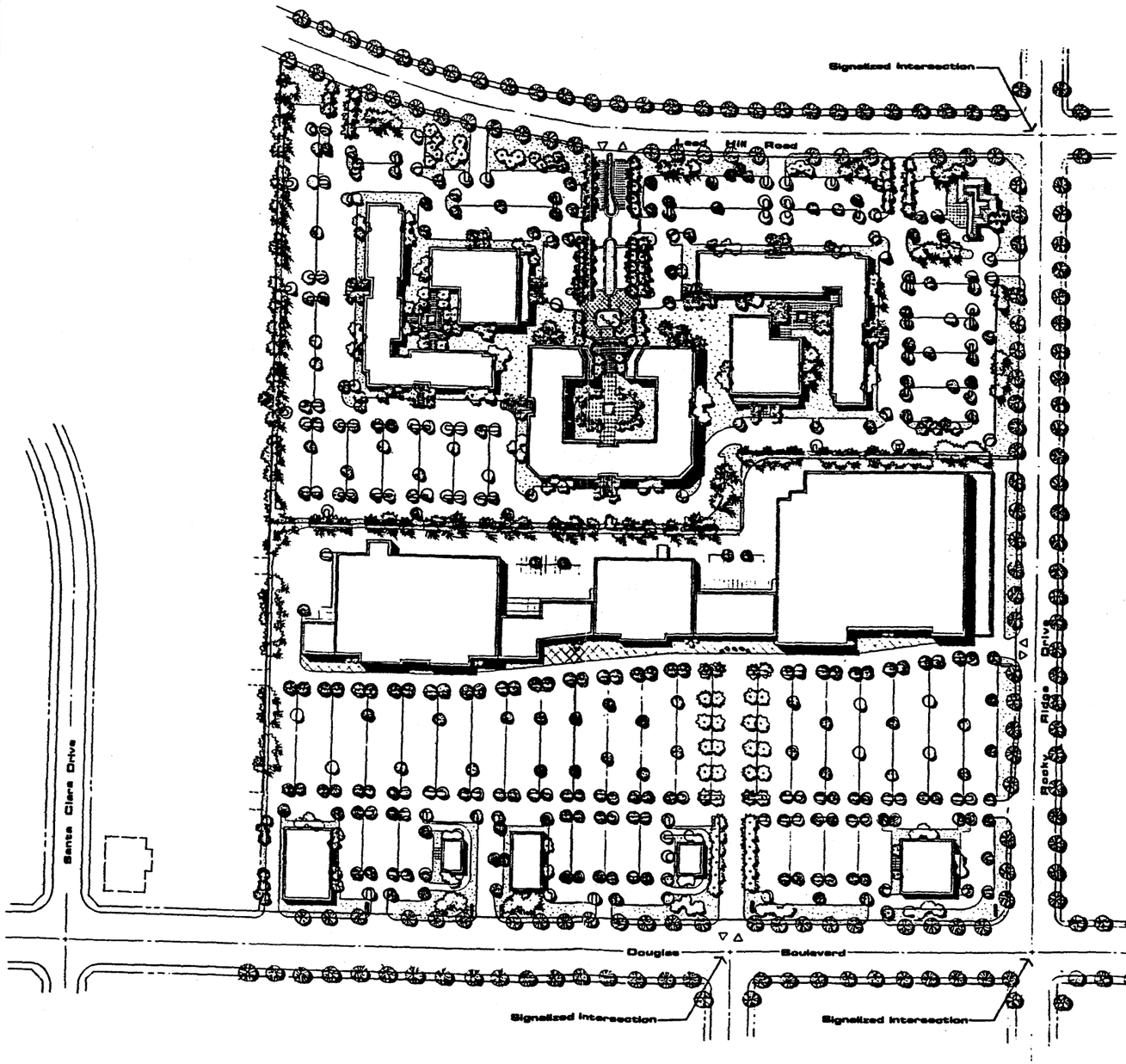
FIGURE 2-5.



NORTHEAST ROSEVILLE SPECIFIC PLAN

ROSEVILLE CALIFORNIA

SCHEMATIC BUSINESS PROFESSIONAL & COMMERCIAL ILLUSTRATIVE

SITE INFORMATION

Total Site Area 43.46ac

Parcel 11 on Lead Hill Road is BP

Parcel 12 on Douglas Boulevard is COM

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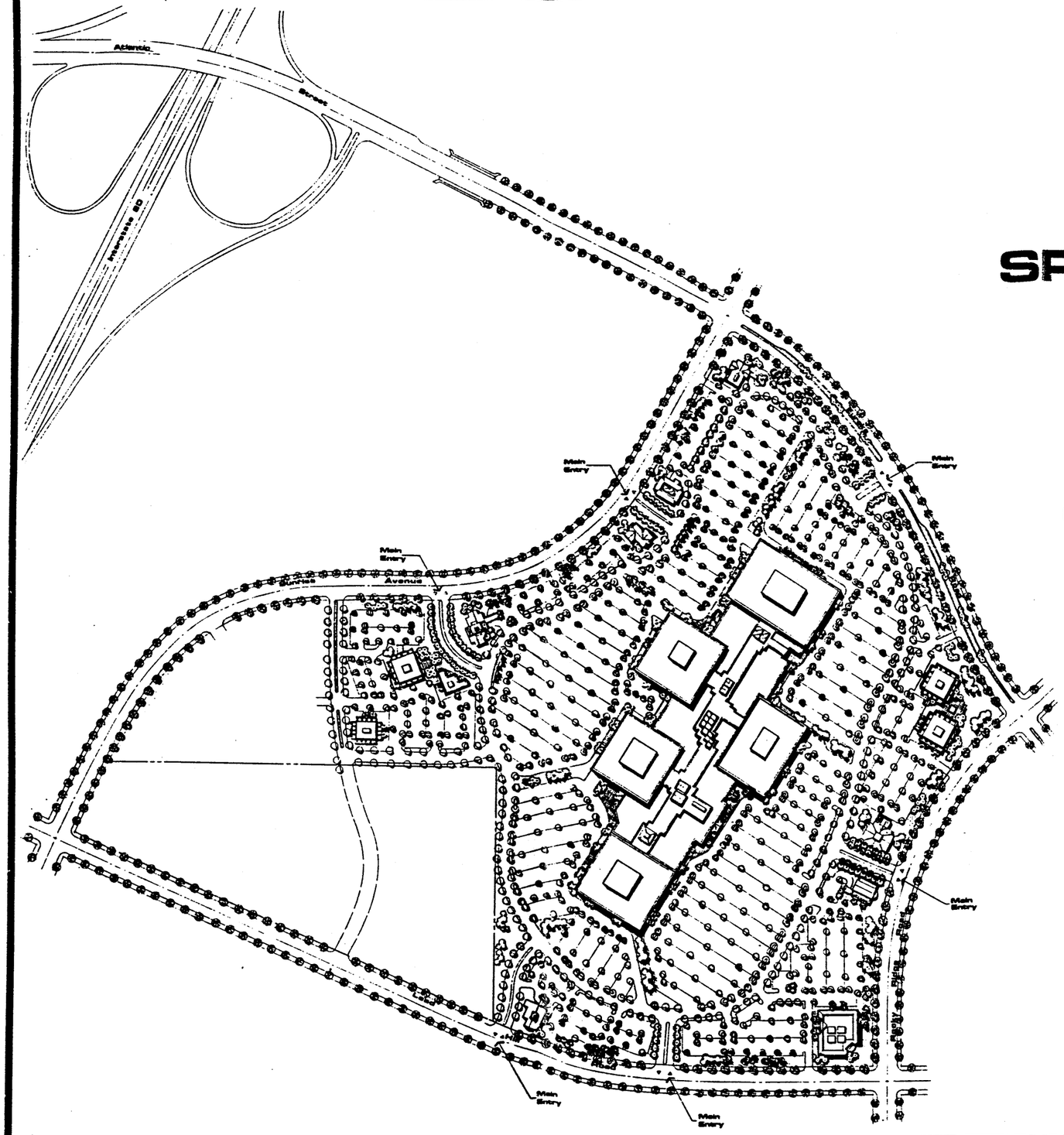
FIGURE 2-6.



NORTHEAST ROSEVILLE SPECIFIC PLAN

ROSEVILLE CALIFORNIA

SCHEMATIC COMMERCIAL CENTER ILLUSTRATIVE

SITE INFORMATION

Total Site Area 96.7ac

Regional Mall

Parcel 13

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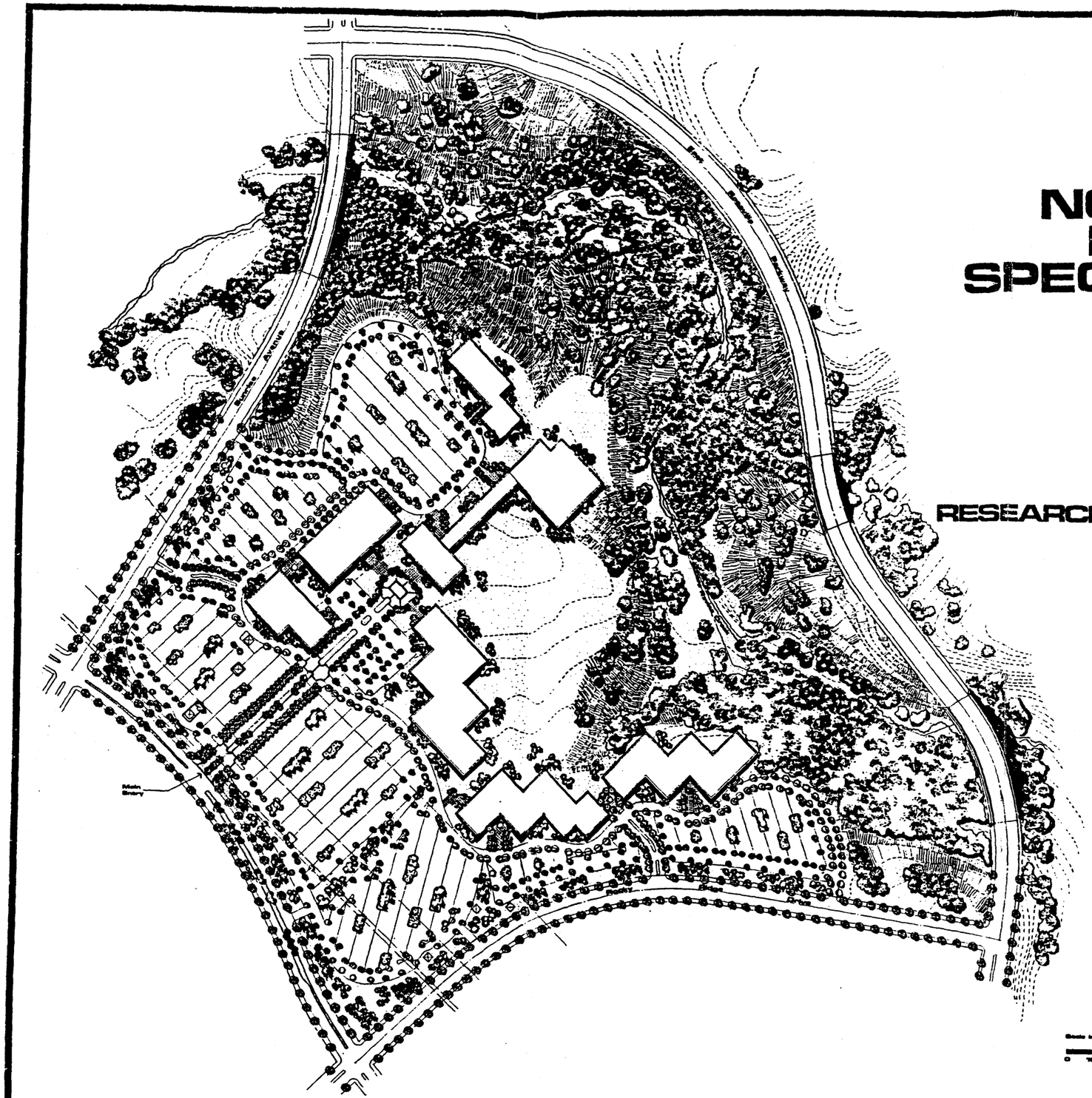
0 100 200 300 400 500 600

FIGURE 2-7.



NORTHEAST ROSEVILLE SPECIFIC PLAN

ROSEVILLE CALIFORNIA

SCHEMATIC
RESEARCH & DEVELOPMENT
ILLUSTRATIVE

SITE INFORMATION

Total Site Area 140.2ac

R & D Park

Parcel 15

Scale in Feet
0 100 200 300 400 500 600

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Table 2-1. Proposed Northeast Roseville Specific Plan Land Uses

	Gross Acreage	Net Acreage[1]	Square Feet	Dwelling Units
Residential Uses				
R-5.5	65.4	55.6		357[5]
R-9	73.8	62.7		510[5]
R-10	46.5	39.5		465
R-12	39.0	33.2		468
Subtotal	224.7	191.0		1,800
Employment-Generating Uses				
Highway commercial	50.1	42.6	371,130[2]	
Community commercial	80.9	68.8	599,390[2]	
Regional commercial	96.7	82.2	1,228,500[3]	
Business park and professional office	227.6	193.4	2,527,350[4]	
Research and development	140.2	119.2	2,800,000[3]	
Subtotal	595.5	506.2	7,526,370	
Other Uses				
Fire station	1.0			
Church	30.0			
Subtotal	31.0			
Open Space/Park/Undeveloped Land				
Open space	83.6			
Community park	15.7			
Urban reserve	531.3			
Agricultural	151.0			
Subtotal	781.6			
Total	1,632.8			

[1] Net acreage = 85 percent of gross acreage.

[2] Assumes building coverage of 20 percent and single-story construction.

[3] Miller (pers. comm.) based on preliminary designs by interested users.

[4] Assumes building coverage of 30 percent and single-story construction.

[5] Parcel 5 would develop at less than 9 units per acre due to PGandE transmission line easement and site topography.

building heights would be five stories. Approximately 2.8 million sf of R&D uses are anticipated to develop. The Specific Plan limits the utilization of the site to approximately 5,000 full-time employees.

Other Uses. Parcel 2 of the Plan area would be developed with a community church.

Open Space/Undeveloped Land. The Specific Plan proposes to preserve Miner's Ravine Creek floodplain and its associated canyon-like environment, as well as portions of Secret Ravine Creek and Dry Creek. The oak woodlands along the ravines would also be substantially preserved. The ravines constitute major open space corridors and would become public use lands with a landscape maintenance district designed to provide for their long-term care. Hiking trails and points of public access would be provided.

The Specific Plan designates a total of 531.3 acres for urban reserve and 151.0 acres for agricultural uses. The acreage designated as urban reserve is intended for future urban growth; however, the current Roseville General Plan does not allow for development. Therefore, the analyses in this EIR assume the urban reserve area to be undeveloped.

Public Facilities

The Specific Plan includes a public facilities element which addresses the provision of water service, sewer, drainage, parks, fire station, and schools. The proposed facilities are described in detail in Chapter 6 of this report and summarized briefly below.

Water. As shown in Figure 6-1, the proposed water plan provides for the extension of an existing 36-inch water main along Eureka Road, thereby providing the City with a loop system linking east and west Roseville. The existing on-site pump station located along Taylor Road would also likely require updating (Sommer pers. comm.).

Sewer. Collector lines would follow proposed roadways, as well as Miner's and Secret Ravines. These lines would feed into a proposed 24-inch interceptor along Dry Creek Ravine, an existing 10-inch line along Rocky Ridge Drive, an existing 12-inch line along Douglas Boulevard, and a proposed 12-inch line emanating from Douglas Boulevard to the south (see Figure 6-2). A lift station would also be constructed on-site near the East Roseville Parkway/Douglas Boulevard intersection (Sommer pers. comm.).

Drainage. Runoff from the Plan area occurs in three basic watersheds on the south side of Miner's Ravine Creek. The southeasterly 150 acres drain primarily south into Strap Ravine.

The central portion of the Plan area drains southwest toward Douglas Boulevard, while the remainder drains directly into Miner's Ravine. As shown in Figure 10-3, the proposed drainage plan reflects these three drainage basins and basic directional flows. Runoff generated on-site would flow from street gutters to drainage inlets and eventually into pipes that feed into the on-site creeks. The system would incorporate retardation and water energy dissipators into its design (Sommer pers. comm.). The result should be an approximation of current natural peak flow conditions on downstream creek systems.

Parks. A 15.7-acre park is proposed to meet the park needs of the residential units in the Plan area.

Fire Station. The Specific Plan contemplates a station site near the intersection of Sunrise Avenue and the East Roseville Parkway.

Schools. The Specific Plan provides the option to obtain a school site should either the Eureka or Roseville school district ultimately serve the Plan area.

Circulation System

The proposed circulation system (see Figure 2-8) would connect Douglas Boulevard to I-80 via the extension of Atlantic Street to Eureka Road. A parallel reliever road would be provided to Douglas Boulevard by extending Lead Hill Road to the East Roseville Parkway. Rocky Ridge Drive and Sunrise Avenue would be extended to Eureka Road and to the East Roseville Parkway. In addition, Sierra College Boulevard would be connected to the East Roseville Parkway via an as yet unnamed street.

Each of these roads, with the exception of the unnamed street, would be constructed as six-lane facilities with landscaped corridors of varying widths on each side. The major streets, including Douglas Boulevard, Atlantic Street, and the East Roseville Parkway south of Miner's Ravine, would incorporate landscape medians as extensions of the medians to be constructed in the Southeast Roseville Specific Plan.

Figure 2-9 shows the phasing diagram for the circulation plan.

The construction program for the streets would include signalization of all intersections depicted on the Circulation Plan, as required by the City. Even though bus services are not yet an integral part of the City's circulation system, the Specific Plan anticipates such service by providing bus turnouts and shelters, per City standards.

The off-street circulation system focuses upon the use of the ravines for connection between uses. Construction of these improvements and their maintenance are expected to be accomplished by a special maintenance district as provided for in the Open Space and Resource Conservation Plan. On-street bikeways, pursuant to City standards, would be incorporated along all thoroughfares.

The design element establishes standards for setbacks and streetscapes. The design standards are intended to be compatible with the standards established within the Southeast Specific Plan. Design standards for street sections are shown in Figure 2-10.

Alternatives to the Proposed Project

Lower Intensity Alternative

Figure 2-11 illustrates the Lower Intensity Alternative. The land uses are identical to the proposed Specific Plan except that parcels 6, 7, and 8 shift from business park and professional office to urban reserve, and parcel 14 shifts from commercial to urban reserve. Table 2-2 summarizes the land uses of the Lower Intensity Alternative as compared to the proposed project. As shown, the Lower Intensity Alternative reduces the amount of community commercial by 71 percent, and business park and professional office by 55 percent; it increases the amount of urban reserve by 34 percent.

General Plan Alternative

Figure 2-12 illustrates the General Plan Alternative. Under this alternative the Plan area would develop with the land uses as adopted by the Roseville City Council on November 6, 1985. Table 2-3 summarizes land uses under the General Plan Alternative and shows a comparison to the proposed project. The General Plan Alternative is essentially identical to the proposed Specific Plan. Therefore the analysis in the Draft EIR is limited to the following three impact areas: Chapter 4, Land Use; Chapter 7, Transportation; and Chapter 15, Visual Quality.

No-Project Alternative

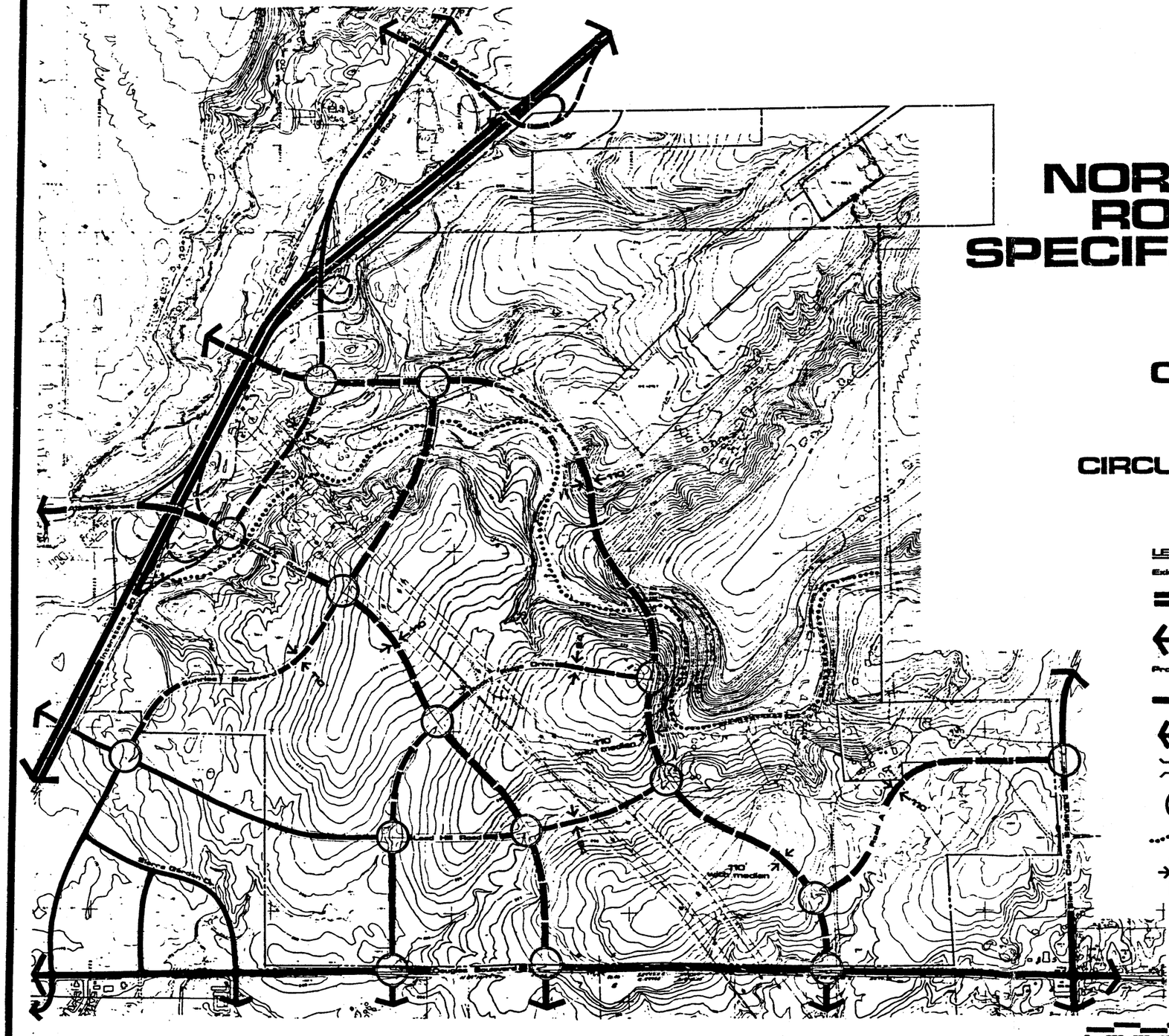
Under this alternative, the Plan area would remain undeveloped in its current use.

FIGURE 2-8.

NORTHEAST ROSEVILLE SPECIFIC PLAN

ROSEVILLE CALIFORNIA

CIRCULATION PLAN



LEGEND

Existing Roads

- Interstate 80
- Major Arterials

Proposed Roads

- 110' ROW Arterials
- 84' ROW Collectors
- Bridge
- Signalized Intersection
- Pedestrian/ Bikeway
- Right of Way Width (ROW)

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0 300 600 900 1800 1500 1800

FIGURE 2-9.

NORTHEAST ROSEVILLE SPECIFIC PLAN

ROSEVILLE CALIFORNIA

CIRCULATION PLAN PHASING DIAGRAM

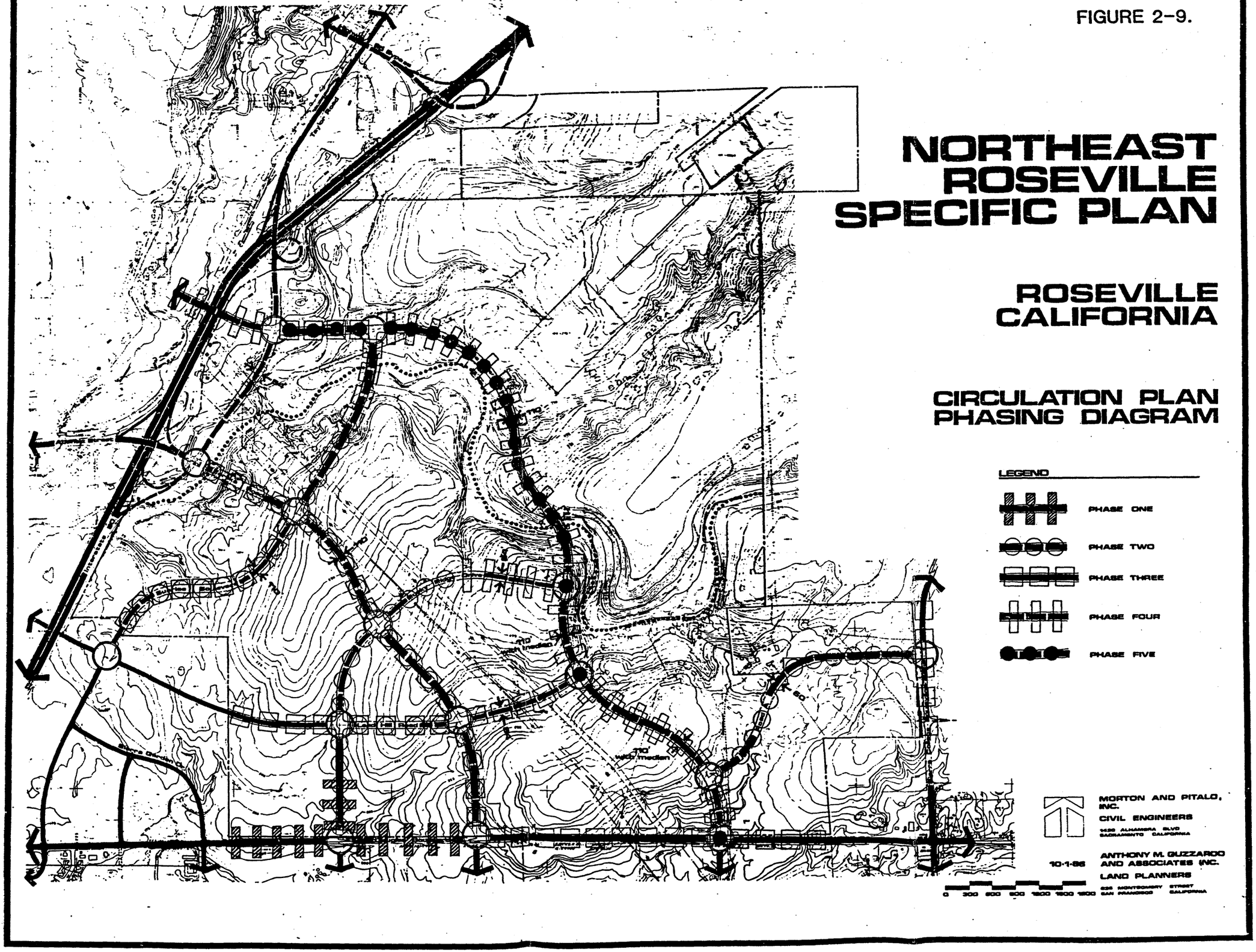
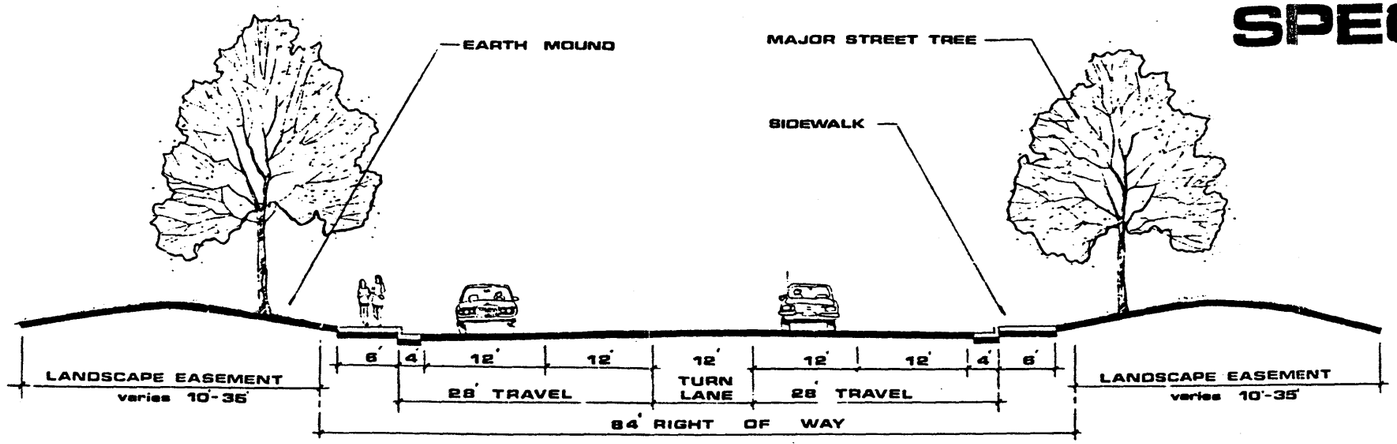


FIGURE 2-10.

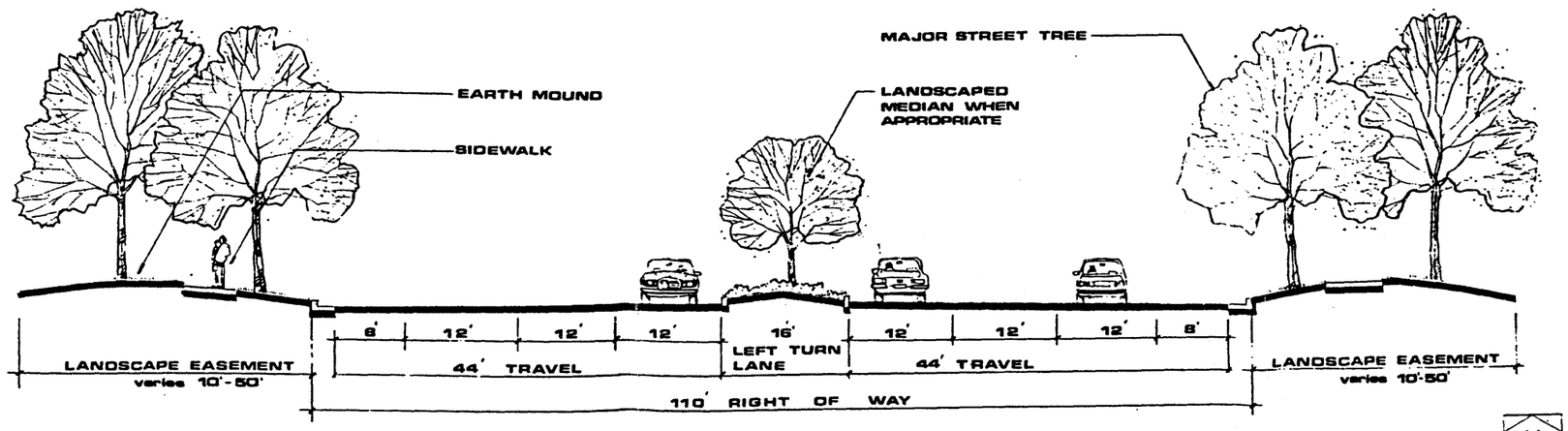
NORTHEAST ROSEVILLE SPECIFIC PLAN

ROSEVILLE CALIFORNIA

STREET SECTIONS



Ⓐ MAJOR STREET



Ⓑ ARTERIAL

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FIGURE 2-11.

NORTHEAST ROSEVILLE SPECIFIC PLAN
LOWER INTENSITY ALTERNATIVE

ROSEVILLE CALIFORNIA

LAND USE PLAN

KEY	LAND USE	UNITS	ACRES
R-5.5	RESIDENTIAL 5.5 units/acre	357	65.4
R-8	RESIDENTIAL 8 units/acre	510	73.8
R-10	RESIDENTIAL 10 units/acre	465	46.5
R-12	RESIDENTIAL 12 units/acre	468	39.0
BP	BUSINESS PARK & PROFESSIONAL OFFICE		103.0
COM	COMMERCIAL		120.2
R&D	RESEARCH & DEVELOPMENT		140.2
HC	HIGHWAY COMMERCIAL		50.1
UR	URBAN RESERVE		713.3
OS	OPEN SPACE		53.6
P	PARK		15.7
(E)	CHURCH		30.0
AG	AGRICULTURE		151.0
	FIRE STATION		1.0
	TOTALS	1800	1532.8

LEGEND
- Major Auto Circulation
- R.R. & E. Transmission Line Easement
- Out Parcel
- Parcel Number

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0 300 600 900 1800 1800 1500

Table 2-2. Lower Intensity Alternative Land Uses

	Gross Acreage		Net Acreage[1]		Square Feet		Dwelling Units	
Residential Uses								
R-5.5	65.4	(0)	55.6	(0)			357[5]	(0)
R-9	73.8	(0)	62.7	(0)			510[5]	(0)
R-10	46.5	(0)	39.5	(0)			465	(0)
R-12	39.0	(0)	33.2	(0)			468	(0)
Subtotal	224.7	(0)	191.0	(0)			1,800	(0)
Employment-Generating Uses								
Highway commercial	50.1	(0)	42.6	(0)	371,130[2]	(0)		
Community commercial	23.5	(-71)	20.0	(-71)	174,240[2]	(-71)		
Regional commercial	96.7	(0)	82.2	(0)	1,228,500[3]	(0)		
Business park and professional office	103.0	(-55)	87.6	(-55)	1,144,760[4]	(-55)		
Research and development	140.2	(0)	119.2	(0)	2,800,000[3]	(0)		
Subtotal	413.5	(-31)	351.6	(-31)	5,718,630	(-24)		
Other Uses								
Fire station	1.0	(0)						
Church	30.0	(0)						
Subtotal	31.0	(0)						
Open Space/Park/Undeveloped Land								
Open space	83.6	(0)						
Community park	15.7	(0)						
Urban reserve	713.3	(+34)						
Agricultural	151.0	(0)						
Subtotal	963.6	(+23)						
Total	1,632.8	(0)						

Note: Numbers in parentheses indicate percentage difference as compared to the proposed Northeast Roseville Specific Plan.

[1] Net acreage = 85 percent of gross acreage.

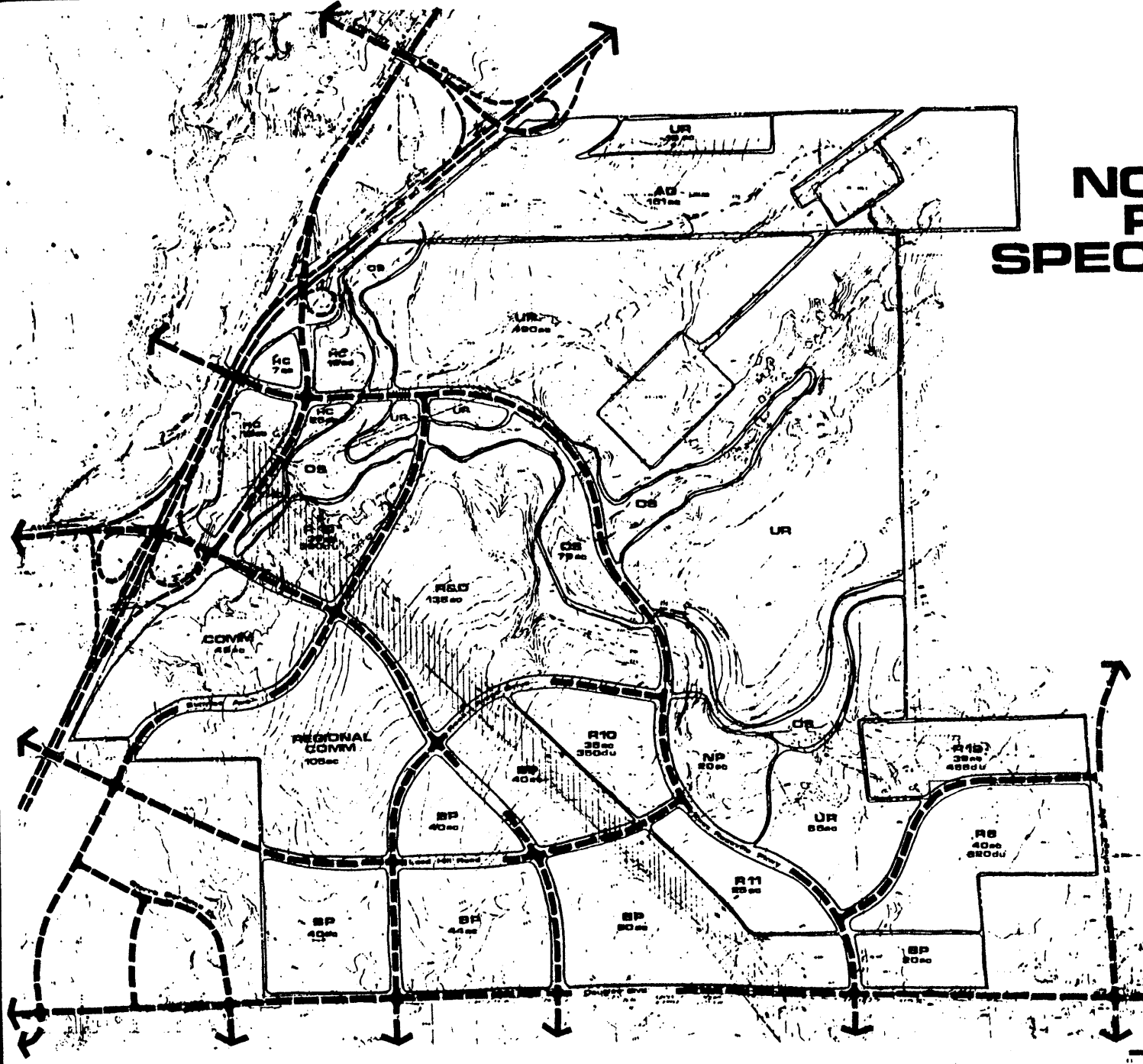
[2] Assumes building coverage of 20 percent and single-story construction.

[3] Miller (pers. comm.) based on preliminary designs by interested users.

[4] Assumes building coverage of 30 percent and single-story construction.

[5] Parcel 5 would develop at less than 9 units per acre due to PGandE transmission line easement and site topography.

FIGURE 2-12.



NORTHEAST ROSEVILLE SPECIFIC PLAN

GENERAL PLAN ALTERNATIVE

ROSEVILLE CALIFORNIA

LAND USE PLAN

KEY	LAND USE	UNITS	ACRES
R-8-9	RESIDENTIAL 8 Units/acre	320	40
R-10	RESIDENTIAL 10units/acre	1483	138
SP	BUSINESS PARK & PROFESSIONAL OFFICE		235
COM	COMMERCIAL		238
R&D	RESEARCH & DEVELOPMENT		143
UR	URBAN RESERVE		665
OS	OPEN SPACE		79
AG	AGRICULTURE		151
NP	PUBLIC		80
	TOTALS	1803	1822

LEGEND

Major Auto Circulation

P.G.& E. Transmission Line Easement

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Table 2-3. General Plan Alternative Land Uses

	Gross Acreage		Net Acreage[1]		Square Feet		Dwelling Units	
Residential Uses								
R-5.5	0	(-100)	0	(-100)			0	(-100)
R-6 - R-9	40	(-46)	34	(-46)			320	(-37)
R-10+	136	(+196)	117.3	(+196)			1,483	(+218)
R-12	0	(-100)	0	(-100)			0	(-100)
Subtotal	178	(-21)	151.3	151.3			1,803	(0)
Employment-Generating Uses								
Highway commercial	64	(+28)	54.4	(+28)	473,933[2]	(+28)		
Community commercial	63	(-22)	53.55	(-22)	466,528[2]	(-22)		
Regional commercial	105	(+8)	89.25	(+8)	1,228,500[3]	(0)		
Business park and professional office	235	(+3)	199.75	(+3)	2,610,333[4]	(+3)		
Research and development	143	(+2)	121.55	(+2)	2,800,000[3]	(0)		
Subtotal	610	(+2)	518.5	(+2)	7,579,294	(1)		
Other Uses								
Fire station	0	(0)						
Church	0	(0)						
Subtotal	0	(0)						
Open Space/Park/ Undeveloped Land								
Open space	79	(-6)						
Community park	20	(+27)						
Urban reserve	585	(+10)						
Agricultural	151	(0)						
Subtotal	835	(+7)						
Total	1,623							

Note: Numbers in parentheses indicate percentage difference as compared to the proposed Northeast Roseville Specific Plan.

[1] Net acreage = 85 percent of gross acreage.

[2] Assumes building coverage of 20 percent and single-story construction.

[3] Miller (pers.comm.) based on preliminary designs by interested users.

[4] Assumes building coverage of 30 percent and single-story construction.

Planning Approvals Required

The following approvals would be required from the City of Roseville prior to implementing the project.

- Certification of the EIR.
- Approval of the Specific Plan.
- One large subdivision dividing the Plan area into its respective parcels.
- Zoning of the individual parcels.
- Approval of tentative maps and final maps.
- Specific site plan approvals.
- Issuance of building permits.

The project applicant would also need to obtain a California Department of Fish and Game Stream or Lake Alteration Agreement (1601-03 Permit) for activities in and crossing the creeks. This agreement applies to any person, government agency, or public utility proposing an activity that will change the natural state of any river, stream, or lake in California. It generally applies to work undertaken within the mean high water mark of a body of water containing fish or wildlife resources or where material will be removed from the streambed.

Applications are evaluated on the basis of the anticipated impact of the proposed project on fish and wildlife resources. Once an application is submitted, a local warden inspects the site, if necessary. For projects that could cause environmental damage or threaten fish or wildlife resources, modification or mitigation measures to the project may be recommended. The project applicant must either agree to comply with any proposed project modifications or enter into arbitration proceedings.

Chapter 3

SUMMARY OF FINDINGS

This section presents a summary of project impacts and mitigation measures and a number of impact conclusions required by CEQA (CEQA Guidelines, Section 15143).

Summary of Impacts and Mitigation Measures

Table 3-1 presents a summary of potentially significant environmental impacts of the proposed project, Lower Intensity Alternative, General Plan Alternative, and summarizes the mitigation measures necessary to reduce adverse impacts to a less-than-significant level. Table 3-2 separately lists less-than-significant impacts prior to mitigation. In some cases, mitigation has been identified for less-than-significant impacts. As noted in Chapter 2, analysis of the General Plan Alternative focused on land use, transportation, and visual quality impacts only.

Table 3-3 lists the impacts and mitigation measures identified in the Year 2005 with Lower Intensity Alternative analysis. Table 3-4 lists the impacts and mitigation measures identified in the Expected Buildout with Proposed Project analysis. These cumulative development scenarios are analyzed in detail in Chapter 17. In these tables, potentially significant impacts have been distinguished from less-than-significant impacts in Column 2 of the tables.

For detailed discussions of these impacts and mitigation measures, refer to the appropriate sections of the text following this chapter.

Growth-Inducement Impacts

Development of the Plan area would increase the pressure to develop lands designated urban reserve and agricultural in the Plan area and adjacent undeveloped land. The impact on the urban reserve lands is less than significant because the urban reserve designation allows for ultimate urban conversion. Conversion pressure on Williamson Act land is also less-than-significant since this area is designated urban reserve and is marginal agricultural land. See Chapter 4, Land Use.

Unavoidable Adverse Impacts

The unavoidable adverse impacts are underlined in Tables 3-1 through 3-4. For those impacts, no mitigation is available other than implementation of the No-Project Alternative. These unavoidable impacts include:

Existing Plus Proposed Project

- Conversion of the Plan area from a large open space area to an urbanized area.
- Contribution to regional air quality problems.
- Contribution to making it more difficult to attain air quality standards in the Regional Air Quality Plan.
- Elimination of approximately 130 vernal pools.
- On-site viewsheds would be significantly impacted by the change in visual resources.
- Viewsheds from Douglas Boulevard would be significantly impacted by elimination of the open, rural visual resource.

Year 2005 with Lower Intensity Alternative

- Contribution to regional air quality problems

Expected Buildout with Proposed Project

- Contribution to regional air quality problems
- Potential violations of carbon monoxide standards

For those botanical and wildlife resources designated with an asterick in first column of Table 3-1, the level of significance after mitigation would depend on the degree of adherence to the recommended design criteria. It should be noted that these impacts have not been underlined in Table 3-1; however, if the design criteria are not developed and implemented in good faith, impacts would be unavoidable.

Effects Not Found to be Significant

The impacts described in Tables 3-1, 3-3, and 3-4 which are not underlined constitute less-than-significant impacts after mitigation. For those botanical and wildlife resources designated with an asterisk in the first column of Table 3-1, the concept described under the section Unavoidable Adverse Impacts applies.

The impacts described in Table 3-2 constitute less-than-significant impacts prior to mitigation.

Less-than-significant impacts associated with the cumulative development scenarios are designated as such in Column 2 of Tables 3-3 and 3-4.

Short-Term Uses of the Environment vs. Long-Term Productivity

The proposed project would result in irretrievable commitments of energy and other nonrenewable resources used in building materials to construct the project, and the loss of open space and grazing land to urbanized uses (no prime agricultural soils exist in the Plan area).

Table 3-1. Summary of Potentially Significant Environmental Impacts and Mitigation Measures[1,2]

		Proposed Northeast Roseville Specific Plan	Alternatives: Lower Intensity Alternative	Alternatives: General Plan Alternative
PROJECT DESCRIPTION		Proposed land uses include 1,800 dwelling units; 50.1 acres highway commercial; 80.9 acres community commercial; 96.7 acres regional commercial; 227.6 acres business park and professional office; 140.2 acres research and development; 1.0 acre fire station; 30.0 acres church; 83.6 acres open space; 15.7 acres community park; 531.3 acres urban reserve; and 151.0 acres agriculture for a total of 1,632.8 acres.	Proposed land uses are identical to Specific Plan except 71 percent less community commercial, 55 percent less business park and professional office, and 34 percent more urban reserve.	Proposed land uses are similar to Specific Plan in number of dwelling units; 28 percent more highway commercial; 22 percent less community commercial; minor differences in regional commercial, business park and professional office and research and development. This alternative does not include fire station or church. Six percent less open space; 27 percent more park, and 10 percent more urban reserve. Because the General Plan Alternative is very similar to the proposed Specific Plan, the analysis is limited to Land Use, Transportation, and Visual Quality.
LAND USE				
Direct Changes in Land Use	Impact	Conversion of the Plan area from a large open space area to an urbanized area.	Similar to proposed project.	Similar to proposed project.
	Mitigation Measure	Implement No-Project Alternative (City of Roseville).	Similar to proposed project.	Similar to proposed project.

[1] Impacts which are underlined signify those which are not expected to be reduced to a less-than-significant level with mitigation. No mitigation is available other than implementation of the No-Project Alternative.

[2] Language in parentheses identifies entity(ies) responsible for implementing mitigation measure; pp = project proponent. Note: funding mechanism and implementation schedule for some mitigation measures which are not the responsibility of the project proponent are unknown.

[3] For those botanical and wildlife resources designated with an asterisk in first column, the level of significance after mitigation would depend on the degree of adherence to the design criteria. It should be noted that these impacts have not been underlined in this table; however, if the design criteria are not developed and implemented in good faith, impacts would be unavoidable.

Table 3-1. Continued

		Proposed Northeast Roseville Specific Plan	Alternatives: Lower Intensity Alternative	Alternatives: General Plan Alternative
General Plan Policy Consistency	Impact	Potential inconsistencies with policies 4, 6, 7, 8, 10, and 37 of Land Use Element; policy 12a of Housing Element; policy 11 of Open Space and Conservation Element; policy 2 of General Safety Element; policies 4, 6, and 10 of Energy Element; and policies 4 and 27 of Public Services and Facilities Element.	Identical to proposed project.	Identical to proposed project.
	Mitigation Measure	Increase densities on some of the parcels where development is proposed at densities less than R-10 (pp and City of Roseville). Enter into an affordable housing development agreement (pp).	Identical to proposed project.	Identical to proposed project.
POPULATION, EMPLOYMENT, AND HOUSING				
	Impact	No potentially significant impacts.	Identical to proposed project.	—
	Mitigation Measure	None required.	Identical to proposed project.	—
PUBLIC SERVICES AND FACILITIES				
Water	Impact	Projected peak demand of 5.2 million gallons per day (mgd) contributing to need for water treatment plant expansion; Specific Plan proposes extension of 36-inch main which would likely be financed in an assessment district.	Projected peak demand of 4.6 mgd contributing to need for water treatment plant expansion; Specific Plan proposes extension of 36-inch main which would likely be financed in an assessment district.	—
	Mitigation Measure	Prepare a detailed cost-revenue analysis (pp). Require standard water conservation measures (City of Roseville).	Similar to proposed project.	—

Table 3-1. Continued

		Proposed Northeast Roseville Specific Plan	Alternatives: Lower Intensity Alternative	Alternatives: General Plan Alternative
PUBLIC SERVICES AND FACILITIES, (continued)				
Wastewater	Impact	Projected peak demand of 4.1 mgd contributing to need for sewage treatment plant expansion; Specific Plan proposes construction of on-site lines, an interceptor, and a lift station which could be financed in an assessment district, Mello-Roos District, or other means.	Projected peak demand of 3.4 mgd contributing to need for sewage treatment plant expansion; Specific Plan proposed construction of on-site lines, an interceptor, and a lift station which could be financed in an assessment district, Mello-Roos District, or other means.	—
	Mitigation Measure	Prepare a detailed cost-revenue analysis, (pp).	Similar to proposed project.	—
Police Protection	Impact	Increased need for police protection services in Plan area; potential for security problems in proposed open space areas; minimum of five additional regular officers, one investigative officer, and additional support personnel required.	Similar to proposed project.	—
	Mitigation Measure	Require site design review by the police department (pp and City of Roseville). Require on-site security (pp and City of Roseville). Evaluate parkway security needs (pp and City Police Department).	Similar to proposed project.	—
Fire Protection	Impact	Increased need for fire protection services in Plan area; Specific Plan contemplates a fire station; potential for hazardous material fire risks if such materials used on-site; 3,000 gallons per minute (gpm) fire flow required for commercial areas and 1,000 gpm for residential areas.	Similar to proposed project.	--
	Mitigation Measure	Prepare and implement a site-specific hazardous waste management plan (pp). Incorporate fire safety measures in new development (pp).	Similar to proposed project.	—

Table 3-1. Continued

		Proposed Northeast Roseville Specific Plan	Alternatives: Lower Intensity Alternative	Alternatives: General Plan Alternative
PUBLIC SERVICES AND FACILITIES, (continued)				
Electrical and Gas Services	Impact	Projected peak electrical demand of 59,000 kW requiring at least one, and possibly two, substations; increased gas demand.	Projected peak electrical demand of 44,500 kW requiring one additional substation; increased gas demand.	--
	Mitigation Measure	Coordinate with energy suppliers (pp). Incorporate conservation/load management measures into new development (pp).	Similar to proposed project.	--
Parks	Impact	Projected demand for 12 acres of neighborhood park, 7 acres of community park, and 24 acres of City-wide park; Specific Plan originally proposed a 15.7-acre neighborhood park, on an area whose topography and configuration may not have been able to accommodate City-recommended playing fields and picnic areas; if community and City-wide park credit not allowed for proposed open space, a deficit could occur; no provision for financing off-site recreation facilities should they be needed.	Identical to proposed project.	—
	Mitigation Measure	Continue consultations with Parks and Recreation in considering alternate park location (pp). Prepare a detailed cost-revenue analysis (pp). Reevaluate open space potential (pp and Roseville Parks and Recreation Department). Require private recreational facility development (City of Roseville).	Identical to proposed project.	--

Table 3-1. Continued

		Proposed Northeast Roseville Specific Plan	Alternatives: Lower Intensity Alternative	Alternatives: General Plan Alternative
PUBLIC SERVICES AND FACILITIES, (continued)				
Schools	Impact	Projected increase of 341-465 students in Eureka Union School District (SD) requiring 8.5-11.5 additional K-6 classrooms and 3.2-4.3 7-8 classrooms; even assuming maximum loading of two new schools in Southeast Roseville, unhoused K-6 students could result; adequate 7-8 capacity expected to exist with proposed school in Southeast Roseville. Projected increase of 55-93 students in Roseville City Elementary SD requiring 1.4-2.5 additional K-6 classrooms and less than one 7-8 classroom; adequate K-6 capacity expected to exist with completion of new school; additional 7-8 students would contribute to potential future overcrowding in existing school. Projected increase of 222-317 students in Roseville Joint Union High SD requiring 7.7-10.9 additional classrooms. School district boundaries would split neighborhoods in Plan area.	Identical to proposed project.	—
	Mitigation Measure	Comply with policies in the school component (pp). Evaluate boundary changes (pp and school districts).	Identical to proposed project.	—
TRANSPORTATION				
	Impact	No potentially significant impacts.	Identical to proposed project.	Identical to proposed project.
	Mitigation Measure	None required. Implement transportation system management measures (pp).	Identical to proposed project.	Identical to proposed project.

Table 3-1. Continued

		Proposed Northeast Roseville Specific Plan	Alternatives: Lower Intensity Alternative	Alternatives: General Plan Alternative
AIR QUALITY				
Contribution to Regional Air Quality Problems	Impact	Increase in traffic-related and other air pollutant emissions that are ozone precursors. Project would contribute to regional ozone problems, incrementally adding to the difficulty in attaining the ozone standard.	Similar but less than proposed project.	--
	Mitigation Measure	Implement No-Project Alternative (City of Roseville). Implementation of planned and recommended transportation improvements and transportation system management (TSM) measures would help reduce impact (pp, City of Roseville, and Caltrans).	Similar to proposed project.	--
Consistency with Regional Air Quality Plan	Impact	The project would generally make attainment of air quality standards more difficult thereby making it more difficult for the Air Quality Plan to succeed.	Similar but less than proposed project.	--
	Mitigation Measure	Implement No-Project Alternative (City of Roseville). Implementation of planned and recommended transportation improvements and TSM measures would help reduce impact (pp, City of Roseville, and Caltrans).	Similar to proposed project.	--
NOISE				
Traffic Noise	Impact	Some residential uses facing major roadways (portions of parcels 3, 4, and 5) could experience potentially significant traffic noise.	Similar to proposed project.	--
	Mitigation Measure	Meet the state noise insulation standards for multi-family residences. Implement residential design considerations (pp).	Similar to proposed project.	--
	Impact	Commercial and office uses near I-80 would be exposed to CNEL levels of 70 dB or more (conditionally acceptable).	Similar to proposed project.	--
	Mitigation Measure	Prepare project-specific noise analyses (pp).	Similar to proposed project.	--

Table 3-1. Continued

		Proposed Northeast Roseville Specific Plan	Alternatives: Lower Intensity Alternative	Alternatives: General Plan Alternative
NOISE, (continued)				
Traffic Noise, (continued)	Impact	Transient lodging within 500 feet of I-80 would be exposed to noise levels considered normally unacceptable. Transient lodging within 500-2,000 feet of I-80 would be exposed to noise levels considered conditionally acceptable.	Similar to proposed project.	—
	Mitigation Measure	Locate hotels and/or motels further than 500 feet from I-80. Prepare project-specific noise analyses for hotels and/or motels within 500-2,000 feet of I-80 (pp).	Similar to proposed project.	—
HYDROLOGY AND DRAINAGE				
Surface Drainage	Impact	Potential 30-68 percent increase in runoff for a 10-year storm event thereby affecting downstream facilities; potential for streamflow restrictions to increase upstream water levels with construction of five creek crossings.	Potential 26-56 percent increase in runoff for a 10-year storm event thereby affecting downstream facilities; potential for streamflow restrictions to increase upstream water levels with construction of five creek crossings.	—
	Mitigation Measure	Develop comprehensive drainage study (pp). Implement runoff reduction measures (pp). Design stream crossing structures to ensure minimal flow restriction (pp).	Similar to proposed project.	—

Table 3-1. Continued

		Proposed Northeast Roseville Specific Plan	Alternatives: Lower Intensity Alternative	Alternatives: General Plan Alternative
WATER QUALITY AND FISHERIES				
Short-Term Impacts	Impact	Potential increase in sedimentation and pollutant transport to creeks during construction resulting in degradation of spawning, rearing, and food-producing chinook salmon and steelhead trout habitat.	Similar to proposed project.	--
	Mitigation Measures	Implement precautionary measures during design and construction to minimize water quality degradation (pp).	Similar to proposed project.	--
Long-Term Impacts	Impact	Increase in urban runoff to creeks potentially resulting in degraded water quality; potential water quality problems if proposed sewer line breaks thereby threatening fish population; potential reduction in stream productivity if removal of riparian vegetation increases stream temperatures; increase runoff could flush fish fry out of creek.	Similar to proposed project.	--
	Mitigation Measure	Implement runoff reduction measures to reduce long-term water quality impacts (pp). Establish design criteria for construction in the ravines (pp).	Similar to proposed project.	--
TOPOGRAPHY, GEOLOGY, AND SOILS				
Geology	Impact	Potential problems related to grading, utility, installation, and conventional foundations on Mehrten Volcanic; potential inconsistency with City policy limiting development on Mehrten Formations to nonresidential uses or high-density residential uses where landscaping can be provided.	Similar to proposed project.	--
	Mitigation Measure	Conduct detailed geotechnical investigations prior to final design (pp). Implement alternative development approaches on Mehrten Formations (pp).	Similar to proposed project.	--

Table 3-1. Continued

		Proposed Northeast Roseville Specific Plan	Alternatives: Lower Intensity Alternative	Alternatives: General Plan Alternative
TOPOGRAPHY, GEOLOGY, and SOILS, (continued)				
Soils	Impact	Potential for increased erosion, shrink-swell problems, and construction-related problems on dredge tailings.	Similar to proposed project.	--
	Mitigation Measure	Prepare and implement an erosion and sediment control plan (pp). Use precautionary engineering practices for shrink-swell soils (pp). Use precautionary engineering and design practices for dredge tailings (pp).	Similar to proposed project.	--
BOTANICAL AND WILDLIFE RESOURCES[3]				
Northern Volcanic Mudflow Vernal Pools (Botanical Resources)	Impact	Elimination of approximately 130 vernal pools, or 1.3 acres. From a biological and policy perspective this impact is considered significant.	Elimination of approximately 30 vernal pools, or 0.84 acre. From a biological and policy perspective, this impact is considered significant.	—
	Mitigation Measure	Determine the feasibility of protecting and preserving vernal pool habitat in the area proposed for development (pp and City of Roseville). Dedicate a vernal pool complex in the urban reserve area to perpetual open space (pp, City of Roseville, and possibly other entities).	Similar to proposed project.	—
* Oak Woodland and Riparian Woodland (Botanical Resources)	Impact	Construction of bridges, roads, bike paths, pedestrian trails, and sewer lines would require removal of habitat.	Similar to proposed project.	—
	Mitigation Measure	Establish a tree preservation management plan (pp). Establish design criteria for construction in the ravines (pp). The level of significance after mitigation would depend on the nature of and degree of adherence to the criteria.	Similar to proposed project.	--

[3] For those botanical and wildlife resources designated with an asterisk in first column, the level of significance after mitigation would depend on the degree of adherence to the design criteria. It should be noted that these impacts have not been underlined in this table; however, if the design criteria are not developed and implemented in good faith, impacts would be unavoidable.

Table 3-1. Continued

		Proposed Northeast Roseville Specific Plan	Alternatives: Lower Intensity Alternative	Alternatives: General Plan Alternative
BOTANICAL RESOURCES, (continued)				
* Oak Woodland and Riparian Woodland (Wildlife Resources)	Impacts	Construction of bridges, roads, bike paths, pedestrian trails, and sewer lines could degrade or eliminate associated wildlife species. Potential for fragmenting streamside corridor thereby impeding movements of wide-ranging species. Potential disturbance to wildlife by pedestrians, pets, and maintenance activities on roads and trails.	Similar to proposed project.	--
	Mitigation Measures	Bridges, roads, bike paths, pedestrian trails: Establish a tree preservation management plan (pp). Establish design criteria for construction in the ravines (pp). The level of significance after mitigation would depend on the nature of and degree of adherence to the criteria. Sewer lines: Establish design criteria for construction in the ravines. Impacts would be mitigated to a less-than-significant level by placement of lines outside the ravines; alternatively, if sewer line relocation is not feasible, impacts could also be mitigated by establishing design criteria (pp). The level of significance after mitigation would depend on the nature of and degree of adherence to the criteria.	Similar to proposed project.	--
Special-Status Wildlife Species	Impact	If trees containing Cooper's hawks' nests are cut down during their breeding season, significant impacts would occur.	Similar to proposed project.	--
	Mitigation Measure	Conduct raptor nest surveys in riparian areas to be subject to construction (pp).	Similar to proposed project.	--

Table 3-1. Continued

		Proposed Northeast Roseville Specific Plan	Alternatives: Lower Intensity Alternative	Alternatives: General Plan Alternative
HAZARDOUS MATERIALS	Impact	Potentially adverse impact on tiger salamanders (federal category 2 species), if they are contained in vernal pools within the Plan area.	Similar to proposed project.	—
	Mitigation Measure	Determine the feasibility of protecting and preserving vernal pool habitat in the area proposed for development (pp, City of Roseville, and possibly other entities).	Similar to proposed project.	—
	Impact	If hazardous materials stored or used on-site, potential for uncontrolled or undetected release of such materials.	Similar to proposed project.	—
	Mitigation Measure	Comply with all requirements of Roseville Municipal Code (pp). Prepare and implement a site-specific hazardous waste management plan (pp).	Similar to proposed project.	—
VISUAL QUALITY				
On-Site Views	Impacts	On-site viewsheds would be significantly impacted by the change in visual resources.	Similar to proposed project.	Similar to proposed project.
	Mitigation Measure	Develop and implement landscape design guidelines (pp).	Similar to proposed project.	Similar to proposed project.
Off-Site Views	Impact	Viewsheds from Douglas Boulevard would be significantly impacted by elimination of the open, rural visual resource.	Similar to proposed project.	Similar to proposed project.
	Mitigation Measure	Develop and implement landscape design guidelines (pp).	Similar to proposed project.	Similar to proposed project.

Table 3-2. Summary of Less-Than-Significant Environmental Impacts and Mitigation Measures[1,2]

		Proposed Northeast Roseville Specific Plan	Alternatives: Lower Intensity Alternative	Alternatives: General Plan Alternative
LAND USE				
Direct Changes in Land Use	Impact	Loss of agricultural land.	Identical to proposed project.	Identical to proposed project.
	Mitigation Measure	None required.	Identical to proposed project.	Identical to proposed project.
Adjoining Use Compatibility	Impacts	No land use conflicts with adjacent uses are expected to occur.	Identical to proposed project.	Identical to proposed project.
	Mitigation Measure	None required.	Identical to proposed project.	Identical to proposed project.
Market Impacts on Downtown Roseville	Impact	The degree of impact is difficult to assess, but is expected to be less-than-significant.	Similar to proposed project.	Similar to proposed project.
	Mitigation Measures	None required.	Similar to proposed project.	Similar to proposed project.
General Plan Consistency	Impact	The proposed land use designations are essentially identical to the General Plan designations. The differences are insignificant.	Similar to proposed project.	This alternative reflects approved uses; therefore, no adverse impact would occur.
	Mitigation Measure	None required.	Similar to proposed project.	Similar to proposed project.
South Placer Policy Plan Consistency	Impacts	Growth proposed by Specific Plan should support policies of South Placer Policy Committee.	Similar to proposed project.	Similar to proposed project.
	Mitigation Measure	None required. Evaluate the Specific Plan for compliance with the South Placer Policy Plan (City of Roseville).	Similar to proposed project.	Similar to proposed project.

[1] Impacts which are underlined signify those which are not expected to be reduced to a less-than-significant level with mitigation. No mitigation is available other than implementation of the No-Project Alternative.

[2] Language in parentheses identifies entity(ies) responsible for implementing mitigation measure; pp = project proponent. Note: funding mechanism and implementation schedule for some mitigation measures which are not the responsibility of the project proponent are unknown.

Table 3-2. Continued

		Proposed Northeast Roseville Specific Plan	Alternatives: Lower Intensity Alternative	Alternatives: General Plan Alternative
Growth Inducement	Impact	Impact on urban reserve lands is less than significant because urban reserve designation allows for ultimate urban conversion.	Similar to proposed project.	Similar to proposed project.
	Mitigation Measure	None required.	Similar to proposed project.	Similar to proposed project.
POPULATION, HOUSING, AND EMPLOYMENT				
Population	Impact	Projected generation of 4,680 persons in plan area; potential for population generation off-site from secondary employment.	Identical to proposed project.	—
	Mitigation Measure	None required.	Identical to proposed project.	—
Housing	Impact	Generation of 1,800 units in Plan area; City's planned development ordinance and Housing Element and South Placer Policy Committee's policies would ensure adequate housing supply and suitable densities and prices.	Identical to proposed project.	—
	Mitigation Measure	None required.	Identical to proposed project.	—
Employment	Impact	Generation of 18,026 direct jobs in Plan area; potential for generating secondary jobs off-site in Roseville and region.	Generation of 12,642 direct jobs in Plan area; potential for generating secondary jobs off-site in Roseville and region.	—
	Mitigation Measure	None required.	Identical to proposed project.	—

Table 3-2. Continued

		Proposed Northeast Roseville Specific Plan	Alternatives: Lower Intensity Alternative	Alternatives: General Plan Alternative
PUBLIC SERVICES AND FACILITIES				
Solid Waste	Impact	Projected daily generation of 50 tons which could be accommodated at the existing Western Regional Sanitary Landfill.	Projected daily generation of 39 tons which could be accommodated at the existing Western Regional Sanitary Landfill.	--
	Mitigation Measure	None required.	None required.	--
TRANSPORTATION				
	Impact	Proposed project would generate about 99,000 primary daily vehicle trips. Assuming Route 65 Bypass improvements and on-site roadway system in place, screenlines would all operate within their design capacities. All the necessary improvements are planned as part of the Specific Plan or to support other development in Roseville.	Impacts would be less than proposed project. Detailed analysis is presented in the cumulative analysis.	Essentially identical to proposed project.
	Mitigation Measure	None required. Implement transportation system management measures (pp and City of Roseville).	Identical to proposed project.	Identical to proposed project.
AIR QUALITY				
Construction-Related Impacts	Impact	Construction-related impacts due to dust would be less-than-significant.	Identical to proposed project.	--
	Mitigation Measure	None required. Implement dust-reducing construction practices (pp).	Identical to proposed project.	--
Potential for Localized Carbon Monoxide Problems	Impact	No violations of carbon monoxide standards are projected.	Similar but less than proposed project.	--
	Mitigation Measure	None required.	Identical to proposed project.	--

Table 3-2. Continued

		Proposed Northeast Roseville Specific Plan	Alternatives: Lower Intensity Alternative	Alternatives: General Plan Alternative
NOISE				
Construction Noise	Impact	Construction noise could result in annoyance to nearby residents.	Identical to proposed project.	—
	Mitigation Measure	Limit construction activities to daytime hours (pp).	Identical to proposed project.	—
HYDROLOGY AND DRAINAGE				
Groundwater Recharge	Impact	Insignificant loss of potential recharge area.	Similar to proposed project.	—
	Mitigation Measure	None required.	Similar to proposed project.	--
WATER QUALITY AND FISHERIES	Impact	No less-than-significant impacts.	Similar to proposed project.	--
	Mitigation Measure	None required.	Similar to proposed project.	--
TOPOGRAPHY, GEOLOGY, AND SOILS				
Topography	Impact	Insignificant impacts since project designed to avoid steeper slopes.	Similar to proposed project.	—
	Mitigation Measure	None required.	Similar to proposed project.	—
Seismicity	Impact	Insignificant impact.	Identical to proposed project.	—
	Mitigation Measure	None required.	Identical to proposed project.	—

Table 3-2. Continued

		Proposed Northeast Roseville Specific Plan	Alternatives: Lower Intensity Alternative	Alternatives: General Plan Alternative
BOTANICAL AND WILDLIFE RESOURCES				
Annual Grassland (Botanical Resources)	Impact	From a floristic state-wide standpoint, the removal of 867 acres of grassland is not considered significant. From a local perspective, the removal is considered cumulatively important.	From a floristic, state-wide standpoint, the removal of 685 acres of grassland is not considered significant. From a local perspective, the removal is considered cumulatively important.	--
	Mitigation Measure	None required.	Similar to proposed project.	--
Special-Status Plant Taxa	Impact	No direct impacts anticipated.	Identical to proposed project.	--
	Mitigation Measure	None required.	Similar to proposed project.	--
Annual Grassland and Northern Volcanic Vernal Pools (Wildlife Resources)	Impact	Potential loss of associated non-special-status species. From a biological perspective, this impact is not considered significant (see also "Special Status Wildlife Species" above).	Similar to proposed project.	--
	Mitigation Measure	None required.	Similar to proposed project.	--
VISUAL QUALITY				
On-Site Views	Impact	Construction in ravine areas is considered less than significant because most of the ravine would be retained as natural open space.	Similar to proposed project.	Similar to proposed project.
	Mitigation Measure	None required.	Similar to proposed project.	Similar to proposed project.
Off-Site Views	Impact	Viewsheds from Sierra College Boulevard would not be significantly impacted.	Identical to proposed project.	Identical to proposed project.
	Mitigation Measure	None required.		

Table 3-2. Continued

		Proposed Northeast Roseville Specific Plan	Alternatives: Lower Intensity Alternative	Alternatives: General Plan Alternative
CULTURAL RESOURCES	Impact	Site R-1 could be impacted.	No impacts.	—
	Mitigation Measure	None required. Avoid the site or provide detailed testing.	Identical to proposed project.	—
	Impact	Site R-2 could be impacted.	None required.	—
	Mitigation Measure	None required. Avoid the site or provide detailed testing.	None required.	—
	Impact	Impacts to CA-Pla-514 are minimal.	Identical to proposed project.	—
	Mitigation Measure	None required.	Identical to proposed project.	—

[1] Impacts which are underlined signify those which are not expected to be reduced to a less-than-significant level with mitigation. No mitigation is available other than implementation of the No-Project Alternative.

[2] Language in parentheses identifies entity(ies) responsible for implementing mitigation measure; pp = project proponent. Note: funding mechanism and implementation schedule for some mitigation measures which are not the responsibility of the project proponent are unknown.

Table 3-3. Year 2005 with Lower Intensity Alternative Impacts and Mitigation Measures

Issue Area	Significance	Impacts and Mitigations[1,2]
LAND USE	Potentially Significant Impact	Total development anticipated at over 9,000 acres of residential, commercial, business professional, and industrial uses. Lower Intensity Alternative represents 13 percent of this development. No estimates are available for development in the South Placer region.
	Mitigation Measure	Evaluate projects for compliance with South Placer Policy Plan (City of Roseville).
POPULATION, EMPLOYMENT, AND HOUSING	Potentially Significant Impact	Potential increase in the City to 76,087 people, 29,928 dwelling units, and 57,682 employees. Lower Intensity Alternative represents 6 percent of projected population and dwelling units and 21 percent of projected employees. Potential increase in South Placer region to 213,230 people and 96,590 employees. Lower Intensity Alternative represents less than 3 percent of population and 13 percent of employment.
TRANSPORTATION		
Screenline	Potentially Significant Impact	Screenlines A, I, J, K, D, G, and H would experience significant impacts.
	Mitigation Measure	Widen I-80 to 10 lanes south of Douglas Boulevard interchange; Provide four more arterial lanes of capacity on screenline D than currently planned; Widen and upgrade the Route 65 Bypass to a six-lane expressway or freeway and East Roseville Parkway to a six-lane expressway; Widen Atlantic Street west of I-80; Upgrade Harding Boulevard north of Atlantic Street or expand its capacity (pp, City of Roseville, Caltrans).
Streets and intersections	Potentially Significant Impact	Douglas Boulevard, East Roseville Parkway, Eureka Road, and Harding Boulevard extension would all experience significant impacts. Douglas Boulevard/ Sunrise Avenue, East Roseville Parkway/ Douglas Boulevard, and East Roseville Parkway/Harding Boulevard would all experience significant impacts.
	Mitigation Measure	Widen Douglas Boulevard to six lanes; Widen East Roseville Parkway, Eureka Road extension just east of I-80, and the Harding Boulevard extension between Atlantic Street and East Roseville Parkway to six lanes; Widen Sunrise Avenue to six lanes; Widen section of Atlantic Street/Eureka Road to six lanes; Widen Taylor Road to four lanes west of I-80; Construct urban interchanges at the East Roseville Parkway/Douglas Boulevard and Roseville Parkway/Harding Boulevard intersections (pp, City of Roseville, Caltrans).

Table 3-3. Continued

Issue Area	Significance	Impacts and Mitigations[1,2]
	Less-Than-Significant Impact	Roseville Parkway/Taylor Road and Eureka Road/Sunrise Avenue would experience less-than-significant impacts.
	Mitigation Measure	None required.
AIR QUALITY		
Contribution to Regional Air Quality Problems	Potentially Significant Impact	Increase in traffic-related and other air pollutant emissions that are ozone precursors. Project would contribute to regional ozone problems, incrementally adding to the difficulty in attaining the ozone standard.
	Mitigation Measure	Implement No-Project Alternative (City of Roseville). Implementation of planned and recommended transportation improvements and TSM measures would help reduce impact (pp, City of Roseville, and Caltrans).
Potential for Localized Carbon Monoxide Problems	Potentially Significant Impact	Potential violation of the state and federal 8-hour carbon monoxide standards at Douglas Boulevard/East Roseville Parkway.
	Mitigation Measure	Implement planned and recommended transportation improvements (pp, City of Roseville, and Caltrans).
	Less-than-Significant Impact	Construction would cause dust.
	Mitigation Measure	None required. Implement standard dust-reducing construction practices (pp).
NOISE		
Traffic Noise	Potentially Significant Impact	Some residential uses directly facing major roadways would experience conditionally acceptable noise levels.
	Mitigation Measure	Multi-family residences should be designed to meet state noise insulation standards (pp). Implement residential building design considerations (pp).
	Potentially Significant Impact	Commercial and office uses near I-80 would experience conditionally acceptable noise levels. Transient lodging within 500 feet of I-80 would experience normally unacceptable noise levels. Transient lodging within 500-2,000 feet of I-80 would be exposed to noise levels considered conditionally acceptable.
	Mitigation Measure	Prepare project-specific noise analyses for commercial and office uses near I-80 that are exposed to CNEL levels of 70 dB or more (pp). Locate hotels and/or motels further than 500 feet from I-80 (pp). Prepare project-specific noise analyses for hotels and/or motels within 500-2,000 feet of I-80 (pp).

Table 3-3. Continued

Issue Area	Significance	Impacts and Mitigations[1,2]
NOISE, (continued)		
Construction Noise	Less-than-Significant Impact	Construction noise could result in annoyance to nearby residents.
	Mitigation Measure	None required. Limit construction activities to daytime hours (pp).

[1] Column 2 specifies whether the impact is potentially significant or less-than-significant (prior to mitigation). Impacts which are underlined signify those which are not expected to be reduced to a less-than-significant level with mitigation. No mitigation is available other than implementation of the No-Project Alternative.

[2] Language in parentheses identifies entity(ies) responsible for implementing mitigation measure; pp = project proponent. Note: funding mechanism and implementation schedule for some mitigation measures which are not the responsibility of the project proponent are unknown.

Table 3-4. Expected Build Out with Proposed Project Impacts and Mitigation Measures

Issue Area	Significance	Impacts and Mitigations[1,2]
LAND USE	Potentially Significant Impact	Total development anticipated at over 11,600 acres of residential, commercial, business professional, and industrial uses.
	Mitigation Measure	Evaluate projects for compliance with South Placer Policy Plan (City of Roseville).
POPULATION, EMPLOYMENT, AND HOUSING	Potentially Significant Impact	Potential increase in the City to 90,590 people, 34,685 dwelling units, and 78,315 employees. Project represents 5 percent of population and dwelling units and 22 percent of employment. Potential increase in South Placer region to 263,870 people and 123,420 employees. Project represents less than 2 percent of population and 14.2 percent of employees.
	Mitigation Measure	Evaluate projects for compliance with South Placer Policy Plan (City of Roseville).
TRANSPORTATION		
Screenline	Potentially Significant Impact	Significant impacts to screenlines E, F, C, H, D, M, N, I, J, K, B, and G.
	Mitigation Measure	Upgrade Roseville Parkway both east and west of I-80 to an expressway classification; Upgrade the Route 65 Bypass to freeway status; Provide capacity upgrades for screenlines D, M, and N; Provide additional capacity for north/south travel between Douglas Boulevard and Cirby Way; Widen Sierra College Boulevard to four lanes; Widen Eureka Road to eight lanes (pp, City of Roseville, Caltrans).
AIR QUALITY		
Contribution to Regional Air Quality Problems	Potentially Significant Impact	Increase in traffic-related and other air pollutant emissions that are ozone precursors. Project would contribute to regional ozone problems, incrementally adding to the difficulty in attaining the ozone standard.
	Mitigation Measure	Implement No-Project Alternative (City of Roseville). Implementation of planned and recommended transportation improvements and TSM measures would help reduce impact (pp).

Table 3-4. Continued

Issue Area	Significance	Impacts and Mitigations[1,2]
Potential for Localized Carbon Monoxide Problems	Potentially Significant Impact	Violations of the carbon monoxide standards are expected.
	Mitigation Measure	Implement No-Project Alternative (City of Roseville) Implementation of planned and recommended transportation improvements and TSM measures would help reduce impact (pp).
	Less-than-Significant Impact	Construction would cause dust.
	Mitigation Measure	None required. Implement standard dust-reducing construction practices (pp).
NOISE		
Traffic Noise	Potentially Significant Impact	Some residential uses directly facing major roadways would experience conditionally acceptable noise levels.
	Mitigation Measure	Multi-family residences should be designed to meet state noise insulation standards (pp). Implement residential building design considerations (pp).
	Potentially Significant Impact	Commercial and office uses near I-80 would experience conditionally acceptable noise levels. Transient lodging within 500 feet of I-80 would experience normally unacceptable noise levels. Transient lodging within 500-2,000 feet of I-80 would be exposed to noise levels considered conditionally acceptable.
	Mitigation Measure	Prepare project-specific noise analysis for commercial and office uses near I-80 that are exposed to CNEL levels of 70 dB or more (pp). Locate hotels and/or motels further than 500 feet from I-80 (pp). Prepare project-specific noise analyses for hotels and/or motels within 500-2,000 feet of I-80 (pp).
Construction Noise	Less-Than-Significant Impact	Construction noise could result in annoyance to nearby residents.
	Mitigation Measure	None required. Limit construction activities to daytime hours (pp).

[1] Impacts which are underlined signify those which are not expected to be reduced to a less-than-significant level with mitigation. No mitigation is available other than implementation of the No-Project Alternative.

[2] Language in parentheses identifies entity(ies) responsible for implementing mitigation measure; pp = project proponent. Note: funding mechanism and implementation schedule for some mitigation measures which are not the responsibility of the project proponent are unknown.

Chapter 4

LAND USE

Setting

Regional Land Use

The Plan area is situated in the South Placer region which encompasses approximately 400 square miles within the northeast corner of the Sacramento metropolitan area. The region includes all of Placer County south and west of State Highway 49.

The major growth in the Sacramento region has been to the northeast of the historical core. Interstate 80 (I-80) is the principal transportation route in the area. The South Placer area is recognized as a logical extension of the metropolitan growth trend.

City-Wide Land Use

Substantial planning and development is occurring in the City. The City has designated six major planning areas: Foothills, Northwest, North Industrial, North Central, Northeast, and Southeast (see Figure 4-1). The City Council revised the land uses for some of the specific plan areas in November 1985 when they amended the land use map of the General Plan. The revisions required that several actions occur prior to increases in the land use intensity, including:

- No increase in density, change in land use, or increase in land use intensity in the Northwest, North Central, Northeast, or North Industrial areas could occur until a Specific Plan for the respective area is adopted by the City Council.

- Only one of the Specific Plans shall contain a regional shopping center, even if more than one site is designated on the land use map, and only one such site shall be developed.

- The City Council adopt a Financial Plan as a policy statement.

Specific land uses in the various planning areas are discussed in Chapter 17, Cumulative Impacts. Since only one of the

three designated regional shopping center sites could be developed, it is discussed in this chapter on Land Use.

The three sites designated for regional commercial use are: the 96.7-acre parcel 13 site within the Northeast Specific Plan area; a 65-acre site west of Taylor Road within the North Central Specific Plan area; and a 90-acre site south of the Highway 65 Bypass also within the North Central Specific Plan area.

Downtown Roseville

Historical Growth Trends. The downtown Roseville commercial/retail area was one of the first commercial/retail districts to be established in Roseville. Many of the buildings in the downtown area were constructed around 1909, the year of Roseville's incorporation.

The downtown area, for this study, includes a triangular area bound by Vernon Street on the west, Folsom Road on the northeast and east, and Douglas Boulevard on the south; and the Old Town Roseville area, located northwest of Atlantic Street (see Figure 4-2). The commercial/retail strip along Riverside Avenue between I-80 and Vernon Street is also included as part of the downtown area.

Roseville first experienced commercial activity as early as the 1860s. Much of this activity centered around the railroad yards in the vicinity of Vernon, Atlantic, Pacific, and Lincoln Streets. By 1909, the year of Roseville's incorporation, the downtown business district had become firmly established with a variety of retail and service-oriented shops (Papas pers. comm.). Since the early 1900s, commercial retail growth has spread south along Riverside Avenue, east along Douglas Boulevard, and northwest along Washington Boulevard. In 1962, Roseville Square opened at the corner of Douglas Boulevard and Harding Boulevard, providing 220,000 square feet (sf) of gross leasable retail space (Roseville 1985b). Since then, commercial and retail development has occurred primarily along Douglas Boulevard east of I-80.

Commercial and retail growth in the downtown area has slowed since the 1950s due to route changes and commercial development elsewhere in Roseville and the surrounding areas. In the early 1950s, I-80 was completed along the southeast edge of Roseville. Prior to the completion of I-80, northbound and northeastbound traffic was directed through Roseville (Tapia pers. comm.). Another traffic routing change involved the construction of the Southern Pacific Railroad underpass at Washington Boulevard. Streets connecting Vernon Street with the Old Town business area and residents living northwest of the railroad tracks were then closed off to through traffic. The combination of these two changes in traffic routing decreased auto and foot traffic in the downtown area.

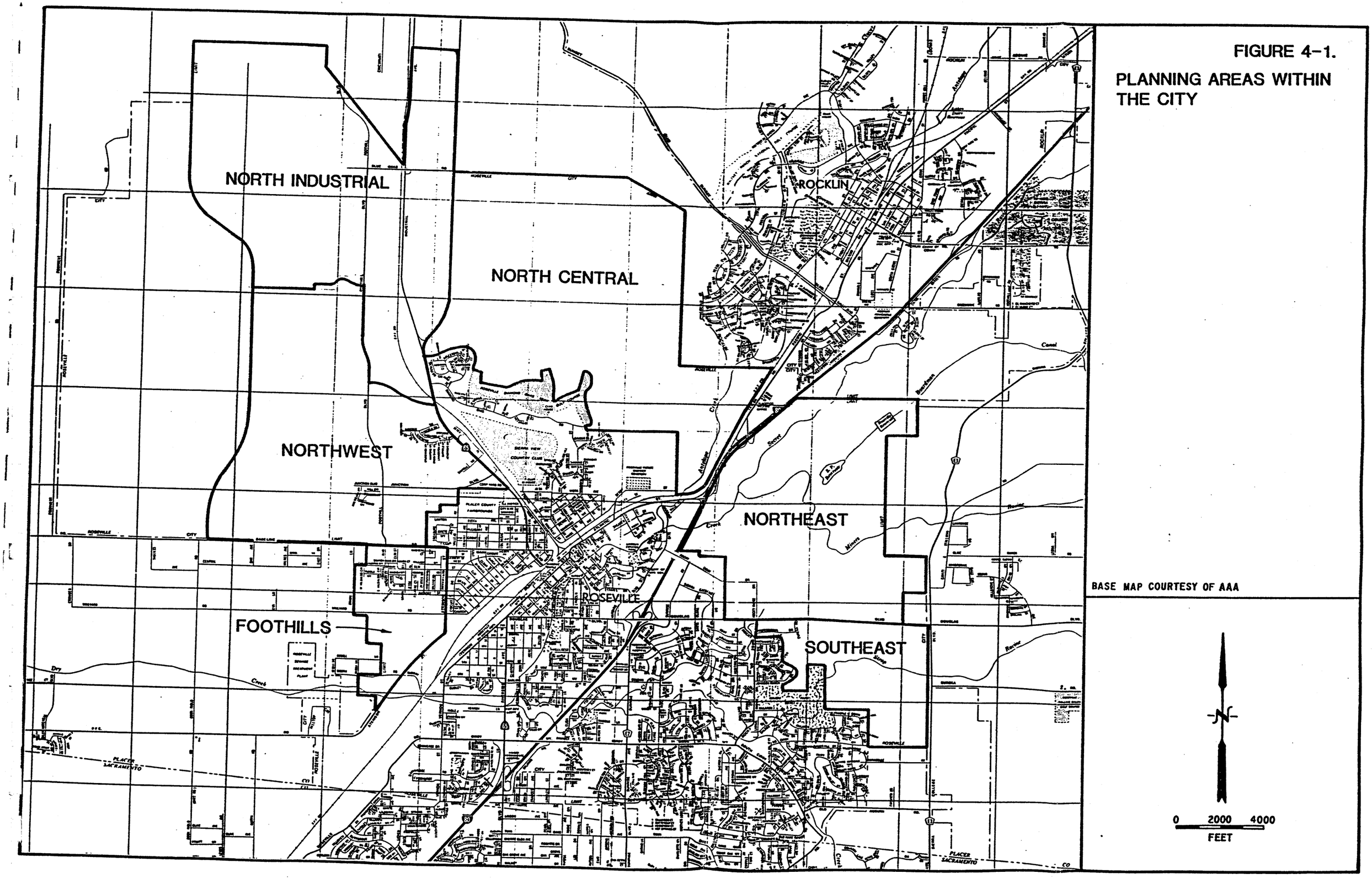


FIGURE 4-1.

PLANNING AREAS WITHIN THE CITY

BASE MAP COURTESY OF AAA

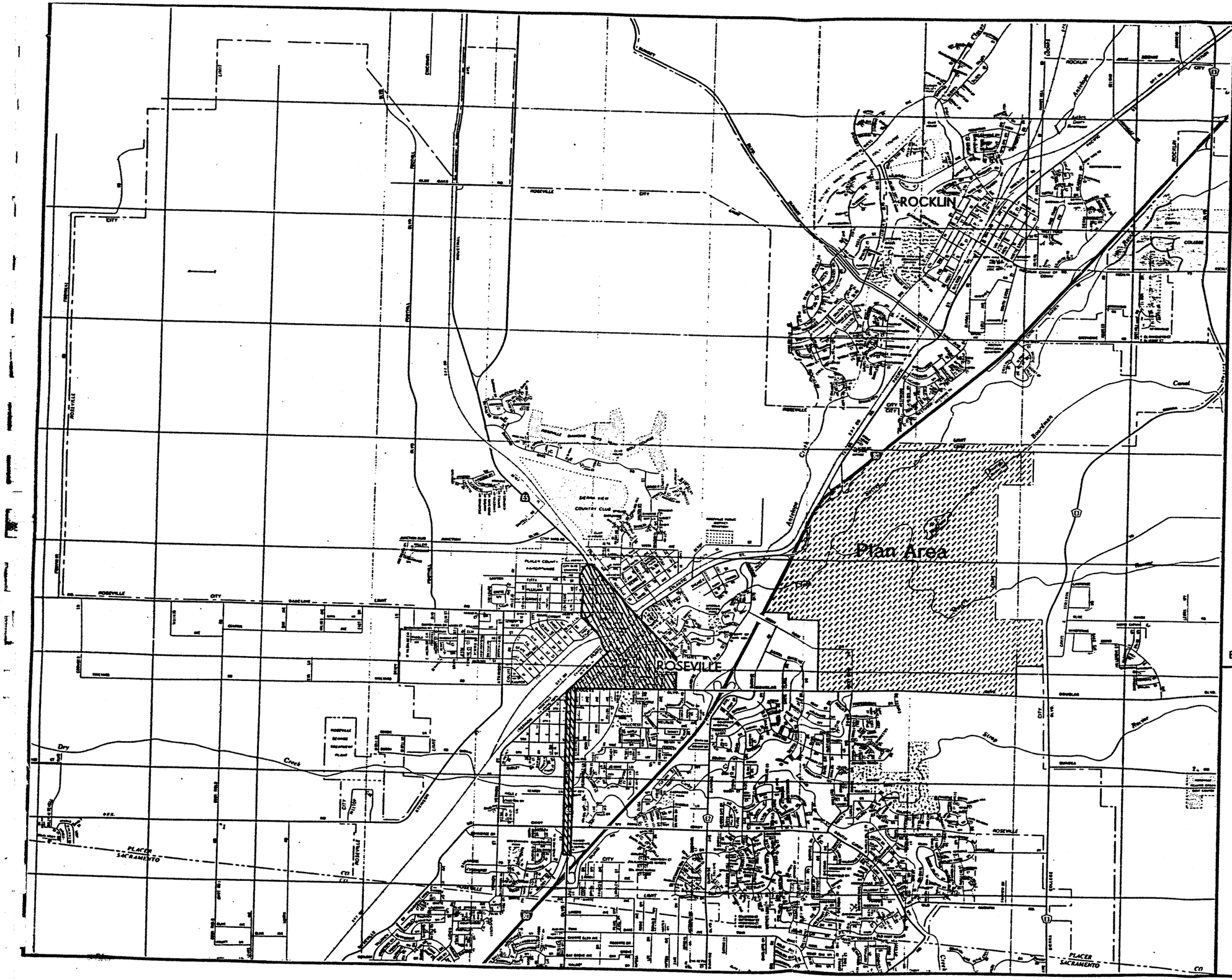


FIGURE 4-2.

DOWNTOWN ROSEVILLE
COMMERCIAL/RETAIL AREA

-LEGEND-

Commercial/Retail Area

BASE MAP COURTESY OF AAA

0 2000 4000
FEET

Commercial and retail development in other parts of Roseville and Citrus Heights has shifted retail activity away from the downtown area. The opening of Roseville Square in 1962 and the development of the Sunrise Mall in Citrus Heights in 1972 created a strong retail environment in the east and southeast sections of Roseville. The diversion of customers to Roseville Square and Citrus Heights has eroded downtown Roseville's customer base and caused a number of major tenants to leave the downtown area. Competition from retail centers caused many clothing and shoe stores to leave the area (Tapia pers. comm.). J. C. Penney Company, which occupied a large building in the 200 block of Vernon, left the downtown area in the 1970s, and was soon followed by the Bank of America. These businesses, along with the downtown post office branch and City Hall, had generated most of downtown's foot traffic.

Business activity in the downtown area steadily declined through the 1970s and into the 1980s (Berliner pers. comm.). Vacancy rates in the downtown area during 1982 and 1983 were estimated to be in the 50-60 percent range (Papas pers. comm.). However, declining rental rates for retail and commercial space have recently attracted new businesses to the downtown area. Several antique shops have opened in once-vacant buildings, including the Roseville Antique Emporium in the old J. C. Penney building. Small specialty shops (e.g., arts and crafts, and gift shops) also have located in the downtown area, decreasing the downtown vacancy rate and slowing the general decline of the area (Papas pers. comm.).

In the autumn of 1985, the City retained a consulting team to: 1) assist in determining the program and financial feasibility of undertaking a redevelopment project in the City; and, 2) prepare a preliminary report describing the project. Approximately 431 acres of land including the City's older central business district and strip commercial areas lies within the project area. The City selected the project area for the following reasons: 1) the area needed revitalization and public improvements; 2) the area was encumbered by blighting influences; 3) the area exhibited depreciating property values, impaired investments and physical and economic stagnation; 4) the area had become a physical and economic burden on the City. A Preliminary Report on the Proposed Redevelopment Plan for the Roseville Redevelopment Project (Burns & Watry Inc. and Walt Smith & Associates 1986) identified a total project cost of over $16 million to construct the improvements, and concluded that the project would be financially feasible.

Commercial Area Inventory. An inventory of the downtown area was conducted on foot to determine the retail and commercial composition of the area, as well as vacancy rates. The current composition of the downtown area is shown in Table 4-1. Square footage for specific shops was estimated using aerial photographs. The error factor for the square footage is estimated to be approximately ±10 percent (Miller pers. comm.).

Table 4-1. Composition of Downtown Roseville Commercial Area: September 1986

Retail/Commercial Category	Number of Businesses	Percent of Total Businesses	Estimated Gross Square Footage[1]	Percent of Total Square Footage
Auto/cycle/boat sales, service, and supplies	32	11.1	203,225	18.7
Specialty shops and services	59	20.6	158,260	14.6
Offices--insurance, real estate, and professional	32	11.1	70,085	6.5
Furniture sales and service	10	3.5	64,560	6.0
Restaurants, delis, and fast food	24	8.5	50,835	4.7
Antique Stores	7	2.4	46,240	4.3
Banks	2	0.7	14,250	1.3
Building supplies, lumber, glass, heating and cooling	8	2.8	76,550	7.1
Medical-related services	11	3.8	17,800	1.6
Barber shops, beauty salons	14	4.9	20,945	1.9
Bars	10	3.5	23,470	2.1
TV, video, music instrument sales and service	6	2.1	23,690	2.1
Pharmacies, markets, and liquor stores	7	2.4	29,600	2.7
Clothing and clothing services	9	3.1	24,400	2.5
Florists and gift shops	6	2.1	11,560	1.1
Other commercial	13	4.5	138,810	12.8
Subtotal	250	87.1	974,280	90.0
Vacant buildings or units	37	12.9	108,680	10.0
Total	287	100.0	1,082,960	100.0

Note: Excludes government buildings, schools, and fraternity halls.

Source: Miller (pers. comm.); Jones & Stokes Associates Inventory.

[1] Estimates accurate to ±10 percent (Miller pers. comm.).

The error factor is not considered to be significant for this study because the square footage estimates are being used only to assess the relative composition of businesses and vacancies in the downtown area. The estimates provide a useful approximation to describe the composition of the downtown area.

The downtown area primarily consists of strip commercial and retail development along Riverside Avenue, Vernon Street, and Douglas Boulevard, and in the Old Town area. Within the triangular area formed by Vernon Street, Folsom Road, and Douglas Boulevard, a number of small offices and restaurants are interspersed among older, single-family homes. One small shopping center is located along the 1000 block of Douglas Boulevard.

The current composition of the downtown area is varied, as indicated previously by Table 4-1. Shops offering specialty goods and services account for 59 of the 287 businesses operating in the downtown area. This retail/commercial category represents a wide variety of businesses, including hobby and craft shops, office supply stores, a golf pro shop, a gunsmith, photo studios, jewelry stores, a pool maintenance store, etc. These stores are grouped together as specialty shops because they generally offer one specialized type of good or service. Customers generally travel to these businesses for a particular good or service, as opposed to shopping for a variety of general goods and services. This category of business accounts for 20.6 percent of the downtown businesses and an estimated 14.6 percent of the downtown area's commercial and retail space.

Roseville's auto row, located along Riverside Avenue, represents one of the region's largest concentrations of auto and cycle dealerships, and related services and shops. Auto and cycle-related businesses account for 32, or 11.1 percent, of the downtown area's businesses, and an estimated 18.7 percent of the downtown area's commercial space.

Small office users account for 32, or 11.1 percent, of the downtown area's businesses, and an estimated 6.5 percent of the downtown area's commercial space. These small offices are primarily occupied by insurance and real estate agents, and by professional firms such as law and engineering firms. In addition, there are 11 medical-related businesses, such as small dental and chiropractic businesses.

The remaining 53.4 percent of the businesses located in the downtown area represent a variety of retail/commercial categories including restaurants, furniture stores, antique shops, barber and beauty shops, small markets, liquor stores, bars, etc. None of these retail/commercial categories excluding "other commercial," account for more than 10 percent of the businesses or commercial space located in the downtown area. The "other commercial" category, which accounts for an estimated 12.8 percent of the downtown's commercial space, primarily

consists of space occupied by the Roseville Telephone Company along Vernon Street.

Square footage estimates prepared for this study indicate that approximately 108,680 sf of the downtown area's 1,082,960 sf of gross commercial/retail space are currently vacant (see Table 4-1). The estimated 10.0 percent vacancy rate for the downtown Roseville area is higher than the 4 percent vacancy rate for major retail concentrations in the Roseville/ Rocklin area estimated by Coldwell Banker Real Estate Services for 1985. The downtown area's vacancy rate is also higher than the 5.7 percent vacancy rate estimated by Coldwell Banker for retail concentrations in the Sacramento area in 1985. However, the estimated 10.0 percent vacancy rate for the downtown area is significantly less than the 50-60 percent vacancy rate estimated for the downtown area 4 years ago (Papas pers. comm.).

The vacancy rate is one indication of the level of economic activity in an area; however, it does not provide information as to the health of particular types of businesses within an area. Trend analysis would usually be used to assess the relative health of a commercial area and its business sectors; however, historical sales, composition, and vacancy information has not been previously compiled. Collection of this information would require extensive surveying. To gain an understanding of the current health of the downtown area, interviews were conducted with nine managers or owners of businesses in the downtown area. The businesses interviewed are representative of the major types of businesses operating in the downtown area, not only in terms of the types of goods and services offered, but also in terms of tenure in the downtown area.

These interviews focused in part on the changes experienced by these businesses since locating in the downtown area. The merchants were also queried concerning their perception of the health and problems of the downtown area. Five the of merchants interviewed have been located in the downtown area for more than 15 years, while the remaining four have been in the area for less than 5 years.

All but two of the merchants interviewed reported that business is good and has been increasing since locating in the downtown area. Two merchants reported that business is adequate, but had decreased over the past 15 years. Both of these merchants felt that competition from new retail areas in the east and southeast areas of Roseville and in Citrus Heights has hurt their business.

None of the merchants characterized the general retail/ commercial health of the downtown area as being good. Five of the merchants felt that the downtown area has been "dying," or is continuing to decline. Four of the merchants felt that the downtown area had stabilized and was improving economically.

All of the merchants indicated that the downtown area needs help to improve the area's business environment.

The merchants interviewed cited a variety of problems with the downtown area. The most often mentioned problem was the lack of adequate parking along Riverside Avenue and Vernon Street. The merchants also often mentioned that a major tenant is needed downtown to generate more auto and foot traffic. A number of merchants felt that the appearance of transients along Riverside Avenue and Vernon Street keeps potential customers from shopping in the downtown area. Improving the appearance of buildings in the downtown area also was frequently mentioned.

Local Land Use

The Northeast Specific Plan area is 1,632.8 acres in size. The current primary use is as pasture for grazing livestock. Two residences are located in the southeast corner of the Plan area. Some dilapidated outbuildings and a corral are also located in the southeast corner of the property. Two abandoned reservoirs are situated in the northern portion of the Plan area. One was developed by Southern Pacific and the other, along with a storage tank, was developed by the City. Both previously served as municipal water sources. With these minor exceptions, the area is undeveloped.

The current General Plan designations of the Plan area are shown in Figure 2-11, General Plan Alternative. Prior to 1985, the Plan area was designated Agriculture-20 and Study Area on the land use map. In November 1985, the City Council adopted land uses for several specific plan areas in the City, including the Northeast area.

The land use map designations are tentative in that minor variations in densities or boundaries may be allowed (Dillon pers. comm.). The Specific Plan will be the vehicle used to provide approval for final land use map designations. Adoption of the Specific Plan, certification of an EIR, and rezoning will all be required by the City of Roseville to ensure land use consistency with the General Plan.

The current zoning of the Plan area is "A" (agricultural), as shown in Figure 4-3. The northern portion of the Plan area (approximately 151 acres) is currently under Williamson Act contract. The Williamson Act allows agricultural landowners to contract with local governments for 10-year terms to restrict land uses to agriculture in return for reduced property tax assessments. Williamson Act lands in the City are shown in Figure 4-4.

Surrounding Land Use

Lands surrounding the Plan area are described as follows:

North: City of Rocklin. Existing use is large-lot agricultural with scattered residences. The City of Rocklin General Plan designates the area as low-density residential with recreation/conservation along Secret Ravine Creek. The zoning is Residential-Planned Development.

East: Unincorporated Placer County. Existing uses include agricultural land used for grazing and large-lot residential. The Loomis Basin General Plan (1975) designates the area for rural estate residential, agriculture, limited commercial, and low- and medium-density residential. Most of the zoning in this area is farming with incidental residential use on 20-acre minimum lots (F-B-X-20).

South: City of Roseville. Existing uses include vacant land currently being developed as detailed in the Southeast Roseville Specific Plan: business professional, commercial, and residential. Other existing uses include residential and commercial. Most of the zoning is commercial, planned development, and single-family residential.

West: City of Roseville. Existing uses include commercial, light industrial, and vacant parcels. The Roseville General Plan designates the area for light industrial and commercial. I-80 forms the northwest border. Most of this area is zoned commercial, residential, and planned development-light industrial.

Significant major land uses in the near vicinity include:

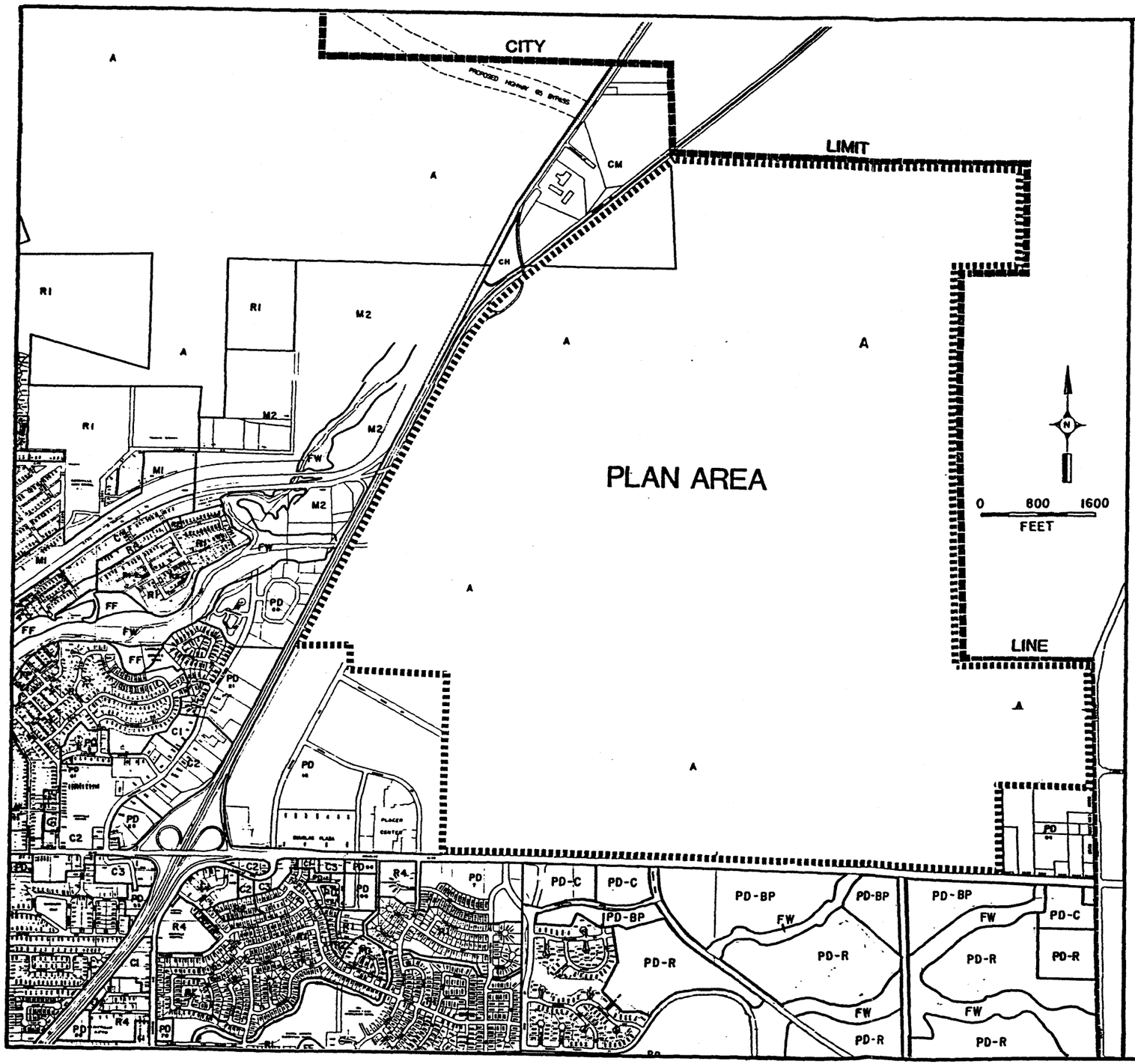
- Downtown Roseville west and southwest of the Plan area.
- Sierra College approximately 1.5 miles to the northwest of the Plan area, in unincorporated Placer County.
- Folsom Lake approximately 6 miles to the east of the Plan area.

Relevant Plans and Policies

City of Roseville. The Roseville General Plan includes the following elements: Land Use, Circulation, Public Services and Facilities, Growth Management Plan, and Housing. A Specific Plan must be consistent with a jurisdiction's General Plan before it can be adopted (California Government Code Section

FIGURE 4-3.

ZONING DESIGNATIONS FOR THE PLAN AREA AND VICINITY

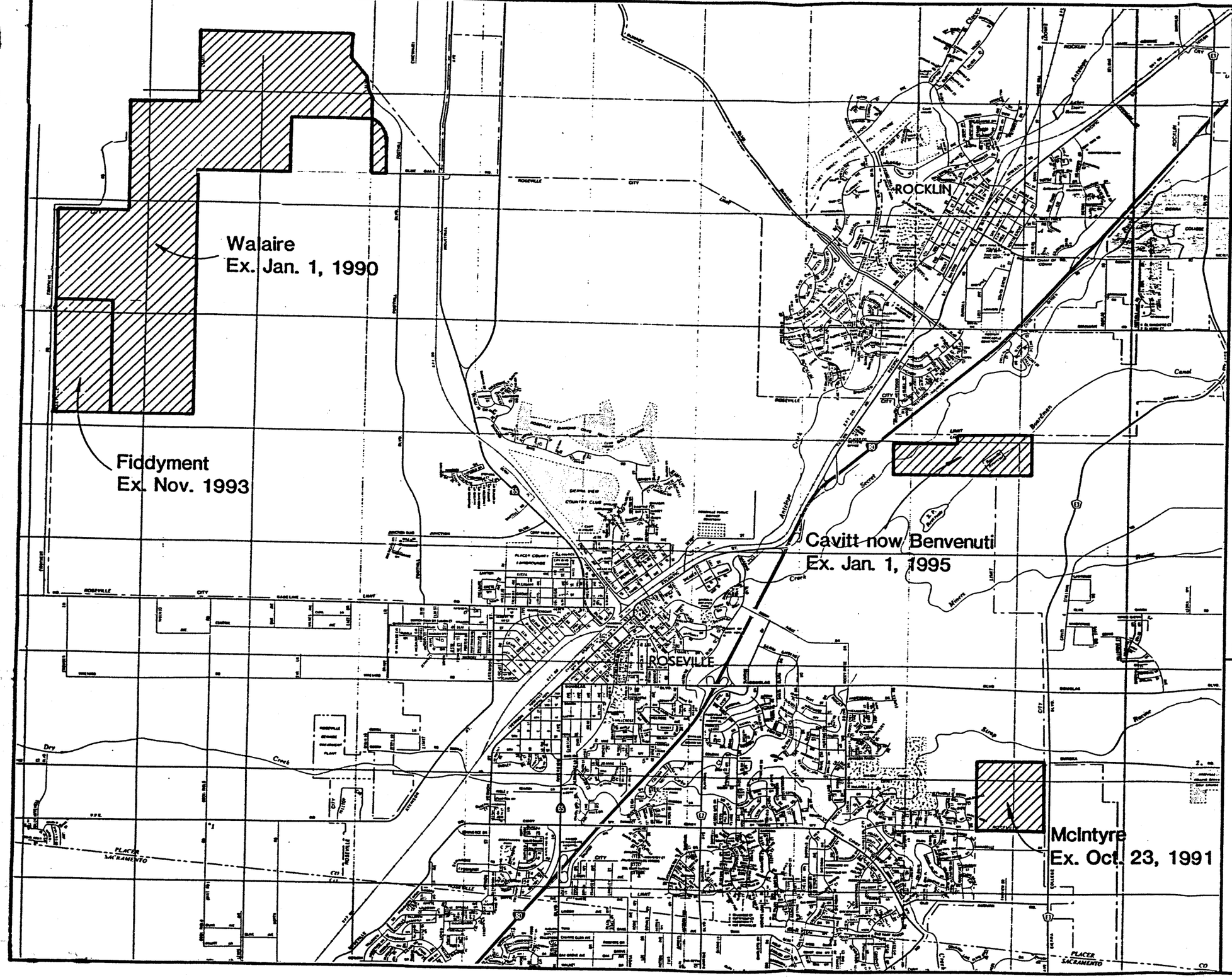


LEGEND

A	AGRICULTURAL DISTRICT
FW	FLOODWAY DISTRICT
FF	FLOODWAY FRINGE
SE	SUBURBAN ESTATES
RI	SINGLE FAMILY RESIDENCE
RI-2	SINGLE FAMILY - DUPLEX
R2	TWO FAMILY RESIDENCE
R3	NEIGHBORHOOD APARTMENT
R4	GENERAL APARTMENT
PD	PLANNED DEVELOPMENT
HD	HISTORIC DISTRICT
C1	NEIGHBORHOOD BUSINESS
C2	CENTRAL BUSINESS
C3	GENERAL COMMERCIAL
CH	HIGHWAY SERVICE COMMERCIAL
CM	COMMERCIAL MANUFACTURING
MI	LIGHT INDUSTRIAL
M2	GENERAL INDUSTRIAL

FIGURE 4-4.

WILLIAMSON ACT LANDS WITHIN THE CITY



BASE MAP COURTESY OF AAA

65454). Several of Roseville's General Plan policies are relevant to the adoption of this Specific Plan. Those policies and this Plan's consistency with them are discussed in the Impacts section that follows.

South Placer Policy Plan. The South Placer area has had a long-term plan to encourage employment development. One factor limiting growth was that Highway 65 was the only north-south arterial in that portion of the county linking Roseville to the communities of Lincoln, Wheatland, Sheridan, and further north to Marysville and other communities in Sutter and Yuba counties. A Route 65-Roseville Bypass has long been recognized as a top priority transportation need.

By 1980, several factors emerged that focused attention on the South Placer region and the Highway 65 Bypass. These factors included:

- The passage of AB 402 which reemphasized the importance of local priorities in establishing the state-wide highway funding program.

- The regional development pattern for the Sacramento housing market had expanded steadily to the northeast since World War II. The South Placer region is the next growth area in the historical pattern. Access to the growth areas from I-80 is essential.

- New employment centers announced that they would locate along Highway 65 north of Roseville, indicating that the region could become a major employment center.

It was obvious to the local governments and the California Transportation Commission (CTC) that substantial growth in the area would have major impacts. Recognizing these potential impacts, and desiring to avoid many of the mistakes suffered in other areas that experienced major growth, the local governments entered into an agreement with the CTC in June 1980. In essence, the agreement states that the local government jurisdictions will act cooperatively to accommodate growth in the region and the CTC would fund construction of the bypass. The primary focus of the agreement is housing, transportation, air quality, and local government coordination.

In September 1980, the four South Placer jurisdictions (Roseville, Rocklin, Lincoln, and Placer County) entered a joint powers agreement forming the South Placer Policy Committee. The Policy Committee is comprised of an elected official from each of the member jurisdictions and by ex-officio members from the cities of Auburn and Sacramento, and the counties of Sacramento, Yuba, and Sutter.

The Policy Committee adopted regional housing, transportation, land use, and jurisdictional policies to manage growth and

economic development so as to minimize the impacts on transportation, air quality, housing, and land use. The actions that comprise the approach for South Placer are listed below (South Placer Policy Committee 1983).

- Formation and support (both participation and financial support) for the South Placer Policy Committee.
- Adoption of Housing Elements.
- Implementation of a regional housing monitoring program to determine the number and type of units built in each jurisdiction.
- Adoption of regional development guidelines in the South Placer Policy Plan.
- Implementation of an annual employee survey to determine the housing and transportation needs of the regional work force.
- Adoption of a jobs-housing program that requires any jurisdiction, permitting an industrial or commercial activity employing more than 50 people, to determine whether an adequate supply of housing will be available for the projected work force. The resolution specifies the actions available to the jurisdiction if the housing supply if deficient. It also establishes a formal procedure for coordinating housing supply and demand among the South Placer jurisdictions.
- Implementation of housing programs such as a Housing Office in Roseville, Community Development Block Grant funds for housing, and development agreements.
- Amendment of general plans and rezoning to increase residential land area and densities, and to reduce industrial land area.
- Adoption and implementation of the regional Air Quality Maintenance Plan.
- Adoption and implementation of a three-tiered transportation system management plan which is correlated to revised development standards, ridesharing programs, and long-range land use plans.
- Adoption and implementation of a regional rideshare program.
- Approval of assessment districts to finance fundamental urban services (water, sewer, street lights, and local arterials) in planned urbanizing areas.

In summary, the South Placer jurisdictions have developed a comprehensive approach to monitoring land use changes, monitoring both jobs and housing development, and certifying that there is adequate housing (number, type, price, and distance from work place) for employees.

The South Placer Policy Committee has developed a Policy Plan that seeks to coordinate the development of the four individual jurisdictions. The five major sections of the Policy Plan are Land Use, Transportation, Public Facilities, Housing, and Local Jurisdiction. Many of the policies found in that document are similar to those found in the general plans; however, two of the policies are considered important enough to the growth and development of the region to mention here.

> Policy 4.2 - It is the objective of the housing program efforts of the South Placer jurisdictions to cumulatively plan for and facilitate the development of a housing stock that will provide a choice of housing types and prices, and in sufficient numbers such that the home-to-work commute for all workers in the industrial core area need be no more than 6 miles for 60 percent of the workers, nor more than 8 miles for 80 percent of the workers, if they so choose.
>
> Policy 5.6 - The County and cities shall participate in a program to monitor the growth and development of the South Placer region as specified in the Resolution to Establish a Method to Monitor Growth and Development adopted by the four member jurisdictions in December 1981.

Impacts

Proposed Project

The land uses planned under the proposed project for the Plan area are shown by category in Table 2-1. Relative locations of the various categories are shown in Figure 2-3.

The predominant urban land uses would be commercial, business park and professional offices, and R&D uses. The acreage for these uses is 595.5 gross acres. Residential development is projected to involve 224.7 gross acres. Other uses would include a fire station and a church, totaling 31.0 gross acres.

The acreage projection for undeveloped land is 781.6 gross acres. A sizable majority (68 percent) is urban reserve in the northeastern part of the Plan area. This urban reserve area

would remain open space until future development is proposed and approved. Such future development would require a General Plan amendment. The remainder of the undeveloped land, 250.3 gross acres, would be preserved as agricultural land, open space, or developed for a community park.

Direct Changes in Land Use. Development of the Plan area would reduce the amount of open space in Northeast Roseville. Conversion of the Plan area from a large open space area to an urbanized area is considered a significant impact for which no mitigation exists other than implementation of the No-Project Alternative.

Loss of agricultural use of the land would be a less-than-significant impact. Grazing is the only existing agricultural use of the Plan area. Due to the geologic conditions, such agricultural lands are considered "marginal" and suitable for conversion according to the Open Space and Conservation Element (Roseville 1983). See also Chapter 12, Topography, Geology, and Soils). The Williamson Act land in the northernmost part of the Plan area would continue to be used as it is currently used.

Adjoining Use Compatibility. No significant land use conflicts with adjacent uses are expected to occur with Specific Plan implementation. Existing land uses would continue in the north portion of the Plan area. The urban reserve, residential, and business professional uses proposed along the eastern border are expected to be compatible with planned adjacent uses. In the southern portion of the Plan area, proposed development is similar to adjoining existing and planned commercial, business professional, and residential uses. The commercial development proposed for the western edge of the Plan area would also be compatible with the existing and planned commercial and industrial uses. In the southwest corner of the Plan area, the regional shopping center area would adjoin vacant land designated as light industrial. Therefore, no significant adverse impacts would occur related to adjacent land use conflicts.

Market Impacts on Downtown Roseville. Older downtown areas in California have historically been impacted when significant residential and commercial growth has occurred on the fringe of a city's urban area. Roseville has been no exception to this trend, with its downtown area declining and vacancy rates increasing, as development has occurred on the outskirts of the City. The commercial development proposed in the Plan area could potentially compete with the downtown Roseville commercial area, causing a change in the composition of the downtown area's businesses or increasing vacancy rates.

Roseville's downtown area, including Old Town, not only has historical value, but also helps enhance Roseville's reputation as an older, established community. The downtown area is also a

convenient shopping area for the established residential neighborhoods surrounding the downtown area. The following analysis of potential impacts was prompted by a concern that new development should not further diminish the character of Roseville's downtown area.

The impact of the proposed project on the downtown commercial/retail area would depend on the composition of retail/commercial development in the proposed project area, and on the downtown merchants' ability to compete with this development. The degree of impact on particular groups of businesses in the downtown area is difficult to assess because the eventual composition of retail and commercial businesses locating in the proposed commercial development is largely unknown.

The following impact analysis for the various retail/commercial groups comprising the downtown area is based on the expected characteristics of development in the Plan area. Much of the actual impact analysis is based on information and opinions gathered through interviews with downtown merchants. This information is the primary source for analysis because historical sales, composition, and vacancy information has not been previously compiled. Collection of historical sales information would require extensive surveying. The merchants in the downtown area were randomly sampled. An effort was made to interview merchants within each significant business group, and to include merchants with varying lengths of tenure in the downtown area. The interviewed merchants are, therefore, considered to be representative, both in terms of type and duration of businesses and duration operating in the downtown area. The analysis and conclusions are qualitative and should be treated as such.

As part of the interview process, merchants were asked to identify their customer base, and to estimate the impact on their business of large-scale commercial and retail development in Northeast Roseville.

Specialty Shops and Services. This group of businesses offers a variety of specialized goods and services. Most of the shops are small and generally offer one type of product. According to one local merchant, businesses that specialize in gift-related items, arts and crafts, and hobby items are seasonal; business is typically good from September through April and slow during the summer. Most customers are from Roseville and travel downtown to find a particular gift item (Tapia pers. comm.). The other specialty shops, such as the golf pro shop, gunsmith, and jewelry stores, have similar specialized clienteles.

The impact of the proposed project on specialty shops would depend upon the specific types of retail uses that locate in the proposed commercial development. A shop specializing in a

competing product will probably draw customers away from a downtown shop. However, a business locating in a new community or regional center is not likely to carry a line of products as specialized as those offered by the downtown shops. High floor space rental costs associated with new retail space generally require shopping center stores to carry broader lines of products. The small, specialized downtown shops with established customers and low overhead should be able to compete with new retail centers in the Plan area. Stores carrying a broader range of products could, however, experience a decline in sales.

Auto/Cycle Sales, Service, and Supplies. This large retail category includes auto/cycle dealers, repair and customizing shops, and auto parts stores. The market area for the auto dealers along Riverside Avenue includes the greater Sacramento area. One dealer estimated that 80 percent of his customers come from Sacramento County, while 20 percent or less come from Placer County (Larson pers. comm.). Increased population and employment growth in the area will potentially generate increased demand for automobiles and auto repair services (Larson pers. comm.).

The market area for auto parts stores generally includes Roseville, Lincoln, Auburn, and Citrus Heights (Craig pers. comm.). Much of an auto parts store's business is locally based, including demand from walk-in customers, local mechanics, gas stations, and small auto dealers. Auto parts stores are vulnerable to competition from the type of large auto parts store that could locate in a community commercial center. A competing store in the Plan area could absorb demand coming from east Roseville and from the Folsom area; however, current demand from these areas represents a small percentage of the business of downtown auto parts dealers. Existing demand generated by customers in and around the downtown area should be adequate to keep existing stores in business (Craig pers. comm.).

Offices - Insurance, Real Estate, Professional, and Medical. Downtown offices are generally limited in size and are ideal for small office users. Office rental space in the downtown area generally costs in the $0.50-0.75 per sf range, compared to $1+ per sf in newer locations (Enzler pers. comm.). The small office sizes and low cost make downtown space attractive for small insurance, real estate, professional, and medical office users.

Office development in the Plan area would be designed for large office users, or for mixed tenants in a business park setting. Costs for this space would probably be significantly higher than for downtown office space. Small office users would not be attracted to office space developed on the project site because of size and cost limitations. The proposed project should not negatively impact the downtown office market.

Furniture Sales and Service. This retail category includes four stores specializing in new furniture and six stores offering related services such as furniture refinishing and upholstering. The furniture stores have been located in the downtown area for many years. According to the manager of one of the furniture stores, the customer base for the downtown stores consists of long-time, return customers from the Roseville and greater Sacramento area (Vohn pers. comm.).

The proposed retail development would probably include department stores carrying new furniture. A store such as Macy's could effectively compete with the downtown furniture stores. Downtown store owners, however, feel that their existing customer base would not be eroded by competing stores in Northeast Roseville (Vohn pers. comm.). Competing stores in the Plan area, however, would limit sales growth for the downtown furniture stores and make the entry of new stores into the downtown area difficult.

Clothing and Clothing-Related Services. Of the six clothing stores located in the downtown area, four of the stores carry standard lines of new clothing. One of the remaining two stores, one carries used clothing and the other carries clothing designed for big and tall persons. The customer base for the downtown clothing stores is similar to the customer base for the furniture stores. According to the owner of one of the downtown clothing stores, the majority of the customers are return customers who have been shopping at the store for many years (Marriam pers. comm.). These customers are not likely to change their buying habits due to development of department stores in the Plan area. Large department stores, however, would probably preclude the opening of a new department store in the downtown area.

Other Retail. The remaining retail establishments are not likely to be negatively impacted by retail and commercial development in the Plan area. The remaining businesses generally fall into two categories--businesses that will not face direct competition from the type of retail that is expected to locate in the project area, and businesses that primarily serve residents and workers in the downtown area.

Downtown businesses that would not face direct competition from expected retail development in the project area include antique shops, and building, lumber, an glass suppliers. The downtown antique shops have become an increasingly important component of the downtown retail area, providing an identity and focus that the downtown has lacked since the major tenants left the area. According to one owner, Roseville's reputation as an antique center has spread to Reno and the Bay Area; this owner estimated that about 25 percent of his customers live in Roseville, 60 percent come from Sacramento County, and the remainder come from outside the Sacramento area. The owner feels that major commercial development in Northeast Roseville would help

the antique businesses because it would focus more attention on Roseville and bring more retail traffic to the area. Similarly, residential development and increased construction activities should increase the demand for building supplies.

Downtown businesses that primarily serve downtown residents, office, and retail workers include restaurants and delis, banks, barber and beauty shops, bars, pharmacies, small markets, and liquor stores. These businesses primarily offer convenience goods and services. Proximity to customers in the downtown area gives these businesses an advantage over similar businesses located elsewhere in the City. New retail development in the Northeast section of Roseville should not significantly impact these downtown businesses.

Summary. Expected retail and commercial development in the Plan area could potentially impact stores offering furniture and clothing goods. These stores comprise 8.5 percent of the estimated square footage in the downtown area (Table 4-1). Furniture and clothing stores would face direct competition from department stores expected to locate in the proposed commercial/retail development. Merchants operating clothing and furniture stores, however, have developed a loyal base of customers through years of operating in the same location. These established older businesses should not be adversely affected by development in the Plan area. Based on merchant interviews, there should not be widespread failure of furniture and clothing stores. Should failure occur, the vacancy rate could increase from the existing 10 percent rate to a rate near 15 percent.

The proposed development may preclude a major department store tenant from locating in the downtown area. The siting of a major department store in the downtown area was identified by many of the merchants interviewed as an important step in the resurgence of the downtown area as a commercial area.

Other businesses in the specialty shops and services category could also be impacted if faced with direct competition from businesses locating in the Plan area. The specialized nature of these shops, however, lessens the chance that a business locating in a new community or regional shopping center would compete directly with a business in the downtown area.

In summary, furniture and clothing stores would face the greatest competition from proposed development in the Plan area. Individual stores within other business sectors could also be impacted if faced with direct competition. The wide variety of store located in the downtown area, however, make it unlikely that widespread failure of businesses would occur. Based on composition of the downtown area and opinions of downtown merchants, the impact of retail or commercial businesses, expected

to locate in the Plan area, on the downtown mixture of auto-related businesses, antique shops, specialty shops, small offices, and older, established businesses should be less than significant.

Retail/commercial developments on the outskirts of Roseville, however, could make revitalization of the downtown area more difficult. Outlying developments would compete with the downtown area for major tenants. This study indicates that the proposed project would not significantly impact the current health of the downtown retail/commercial area; however, the proposed project, and other similar projects, could make revitalization of the downtown area more difficult.

Consistency with Plans and Policies

Allocation. The proposed land use designations are almost identical to the General Plan designations shown in Figure 2-11, General Plan Alternative (see also Table 2-3). The actual demarcation lines were expected to vary from those illustrated in Figure 2-11 (Dillon pers. comm.) because of more accurate property line measurements, actual road alignments, etc. Similarly, the actual number of acres within each designation were also expected to vary from those presented in Table 2-3 (Dillon pers. comm.). The use of a Specific Plan to designate detailed site uses is expected to conform with the generalized area for each use, as well as each of the City's General Plan policies.

The differences between the proposed project and the land uses designated on the land use map of the General Plan are as follows:

Residential: The proposed project designates 224.7 acres to be developed into 1,800 dwelling units. The land use map designated 178 acres for 1,803 dwelling units. The key factor is the proposed project does not exceed 1,800 dwelling units; therefore, the difference is insignificant.

Commercial: Differences in commercial acreage (proposed project is 595.5 acres; land use map is 610 acres) are considered insignificant. A difference in designation exists at the southwesternmost parcel between Lead Hill Road and Douglas Boulevard; the proposed project designates the northern half of this parcel business professional and the southern half commercial; the land use map designates the entire parcel business professional. This difference is considered less than significant for two reasons. First, the designated land use for the parcel immediately south of Douglas Boulevard is also commercial. Second, business and professional offices were included in the commercial designation, until adoption of the Southeast Specific Plan.

Table 4-2. Consistency of the Proposed Project and Lower Intensity Alternative with the City of Roseville General Plan

General Plan Element	Proposed Project	Lower Intensity Alternative
GROWTH MANAGEMENT ELEMENT		
Policy 1: Potential population growth in Roseville must be based on the long-term carry capacities and limits of the roadway system, calculated by Level of Service "C," sewer and water treatment facilities, and electrical utility service, as defined in the Circulation Element and the Public Services and Facilities Element.	Consistent: Specific Plan is essentially identical to adopted Land Use Element. See also Chapter 17, Cumulative Impacts.	Consistent: This alternative allows for additional development consistent with adopted Land Use Element. See also Chapter 17, Cumulative Impacts.
Policy 2: For the purposes of land use allocation, the potential population of Roseville, based on infrastructure limits, must not exceed 92,000 people.	Consistent: Potential population is estimated to be 4,680 people. See also Chapter 17, Cumulative Impacts.	Consistent: Potential population is estimated to be 4,680 people. See also Chapter 17, Cumulative Impacts.
Policy 3: Growth and development must occur at a rate commensurate with the availability of desired facilities capacity and the attainment of desired level of service for public activities as defined in the Public Services and Facilities Element.	Consistent: Specific Plan includes a Land Use and Infrastructure Phasing Plan.	Consistent: Same as proposed project.
Policy 4: Growth must occur in a manner that makes efficient use of the land, but recognizes the need to preserve environmentally sensitive areas.	Consistent: Specific Plan includes policies and objectives to protect riparian habitat, vernal pools, and native trees.	Consistent: Same as proposed project.
Policy 5: Growth must provide a strong diversified economic base and a balance between new employment and affordable housing opportunities.	Consistent: Specific Plan provides new employment and the opportunity for affordable housing.	Consistent: Same of proposed project.
Policy 6: Growth and development must occur on the basis that projected revenues shall be sufficient to meet public costs.	Consistent: Specific Plan includes a Public Facilities Finance Plan.	Consistent: Same as proposed project.
Policy 7: Because of common concerns and problems, growth and development must be viewed in a regional perspective by coordinating activities with adjacent jurisdictions.	Consistent: City of Roseville is a member of South Placer Policy Committee which reviews projects for regional perspective.	Consistent: Same as proposed project.
Policy 9: To allow flexibility in meeting the goals of the General Plan, a portion of the urban development capacity must be kept in reserve in order to utilize concepts of density bonuses, development incentives, and specific plan implementation.	Consistent: Specific Plan designates over 500 acres as urban reserve.	Consistent: This alternative designates over 700 acres as urban reserve.

Table 4-2. Consistency of the Proposed Project and Lower Intensity Alternative with the City of Roseville General Plan

General Plan Element	Proposed Project	Lower Intensity Alternative
Policy 10: Growth management techniques to be utilized in addition to existing methods include the use of specific plans for new growth areas.	Consistent: Use of the Specific Plan process assists the City in managing growth.	Consistent: Same as proposed project.
LAND USE ELEMENT		
Policy 1: To provide sufficient affordable housing in conjunction with anticipated employment, the allocation of an additional 12,000 dwelling units, City-wide, shall be at at average density of not less than six dwelling units per acre or not to exceed a maximum of an additional 2,000 acres of residential land use.	Consistent: Specific Plan is essentially identical to adopted Land Use Element. See also Chapter 17, Cumulative Impacts.	Consistent: This alternative allows for additional development consistent with adopted Land Use Element. See also Chapter 17, Cumulative Impacts.
Policy 2: In order to provide the basic commercial goods and services for an ultimate population of 92,000, a maximum of 2,000 acres shall be allocated for commercial land use.	Consistent: Specific Plan designates 228 acres of commercial use. See also Chapter 17, Cumulative Impacts.	Consistent: This alternative designates 170 acres of commercial use. See also Chapter 17, Cumulative Impacts.
Policy 4: The allocation of land use shall not occur unless public facility needs have been thoroughly calculated and the mechanism for implementation of such facilities has been determined. However, the City may grant land use to a property owner or owners if it is determined to be in the public interest and if such land use commitment is contingent upon the property owners guaranteeing to provide a fair and equitable share of public facilities costs that is yet to be determined.	Potentially inconsistent: See discussion and mitigation measure in Chapter 6, Public Services and Facilities.	Potentially inconsistent: Same as proposed project.
Policy 5: The method of guaranteeing land use in return for some public improvement shall be done by either formal development agreement at the time land use is adopted, as part of the adoption of a specific plan, or as conditional action on adopting land use that requires a formal development agreement prior to adoption of zoning.	Consistent: Specific Plan would be adopted prior to zoning.	Consistent: Same as proposed project.
Policy 6: Urban land use on the Mehrten formations shall be limited to nonresidential activities or high-density residential where normal landscaping amenities can be provided.	Potentially inconsistent: Parcel 1 (65.4 acres; 357 dwelling units) is designated R-5.5. This issue is discussed in detail in Chapter 12, Topography, Geology, and Soils.	Potentially inconsistent: Same as proposed project.

Table 4-2. Consistency of the Proposed Project and Lower Intensity Alternative with the City of Roseville General Plan

General Plan Element	Proposed Project	Lower Intensity Alternative
Policy 7: The City should include as part of the Land Use Plan, designated vernal pool sites, or portions of sites that coincide with designated site Nos. 28, 31, 34, 35, 38, and 40, as shown on the exhibit map, Vernal Pool Resources, Inventory and Evaluation, City of Roseville.	Potentially inconsistent: Vernal pools sites Nos. 34, 35, and 38 are situated in the Plan area. This issue is discussed in detail in Chapter 13, Botanical and Wildlife Resources.	Potentially inconsistent: Same as proposed project.
Policy 9: Preliminary allocation of additional residential units, according to development area, shall be as follows: East Area 5,000 units.	Consistent: The Plan area contains 1,800 of the 5,000 residential units allocated to the East Area. The remaining 3,200 units have been allocated to the Southeast Area (Dillon pers. comm.).	Consistent: Same as proposed project.
Policy 10: Preliminary allocation of additional residential units by density average, according to development area, shall be as follows: East Area: Average of 3 dwelling units per acre--maximum of 1,000 units Average of 10 dwelling units per acre--maximum 2,000 units Average of 15 dwelling units per acre--maximum 2,000 units	Potentially inconsistent: When combined with the Southeast Plan, development in the East Area meets the requirements for 1,000 units at 3 du per acre and 2,000 units at 15 du per acre but provides only 1,757 du at 10 du per acre. Thus, the 2,000-unit minimum at 10 du per acre would not be met unless densities are increased on the R-5.5 to R-9 parcels.	Potentially inconsistent: Same as proposed project.
Policy 11: For the purposes of allocating residential land use, total allowable dwelling units shall not exceed 34,700, or 12,000 above the current adopted Land Use Plan (1977).	Consistent: Specific Plan is essentially identical to adopted Land Use Element. See also Chapter 17, Cumulative Impacts.	Consistent: Same as proposed project.
Policy 13: Residential land use with the average of three dwelling units per acre shall be located in accordance with the following general criteria: a. Not adjacent to heavy industrial uses; b. Not adjacent to intensive commercial development unless appropriately buffered; c. Not adjacent to freeways or railroads; d. Not adjacent to arterial roadways unless appropriate noise attenuation can be implemented.	Consistent: R-5.5 generally complies with the criteria. Specific Plan land uses are essentially identical to adopted Land Use Element.	Consistent: Same as proposed project.

Table 4-2. Consistency of the Proposed Project and Lower Intensity Alternative with the City of Roseville General Plan

General Plan Element	Proposed Project	Lower Intensity Alternative
Policy 14: Residential land use with the average of 10 dwelling units per acre shall be located in accordance with the following general criteria: a. Adjacent to or as part of a low-density mixed development if in a predominantly undeveloped area; b. Not in a predominantly established single-family residential area unless as an in-fill project adjacent to a major arterial roadway; c. Adjacent to higher-density developments, serving as a transition from lower-density projects; d. Not adjacent to arterial roadways unless appropriate noise attenuation can be implemented; e. Adjacent to nonresidential uses serving as a buffer for single-family development providing sufficient buffers are provided adjacent to the nonresidential uses.	Consistent: R-9 and R-10 generally comply with the criteria. Specific Plan land uses are essentially identical to adopted Land Use Element.	Consistent: Same as proposed project.
Policy 15: Residential land use with the average of 15 dwelling units per acre shall be located in accordance with the following general criteria: a. Only along arterial roadways providing appropriate sound attenuation can be implemented; b. Adjacent to commercial areas, where possible; c. Adjacent to residential density range of 6-9 dwelling units per acre or as a part of a mixed development or specific plan that is preplanned; d. Not adjacent to single-family residential unless appropriate design controls are associated with the zoning; e. Adjacent to freeways only if appropriate noise attenuation and site design can be implemented.	Consistent: R-12 generally complies with criteria. Specific Plan land uses are essentially identical to adopted Land Use Element.	Consistent: Same as proposed project.

Table 4-2. Consistency of the Proposed Project and Lower Intensity Alternative with the City of Roseville General Plan

General Plan Element	Proposed Project	Lower Intensity Alternative
Policy 16: Commercial land uses shall consist primarily of those activities that involve retail trade and services, and secondarily business professional office uses.	Consistent: Specific Plan differentiates between commercial land uses and business park and professional offices.	Consistent: Same as proposed project.
Policy 17: Commercial land uses shall be located in accordance with the following general criteria: a. Adjacent to arterial roadways, and if possible, adjacent to intersections of arterial roadways or at the intersection of an arterial roadway or at the intersection of an arterial roadway and collector street; b. Commercial land uses located in predominantly residential areas or in close proximity to residential areas shall consist primarily of retail activities; c. Commercial land use sites located in predominantly residential areas shall be a minimum of 10 acres in size and shall, when possible, include a retail food market; d. Intensive commercial uses, serving other than local residential neighborhoods, shall be located on sites of over 10 acres where surrounding land use is predominantly non-residential (except for high-density residential); e. Continuous commercial development along arterial roadways (where development does not currently exist) shall be prohibited unless such development is part of a specific development plan that coordinates use and design with adjacent properties; minimizes access to arterial roadways; and maintains aesthetic standards of the Scenic Highway Element.	Consistent: Commercial land uses are located adjacent to arterials and are on sites of over 10 acres in size.	Consistent: Same as proposed project.
Policy 24: A land use category shall be created for designating areas as open space where development cannot or shall not occur because of physical, cultural, or historical qualities. Use of such property may be public or private.	Consistent: Specific Plan designates open space areas where development cannot occur. Open space is proposed to become public use.	Consistent: Same as proposed project.

Table 4-2. Consistency of the Proposed Project and Lower Intensity Alternative with the City of Roseville General Plan

General Plan Element	Proposed Project	Lower Intensity Alternative
Policy 25: All lands subject to flooding, according to the most accurate and current data, shall be designated as a Floodway land use, and where there is not a conflict with some reasonable and environmentally acceptable urban land use, such areas shall be designated as open space.	Consistent: Specific Plan designates land within 100-year floodplain as open space.	Consistent: Same as proposed project.
Policy 26: An Urban Reserve land use designation shall be used for all lands where future urban expansion may occur, but such urban expansion development cannot take place in the immediate future because of unavailable utility lines, utility capacities, roadways, or public services.	Consistent: Specific Plan designates over 500 acres as urban reserve.	Consistent: This alternative designates over 700 acres as urban reserve.
HOUSING ELEMENT		
Policy 1: Roseville will work to accommodate the housing needs of its current and future residents by providing a range of purchase and rental units affordable to all income groups and to guarantee affordability over time through the adoption of policies and implementation of action plans listed in the Housing Element.	Consistent: A goal of the Specific Plan is to provide a range of housing to meet the needs for a range of household types. An objective is to provide 15 percent of the high-density units to low or very low income range persons.	Consistent: Same as proposed project.
Policy 4: Provide adequate housing at affordable costs for existing and future residents from all income groups by establishing a minimum number of housing units needed each year, broken down by unit type and targeted to specific income groups. Encourage the production of high-density multi-family units, both rental and purchase, to meet the needs of very low, low, and moderate income groups. Establish a monitoring program to determine whether the City is making progress toward meeting its Housing Element goals.	Consistent: The City would monitor housing production. See Chapter 5, Population, Housing, and Employment.	Consistent: Same as proposed project.

Table 4-2. Consistency of the Proposed Project and Lower Intensity Alternative with the City of Roseville General Plan

General Plan Element	Proposed Project	Lower Intensity Alternative
Policy 12(a): An affordable housing development agreement shall be required whenever the land use on a piece of property is being changed to a density in excess of 10 dwelling units per acre. The affordable housing development agreement will be a part of the land use and zoning change and will stipulate the number of affordable units to be constructed, the unit price or rent range, the income group to which the affordable units will be targeted, and the length of time the units will remain affordable. Compliance with a requirement to provide affordable housing shall be satisfied provided: 25 percent of the units are affordable to middle-income households for one- and two-person households, or 10 percent of the units are affordable to low-income households for one- and two-person households.	Potentially inconsistent: The project proponent and City should enter into a housing development agreement that has provisions for affordable housing to meet the City's goals.	Potentially inconsistent: Same as proposed project.
CIRCULATION ELEMENT		
Policy 1: For the City of Roseville, the Level of Service C shall be used in determining the roadway capacities and intersection delays for all freeway, arterial, and collector streets. For long-range development, Level of Service C need not be strictly maintained if other policies and action plans indicate that a lesser level of service may be acceptable on a short-term basis providing there are sufficient overriding considerations.	Consistent: Chapter 7, Transportation, details that Existing Plus Project conditions would result in Level of Service C. Chapter 17, Cumulative Impacts, analyzes long-range development and concludes that Level of Service C could be achieved.	Consistent: Same as proposed project.
Policy 2: If an ultimate population of 92,000 is to be allowed in the City of Roseville, then the incremental growth of 22,000-27,000 additional people should be allocated on the basis of maintaining a balance of jobs and housing to minimize impacts on the intra-city road systems.	Consistent: Specific Plan is essentially identical to adopted Land Use Element. See also Chapter 17, Cumulative Impacts.	Consistent: Same as proposed project.

Table 4-2. Consistency of the Proposed Project and Lower Intensity Alternative with the City of Roseville General Plan

General Plan Element	Proposed Project	Lower Intensity Alternative
Policy 3: In order to meet the projected travel demands, major additional highway capacity (expressed as screenlines that are a composite of individual roadways within a corridor) that will be needed City-wide includes:	Consistent: The Specific Plan would provide for the following improvements:	Consistent: Same as proposed project.
-- Eight highway lanes east of I-80, running in an east/west direction, to supplement existing capacity on Douglas and Cirby;	-- Construct Lead Hill Road as a four-lane arterial; Eureka Road as a six-lane arterial; and East Roseville Parkway as a six-lane expressway.	
-- Twelve additional lanes across I-80;	-- Construct Atlantic Street interchange, Taylor Road interchange, and I-80 overpass for East Roseville Parkway.	
-- Six to eight lanes in an arc across the northern side of the City from Douglas Boulevard/Rocky Ridge Drive to Highway 65;	-- Construct East Roseville Parkway as a six-lane expressway with an I-80 overpass.	
-- Four additional highway lanes on the east side of the City in a north/south direction.	-- Construct the Atlantic Street/Taylor Road connector as a four-lane arterial.	
Policy 4: In order to meet projected travel demands in the eastern area of the City, the following improvements need to be implemented:	Consistent: The Specific Plan would provide for the following improvements:	Consistent: Same as proposed project.
-- Douglas Boulevard to six-lane arterial;	-- Construct Douglas Boulevard as a six-lane arterial;	
-- Rocky Ridge Drive to four-lane arterial;	-- Construct Rocky Ridge Drive as a four-lane arterial;	
-- Sierra College Boulevard to four-lane arterial;	-- Construct Sierra College Boulevard as a four-lane arterial;	
-- New two-lane roadway running north and/or west from Rocky Ridge Drive/Douglas Boulevard to connect across I-80 to north of the City.	-- Construct East Roseville Parkway as a six-lane expressway.	

Table 4-2. Consistency of the Proposed Project and Lower Intensity Alternative with the City of Roseville General Plan

General Plan Element	Proposed Project	Lower Intensity Alternative
TRANSPORTATION ELEMENT		
Policy 2: Provide bicycle routes on major streets leading through the City and into outlying areas.	Consistent: The Specific Plan incorporates bikeways along all thoroughfares.	Consistent: Same as proposed project.
Policy 4: Provide adequate bike lanes to allow children easy access to and from existing schools and recreation areas.	Consistent: The Specific Plan incorporates bikeways along all thoroughfares and through the ravine.	Consistent: Same as proposed project.
TRANSIT ELEMENT		
Policy 1: Provide a mass transit system that is most suited in convenience and efficiency for the citizens of Roseville at a cost that is not prohibitive to any segment of the community.	Consistent: Specific Plan provides bus shelters and turnouts.	Consistent: Same as proposed project.
SCENIC HIGHWAYS ELEMENT		
Policy 1: Preserve, enhance, and create the necessary amenities along major roadways linking Roseville with adjacent jurisdictions in order to maintain the community identity of Roseville.	Consistent: Specific Plan includes a Design Element and landscaping guidelines for Rocky Ridge Drive, Taylor Road, Lead Hill Road, Eureka Road, East Roseville Parkway, and Douglas Boulevard.	Consistent: Same as proposed project.
OPEN SPACE AND CONSERVATION ELEMENT		
Policy 1: Open space shall be treated as a by-product of other land uses where the primary land use function establishes the need for preservation.	Consistent: Floodplains and ravine areas are designated for open space.	Consistent: Same as proposed project.
Policy 3: Provide for the preservation of diverse habitats (e.g., riparian habitats), native trees, and unique plant species or habitats.	Consistent: Specific Plan preserves riparian habitats. See also Chapter 13, Botanical and Wildlife Resources.	Consistent: Same as proposed project.
Policy 4: Provide for the preservation of the streambed systems to ensure: a) public safety from storm runoff; b) to allow for proper maintenance; and c) public access, use, and enjoyment.	Consistent: Specific Plan preserves streambed systems.	Consistent: Same as proposed project.

Table 4-2. Consistency of the Proposed Project and Lower Intensity Alternative with the City of Roseville General Plan

General Plan Element	Proposed Project	Lower Intensity Alternative
Policy 9: Provide for the preservation of lands that possess scenic qualities or are associated with roadways that are recognized as community corridors in the Scenic Highway Element.	Consistent: Specific Plan preserves ravine areas which have the highest scenic qualities.	Consistent: Same as proposed project.
Policy 11: Provide for adequate park and recreational facilities for all existing and future neighborhoods.	Potentially inconsistent: See discussion in Chapter 6, Public Services and Facilities.	Potentially inconsistent: Same as proposed project.
Policy 14: Provide for use of all major utility easements to encourage intra-city recreational link up.	Consistent: Specific Plan includes provision for recreational access along power line easement.	Consistent: Same as proposed project.
Policy 16: Provide for park trails to be used by pedestrians, bicyclists, and other alternative transportation modes.	Consistent: Specific Plan includes provisions for bike and hiking trails.	Consistent: Same as proposed project.
NOISE ELEMENT		
The City implements all the policies of this element.	See Chapter 9, Noise, and Chapter 17, Cumulative Impacts.	See Chapter 9, Noise, and Chapter 17, Cumulative Impacts.
SEISMIC SAFETY ELEMENT		
The City implements all the policies of this element.	Not applicable.	Not applicable.
GENERAL SAFETY ELEMENT		
Policy 1 - Flooding. It is the policy of the City of Roseville to: use the concept of floodway zoning to restrict development in areas which are susceptible to flooding; and provide appropriate facilities for reducing the likelihood of flooding in all parts of the community through such means as retention ponds and enlarged culverts.	Consistent: Specific Plan designates floodplain as open space. See also Chapter 10, Hydrology and Drainage.	Consistent: Same as proposed project.
Policy 2 - Geologic Hazards: It is the policy of the City of Roseville to: continue to mitigate the potential impacts of geologic hazards through subdivision reviews and building permit inspections; and minimize soil problems by maintaining compatible land use and suitable building designs and construction techniques.	Potentially inconsistent: See discussion and mitigation measures in Chapter 12, Topography, Geology, and Soils.	Potentially inconsistent: Same as proposed project.

Table 4-2. Consistency of the Proposed Project and Lower Intensity Alternative with the City of Roseville General Plan

General Plan Element	Proposed Project	Lower Intensity Alternative
ENERGY ELEMENT		
Policy 4: Encourage and promote the use of cost-effective, alternative energy sources.	Potentially inconsistent: See discussion and mitigation measures in Chapter 6, Public Services and Facilities.	Potentially inconsistent: Same as proposed project.
Policy 6: Encourage innovative site designs and orientation techniques which incorporate passive and active solar designs and natural cooling techniques in the residential sector.	Potentially inconsistent: See discussion and mitigation measures in Chapter 6, Public Services and Facilities.	Potentially inconsistent: Same as proposed project.
Policy 10: Encourage innovative site design and orientation techniques which incorporate passive and active solar design and natural cooling techniques in the commercial and industrial sectors when they are found to be cost effective.	Potentially inconsistent: See discussion and mitigation measures in Chapter 6, Public Services and Facilities.	Potentially inconsistent: Same as proposed project.
Policy 13: Encourage large industrial employers to provide energy-saving modes of transportation for their employees.	Consistent: Specific Plan includes park-n-ride lot, bikeways, and provisions for buses.	Consistent: Same as proposed project.
PUBLIC SERVICES AND FACILITIES ELEMENT		
Policy 4: The City shall require dedication of lands within newly developing areas for public purposes when it is found that a facility is needed.	Potentially inconsistent: See discussion and mitigation measures in Chapter 6, Public Services and Facilities.	Potentially inconsistent: Same as proposed project.
Policy 5: The City shall provide for detailed review of all development plans to ensure adequate public services and facilities are available.	Consistent: Specific Plan is undergoing detailed review.	Consistent: Same as proposed project.
Policy 8: The City shall extend new sewer lines to the east side of the City in order to meet existing and future sewer needs.	Consistent: See discussion in Chapter 6, Public Services and Facilities.	Consistent: Same as proposed project.
Policy 14: The City shall seek to provide water service to all developing areas of town.	Consistent: See discussion in Chapter 6, Public Services and Facilities.	Consistent: Same as proposed project.
Policy 15: The City shall promote water conservation programs in order to control the use of water.	Consistent: See discussion in Chapter 6, Public Services and Facilities.	Consistent: Same as proposed project.
Policy 21: The City will continue to provide a refuse collection site that satisfies the needs of the refuse disposal operation and for use by City residents.	Consistent: See discussion in Chapter 6, Public Services and Facilities.	Consistent: Same as proposed project.

Table 4-2. Consistency of the Proposed Project and Lower Intensity Alternative with the City of Roseville General Plan

General Plan Element	Proposed Project	Lower Intensity Alternative
Policy 21: The City shall provide adequate Park and Recreation facilities for all existing and future neighborhoods.	Consistent: See discussion in Chapter 6, Public Services and Facilities.	Consistent: Same as proposed project.
Policy 23: The City shall ensure timely development of park sites to satisfy newly-developing areas and neighborhood needs.	Consistent: See discussion in Chapter 6, Public Services and Facilities.	Consistent: Same as proposed project.
Policy 24: Whenever possible, the City shall provide for the use of large utility easements for recreational park use.	Consistent: Specific Plan includes provision for recreational access along power line easements.	Consistent: Same as proposed project.
Policy 25: Whenever possible, the City shall use Floodway and creek areas for public pathway development.	Consistent: Specific Plan includes bike and hiking trails in the ravine.	Consistent: Same as proposed project.
Policy 27: Require as part of project development approval that predetermined park sites be set aside for future acquisition and development.	Potentially inconsistent: See discussion and mitigation measures in Chapter 6, Public Services and Facilities.	Potentially inconsistent: Same as proposed project.
Policy 28: Require dedication of potential park land and public pathways that are located in the Floodplain areas.	Consistent: Specific Plan provides for dedication of land in open space area.	Consistent: Same as proposed project.
Policy 37: The City shall continue to require impact mitigation on developments which are identified as adversely impacting the school districts.	Potentially inconsistent: See discussion in Chapter 6, Public Services and Facilities.	Potentially inconsistent: Same as proposed project.
Policy 39: The City shall work with the school districts in identifying and acquiring future school sites by identifying those sites on the General Plan and on specific development plans.	Consistent: See discussion and mitigation measures in Chapter 6, Public Services and Facilities.	Consistent: Same as proposed project.
FIRE SERVICE COMPONENT		
Policy 11: The City shall formulate a funding mechanism to finance new fire stations, including land costs, building construction, and equipment.	Consistent: See discussion in Chapter 6, Public Services and Facilities.	Consistent: Same as proposed project.

Other Uses: Differences regarding public lands between the proposed project and the land use map reflect both measurement imprecision and actual changes in use. The approved land use map shows the land on which the church site is proposed as urban reserve. An additional public use provided by the proposed project is a 1-acre fire station. These differences are considered less than significant.

Open Space/Park/Undeveloped Land: The nonurban designations are essentially the same under the proposed project as the land use map.

General Plan Consistency. Table 4-2 summarizes relevant Roseville General Plan policies and their consistency with the proposed project. Potential inconsistencies are discussed below.

Land Use Element

- Policy 4 - Requires thorough calculation of public facility needs and mechanism for implementation. This issue is discussed in Chapter 6, Public Services and Facilities.

- Policy 6 - Limits development on Mehrten formation to non-residential activities or high-density residential. This issue is discussed in Chapter 12, Topography, Geology, and Soils.

- Policy 7 - Land Use Plan should designate vernal pool sites. This issue is discussed in Chapter 13, Botanical and Wildlife Resources.

- Policy 8 - Unsurveyed vernal pools should be analyzed. This issue is discussed in Chapter 13, Botanical and Wildlife Resources.

- Policy 10 - Requires that a minimum of 2,000 units at an average density of R-10 be developed in the East Area. The combined Southeast Specific Plan and Northeast Specific Plan fall short of this requirement by 243 units. This impact is significant because higher density development generally lowers construction costs and promotes more affordable housing. To reduce this policy conflict to a less-than-significant level, densities should be increased on some of the parcels where development is proposed at densities less than R-10.

- Policy 37 - Requires impact mitigation for schools. This issue is discussed in Chapter 6, Public Services and Facilities.

Housing Element

- Policy 12(a) - Requires an affordable housing agreement whenever the land use on a piece of property is being changed to a density in excess of ten dwelling units per acre. To reduce this impact to a less-than-significant level the project proponent and City should enter into a housing development agreement that has provisions for affordable housing.

Open Space and Conservation Element

- Policy 11 - Requires adequate park and recreational facilities. This issue is discussed in Chapter 6, Public Services and Facilities.

General Safety Element

- Policy 2 - Requires mitigation of geologic hazards and minimizing soil problems. This issue is discussed in Chapter 12, Topography, Geology, and Soils

Energy Element

- Policies 4, 6, and 10 - Encourage alternate energy sources and solar. This issue is discussed in Chapter 6, Public Services and Facilities

Public Services and Facilities Element.

- Policy 4 - Requires dedication of lands needed for public facility purposes. These issues are discussed in detail in Chapter 6, Public Services and Facilities.

- Policy 27 - Requires predetermined park sites to be set aside for development. This issue is discussed in detail in Chapter 6, Public Services and Facilities.

- Policy 37 - Requires impact mitigation for schools. This issue is discussed in Chapter 6, Public Services and Facilities.

South Placer Policy Plan Consistency. The purpose of the South Placer Policy Plan is to coordinate growth and development in the region, thereby minimizing impacts on

transportation, air quality, housing, and land use. The first policy mentioned under Setting is important because it identifies the regional commitment to providing affordable housing and minimizing traffic and air quality impacts. The second policy is important because the South Placer Policy Committee monitors the growth and development in the region. This provides them with the ability to change policies and direction, if desired. To assure that the growth proposed by the Specific Plan supports the policies of the South Placer Policy Committee, the City should evaluate Specific Plan implementation for compliance with the South Placer Policy Plan.

Growth-Inducement Impacts. Development of the Plan area would increase the pressure to develop lands designated urban reserve and agricultural in the Plan area, as well as adjacent undeveloped land. The proximity of growth, increased land values, and expansion of adjacent infrastructure would create pressure to develop. The impact is less than significant because the urban reserve designation allows for ultimate urban conversion.

Lower Intensity Alternative

The uses planned under the Lower Intensity Alternative are shown by category in Table 2-2. Relative locations of the various categories are shown in Figure 2-10. Community commercial uses would be 71 percent less than the proposed project; business park and professional office uses would be 55 percent less. Other developed uses would be the same as the proposed project.

The predominant undeveloped land use is urban reserve. The gross acreage for this use is 713.3 (34 percent more than is proposed in the proposed project). The balance of the 963.6 acres of undeveloped land includes 151.0 acres of agriculture, 83.6 acres of open space, and 15.7 acres of community park, as proposed under the Specific Plan.

Direct Changes in Land Use. Development of this alternative would have a significant impact by converting open space to urbanized uses, as discussed for the proposed project; approximately 182 fewer acres would be converted. This is a significant impact that cannot be reduced to a less-than-significant level short of implementing the No-Project Alternative.

Loss of agricultural use of the land would be a less-than-significant impact as discussed for the proposed project.

Adjoining Use Compatibility. Impacts would be similar to the proposed project.

Market Impacts on Downtown Roseville. Impacts would be less than the proposed project due to the reduction in commercial uses.

Consistency with Plans and Policies

Land Use Allocation. Table 2-2 provides a comparison of land use allocations for the Lower Intensity Alternative. As shown in Figure 2-10, the Lower Intensity Alternative is identical to the proposed project in all areas except that parcels 6, 7, 8, and 14 would be designated urban reserve. This alternative would increase the land designated urban reserve by 34 percent. No significant impact to land use would result from this designation. Ultimate development of parcels 6, 7, 8, and 14 would require a General Plan amendment and rezoning. Impact analysis of such development would be performed at that time.

General Plan Consistency. Table 4-2 summarizes relevant Roseville General Plan policies and their consistency with the Lower Intensity Alternative. Impacts would be similar to the proposed project.

South Placer Policy Plan Consistency. Impacts would be similar to the proposed project.

Growth-Inducement Impacts. Impacts would be similar to the proposed project.

General Plan Alternative

Direct Changes in Land Use. Impacts would be similar to the proposed project.

This alternative would have the same significant impact on Plan area open space as described for the proposed project.

Adjoining Use Compatibility. Impacts would be similar to the proposed project. The business park and office uses proposed on parcel 12 are not expected to be incompatible with existing and proposed uses along the Douglas Boulevard corridor, as approved by the Southeast Roseville Specific Plan.

Market Impacts on Downtown Roseville. Impacts would be similar to the proposed project.

Consistency with Plans and Policies

Land Use Allocation. The General Plan Alternative reflects approved uses; therefore no adverse impact would occur.

General Plan Consistency. Impacts would be similar to the proposed project (see Table 4-2).

South Placer Policy Plan Consistency. Impacts would be similar to the proposed project.

Growth-Inducement Impacts. Impacts would be similar to the proposed project.

No-Project Alternative

The No-Project Alternative assumes that no Specific Plan would be adopted for the Plan area. The Plan area would continue to be used for grazing and to provide an open space area between the developed areas of Rocklin and Roseville.

Direct Changes in Land Use. Conditions would remain as described in the Setting section of this chapter. No direct impacts would result.

Adjoining Use Compatibility. No incompatibility with adjoining uses would result from continued existing use of the site.

Market Impacts on Downtown Roseville. The No-Project Alternative would not result in any impacts to downtown.

Consistency with Plans and Policies. The No-Project Alternative is consistent with all policies.

Growth-Inducement. This alternative would not induce urban conversion of the Plan area or adjacent agricultural lands.

Mitigation Measures

Proposed Project

Implementation of the proposed project would convert a large open space to urbanized uses. This is a potentially significant impact for which no mitigation is available other than implementation of the No-Project Alternative.

Increase Densities on Some of the Parcels where Development is Proposed at Densities Less than R-10. A detailed description of this measure is contained in Chapter 12, Topography, Geology, and Soils.

Enter into an Affordable Housing Development Agreement. The project proponent and City should enter into a housing development agreement that has provisions for affordable housing to meet the City's goals.

Evaluate the Specific Plan for Compliance with the South Placer Policy Plan. To assure that growth occurs in compliance with the South Placer Policy Plan, the City should evaluate Specific Plan implementation in relation to the South Placer Policy Plan.

Lower Intensity Alternative

All of the mitigation measures required for the proposed project are also required for this alternative.

General Plan Alternative

All of the mitigation measures required for the proposed project are also required for this alternative.

No-Project Alternative

No mitigation is required.

Chapter 5

POPULATION, HOUSING, AND EMPLOYMENT

Setting

Population

Regional. The City of Roseville lies within the Sacramento Standard Metropolitan Statistical Area (SMSA). The Sacramento SMSA includes the counties of Sacramento, Placer, Yolo, and El Dorado. Prior to 1986, El Dorado County was not part of the Sacramento SMSA.

The total population for the SMSA in 1985 was 1,234,800. The population of Placer County was 135,300 in that year. The City population in 1985 was 28,527. The distribution of population within the SMSA is provided in Table 5-1. In the last 15 years, the portion of the SMSA population living in Sacramento County has been reduced by approximately 4 percent. The pro rata share of Yolo County's population within the SMSA has also been reduced, but by 1 percent. These figures indicate a trend toward larger population growth in Placer and El Dorado counties than in the remainder of the SMSA.

The trend toward accelerated population growth in Placer County is illustrated in Table 5-2. Between 1970 and 1980 the population of Placer County increased 51 percent, while the entire SMSA population increased by only 29.8 percent.

The differences in population increase from 1980 to 1985 are not as dramatic, but the trend remains clear. Population levels in Placer County were 15.4 percent greater in 1985 than they were in 1980, while the population levels in the SMSA as a whole increased only 12.3 percent.

City of Roseville. Table 5-2 also illustrates that the City itself is growing at a more accelerated rate during recent years than either Placer County or the SMSA. In fact, since 1980, average population growth for both Placer County and the SMSA as a whole has slowed relative to the period between 1970 and 1980. In contrast, the City's average population growth rate has accelerated since 1980.

A breakdown of annual population growth in the City since 1970 is provided in Table 5-3. From 1980 to 1985 the actual yearly population gain has ranged from 1.9 to 4.2 percent. During that period, the average yearly population gain was

Table 5-1. Distribution of Population by County Within SMSA: 1970, 1980, and 1985

County	1970[1]	1980[2]	1985[3]
Placer	9.15%	10.66%	10.96%
Sacramento	74.84%	71.23%	70.93%
Yolo	10.83%	10.31%	9.9%
El Dorado	5.17%	7.8%	8.19%
SMSA Total	847,626	1,099,814	1,234,800

[1] Employment Development Department (1985) from U. S. Bureau of Census, April 1, 1970.

[2] Employment Development Department (1985) from U. S. Bureau of Census, April 1, 1980.

[3] California Department of Finance estimates for January 1, 1985.

Table 5-2. Population of Roseville, Placer County, and the SMSA: 1970, 1980, and 1985

	1970[1]	1980[2]	1985[3]	Percent Increase 1970-1980	Percent Increase 1980-1985
SMSA	847,626	1,099,814	1,234,800	29.8	12.3
Placer County	77,632	117,247	135,300	51.0	15.4
Roseville	18,221	24,347	28,527[4]	33.6	17.2

[1] Employment Development Department (1985) from U. S. Bureau of Census, April 1, 1970.

[2] Employment Development Department (1985) from U. S. Bureau of Census, April 1, 1980.

[3] California Department of Finance estimates for January 1, 1985.

[4] California Department of Finance Special Census of Roseville as of April 1, 1985.

Table 5-3. Annual Population Growth, City of Roseville: 1970-1985

Year	Population	Annual Increase	Percent Increase
1970[1]	18,221	179	1.0
1971[2]	18,400	350	1.9
1972[2]	18,750	500	2.7
1973[2]	19,250	450	2.3
1974[2]	19,700	350	1.8
1975[2]	20,050	500	2.5
1976[2]	20,550	600	2.9
1977[2]	21,150	1,020	4.8
1978[2]	22,170	1,330	6.0
1979[2]	23,500	847	3.5
1980[3]	24,347	732	3.0
1981[2]	25,079	1,048	4.2
1982[2]	26,127	491	1.9
1983[2]	26,618	952	3.6
1984[2]	27,570	1,418	3.4
1985[4]	28,527	--	--

[1] City of Roseville from U. S. Bureau of Census, April 1, 1970.

[2] City of Roseville from California Department of Finance estimates.

[3] City of Roseville from U. S. Bureau of Census, April 1, 1980.

[4] California Department of Finance Special Census of Roseville as of April 1, 1985.

3.56 percent. In comparison, the average yearly population gain from 1970 to 1980 was 2.94 percent.

Future population growth in Roseville is expected to increase at a significant rate. As shown in Table 5-4, the City's population is expected to increase from 28,527 in 1985 to 98,161 in 2010, an estimated increase of 244 percent. Similarly, the population of Placer County is expected to increase from 140,400 in 1985 to 282,300 in 2010, an increase of 101 percent.

Housing

According to the 1980 census, as of 1980 there were 421,321 total housing units in the Sacramento SMSA. Vacant seasonal and migratory units comprised less than 1 percent of the total number of units. Detached units comprised 68 percent and attached units 32 percent of the year-round housing stock.

The total number of households in Placer County in 1980 was approximately 42,737. Approximately 40 percent of the households were located in the incorporated cities while 60 percent were in the unincorporated area of the County.

The Sacramento Area Council of Governments (SACOG) Housing Module reports that as of January 1, 1985 there were 11,013 housing units in the City of Roseville. Approximately 77 percent of all the units were single-family, 14 percent were multi-family (2-4 units), 7 percent were multi-family (5+ units) and 2 percent were mobile homes. The number of new units completed has been increasing, primarily in the single-family detached unit category. From 1980 to 1985 the number of new units increased by 1,772, and more than 75 percent were single-family units.

Roseville had a special census conducted in 1985 which indicated that there were 11,556 housing units as of April 1, 1985. The number of occupied units was 10,863, while 693 units, approximately 6 percent, were vacant. The number of persons per occupied housing unit was 2.58; slightly higher in owner occupied units, 2.69, and slightly lower in renter occupied units, 2.37.

Employment

The economy of the Sacramento SMSA is dominated by three employment sectors: government, wholesale and retail trade, and services. Together, these three sectors provided 75.4 percent of all jobs in the SMSA during 1985.

These same three sectors provided 76.6 percent of SMSA employment in 1975. While the totals for the three sectors have remained stable, the relative share of each employment sector

Table 5-4. Projected Total Population of Roseville and Placer County: 1985-2010

	1985	1990	1995	2000	2005	2010
Roseville	29,647	38,093	48,618	62,050	79,193	101,073
Placer County	140,411	167,568	197,240	226,263	254,251	282,346

Source: Sacramento Area Council of Governments (1984).

has changed over the last decade. Both the trade and service sectors have risen about 3 percent each. The government sector employed approximately 7 percent less of the SMSA's labor force in 1985 than it did in 1975. Table 5-5 shows the employment distribution for the Sacramento SMSA over time.

Placer County's economy is also dominated by the same three employment sectors and the Sacramento SMSA. However, the relative significance of each sector is different. Wholesale and retail trade is the largest single employment sector with services being second and government third. The three sectors provided 67.1 percent of all jobs in the County during 1985. Six years earlier, these same sectors provided 66.1 percent of Placer County employment. The relative share of each employment sector in Placer County has also changed over time. The trade sector has increased about 3 percent since 1979, as has the services sector. Government employment has decreased about 3 percent since 1979. Table 5-6 shows the employment distribution for Placer County over time.

Placer County's economy differs from the SMSA in two important respects. First, wholesale and retail trade is the largest jobs sector for Placer County while government is the largest sector for the SMSA overall. Second, the differences in relative magnitude between each sector are not as great for Placer County as they are for the SMSA. The difference between the highest and lowest of Placer County's dominant job sectors is 7 percent, whereas the difference in the SMSA is 11 percent. More importantly, the bulk of the remaining jobs distribution is between 4.7 and 10.6 percent for Placer County but is clustered between 4.7 and 7 percent for the SMSA.

Unemployment rates over time are provided for Placer County and the SMSA in Table 5-7. In 1985, the Employment Development Department established that 7 percent of those seeking employment in the SMSA could not find jobs, while 6.8 percent of those seeking work in Placer County were unable to find it. The unemployment rate for Placer County is generally within 1 percentage point of the SMSA rate. Recently, the rates of the two areas have tended to be within 0.2 percent of each other.

Impacts

The cumulative analysis of population, housing, and employment is found in Chapter 17, Cumulative Impacts.

Proposed Project

Population. The number of persons occupying the 1,800 housing units in the Plan area is estimated to be 4,680 based upon 2.6 persons per household.

Table 5-5. Employment by Industry, Sacramento SMSA: 1975-1985[1]

	1975		1976		1977		1978		1979		1980		1981		1982		1983		1984		1985	
Agriculture, forestry and fishing	10,600	(3.0)	10,000	(2.8)	8,800	(2.3)	8,900	(2.2)	9,300	(2.2)	9,100	(2.1)	9,400	(2.2)	9,300	(2.1)	7,700	(1.7)	9,700	(2.0)	8,300	(1.7)
Mining	400	(0.1)	400	(0.1)	500	(0.1)	400	(0.1)	500	(0.1)	600	(0.1)	800	(0.2)	900	(0.2)	800	(0.2)	800	(0.2)	900	(0.2)
Construction	14,400	(4.2)	15,400	(4.3)	19,100	(5.0)	22,500	(5.6)	25,200	(6.0)	20,900	(4.9)	18,700	(4.3)	16,200	(3.7)	18,000	(4.0)	23,200	(4.9)	26,700	(5.3)
Manufacturing	23,000	(6.7)	24,200	(6.8)	25,800	(6.8)	27,800	(6.9)	29,100	(6.9)	28,500	(6.7)	28,700	(6.6)	27,900	(6.4)	29,300	(6.6)	32,800	(6.9)	34,800	(7.0)
Transportation and public utilities	17,300	(5.0)	18,100	(5.1)	19,000	(5.0)	20,900	(5.2)	22,600	(5.4)	22,700	(5.3)	23,600	(5.4)	23,500	(5.4)	22,500	(5.1)	23,300	(4.9)	23,600	(4.7)
Wholesale	14,600	(4.3)	15,200	(4.3)	15,100	(4.0)	16,600	(4.1)	17,300	(4.1)	18,000	(4.2)	19,100	(4.4)	19,000	(4.4)	20,500	(4.6)	22,700	(4.8)	23,500	(4.7)
Retail	59,400	(17.3)	63,500	(17.8)	67,800	(18.0)	74,600	(18.5)	79,300	(18.8)	80,300	(18.8)	81,200	(18.6)	81,100	(18.7)	84,900	(19.1)	91,300	(19.2)	96,600	(19.3)
Finance, insurance, and real estate	14,500	(4.2)	15,800	(4.4)	17,500	(4.6)	19,800	(4.9)	22,000	(5.2)	23,200	(5.4)	23,900	(5.5)	23,900	(5.5)	24,800	(5.6)	26,400	(5.6)	28,500	(5.7)
Services	56,500	(16.5)	60,000	(16.8)	63,300	(16.8)	69,500	(17.2)	74,300	(17.6)	77,900	(18.2)	82,200	(18.9)	83,600	(19.3)	86,800	(19.5)	94,000	(19.8)	101,200	(20.2)
Government	132,500	(38.6)	134,600	(37.7)	140,700	(37.3)	142,100	(35.3)	142,200	(33.7)	145,800	(34.1)	148,400	(34.0)	148,900	(34.3)	148,800	(33.5)	150,900	(31.8)	155,700	(31.2)
Nonagricultural total	332,600	(96.9)	347,200	(97.2)	368,600	(97.7)	394,100	(97.8)	412,500	(97.9)	417,900	(97.9)	426,600	(97.8)	424,900	(97.9)	436,400	(98.2)	465,300	(98.0)	491,500	(98.3)
Total[2]	343,200	(100.0)	357,200	(100.0)	377,400	(100.0)	403,000	(100.0)	421,700	(100.0)	427,000	(100.0)	436,000	(100.0)	434,200	(100.0)	444,200	(100.0)	475,000	(100.0)	499,800	(100.0)

Source: California Employment Development Department (1985) and McClelland (pers. comm.).

[1] Number in parentheses designates percentage of total employment for the specified year.

[2] Apparent error due to independent rounding.

Table 5-6. Employment by Industry, Placer County: 1979-1985[1]

	1979		1980		1981		1982		1983		1984		1985	
Agriculture, forestry, and fishing	500	(1.4)	500	(1.4)	500	(1.3)	500	(1.3)	400	(1.0)	500	(1.2)	500	(1.1)
Mining	100	(0.3)	100	(0.3)	100	(0.3)	100	(0.3)	100	(0.3)	100	(0.2)	100	(0.2)
Construction	2,900	(8.3)	2,600	(7.0)	2,200	(5.8)	1,800	(4.8)	2,300	(5.9)	3,100	(7.1)	3,300	(7.4)
Manufacturing	2,700	(7.7)	2,600	(7.0)	2,800	(7.4)	3,100	(8.2)	3,300	(8.4)	4,200	(9.7)	4,700	(10.6)
Transportation and public facilities	4,000	(11.4)	4,200	(11.4)	4,000	(10.6)	4,100	(10.8)	4,100	(10.4)	4,100	(9.4)	3,900	(8.8)
Wholesale	900	(2.6)	1,000	(2.7)	900	(2.4)	1,100	(2.9)	1,200	(3.0)	1,300	(3.0)	1,200	(2.7)
Retail	7,500	(21.4)	7,800	(21.0)	8,500	(22.5)	8,500	(22.5)	9,000	(22.9)	10,000	(23.0)	10,200	(23.0)
Finance, insurance, and real estate	1,800	(5.1)	1,800	(4.9)	1,800	(4.7)	1,900	(5.0)	2,000	(5.0)	2,100	(4.8)	2,100	(4.7)
Services	7,000	(19.9)	7,700	(20.8)	8,300	(22.0)	8,500	(22.5)	8,700	(22.1)	9,700	(22.4)	10,100	(22.7)
Government	7,800	(22.2)	8,700	(23.5)	8,700	(23.0)	8,300	(21.9)	8,200	(20.1)	8,400	(19.4)	8,300	(18.7)
Nonagricultural total	34,600	(98.6)	36,500	(98.6)	37,300	(98.7)	37,400	(98.9)	38,800	(98.7)	43,000	(99.0)	43,900	(98.9)
Total[2]	35,100	(100.0)	37,000	(100.0)	37,800	(100.0)	37,800	(100.0)	39,300	(100.0)	43,400	(100.0)	44,400	(100.0)

Source: California Employment Development Department (1985) and McClelland (pers. comm.).

[1] Number in parentheses designates percentage of total employment for the specific year.

[2] Apparent error due to independent rounding.

Table 5-7. Unemployment Rates by County Within SMSA: 1975-1985

	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976	1975
SMSA	7.0	8.1	10.3	11.5	9.0	8.1	7.3	7.8	9.1	10.0	10.4
Placer County	6.8	8.3	10.5	12.7	10.3	9.2	7.4	9.1	10.5	11.4	11.5
Sacramento County	6.7	7.8	9.9	11.0	8.5	7.7	6.9	7.5	8.6	9.4	9.5
Yolo County	9.2	10.3	12.9	12.8	10.0	9.0	8.9	7.4	8.5	9.3	9.4
El Dorado	7.0	7.9	9.8	12.6	10.0	9.2	9.0	9.9	13.5	15.3	17.5

Source: California Employment Development Department.

The impact of this population increase is dependent upon how rapidly the project is developed, and the likelihood that other portions of Roseville also will develop residential units. As shown in Tables 5-2 and 5-3, the City added approximately 500-1,500 people each year from 1980 to 1984. Based on these numbers, the project could supply all of the housing needs for 4-10 years.

In addition to direct effects from an on-site population increase, indirect population effects could occur due to secondary employment generated off-site (see Employment).

Housing. The project would provide 1,800 housing units at densities ranging from 5.5 units per acre up to 12 units per acre. It is not known what the specific price ranges of the housing would be. The City's planned development ordinance allows City staff the ability to coordinate specific housing projects to ensure that the housing types, densities, and price ranges meet the needs of the expected income range of new employees in the area. The Housing Element of the General Plan and the policies established by the South Placer Policy Committee would ensure that an adequate housing stock is available.

The Roseville Planning Department monitors housing production versus housing need on an annual basis. As described in the General Plan, the monitoring program includes:

- Conducting an annual survey of the major industrial and commercial employers within Roseville to obtain current demographic data on their employees. Data will include household income, existing housing accommodations and expenses, household size, housing needs, etc.

- Conducting an annual survey of new housing prices by type of unit (e.g., single-family, halfplex, condominium, townhome, etc.), resale prices of existing homes by type of unit, rental rates of units by bedroom size, and the latest vacancy rates.

- Obtaining the latest figures for median income for Roseville residents.

- Analyzing every residential project approved and/or constructed during the preceding year by unit type, number of units, approved sales price, rental rates, and bedroom size.

- Submitting an annual report of housing needs to the Planning Commission which outlines:

- The number of units needed in each price range in the preceding year,

- The number of units approved/constructed in each price range in the preceding year,

- The number of units "shortfall" in each price range, and

- The number of units in each price range needed for the current year.

Based upon the established programs, the potential impacts related to housing supply and affordability are considered less than significant.

In addition to direct effects from an on-site housing increase, indirect housing impacts could occur due to secondary employment generated off-site (see Employment).

Employment. Table 5-8 shows that an estimated 18,026 direct jobs are expected to be generated with implementation of the proposed project. This employment generation has been estimated using employee per gross acre figures as estimated by McDonald (1986). It should be noted that employee generation models vary widely in their results, and many factors are dependent upon the particular industry or business moving to the site. It is likely that this estimate could be maintained at projects in the Plan area for the following reason. Roseville conducts an annual survey of employees in the Roseville area to correlate job development and the provision of affordable housing. Details of this monitoring program are provided earlier. Therefore, if the number of employees being generated was actually projected to be higher than estimated, the City would have the ability to stop permitting additional development. The reverse of this situation, fewer employees generated than estimated, is not considered a problem in this analysis.

Most of the employee positions are expected to be new to Roseville, as opposed to being existing jobs in Roseville merely shifting to a new location.

In addition to generating direct new jobs, the project could generate secondary employment off-site. Secondary employment is composed of indirect employment (employment in firms supporting the direct jobs) and induced employment (employment generated by the wages spent by direct and indirect employees, which may provide jobs in other industries). Secondary employment is projected in the 1981 publication "Planning for Development in South Placer County," at a rate of 2.95 secondary jobs

Table 5-8. Projected Employees

Land Use	Acres	Employees per Gross Acre	Number of Employees
Proposed Project			
Highway commercial	50.1	20	1,002
Community commercial	80.9	20	1,618
Regional commercial	96.7	30	2,901
Business park and professional office	227.6	34	7,738
Research and development	140.2	34	4,767
Total	595.5		18,026
Lower Intensity Alternative			
Highway commercial	50.1	20	1,002
Community commercial	23.5	20	470
Regional commercial	96.7	30	2,901
Business park and professional office	103.0	34	3,502
Research and development	140.2	34	4,767
Total	413.5		12,642
No-Project Alternative			
No impacts			

Source: Jones & Stokes Associates.

for every direct job. It is difficult to estimate where the secondary jobs would be created. Some of these jobs would locate in Roseville, and still others throughout the region. A portion of the employment generated in the Plan area could itself be secondary.

The project would offer increased employment opportunities to Roseville residents. This is generally considered a beneficial impact. See Chapter 17, Cumulative Impacts, for a discussion of the regional jobs/housing balance.

Lower Intensity Alternative

The population and housing impacts of the Lower Intensity Alternative would be the same as the proposed project. The Lower Intensity Alternative would generate an estimated 12,642 direct jobs. Most of these jobs are expected to be new to Roseville. In addition to generating direct new jobs, secondary jobs could be created. The impacts associated with this increased employment opportunity are generally considered beneficial.

General Plan Alternative

The General Plan Alternative is essentially identical to the proposed Specific Plan. Therefore, the analysis in the Draft EIR is limited to the following three impact areas: Chapter 4, Land Use; Chapter 7, Transportation; and Chapter 15, Visual Quality.

No-Project Alternative

No impacts would occur.

Mitigation Measures

Proposed Project, Lower Intensity Alternative, and No-Project Alternative

No mitigation is required.

Chapter 6

PUBLIC SERVICES AND FACILITIES

Introduction

This Public Services and Facilities chapter includes a discussion of water, wastewater, solid waste, police protection, fire protection, electrical and gas service, parks, and schools.

Water

Setting

City. All treated water to areas within the City limits is provided by the City of Roseville. Roseville obtains its water from Folsom Lake via contract with the federal Bureau of Reclamation. Per this contract, Roseville has guaranteed water rights to 36,000 acre-feet per year or 32 million gallons per day (mgd). The current City-wide usage is approximately 11,000 acre-feet per year or 9.8 mgd (Jackson pers. comm.). The water system also has a well back-up system consisting of 6 million gallons (mg) and 2 mg reservoirs, a 4 mgd booster station, and five deep wells (Roseville 1984c).

The existing 6 mg storage tank is located northeast of the Plan area. The City is proposing construction of a second 6 mg storage tank within 5 years to increase storage capacity to 12 mg (Morton and Pitalo 1985; and McDonald 1986).

The Roseville water treatment plant has a capacity of 24 mgd. Normal flows for the plant vary between 12 and 15 mgd. In August 1984, the City experienced a 21 mgd flow which excluded fire demand. Current excess plant capacity is available for the entire area within the City boundaries on a first-come, first-serve basis. The plant is capable of being doubled in size to 48 mgd. The City anticipates that 24 mgd capacity will be added within the next 10 years. The City is also proposing to build a primary 30- to 42-inch transmission line from Folsom Lake to northeast Roseville and a water booster station, to be completed by 1991 (Morton and Pitalo 1985; and McDonald 1986).

Plan Area. Currently, City water is not supplied to the Plan area. A high-pressure transmission line serving the City of Roseville crosses the Plan area, but is not designed to service existing or proposed uses. Water mains currently extend

along portions of the Plan area bordering Douglas Boulevard to the south and I-80 to the west.

Impacts

Proposed Project

Projected Demand and Required Facilities. Projected water demand-peak use is shown in Table 6-1. The projected peak demand of 5.1 mgd would substantially increase the demand on the water treatment plant. Some available excess capacity does exist in the system. However, this excess capacity will be utilized on a first-come, first-serve basis. Conceivably, this additional capacity could be used up before development occurs in the Plan area. Development of the Plan area could, therefore, contribute to the need for water treatment plant expansion.

The schematic water plan for the Plan area (Figure 6-1) shows the extension of a 36-inch water main along Eureka Road. This main would tie in with the 24-inch main serving the west side of the City, providing the City with a loop system tying east and west Roseville. As a result of discussions between the project proponents and Caltrans, the Taylor Road overcrossing's structural integrity has been increased to accommodate this large water transmission line.

Major water lines within the Plan area would vary from 12-16 inches. The water system pipe sizes are based upon the City of Roseville General Plan factors for domestic water usage, 3,000 gallons per minute (gpm) fire flows for commercial property, and 1,000 gpm fire flows for residential areas.

The minimum acceptable water pressure at each building would be 35 pounds per square inch (psi). A 15 psi pressure drop between the water main and the service point has been assumed. This means that the water main pressure must be maintained above 50 psi, which translates to a 115-foot elevation change. Therefore, the system would serve up to elevation 270. Any higher elevations would require special design features to assure adequate pressure.

Fiscal Considerations. The Specific Plan policies stipulate that all waterline extensions be fully paid by the development and that financing be achieved by spreading the costs to all benefiting properties. Construction of internal water lines and facilities would be the responsibility of the project proponent. Costs of water treatment plant expansion and the main transmission line would require a broader-based method of financing. The Specific Plan further states that to the extent funds are needed for line installation or plant expansion in advance of City collection, then the project would advance the funds by cash payment, assessment district bond sales, Mello-Roos bond sales or other appropriate means with

Table 6-1. Projected Water Demand - Peak Use

Land Use Category	Acreage	Density (Units/Acre)	Total Units	Peak Water Usage Factor	Number in Household	Peaking Factor	Peak Water Demand (mgd)
Proposed Project							
Single-family	65.4[1]	5.5	357[1]	400[2] gal/person/day	4[3]	1	0.571
Multi-family	159.3[1]	9-12	1,443[1]	400[2] gal/person/day	3[3]	1	1.732
Business park	228	--	--	1,785[3/4] gal/ac/day	--	2[4]	0.813
Commercial	227	--	--	1,785[3/4] gal/ac/day	--	2	0.810
Research and development	140	--	--	3,930[5] gal/ac/day	--	2	1.100
Fire station and church	31	--	--	1,785[3/4] gal/ac/day	--	1	0.055
Park	16	--	--	1,000[6] gal/ac/day	--	1	0.016
Total	866.7		1,800				5.097
Lower Intensity Alternative							
Single-family	65.4[1]	5.5	357[1]	400[2] gal/person/day	4[3]	1	1.571
Multi-family	159.3[1]	9-12	1,443[1]	400[2] gal/person/day	3[3]	1	1.732
Business park	103	--	--	1,785[3/4] gal/ac/day	--	2[4]	0.368
Commercial	170	--	--	1,785[3/4] gal/ac/day	--	2[4]	0.606
Research and development	140	--	--	3,930[3/4] gal/ac/day	--	2	1.100
Fire station and church	31	--	--	1,785[3/4] gal/ac/day	--	1	0.055
Park	16	--	--	1,000[6] gal/ac/day	--	1	0.016
Total	684.7						4.448
No-Project Alternative							
No impacts							

[1] Assumes 100 percent of R-5.5 acreage would develop as single-family units and R-9, R-10, and R-12 would develop as multi-family units.

[2] 400 gallons/person/day is the City of Roseville standard, which includes the peak flow for residential usage.

[3] Morton and Pitalo (1985).

[4] 1,785 gallons/acre/day water usage for business park, commercial, and institutional is derived from City of Roseville water usage figures for wastewater treatment, which compare favorably with water supply figures for other jurisdictions within the greater Sacramento area. Peaking factor of 2 for business park and commercial is based upon Placer County Water Agency, City of Sacramento, and Sacramento County figures.

[5] Miller (pers. comm.).

[6] City of Sacramento averages.

full cost plus interest expense repayment to the developer in the form of connection fee credits.

The 36-inch water main along Eureka Road would probably be included in an assessment district which would also finance the proposed transmission line from Folsom Lake to northeast Roseville (Morton and Pitalo 1985). Other options would include increasing fees or financing through a Mello-Roos Community Facilities District. At present, City funds are not available to construct this water line.

Development of the Plan area without an established funding mechanism to defray costs would be a significant impact. To reduce this impact to a less-than-significant level, the project proponent should prepare a detailed cost-revenue analysis which should be reviewed by the City prior to adoption of the Specific Plan.

Lower Intensity Alternative. As shown in Table 6-1, peak water demand for the Lower Intensity Alternative would be about 4.4 mgd, or about 12 percent less than the proposed project. The impact on water treatment plant expansion would be slightly reduced. Construction of the 36-inch water main is also assumed with this alternative. Potential impacts could also result with this alternative if appropriate funding is not assured.

General Plan Alternatives. The General Plan Alternative is essentially identical to the proposed Specific Plan. Therefore, the analysis in the Draft EIR is limited to the following three impact areas: Chapter 4, Land Use; Chapter 7, Transportation; and Chapter 15, Visual Quality.

No-Project Alternative. No impacts would occur. An alternative routing of the 36-inch main would be necessary to achieve the east-west loop system. The full cost of an alternative routing would likely result in a net increase in cost to the City.

Mitigation Measures

Proposed Project

Prepare a Detailed Cost-Revenue Analysis. The project proponent should prepare a detailed cost-revenue analysis for review by the City prior to adoption of the Specific Plan. Assurance of an adequate financing plan for water facility improvements should be required as a condition of project ap-

FIGURE 6-1.

MORTON & PITALO, INC.
CIVIL ENGINEERING
PLANNING SURVEYING

6-12-86

SCHEMATIC WATER PLAN

JOB NO. 840084

LEGEND
PROPOSED
EXISTING

DESIGNED BY: S. SOMMER
DRAWN BY: J. ZARAGOZA

SHEET 1 OF 4 SHEETS

FUTURE WATER LINE BY CITY OF ROSEVILLE
EAST
PUMP STATION
ABANDON
16" 30 BY OTHERS
I-80
SUNRISE AVE.
EUREKA
ROSEVILLE
DRIVE
RIDGE
ROAD
LEAD HILL
ROCKY
PRKWY.
ROAD "A"
SIERRA COLLEGE BLVD.
DOUGLAS BLVD.

- Increased Development Fees. Fees could be increased to finance all or part of water capital costs. A major drawback to development fees from the public agency's viewpoint is that the revenues generated by development fees are dependent upon the pace of development. If improvements are required in advance of available revenues, then this mechanism is inappropriate. While exactions require that a project proponent finance and construct public facilities, development fees provide only the financing for these facilities. Furthermore, development fees are typically set on a City-wide basis and do not vary with the specific capital requirements of projects. Development fees and exactions are financed without benefit of lower interest rates through access to municipal tax-exempt bonds. Higher finished lot prices or lower project proponent profits would result.

- Special Benefit Assessments. A special assessment levy could be placed on a property to finance improvements that specifically benefit that property. Special assessments can be apportioned upon any basis which reasonably measures benefits. These assessments are typically paid by property owners at the same time property taxes are paid. California benefit-type assessments are administered through such proceedings as the Improvement Act of 1911, the Municipal Improvement Act of 1913, and the Improvement Bond Act of 1915.

- Mello-Roos Community Facilities Act of 1982. This act authorizes local governments to levy a special tax within newly formed community facility districts to fund capital improvements. These funds may be used to guarantee bond issues. The act is designed to be used by areas that are undeveloped, such as the Plan area.

Require Standard Water Conservation Measures. State law requires standard water conservation measures, such as flow-restricting devices, landscaping with drought-tolerant vegetation, and drip irrigation.

Lower Intensity Alternative. The mitigation measures required for the proposed project would also be required under this alternative.

No-Project Alternative. No mitigation is required.

Wastewater

Setting

City. The Roseville Wastewater Treatment Plant was designed to service Roseville and parts of South Placer County (including the Rocklin/Loomis area), as contained within the Rocklin/Loomis Municipal Utility District (RLMUD).

Treatment plant capacity is 12 mgd. At present there is approximately 6 mgd in excess treatment plant capacity. It is estimated that this excess capacity will decrease to 3.5 mgd as soon as the Southeast Placer County Interceptor is completed this year.

Excess capacity within the City limits is allocated on a first-come, first-serve basis. The plant theoretically could be expanded to as much as 84 mgd, depending on water quality restraints at the Dry Creek discharge point (Jackson pers. comm.). The City plans to expand the plant by 12 mgd within the next 10 years, and ultimately by another 6 mgd (McDonald 1986). Also planned are expansion of storage facilities, construction of pumping facilities, and major sewer line facility construction.

The City, RLMUD, Rocklin, and South Placer County are considering providing sewer service to the industrial properties in north Roseville. This area would produce approximately 5 mgd when developed. Alternatively, special consideration is being given for a separate treatment plant for this area.

Plan Area. Currently, no City sewer service is provided to the Plan area. The existing 10-inch sewer line to the southwest of the Plan area, along Sunrise Avenue, has approximately 290,000 gpd of excess capacity. To the south, very little excess capacity is available at this time. This condition will improve significantly once the Southeast Placer County Interceptor is functioning and 1 mgd excess capacity is available.

A 10-inch sewer line has been installed in Rocky Ridge Drive at its intersection with Douglas Boulevard. This improvement is part of Phase I of the Southeast Roseville Specific Plan. This line can handle limited capacity once the Southeast Placer County Interceptor is functioning (Morton and Pitalo 1985).

Impacts

Proposed Project

Projected Demand and Required Facilities. Projected wastewater generation-peak use is shown in Table 6-2. The projected peak generation of about 4.0 mgd would substantially increase the demand on the sewage treatment plant. As with

Table 6-2. Projected Wastewater Generation - Peak Use

Land Use Category	Acreage	Density (Units/Acre)	Total Units	Sewage Factor	Average Sewage Flow (mgd)
Proposed Project					
Single-family	65.4[1]	5.5	357[1]	400[2] gal/unit/day	0.143
Multi-family	159.3[1]	9-12	1,443[1]	300[2] gal/unit/day	0.433
Business park	228	—	—	1,600[2] gal/ac/day	0.365
Commercial	227	—	—	1,600[2] gal/ac/day	0.363
Research and development	140	—	—	2,857[3] gal/ac/day	0.400
Fire station and church	31	—	—	1,600[4] gal/ac/day	0.050
Park	16	—	—	300[4] gal/ac/day	0.005
Total	866.7		1,800		1.759
				Peaking factor	x 2.3[5]
				Peak flow	4.046
Lower Intensity Alternative					
Single-family	65.4[1]	5.5	357[1]	400[2] gal/unit/day	0.143
Multi-family	159.3[1]	9-12	1,443[1]	300[2] gal/unit/day	0.433
Business park	103	—	—	1,600[2] gal/ac/day	0.165
Commercial	170	—	—	1,600[2] gal/ac/day	0.272
Research and development	140	—	—	2,857[3] gal/ac/day	0.400
Fire station and church	31			1,600[3/4] gal/ac/day	0.050
Park	16	—	—	300[3/4] gal/ac/day	0.005
Total	684.7		1,800		1.468
				Peaking factor	x 2.3[5]
				Peak flow	3.376
No-Project Alternative					
No impacts					

[1] Assumes 100 percent of R-5.5 acreage would develop as single-family units and R-9, R-10, and R-12 would develop as multi-family units.

[2] Morton and Pitalo (1985).

[3] Miller (pers. comm.).

[4] Based on flows for other jurisdictions within the greater Sacramento area.

[5] Based on City of Roseville standards for average flows greater than 1.0 mgd.

water, service is on a first-come, first-serve basis. Development of the Plan area could, therefore, contribute to the need for sewage treatment plant expansion.

Proposed on-site collector lines would follow proposed roadways, as well as Miner's Ravine and Secret Ravine creeks (see Figure 6-2). These lines would feed into a proposed interceptor along Dry Creek Ravine, an existing 10-inch line along Rocky Ridge Drive, an existing 12-inch line along Douglas Boulevard, and a proposed 12-inch line emanating from Douglas Boulevard to the south. A lift station would also be constructed near the East Roseville Parkway/Douglas Boulevard intersection.

The existing line down Antelope Creek could be used for early phases of development. For example, some development could occur in the highway commercial, regional commercial, or residential areas adjacent to Miner's Ravine Creek along I-80. Some development of the commercial area proposed for Douglas Boulevard could also proceed with connection to the sewer line beneath Rocky Ridge Drive. Finally, connection to the interceptor line in Sierra College Boulevard or in Strap Ravine could accommodate early development of the residential areas along Road "A" and Sierra College Boulevard.

Fiscal Considerations. The Specific Plan policies stipulate that all sewer line extension and plant expansion costs be fully paid by the project proponents and that financing be achieved by spreading the costs to all benefiting properties. Construction costs of on-site facilities and the interceptor would be the responsibility of the project proponent. The extent of the areas to be served by the interceptor and the resulting costs, cost-sharing, and means of financing have not yet been determined. Options could include an assessment district or a Mello-Roos Community Facilities District.

Development of the Plan area without an established funding mechanism to defray costs would be a significant impact. To reduce this impact to a less-than-significant level, the project proponent should prepare a detailed cost-revenue analysis which should be reviewed by the City prior to adoption of the Specific Plan.

Lower Intensity Alternative. As shown in Table 6-2, peak sewage generation would be about 3.4 mgd or about 16 percent less than the proposed project. The impact on sewage treatment plant expansion requirements would be reduced.

General Plan Alternative. The General Plan Alternative is essentially identical to the proposed Specific Plan. Therefore, the analysis in the Draft EIR is limited to the following three impact areas: Chapter 4, Land Use; Chapter 7, Transportation; and Chapter 15, Visual Quality.

No-Project Alternative. No impacts would occur.

Mitigation Measures

Proposed Project

Prepare a Detailed Cost-Revenue Analysis. The project proponent should prepare a detailed cost-revenue analysis for review by the City prior to adoption of the Specific Plan. Assurance of an adequate financing plan for sewage treatment plant expansion and other improvements should be a condition of project approval. Funding options would be the same as those described under the Water section.

Lower Intensity Alternative. The mitigation measure required for the proposed project would also be required under this alternative.

No-Project Alternative. No mitigation is required.

Solid Waste

Setting

City. The City disposes of its refuse at the 320-acre Western Regional Sanitary Landfill located just northwest of the City. The site is under the jurisdiction of the Regional Landfill Authority. The site handles refuse disposal for the cities of Roseville, Lincoln, Rocklin, and the unincorporated section of Placer County, southerly and westerly of Auburn. All of these jurisdictions participated in the financing of the landfill.

The Western Regional Sanitary Landfill is currently receiving about 300-400 tons per day including about 100 tons per day from Roseville. The capacity of the site is in excess of 8 million cubic yards. Given an anticipated growth rate in the service area of 4 percent compounded annually, the life expectancy is 40 years. Waste removal services in the City are fee supported. The money paid for refuse pickup pays for equipment and personnel.

Plan Area. There is no existing service to the Plan area.

Impacts

Proposed Project

Projected Demand and Required Facilities. The project would result in an estimated 50 tons per day of solid waste, assuming 5 pounds per capita per day for residential uses, and 1 pound per 100 sf for business uses. (These generation factors are derived from comparable uses in the City of Sacramento.) The largest percentage of this would be generated by the nonresidential uses. This increase could be accommodated at the existing landfill.

In view of the uncertainty regarding the specific types of high technology industries anticipated, it is not possible to predict the amount and nature of the hazardous materials that may be generated. Hazardous wastes would require disposal in a Class I disposal site. The nearest facilities are located in the cities of Benicia, Martinez, and Richmond, all of which are within a 3- to 4-hour round trip haul distance. A discussion of hazardous materials is contained in Chapter 14, Hazardous Materials.

Fiscal Considerations. As waste removal services, personnel, and equipment are fee supported, no adverse fiscal impacts would result.

Lower Intensity Alternative. This alternative would result in an estimated 39 tons per day of solid waste, assuming the generation factors previously discussed. This is a 22 percent reduction from the proposed project. Potential impacts associated with hazardous waste would be the same as under the proposed project.

General Plan Alternative. The General Plan Alternative is essentially identical to the proposed Specific Plan. Therefore, the analysis in the Draft EIS is limited to the following three impact areas: Chapter 4, Land Use; Chapter 7, Transportation; and Chapter 15, Visual Quality.

No-Project Alternative. Since the plan area would remain undeveloped, it would not generate increased demand on landfill capacity or impacts related to hazardous waste. No impacts would occur.

Mitigation Measures

Proposed Project, Lower Intensity Alternative, and No-Project Alternative. No mitigation is required. See also Chapter 14, Hazardous Materials.

Police Protection

Setting

City. The City Police Department serves the entire incorporated area. The department is divided into six patrol areas. All police dispatches and calls for services are handled from the downtown central station.

The City currently employs 38 sworn officers at a ratio of about 1.3 officers per 1,000 population. Minimum staffing levels, based on population served, are 1 sworn officer per 1,000; 1 traffic officer per 10,000; 1 full-time police service aide per 15,000; and 1 investigative officer per 5,000 population. Police manpower and funding is generally considered to be adequate (Hall pers. comm.). The local holding jail is currently at capacity.

The department plans to expand the downtown station to accommodate future City growth. No additional stations are planned.

Plan Area. Demand for services within the Plan area is low and typically relates to problems with trespassing including vandalism. Average emergency response time to the Plan area is 3 minutes, and 20 minutes or less for nonemergency calls (Hayes pers. comm.).

Impacts

Proposed Project

Projected Demand and Service Requirements. Development in the Plan area would create a need for additional police services; this demand would be primarily for emergency calls, parking and circulation problems in residential areas, and for traffic and parking lot vandalism problems in office, commercial, and research and development areas. The proximity of residential to business areas may increase the potential for criminal activity. This impact can be reduced to a less-than-significant level by implementing appropriate design criteria in new development, per police department recommendations.

It may be difficult for police to locate specific buildings when responding to calls in business developments unless the buildings are clearly marked. Rooftop addresses aid helicopter response to crime incidents, and prominent site maps aid ground force response. In addition, sufficient lighting should be provided in parking areas to provide for personal safety. To further reduce demand on City police services, private security patrols should be considered.

Police department personnel have expressed concern over possible security problems associated with the open space parkway (White, Hayes pers. comm.). Potential security problems could be minimized by conformance with City streambed development standards. As discussed under Parks, this includes selective trimming of vegetation to discourage undesirable activity and encourage safety, and coordination with the police department and general public on methods to promote public safety (Roseville 1986). Private patrol of this area would also reduce potential security problems.

Fiscal Considerations. Based on current minimum staffing levels, the resident population would require about five additional regular officers, one investigative officer, and additional support personnel. This estimate may be low as it is based only on residential population, and does not reflect police service requirements for office, commercial, or research and development uses.

Lower Intensity Alternative. Demand for police services, based on the residential population and associated costs, would be the same as under the proposed project. The reduction in commercial and business park and professional office development could reduce police service requirements. Potential problems due to proximity of residential and business areas would also be less with this alternative.

General Plan Alternative. The General Plan Alternative is essentially identical to the proposed Specific Plan. Therefore, the analysis in the Draft EIS is limited to the following three impact areas: Chapter 4, Land Use; Chapter 7, Transportation; and Chapter 15, Visual Quality.

No-Project Alternative. No impacts would occur.

Mitigation Measures

Proposed Project

Require Site Design Review by the Police Department. As currently required by the City, when specific projects are proposed, police personnel should review site designs to ensure that adequate police access is provided, and that measures that discourage crime, such as adequate parking lot lighting, and clearly visible building numbers, are included in project designs.

Require On-Site Security. Private security could be required during construction and after completion of development to reduce demand on City services.

Evaluate Parkway Security Needs. Coordination with police, park, and public interests should be undertaken to determine methods of enhancing security within the parkway while still maintaining open space objectives (see also Chapter 13, Botanical and Wildlife Resources).

Lower Intensity Alternative. The mitigation measures required for the proposed project would also be required for this alternative.

No-Project Alternative. No mitigation is required.

Fire Protection

Setting

City. The City of Roseville Fire Department serves the entire incorporated area. The City currently maintains two fire stations. An additional station is planned for completion by January 1987 (White pers. comm.). Table 6-3 lists personnel and equipment at these stations. The department maintains mutual aid agreements with Placer County and adjacent incorporated cities and state and federal agencies.

The Insurance Service Organization (ISO) service rating for the City is 3. (The ISO rating is the accepted standard of service quality and rates overall service on a descending scale of 1-10.) The highest percentage of calls in the City are for emergency medical treatment. The department currently has adequate manpower, but anticipates a manpower shortage as development proceeds within the City. A potential problem also could occur in handling fires associated with hazardous chemicals and other specialized requirements of large industrial facilities (White pers. comm.).

Plan Area. Station No. 3, located at Cirby Way east of Sunrise Boulevard, presently serves the Plan area and development south of Douglas Boulevard. Demand for services within the undeveloped areas is low and is primarily for grass fire suppression (White pers. comm.). The average emergency response time to the project site is 5.5 to 6 minutes, which exceeds the department recommendation of 4 minutes (White pers. comm.).

Impacts

Proposed Project

Projected Demand and Service Requirements. Development of the Plan area would substantially increase the demand for service and the type of services required. The Plan contemplates a fire station site near the intersection of Sunrise

Table 6-3. Fire Services

Station Number	Location	Type	Personnel	Available Equipment
1	Oak Street	Truck/Engine	8	Three Engines/Ladder Truck/Tanker Grass Unit
3	Cirby	Engine	4	Engine/Tanker/Rescue/ Grass Unit
2[1]	Junction Boulevard	Engine	4	Engine/Grass Unit

Source: White (pers. comm.).

[1] Scheduled for completion in January 1987.

Avenue and East Roseville Parkway to accommodate this demand. This station, planned by the fire department for construction in 1995, would be beneficial in serving the Plan area as well as extending coverage to areas now considered poorly served (White pers. comm.).

Residential development would generate demand for services now typically required in the City and would not require new types of specialized equipment or training. Fire prevention measures incorporated into office and commercial developments result in a high level of fire safety. However, the commercial areas and research and development facilities may include high rise structures which could require a ladder truck. It is not known if the station proposed in the Plan area would include a ladder truck. However, this is not considered to be a problem because equipment is available at the central station and could also be summoned from the Citrus Heights station on a mutual aid basis.

Research and development activities within the Plan area may involve use and storage of hazardous materials. Such use is governed by local ordinance. However, these uses pose a fire risk which require specially trained personnel and equipment. The department currently lacks both. A station now planned for the year 2002/03 in the Northern Industrial area of the City would include a complete hazardous material unit. Research and development activities in the Plan area and in other areas of the City may require that this equipment and station be provided earlier than now planned. Hazardous material fire risks could be reduced to a less-than-significant level by implementation of a hazardous waste management plan. See also Chapter 14, Hazardous Materials.

Additional fire safety measures, which should be incorporated into final project design to reduce impacts to a less-than-significant level, include provision of high visibility signs and preventative measures such as sprinklers and fire walls (White pers. comm.).

Fire Flow/Access Requirements. A 3,000 gpm fire flow would generally be required for commercial areas and 1,000 gpm flows for residential areas. Sprinkling systems would be required in all commercial buildings larger than 5,000 sf. Road construction, governed by City standards, specifies a minimum vertical clearance of 12 feet and turning radius of 46 feet for ladder trucks and dynamic loading of 47,000 pounds (White pers. comm.).

Fiscal Considerations. The primary fiscal concern of the fire department regarding new development is the lack of funding for additional manpower other than the General Fund (White pers. comm.).

Lower Intensity Alternative. Demand for fire services based on the projected residential population would be the same as under the proposed project. The reduction in business uses may decrease demand for fire protection services. Impacts associated with fire flow and access requirements would also be the same.

General Plan Alternative. The General Plan Alternative is essentially identical to the proposed Specific Plan. Therefore, the analysis in the Draft EIS is limited to the following three impact areas: Chapter 4, Land Use; Chapter 7, Transportation; and Chapter 15, Visual Quality.

No-Project Alternative. No impacts would occur.

Mitigation Measures

Proposed Project

Prepare and Implement a Site-Specific Hazardous Waste Management Plan. The measure is explained in detail in Chapter 14, Hazardous Materials.

Incorporate Fire Safety Measures in New Developments. Fire flow requirements for office and commercial developments could be reduced by installing sprinkler systems and requiring fire separation walls. To ensure that adequate fire safety measures are incorporated into new developments, all building designs and site layouts should be reviewed by fire officials; recommendations regarding fire protection measures should be included in final project design.

Lower Intensity Alternative. The mitigation measures required for the proposed project would also be required for this alternative.

No-Project Alternative. No mitigation is required.

Electrical and Gas Service

Setting

City

Electrical Service. The City owns and operates its own electrical distribution system. Roseville purchases electricity from the Western Area Power Administration (WAPA), a

federal agency. The City contracts additional electricity from the Northern California Power Agency (NCPA).

Gas Service. Natural gas is provided by Pacific Gas and Electric Company (PGandE).

Plan Area

Electrical Service. Three sets of electrical transmission lines cross the Plan area in a southeast to northwest direction. The 90-acre PGandE power easement is 550 feet wide. The City plans construction of a double circuit 60 kV line next to the transmission corridor during 1987 and around the Atlantic Street interchange in 1986-87. Twelve kV transmission lines will be available by early 1987 at or near: Lead Hill Road and Sunrise Avenue; Rocky Ridge Drive, and Douglas Boulevard; Eureka Road and Douglas Boulevard; and East Roseville Parkway and Douglas Boulevard (Mizer pers. comm.).

Gas Service. The nearest feeder line is a 4-inch line located just east of the Plan area extending along Sierra College Boulevard to Cavitt & Stallman Road.

The City follows the practice of setting fees at levels sufficient to cover the cost of required capital investments. The project proponent is required to pay for all on-site materials. The backbone and mainline system improvements are defrayed by imposition of fees.

Impacts

Proposed Project

Electrical Services. As shown in Table 6-4, peak demand is estimated at 59,500 kW. The City has projected adequate resources to meet load growth (Mizer pers. comm.). Development of the project would require 60 kV overhead lines and 12 kV underground lines. At least one substation would be required on a 0.75-acre site located on Eureka Road between Rocky Ridge Drive and Sunrise Avenue, adjacent to the transmission line. If an additional substation is needed, the City electrical department recommends it be located on Lead Hill Road adjacent to the transmission lines. Improvements on Eureka Road would need to be installed to extend underground distribution circuits from the substation. To ensure the provision of these facilities and mitigate potential impacts to a less-than-significant level, the project proponents should coordinate with the City during the early phases of development planning. Additionally, to ensure that adequate resources are available when needed, the City electrical department recommends that an annual development plan be submitted by the project proponent (Mizer pers. comm.).

Table 6-4. Projected Electrical Demand - Peak Use

Land Use Category	Acreage	Kilowatts/ Acre[2]	Peak Electrical Demand
Proposed Project			
Single-family	65.4[1]	25	1,635
Multi-family	159.3[1]	40	6,372
Business park	228	80	18,240
Commercial	227	80	18,160
Research and development	140	90	12,600
Fire station and church	31	80	2,480
Totals	850.7		59,487
Lower Intensity Alternative			
Single-family	65.4[1]	25	1,635
Multi-family	159.3[1]	40	6,372
Business park	103	80	8,240
Commercial	170	80	13,600
Research and development	140	90	12,600
Fire station and church	31	80	2,480
Totals	668.7		44,927
No-Project Alternative			
No impacts			

[1] Assumes 100 percent of R-5.5 acreage will be developed for single-family and R-9 and R-12 will be developed as multi-family.

[2] Based on estimates by City of Roseville Electrical Utility Department (Mizer pers. comm.).

Gas Services. PGandE has indicated that gas service can be provided in accordance with Gas Rule No. 15 -- Gas Main Extensions. Connection would probably be made with the existing 4-inch line to the east. This feeder line has adequate capacity to serve the planned development (Kageta pers. comm.).

Fiscal Considerations. All costs of improvements and connections would be paid by required fees and project proponent contributions. Lands for utility purposes should be dedicated where funds are not available to purchase such lands. No adverse fiscal impacts are anticipated.

Lower Intensity Alternative. As shown in Table 6-4, peak demand is estimated at 44,500 kW or 25 percent less than the proposed project. The type of overhead and underground lines would be the same as with the proposed project. One substation would probably be adequate. Impacts on gas services and fiscal considerations would be similar to the proposed project.

General Plan Alternative. The General Plan Alternative is essentially identical to the proposed Specific Plan. Therefore, the analysis in the Draft EIS is limited to the following three impact areas: Chapter 4, Land Use; Chapter 7, Transportation; and Chapter 15, Visual Quality.

No-Project Alternative. No major service extensions or facilities would be required to serve the Plan area.

Mitigation Measures

Proposed Project

Coordinate with Energy Suppliers. Contacts should be established with the City and PGandE during the early phases of development planning to ensure dedication of public utility easements for necessary power/gas lines and to assist in the siting of substations. An annual development plan by the project proponent should also be submitted.

Incorporate Conservation/Load Management Measures into New Development. Energy conservation requirements, as established by the City Planning Department, should be incorporated into project design. The City should promote the use of passive and active solar systems in new residential, commercial, and business professional buildings. Important items to remember when designing projects include building orientation, street layout, lot design, landscaping, and street trees.

Lower Intensity Alternative. The mitigation measures required for the proposed project would also be required for this alternative.

No-Project Alternative. No mitigation is required.

Parks

Setting

City. Parks and recreation services and maintenance are provided by the Roseville City Parks and Recreation Department. Currently 16 park sites exist, totaling approximately 282 acres; approximately 68 acres are developed and about 214 acres are undeveloped. Park facilities include tennis courts, play equipment, restrooms, activity buildings, a zoo, and active play areas. Demand for play fields exceeds supply because of the high interest in organized sports activities within the community (Ucovich pers. comm.). The City also maintains 17 acres at school sites for joint school-park use. The Parks Department is responsible for 28 landscaped areas covering 24 acres, as well as bike trails and the City golf course.

The City is divided by several creeks, including Dry Creek, Linda Creek, Cirby Creek, and Pleasant Grove Creek. The City has adopted floodway zoning along the channels of each of these creeks (see also Chapter 10, Hydrology and Drainage). In some cases, they are wide enough to use for recreational/park activities. Currently, the Parks Department maintains the 5.89 miles of creeks within the City. No City maintenance is provided for privately-owned creek areas.

Staff-recommended City park standards are listed in Table 6-5. As shown, minimum acreage per 1,000 population is 2.5 acres for neighborhood parks, 1.5 acres for community parks, and 5 acres for City-wide parks.

An updated recreation master plan has not been adopted by the City; however, staff has prepared conceptual plans for the newly developing areas.

Plan Area. Currently, no recreational areas with authorized public access exist in the Plan area. The extensive natural amenities of the site and relatively open access undoubtedly contribute to unauthorized use of the area.

Table 6-5. Staff Recommended Park Standards

Components	Neighborhood Park	Community Park	City-Wide Park
Minimum acreage per 1,000 population[1]	2.5 acres	1.5 acres	5 acres
Desired size for best results	12-15 acres	20-25 acres	40-100+[2] acres
Age group served[1]	Primarily youngsters 15 years or younger	Primarily youngsters 15 years or older, adults, and family groups	All
Population served	5,000-6,000	13,000-16,000	8,000-20,000[1]
Service radius[1]	0.25-0.50 mile	1-2 miles	Total City
Facilities that[1] may be included	Apparatus area, paved area for court games, turf area, picnic area, landscaping, play lot for preschoolers, restroom, parking	Field for sports, paved area for court games, family and group picnic, area for special events, off-street parking, night lighting, indoor center, natural area	Large picnic area, boating, swimming, athletic fields, museum, zoo, play area, parking, trails
General location[1] considerations	Central to service area, preferably in conjunction with school, accessible without crossing major street, railroad	Central to service area on secondary arterials	Convenient to arterials

Source: Roseville City Parks and Recreation Department per Mahany and Ucovich (pers. comm.).

[1] These standards are the same as found in the General Plan.

[2] City-wide parks will have large variations in size and design, depending on site amenities and natural features. The relatively low level of population served in relationship to size is due to typically large open space acres for low intensity and passive use.

Impacts

Proposed Project

Projected Demand and Required Facilities. Based on a population of 4,770 and park standards of 9 acres per 1,000 population, a total of 43 acres (12 acres of neighborhood park, 7 acres of community park, and 24 acres of City-wide park) should be made available for park development.

The Specific Plan originally proposed a 15.7-acre neighborhood park along East Roseville Parkway. This exceeded City park acreage standards for that category. Parks and Recreation staff maintain that neighborhood parks should include large areas of playing fields, as demand exceeds supply for these facilities. Picnic areas and play equipment should also be provided (Mahany and Ucovich pers. comm.). The topography and configuration of the Plan area might not have accommodated such facilities. To accommodate neighborhood park objectives of the City, and mitigate potential impacts on these park resources to a less-than-significant level, the project proponent has been consulting with Parks and Recreation personnel in considering an alternative site.

City policy does not credit open space areas available for public use toward meeting community or City-wide requirements (Mahany pers. comm.). However, if open space areas include some of the features provided in community or City-wide parks, consideration would be given to allowing credit for these park acreage requirements (Mahany pers. comm.). If no credit were allowed for the proposed open space area, a theoretical deficit of about 31 acres of community and City-wide park acreage would exist. Future residents of the Plan area presumably would utilize existing and planned community and City-wide parks outside the Plan area. From a locational standpoint, this conforms to City plans which designate only neighborhood parks within the Plan area. However, a potential for adverse economic impacts would exist as discussed later in this section.

Although the open space area is not proposed to feature facilities typical of community and City-wide parks, it would provide a unique recreational opportunity for City residents. The Specific Plan states that access to and through the open space area shall be provided when dedication of such land is accepted by the City. To mitigate potential adverse impacts on the provision of community and City-wide parks to a less-than-significant level, the project proponent should further consult with City staff to determine how and to what extent the open space area could be utilized in meeting City park requirements.

The provision of private on-site recreational facilities should also be considered in approving specific nonresidential projects in the Plan area. Facilities such as exercise and outdoor eating areas could be required.

Fiscal Considerations. The Specific Plan proposes a Landscape and Lighting District to fund on-site park improvements.

The Landscape and Lighting Act of 1972 (as amended by SB 2137, 1984) provides for assessments levied against the benefitted property to finance the capital and/or maintenance costs for park and recreational improvements. The costs associated with land preparation (such as grading, drainage, irrigation systems, and sidewalks) are also eligible. To implement this provision, the City Council would require, under the terms of the Subdivision Map Act, that maintenance be financed using this mechanism as a condition of map approval. The City Council would initiate the proceedings by resolution, describing the improvements and/or maintenance to be financed, the number of annual installments, the fiscal years during which they are to be collected, and the maximum amount of each annual installment. Assessments would be collected in the same manner and at the same time as property taxes, with the exception that the assessments would be paid in advance (i.e., after the date the County auditor has entered the assessments on the County assessment roll).

The Specific Plan makes no financing provision for off-site recreation facilities and requirements attributable to the project. This is a significant impact which could be mitigated to a less-than-significant level by preparing a detailed cost-revenue analysis.

Lower Intensity Alternative. Impacts would be the same as for the proposed project.

General Plan Alternative. The General Plan Alternative is essentially identical to the proposed Specific Plan. Therefore, the analysis in the Draft EIS is limited to the following three impact areas: Chapter 4, Land Use; Chapter 7, Transportation; and Chapter 15, Visual Quality.

No-Project Alternative. No impacts would occur.

Mitigation Measures

Proposed Project

Continue Consultations with Parks and Recreation in Considering Alternate Park Location. The project proponent has been working with Park and Recreation personnel in considering an alternate location and design for the neighborhood park to meet City Parks and Recreation needs and objectives. Figure 6-3

presents a schematic park design which has been prepared and is currently being reviewed by the City.

Prepare a Detailed Cost-Revenue Analysis. The project proponent should prepare a detailed cost-revenue analysis for review by the City prior to adoption of the Specific Plan.

Reevaluate Open Space Potential. Due to the unique potential of the proposed open space area for public recreation use, consideration should be given to including a portion as meeting community or City-wide park standards. Coordination between the project proponent and the City should also ensure that the proposed open space meets those City streambed development goals and objectives that are related to the provision of greenbelts (Ucovich pers. comm.). Recommended uses in these greenbelts include jogging, bike riding, nature study, and walking. Maintenance objectives include preservation of riparian areas and selective trimming as required to reduce unsafe or undesirable activities in greenbelt areas (Roseville 1986b).

Consider Private Recreational Facility Development. Provision of private on-site recreation facilities should be considered as part of future project approval. Site planning and design for office and other nonresidential development should incorporate recreation and open space facilities, such as exercise and outdoor eating areas, for employees.

Lower Intensity Alternative. The mitigation measures required for the proposed project would also be required for this alternative.

No-Project Alternative. No mitigation is required.

Schools

Introduction

The issue of school facilities in Roseville is in a state of flux. First, the City issued a Draft School Component to the Public Services and Facilities Element of the General Plan in September 1986. The purposes of the component are to:

- attempt to put into perspective the degree to which the City can and should participate in school financing,
- explore the most cost-effective methods of providing school facilities,

- explore the concept of shared responsibilities between the City, the school districts, the landowners/developers, and the State, and

- provide an implementation plan.

The Draft School Component has been reviewed by each of the school districts and the City Project Review Commission. The document also will be reviewed by the Planning Commission and City Council prior to adoption.

Second, a three-bill school facility package to provide funding sources for new school facilities was hammered out by the State Legislature (California Planner 1986) and signed by the Governor.

The three bills which were signed are:

- AB 2926 (Stirling) - This bill established a state and local partnership for the financing of school construction; declaring legislative intent that the state's share of its financial commitment will be met from such revenue sources as general obligation bonds, tideland oil revenues, and from other funds specified in the bill.

This bill includes a provision which provides that local participation in a project cost is an amount equal to the sum raised by levying a fee up to $1.50 per sq ft on residential property; and $0.25 per sq ft on industrial and commercial property (applied to new construction) from the date of an approved application to the date a notice of completion of a project is issued. However, that period of time may not exceed the time necessary for a final apportionment to be issued where the district has met its school project funding obligations.

Cities and counties would continue to be authorized to levy fees or require the dedication of land to finance specified interim facilities. However, the fees would be limited to the $1.50/0.25 per square footage cap.

- SB 327 (L. Greene) - This bill is designed to relax existing standards to allow more school districts to be eligible for funding. It establishes baseline eligibility standards, increases per pupil square footage allowances by 7 percent, specifies new areas which would no longer be charged against eligibility, and changes existing law with regard to portables, relocatables, emergency classrooms, enrollment projections, year-round schools, maintenance and deferred maintenance.

- SB 2068 (Seymour) - This bill corrects omissions and errors in the other two bills, including extending the annual $150 million Tideland Oil Revenue transfers to 1990-91, and clarifying that the $1.50 sq ft residential fee only applies when the construction produces new, habitable space.

The exact provision of educational services to the Plan area cannot be determined until the School Component is adopted and the recent state bills are interpreted.

Setting

City. Roseville contains portions of four elementary school districts and one high school district. These districts are:

1. Eureka Union Elementary School District (Eureka SD)
2. Roseville City Elementary School District (Roseville Elementary SD)
3. Roseville Joint Union High School District (Roseville High SD)
4. Dry Creek Elementary School District (Dry Creek SD)
5. Rocklin Elementary School District (Rocklin SD)

Plan Area. The Plan area is within the K-8 attendance boundaries of both the Eureka and Roseville SDs. Roseville High SD serves the entire Plan area. Figure 6-4 presents the school district boundaries relative to the Plan area. Table 6-6 summarizes data on the three districts.

Eureka SD

Existing Facilities. The district currently operates three elementary schools within Placer County. The core of the program is a K-3, 4-6, 7-8 grade configuration. The district serves the major portion of the Plan area planned for residential development.

Standards. Standards for site development criteria are included in the District's Master Plan (Sage Institute Inc., undated). The plan stipulates that schools K-3 be master planned for up to 450 students and include 8 usable acres; schools 4-6 should be planned for up to 500 students and include 8 usable acres; schools 7-8 should be planned for up to 700 students and include 15 usable acres. All school sites are to be planned cooperatively with City Parks and Recreation when

FIGURE 6-2.

MORTON & PITALO, INC.
CIVIL ENGINEERING
PLANNING SURVEYING

6-12-86

SCHEMATIC
SEWER PLAN

JOB NO. 840084

LEGEND
PROPOSED
EXISTING

DESIGNED BY: S. SOMMER
DRAWN BY: J. ZARAGOZA

SHEET 2 OF 4 SHEETS

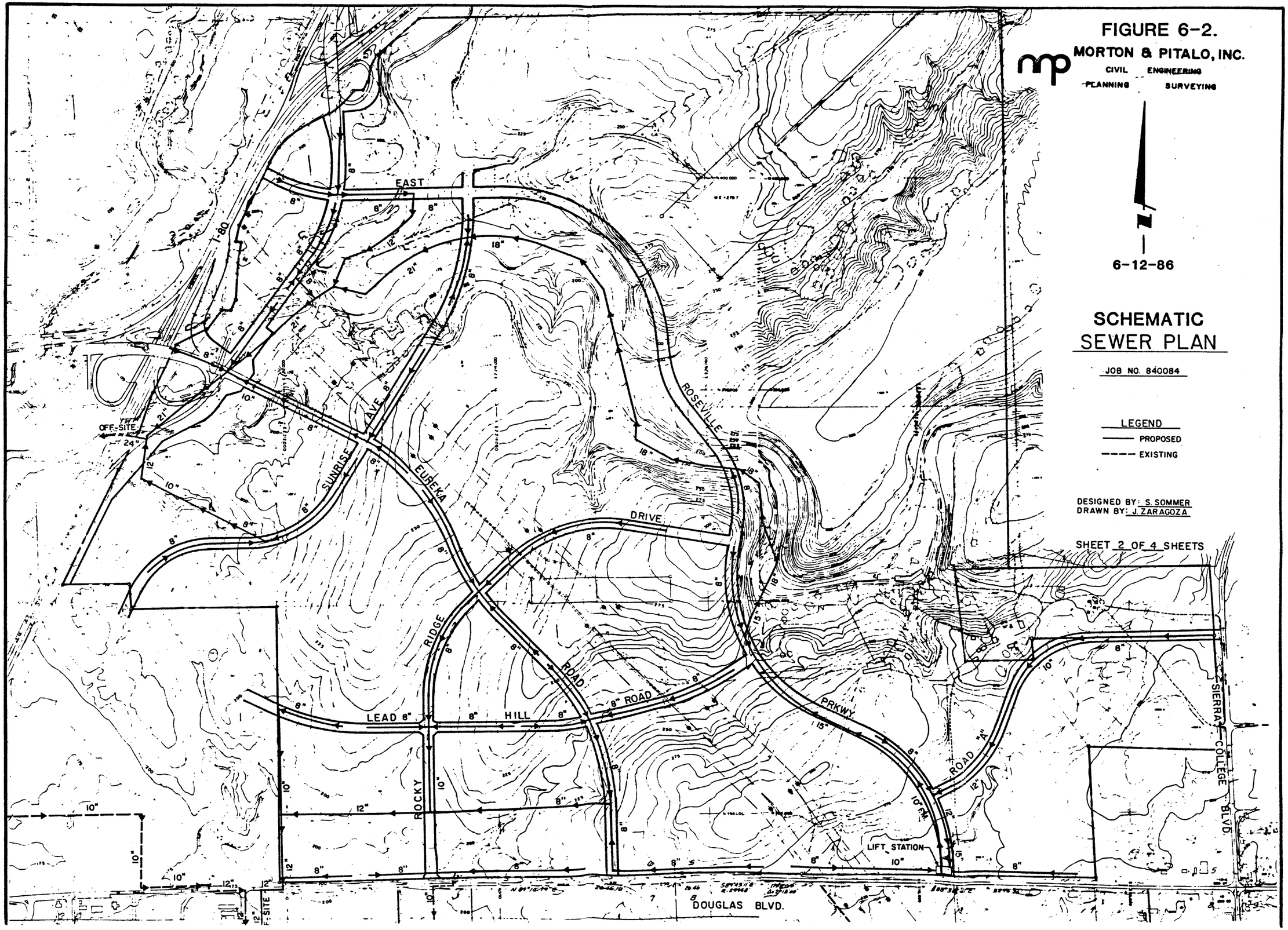
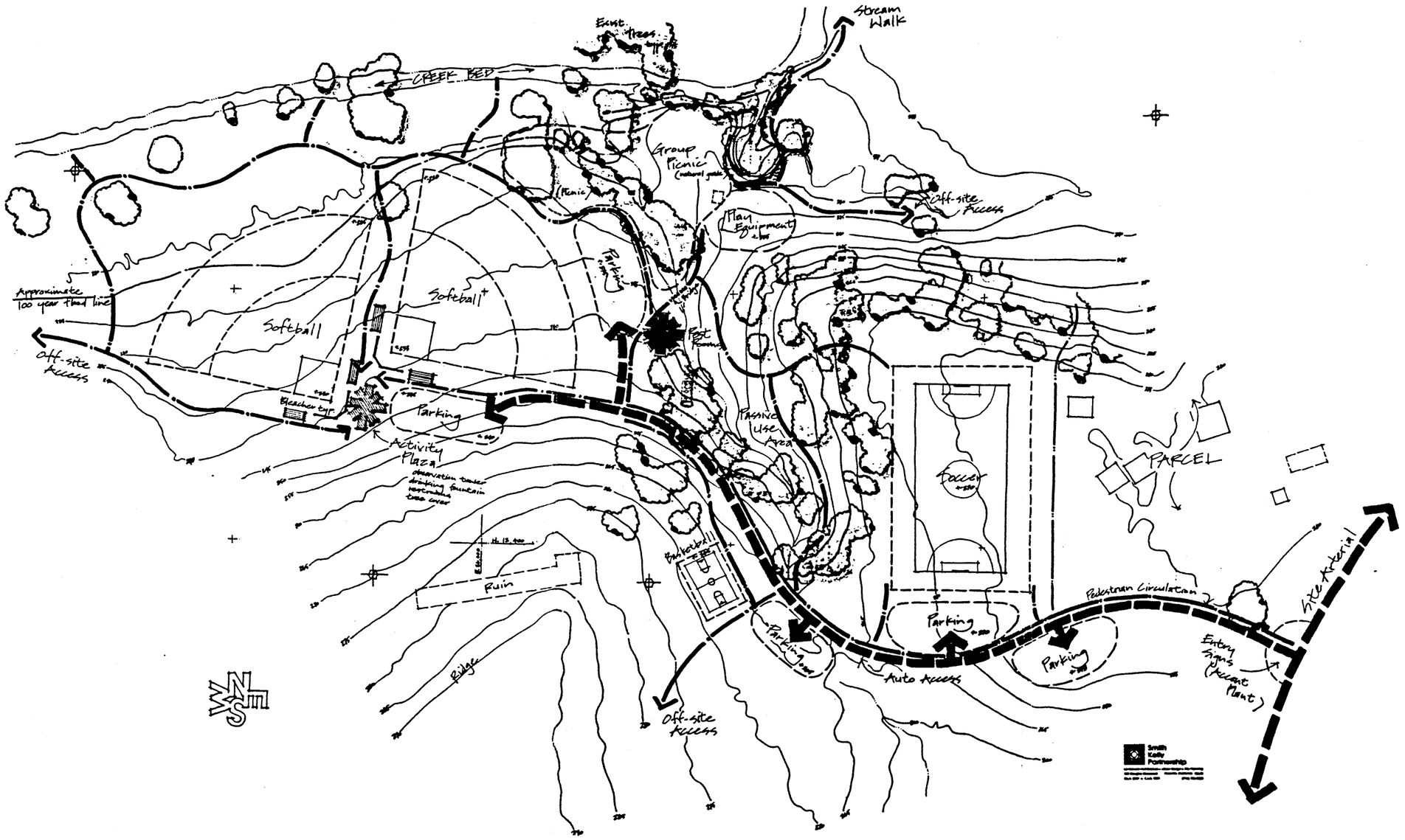


FIGURE 6-3.

SCHEMATIC PARK DESIGN



ROCKLIN ELEMENTARY SCHOOL DISTRICT

ROSEVILLE CITY ELEMENTARY SCHOOL DISTRICT

DRY CREEK JOINT ELEMENTARY SCHOOL DISTRICT

EUREKA UNION ELEMENTARY SCHOOL DISTRICT

ROCKLIN

ROSEVILLE

Plan Area

FIGURE 6-4.

SCHOOL DISTRICT BOUNDARIES

BASE MAP COURTESY OF AAA

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0 2000 4000

FEET

Table 6-6. School Data

School District	Grade Level	Permanent Classrooms	Portable Classrooms	1986 Enrollment	Site Size (acres)	Current Capacity	Current Capacity Available
Eureka							
Greenhills[1]	K-3	18	2	636	10	552	-84
Eureka[1]	4-6	14	0	384	9[2]	363	-21
Cavitt[1]	7-8	3	10	301	18[2]	326	+25
Total				1,321		1,241	-80
Roseville Elementary							
Woodbridge	K-3	13	5	453	4	447	+6
Cirby	K-6	21	3	557	15	626	+59
Crestmont	K-6	20	5	723	10[3]	726	+3
Sierra Garden[1]	K-6	20	3	604	30[3]	638	+34
Kaseberg	4-6	14	0	267	20	344	+77
Sargeant	K-6	4	6	0	10[3]	307	+307
Eich[1]	7-8	27	5	735	30[3]	785	+50
Total				3,339		3,873	+536
Roseville High							
Roseville High	9-12	43	0	1,375		1,446	+71
Oakmont High[1]	9-12	50	5	1,650	45	1,500	-150
Continuation Schools	9-12	4	4	212	Unknown	230	+18
Total				3,237		3,176	-61

[1] Within attendance area of Plan area.
[2] 14 usable acres due to site characteristics.
[3] Eich and Sierra Garden share the school site.

possible. District policy stipulates maximum loading of 27 students per permanent or portable classroom.

Enrollment Trends. The Eureka SD has been declared impacted since 1978. Rapid growth at all grade levels has occurred due to development in southeast Placer County. Current enrollment of 1,321 students exceeds available capacity by 80 students based on district standards for student loading. The most severe overcrowding is now occurring in the Greenhills K-3 facility (Feist pers. comm.).

High rates of growth are projected to continue in the district with development of Northeast and Southeast Roseville. Funding to accommodate the need for temporary and permanent facility construction and acquisition of school sites are major concerns of the district (Feist pers. comm.). The district plans extensive use of portables on existing sites to handle a portion of anticipated growth. However, unless additional funding is forthcoming, the district may institute double sessions in the fall of 1987 (Feist pers. comm.).

Various plans designate school sites in the district area; however, none of these sites have been dedicated for school site use. The Roseville General Plan designates three school sites (K-3, 4-6, and 7-8) in Southeast Roseville, south of Douglas Boulevard and between Sierra College Boulevard and Rocky Ridge Drive (Roseville 1982). The City General Plan does not designate any school sites in the Plan area; however, the Eureka SD Master Plan designates one additional K-3 site in the Plan area (Sage Institute Inc., undated). The district estimates that with maximum use of permanent and portable facilities in Southeast Roseville, 1,900-1,950 students (500 - K-3 students, 600 - 4-6 students, and 800-850 - 7-8 students) could be accommodated. These loading levels exceed Master Plan site development criteria.

Total estimated student yield in Southeast Roseville (based on 3,798 housing units and Eureka SD's Master Plan criteria) would be 1,640 students, plus an additional 15 percent or 246 students attending from the County. This would result in 1,886 students (1,717 - K-3, 641 - 4-6, 509 - 7-8). Assuming three new school sites and maximum loading, a potential exists for 217 unhoused K-3 students and 41 unhoused 4-6 students. Excess capacity would exist in 7-8 schools.

Roseville Elementary SD

Existing Facilities. This district is a K-8 elementary district. The district has one K-3 school, four K-6 schools (including a school under construction), one 4-6 school, and one 7-8 intermediate school. The district encompasses the City of Roseville and large unincorporated areas north and west

of the City. This district is currently the only one that has developed school sites within the City.

A portion of the Plan area is within the attendance area of Sierra Garden (K-6) and Eich (7-8) schools. Both schools are near capacity. Sargeant (K-6) school provides additional capacity to the Plan area (Bush pers. comm.).

Standards. Standards for development and utilization of school sites are included in the District's Master Plan (Sage Institute Inc., undated). The Master Plan stipulates that elementary school sites be 10 acres; the actual school site may be less than 10 acres when the total school/park site equals or exceeds 10 acres. Elementary schools should accommodate approximately 600 students. Intermediate school sites should be 15 acres; the actual school site may be less than 15 acres when the total school/park site equals or exceeds 15 acres. Intermediate schools should be master planned to accommodate approximately 850 students. All sites should be planned cooperatively with the City Parks and Recreation Department. District policy stipulates maximum loading of 28 students per portable or permanent classroom.

Enrollment Trends. This district has been declared impacted since 1976. The current enrollment of 3,339 is only slightly higher than the 3,200 level of 1970. Over the last 15 years, a gradual decline in enrollment, followed by a gradual increase to the prior level, has occurred. Since the late 1970s, enrollment has been increasing, primarily reflecting the construction of new homes.

Currently, limited excess capacity is available on a district-wide basis. The apparent excess capacity of 536 students is due to the uneven distribution of students and classroom needs (i.e., extra third graders cannot share an underutilized first grade classroom). The major concern of the district, however, is not with the capacity of the present facilities, but with the need for additional facilities to handle anticipated future enrollment.

Development of Northeast, Northwest, and North Central Roseville and infill would add substantially to enrollment growth. The district plans to accommodate this growth by adding portables and constructing new schools as funding becomes available.

Limited additional capacity could be achieved by placement of portables at Cirby (K-6) and Eich (7-8) schools. Kaseberg (4-6) school could be substantially expanded; however, the effectiveness of such an expansion would be limited as most new students would be drawn from other attendance areas, requiring bussing. Sargeant (K-6) school has the greatest capacity for expansion (Bush pers. comm.). The district has one undeveloped site in North Central Roseville.

Roseville High SD

Existing Facilities. This district is a 9-12 district which includes two high schools and two continuation schools.

Standards. District standards for development and utilization of school sites recommend that high schools be master planned to accommodate 1,500 students and include 45 usable acres.

Enrollment Trends. Oakmont High (which includes the Plan area) is currently operating beyond capacity with overflow handled by portables. Roseville High is operating near full capacity and is planned for comprehensive reconstruction. The two continuation schools are operating near capacity. Current enrollment of 3,237 students exceeds available capacity by 61 students.

The district is faced with extremely large residential projects in the very near future. Roseville High would experience the most significant short-term growth, followed by a decrease in enrollment. This decrease is anticipated with the planned unification of the Rocklin SD in 1987 for the purpose of providing a local high school. The Unified Board would govern the same boundary as the elementary district, but would serve grades K-12. A new high school is anticipated by late 1989.

Growth at Oakmont High would also be affected by Rocklin SD unification. However, total attendance and overcrowding would continue to increase at Oakmont High. A third high school site would be needed within the Oakmont High attendance area. A site is expected to be acquired in 1986/87 and a facility constructed during 1990-1993 (Bush 1986).

Impacts

Proposed Project. Table 6-7 gives expected student yield and distribution by grade level with projected development in the Plan area. Student yield is calculated with two density factors. The proposed project density factors assumes 100 percent of the R-5.5 acreage would develop into single-family units and the R-9, R-10, and R-12 would develop into multiple-family units. The generalized density factors are based upon school district yield rates contained in the Draft School Component, Public Services and Facilities Element, City of Roseville General Plan, September 1986 (amended).

Eureka SD

Enrollment Increase. Development would result in an increase of 341-465 students. The influx would contribute to existing overcrowding problems. Assuming a classroom loading factor of 29 students, the 130-177 K-3 students would require

Table 6-7. Projected Student Yield

School District	Land Use Density	Number of Units	Proposed Project Density Factors: Density Ratio	Yield Rates	Number of Students	Generalized Density Factors[1]: Density Ratio	Yield Rates	Number of Students
Eureka	R-5.5	357	100% R-1	0.50	179	100% R-1	0.50	179
	R-9-R-12	1,078	100% Multi	0.15	162	20% R-1	0.50	108
		1,435			341	30% R-2	0.30	97
						50% Multi	0.15	81
								465
			School Attendance			School Attendance		
			K-3 341 students x 38% = 130			K-3 465 students x 38% = 177		
			4-6 341 students x 34% = 116			4-6 465 students x 34% = 158		
			7-8 341 students x 27% = 92			7-8 465 students x 27% = 126		
Roseville Elementary	R-9-R-10	365	100% Multi	0.15	55	20% R-1	0.45	33
						30% R-2	0.30	33
						50% Multi	0.15	27
								93
			School Attendance			School Attendance		
			K-6 55 students x 77% = 42			K-6 93 students x 77% = 72		
			7-8 55 students x 23% = 13			7-8 93 students x 23% = 21		
Roseville High	R-5.5	357	100% R-1	0.30	107	100% R-1	0.30	107
	R-9-R-12	1,443	100% Multi	0.08	115	20% R-1	0.30	87
		1,800			222	30% R-2	0.15	65
						50% Multi	0.08	58
								317

Source: Jones & Stokes Associates.

[1] Based on school district yield rates contained in the Draft School Component, Public Services & Facilities Element, City of Roseville General Plan, September 1986 (amended).

4.5-6.1 classrooms, the 116-158 4-6 students would require 4-5.4 classrooms, and the 92-126 7-8 students would require 3.2-4.3 classrooms. Additional core and other support facilities would also be required.

The magnitude of the impact would depend on the timely provision of schools in Southeast Roseville, the funding available to finance needed school construction, and the overall development of an effective mitigation program. Even with maximum loading of Southeast Roseville school sites, the capacity to handle project-related K-6 students would not be available, resulting in unhoused students. This deficit, combined with the potential for unhoused K-6 students in Southeast Roseville, would be a significant adverse impact which could be mitigated by complying with the policies of the Schools Component to the Public Services and Facilities Element of the General Plan after it is adopted.

The proposed 7-8 school in Southeast Roseville (south of Douglas Boulevard) would appear to have the capacity to handle students from the Plan area.

Roseville Elementary SD

Enrollment Increase. Projected enrollment would result in an increase of 55-93 students. Based on current attendance boundaries, students would attend Sierra Gardens (K-6) and Eich (7-8), contributing to overcrowding in these impacted schools. Assuming a classroom loading factor of 29 students, the 42-72 K-6 students would require 1.4-2.5 new classrooms while the 13-21 new 7-8 students would require less than one new classroom. Additional core and support facilities would also be required. No available capacity for expansion exists at Sierra Gardens. However, Sargeant (K-6) school is expected to have a 2-3 year capacity to accommodate short-term growth; this school could also be doubled in size. To the extent that this capacity is made available to Plan area students, the impact on K-6 requirements is considered less than significant. Eich school is anticipated to reach capacity by 1988 (Bush pers. comm.). Until an additional intermediate school is constructed, as proposed in North Central Roseville, the limited number of 7-8 students generated by the proposed project would contribute incrementally to overcrowding.

Roseville High SD

Enrollment Increase. Projected enrollment would result in an increase of 222-317 students. Based on current attendance boundaries, students would attend Oakmont High, contributing to further overcrowding at this facility. Student generation would require 7.7-10.9 portable or permanent classrooms based on district loading standards. Additional core and support facilities would also be needed. This demand could not be accommodated at either of the district high schools

without adversely impacting these facilities. Construction of additional facilities would be required to reduce this impact to a less-than-significant level.

Boundary Adjustments. With implementation of the proposed project, school district boundaries would cross neighborhoods within the Plan area, creating potential conflicts and confusion for the districts and residents. The project proponent recommends reorganization of the Eureka SD to place the students generated by the development in the Roseville Elementary SD.

Adjustments of attendance boundaries are included as possible mitigation for overcrowding in the respective school master plans and the Draft No. 4 School Component of the Roseville General Plan (Roseville 1984d). However, the Boards of Education for the Roseville Elementary and Eureka SD have not discussed this matter, nor have the respective district superintendents formally discussed it. Roseville Elementary SD recently adopted a policy that it will initiate no requests for boundary adjustments without the support of the affected school districts (Bush pers. comm.).

The impacts of a boundary adjustment are complex and require detailed study that is beyond the scope of this EIR. The Roseville Elementary SD is anticipating a request by the City to determine the impacts of extending district boundaries to the City limits, thereby servicing Northeast and Southeast Roseville (Bush pers. comm.). The Roseville system appears to have more flexibility than the Eureka SD due to its greater number of schools and available short-term capacity in 4-6 grade level schools to absorb anticipated growth. However, such a change would require major revisions in the Eureka SD master planning with loss of planned school sites to meet both City and unincorporated Placer County needs (Feist pers. comm.).

The Roseville High SD Master Plan also recommends consideration of boundary changes. This would allow detachment of areas annexed to the City of Rocklin and placement within the Rocklin SD. This recommendation would require agreement by the affected districts (Bush 1986).

Lower Intensity Alternative. Student yield and related impacts would be identical to the proposed project.

General Plan Alternative

The General Plan Alternative is essentially identical to the proposed Specific Plan. Therefore, the analysis in the Draft EIR is limited to the following three impact areas: Chapter 4, Land Use; Chapter 7, Transportation; and Chapter 15, Visual Quality.

No-Project Alternative. Under this alternative, no increase in student population would occur associated within the Plan Area. However, a potential for unhoused K-6 students in Southeast Roseville would still exist.

Mitigation Measures

Proposed Project

Comply with Policies in the School Component. Development of the Plan Area would need to comply with the findings and policies of the School Component of the Public Services and Facilities Element of the General Plan after it is adopted. This would mitigate impacts to a less-than-significant level.

Evaluate Boundary Changes. A detailed study of the impacts of boundary adjustments between the Roseville Elementary and Eureka SDs should be undertaken. Consideration should be given to a realignment of boundaries to avoid splitting neighborhoods within the Plan area. Consideration should also be given to boundary changes within the Roseville High SD as future areas are annexed to the City of Rocklin.

Lower Intensity Alternative. The mitigation measures required for the proposed project would also be required under this alternative.

No-Project Alternative. No mitigation is required.

Chapter 7

TRANSPORTATION

Setting

This section is based on a transportation report prepared by Fehr & Peers Associates, consultants to AKT Developments.

Existing Roadway Facilities

Figure 7-1 shows the existing roadway facilities serving the Plan area. Because the site is located on the fringe of the urbanized area, roadway access is limited. Although the Plan area is adjacent to I-80 and adjoins two existing freeway interchanges at Atlantic Street and Taylor Road, it has no direct freeway access, as both the Atlantic Street and Taylor Road interchanges serve the west side of I-80 only. The Plan area's nearest freeway access point is currently at Douglas Boulevard. In addition to Douglas Boulevard, surface streets currently serving the Plan area include Sunrise Avenue, Harding Boulevard, Lead Hill Road, Rocky Ridge Drive, and Sierra College Boulevard.

I-80 is a six-lane interstate freeway in the vicinity of the Plan area. I-80 widens to eight lanes at the Riverside Avenue interchange about two miles south of the Plan area.

Douglas Boulevard is a six-lane arterial near I-80 but narrows to four lanes east of Santa Clara Drive and two lanes east of Eureka Road. Douglas Boulevard is currently being widened to four lanes and eventually will be widened to six lanes all the way to Sierra College Boulevard. The widening will progress incrementally as planned development continues to extend eastward. Harding Boulevard, Sunrise Avenue, and Rocky Ridge Drive are all currently four lane facilities. Lead Hill Road was recently constructed, crossing I-80 about midway between Douglas Boulevard and Atlantic Street. It does not connect with I-80. Lead Hill Road is currently four-lanes wide from its western terminus at Harding Boulevard to just east of Sunrise Avenue. It narrows to two lanes between Sunrise Avenue and its eastern terminus at Douglas Boulevard opposite Rocky Ridge Drive. Sierra College Boulevard has two lanes.

Planned Roadway Improvements

Significant expansion of the existing roadway network is planned to take place concurrent with development of the Plan

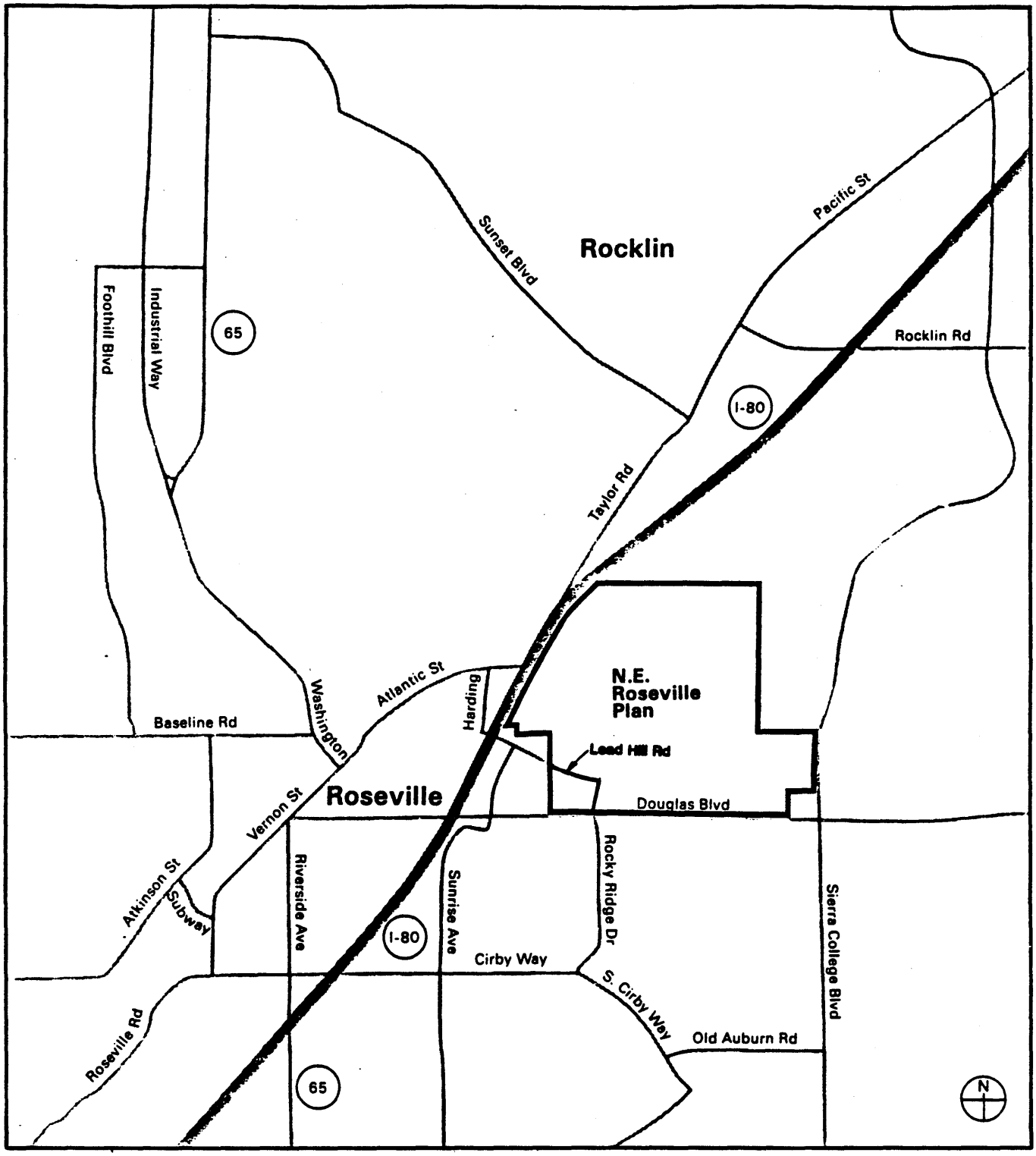


Figure 7-1
Project Location

area. One major roadway project, the Route 65 Bypass, is currently under construction. This four-lane expressway, with freeway-upgrade potential, will connect I-80 just north of the Plan area with the existing Route 65 near the Roseville/Rocklin City boundary. The project also involves several key upgrades along I-80, including new interchanges at Atlantic Street and Taylor Road, both with easterly access, and widening of I-80 to eight lanes between Douglas Boulevard and the new Route 65 Bypass interchange.

Augmenting the Route 65 Bypass improvements are a number of additional roadway network expansions planned as part of major Roseville and Rocklin development proposals. They include improvements in the Southeast Roseville Plan area, as well as three major development areas west of I-80: the North Central Plan area, North Industrial Plan area, and Northwest Plan area (see Figure 4-1). Other major development areas exist outside of Roseville. The Northwest Rocklin Plan area, which includes the Stanford Ranch industrial area, is located just north of the Roseville City limits.

Key roadway facilities that are to be constructed to support the major growth areas are illustrated in Figure 7-2. In addition to the Route 65 Bypass, and its related freeway widening and interchange improvements, the key new facility connecting east and west Roseville is Roseville Parkway, a major expressway/arterial facility. Although Roseville Parkway is to extend through several of the major plan areas, it will not have an interchange at I-80. As the Route 65 Bypass will not extend east of I-80 (its I-80 interchange as presently constructed will serve only travel to/from the west), the enlarged Atlantic Street (Eureka Road) interchange will provide the primary access to I-80 for new development areas east of the freeway. This access point and the other components of the Plan area Circulation Element are shown in Figure 7-3 and Figure 2-8.

One prospective facility that is not shown in these figures is the proposed beltline freeway. Corridor alignment options for this facility are currently under study. Current alternatives all pass through or near the Plan area, with several options calling for an easterly extension of the Route 65 Bypass from its planned terminus at I-80. These alignment options all travel along the northern edge of the Plan area toward the existing intersection of Douglas Boulevard and Sierra College Boulevard. None of the proposed alignments transverse the portion of the Plan area proposed for development. Another alternative meets I-80 near the existing I-80/Sierra College Boulevard interchange. From Douglas Boulevard/Sierra College Boulevard all options proceed southeasterly toward the Sacramento County line for connections with all major freeways and key development areas in the eastern and southern parts of Sacramento County. As the alignment of the beltline freeway is presently undetermined, and its possible implementation date and initial design class (freeway or expressway) are uncertain, this

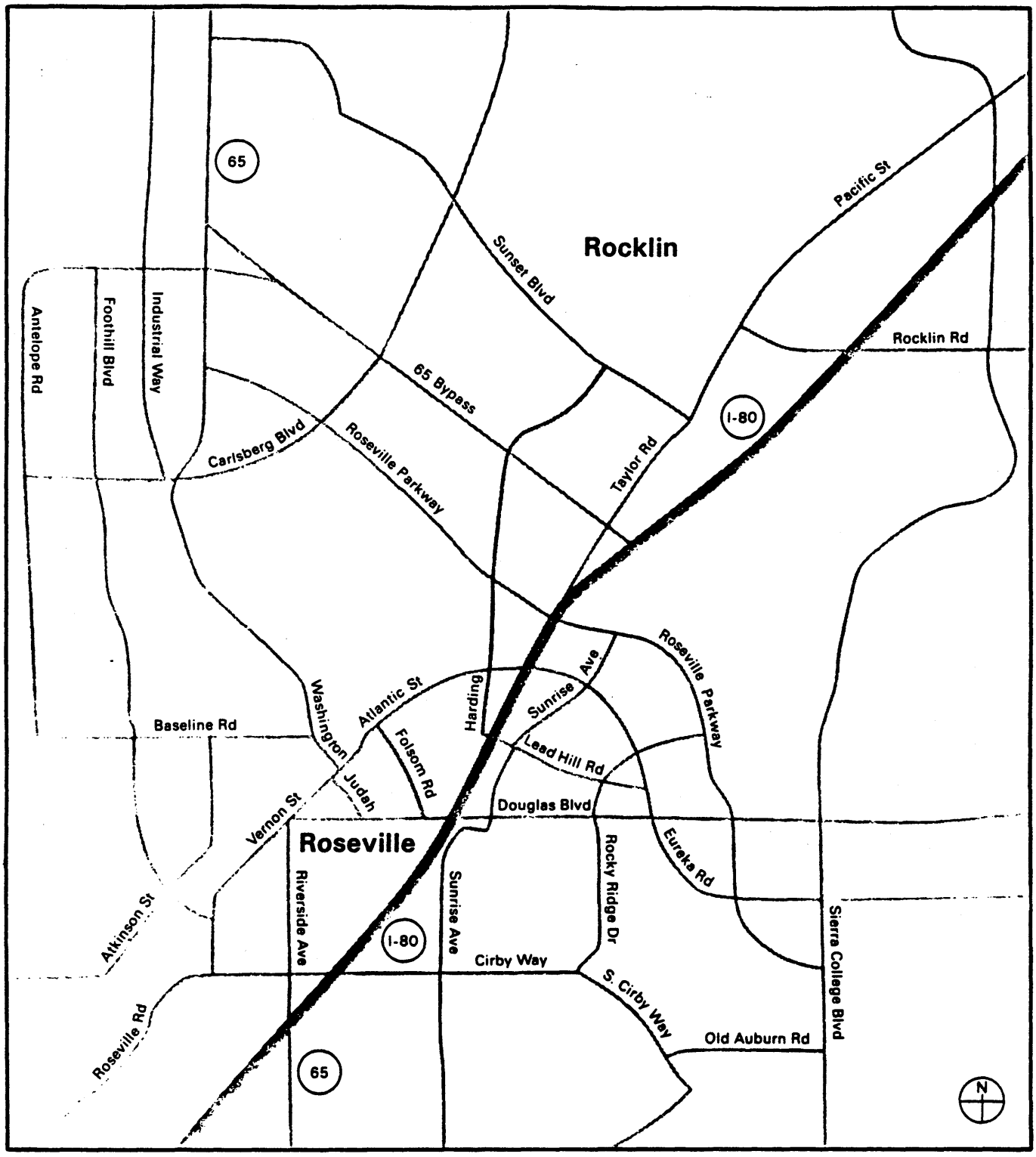


Figure 7-2.
Expanded Regional Roadway Network

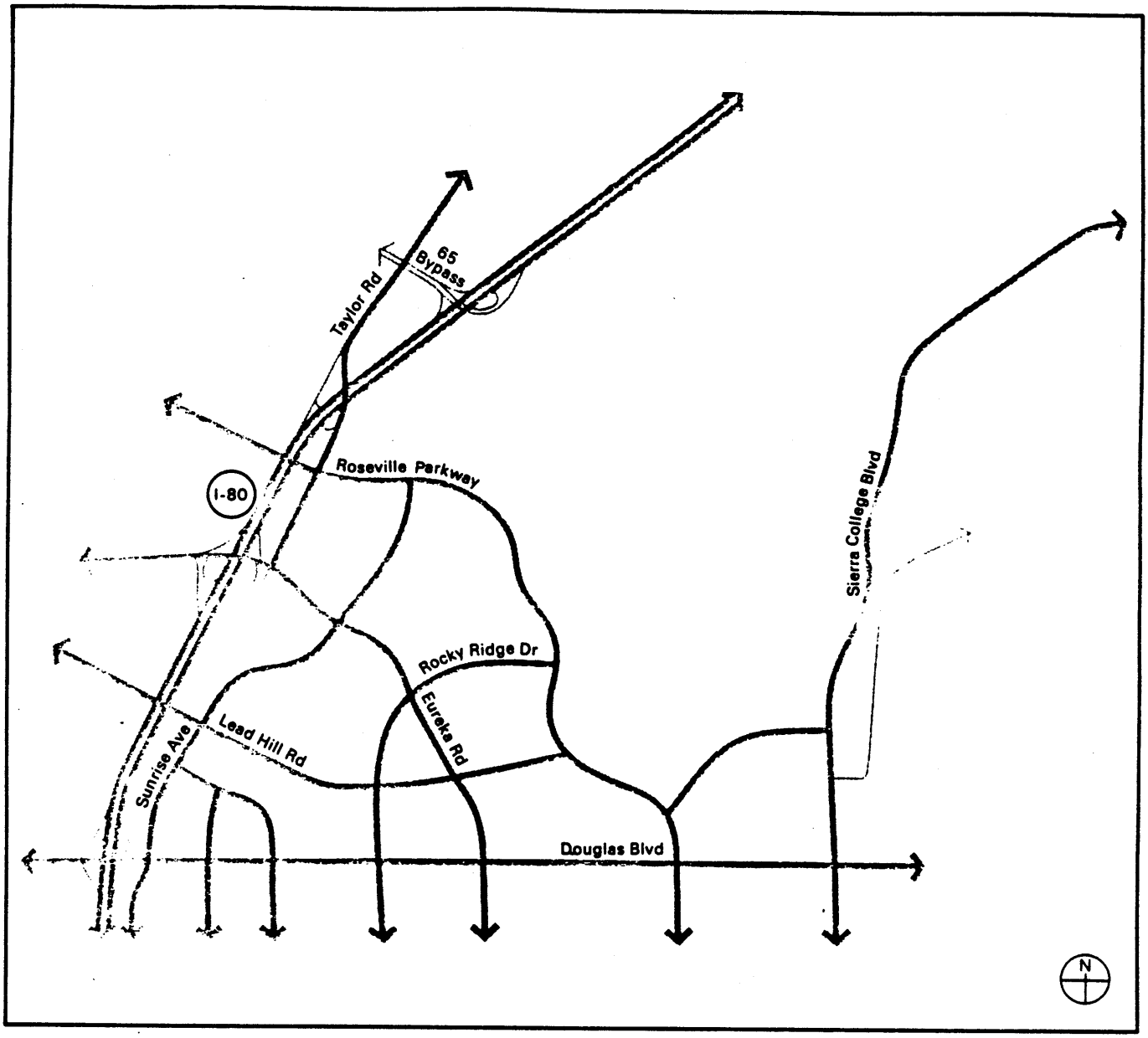


Figure 7-3.
Circulation Plan

study does not include that facility in its quantitative analysis. The implications of the beltline facility on the traffic impacts and mitigations in the area are discussed qualitatively.

City-Wide and Local Traffic Analysis Techniques

Because the Plan area is a part of significant City-wide growth, this traffic analysis considers both the City-wide and local traffic setting and impacts. The City-wide analysis considers major travel corridors through the Roseville/Rocklin area. The local analysis considers the localized roadway network within and adjacent to the Plan area.

The screenline analysis is based on existing and projected average daily traffic (ADT) volumes measured at key "screenlines" that intersect each travel corridor. The regional screenline locations are shown in Figure 7-4. They are the same as the screenlines used in the Roseville Circulation Study (PRC Voorhees 1983) with certain minor modifications. For the current study, the original system has been extended to the north and east to more fully cover the Plan area, and the alignment of several screenlines was altered slightly to correspond with the roadway network as currently planned. Key differences from the 1983 study are:

- Screenline B has been extended further east in order to measure conditions on the Sunrise Avenue extension, Roseville Parkway, and Sierra College Boulevard, as well as I-80 and the Harding Boulevard extension.

- Screenline E has been shifted to the west and extended north and east to include Eureka Road and Roseville Parkway, as well as Douglas Boulevard and Cirby Way.

- Screenline F was shifted to the west to avoid "bridging over" Rocky Ridge Drive and extended north to include Lead Hill Road, Eureka Road (Atlantic Street extension), and Roseville Parkway, as well as Douglas Boulevard and Cirby Way.

- Screenline G was extended north to measure conditions on Roseville Parkway, as well as Cirby Way, Douglas Boulevard, Lead Hill Road, and the Atlantic Street extension.

To ensure that these changes would not adversely affect the traffic forecasting model, the Roseville Circulation Study Model was recalibrated and validated on the basis of 1980 and 1985 conditions.

Table 7-1 gives the daily traffic capacity for different classes of roadway in the study area. These capacity ratings

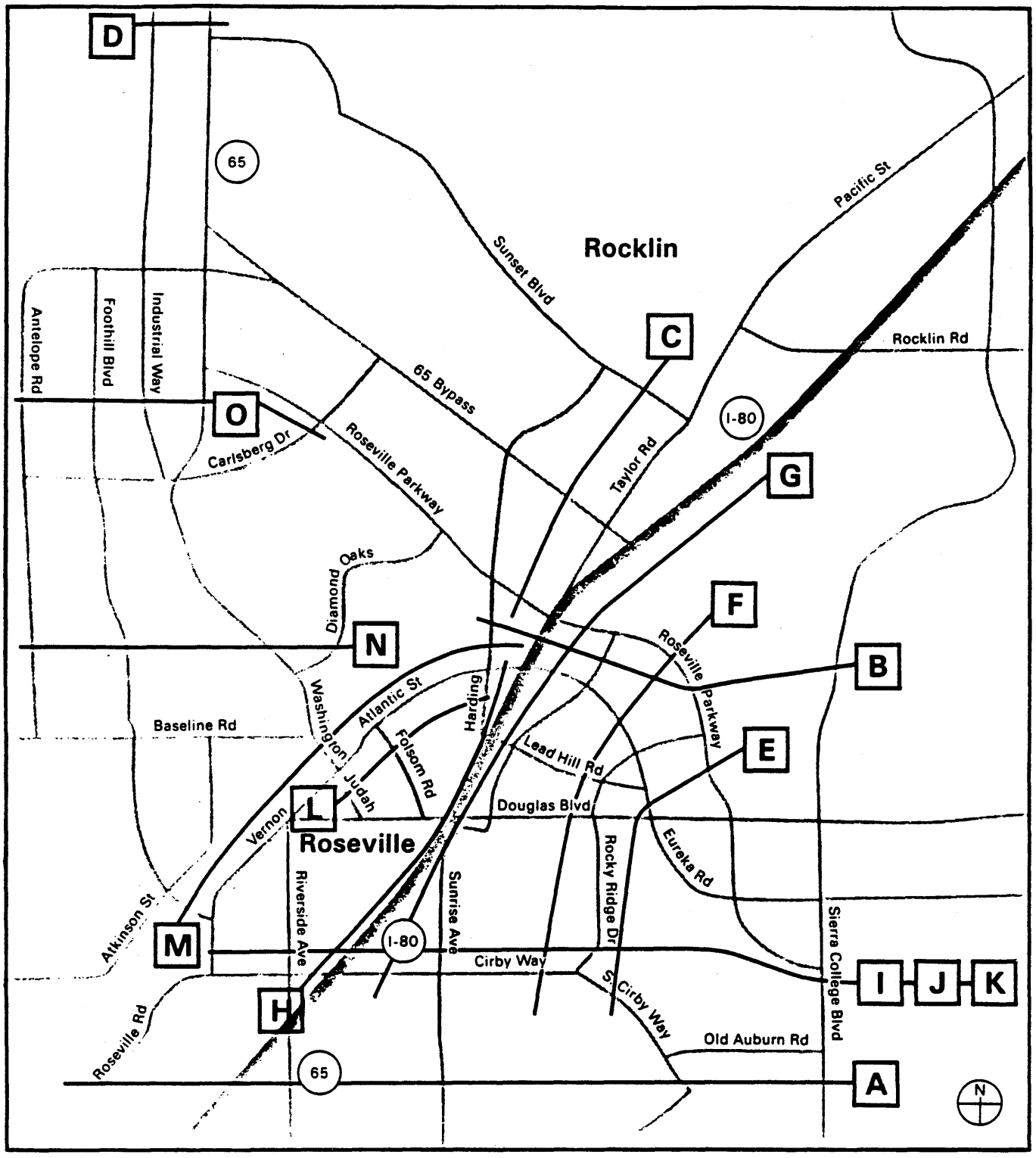


Figure 7-4.
Key Travel Screenlines

Table 7-1. Roadway Capacities

Roadway Type	Number of Lanes	Daily Capacity (both directions)		Peak Hour Capacity (peak direction)	
		Design[1]	Maximum	Design[2]	Maximum
Minor Arterial	2	12,000	16,000	560	700
Major Arterial	4	24,000	32,000	1,440	1,800
	6	36,000	48,000	2,160	2,700
Expressway	4	39,000	52,000	1,920	2,400
	6	58,500	78,000	2,800	3,500
Freeway Mainline	6	97,200	108,000	4,800	6,000
	8	130,000	144,000	6,400	8,000
	10	150,000	200,000	8,000	10,000
Freeway Ramp					
Loop	1	--	--	1,300	1,450
	2	--	--	2,340	2,600
Linear	1	--	--	1,530	1,700
	2	--	--	3,060	3,400

Source: Transportation Research Board (1985) and Fehr & Peers Associates.

[1] Daily screenline design capacities are set at 75 percent of maximum capacity to maintain average screenline volume/capacity ratios at 0.75.

[2] Peak hour capacities maintain volume/capacity ratios on individual links at 0.80 or better.

are consistent with those used in the Roseville Circulation Study (PRC Voorhees 1983).

In the localized roadway analysis, facilities are analyzed individually, based on peak hour traffic volumes to determine the capacity requirements of specific roadway links, intersections, and interchanges in the area. These peak-hour capacities are given in Table 7-1.

For both the regional and the local area analyses, traffic conditions are measured on the basis of the relationship between projected traffic volumes and the traffic facilities' design capacities. The design capacity of a facility is set at some percentage of its maximum capacity. The percentage is selected on the basis of desired operating condition, or Level of Service (LOS). LOS is a rating system that grades a roadway or intersection on a scale of "A" through "F," based on its level of congestion and delay. An LOS A represents free-flowing conditions, and F represents jammed conditions. Caltrans and most cities and counties generally consider LOS A through C or D to be acceptable peak-hour operating conditions. Typical percentages used for establishing design capacities are, therefore, between 75 percent (LOS C) and 90 percent (LOS D/E) of maximum capacity.

The City of Roseville uses LOS C for determining the roadway capacities and intersection delays for all freeway, arterial, and collector streets. For long-range development, LOS C need not be strictly maintained if other policies and action plans indicate that a lesser level of service may be acceptable on a short-term basis providing there are sufficient overriding considerations. Also, different LOS criteria are more suitable for regional screenline analyses than for individual streets and intersections. Therefore, this study uses a variety of relationships between design capacity and maximum capacity for different applications: 75 percent for City-wide screenline analysis, 80 percent for analysis of specific local streets and freeway sections, and 85 percent for individual street intersections. Conservative measures should be used for analyzing screenline conditions so that variations on a screenline do not produce unacceptable conditions at individual locations, though individual intersections may operate at mid-D LOS or better.

The daily and peak hour design capacities are translated into traffic LOS design standards in Table 7-2.

For street intersections, the evaluation criterion used in this study matches that recommended in the Highway Capacity Manual (HCM) (Transportation Research Board 1985) for long-range planning analysis. The design volume of an intersection is set at the threshold between "under capacity" and "near capacity" conditions so that the intersection will always operate within

Table 7-2. Level of Service Design Standards

	City-Wide Analysis (Average Screenline Conditions)		Local Area Analysis (Individual Streets & Intersections)	
	V/C Ratio[1]	LOS	V/C Ratio	LOS
Arterials and Expressways	0.75	C	0.80	C/D
Freeways	0.75	C	0.80	C/D
Intersections and Interchanges	--	--	0.85	D

Source: Fehr & Peers Associates

[1] Volume-to-Capacity Ratio.

its capacity. This represents about 85 percent of the HCM critical volume threshold of 1,400 vehicles per hour. This was translated into total intersection throughput for various classes of intersecting streets on the basis of normal intersection design standards and traffic counts and surveys in the area. The assumed lane configuration for intersections built or expanded to the normal maximum standards are as follows:

Facility Type	Intersection Type	Intersection Approach Lanes Left	Through	Right
Six-lane arterial	Full	2	3	1
Four-lane arterial	Full	1	2	1
Two-lane arterial	Full	1	1	1
Six-lane arterial	T	2	0	1
Four-lane arterial	T	2	0	1
Two-lane arterial	T	1	0	1

These lane configurations determine the percentage of total traffic approaching an intersection that is "critical" to the intersection's capacity. For a six-lane arterial, for example, about 20 percent of the volume approaching the intersection would be critical to the intersection's capacity. For a four-lane arterial, 27 percent would be critical, and for a two-lane arterial, 33 percent would be critical. At the minor approaches to T intersections, 37 percent of the traffic would be critical for four- and six-lane facilities.

Existing Traffic Volumes

Existing traffic volumes in the study area are shown in Figure 7-5. I-80 carries about 50,000-60,000 vehicles daily in the vicinity of the Plan area. The most heavily-used surface street in the area is Douglas Boulevard, with a volume of about 34,000 near the freeway and 20,000 near Sierra College Boulevard. Most facilities in the area operate well within their maximum capacities (see Table 7-1), but key freeway access facilities, such as Douglas Boulevard near Sunset, and Riverside Avenue south of Cirby Way, operate above their design capacities. The implications of these conditions are discussed below.

City-Wide Screenline Capacity

Table 7-3 presents the current screenline traffic volumes and capacities in the study area. The volumes are based on mid-1985 traffic counts. The capacity analysis is shown for conditions as they existed both immediately before and immediately after the opening of the Lead Hill Overcrossing. Before the overcrossing, the volumes on screenlines E, F, G, and H exceeded their design capacities (but not their maximum

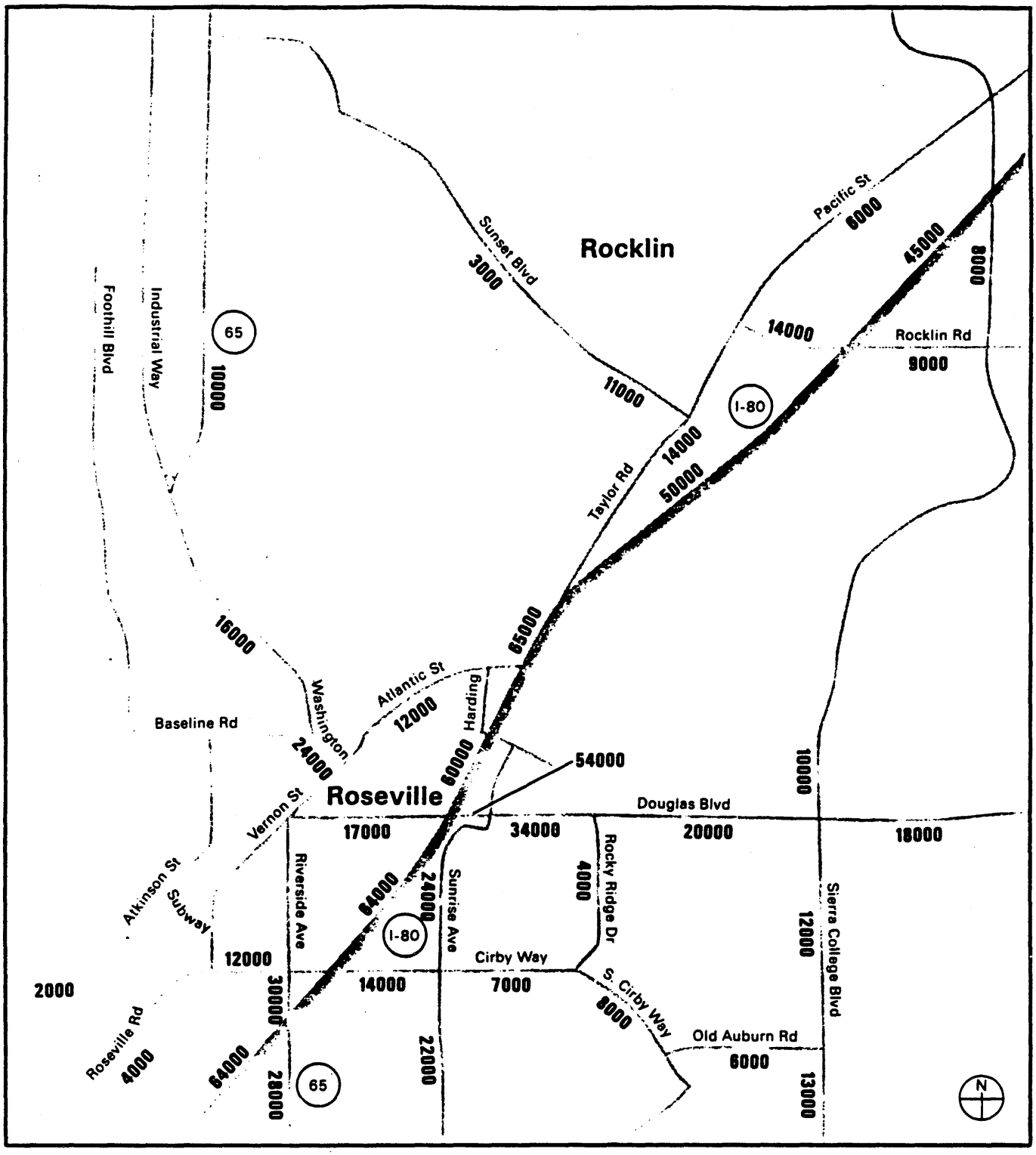


Figure 7-5.
Existing Daily Traffic Volumes
(1985 Counts, Before Lead Hill Overcrossing)

Table 7-3. Current Screenline Capacities

Screenline	1985 Conditions Before Lead Hill Overcrossing		1985 Conditions After Lead Hill Overcrossing		1985 Conditions With 65 Bypass and Lead Hill Overcrossing	
	Volume	V/C Ratio	Volume	V/C Ratio	Volume	V/C Ratio
A	145,000	0.53	145,000	0.53	145,000	0.53
B	75,000	0.55	75,000	0.55	87,000	0.45
C	3,000	0.19	3,000	0.19	22,000	0.22
D	11,000	0.23	11,000	0.23	11,000	0.23
E	30,000	0.91*	30,000	0.91*	29,000	0.91*
F	37,000	0.77*	37,000	0.58	38,000	0.59
G	67,000	0.84*	67,000	0.60	67,000	0.60
H	72,000	0.90*	72,000	0.64	66,000	0.52
I,J,K	129,000	0.52	129,000	0.52	132,000	0.53
M	30,000	0.54	30,000	0.54	24,000	0.43
N	15,000	0.31	15,000	0.31	8,000	0.17
O	13,000	0.27	13,000	0.27	7,000	0.15

Source: Fehr & Peers Associates.

*Indicates volume in excess of design capacity (but within maximum capacity).

capacities). The overcrossing increased the design capacity of both screenlines G and H by 24,000 ADT and screenline F by 12,000 ADT, giving each adequate capacity to meet the current traffic demand.

The only screenline with a design capacity which remains below its demand is screenline E. This screenline measures conditions on Douglas Boulevard and Cirby Way east of Rocky Ridge Drive. Based on standard capacity designations, these facilities are operating near their maximum capacities. However, as both roadways are free of major intersections on the segments in question, both are capable of carrying higher volumes than indicated by standard capacities. Consequently, current operating conditions on screenline E are reasonably good despite the low volume/capacity rating.

To provide a baseline condition for analyzing the effects of the proposed project, existing conditions were also evaluated for the time immediately following the opening of the Route 65 Bypass and related I-80 improvements. This analysis is also presented in Table 7-3. It indicates that significant improvements would occur on screenlines H, M, N, and O as a result of traffic that would divert to the Route 65 Bypass rather than continuing to travel through central Roseville. Screenlines B and C, which would receive additional capacity due to the improvements, would also experience increased traffic, diverting from slower routes. Therefore, their volume/capacity ratios would not improve as significantly, but would nonetheless remain well within their design capacities.

Levels of Service on Local Streets

The 1985 p.m. peak hour levels of service at local street intersections in the study area are given in Figure 7-6. All intersections operated at LOS B or better, with the exception of two: Douglas Boulevard/Sunrise Avenue and Cirby Way/Riverside Avenue. These intersections both operated at LOS D in mid-1985. However, in both cases recent street improvements have changed conditions. The recent opening of the Lead Hill Overcrossing, which diverts traffic off Douglas Boulevard, was expected to relieve the Douglas Boulevard/Sunrise Avenue intersection. The additional capacity was offset by traffic growth due to development east of I-80. At Cirby Way/Riverside Avenue, recent intersection improvements provide dual left-turn lanes on Riverside Avenue. This improvement provides enough capacity to improve the LOS by one grade.

Impacts

The cumulative analysis of transportation is found in Chapter 17, Cumulative Impacts.

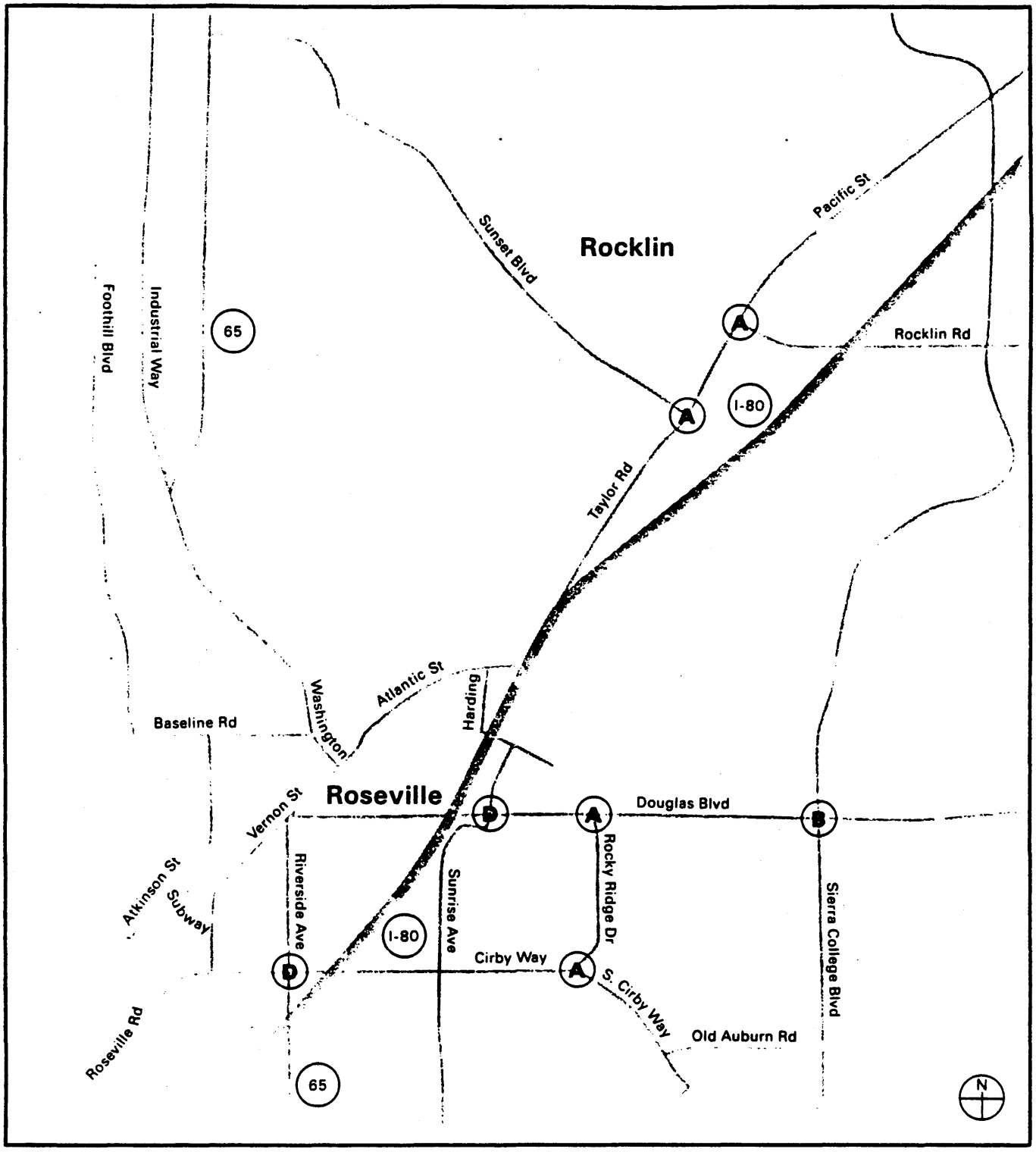


Figure 7-6.
Existing Intersection Service Levels
(PM Peak Hour, Before Lead Hill Overcrossing)

The analysis approach for Chapter 7, Transportation, Chapter 8, Air Quality, and Chapter 9, Noise was to focus on the incremental impacts of the Lower Intensity Alternative because analyzing beyond a 20-year time frame is considered too impractical. As discussed in Chapter 17, Cumulative Impacts, the Lower Intensity Alternative could be expected to build out by the year 2005 while the anticipated build out of the proposed project is beyond that date.

The impact analysis does not initially discount traffic volumes for TSM. This conservative approach to specifying capacity mitigations provides a safeguard if TSM programs are less effective than desired. If the TSM programs are successful, then the area's roadways would operate at better service levels than predicted.

Trip Generation Rates

Trip generation rates used for the analysis of the proposed project are presented in Table 7-4. They are based on research published by the Institute of Transportation Engineers (ITE) and Caltrans. This research indicates that, for residential developments, trip generation rates per dwelling unit decline as the dwelling unit density increases and that, for retail centers, trip rates per thousand square feet decrease as the overall size of the shopping center increases. The ITE research also indicates that a high proportion of the trips generated by retail businesses is secondary or diverted travel. This is travel that is already occurring on the local street system for other purposes, such as travel home from work, with stops at commercial uses along the way. As such drop-in visits do not represent a net increase in the number of vehicles on the surrounding street system, they are discounted from the traffic generation estimates. The ITE research suggests that only about 35 percent of the traffic generated by retail centers represents true primary travel that should be included in the evaluation of impacts.

Commercial trip rates are based on the expected retail coverages projected for Roseville by Angus McDonald & Associates: 9,000-12,000 sf per gross acre. Trip rates for office and R&D uses are based on the expected employee density of 34 per gross acre for business professional and R&D.

Proposed Project

The following analysis identifies the magnitude of the impacts of the proposed project, measured against a known quantifiable background condition. It assumes that the proposed project, generating about 99,000 primary daily vehicle trips, would be superimposed upon the existing traffic conditions

Table 7-4. Trip Generation
Residential, Commercial, and Business Uses
Proposed Project

Land Use Category	Description/ Size	Number of Units	Trips per DU					Total Trips				
				AM Peak		PM Peak			AM Peak		PM Peak	
			ADT	In	Out	In	Out	ADT	In	Out	In	Out
Residential	R-5.5	357	10.00	0.21	0.55	0.63	0.37	3,570.00	74.97	196.35	224.91	132.09
	R-9 and R-10	975	8.50	0.14	0.50	0.55	0.30	8,287.50	136.50	487.50	536.25	292.50
	R-12	468	7.00	0.12	0.40	0.47	0.23	3,276.00	56.16	187.20	219.96	107.64
					Residential totals:			15,133.50	267.63	871.05	981.12	532.23
			Trips per Acre					Total Trips				
				AM Peak		PM Peak			AM Peak		PM Peak	
			ADT	In	Out	In	Out	ADT	In	Out	In	Out
Commercial	10 acres	15.20	738.00	11.20	10.40	34.00	36.20	11,217.60	170.24	158.08	516.80	550.24
	10-20 acres	13.00	600.00	8.10	7.20	25.70	27.40	7,800.00	105.30	93.60	334.10	356.20
	20-30 acres	45.41	455.00	3.60	1.80	21.00	22.20	20,661.55	163.48	81.74	953.61	1,008.10
	30-40 acres	0.00	--------These trip rates not used--------					0.00	0.00	0.00	0.00	0.00
	40-50 acres	0.00	--------These trip rates not used--------					0.00	0.00	0.00	0.00	0.00
	50-100 acres	154.10	409.00	4.00	2.60	17.00	17.10	63,026.90	616.40	400.66	2,619.70	2,635.11
	100 acres +	0.00	--------These trip rates not used--------					0.00	0.00	0.00	0.00	0.00
					Commercial totals:			102,706.05	1,055.42	734.08	4,424.21	4,549.65
			Trips per Acre					Total Trips				
				AM Peak		PM Peak			AM Peak		PM Peak	
			ADT	In	Out	In	Out	ADT	In	Out	In	Out
Business Park and Professional Office/Research and Development		367.75	129.00	16.40	2.00	2.80	15.60	47,439.75	6,031.10	735.50	1,029.70	5,736.90
					All uses totals:			165,279.30	7,354.30	2,340.63	6,435.03	10,818.78

Sources: Institute of Transportation Engineers (1982).
Fehr & Peers Associates.

throughout Roseville. This scenario is referred to as the Existing Plus Project Condition in Chapters 7, 8, and 9.

Table 7-4 summarizes the trip generation estimates for the proposed project. Under build-out conditions, total daily trip generation (as measured at the individual driveways of all of the respective parcels) would be about 165,000 vehicle trip ends. However, many of these would be the result of multiple-stop trips by the same vehicles. The net traffic increase on the area's principal streets would be only about 99,000 primary vehicle trips. Total trip generation in the p.m. peak hour would be about 17,200 vehicles (about 10 percent of the daily amount), with about 11,200 making primary trips. Primary trip generation in the a.m. peak hour would be about 8,500 vehicles.

The Specific Plan includes several basic roadway improvements as part of its access and internal circulation plan. This roadway plan is illustrated in Figure 7-3 and Figure 2-8. It is generally consistent with Roseville's current Circulation Plan and/or with Caltrans' planned improvements under the Route 65 Bypass project. It adds roadways to these plans only where necessary to provide parcel access. Key features of the Specific Plan's Circulation Element include improvements to the Atlantic Street and Taylor Road interchanges along I-80, including extensions of both roadways to the east side of the freeway, and extensions of Rocky Ridge Drive and East Roseville Parkway northward from Douglas Boulevard through the Plan area. Because this plan does not call for any development west of the freeway, the extension of Roseville Parkway across I-80 is not assumed, even though it is identified in the Specific Plan's Circulation Element. The Parkway's western terminus is assumed to be at the Taylor Road extension just southeast of Taylor's improved I-80 interchange.

Table 7-5 indicates the traffic increases that build-out of the proposed project would generate on the key travel screenlines. Increases would range from little or none west of the freeway along the existing Route 65 (screenlines D, N, and O), to a growth of about 54,000 vehicles attempting to access or cross I-80 from the east (screenline G). On a percentage basis, traffic through the immediate Plan area would more than double (screenlines E, F, and G). North/south travel along and parallel to I-80 would grow by 20 percent to 35 percent (screenlines A, B, and I, J, K), and travel west of the freeway would grow by about 10 percent (screenlines C, H, and M).

The impacts of this traffic growth on screenline capacities are given in Table 7-6. Assuming the Route 65 Bypass improvements and on-site roadway system are in place, screenlines would all operate within their design capacities (providing average LOS C or better), as long as roadways in northeast Roseville are built to the following specifications:

Table 7-5. Comparison of Existing Screenline Volumes With and Without the Project

Screenline[1]	Existing Daily Traffic[2]	Existing Plus Project Daily Traffic[3]	Increase (Percent)
A	145,000	189,000	30
B	87,000	104,000	20
C	22,000	24,000	9
D	11,000	11,000	0
E	29,000	65,000	124
F	38,000	82,000	115
G	67,000	121,000	81
H	66,000	74,000	12
I,J,K	132,000	178,000	35
M	24,000	26,000	8
N	8,000	8,000	0
O	7,000	7,000	0

Source: Fehr & Peers Associates

[1] See Figure 7-5 for locations.

[2] Assumes Route 65 Bypass completed to provide common basis for comparison to with-project condition (I-80 interchange improvements associated with Route 65 Bypass project needed for access to Plan area).

[3] Full expected build-out of Plan area.

Table 7-6. Existing Screenline
Capacity Analysis With and Without the Project

Screenline[4]	Existing Traffic (With 65 Bypass)[1,2] Volume	Maximum Capacity	V/C Ratio	Existing Plus Project Traffic[2,3] Volume	Maximum Capacity	V/C Ratio
A	145	272	0.53	189	272	0.69
B	87	192	0.45	104	192	0.54
C	22	100	0.22	24	100	0.24
D	11	48	0.23	11	48	0.23
E	29	32	0.91*	65	96	0.68
F	38	64	0.59	82	144	0.57
G	67	112	0.60	121	176	0.69
H	66	128	0.52	74	128	0.58
I,J,K	132	248	0.53	178	248	0.72
M	24	56	0.43	26	56	0.46
N	8	48	0.17	8	48	0.17
O	7	48	0.15	7	48	0.15

Source: Fehr & Peers Associates

[1] Assumes Route 65 Bypass completed to provide common basis for comparison to with-project condition (I-80 interchange improvements associated with Route 65 Bypass project needed for access to Plan area).

[2] All volumes and capacities represent thousands of vehicles per day.

[3] Full expected build-out of Plan area.

[4] See Figure 7-5 for locations.

* Indicates volume in excess of design capacity (but within maximum capacity).

- Taylor Road extension -- two lanes from I-80 crossing (at improved Taylor Road interchange) to east side of new Atlantic Street interchange.

- Sunrise Avenue extension -- two lanes from Douglas Boulevard to East Roseville Parkway.

- East Roseville Parkway -- two lanes from Taylor Road to Douglas Boulevard.

- Atlantic Street Extension (Eureka Road) -- six lanes from I-80 to Sunrise Avenue extension, four lanes from Sunrise Avenue extension to Douglas Boulevard.

- Lead Hill Road -- four lanes from Harding Boulevard to Douglas Boulevard.

- Douglas Boulevard -- six lanes from I-80 to Eureka Road, four lanes from Eureka Road to Sierra College Boulevard.

- Atlantic Street -- four lanes from improved I-80 interchange to west of Harding Boulevard.

Roadways at least this wide or wider than needed are already planned as part of the Specific Plan Circulation Element or to support other development in Roseville. Therefore, assuming implementation of these improvements, the proposed project would generate traffic impacts that are less than significant.

The Specific Plan calls for an access and circulation system whose elements could be constructed to sufficient sizes to furnish all of the capacity and coverage needed by the project. However, in order to tie the on-site circulation plan into the off-site street and freeway system, certain off-site improvements would be necessary to reduce the projected traffic impacts to a less-than-significant level. These improvements are, however, currently included in the Specific Plan Circulation Element or are planned within the City of Roseville to meet other City-wide travel demand. Therefore, they are not considered as mitigation measures specific to the proposed project. No mitigation is required.

The on-site circulation system (illustrated in Figure 7-3) could consist primarily of two-lane roads; however, the Specific Plan proposes them as four- and six-lane roads. One exception would be Eureka Road (Atlantic Street extension), which would require six-lanes west of Sunrise Avenue and four-lanes from Sunrise Avenue to the intersection of Douglas Boulevard and Eureka Road. The other exception would be Lead Hill Road, which would need to be four lanes through the Plan area.

Lower Intensity Alternative

The impacts of the Lower Intensity Alternative would be less than those of the proposed project. Total daily trip generation would be 126,000 vehicle trip ends, as shown in Table 7-7. This is approximately 24 percent less than the proposed project. The net traffic increase on the area's principal streets would be approximately 73,000 primary vehicle trips. Total trip generation in the p.m. peak hour would be 13,000 vehicles, with 8,200 of them being primary trips. Primary trip generation in the a.m. peak hour would be 6,000 vehicles. Detailed analysis of this alternative is included in Chapter 17, Cumulative Impacts.

General Plan Alternative

The General Plan Alternative is almost identical to the proposed project in the type, amount, and location of individual land uses. The difference in total trip generation between these two alternatives is less than 2 percent. Because of the conformity in total trip generation, and the similarity in land uses, no quantifiable differences in impacts can be identified.

No-Project Alternative

No impacts would occur.

Mitigation Measures

Proposed Project

The proposed project is expected to result in less-than-significant impacts. However, TSM measures are recommended.

Implement Transportation System Management Measures. The City of Roseville's TSM ordinance (see Appendix 7-1) defines a series of measures which are to be applied at new nonresidential developments to reduce commute traffic in peak hours. Measures include transit and rideshare promotion, flexible work-hour programs and amenities to encourage bicycling and walking. It is designed to reduce traffic generation by 20-30 percent below the amount that would occur if everyone drove alone. This would represent a traffic decrease of up to 10 percent relative to no-TSM conditions. The ordinance also includes a monitoring program and attempts to guarantee that performance standards will be met by conditioning subsequent development approvals on compliance during the initial phases of development. This

Table 7-7. Trip Generation
Residential, Commercial, and Business Uses
Lower Intensity Alternative

Land Use Category	Description/ Size	Number of Units	Trips per DU					Total Trips				
				AM Peak		PM Peak			AM Peak		PM Peak	
			ADT	In	Out	In	Out	ADT	In	Out	In	Out
Residential	R-5.5	357	10.00	0.21	0.55	0.63	0.37	3,570.00	74.97	196.35	224.91	132.09
	R-9 and R-10	975	8.50	0.14	0.50	0.55	0.30	8,287.50	136.50	487.50	536.25	292.50
	R-12	468	7.00	0.12	0.40	0.47	0.23	3,276.00	56.16	187.20	219.96	107.64
					Residential totals:			15,133.50	267.63	871.05	981.12	532.23
			Trips per Acre					Total Trips				
				AM Peak		PM Peak			AM Peak		PM Peak	
			ADT	In	Out	In	Out	ADT	In	Out	In	Out
Commercial	10 acres	15.20	738.00	11.20	10.40	34.00	36.20	11,217.60	170.24	158.08	516.80	550.24
	10-20 acres	13.00	600.00	8.10	7.20	25.70	27.40	7,800.00	105.30	93.60	334.10	356.20
	20-30 acres	45.41	455.00	3.60	1.80	21.00	22.20	20,661.55	163.48	81.74	953.61	1,008.10
	30-40 acres	0.00	--------These trip rates not used--------					0.00	0.00	0.00	0.00	0.00
	40-50 acres	0.00	--------These trip rates not used--------					0.00	0.00	0.00	0.00	0.00
	50-100 acres	96.70	409.00	4.00	2.60	17.00	17.10	39,550.30	386.80	251.42	1,643.90	1,653.57
	100 acres +	0.00	--------These trip rates not used--------					0.00	0.00	0.00	0.00	0.00
					Commercial totals:			79,229.45	825.82	584.84	3,448.41	3,568.11
			Trips per Acre					Total Trips				
				AM Peak		PM Peak			AM Peak		PM Peak	
			ADT	In	Out	In	Out	ADT	In	Out	In	Out
Business Park and Professional Office/Research and Development		243.15	129.00	16.40	2.00	2.80	15.60	31,366.35	3,987.66	486.30	680.82	3,793.14
					All uses totals:			125,729.30	5,081.11	1,942.19	5,110.35	7,893.48

Sources: Institute of Transportation Engineers (1982).
Fehr & Peers Associates.

would be attached to the proposed project and to approvals in the other Roseville specific plan areas.

Many local jurisdictions and transportation agencies have TSM programs and ordinances that go beyond Roseville's programs. Some specify site design features that should be used to promote use of and improve the efficiency of non-auto travel modes. Sacramento Regional Transit and Caltrans' rideshare program, for example, request that bus turnouts and shelters be provided along primary streets in new development areas, that building siting make bus-stop access convenient, that pedestrian and bikeways be provided, that buildings contain showers and lockers, that strategic parcels be set aside, even in residential developments, for park-and-ride lots. The Specific Plan includes a park-and-ride lot in the vicinity of the Atlantic interchange. Regional Transit also requests direct subsidies in some cases to help offset the cost of providing service to new areas.

A list of site planning features and institutional measures that help reduce traffic generation are presented in Appendix 7-1.

Jurisdictions with aggressive TSM ordinances often set performance standards, and devise monitoring and enforcement plans to be sure the standards are met. Sacramento County, for example, encourages office/industrial developments to achieve a 30 percent reduction in peak hour vehicular travel relative to the amount of travel that would occur if all employees traveled in single-occupant automobiles. This represents a 10 percent reduction in traffic generation below the "ambient" conditions. (Under circumstances where there is no special TSM in effect, about 20 percent of commuters travel in carpools, by transit, or in nonpeak times.)

Lower Intensity Alternative

Mitigation measures for this alternative are discussed in detail in Chapter 17, Cumulative Impacts.

General Plan Alternative

TSM measures are also recommended for this alternative.

No-Project Alternative

No mitigation is required.

Chapter 8

AIR QUALITY

Setting

Climate

The proposed project area is located along the western side of the Sacramento Valley. The prevailing wind direction in the study area is from the southwest, resulting from marine breezes through the Carquinez Strait. During winter, the sea breezes diminish and winds from the north occur more frequently. However, the winds from the south still predominate.

Air Quality Standards

The federal Clean Air Act established air quality standards for several pollutants, and requires areas that violate these standards to prepare and implement plans to achieve the standards by certain deadlines. The deadline for attaining both the ozone and carbon monoxide standards is December 31, 1987.

Both the State of California and the federal government have established a variety of ambient air quality standards. The state 1-hour ozone standard is 0.10 ppm (parts per million, by volume), not to be equalled or exceeded. The federal 1-hour ozone standard is 0.12 ppm, not to be exceeded more than 3 times in any 3-year period.

State and federal carbon monoxide standards have been set for both 1-hour and 8-hour averaging times. The state 1-hour carbon monoxide standard is 20 ppm, while the federal 1-hour carbon monoxide standard is 35 ppm. Both state and federal standards are 9 ppm for the 8-hour averaging period. The state carbon monoxide standards are phrased as values not to be exceeded, while the federal standards are phrased as values not to be exceeded more than once per year.

Air Quality Monitoring Data

Urban development and associated traffic are the primary sources of existing air quality problems in the Roseville area. The federal air quality standards for ozone and carbon monoxide are being exceeded several times per year in Sacramento and Placer counties (Table 8-1). The highest ozone levels and most

Table 8-1. Summary of Air Quality Monitoring Data for Placer and Sacramento Counties

Monitoring Station	Parameter	Carbon Monoxide								Ozone							
		1978	1979	1980	1981	1982	1983	1984	1985	1978	1979	1980	1981	1982	1983	1984	1985
Auburn-DeWitt Center[c]	Peak hour value[a]										0.15	0.15	0.16	0.15	0.14	0.15	0.14
	Peak 8-hour value[a]										NA	NA	NA	NA	NA	NA	NA
	Days above standard[b]										1	4	6	4	2	2	2
Rocklin-Sierra College	Peak hour value[a]									0.20	0.18	0.16	0.14	0.16	0.16	0.18	0.18
	Peak 8-hour value[a]									NA	NA	NA	NA	NA	NA	NA	NA
	Days above standard[b]									21	8	7	9	2	5	5	8
Creekside School[d]	Peak hour value[a]	19	15	16	12	12				0.22	0.20	0.18	ND	0.13			
	Peak 8-hour value[a]	11.9	11.8	11.8	10.4	6.3				NA	NA	NA	ND	NA			
	Days above standard[b]	7	6	6	1	0				15	2	8	ND	1			
North Highlands[e]	Peak hour value[a]	10	8	10	9	9	8	8	10	0.21	0.17	ND	0.18	0.16	0.17	0.17	0.18
	Peak 8-hour value[a]	6.0	4.9	5.5	3.9	4.9	5.1	5.4	6.3	NA	NA	NA	NA	NA	NA	NA	NA
	Days above standard[b]	0	0	0	0	0	0	0	0	17	5	ND	11	8	4	11	10
Meadowview Road[h]	Peak hour value[a]									0.11	0.13	0.15	0.11	0.12	0.12	0.11	0.11
	Peak 8-hour value[a]									NA	NA	NA	NA	NA	NA	NA	NA
	Days above standard[b]									0	1	3	0	0	0	0	0
Folsom	Peak hour value[a]									0.19	0.25	0.16	0.17	0.16	0.14	0.18	0.17
	Peak 8-hour value[a]									NA	NA	NA	NA	NA	NA	NA	NA
	Days above standard[b]									23	18	7	12	12	7	0	13
El Camino/Watt[f]	Peak hour value[a]	30	17		17	17	19	18	ND								
	Peak 8-hour value[a]	15.0	11.5		13.5	15.1	14.1	12.4	13.3								
	Days above standard[b]	6	2		6	5	4	5	11								
Citrus Heights-Sunrise Boulevard	Peak hour value[a]			10	10	10	9	9	9				0.14	0.13	0.15	0.19	0.20
	Peak 8-hour value[a]			7.0	5.1	8.4	5.4	5.1	7.4				NA	NA	NA	NA	NA
	Days above standard[b]			0	0	0	0	0	0				12	1	5	9	10
Del Paso Manor[g]	Peak hour value[a]				12	14	12	13	12				0.15	0.15	0.15	0.21	0.19
	Peak 8-hour value[a]				10.3	13.3	10.9	9.1	9.3				NA	NA	NA	NA	NA
	Days above standard[b]				1	3	2	0	3				9	4	9	10	9

Source: California Air Resources Board 1979-1986.

NA = Not applicable.
ND = No data or inadequate data during season of high pollution levels.

[a] Peak hour and peak 8-hour values given as parts per million by volume (ppm).
[b] For ozone, days with a peak 1-hour value exceeding the federal primary standard of 0.12 ppm; for carbon monoxide, days with a peak 8-hour average value exceeding the federal primary and state standards of 9 ppm.
[c] Ozone monitoring began August 1979.
[d] Instrumentation problems invalidated 1981 ozone data; ozone monitoring discontinued October 1982; no carbon monoxide data reported for April-September 1981; carbon monoxide monitoring discontinued, July 1982.
[e] Station at Blackfield Drive closed in September 1979; station on Blackfoot Way began operating in January 1980.
[f] Temporary station December 1978-February 1979; permanent station began operating in January 1981.
[g] Station began operating in April 1981.
[h] Station at Meadowview closed January 1985-March 1985, and November 1985-December 1985.

frequent violations of the federal standard occur in the northern part of Sacramento County and the southern part of Placer County. Violations of the federal and state 8-hour carbon monoxide standards occur primarily in the heavily urbanized portion of Sacramento County.

As a consequence of the recorded violations of the federal ozone standard, all of Sacramento County and the southern portion of Placer County have been designated a "nonattainment area" with respect to ozone. The urbanized portion of Sacramento County has also been designated as a nonattainment area for carbon monoxide; no locations in Placer County are considered carbon monoxide nonattainment areas.

Air Quality Management

Yolo County, Sacramento County, and portions of Placer County and Solano County constitute the Sacramento Air Quality Maintenance Area, the air quality planning area for the Sacramento region. The current plan for achieving the federal air quality standards was developed by the Sacramento Area Council of Governments (SACOG) in 1982.

Ozone. Ozone, the main component of photochemical smog, is primarily a summer/fall period pollution problem. Ozone is not emitted directly into the air, but is formed through a complex series of chemical reactions involving other compounds (various organic compounds, nitric oxide, and nitrogen dioxide) that are directly emitted. The time period required for these reactions allows the reacting compounds to be spread over a large area, which produces a regional pollution problem. Ozone problems are the cumulative result of regional development patterns, rather than being the result of a few incrementally significant emission sources.

The Sacramento Air Quality Plan identifies the major contributors to regional ozone problems as motor vehicle emissions and evaporation of various organic compounds (fuels, solvents, etc.). The plan predicts a general reduction in ozone levels through 1987. This predicted reduction is due to improved controls on both stationary source and motor vehicle emissions of organic compounds and nitrogen oxides. Despite the predicted improvements, the Air Quality Plan projects continued violation of federal and state ozone standards beyond 1987, with ozone levels increasing after 1990.

A recent status report on implementation of the the Sacramento Air Quality Plan (Sacramento Area Council of Governments 1985) concludes that current control measures now being implemented throughout the Sacramento Air Quality Maintenance Area have been sufficient to prevent a further deterioration in air quality. However, the analysis also concludes that an

additional 25 percent reduction in ozone levels will be necessary to achieve the federal ozone standard.

Carbon Monoxide. Carbon monoxide is primarily a winter period pollution problem. Motor vehicle emissions are the dominant source of carbon monoxide in most areas. As a directly emitted pollutant, transport away from the emission source is accompanied by dispersion and reduced pollutant concentrations. Consequently, carbon monoxide problems are usually localized, often the result of a combination of high traffic volumes and significant traffic congestion.

Outdoor carbon monoxide levels are a fairly reliable indicator of potential indoor carbon monoxide levels. Carbon monoxide is not chemically reactive and is poorly soluble in water. Thus, it is not adsorbed onto surfaces or otherwise removed from outdoor air entering a building through open doorways, open windows, or building ventilation systems.

During late 1980 and early 1981, the California Air Resources Board (ARB), Caltrans, and the Sacramento County Air Pollution Control District conducted a special carbon monoxide study at three intersections in the Sacramento area (Sunrise Boulevard and Greenback Lane; El Camino Avenue and Watt Avenue; Florin Road and Franklin Boulevard). During the 3-4 months of monitoring, each of the intersection areas experienced 6-7 violations of the federal and state 8-hour carbon monoxide standards (Macaluso 1981). Episodes of high carbon monoxide levels at all three locations occurred most often during late afternoon to nighttime hours.

Available data suggest that carbon monoxide problems occur primarily in the vicinity of major traffic arteries having significant amounts of commercial development. The presence of significant commercial development is an important contributing factor for two reasons. Parking lots for such developments represent a localized source of emissions which augments the carbon monoxide emissions from vehicle traffic on adjacent roadways. Additionally, vehicles leaving major parking lots are likely to be in a "cold start" operating mode, resulting in higher carbon monoxide emission rates than is typical for "through" traffic on major roadways.

Meteorological conditions are also a significant factor affecting the development of carbon monoxide problems. High carbon monoxide levels develop primarily during the winter months when periods of light winds or calm conditions combine with the formation of ground level temperature inversions (typically in the evening through early morning period). These conditions result in reduced dispersion of vehicle emissions, allowing carbon monoxide problems to develop and persist during hours when traffic volumes are declining from peak levels. Motor vehicles also exhibit increased carbon monoxide emission rates at low air temperatures.

The Sacramento Air Quality Plan predicts that federal and state carbon monoxide standards will be attained throughout the region by 1987. The regional air quality model predicted 1987 8-hour carbon monoxide levels of up to 7.4 ppm in Sacramento County. The Sacramento Air Quality Plan does not present any modeling predictions for carbon monoxide levels in the Roseville area.

Impacts

The cumulative analysis of air quality is found in Chapter 17, Cumulative Impacts.

The analysis approach for Chapter 7, Transportation, Chapter 8, Air Quality, and Chapter 9, Noise was to focus on the incremental impacts of the Lower Intensity Alternative because analyzing beyond a 20-year time frame is considered too impractical. As discussed in Chapter 17, Cumulative Impacts, the Lower Intensity Alternative could be expected to build out by the year 2005 while the anticipated build out of the proposed project is beyond that date.

Proposed Project

Construction-Related Impacts. Construction of the proposed project would cause an indeterminable quantity of dust particles to be emitted into the atmosphere. A major fraction of these dust particles would settle out on and immediately adjacent to the proposed project site, while a minor fraction would contribute to the area's ambient particulate level. In general, particles larger than 30 microns (effective aerodynamic diameter) would settle out within a short distance of the project site. With implementation of the mitigation measures described later in this chapter, this impact is considered to be less than significant.

Construction equipment having internal combustion engines would emit an indeterminable quantity of nitrogen oxides, hydrocarbons, particulates, sulfur dioxides, and carbon monoxide. This impact is considered to be less than significant.

Contribution to Regional Air Quality Problems. As described above, ozone is the principal problem pollutant on a regional scale. The proposed project would increase traffic-related and other air pollutant emissions that are ozone precursors. This would contribute to regional ozone problems, incrementally adding to the difficulty in attaining the ozone standard.

Estimates of reactive organic compound and nitrogen oxide emissions from vehicle traffic have been prepared for the Year 2005 with Lower Intensity Alternative. These are presented in

Chapter 17, Cumulative Impacts. The incremental emissions increase from the Year 2005 with Lower Intensity Alternative would be 0.9 ton per day for reactive organic compounds and 0.9 ton per day for nitrogen oxides. Incremental emissions from the proposed project would be greater.

As a point of comparison, the regional air quality plan is based on growth projections that imply about 57 tons per day of reactive organic compound emissions from region-wide vehicle traffic in 1995 (Sacramento Area Council of Governments 1985). The ARB estimates year 2000 vehicle emissions in Placer County (outside the Tahoe Basin) will be 5.7 tons per day of reactive organic compounds and 14.3 tons per day of nitrogen oxides (see Table 8-2).

Because the Air Quality Plan does not project attainment of the ozone air quality standard, and because the regional air quality impact of the proposed project would be focused in an area downwind of the Plan area, the levels of emissions increase described above for the future year development conditions are considered to be a potentially significant impact. A substantially less intensive level of development would need to be implemented to mitigate this impact to a less-than-significant level. For purposes of comparison, any project of substantial size would also result in a significant impact. Implementation of the transportation system management measures described in Chapter 7, Transportation, would, however, help slightly to reduce this impact (see the Mitigation Measures section below).

Consistency with the Regional Air Quality Plan. Determinations of consistency with the Sacramento Air Quality Plan are made by comparing proposed projects with land use conditions assumed in the analysis conducted for the plan. These assumptions describe conditions in the year 1987, since that is the deadline for attaining the federal air quality standards. Because build-out under any of the plan alternatives would occur after 1987, it is not possible to make a technical determination of consistency with the Air Quality Plan.

Regional growth projections have been used in extrapolating beyond 1987 in the reasonable further progress report for the Air Quality Plan (Sacramento Area Council of Governments 1985). These growth projections, however, are simple population totals. They do not include any assumptions regarding the geographic distribution of future growth or its relationship to local land use plans.

A principal objective of the Air Quality Plan is to attain the air quality standards; the project would tend to make it more difficult for the plan to succeed. This is considered to be a significant impact. Implementation of the transportation system management measures described in Chapter 7, Transportation, would, however, help to reduce the impact (see the Mitigation Measures section).

Table 8-2. Emissions Projections for Mountain Counties Air Basin Portion of Placer County in Tons per Day and Percent of Total

Source Category	Reactive Organic Compounds								Nitrogen Oxides								Carbon Monoxide							
	1985		1990		1995		2000		1985		1990		1995		2000		1985		1990		1995		2000	
	tn/dy	percent	tn/dy	percent	tn/dy	percent	tn/dy	percent	tn/dy	percent	tn/dy	percent	tn/dy	percent	tn/dy	percent	tn/dy	percent	tn/dy	percent	tn/dy	percent	tn/dy	percent
Fuel Combustion	0.50	2.77%	0.58	3.09%	0.67	3.25%	0.77	3.40%	2.00	9.95%	2.33	11.49%	2.71	12.41%	3.08	12.95%	1.61	1.88%	1.91	2.36%	2.23	2.67%	2.55	2.85%
Agricultural Waste Burning	0.21	1.16%	0.22	1.17%	0.23	1.12%	0.24	1.06%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	4.43	5.17%	4.54	5.60%	4.81	5.76%	5.06	5.66%
Other Waste Burning	0.50	2.77%	0.51	2.72%	0.55	2.67%	0.58	2.56%	0.01	0.05%	0.02	0.10%	0.02	0.09%	0.02	0.08%	12.63	14.73%	13.03	16.07%	13.77	16.49%	14.51	16.24%
Solvent Use	2.06	11.41%	2.40	12.80%	2.82	13.70%	3.23	14.25%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
Petroleum Process, Storage and Transfer	0.54	2.99%	0.59	3.15%	0.62	3.01%	0.66	2.91%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
Industrial Processes	4.68	25.93%	5.32	28.37%	6.18	30.01%	7.03	31.02%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
Pesticide Application	0.41	2.27%	0.43	2.29%	0.46	2.23%	0.48	2.12%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
Farming Operations	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
Construction & Demolition	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
Entrained Road Dust From Paved Sources	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
Entrained Road Dust From Unpaved Sources	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
Unplanned Fires	0.19	1.05%	0.19	1.01%	0.19	0.92%	0.19	0.84%	0.04	0.20%	0.04	0.20%	0.04	0.18%	0.04	0.17%	1.68	1.96%	1.68	2.07%	1.68	2.01%	1.68	1.88%
SUBTOTAL FOR STATIONARY SOURCES	9.09	50.36%	10.24	54.61%	11.72	56.92%	13.18	58.16%	2.05	10.19%	2.39	11.79%	2.77	12.68%	3.14	13.20%	20.35	23.73%	21.16	26.10%	22.49	26.93%	23.80	26.63%
On-Road Vehicles	6.81	33.30%	5.30	28.27%	5.40	26.23%	5.69	25.11%	12.08	60.07%	11.03	58.36%	12.90	59.07%	14.34	60.30%	55.40	64.60%	48.71	60.08%	48.42	57.99%	51.60	57.74%
Off-Road Vehicles	0.70	3.88%	0.83	4.43%	0.98	4.76%	1.13	4.99%	0.03	0.15%	0.03	0.15%	0.04	0.18%	0.04	0.17%	1.55	1.81%	1.85	2.28%	2.18	2.61%	2.50	2.80%
Aircraft	0.02	0.11%	0.03	0.16%	0.00	0.00%	0.04	0.18%	0.00	0.00%	0.00	0.00%	6.13	28.07%	0.00	0.00%	0.72	0.84%	0.85	1.05%	1.03	1.23%	1.21	1.35%
Other Mobile Sources	2.23	12.35%	2.35	12.53%	2.49	12.09%	2.62	11.56%	5.95	29.59%	6.02	29.70%	0.00	0.00%	6.26	26.32%	7.74	9.03%	8.50	10.48%	9.30	11.23%	10.25	11.47%
SUBTOTAL FOR MOBILE SOURCES	8.96	49.64%	8.51	45.39%	8.87	43.08%	9.48	41.84%	18.06	89.81%	17.08	88.21%	19.07	87.32%	20.64	86.80%	65.41	76.27%	59.91	73.90%	61.01	73.07%	65.56	73.37%
GRAND TOTAL FOR ALL SOURCES	18.05	100.00%	18.75	100.00%	20.59	100.00%	22.66	100.00%	20.11	100.00%	20.27	100.00%	21.84	100.00%	23.78	100.00%	85.76	100.00%	81.07	100.00%	83.50	100.00%	89.36	100.00%

Source: California Air Resources Board 1985

Potential for Localized Carbon Monoxide Problems. Carbon monoxide levels are a public health concern because carbon monoxide combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream. Relatively low concentrations of carbon monoxide can significantly affect the amount of oxygen in the bloodstream since carbon monoxide binds to hemoglobin 220-245 times more strongly than does oxygen. Both the cardiovascular system and the central nervous system can be affected when 2.5-4.0 percent of the hemoglobin in the bloodstream is bound to carbon monoxide rather than to oxygen. State and federal ambient air quality standards for carbon monoxide have been set at levels intended to keep carbon monoxide from combining with more than 1.5 percent of the blood's hemoglobin (U. S. Environmental Protection Agency 1979 and California Air Resources Board 1982).

The regional air quality plan projects attainment of the carbon monoxide standards by 1987. The analyses in the plan were not, however, designed to evaluate highly localized carbon monoxide problems that might occur with specific projects. Thus, this EIR has analyzed the potential for localized carbon monoxide problems associated with various traffic patterns.

The air quality analyses prepared for this EIR have focused on the potential for localized carbon monoxide problems at sensitive receptors near several heavily congested intersections, as identified in Chapter 7, Transportation.

Analyses were performed using the CALINE3 dispersion model, EMFAC6D vehicle emission rates, and afternoon peak hour traffic volume and level-of-service projections for the Year 2005 with Lower Intensity Alternative. The data and assumptions used for this analysis are described in Chapter 17, Cumulative Impacts.

An analysis of the Year 2005 with Lower Intensity Alternative has shown projected carbon monoxide concentrations to be just above the state and federal 8-hour standards at one intersection and just below the standards at two other intersections. No other violations of carbon monoxide standards are projected.

To estimate expected carbon monoxide concentrations under Existing Plus Project conditions, the EIR preparers compared projected traffic volumes and volume/capacity ratios for Existing Plus Project conditions and the Year 2005 with Lower Intensity Alternative. Projected traffic volumes and volume/capacity ratios for Existing Plus Project conditions are lower than the Year 2005 with Lower Intensity Alternative. Therefore, no violations of carbon monoxide standards are projected under Existing Plus Project conditions; the project is not considered to have significant carbon monoxide air quality impacts under this condition.

Lower Intensity Alternative

The impacts of the Lower Intensity Alternative would be less than those of the proposed project. A detailed analysis of this alternative is included in Chapter 17, Cumulative Impacts.

General Plan Alternative

The General Plan Alternative is essentially identical to the proposed Specific Plan. Therefore, the analysis in the Draft EIR is limited to the following three impact areas: Chapter 4, Land Use; Chapter 7, Transportation; and Chapter 15, Visual Quality.

No-Project Alternative

No impacts related to the Plan area would occur. Growth elsewhere in the region would result in air quality impacts.

Mitigation Measures

Proposed Project

No mitigation is required for localized air quality impacts. However, the planned roadway improvements described in Chapter 7, Transportation, would tend to reduce localized air quality impacts.

Air quality impacts involving regional pollution problems could be reduced by the planned roadway improvements described in Chapter 7, Transportation. However, these improvements would not mitigate impacts to a less-than-significant level.

Implement Dust-Reducing Construction Practices. Standard construction practices would greatly reduce the amount of dust particles emitted due to construction activities. These measures include minimizing the amount of time surfaces are left exposed, periodic sprinkling of exposed areas and soil piles with water, and covering soil piles with plastic sheeting or tarpaulins to limit disturbance.

Vehicles traveling on exposed surfaces should not be driven at excessive speed. Preparation of roadway surfaces in a stepwise fashion, where segments of the route are graded in succession, would greatly minimize the amount of time the surfaces are left exposed, thereby reducing these emissions. Also, proper maintenance of construction equipment would minimize emissions from internal combustion engines.

Lower Intensity Alternative

Mitigation measures for this alternative are discussed in detail in Chapter 17, Cumulative Impacts.

No-Project Alternative

No mitigation is required for the Plan area.

Chapter 9

NOISE

Setting

Background Information on Noise

Introduction. Sound travels through the air in the form of waves of minute air pressure fluctuations caused by a vibration. In general, sound waves travel away from the noise source as an expanding spherical surface. The energy contained in a sound wave is consequently spread over an increasing area as it travels away from the source. This results in a decrease in loudness at greater distances from the noise source.

Measurements and descriptions of sounds are usually based on various combinations of the following factors:

- The vibrational frequency characteristics of the sound, measured as sound wave cycles per second (Hertz); this determines the "pitch" of a sound.
- The total sound energy being radiated by the source, usually reported as the sound power level.
- The pressure changes experienced at a particular location, usually measured as the sound pressure level; the frequency characteristics and sound pressure level combine to determine the "loudness" of the sound at a particular location.
- The duration of the sound.
- The changes in frequency characteristics or pressure levels through time.

Most sound measurements are based on sound pressure levels at various frequency ranges, with results reported using a decibel (dB) scale. Decibel scales are a logarithmic index based on a ratio of the actual pressure fluctuations generated by sound waves compared to a standard reference pressure value.

General Purpose Decibel Scales. Most sounds consist of a broad range of sound frequencies. Because the human ear is not equally sensitive to all frequencies, a large number of frequency weighting schemes have been used to develop noise measuring instruments that approximate the way the human ear responds to

noise levels. The "A weighted" decibel scale (dBA) is the most widely used for this purpose. The A weighting scale significantly reduces the measured pressure level for low frequency sounds while slightly increasing the measured pressure level for some high frequency sounds. Figure 9-1 illustrates dBA levels associated with a variety of noise sources.

Other frequency weighting schemes are used for specialized purposes. The "C weighted" decibel scale (dBC) is often used to characterize low frequency sounds capable of inducing vibrations in buildings or other structures. The C weighting scale does not significantly reduce the measured pressure level for low frequency components of a sound.

Varying noise levels are often described in terms of the equivalent constant decibel level. Equivalent noise levels (Leq) are used to develop single-value descriptions of average noise exposure over various periods of time. Such average noise exposure ratings often include additional weighting factors for annoyance potential due to time of day or other considerations. The Leq data for these average noise exposure descriptors generally use A-weighted sound level measurements.

Decibel Scales Reflecting Annoyance Potential. Average noise exposure over a 24-hour period is often presented as a day-night average sound level (Ldn). Ldn values are calculated from hourly Leq values, with the Leq values for the nighttime period (10 p.m.-7 a.m.) increased by 10 dB to reflect the greater disturbance potential from nighttime noises.

The community noise equivalent level (CNEL) is also used to characterize average noise levels over a 24-hour period, with weighting factors for evening and nighttime noise levels. Leq values for the evening period (7 p.m.-10 p.m.) are increased by 5 dB while Leq values for the nighttime period (10 p.m.-7 a.m.) are increased by 10 dB. Except in unusual situations, the CNEL descriptor will be within 1.5 dB of the Ldn descriptor.

It should be noted that single-value average noise descriptors (such as CNEL or Ldn values) are most appropriately applied to variable but relatively continuous sources of noise. Typical urban noise conditions, highway traffic, and major commercial airports are examples where CNEL and Ldn descriptors are most appropriate.

Noise Descriptors for Brief Noise Events. The annoyance potential of intermittent or short duration noise events is often underestimated by 24-hour average noise descriptors. Railroad operations, aircraft activity at general aviation airports, testing of emergency generators, pile driving, and blasting activities may require evaluations using other types of noise descriptors. Peak noise levels, the duration of individual noise events, and the repetition pattern of events are often used to describe intermittent or short duration noise

Figure 9-1. Weighted Sound Levels and Human Response

SOUND SOURCE	dB(A)*	RESPONSE CRITERIA
	—150	
Carrier Deck Jet Operation	—140	
		Painfully Loud
	—130	Limit Amplified Speech
Jet Takeoff (200 feet)	—120	
Discotheque Auto Horn (3 feet)		Maximum Vocal Effort
Riveting Machine	—110	
Jet Takeoff (2,000 feet)		
Shout (0.5 feet)	—100	
N.Y. Subway Station		Very Annoying
Heavy Truck (50 feet)	— 90	Hearing Damage (8 hours)
Pneumatic Drill (50 feet)		
	— 80	Annoying
Freight Train (50 feet)		
Freeway Traffic (50 feet)	— 70	Telephone Use Difficult
		Intrusive
Air Conditioning Unit (20 feet)	— 60	
Light Auto Traffic (50 feet)		
	— 50	Quiet
Living room		
Bedroom	— 40	
Library		
Soft Whisper (15 feet)	— 30	Very Quiet
Broadcasting Studio	— 20	
	— 10	Just Audible
	— 0	Threshold of Hearing

*Typical A - Weighted sound levels taken with a sound-level meter and expressed as decibels on the scale. The "A" scale approximates the frequency response of the human ear.

Source: U. S. Council on Environmental Quality 1970.

conditions. Statistical descriptions (percent of time when noise levels exceed various thresholds) are also used to characterize noise conditions over relatively brief periods of time. Noise events lasting more than half a minute can be characterized by the Leq or CNEL of the event.

Decibel Scales for Impulse Noise. Impulse sounds are usually defined as noise events producing a significant increase in sound level but lasting less than 2 seconds (often less than 1 second). Examples of impulse noise sources include pile driving, punch presses, gunshots, fireworks, and blasting activities. Impulse noises are usually described using the sound exposure level (SEL) descriptor. The SEL measure represents the cumulative sound exposure during a particular noise event, integrated with respect to a 1-second time frame.

The SEL measure is equivalent to the Leq value of a 1-second noise event producing the same cumulative acoustic energy as the actual noise event being analyzed. In effect, the SEL measure "spreads" or "compresses" the noise event to fit a fixed 1-second time interval. If the actual duration of the noise event is less than 1 second, the SEL value will be less than the Leq value for the event. If the duration of the noise event exceeds 1 second, the SEL value will exceed the Leq of the event.

Impulse noises of substantial magnitude (blasting, sonic booms) are often characterized using unweighted (flat) or C-weighted SEL measures. Less intense impulse noises are often characterized using an A-weighted SEL measure. As a practical matter, most SEL measurements are performed using procedures that restrict the time interval over which actual measurements or subsequent calculations are made. Most commonly, this involves defining the noise event as the period when sound levels exceed 85 dBC for daytime events or 75 dBC for nighttime events. Recent evaluations of community annoyance from military training activities have recommended against use of such thresholds (Schomer 1982).

Working With Decibel Values

The nature of dB scales means that individual dB ratings for different noise sources cannot be added directly to give the dB rating of the combination of these sources. Two noise sources producing equal dB ratings at a given location will produce a composite noise level 3 dB greater than either sound alone. When two noise sources differ by 10 dB, the composite noise level will be only 0.4 dB greater than the louder source alone. Most people have difficulty distinguishing between the louder of two noise sources that differ by less than 1.5-2 dB. In general, a 10 dB increase in noise level is perceived as a doubling in loudness. A 2 dB increase represents a 15 percent

increase in loudness. Figure 9-2 illustrates the relationship between decibel changes and perceived loudness.

Sound levels from an isolated noise source will typically decrease by about 6 dB for every doubling of distance away from the noise source. When the noise source is essentially a line (such as vehicle traffic on a highway), noise levels decrease by about 3 dB for every doubling of distance.

Guidelines for Interpreting Noise Levels

Various federal, state, and local agencies have developed guidelines for evaluating the compatibility of different land uses and various noise levels.

Federal Guidelines. The U.S. Environmental Protection Agency (EPA) (1974) has identified indoor and outdoor noise limits to protect public health and welfare "with an adequate margin of safety." Ldn values of 55 dB outdoors and 45 dB indoors were identified as desirable for residential, educational, and health care areas. Noise level criteria for commercial and industrial areas were identified as 24-hour Leq values of 70 dB (both outdoors and indoors).

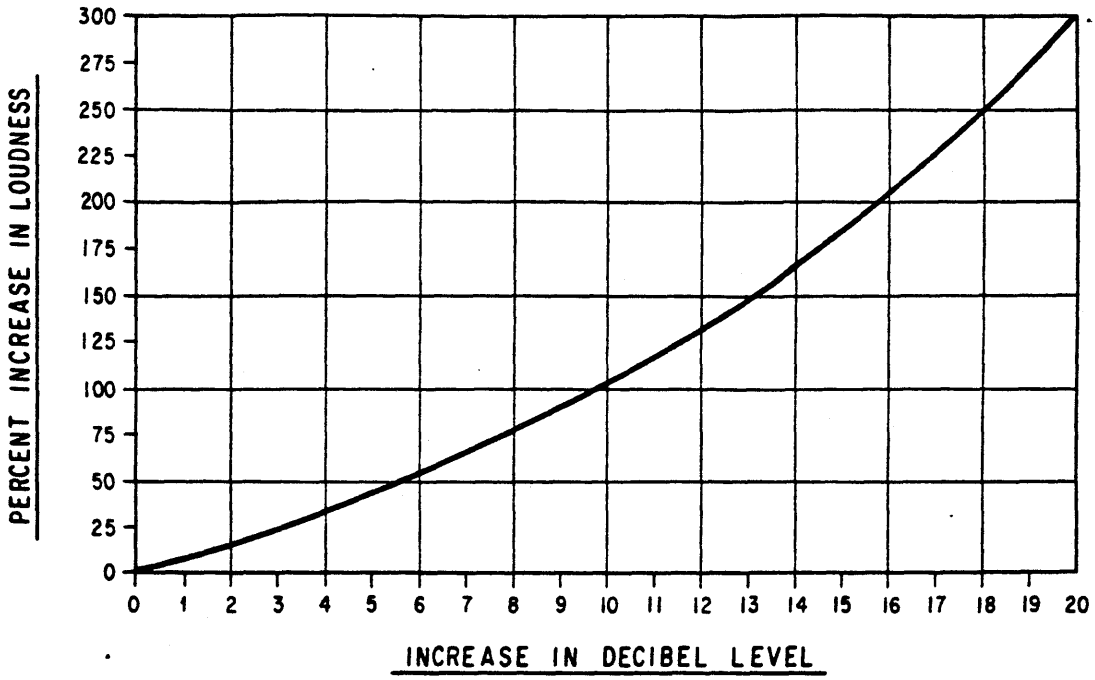
The U.S. Federal Highway Administration (FHWA) (1982) has adopted criteria for evaluating the acceptability of noise impacts associated with federally-funded highway projects. These criteria are based on peak hour Leq noise levels, not Ldn or 24-hour Leq values. Criteria for residential, educational, and health care facilities are 67 dB outdoors and 52 dB indoors. The criterion for commercial and industrial areas is 72 dB outdoors.

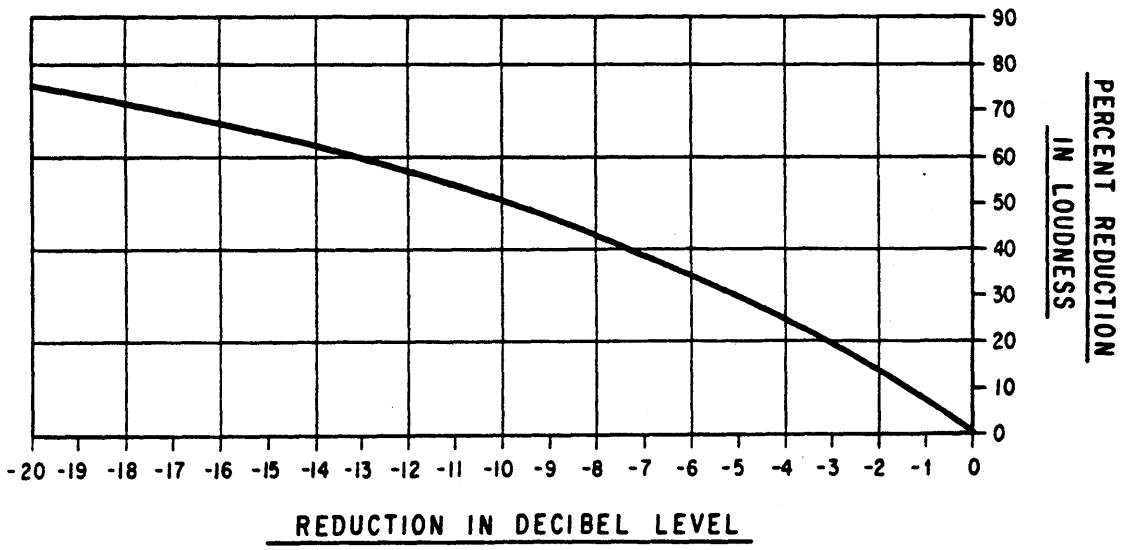
The U.S. Department of Housing and Urban Development (HUD) has established guidelines for evaluating noise impacts for residential projects seeking financial support under various HUD programs. Sites are generally considered acceptable for residential use if they are exposed to outdoor Ldn values of 65 dB or less. Sites are considered "normally unacceptable" if they are exposed to outdoor Ldn values of 65-75 dB. Sites are considered unacceptable if they are exposed to outdoor Ldn values above 75 dB.

State Guidelines. The California Department of Health Services (DOHS) has published guidelines for the noise element of local general plans. These guidelines include a noise level/land use compatibility chart (see Figure 9-3). That chart categorizes various outdoor Ldn ranges into as many as four compatibility categories (normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable) depending on land use. For many land uses, the chart shows overlapping Ldn ranges for two or more compatibility categories. These overlapping Ldn ranges indicate that local conditions

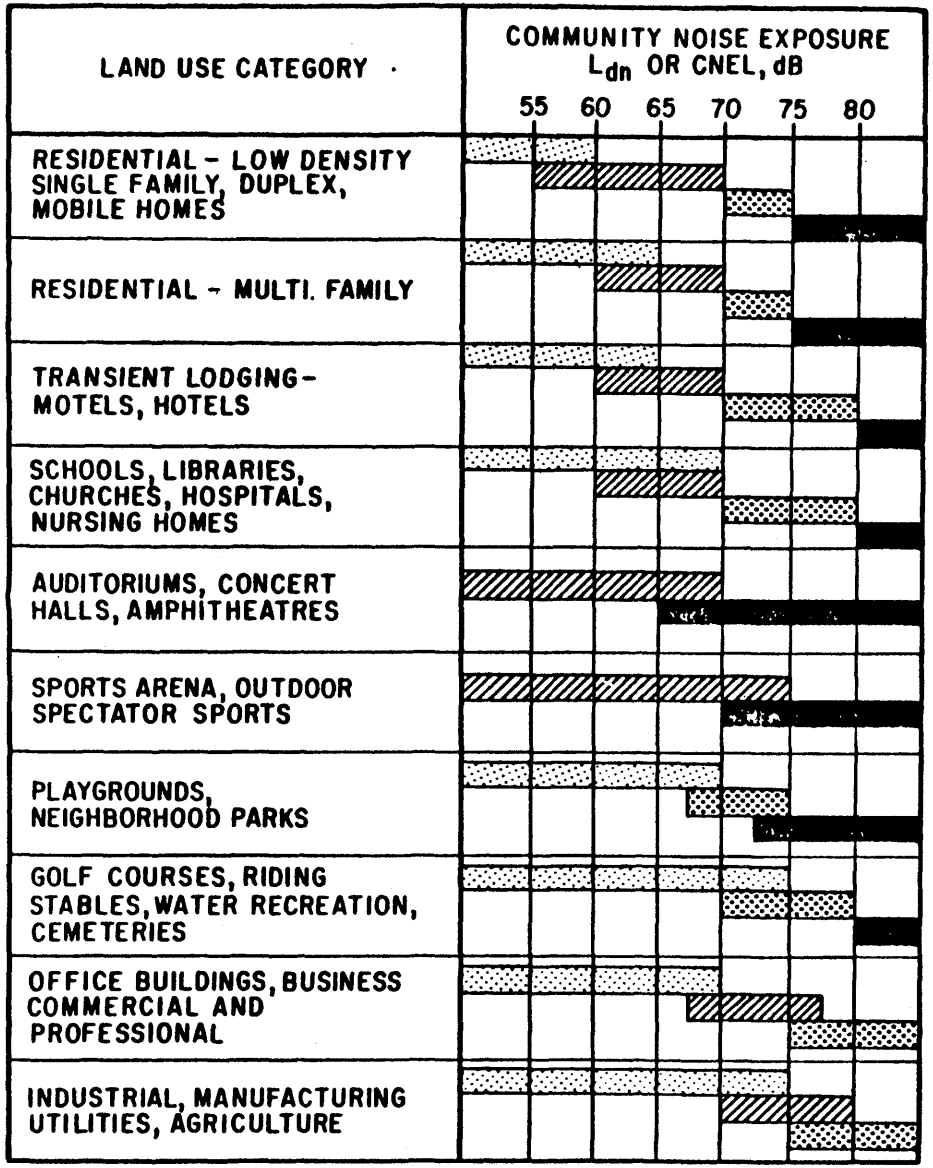
FIGURE 9-2.

RELATIONSHIP BETWEEN DECIBEL CHANGES AND LOUDNESS





SOURCE: JONES & STOKES ASSOCIATES, INC.



INTERPRETATION

NORMALLY UNACCEPTABLE

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

CONDITIONALLY ACCEPTABLE

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

NORMALLY ACCEPTABLE

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

CLEARLY UNACCEPTABLE

New construction or development should generally not be undertaken.

FIGURE 9-3. LAND USE COMPATABILITY FOR COMMUNITY NOISE ENVIRONMENTS

Source: California Department of Health, Office of Noise Control 1976.

(existing noise levels and community attitudes toward dominant noise sources) should be considered in evaluating land use compatibility at specific locations.

The normally acceptable range for low density residential uses is identified as less than 60 dB, while the conditionally acceptable range is 55-70 dB. The normally acceptable range for high density residential uses is identified as Ldn values below 65 dB, while the conditionally acceptable range is identified as 60-70 dB. For educational and medical facilities, Ldn values below 70 dB are considered normally acceptable, while Ldn values of 60-70 dB are considered conditionally acceptable. For office and commercial land uses, Ldn values below 70 dB are considered normally acceptable, while Ldn values of 67.5-77.5 are categorized as conditionally acceptable.

The California Department of Housing and Community Development (HCD) has adopted noise insulation performance standards for new hotels, motels, and dwellings other than detached single-family structures (California Administrative Code, Title 24). These standards require that "interior community noise equivalent levels (CNEL) with windows closed, attributable to exterior sources, shall not exceed an annual CNEL of 45 dB in any habitable room."

Local Policies. The Noise Element of the Roseville City General Plan contains the DOHS noise level/land use compatibility chart. This chart is used as an indication of local policy. Roseville Municipal Code Chapter 9.24 contains regulations prohibiting unnecessary, excessive, and annoying noise levels from all sources.

Noise Descriptor Equivalencies

The traffic noise analysis contained in this EIR uses the CNEL descriptor. However, the guidelines described above use a variety of descriptors. In order to facilitate interpretation of existing conditions and project impacts with respect to the guidelines, the following CNEL equivalencies can be used.

Under common circumstances, Ldn measurements are slightly lower than CNEL measurements. Except in situations with unusually high evening period (7 p.m.-10 p.m.) noise levels, Ldn measurements will be within 1.5 dB of CNEL measurements.

Under common circumstances, 24-hour Leq measurements are 6-7 dB lower that CNEL measurements. This difference is due to the lack of nighttime weighting in the calculation of 24-hour Leq levels.

Past analyses have found that peak hour Leq levels from traffic noise sources are generally within 1-2 dB of CNEL levels. Under circumstances where peak hour traffic constitutes

an unusually high percent of daily traffic, peak hour Leq levels can be more than 1-2 dB higher than CNEL.

Existing Noise Levels

Existing and future traffic noise conditions have been evaluated using the FHWA traffic noise prediction model (Barry and Reagan 1978). As used by Jones & Stokes Associates, this model has been structured to evaluate noise levels on an hourly basis over a 24-hour period. This allows direct calculation of CNEL or Ldn values, as well as peak hour Leq values. The model has also been structured to estimate vehicle speed based on volume/capacity ratios. The FHWA noise model is sensitive to assumptions about vehicle speeds and the amount of truck traffic. CNEL results from the model are affected by assumptions concerning the amount of nighttime traffic.

Peak hour traffic volumes for different highway segments were used to derive a standard hourly traffic distribution pattern. Vehicle speeds were assigned based on volume/capacity ratios, using the same link capacities as used for the traffic analysis. A minimum speed of 25 mph was used for congested highway segments. Heavy duty truck percentages were set in the range of 0.6-6.4 percent, depending on the roadway. A noise drop-off rate of 4.5 dB per doubling of distance was used for roadway segments.

Existing noise levels in the project vicinity are dominated by traffic noise from I-80 and Douglas Boulevard. Based on current traffic volumes, noise levels over most of the Plan area are estimated to be 50-60 dB (CNEL). Noise levels immediately adjacent to I-80 and Douglas Boulevard are somewhat higher. A CNEL value of 77.36 dB 100 feet away from I-80 has been estimated (Jones & Stokes Associates 1986). A CNEL value of approximately 65 dB 100 feet away from Douglas Boulevard is expected.

Impacts

The cumulative analysis of noise is found in Chapter 17, Cumulative Impacts.

The analysis approach for Chapter 7, Transportation, Chapter 8, Air Quality, and Chapter 9, Noise was to focus on the incremental impacts of the Lower Intensity Alternative because analyzing beyond a 20-year time frame is considered too impractical. As discussed in Chapter 17, Cumulative Impacts, the Lower Intensity Alternative could be expected to build-out by the year 2005 while the anticipated build-out of the proposed project is beyond that date.

Proposed Project

The proposed project would contribute several sources of noise to the Plan area. Construction activities would be a temporary noise source. The major long term noise source would involve vehicle traffic.

Construction Noise. Construction equipment and activities typically generate noise levels of 85-90 dBA at 50 feet from the equipment. Off-site noise levels during project construction would vary considerably depending on the location of construction activities and the types of equipment in use. Construction noise levels near the project boundaries could be expected to vary from 55-80 dBA.

In addition to typical construction equipment and activities, development would involve explosive blasting to penetrate the lava cap surface. The frequency of blasting and the amount of explosive is unknown. Therefore, average noise levels over a 24-hour period (CNEL, Ldn, or Leq) cannot be estimated. Impulse SEL values of up to 120 dBC could be expected (U. S. Army Corps of Engineers 1979). Values in the 90-110 dBC range are expected to be more common.

At certain times during the construction phase, these noise levels could result in annoyance to nearby residents. However, due to the temporary nature of construction noise and the limited amount of current development on surrounding properties, construction noise impacts are not considered to be significant. In addition, development would need to comply with the regulations in the Roseville Municipal Code, Chapter 9.24.

Traffic Noise. Existing Plus Project conditions would result in significant increases in traffic volumes. As a result, overall noise levels in the planning area would increase. Existing Plus Project traffic volumes, however, would be generally less than the Year 2005 With Lower Intensity Alternative (cumulative) conditions (Table 17-17 and Figure 17-6 show noise levels projected to result from development of Year 2005 With Lower Intensity Alternative). The general magnitude of the impacts under Existing Plus Project conditions are expected to be similar to the Year 2005 with Lower Intensity Alternative. The exact amount of difference would vary with the difference in traffic volumes.

With development of Existing Plus Project conditions, noise levels would increase from existing conditions. In general, however, projected noise levels are compatible with proposed land uses.

Residential uses are generally expected to be exposed to noise levels shown as "normally acceptable" on Figure 9-3. Some residential uses directly facing major roadways (e.g., East Roseville Parkway [parcels 3 and 4], Eureka Road [parcel 5], and

Sunrise Avenue [parcel 5]) would be in the range described as "conditionally acceptable" in Figure 9-3, and therefore potentially significant impacts could occur. A small portion of parcel 5 would also receive noise impacts from traffic on I-80. To reduce these potentially significant impacts to a less-than-significant level, multi-family residences constructed on parcels 3, 4, and 5 should be designed to meet the state noise insulation standards as specified in Title 24 of the California Administrative Code. Residential building design considerations are also recommended to reduce noise levels.

Nonresidential uses are also generally expected to be exposed to noise levels shown as normally acceptable in Figure 9-3. However, potential noise problems along I-80 could occur. The potential CNEL levels in this area are 60-75 dB. These CNEL values are considered to be conditionally acceptable for office and commercial uses. To reduce potentially significant impacts to a less-than-significant level, project-specific noise analyses should be prepared for commercial or office uses exposed to CNEL levels of 70 dB or more.

Transient lodging (hotels and motels) in the highway commercial areas within 500 feet of I-80 would be exposed to noise levels considered normally unacceptable (CNEL level of 70 dB or higher). To reduce this potentially significant impact to a less-than-significant level, hotels and/or motels along I-80 should be located further than 500 feet from I-80. Transient lodging within 500-2,000 feet of I-80 would be exposed to noise levels considered conditionally acceptable (CNEL level 60-70 dB). To reduce this potentially significant impact to a less-than-significant level, project-specific noise analyses for hotels and/or motels within 500-2,000 feet of I-80 should be prepared.

Lower Intensity Alternative

The impacts of the Lower Intensity Alternative would be less than those of the proposed project. Detailed analysis of the alternative is included in Chapter 17, Cumulative Impacts.

General Plan Alternative

The General Plan Alternative is essentially identical to the proposed Specific Plan. Therefore, the analysis in the Draft EIR is limited to the following three impact areas: Chapter 4, Land Use; Chapter 7, Transportation; and Chapter 15, Visual Quality.

No-Project Alternative

No impacts would occur.

Mitigation Measures

Proposed Project

Comply with Roseville Municipal Code, Chapter 9.24. Construction-related noise impacts would be temporary in nature and, therefore, are considered less than significant. Noise resulting from operation of equipment could be reduced by proper maintenance. Annoyance resulting from overall noise impacts, including noise from blasting, could be reduced by complying with the City Code, which establishes guidelines for construction noise. Generally, construction would occur between the hours of 7 a.m.-7 p.m. on Mondays-Fridays, and between the hours of 8 a.m.-8 p.m. on Saturdays and Sundays.

Comply with State Noise Insulation Standards for Multi-Family Residences. The state noise insulation standards apply to all multi-family residential development proposed for areas exposed to predicted CNEL levels of 60 dB or more. These standards require floor/ceiling assemblies to have a "sound transmission class" rating of at least 50, while entrance doors must have a sound transmission class rating of at least 30.

Implement Residential Building Design Considerations. Residential areas adjacent to major roadways should be planned and designed to minimize interior noise levels. Building design and orientation should minimize exposure of windows and sliding doors to roadway traffic noises. Bedrooms and other noise-sensitive areas of dwellings should be shielded from exterior noise sources by other portions of the dwelling or the use of buffer areas.

Nonresidential buildings should be designed to provide shielding of adjacent residential areas from traffic noise sources. Site planning for the nonresidential areas of the project should also give consideration to the design and placement away from from residential uses of potential noise sources such as storage areas, loading docks, and parking lots.

Prepare Project-Specific Noise Analyses for Commercial and Office Uses Near I-80 that are Exposed to CNEL Levels of 70 dB or More. Construction of commercial and office facilities within the CNEL level of 70 dB or more (portions of parcels 14, 17, and 19) should only be undertaken after a detailed analysis of the noise reduction requirements of each structure is made and the needed noise insulation features have been incorporated into the design.

Locate Hotels and/or Motels Further than 500 Feet from I-80 and Prepare Project-Specific Noise Analyses for Hotels and/or Motels within 500-2,000 Feet of I-80. Construction of transient lodging within 500-2,000 feet of I-80 (CNEL level 60-70 dB) should only be undertaken after a detailed analysis of the noise

reduction requirements of each structure is made and the needed noise insulation features have been incorporated into the design.

Lower Intensity Alternative

Mitigation measures for this alternative are discussed in detail in Chapter 17, Cumulative Impacts.

No-Project Alternative

No mitigation is required.

Chapter 10

HYDROLOGY AND DRAINAGE

Setting

Surface Drainage

The Plan area is part of the Dry Creek and tributaries drainage basin. Figure 10-1 shows the drainage area and major tributaries into Dry Creek. The major tributaries for the northern portion of the drainage area are Antelope Creek, Secret Ravine Creek, and Miner's Ravine Creek, which discharge into Dry Creek. The southern portion of the drainage area flows into Dry Creek via Strap Ravine, Cirby Creek, and Linda Creek.

Runoff from the Plan area occurs in three primary watersheds. The southeasterly portion of the Plan area drains south into Strap Ravine. The central portion of the Plan area drains southwest toward Douglas Boulevard and Cirby Creek. A majority of the northern portion of the Plan area drains directly into Miner's Ravine Creek with the remainder draining into Secret Ravine Creek, slightly north of the confluence with Miner's Ravine Creek. Existing flow estimates for the major drainage tributaries in the project vicinity were not available at the time of this report.

Recent floodplain analysis has been conducted by Nolte and Associates for the incorporated area of Roseville. The completed results of this study should be available during the fall of 1986. The study results thus far indicate a significant increase in estimates of the 100-year storm event peak flow rates and flood boundary limits as defined for area streams (Moosakhanian pers. comm.). Figure 10-2 shows the 100-year floodplain boundaries within the Plan area.

The City of Roseville designs local storm drainage facilities for a 10-year storm event, and requires a supplemental analysis that demonstrates the 100-year storm event can be safely passed without property damage. Major watercourses must be designed to convey runoff from the 100-year storm event. The City's goals and objectives for 1987 include completion of a Citywide drainage master plan (Moosakhanian pers. comm.).

The drainage system within the City limits receives flows generated from approximately 80 square miles of total drainage area, the majority of which lies outside the City limits (Moosakhanian pers. comm.). The City system is entirely a

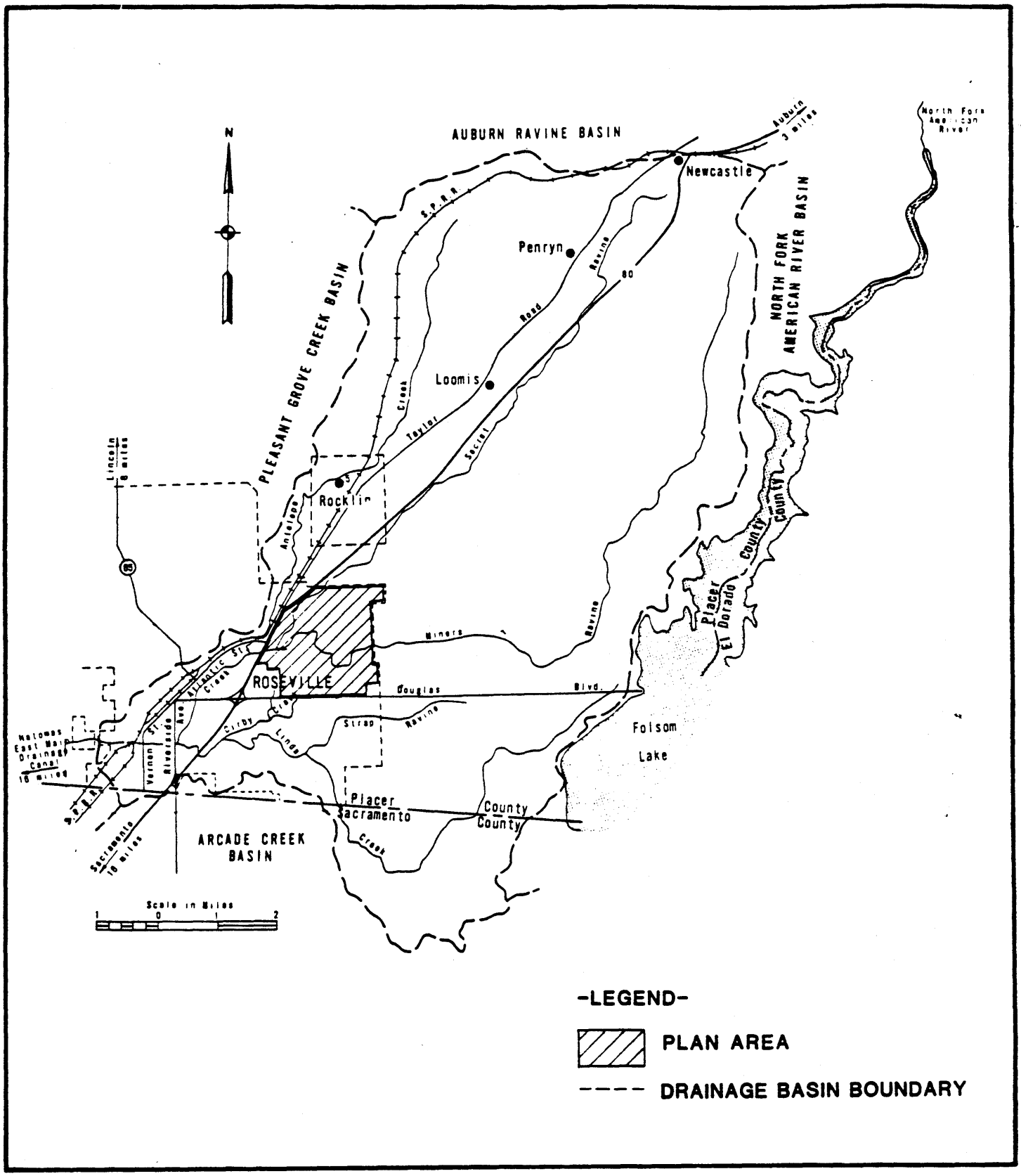
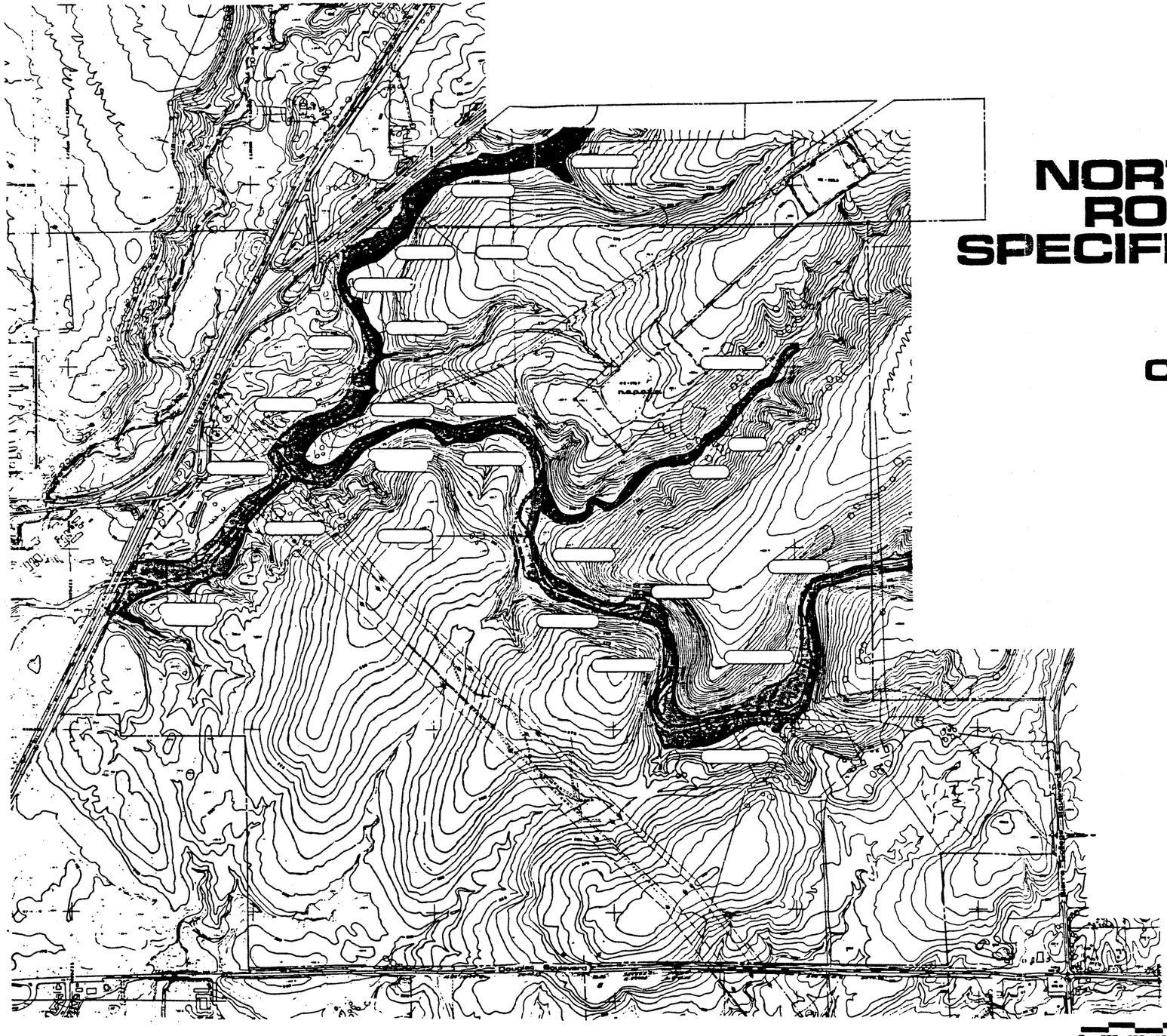


FIGURE 10-1. DRY CREEK AND TRIBUTARIES DRAINAGE AREA MAP

FIGURE 10-2.



NORTHEAST ROSEVILLE SPECIFIC PLAN

ROSEVILLE CALIFORNIA

SCHEMATIC
100 YEAR FLOOD PLAIN MAP

MORTON AND PITALO, INC.
CIVIL ENGINEERS
1430 ALHAMBRA BLVD
SACRAMENTO CALIFORNIA

6-12-86

ANTHONY M. GUZZARDO AND ASSOCIATES INC.
LAND PLANNERS
526 MONTGOMERY STREET
SAN FRANCISCO CALIFORNIA

0 200 400 800 1200 1600 1800

gravity flow system which discharges into natural streams that are tributaries of Dry Creek. Dry Creek flows westerly into the Natomas East Main Drainage Canal, which enters the American River near its confluence with the Sacramento River. During the recent heavy rains, commonly referred to as the 1986 floods, several areas of Roseville were flooded. The majority of flooding problems were due to inadequate natural drainage channel capacities and some culvert restrictions. These problems are currently being evaluated and corrected, with the completion date expected prior to the 1987 rainy season. A levee system to increase natural channel capacities and the replacement of pipe culverts with box culverts is being proposed as part of the improvements. Box culverts for road or railroad crossings generally allow a greater flow area, reducing the depth of water at the culvert inlet due to flow constriction (Moosakhanian pers. comm.).

Groundwater Recharge

Rainwater reaching the subsurface saturated zone is considered deep percolation and treated as recharge to the groundwater supply. The rate and quantity of water reaching the saturation zone depends on factors that include: the amount and duration of precipitation, soil type, moisture content of the soil, and vertical permeability of the unsaturated zone (California Department of Water Resources 1974).

Recharge basin information for the Mehrten formation was discussed in general by the California Department of Water Resources, Bulletin No. 118-3, The Evaluation of Ground Water Resources: Sacramento County, July 1974. See also Chapter 12, Topography, Geology, and Soils, of this report for a detailed discussion of the Mehrten formation. In general, the Mehrten formation consists of two distinctly different groupings. One is a sedimentary unit composed of gray to black andesitic sands, commonly referred to as "black sand," and interbedded blue to brown clay. The other is a hard, gray tuff-breccia generally referred to as "lava" or "volcanic mudflows." The "black sand" Mehrten formation provides a substantial quantity of groundwater to many wells in Sacramento County, whereas the "lava" formation yields little water. Wells that pass through the volcanic mudflows entering highly permeable materials may obtain large yields from the underlying sediments. Where the majority of well strata is made up of the volcanic mudflows, yields are substantially less (California Department of Water Resources 1974).

Impacts

Proposed Project

Surface Drainage. Development of the Plan area would increase runoff due to the construction of impervious areas including roads, parking areas, and building structures. Runoff would be directed by street gutters into the drainage system inlets, and the piped gravity drainage system would discharge the collected flows into existing natural drainage courses. Project design has not been completed, thus the system outlet structure design has not been determined. Figure 10-3 shows the schematic storm drain plan.

The soils within the Plan area are predominantly Mehrten volcanic mudflows with limited drainage capabilities, resulting in a higher percentage of runoff as compared to other well-drained soil formations. The majority, or roughly 60 percent, of the Plan area has very thin soils with sparse vegetation over the volcanic mudflows. The remaining development portion includes the Mehrten conglomerate and fractured formations, allowing a greater degree of water infiltration and percolation (see also Chapter 12, Topography, Geology, and Soils.

The soils in the Plan area are identified as Group D (high runoff potential) in the Storm Drainage Manual for the City of Roseville (Paskett 1984). These soils have very slow infiltration rates when thoroughly wetted, due to shallow soils over nearly impervious material. These soils have a very slow rate of water transmission.

Runoff coefficient (C) values are used for estimating the percentage of rainfall that becomes runoff. These coefficients reflect conditions such as slope, soil type, drainage conditions, and type of cover. Utilizing the California Department of Conservation methodology, as presented in the 1981 Erosion and Sediment Control Handbook for unimproved lands, the estimated C value for existing (preproject) conditions would range from 0.52 to 0.56. The estimated runoff coefficient range presented in the City of Roseville Improvement Standards, Section 10.04, is 0.10 to 0.30, which is significantly below the estimate based on soil characteristics. The higher C value appears appropriate due to the volcanic mudflow formations present in the Plan area.

City standards were used for estimating the runoff from the lands following development. Development increases the C value because of the construction of impervious areas. It is assumed that C values after development would not be less than the 0.52 value used for existing conditions. The runoff coefficients for undeveloped areas in the City vary, depending upon land use, from 0.70-0.95 for business uses, 0.4-0.65 for single-family, 0.5-0.75 for apartments and 0.50-.080 for light industrial. The

FIGURE 10-3.

MORTON & PITALO, INC.
CIVIL ENGINEERING
PLANNING SURVEYING

6-12-86

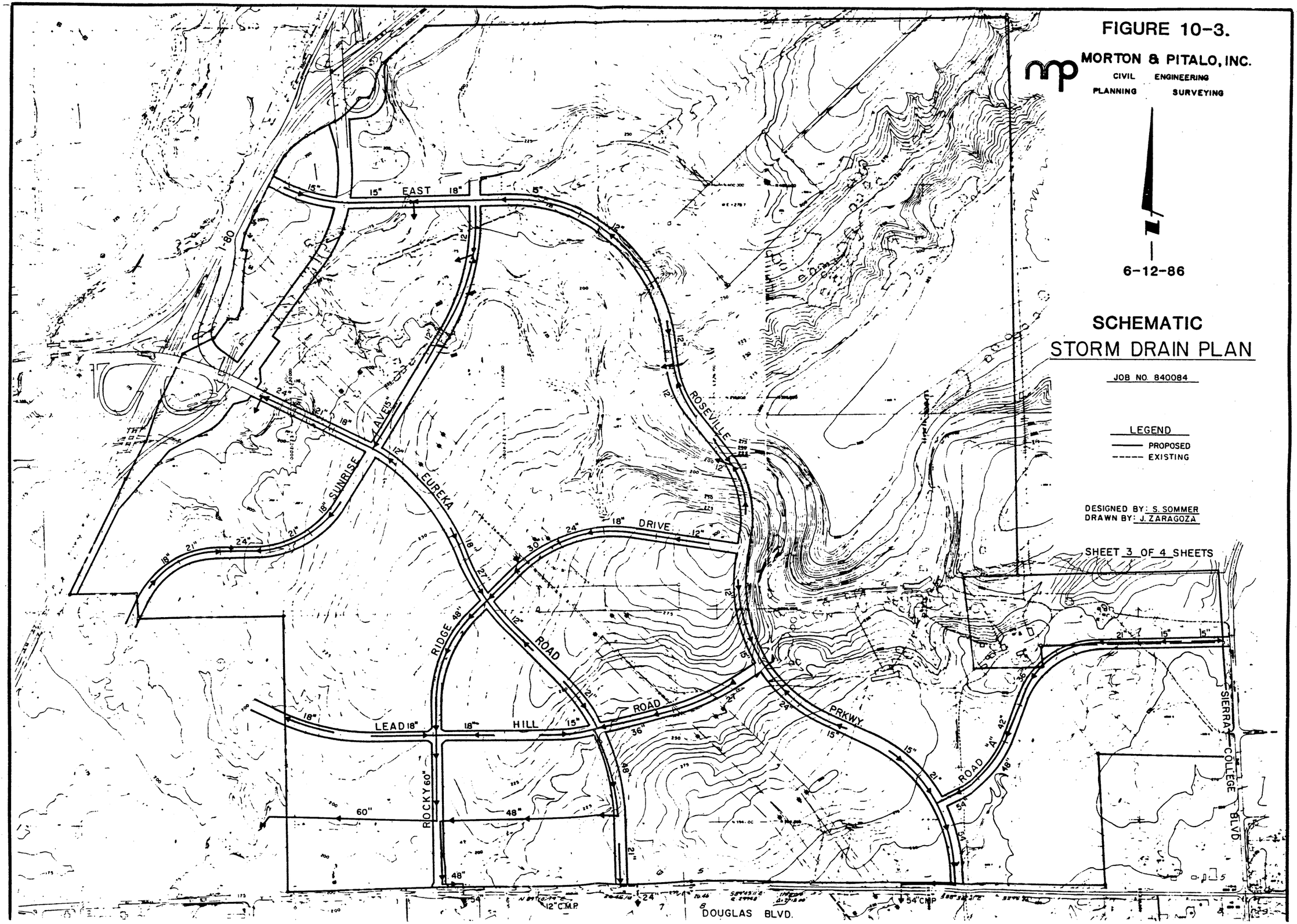
SCHEMATIC
STORM DRAIN PLAN

JOB NO. 840084

LEGEND
PROPOSED
EXISTING

DESIGNED BY: S. SOMMER
DRAWN BY: J. ZARAGOZA

SHEET 3 OF 4 SHEETS



estimated weighted average C value for the proposed land uses ranges from 0.58 to 0.70, indicating a potential 4-35 percent increase of the runoff C value.

Runoff flows were roughly estimated for the existing (preproject) and postproject development conditions. These estimates are based on the above runoff coefficient estimates, a 10-year storm event, and assumed time of concentration values of 60 minutes for existing conditions and 40 minutes for developed conditions. The preproject runoff flow estimate is 850-910 cubic feet per second (cfs), and the postproject estimate is 1,190-1,430 cfs. The estimated postproject flow represents a potential 30-68 percent increase in runoff for a 10-year storm event.

The existing City drainage system flow capacities are limited, and any increase in flows would pose a significant impact (Moosakhanian pers. comm.). Increases in flows may affect other downstream drainage facilities in Placer and Sacramento counties. Areas adjacent to Dry Creek could experience increased flooding, and the Natomas East Main Drainage Canal could receive slightly higher flows as a result of the project.

To mitigate potential impacts to a less-than-significant level, a comprehensive drainage study should be prepared to fully evaluate the existing flows, drainage system limitations, and impacts due to build-out of the proposed land uses.

As identified in Chapter 11, Water Quality and Fisheries, retention ponds are being recommended in order to mitigate potential water quality impacts due to urban runoff. The use of retention ponds would also reduce peak runoff flows from the Plan area and thus would reduce, to a limited degree, the impact on downstream reaches. Therefore, design of the project development to maximize on-site retention would assist in reducing impacts to a less-than-significant level.

The proposed road network includes five crossings of the natural drainage channels. The proposed project concept includes the use of four bridge structures and one culvert for the crossings. Specific design details had not been developed at the time of this report. Stream flow restrictions due to strictures or clogging by storm debris may significantly increase upstream water levels. Impacts can be mitigated to a less-than-significant level by careful design of the bridges and culverts. All stream crossings should be designed for minimal restriction and adequate span for storm debris passage to minimize upstream impacts due to increased water levels.

Groundwater Recharge. Since the Mehrten formation predominates in the Plan area, this site does not currently contribute significantly to groundwater recharge in the project vicinity. The development of the project would decrease subsurface infiltration by approximately 4-35 percent, as discussed previously.

The total amount of water infiltration generally does not reach the saturated zone due to evapotranspiration of the vegetative growth in the soil zone and water uptake by capillary pores in the unsaturated zone. The greatest degree of deep soil infiltration would continue to occur in the stream channel where water ponds. The loss of potential groundwater recharge area due to development of the site would be less than significant.

Lower Intensity Alternative

Surface Drainage. The nature of the impacts related to this alternative would be similar to the proposed project. This alternative would generate 1,150-1,330 cfs in runoff. This flow represents a potential 26-56 percent increase in runoff for a 10-year storm event. To reduce significant impacts to a less-than-significant level, mitigation similar to that proposed for the proposed project would be required.

Groundwater Recharge. The nature of groundwater impacts related to this alternative are similar to the proposed project. The loss of potential groundwater recharge area associated with this alternative would be less than significant.

General Plan Alternative

The General Plan Alternative is essentially identical to the proposed Specific Plan. Therefore, the analysis in the Draft EIR is limited to the following three impact areas: Chapter 4, Land Use; Chapter 7, Transportation, and Chapter 15, Visual Quality.

No-Project Alternative

No impacts would occur.

Mitigation Measures

Proposed Project

Surface Drainage

Prepare a Comprehensive Drainage Study. A comprehensive drainage study of the Plan area should be completed as a condition of approval for the project. This comprehensive study is needed in order to identify and minimize adverse effects on downstream reaches due to increased runoff. The use of retention ponds should be addressed as part of the drainage study. Any improvements identified by the drainage study as necessary

to minimize downstream impacts should be implemented as part of the project design.

Drainage improvements should be designed such that the release rate of storm water from the Plan area after development should approximate the release rate from the area in its undeveloped state. The carrying capacity of the channels immediately downstream should be considered in determining the permitted amount of the storm water release.

The final drainage system design and downstream improvements should be coordinated with the City and surrounding existing and proposed developments to minimize impacts to the existing City drainage system and downstream reaches.

Implement Runoff Reduction Measures to Reduce Long-Term Water Quality Impacts. Project design should include provisions to maximize on-site retention of runoff to reduce peak runoff flows off-site. Chapter 11, Water Quality and Fisheries, describes this measure in detail.

Design Stream Crossing Structures to Ensure Minimal Flow Restriction. Design of the stream crossing structures should provide for minimal flow restriction and adequate span for storm debris passage to minimize upstream impacts.

Groundwater Recharge. No mitigation is required.

Lower Intensity Alternative

The mitigation measures required for the proposed project would also be required for this alternative.

No-Project Alternative

No mitigation is required.