

Gilman

Specific Plan 5
EIR 81-3
City of Fontana
August 1981

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**Southridge
Village**

SOUTHRIDGE VILLAGE

Specific Plan #5
and
Environmental Impact Report 81-4

Prepared by:

PHILLIPS BRANDT REDDICK, INC.
18012 Sky Park Circle
Irvine, California 92714

Contact Persons: ~~Tom Paradise~~
John McKenna
Telephone Number: (714) 641-8820

Prepared for:

CITY OF FONTANA
8353 Sierra Avenue
Fontana, California 92335

Contact Persons: George Brenner
Terry Draper
Telephone Number: (714) 823-3411

Applicant:

CREATIVE COMMUNITIES
7072 Garfield Avenue
Huntington Beach, California 92648

Contact Persons: Richard Ashby -
Larry Redman
Telephone Number: (714) 842-5527

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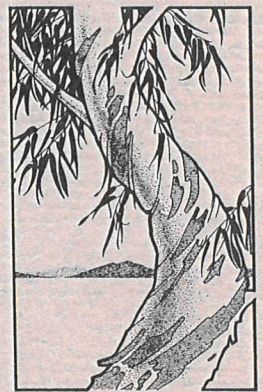
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Introduction



1.0

1.0 INTRODUCTION

This Specific Plan and focused Environmental Impact Report has been prepared for the City of Fontana, California, by Phillips Brandt Reddick, Inc. (PBR), professional planning and environmental consultants.

1.1 AUTHORITY

Government Code Section 65507 gives a legislative body authorization to adopt an ordinance or resolution requiring that a specific plan be prepared when it is in the public interest to do so. Adoption of a specific plan allows a city council or planning commission to have broad regulatory powers. As with general plans, the planning commission must hold a public hearing before the planning agency can recommend the adoption of a specific plan. The city council may then adopt a specific plan by ordinance or resolution. Adoption by ordinance is common in cases where a specific plan amends a development code, zoning ordinance, or other code.

After adoption, a specific plan has an effect similar to the local general plan. The Subdivision Map Act requires the legislative body to deny approval of a final or tentative subdivision map if it is not consistent with applicable specific plans (Government Code Section 66474(b)). Additionally, a development agreement cannot be approved unless the legislative body finds the agreement is consistent with the general plan and any applicable specific plan (Government Code Section 65867.5).

In addition, 1979 legislation has provided that where a specific plan environmental impact report (EIR) has been certified (after January 1, 1980) it is unnecessary to prepare a subsequent EIR for any residential project, including land subdivisions or zone changes, which are undertaken pursuant to and in conformity with a specific plan. In such case, the EIR for a specific plan constitutes compliance with the California Environmental Quality Act (CEQA) for subsequent residential projects.

1.2 CALIFORNIA ENVIRONMENTAL QUALITY ACT COMPLIANCE

This Specific Plan contains a complete focused Environmental Impact Report (EIR 81-3) in compliance with the California Environmental Quality Act. The project description component of the EIR is contained in chapters 2, 3, and 4. Chapter 6 includes the main body of the EIR, with impacts, mitigating measures, and project alternatives. A range of impacts and mitigation is presented to address the range of actions and development decisions that may be included in the final Specific Plan. A range of additional measures for implementation of the Specific Plan, including means to mitigate adverse impacts, is presented in chapter 5.

1.3 SCOPE

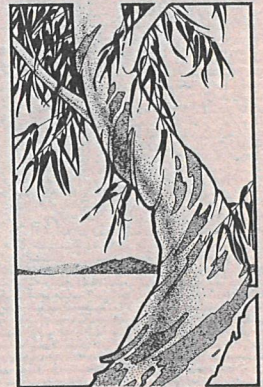
As outlined in Government Code Section 65451, specific plans shall include all detailed regulations, conditions, programs, and proposed legislation necessary for systematic implementation of the general plan with respect to the following:

- (a) The location of housing, business, industry, open space, agriculture, recreation facilities, educational facilities, churches, and related religious facilities, with regulations establishing height, bulk and setback limits for such buildings and facilities, including the location of areas such as floodplains.
- (b) The location and extent of existing or proposed streets and roads, the proposed widths with reference to prospective standards for their construction and maintenance, and the location and standards of construction, maintenance and use of all other transportation facilities, whether public or private.
- (c) Standards for population density and building density, including lot size, permissible types of construction, and provisions for water supply, sewage disposal, storm water drainage, and the disposal of solid waste.
- (d) Standards for the conservation, development, and utilization of natural resources.

(e) The implementation of all applicable provisions of the Open Space Element.

(f) Other measures as may be necessary or convenient to ensure the execution of the General Plan.

Specific Plan Overview



2.0

2.0 SPECIFIC PLAN OVERVIEW

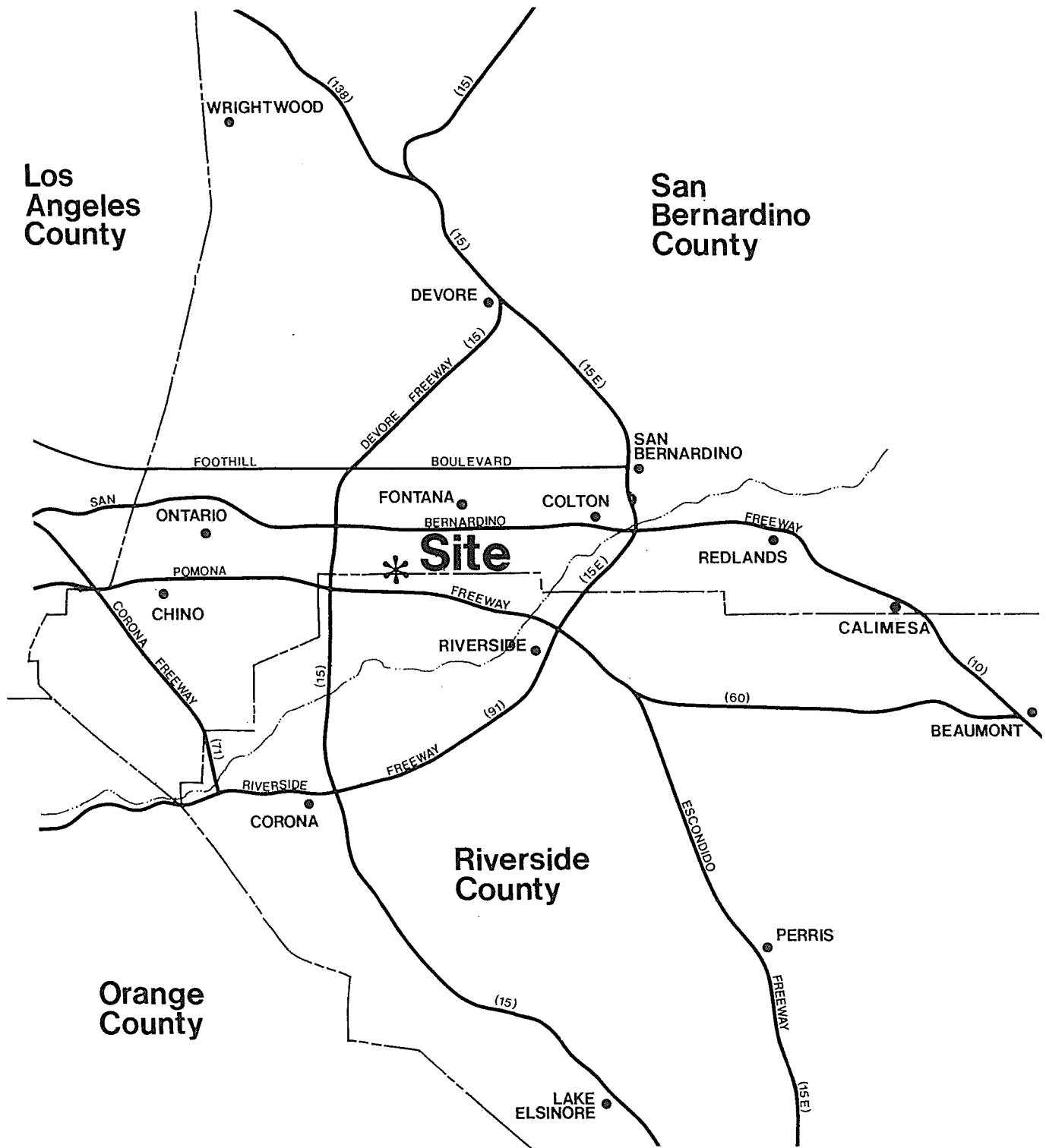
2.1 PROJECT LOCATION

The Southridge Village study area is located on approximately 2,560 acres in the southern portion of the City of Fontana, California. The rectangular site consists of four survey sections of land, measuring in total one mile north-south by four miles east-west. It is bounded on the north by Jurupa Avenue, on the west by Mulberry Avenue, on the south by the San Bernardino/Riverside County line, and on the east by Sierra Avenue. Exhibits 2.1 and 2.2 depict the study area in its regional and local context. The San Bernardino Freeway (Interstate 10) is located 1.25 miles to the north; the Devore Freeway (Interstate 15) is 2.5 miles to the west; and the Pomona Freeway (Route 60) is one mile to the south. Most of the study area is gently sloping, relatively flat terrain; the Jurupa Mountains rise adjacent to the site, and extend into the study area from the south.

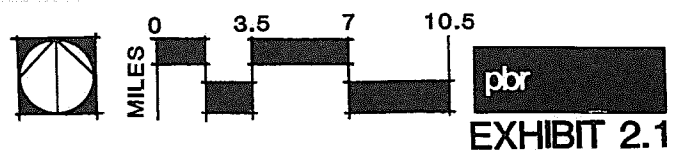
2.2 SUMMARY DESCRIPTION OF THE PROJECT

The Southridge Village Specific Plan envisions the development of 8,810 dwelling units (at target density) with a broad range of product types and residential densities. An estimated absorption rate of 1,000-1,200 units per year is anticipated, with an estimated project buildout by 1990-1992. The Specific Plan residential designations range from 0-2 units per acre up to 21-25 units per acre. Housing types consistent with these density categories range from single-family detached homes and duplexes through townhouses, condominiums, and apartments. The plan proposes a village center in the west-central part of the site to service the needs of the planned community as well as the larger south Fontana area. The village center includes subregional commercial (SRC) uses, community recreational and entertainment amenities, and public/quasi-public facility services. Three small neighborhood commercial centers are also provided within residential areas to serve the community residents. It is anticipated that six (6) elementary schools and one (1) junior high school will be developed, depending upon the ultimate density of the development. A system of neighborhood parks and subregional trail networks is designed to link the various elements of the community with the regional park. A major expansion of the regional park is also proposed.

The intent of the Southridge Village Specific Plan is to create a large master-planned residential community, providing quality housing in a broad range of housing types and densities. A full range of supporting uses and amenities would be provided within the planned community, including neighborhood and subregional commercial areas, schools, other public facilities such as fire and police station sites, neighborhood and community parks, community-wide greenbelt and trail systems, and major open space/regional park reservations.



REGIONAL LOCATION
Southridge Village
CREATIVE COMMUNITIES



2.3 RELATIONSHIP TO GENERAL PLAN AMENDMENT 12-2

General Plan Amendment (GPA) 12-2 was initiated by the City on January 12, 1981, upon receipt of a request by Creative Communities to initiate a General Plan Amendment for 980 acres. The boundaries of the General Plan Amendment were expanded by the City to provide for comprehensive planning of a logically integrated planning area. Creative Communities owns or controls most of the land in the study area.

The General Plan Amendment provides the framework for the future development of a master planned community which will be implemented by the Southridge Village Specific Plan. Many issues have been raised in the hearings on the General Plan Amendment, and these issues are addressed in the Specific Plan. It must be remembered that the proposed General Plan Amendment may be modified by the Planning Commission and the City Council. The Planning Commission will make a recommendation to the City Council regarding the General Plan Amendment on August 24, 1981. Information regarding the status of the General Plan Amendment may be obtained from the City Planning Department, 8353 Sierra Avenue, Fontana, California, telephone (714) 823-3411. Substantive revision of the General Plan Amendment may require changes in this Specific Plan.

The General Plan Amendment requires the preparation and adoption of a Specific Plan for the study area. The Specific Plan will serve to implement the General Plan by providing precise land use designations, infrastructure master plans, performance standards, design guidelines, and planned community zoning regulations. The Specific Plan more precisely defines the character, land use, infrastructure, and circulation patterns of the planned community. These elements include master water and sewer systems; master drainage and flood control improvements; open space, parks, recreation, and trail systems; neighborhood and community commercial areas; schools, fire protection, and other service facilities; and other such elements as may be determined to be necessary by the City. With respect to residential uses, the Specific Plan establishes more detail criteria and regulations relating to housing types, densities, number of units, performance standards, and design guidelines.

2.4 REASONS FOR THE SPECIFIC PLAN

In serving as an implementing measure to the General Plan, the Specific Plan provides necessary assurances to the involved parties on issues such as development character, environmental and natural resources protection, public services provisions, etc. The Specific Plan is geographically focused, identifies planning considerations, and relates development controls and other programs to anticipated land use practices. It may be adopted and amended by the City of Fontana and when adopted permanently controls the ultimate development of the Specific Plan area.

The Southridge Village Specific Plan represents an opportunity for the City of Fontana to:

- . Carry out the General Plan for an identified area of the community;
- . Protect valuable environmental resources;
- . Implement innovative resources conservation and recovery programs;
- . Reduce the cost of capital facilities and public improvements; and
- . Expedite the review and processing of subsequent development approvals.

Legislative action, when adopted by the City through the Southridge Village Specific Plan, will serve both a planning function and a regulatory function for the community by combining zoning regulations, capital improvement programs, detailed site development standards, and other regulatory schemes into one document tailored to meet the needs of the particular area.

The Southridge Village Specific Plan will establish the type, location, intensity, and character of development to take place while allowing for a creative and imaginative community design concept that effectively deals with the open space quality unique to Southridge Village. Community services are also centralized to reduce the need for separate auto trips and optimize the use of shared facilities, such as parking. Water and energy conservation measures are also incorporated.

A developer's uncertainty about whether or not a project will be approved is lessened under this process, since priorities for appropriate land uses are determined when a specific plan is designed. Because the location and size of capital facilities and public improvements have been determined, a developer knows from the onset how to design a project to take greatest advantage of the area. The processing time for tentative maps, zone changes, and environmental review can be cut substantially with the use of a specific plan.

The Southridge Village Specific Plan also establishes development controls to provide the City with assurance that the completed projects will be as envisioned at the time of approval. This can reduce the costs of capital facilities and public improvements by not installing more than that which will be needed.

2.5 CONTENT OF THE SPECIFIC PLAN

This Specific Plan document consists of both descriptive and prescriptive language which discusses the various concepts, plans and other elements (graphic and tabular) which in total comprise the Southridge Village Specific Plan. The Specific Plan is divided into nine chapters, as follows:

- . Chapter 1 - establishes the authority and scope of the Specific Plan prescribed by state law
- . Chapter 2 - provides a summary description of the project, its relationship to the General Plan, and the reasons for and contents of the Specific Plan
- . Chapter 3 - presents the various Master Plan and Concept Plan elements for land use, circulation, drainage, sewer, water, community facilities, open space and recreation, landscape, grading and phasing
- . Chapter 4 - establishes the standards regulating the development of the various land uses, the procedures for review, approval, and administration and enforcement
- . Chapter 5 - discusses the methods of physically and financially implementing the project
- . Chapter 6 - provides a focused discussion of existing environmental conditions, potential impacts and mitigation measures
- . Chapter 7 - provides a fiscal analysis of the Southridge Village Specific Plan

- . Chapter 8 - discusses the relationship of the Specific Plan to the various elements of the General Plan
- . Chapter 9 - identifies persons and organizations consulted and bibliographical references, and provides appendices including the Notice of Preparation and related comments, subconsultant reports, and air quality calculations

Specific Development Plan



3.0

3.0 SPECIFIC DEVELOPMENT PLAN

This chapter of the Southridge Village Specific Plan includes a series of master plans and concept plans which will guide the development of the Southridge Village community. Seven master plans have been developed:

- . Land Use
- . Circulation
- . Drainage
- . Water
- . Sewer
- . Open Space and Recreation
- . Landscape

These master plans establish specific standards and requirements to which individual development projects within the Specific Plan area must conform. In addition to these master plans, two concept plans have been prepared:

- . Grading
- . Phasing

These concept plans are intended to describe and communicate the intended program for grading and development phasing within the Specific Plan area. Unlike the master plans, these concept plans do not establish specific standards and requirements that must be met by individual development projects.

3.1 LAND USE MASTER PLAN

3.1.1 Intent

The intent of the Master Plan of Land Use for Southridge Village is to establish the detailed framework for future development of a planned residential community. The objective of the Land Use Plan is to develop a series of residential neighborhoods that will provide housing of various types and densities, which will meet a variety of living styles and income levels. The Land Use Plan also provides for the development of commercial, recreation, public, and open space land uses. While the greatest portion of the plan is devoted to residential uses, these supporting non-residential uses are proposed so that an amenity-oriented residential environment of high quality may be created.

3.1.2 Residential Land Use Designations

The Land Use Master Plan for Southridge Village is shown in Exhibit 3.1. The Land Use plan designates a series of development areas for residential and non-residential uses, linked together by a circulation system consisting of arterial and collector streets. Each development area for which a particular land use is proposed is called a "planning unit."

The Land Use Plan establishes nine types or density categories for residential uses. For each of these residential types, the Land Use Plan establishes a target density, a descriptive designation, and a density range. Unless stated otherwise, "density" as used herein refers to gross residential density, as defined in chapter 5, DEVELOPMENT STANDARDS.

The intent of the Land Use Plan is to achieve the target density shown in the plan for each residential type. The target density falls within the density range established for each residential type. The plan recognizes that as the community grows and conditions change, it may be necessary or desirable to permit the actual density of development to vary somewhat from the target density shown for each residential type. For this reason, density ranges are shown for each residential type.

The target density, descriptive designation, and density range for each of the nine residential types are shown in Table 3.1.

The Land Use Plan assigns one of the nine residential types to each of the individual residential planning units shown in the plan. This is indicated by the target density symbol shown within each residential planning unit. In addition to this symbol, the plan also shows the approximate gross residential acres and the approximate number of dwelling units for each residential planning unit. For each residential planning unit, the approximate number of dwelling units has been calculated by multiplying the target density by the approximate gross residential acres for that planning unit.

Table 3.1
Residential Types or Density Categories

<u>Master Plan Designation</u>	<u>Descriptive Designation</u>	<u>Target Density</u>	<u>Density Range</u>
1.2	Single Family	1.2 units/acre	0-2 units/acre
3	Single Family	3 units/acre	2-4 units/acre
4	Single Family	4.5 units/acre	4-5 units/acre
6	Patio Homes	6 units/acre	6-7 units/acre
8	Entry Estates	8 units/acre	7-9 units/acre
8	Duplex	8 units/acre	7-9 units/acre
12	Townhomes	12 units/acre	9-15 units/acre
18	Garden Homes	18 units/acre	15-21 units/acre
25	Carriage Homes	25 units/acre	21-25 units/acre

Table 3.2 presents a statistical summary of the planned residential development for the Southridge Village community. This table shows the breakdown of approximate gross residential acres and the approximate number of dwelling units according to the nine residential density categories.

It is recognized that the boundaries of individual planning units, the approximate gross residential acres, and the approximate number of dwelling units shown on the Land Use Plan are not precise. Precision is limited

Table 3.2

Statistical Summary
Residential Development

<u>Residential Type</u>	<u>Target Density</u>	<u>Total Approximate Gross Residential Acres</u>	<u>Percent of Total Residential Acres</u>	<u>Total Approximate Dwelling Units</u>	<u>Percent of Total Dwelling Units</u>
Single Family	1.2 units/acre	107.0	9.0	127	1.4
Single Family	3 units/acre	8.6	0.7	26	0.3
Single Family	4.5 units/acre	410.4	34.4	1,846	21.0
Patio Homes	6 units/acre	255.1	21.4	1,531	17.4
Entry Estates	8 units/acre	50.3	4.2	402	4.6
Duplex	8 units/acre	129.5	10.8	1,036	11.8
Townhomes	12 units/acre	115.9	9.7	1,391	15.8
Garden Homes	18 units/acre	67.6	5.7	1,217	13.8
Carriage Homes	25 units/acre	<u>49.3</u>	<u>4.1</u>	<u>1,233</u>	<u>14.0</u>
		1,193.7	100.0	8,810	100.0

by the scale at which the Land Use Plan is drawn. Precise determinations of planning unit boundaries, areas, and numbers of dwelling units will be made at the time when precise plans (tentative tract maps, site plans, plot plans, etc.) are reviewed for consistency with this Specific Plan.

3.1.3 Other Land Use Designations

The Land Use plan also assigns a series of non-residential land use designations to certain planning units within the Specific Plan area. These non-residential land use designations include the following:

- Regional park/open space
- Community park
- Neighborhood park
- Commercial recreation
- Quasi-public uses
- Sub-regional center
- Neighborhood commercial
- Elementary school
- Junior high school

In addition to these uses, the Land Use Plan also designates the location of certain major infrastructure facilities:

- Utility easements
- Flood control channel
- Arterial and collector streets
- Trail system
- Water reclamation facilities

The purpose of these non-residential designations is to identify locations for the development of certain open space, commercial, public facility, and infrastructure uses which are necessary for a residential community of the scale planned in Southridge Village.

Table 3.3 presents a statistical summary of the approximate gross acreage assigned to the non-residential uses shown on the Land Use Plan.

Table 3.3
Statistical Summary
Non-Residential Development

<u>Land Uses</u>	<u>Approximate Acreage</u>
Parks and Open Space	1,062.3
Neighborhood Parks exclusive of easements	7.0
Neighborhood Parks within easements	32.5
Community Park	14.0
Utility Easements exclusive of neighborhood parks	102.5
Regional Park/Open Space	906.3
Commercial	37.0
Subregional Center	20.0
Neighborhood Commercial	11.0
Commercial Recreation	6.0
Schools	56.0
Elementary Schools	36.0
Junior High School	20.0
Quasi-Public Uses	6.0
Wastewater Treatment	60.0
Flood Control Channel	45.0
Arterial and Collector Streets	<u>100.0</u>
TOTAL NON-RESIDENTIAL LAND USE	1,366.3

3.1.4 Community Design Concept

The Land Use Plan for Southridge Village was developed through a careful process of formulating, testing, and refining various planning concepts and design criteria for community development. The plan is reflective of the following goals:

- . To create a mix of residential densities in response to housing market demands, housing affordability goals, and the need for a diversity of lifestyles and neighborhoods.

- . To provide non-residential land uses and amenities in the proper quantities and locations necessary to support the vitality of residential neighborhoods within an overall balanced community.
- . To preserve the unique natural and aesthetic values of the Jurupa Mountains as permanent open space land, and to provide access to open space via community-wide trail systems.
- . To create logical, efficient, and compatible arrangements of different land uses in relation to other land uses and the arterial/collector street system.

These major goals have been further refined and elaborated on the basis of specific site conditions, infrastructure relationships, surrounding land uses, and generally accepted community design criteria. In the course of developing the Land Use Plan, many design alternatives were considered. A number of the major alternatives that were considered, but not selected, are described in section 6.3, PROJECT ALTERNATIVES, of this Specific Plan. The rest of this section provides a description of the Land Use Plan and the rationale for community design which it embodies.

Community Structure

In broad terms the Southridge Village community consists of an eastern village and a western village which, although linked together, are physically and by design somewhat independent areas. The two villages are separated by a prominent ridge of the Jurupa Mountains and by the wastewater treatment plant site. The Jurupa Mountains surround the eastern village on the west, south, and east; the mountains also border the western village on the east and southeast. About 906 acres of land (35% of the site), including the steeper slopes and higher elevations of the hills, will be preserved for regional park and natural open space uses. The remaining 65% of the plan area, about 1,654 acres, would be developed for residential, non-residential, and urban open space uses.

The western village is larger than the eastern village and includes several urban activity centers that will serve the entire Southridge

Village community. These centers include the sub-regional commercial center, the quasi-public uses (police, fire, etc.), the junior high school, and the community park. Elementary schools and neighborhood commercial centers would be provided within both the eastern and western villages.

Two major entries to the western village will be created: a north entry at Cherry Avenue and Jurupa, and a southwest entry at Cherry and Mulberry. Secondary entries to the western village will be provided along Jurupa Avenue at Live Oak and Banana, with an additional entry along Mulberry Avenue at Marlay. Cherry Avenue is the primary traffic circulation route in the western village.

In the eastern village the major entry will be provided at Citrus Avenue and Jurupa. Secondary entries will be created along Jurupa at Beech, Poplar, and Oleander Avenues. Citrus and Beech will be joined to create a continuous street, serving as the primary circulation route in the eastern village.

Residential Elements

Residential land uses are proposed for approximately 1,194 acres, or about 47% of the Specific Plan area. The nine residential land use types shown on the plan fall into three general categories:

- Low density, single family detached (SFD), 0 to 7 units per gross acre
- Medium density, single family attached, 7 to 15 units per gross acre
- High density, multiple family, 15 to 25 units per gross acre

The low density category includes the SFD designations at 1.2, 3, and 4.5 units per acre, as well as the Patio Home designation at six units per acre. A total of about 3,530 units (40% of all units) would be developed in the low density category. This represents 65% of all the land in the planning area that would be developed for residential uses.

The medium density category includes the Entry Estates and Duplex designations at eight units per acre, and also the Townhomes designation

at 12 units per acre. A total of about 2,829 units (32% of all units) would be developed in the medium density category. This represents 25% of all residential land in the planning area.

The high density category includes the Garden Homes designation at 18 units per acre and the Carriage Homes designation at 25 units per acre. About 2,450 units (28% of all units) would be developed in the high density category. This represents 20% of all residential land in the planning area.

The distribution of these residential densities within the planning area reflects several design considerations. In order to promote compatibility with land uses north of Jurupa, the planning units immediately south of the Jurupa Avenue landscape buffer are designated for low and medium density development. Within the western village, low density uses are designated along the eastern edge of Woodhaven, where existing low density development occurs. The proposed high density areas are located in the interior of the community, with excellent access to the major street system. Most of the highest density carriage home units are located in the western village, adjacent to the sub-regional commercial center, and related urban activity centers. With the exception of one high density planning unit adjacent to the subregional center, all residential areas along the edge of the Jurupa Mountains are planned for low density development. This will serve as a buffer zone between urban uses and the natural open space in the hills.

Standards for the development of low, medium, and high density residential uses are presented in section 4.4 of this Specific Plan.

Parks and Open Space Elements

About 42% of the planning area (1,062 acres) is proposed for parks and open space uses. About 906 acres of the Jurupa Mountains are designated Regional Park/Open Space. This area is intended to serve as either natural open space land, or as an expansion of the existing City Regional Park in the mountains. A major feature of this area is the proposal to create an extensive network of trails for hiking and horseback riding.

The Land Use Plan also incorporates ten neighborhood parks, ranging in size from two to five acres, to be located throughout the community. Most of these parks are located within and adjacent to the Edison and Metropolitan Water District easements. All of the neighborhood parks are linked together with the community-wide system of pedestrian and bicycle paths. Outside of the proposed neighborhood parks, there are approximately 102 acres of land in Edison and MWD easements. These easements are proposed as open space areas through which trail systems will be developed.

A 14-acre community park is also proposed for development adjacent to the subregional commercial center in the core of the western village. The community park will provide more extensive recreational areas and a broader range of uses than the neighborhood parks.

Additional detail regarding these park and open space uses is presented in section 3.6, OPEN SPACE AND RECREATION MASTER PLAN, of this chapter.

Commercial Elements

The Land Use Plan designates 20 acres of land in the western village as a sub-regional commercial center. This center would be of sufficient scale to serve many of the weekly shopping needs of the residents of Southridge Village and South Fontana. Uses such as a junior department store, a movie theatre, restaurant, small shops, and service establishments would be typical of a sub-regional center. The center would have direct access from Cherry Avenue, Live Oak, and "C" Street.

A three-acre neighborhood commercial center would also be located in the western village. Two additional neighborhood commercial centers, one of three acres and one of five acres, would be located in the eastern village. These centers are intended to meet most of the daily shopping needs of residents in the surrounding neighborhoods. Uses such as a market, drug store, and laundry would be typical of a neighborhood center. All of the neighborhood commercial centers are located at arterial/collector street intersections.

In addition to these retail commercial centers, the plan also identifies a six-acre commercial recreation site adjacent to the subregional center. This site is intended for uses such as a raquetball club, miniature golf, and/or other similar recreation/entertainment activities.

Standards for development of commercial land uses are presented in section 4.5 of this Specific Plan.

Public and Quasi-Public Elements

The Land Use Plan identifies six elementary school sites and one junior high school site. Each elementary school site is six acres in size and is located adjacent to a neighborhood or community park. The junior high school site is twenty acres in size and is located in the middle of the western village. The plan provides for pedestrian and bicycle access to all schools.

The plan designates two sites adjacent to the subregional center for development of quasi-public uses. These would include a fire station and police contact office, both of which will be required. Additional uses for these sites could include a library, community meeting hall, churches, clubs, or similar public and quasi-public uses.

Additional detail regarding these public uses is provided in section 3.7, COMMUNITY FACILITIES MASTER PLAN, of this chapter. Standards for development of public and quasi-public uses are presented in section 4.6 of this Specific Plan.

3.2 CIRCULATION MASTER PLAN

3.2.1 Intent and Background

The Circulation Master Plan for Southridge Village is intended to establish the framework and standards for development of a safe and adequate system of vehicular traffic circulation. The proposed Master Plan contains a number of elements:

- . Proposed alignments for arterial and collector streets within the Southridge Village planning area.
- . Proposed rights-of-way and cross-sections for arterial, collector, and local streets.
- . Plan views proposing certain geometric configurations for key intersections.

The Circulation Master Plan has been developed using the results of several traffic generation and trip distribution studies. The plan reflects traffic volumes expected to result from ultimate development of Southridge Village and a larger area of influence encompassing the rest of south Fontana. Traffic studies were previously accomplished and published in Draft EIR 81-1, which considered the General Plan Amendment alternatives for Southridge Village.

More detailed traffic analysis has been completed by Linscott, Law, and Greenspan, professional traffic engineers, using the Southridge Village Land Use Master Plan. Linscott, Law, and Greenspan's traffic report is included in the appendix of this Specific Plan. Exhibit 6.7 in Chapter 6,0 FOCUSED ENVIRONMENTAL IMPACT REPORT, illustrates the future traffic volume projections developed by Linscott, Law, and Greenspan.

3.2.2 Circulation Design Concept

The Circulation Master Plan for Southridge Village is presented in Exhibit 3.2. Vehicular circulation for Southridge Village emphasizes linkage of arterial routes with freeway interchanges. The circulation system is designed to facilitate progress from lower densities through higher

densities to the arterial routes, while at the same time, balancing flows to minimize congestion and related hazards. The primary entry points for the project will be on Cherry at Mulberry and Jurupa Avenues, and on Citrus at Jurupa Avenue. Secondary entries will be along Jurupa at Banana, Live Oak, Beech, Poplar, and Oleander Avenues.

Cherry and Citrus Avenues will be widened between Jurupa and Interstate 10 to standards previously established in the City's Master Plan of Highways. Cherry and Citrus Avenues will extend through the project in a curvilinear fashion to join with Mulberry and Beech Avenues, respectively. Mulberry Avenue will be widened from Jurupa to the county line according to City standards. Jurupa will be extended west from the project site to Interstate 15 per standards acceptable to the County, the City of Fontana, and the City of Ontario. In addition, Jurupa will be widened from Mulberry to Sierra to accommodate projected traffic volumes, major landscape elements, and project identity features.

The planned street improvements are designed to accommodate regional traffic growth as well as project-related volumes. Offsite traffic will be encouraged through several design measures to circumvent the community in favor of more direct freeway connections. Measures to discourage through traffic from traversing the community include the following:

- . A curvilinear alignment of Cherry Avenue through Southridge Village, with a basic street section providing four travel lanes with median.
- . Six travel lanes along Jurupa Avenue, six lanes on Mulberry south of Jurupa, and the extension of Jurupa west to Interstate 15. This will provide alternate routes other than Cherry Avenue for non-project traffic oriented towards the Pomona Freeway.
- . Adequate design of the intersections at Cherry and Mulberry, Cherry and Jurupa, and Jurupa and Mulberry to provide for efficient movement of truck traffic around Southridge Village.
- . Signing to prohibit through truck traffic along Cherry between Jurupa and Mulberry; and to designate Jurupa and Mulberry as truck routes.

It is anticipated that intersections at major entries (i.e., Citrus/Jurupa, Cherry/Jurupa, and Cherry/Mulberry) and at secondary entries (i.e.,

Poplar/Jurupa, Beech/Jurupa, Live Oak/Jurupa, and Banana/Jurupa) will require left turn lanes and signalization. In addition, the design of major arterial intersections at Mulberry/Jurupa and Sierra/Jurupa are expected to require signalization and left turn lanes. Within the study area, signalization is anticipated only at the Cherry/Live Oak intersection next to the subregional commercial center, with the inclusion of left turn lanes.

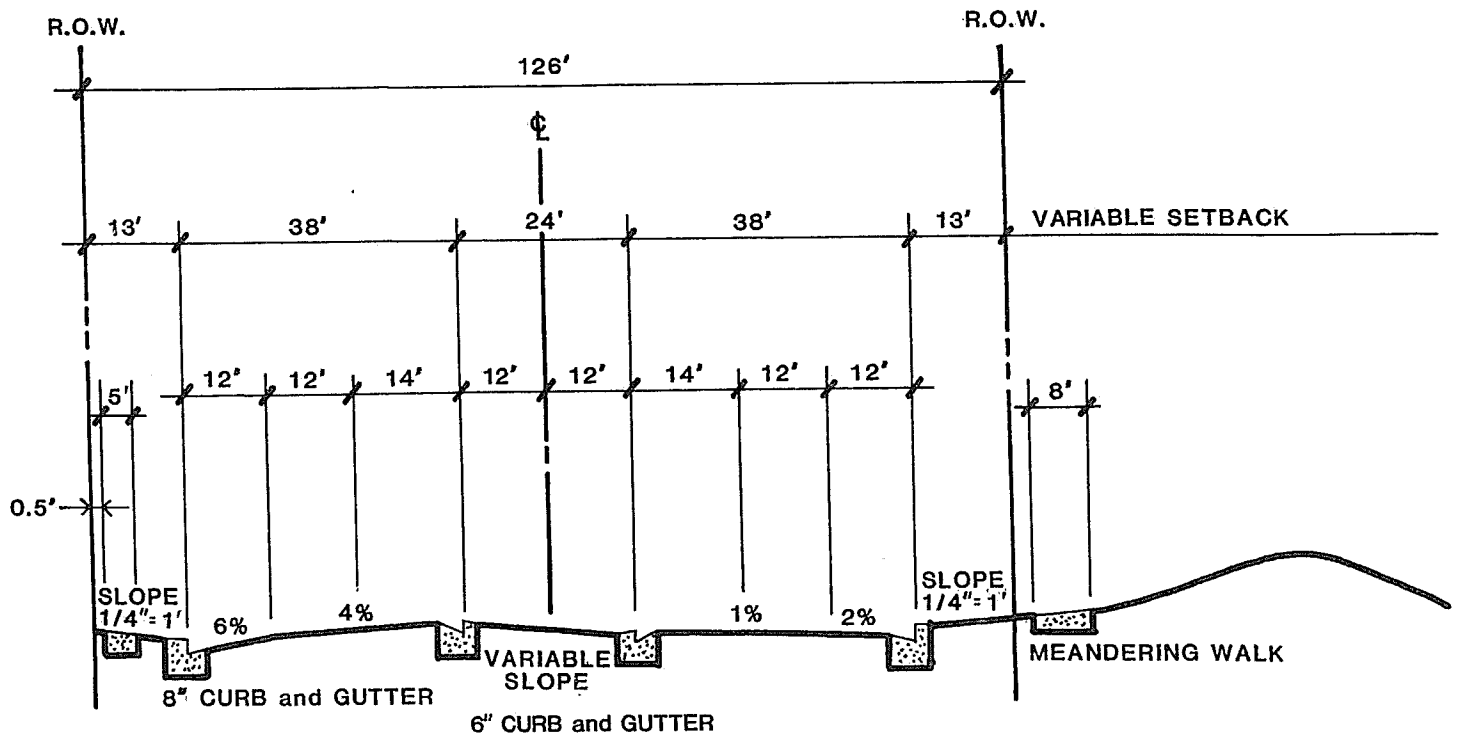
On arterials with landscaped medians (i.e., Cherry and Jurupa Avenues), left turns between signals are anticipated to be accommodated via breaks in the median. Left turn pockets within the median are expected to occur between signals on arterial streets without landscaped medians.

3.2.3 Street Design Standards

Certain dimensions, design speeds, and minimum curve radii recommended for adequate traffic flow and safety are presented herein. These are intended to serve as standards for the Southridge Village Specific Plan. Unless specified otherwise herein, street design standards of the City or County, as applicable, will govern. The term right-of-way refers to an area required to build a roadway located between two privately owned parcels. The proposed rights-of-way for major streets within Southridge Village are designated on the Circulation Master Plan. Typical street sections for selected locations identified on the Master Plan are shown in Exhibits A through K. Plan views illustrating recommended designs for key intersections and other elements of the circulation system are shown in Exhibits T through Z.

Jurupa Avenue will require a right-of-way of 126' as shown in Exhibits A and B. This right-of-way will flare to 136' at the Cherry Avenue intersection to provide additional turning lanes. The intersection of Cherry and Jurupa Avenues is shown in Exhibit U.

Special study is required for Jurupa Avenue between Mulberry and Banana Avenues. Existing improvements on the north and south sides of Jurupa at this location may limit the right-of-way to 100', restricting opportunities for median planting and parkways.



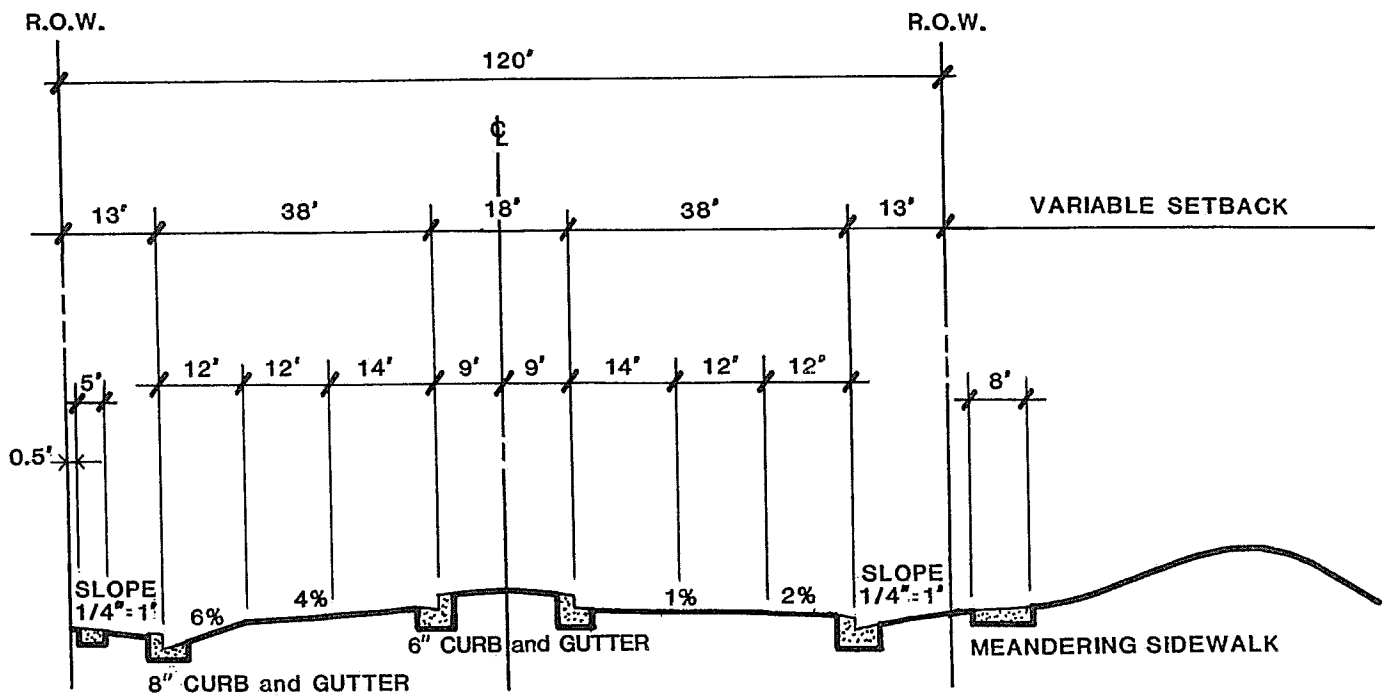
JURUPA AVENUE-BANANA TO LIVE OAK

TYPICAL STREET SECTION
 Southridge Village
 CREATIVE COMMUNITIES

NOT TO SCALE

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A



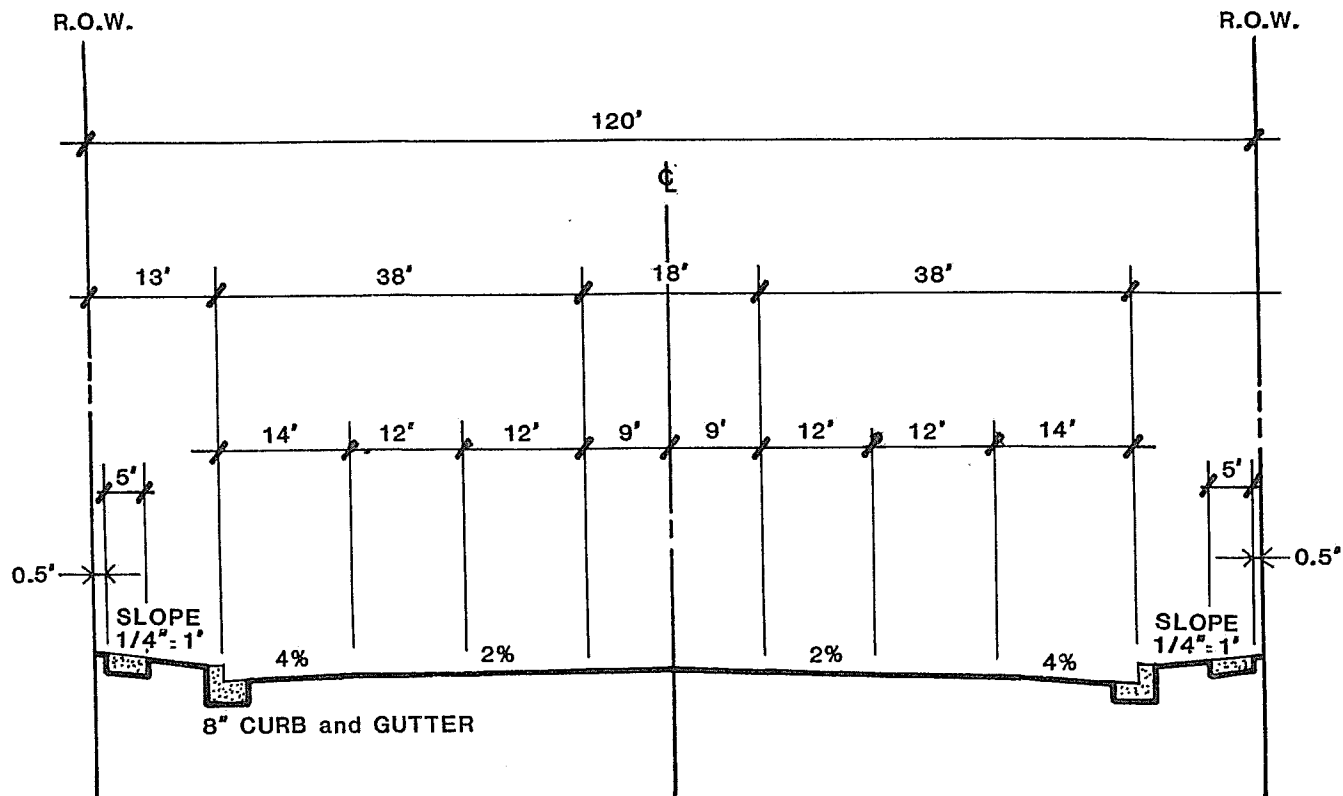
JURUPA AVENUE—LIVE OAK TO SIERRA

TYPICAL STREET SECTION
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 CREATIVE COMMUNITIES

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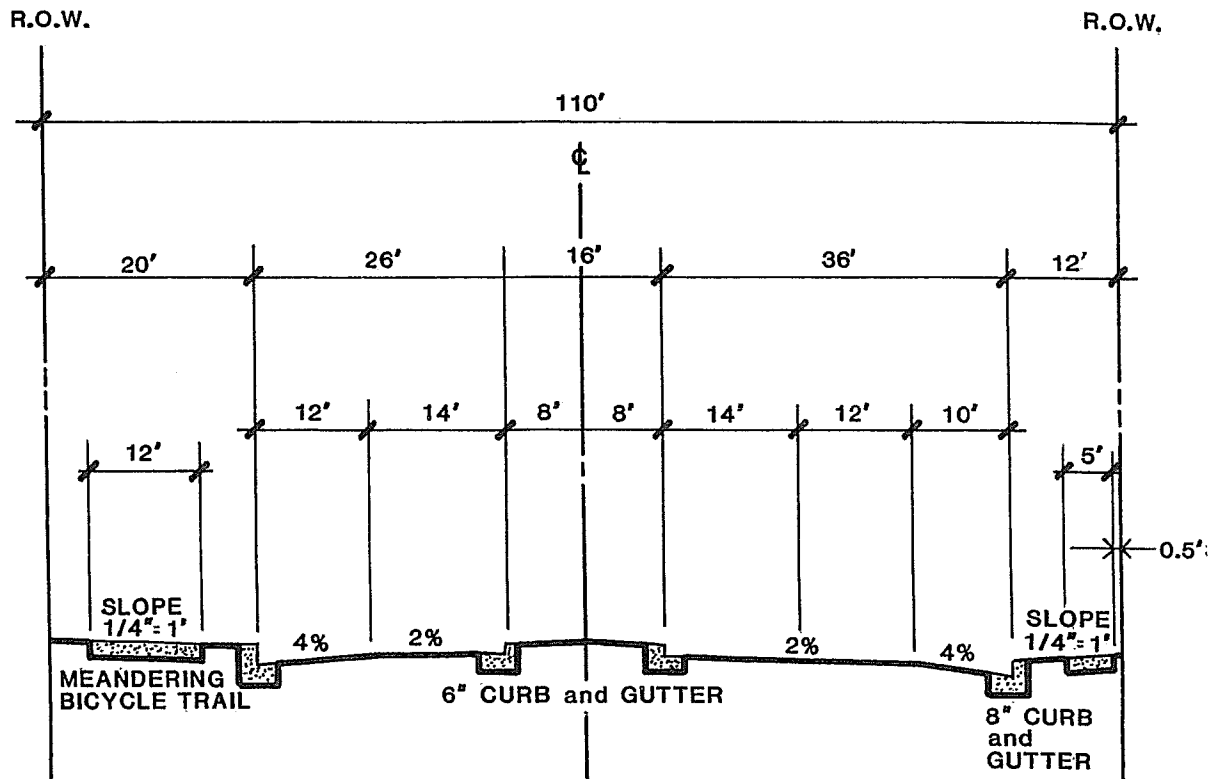
MULBERRY AVENUE, AND JURUPA AVENUE MULBERRY TO BANANA

TYPICAL STREET SECTION
Southridge Village
CREATIVE COMMUNITIES

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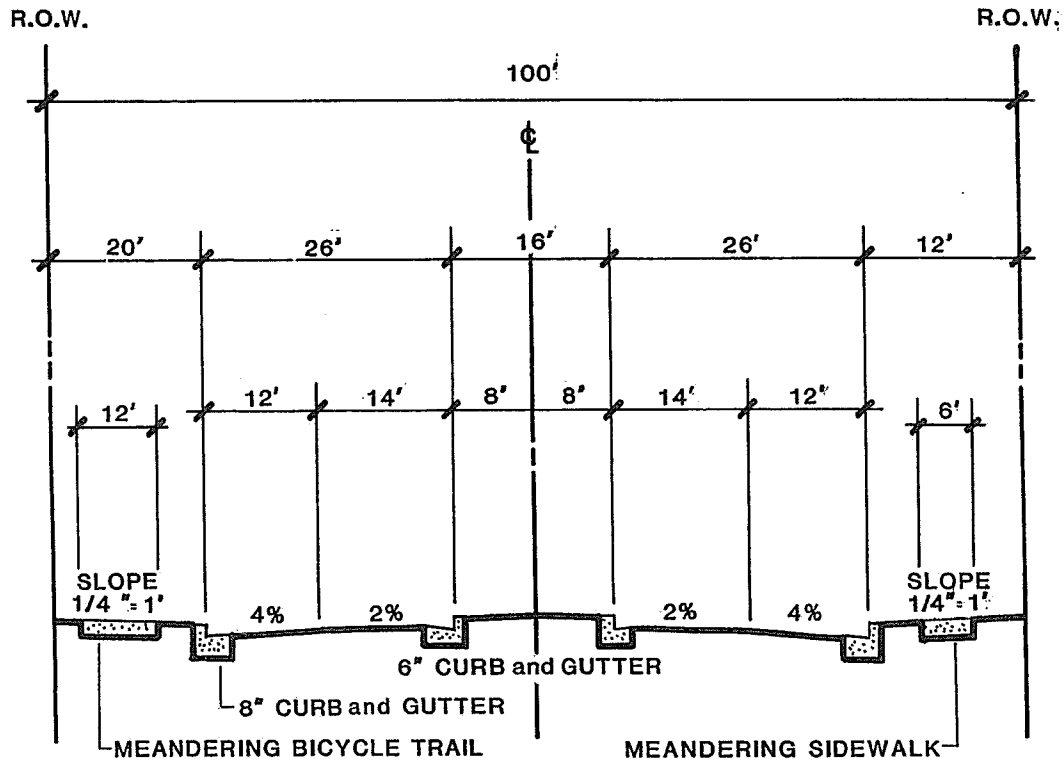
CHERRY AVENUE—LIVE OAK TO C

TYPICAL STREET SECTION
 Southridge Village
 CREATIVE COMMUNITIES

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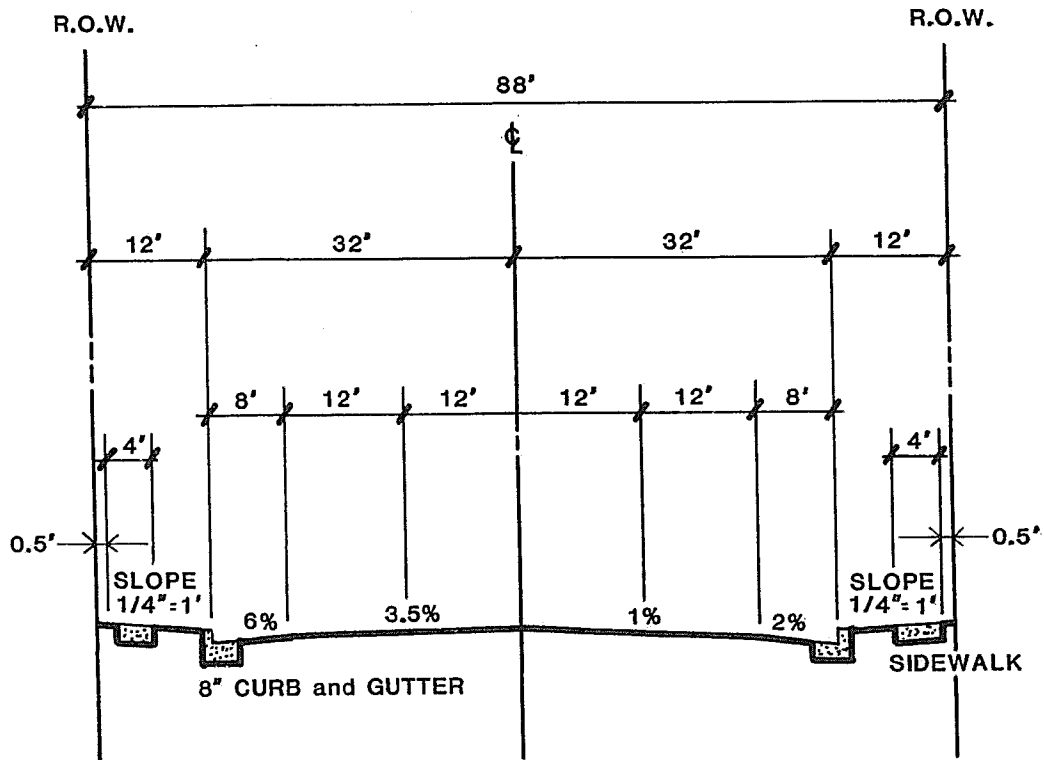
CHERRY AVENUE—PORTIONS

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 CREATIVE COMMUNITIES

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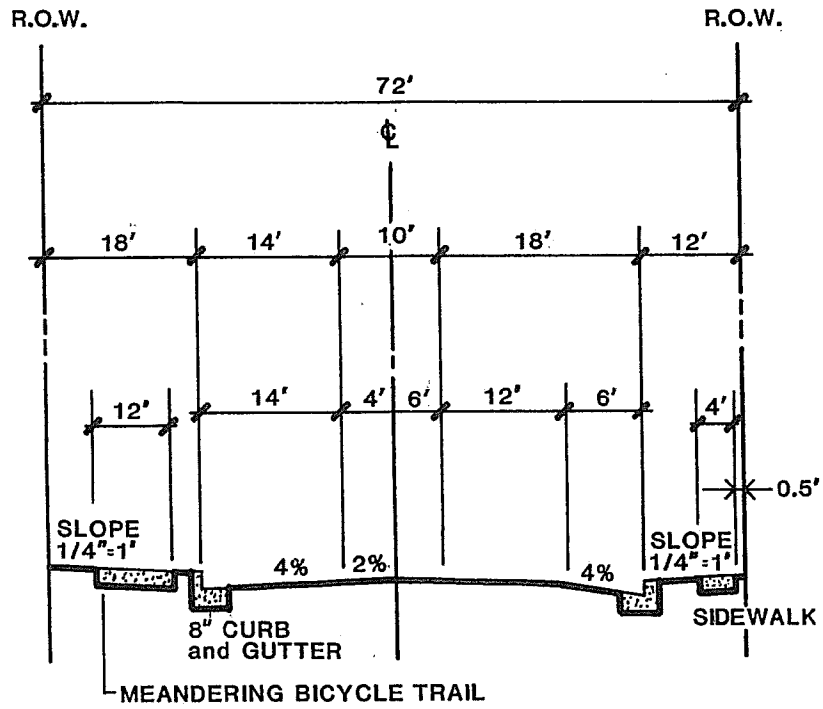


MARLAY AVENUE
CITY STANDARD DETAIL 100-B

TYPICAL STREET SECTION
Southridge Village
CREATIVE COMMUNITIES

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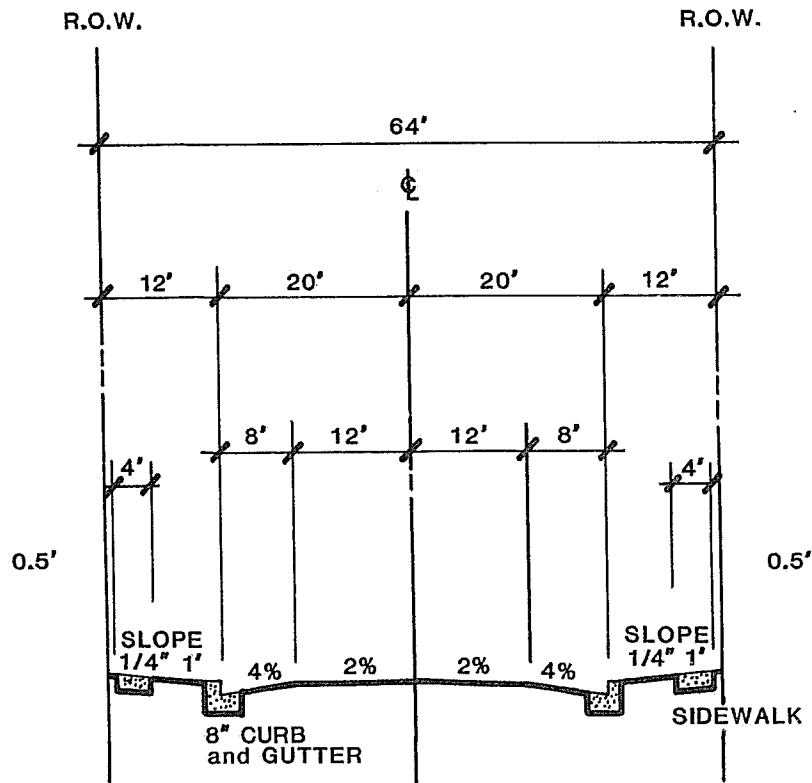
LIVE OAK AVENUE-CHERRY TO C

TYPICAL STREET SECTION
 Southridge Village
 CREATIVE COMMUNITIES

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COLLECTOR STREETS

CITY STANDARD DETAIL 100-C

NOTE:

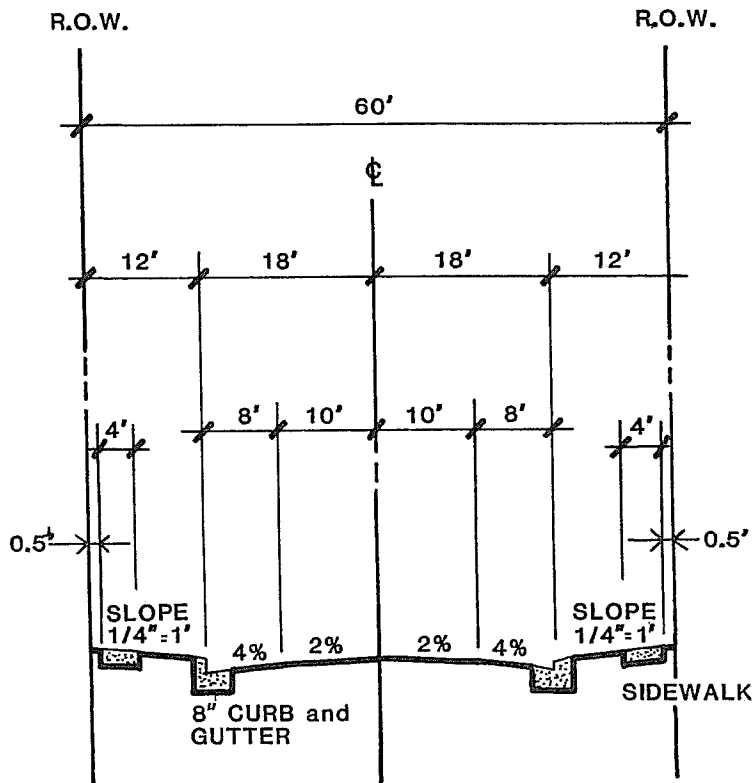
STREETS RUNNING EAST/WEST WILL REQUIRE TILTED SECTIONS
CROSSFALL GRADEBREAKS WILL BE THE SAME AS CITY STANDARDS

TYPICAL STREET SECTION
Southridge Village
CREATIVE COMMUNITIES

NOT TO SCALE

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H



LOCAL STREETS

CITY STANDARD DETAIL 100-D

NOTE:

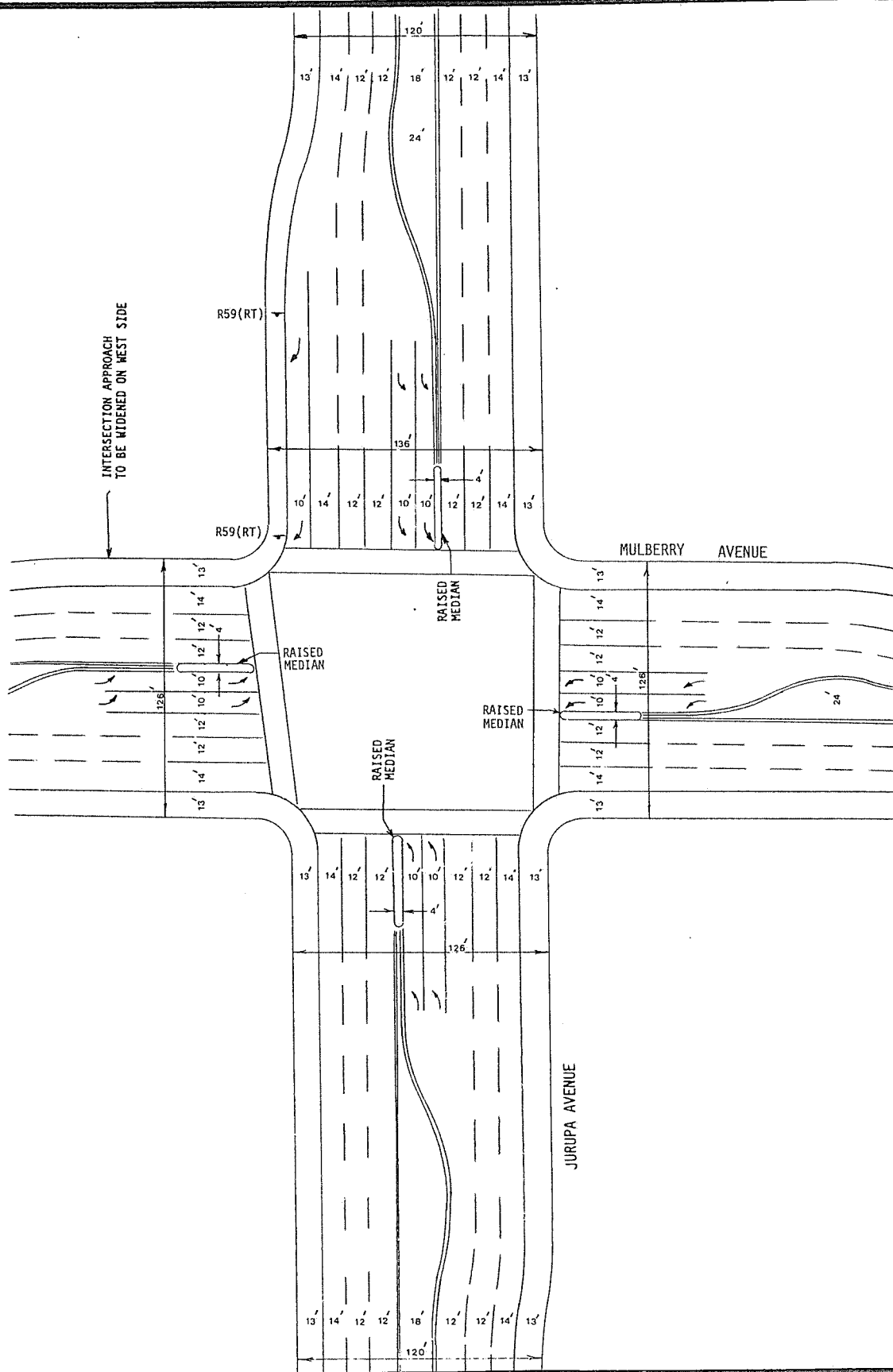
STREETS RUNNING EAST/WEST WILL REQUIRE TILTED SECTIONS
CROSSFALL GRADEBRAKES WILL BE THE SAME AS CITY STANDARDS

TYPICAL STREET SECTION
Southridge Village
CREATIVE COMMUNITIES

NOT TO SCALE



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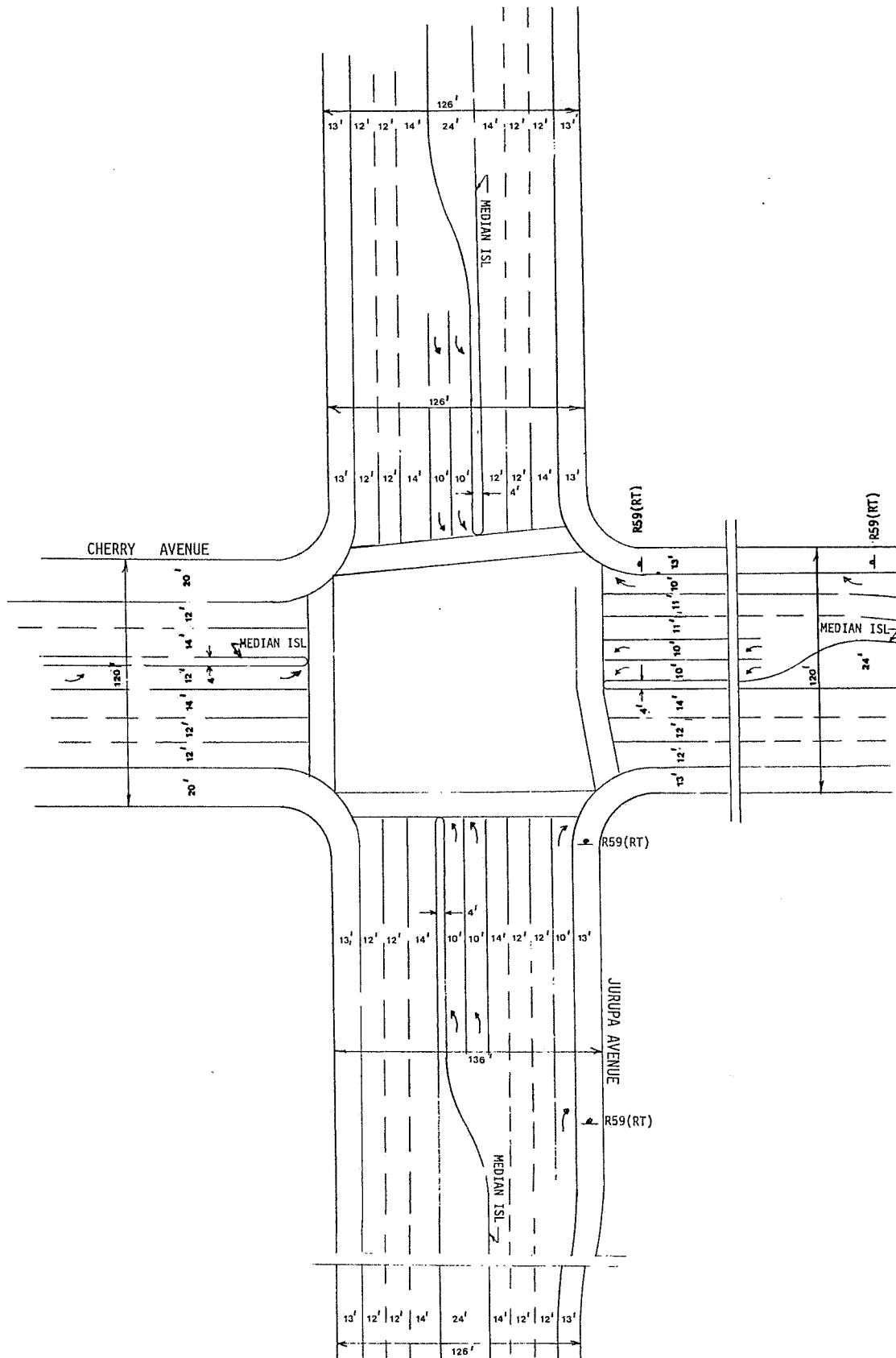


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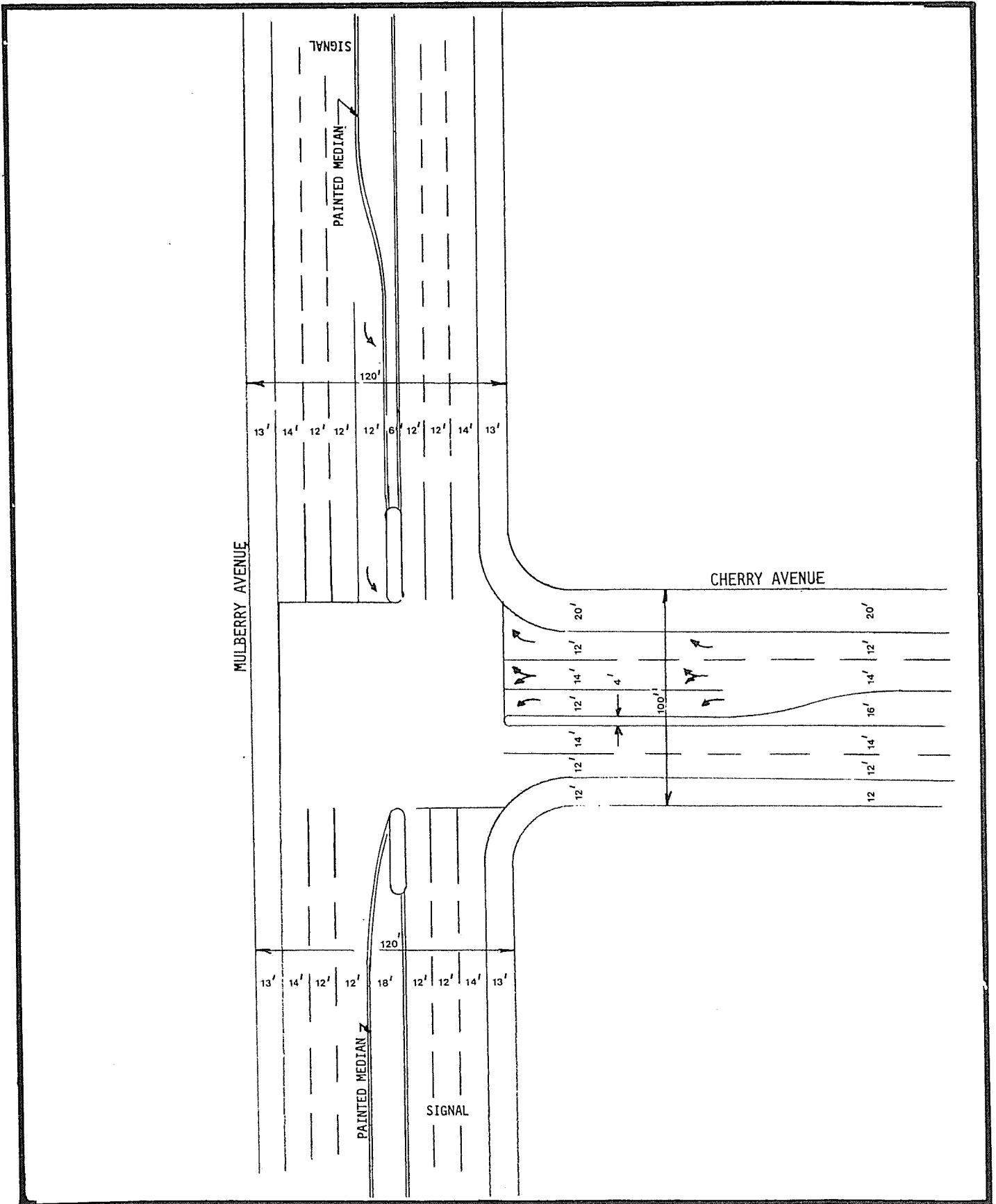
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Southridge Village
CREATIVE COMMUNITIES

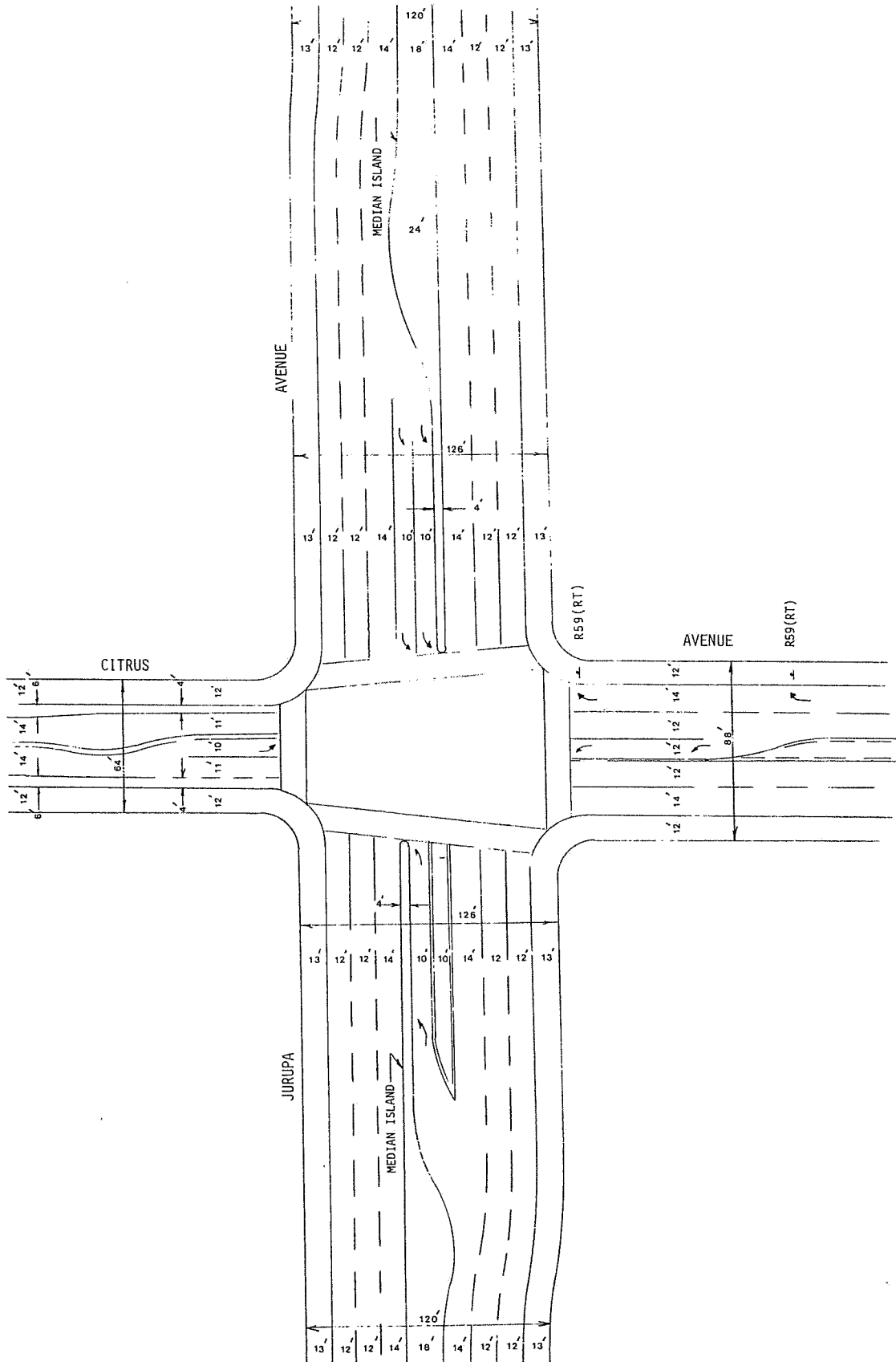
LG Linscott, Law & Greenspan, Inc., Engineers



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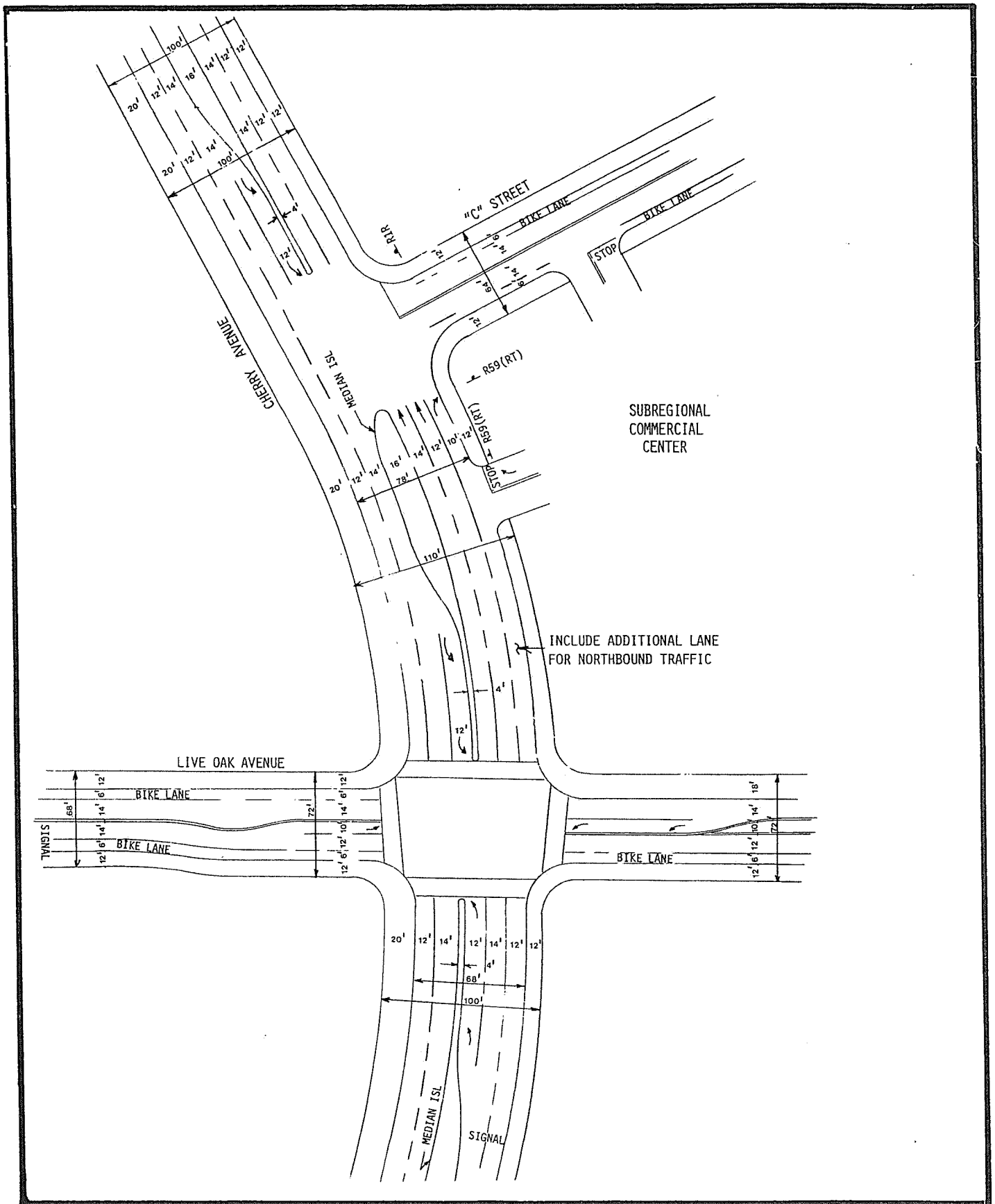
Southridge Village
CREATIVE COMMUNITIES



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W Southridge Village
CREATIVE COMMUNITIES

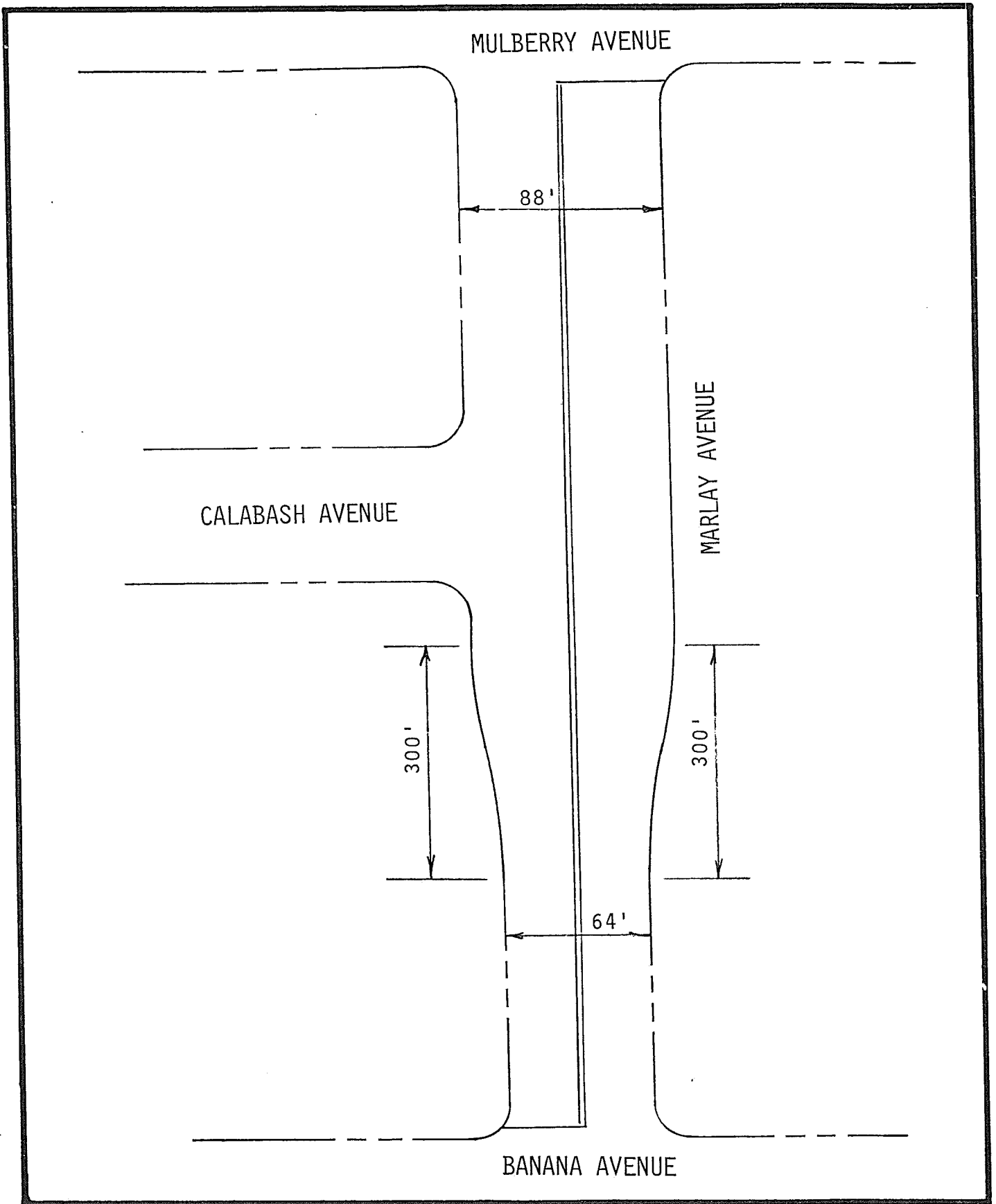
LTG Linscott, Law & Greenspan, Inc., Engineers



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Southridge Village
CREATIVE COMMUNITIES



NORTH

Z Southridge Village
CREATIVE COMMUNITIES

LG Linscott, Law & Greenspan, Inc., Engineers

Mulberry Avenue will require a 120' right-of-way as shown in Exhibit C. Exhibit V illustrates the proposed 'T' shaped intersection of Mulberry and Cherry. In order to facilitate smooth traffic flow, an upgraded design is proposed for the intersection of Jurupa and Mulberry. This is shown on Exhibit T. Depending on the conclusion of Jurupa Avenue right-of-way study, the configuration of Jurupa east of Mulberry may need to be modified.

Cherry Avenue will require a 100' right-of-way along most of its length, as shown on Exhibit E. The 100' right-of-way will flare to 120' at Jurupa Avenue as shown on Exhibit U. Cherry Avenue will have an additional northbound lane where it adjoins the subregional shopping center. At this location a right-of-way of 110' will be required, as shown on Exhibit D. Cherry Avenue's frontage along the subregional center is shown in plan view on Exhibit X. This exhibit also shows the intersections of 'C' Street and Live Oak Avenue with Cherry. A design speed of 45 mph and minimum curve radius of 1,200' are proposed for Cherry Avenue.

Banana, Marlay and Live Oak Avenues will require a 64' right-of-way section as shown on Exhibit H. A portion of Marlay already has an 88' right-of-way as shown on Exhibit F. A schematic showing the planned transition on Marlay from 88' to 64' is presented on Exhibit Z. Live Oak Avenue will flare to a 72' right-of-way where it adjoins the subregional commercial center and the quasi-public sites; this is shown in section on Exhibit G, and in plan view on Exhibit Y. Design speed of 30 mph and minimum curve radius of 400' are proposed for these streets. A local street with a cul-de-sac length of less than 500' shall have a minimum right-of-way length of 50' and a radius of 45' in the "bulks."

Citrus and Beech Avenues will require a right-of-way of 64', as shown on Exhibit H. A plan view of the intersection of Citrus and Jurupa is shown in Exhibit W. Design speed of 30 mph and minimum curve radius of 500' are proposed for Citrus and Beech. Other streets will also require a 64' right-of-way as shown on Exhibit H. Design speed of 25 mph and a minimum curve radius of 200' are proposed for the other collector streets.

Local public streets will require a 60' right-of-way as shown on Exhibit K. Design speed of 20 mph and minimum curve radius of 200' are proposed for local public streets.

Private streets within high density multiple-family residential areas will require a minimum right-of-way of 24' and minimum curve radius of 150'. Speed limits will be restricted to 15 mph on these private streets.

3.3 DRAINAGE MASTER PLAN

3.4.1 Intent

The purpose of this section is to establish the framework for a comprehensive area-wide approach to flood control and drainage planning for the Southridge Village community. The Drainage Master Plan recommends specific local drainage facilities to provide for development of the Southridge Village Land Use Plan, and to coordinate these facilities with existing local drainage systems. A drainage master plan report for the Southridge Village Specific Plan was prepared by Boyle Engineering Corporation in June 1981, and is included in its entirety in the appendix of this Specific Plan. The drainage facilities recommended in the Boyle report and proposed in this Master Plan are intended to be the backbone drainage system for all of south Fontana.

3.3.2 Existing Drainage Facilities

No runoff or flood control facilities have been constructed within the undeveloped lands of the Specific Plan area. The San Bernardino County Flood Control District (SBCFCD) has developed a comprehensive storm drain plan for the south Fontana area. The County's plan recommends construction of flood control improvements within the Declez Channel to carry the 100-year peak flood flows through the Southridge Village planning area.

Southwest of the Southridge Village Planning area in Riverside County, the San Sevaine Channel and a short segment of the Declez Channel branching from the San Sevaine Channel have been improved. According to the SBCFCD plan, Declez Channel improvements will begin at the San Bernardino County line on the southern boundary of the study area, extend upstream along the base of the Jurupa Mountains, and terminate near the northeastern corner. The SBCFCD plan also includes a collector system of storm drains which extends north and south from the Declez Channel. No specific alignment is proposed for the Declez Channel in the SBCFCD plan.

3.3.3 Proposed Facilities

The proposed Drainage Master Plan for Southridge Village is presented in Exhibit 3.3. Four major categories of flood control and drainage improvements are recommended as necessary for development of the Southridge Village community:

- . Improvement of the Declez Channel to accommodate major storm flows.
- . Construction of flood retarding basin(s) or other improvements to mitigate the effects of increased runoff on downstream facilities.
- . Construction of tributary storm drains to convey runoff to the Declez Channel.
- . Construction of bridges and related drainage structures.

A summary of these recommended improvements is presented below.

Improvement of Declez Channel

The Declez Channel is proposed to be improved from its inlet at Oleander Street to its junction with the improved Fontana Channel in Riverside County. The specific alignment proposed for the Declez Channel is shown on the Drainage Master Plan. The channel will parallel the Edison power line easement adjacent to and on the north side for most of the length of the easement. The channel will turn to the southwest where the Edison easement branches, following the diagonal easement on the northwest side. The channel will then cross into Riverside County, eventually joining the existing channel which has already been improved by the Riverside County Flood Control District. It is estimated that approximately 33.5 acres of land will be required for the improved channel along this alignment. This routing is designed to limit land severance and to parallel trail system and open space development within the Edison easement.

Meetings have been held with San Bernardino and Riverside County Flood Control Districts, and with landowners in Riverside County southwest of the Specific Plan area. Riverside County and downstream landowners have suggested an alternative alignment for study, wherein the Declez Channel would enter Riverside County on the southeast side of the Edison easement, instead of the northwest side as is proposed herein.

The comparative costs of a trapezoidal section channel and a rectangular section channel have been estimated. The trapezoidal section channel is estimated to cost 20 percent less than a rectangular section channel. Therefore, this Drainage Master Plan assumes that a trapezoidal section channel will be used. A typical section for the concrete lined trapezoidal channel is shown in Exhibit 3.4.

The Declez Channel improvement has been planned to contain the estimated 100-year return period peak flow plus a 25 percent bulking factor for possible sediment inclusion. For the total watershed area of 10.91 square mile, the estimated peak flood flow under existing conditions is 4,200 cfs. For conditions of ultimate development, the peak flood flow is estimated at 5,100 cfs. Considering a 25 percent bulking factor, the maximum design capacity requirement for the entire drainage area is 6,400 cfs. Table 3.4 shows capacity requirements at selected concentration points along the channel. Table 3.5 shows capacity requirements and channel dimensions at various locations along the channel.

It is noted that with full development the peak flow increases from 4,200 cfs to 5,100 cfs, or an increase of over 21 percent. However, with mature urban development, sediment production is probably about one-tenth that from existing land use. With full urban development only the Jurupa Hills would remain as a natural sediment producing area.

A sedimentation analysis of the watershed on the basis of existing conditions and for conditions of ultimate development should be made. This would determine if a lesser bulking factor is appropriate on the basis of reduced sediment production because of urban development.

A letter report on the hydrologic analysis has been submitted to the Director of Public Works for the City of Fontana for review and clearance with the SBCFCD. Further investigations and clearances will be required to obtain a possible reduction in the required bulking factor.

The total cost to improve the Declez Channel from its inlet at Oleander Street to its junction with the improved Fontana Channel downstream is estimated to be \$9.85 million. The present design capacities of Declez

Table 3.4

DECLEZ CHANNEL CAPACITY REQUIREMENTS
100-YEAR RETURN PERIOD (INCLUDING 25 PERCENT BULKING FACTOR)

Concentration Point*	100-Year Peak Flood Flood Flow (cfs)	Bulking Factor Percent	100-Year Design Capacity (cfs)
3	5,100	25	6,400
4	2,800	25	3,500
5	1,000	**	1,000
6	600	**	600

* See Exhibit 3.3 for location

** Tributary with no bulking factor added

Table 3.5

CHANNEL DIMENSIONS AND CAPACITIES

Location	Capacity (cfs)	Channel Dimensions*	
		Bottom Width (ft.)	Depth** (ft.)
Country Village Rd.	6,400	10	12
San Bernardino County Line	5,700	8	12
Cherry Avenue First Bridge	5,000	8	11
Cherry Avenue Second Bridge	4,200	8	11
Live Oak Avenue Bridge	3,300	8	11
Beech Avenue Bridge	2,800	8	10
Above MWD Pipeline	2,600	20	9
Adjacent to Citrus Avenue	2,200	12	9

* Trapezoidal Section (Exhibit 3.4)

** Includes 3' freeboard

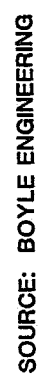


Exhibit 3.4

Channel in the various reaches appear to be conservatively high. A reduction in the required bulking factor may cause a significant reduction in the flood control facilities costs.

A major MWD water transmission main crosses the proposed Declez Channel alignment. A wider shallower section of the flood control channel will be required to provide sufficient fill upstream from the crossing and to maintain channel gradient without requiring relocation of the service line. A preliminary plan and profile for the Declez Channel crossing of the MWD service line are shown in Exhibit 3.5.

A tributary channel is planned to drain the low area between the MWD service line crossing and its junction with the proposed Declez Channel improvement. The proposed alignment of this channel is shown on Exhibit 3.3, the Drainage Master Plan. Recommended dimensions for this tributary channel are illustrated in Exhibit 3.6. The total installed cost for the tributary channel is estimated at \$4.4 million.

Mitigation of Effects on Downstream Facilities

The extent to which urbanization of the Declez watershed will increase peak flows beyond what would occur under existing conditions has been described. The use of a floodwater retarding reservoir is recommended as a measure to mitigate the possibility of downstream flooding due to capacity limitations on existing channels in Riverside County. The floodwater retarding reservoir is planned to reduce peak flood flows for the 100-year return period flood from those that are estimated to occur under conditions of ultimate development, to those that are estimated to occur under existing conditions. A conceptual plan for this floodwater retarding reservoir is presented in Exhibit 3.7. The estimated installation cost for this facility is \$1.6 million.

One disadvantage of this flood water retarding reservoir concept is that it does not provide significant reduction in the more frequently occurring flood flows, which are also increased by the urban development. Because the flood control channel capacities in Riverside County are not adequate to contain these flows, an alternative to alleviate the problem of in-

creased runoff would be to correct the existing channel inadequacies downstream. Assistance in downstream offsite mitigation may be a viable alternative to providing a floodwater retarding reservoir within Southridge Village.

Tributary Storm Drains

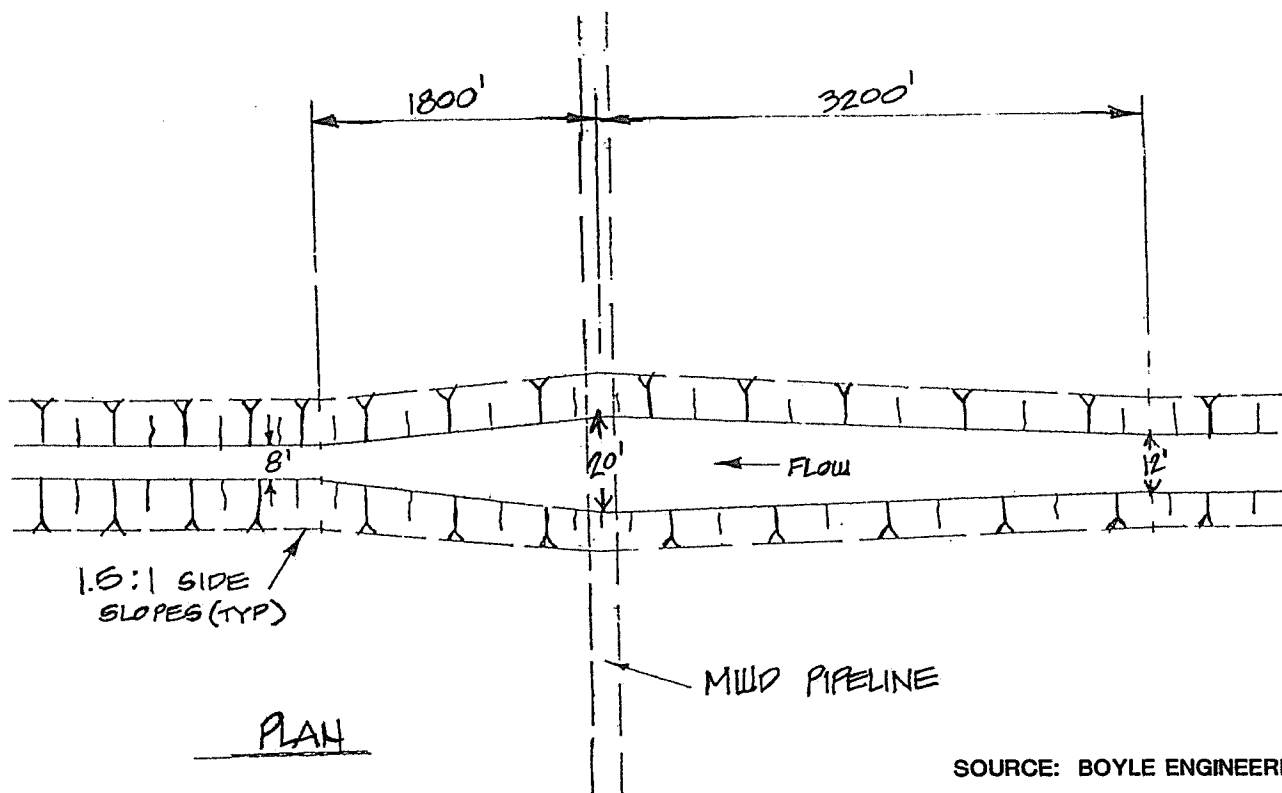
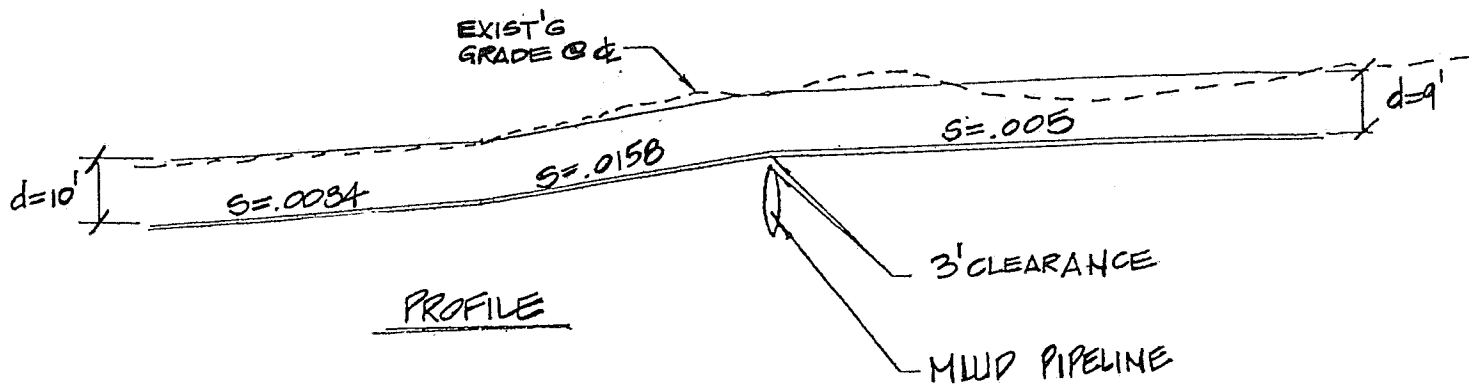
Concrete pipe drains will serve to collect area drainage and convey runoff to discharge into the main channel. The proposed locations and preliminary sizing of these storm drains are shown in Exhibit 3.3, Drainage Master Plan. Storm drain alignments have been designed to conform with planned street alignments. Final grade lines for storm drains will depend on street grading plans. The total estimated installation cost for these storm drains is \$4.25 million.

The storm drainage system provides capacities to contain the 10-year return period flood flows. The plan assumes that drainage capacities within the streets will contain the difference between the 25-year return period flood flows and the 10-year return period flood flows. When grading plans for the streets become available, street drainage capacities will be determined. If the street capacities are not adequate to contain this differential, the capacities of the storm drains will be increased accordingly.

These storm drains will provide nuisance protection from the more frequently occurring floods. The less frequently occurring larger flood will not cause significant danger to property or life because of the relatively small drainage areas.

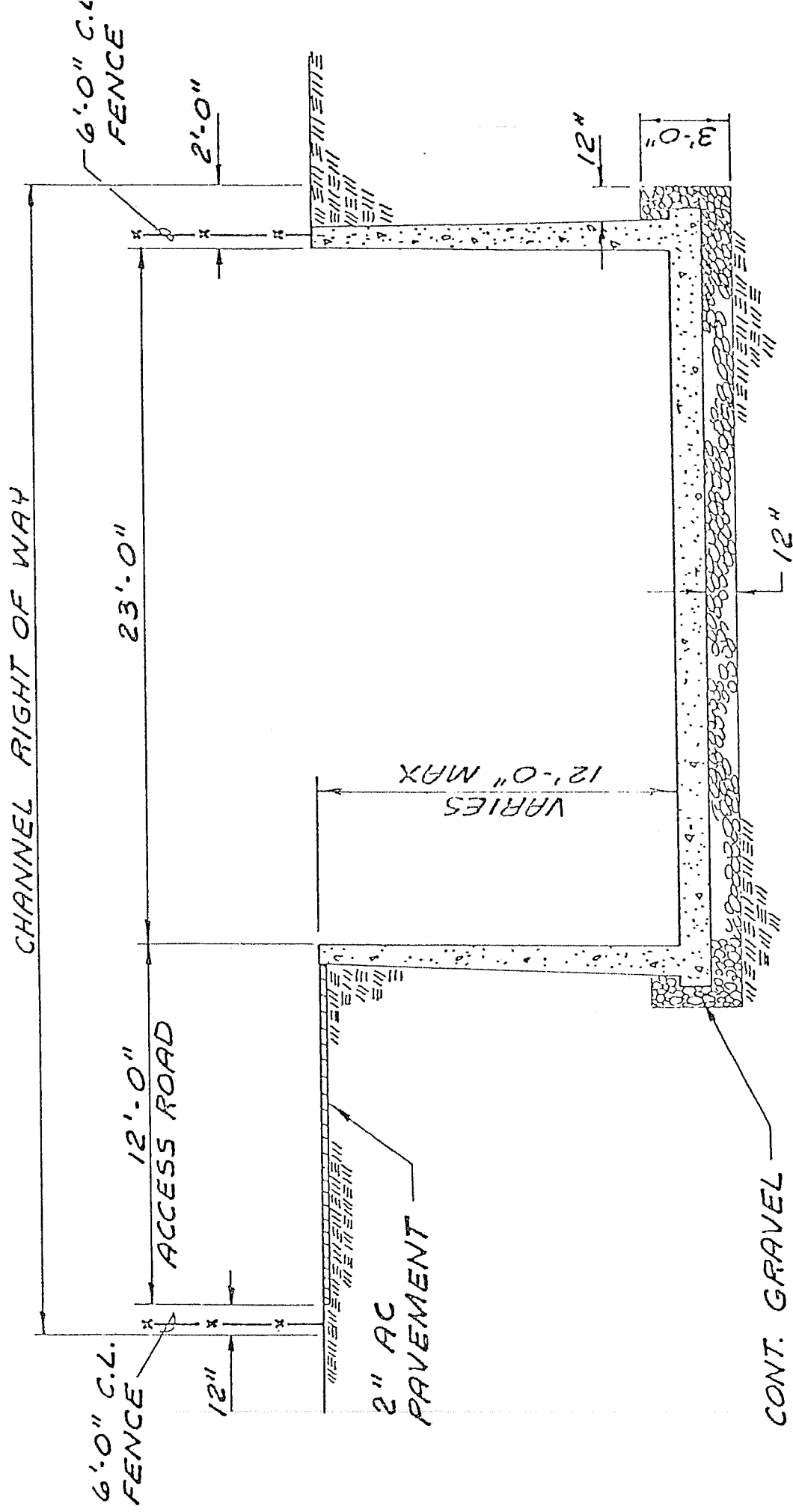
Bridge Crossing of Channels

Seven bridges will be constructed to carry the various streets across the proposed flood control channel. In addition, a bridge will carry the railroad spur located at Live Oak Avenue over the channel. Bridges and related drainage facilities will be built as required. Total costs of the necessary bridges and related drainage facilities proposed are estimated at \$3.1 million.



SOURCE: BOYLE ENGINEERING

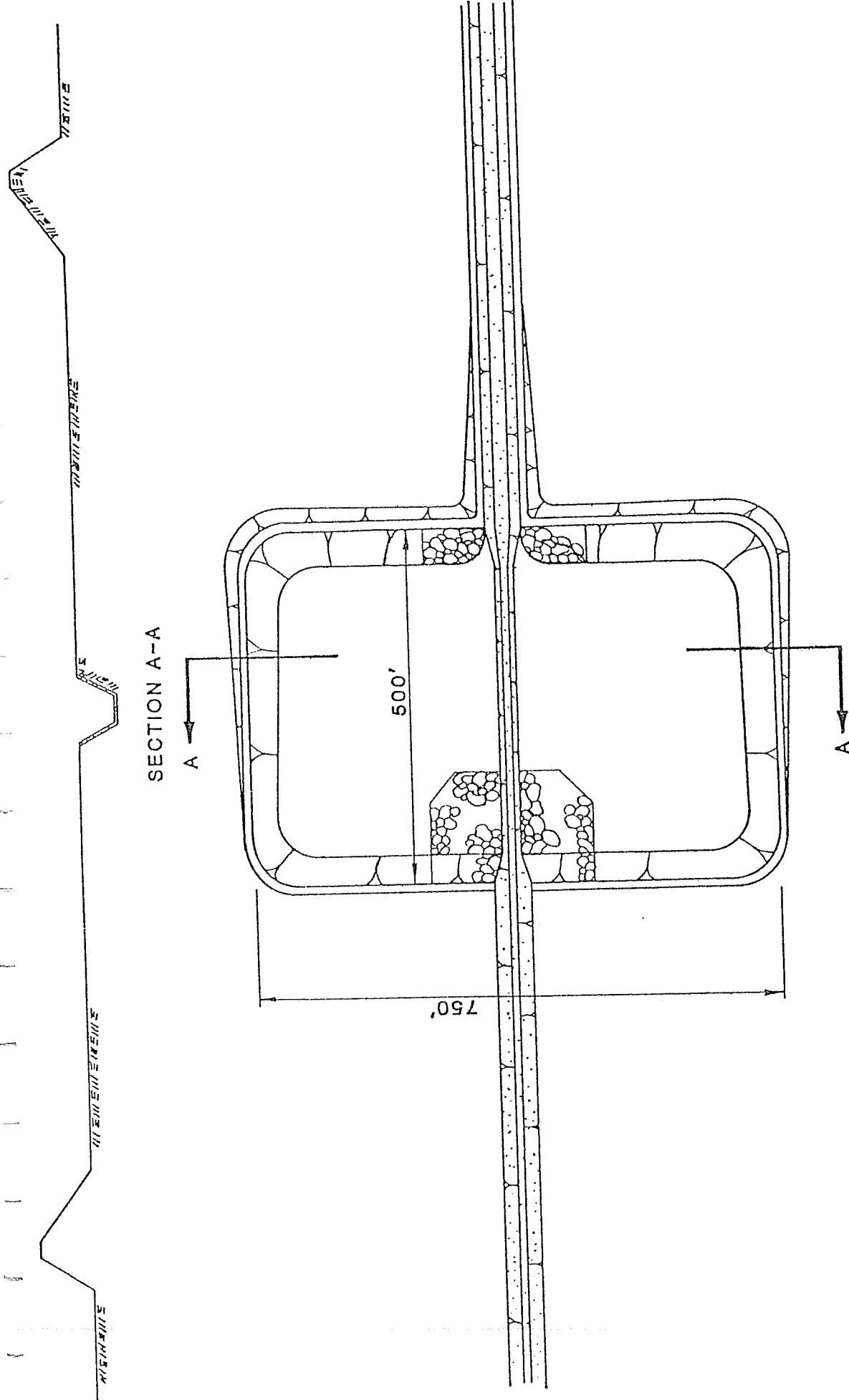
**DECLEZ CHANNEL
CROSSING MWD
SERVICE LINE**
Southridge Village
CREATIVE COMMUNITIES



SOURCE: BOYLE ENGINEERING

TRIBUTARY CHANNEL RECTANGULAR SECTION Southridge Village CREATIVE COMMUNITIES

Exhibit 3.10



FLOODWATER RETARDING RESERVOIR WITH LOW FLOW CHANNEL

Southridge Village

CREATIVE COMMUNITIES

3.4 WATER MASTER PLAN

3.4.1 Service Responsibilities

Domestic water service to Southridge Village will be supplied by the Fontana Water Company (FWC). Very little of the proposed Southridge Village property is within the existing FWC service boundary. However, Fontana Water Company is committed to serve the area. Upon receipt of a "Request for Service" letter from the developer, FWC will obtain certification from the California Public Utilities Commission to initiate service.

3.4.2 Proposed Facilities

The Water Master Plan, presented in Exhibit 3.8, was developed by Boyle Engineering Corporation. The water facilities report prepared by Boyle is presented in the appendix of this Specific Plan. This plan illustrates the major facilities required onsite to meet the demands of future development adequately, based on the Land Use Master Plan for Southridge Village. The potential water consumption of the community is estimated to be 5.7 mgd (million gallons per day) for an average day and 14 mgd for peak demand day.

The location, sizing, and construction phasing of water facilities will be determined by the City of Fontana and the Fontana Water Company as precise plans (i.e., tentative tract maps, site plans, etc.) are designed and reviewed for individual development projects. The following discussion describes these facilities as they are currently expected to be required.

Two reservoirs are proposed to serve different pressure zones. The two recommended reservoir sites are located at elevations of approximately 1,160 and 1,200 feet in the Jurupa Mountains southeast of the current treatment plant site.

Well capacity south of Interstate 10 needs to be increased to 5,200 gallons per minute for peak flows. In order to meet this requirement, it is anticipated that water lines will have to be extended south from the active wells north of Interstate 10; and that on-line booster pumps will

be installed; and that existing inactive wells south of Interstate 10 will be reactivated. Wells proposed for reactivation include Fontana Union's Number 5 at Slover and Poplar, Number 6 at Santa Ana and Cypress, Number 18 at Slover and Live Oak, and Number 29 at Santa Ana and Banana.

Within the project area, a series of water transmission mains ranging in size from 8 to 20 inches will be required to serve the Southridge Village community. Pressure reducing stations will also be constructed where appropriate.

The water facilities will be constructed in three phases: Phase One will include the area east from Mulberry Avenue to the SCE easement; Phase Two includes the area east of the SCE easement to Live Oak Avenue; and Phase Three will develop facilities for the area extending east from Live Oak Avenue to the eastern boundary of the planning area.

Estimated costs for implementation of the master plan water infrastructure system are \$794,100 in Phase One, \$1,581,700 in Phase Two, and \$1,903,800 in Phase Three.

3.5 SEWER MASTER PLAN

3.5.1 Regional Sewer Facilities Planning

Sewer treatment planning for the City of Fontana is provided by the City and the Chino Basin Municipal Water District (CBMWD). Two existing treatment plants and a planned major interceptor are central to meeting the wastewater disposal requirements of the City and the Southridge Village community. These include Regional Plant No. 3 within the Southridge Village site, Regional Plant No. 1 in the City of Ontario, and the Fontana Interceptor which is planned to connect RP No. 3 to RP No. 1.

Regional Plant No. 3 has a capacity of 4.0 mgd. As of July 1981, wastewater flows to this plant are estimated to be 2.9 mgd. Considering the City's growth management program and development forecasts, Chino Basin MWD has estimated that the expected discharge to Regional Plant No. 3 will increase to 3.8 mgd by January 1984. With the addition of 0.2 mgd for permits, vacancies, and other unused but committed flow, the total committed flow at this plant is expected to reach 3.9 mgd by January 1984.

Current facilities planned by Chino Basin MWD anticipate that the Fontana Interceptor will be completed by January 1984. Regional Plant No. 3 is now operating under a temporary discharge permit, and current facilities plans indicate that RP No. 3 will be closed down when the interceptor is completed. All wastewater flows to RP No. 3 would then be diverted to RP No. 1 via the interceptor. A condition of approval on the federal grant for the interceptor requires that 4 mgd of capacity in RP No. 1 be reserved for Fontana until flows are diverted to the interceptor.

Regional Plant No. 1 presently serves Montclair, Upland, Ontario, and Rancho Cucamonga. Present plant capacity is 26 mgd, and current wastewater flow to the plant is 19 mgd. Considering permits, vacancies and other unused but committed flows, the total committed flow at this plant is expected to reach 23 mgd by January 1982. Chino Basin MWD is designing the next phase of expansion for Regional Plant No. 1, and anticipates completion of this expansion to about 29 mgd by January 1983. A second expansion to about 37.5 mgd is being considered for 1985, although this may need to be completed sooner if capacity problems are to be avoided.

3.5.2 Proposed Sewer Master Plan

The proposed Sewer Master Plan for Southridge Village is presented in Exhibit 3.9. The Sewer Master Plan was developed by Boyle Engineering Corporation and is based on an extensive analysis of alternative treatment and disposal of alternative treatment and disposal methods. The Boyle report is included in the appendix of this Specific Plan.

The projected sewage flow from Southridge Village is estimated to be a total average flow of 2.25 million gallons per day (mgd). Of this total, 1.5 mgd is tributary to the southwest corner of the planning area, and 0.75 mgd would flow to the existing RP No. 3 treatment plant.

The alternatives investigated by Boyle Engineering fall into two general categories: (1) expand and upgrade RP No. 3 on the existing site or a new site and continue to percolate the effluent into the local groundwater basin in existing or new percolation ponds; or (2) transport the sewage flows from Southridge Village to RP No. 1 by way of the planned Fontana Interceptor or a new parallel interceptor.

The alternative recommended in this Sewer Master Plan is to construct the Fontana Interceptor to the maximum size permitted under the grant funding conditions (10.2 mgd), deactivate RP No. 3, and connect the interceptor for treatment and disposal of wastewater at RP No. 1. As peak flows from the interceptor's tributary area increase to the pipeline capacity, an equalization basin could be constructed at the RP No. 3 site to store flow during the peak hours of the day, discharging stored effluent to the interceptor during low flow periods. This method of flow equalization will reduce diurnal peak flows to RP No. 1 from Southridge Village (3.5 mgd) and the City of Fontana (11.2 mgd). This alternative would provide time for the City, Chino Basin MWD, and the Regional Water Quality Control Board to determine the ultimate role of RP No. 3 in the regional wastewater treatment and water reclamation system. A potential role for the RP No. 3 site would be to construct a pilot water reclamation plant with an approximate capacity of 1.0 mgd, with the capability of expansion to 4.0 mgd. Water reclamation at the RP No. 3 site would make reclaimed water available for landscape and agricultural irrigation purposes, and possibly for groundwater recharge use.

The locations of the basic onsite sewage collection facilities, as shown on the Sewer Master Plan, will be similar regardless of the sewage treatment alternative that is eventually implemented. However, the requirements for and locations of force mains and pumping stations versus a gravity system will vary according to the chosen treatment and disposal alternative. There are existing sewer mains under Jurupa Avenue from Live Oak to Juniper and south on Live Oak to the RP No. 3 at the SCE easement. The Sewer Master Plan (Exhibit 3.9) depicts a 14" force main adjacent to the diagonal SCE easement, running from the southwest corner of the planning area to the treatment plant. A pumping station will be constructed at the southwest corner of the planning area to the termination of the proposed 14" force main. The Sewer Master Plan proposes a series of sewer mains, ranging from 8" to 15" in size, to be located generally along proposed street rights-of-way. These mains will be designed to flow directly to RP No. 3 from the eastern village, or to the proposed pump station in the southwest corner of the western village.

Capital costs for the recommended Sewer Master Plan are estimated at \$11.8 million; this estimate includes flow equalization basins, sewage treatment capacity at RP No. 1, and the onsite sewage collection system. Annual costs for this system, including capital amortization, operating and maintenance costs, and sewage treatment costs are estimated at \$1.9 million.

3.6 COMMUNITY FACILITIES MASTER PLAN

The Community Facilities Master Plan for Southridge Village is presented in Exhibit 3.10. This plan delineates specific planning units to be reserved for schools, a fire station, a police station, and other public or quasi-public facilities.

3.6.1 Student Generation and School Facilities

Two school districts have jurisdiction over the Southridge Village planning area: Fontana Unified School District (FUSD) for the area west of Beech, and Colton Joint Unified School District (CJUSD) for the area east of Beech. The two districts provide different sets of student generation factors which are used to estimate the number of students that will occupy a new residential development.

It has been proposed to the FUSD and CJUSD Boards of Directors that school services for the entire Southridge Village community be provided by FUSD. A determination on this suggested school district boundary adjustment has not yet been reached. To allow for consistent school facilities planning, this Specific Plan uses the student generation factors provided by FUSD. These factors are considered appropriate because most households in Southridge Village would be served by FUSD with the current district boundaries; and because the FUSD factors are based on survey data related to over ninety percent of the development areas within the City of Fontana. The following estimates of student generation were developed using the most current factors from FUSD:

Education Level	Generation Rate	Number of Units	Number of Students
Elementary (K-6)	.50	8,810	4,405
Junior High	.14	8,810	1,233
High School	.09	8,810	793
Total Student Generation			6,431

The Community Facilities Plan designates six elementary school sites within Southridge Village; four in the FUSD service area, and two in the

CJUSD service area. Each elementary school is tentatively planned for a capacity of 800 students. If the FUSD student generation rates are realized, each school would have an average attendance of 734 students. It is believed that applying the FUSD factors to Southridge Village may be conservative; that is, these factors may overstate the actual number of students as development occurs. This is because the existing development in the City is largely of a single family detached character. Because of the higher average density in Southridge Village, including substantial single family attached and multiple family housing, it is expected that student generation per household may be less in Southridge Village than in the City as a whole.

Each elementary school site is six acres in size and is located adjacent to a four- to five-acre neighborhood park or the community park. This will provide opportunities for joint use of open space and recreation facilities, and maximize land use efficiency. Each school/park site will be accessible from neighborhood pedestrian and bicycle paths linked to the community-wide trail system. Convenient vehicular access to each school is also provided. The elementary schools will be distributed throughout the community to provide logical service relationships for surrounding neighborhoods.

A 20-acre junior high school site is located in the western village, near the subregional center, and in proximity to the areas with the greatest density of residential units. Live Oak and Cherry Avenues provide easy vehicular access and the easement-greenbelt system allows easy pedestrian access. The 20-acre junior high site will provide for approximately 1,200 to 1,300 students.

It is proposed that the approximately 793 senior high school students be accommodated by expanding the existing Fontana High School. Expansion of the high school could accommodate up to 1,000 additional students without requiring additional land. The FUSD does not wish to acquire a new high school in the Southridge Village planning area.

The estimated capital costs for school facilities, including land acquisition, construction, and furnishings, is \$19.7 million for six elementary

schools, \$7.9 million for the junior high school, and \$4.4 million for the Fontana High School expansion to accommodate additional students. Total capital costs for schools are thus estimated at \$31.9 million.

With the implementation of this plan for schools, residents of Southridge Village will have local elementary and junior high schools to which to send their children, avoiding long bus trips to already overcrowded schools. The addition of the new schools could also help alleviate existing crowded conditions by providing alternative schools for students living in other parts of South Fontana near Southridge Village.

3.6.2 Police Protection Facilities

The Police Department of the City of Fontana has indicated that development of Southridge Village would require construction of a "contact office" to ensure adequate service for the site. The facility would not be a 24-hour office and could be constructed in conjunction with the fire station planned to service the area. The facility should include a reception area, telephones, private interrogation rooms, storage, and standard parking and lighting provisions. The facility is expected to require a minimum of 900 square feet.

The Community Facilities Plan designates two planning units as sites for quasi-public uses. Both sites are located on Live Oak Avenue in the western half of the community near the subregional commercial center. The larger four-acre site is located on the southwest corner of Live Oak and 'C' Street, immediately northeast of and adjacent to the subregional center. The smaller two-acre site is located on Live Oak opposite the subregional center, between 'C' Street and 'H' Street. The superior access to the four-acre site suggests that the police contact office be located there.

It is estimated that the cost for this facility would be approximately \$35/square foot for a total construction cost of about \$32,000. Capital outlay to provide equipment for the contact office and the additional personnel is estimated at \$200,000. Thus, total police facility and capital outlay costs are estimated at \$232,000.

A centrally located police contact office would reduce response time required to answer calls from community residents. At the same time, the police would have more time and officers available to serve the remainder of Fontana. In particular, police service throughout the entire South Fontana area would be expected to improve significantly.

3.6.3 Fire Protection Facilities

The significant increase in population resulting from the development of Southridge Village will require the construction of a new fire protection facility. The Community Facilities Plan proposes the construction of a new fire station within Southridge Village to house a staff of three for each of the three rotating shifts on a 24-hour basis. Because of superior access, it is recommended that the new fire station be located on the larger four-acre quasi-public site at the corner of Live Oak and 'C' Street. Cost savings could be realized if the fire station were built in conjunction with the police protection facility. Total capital costs for an equipped fire station, including land acquisition, site improvements, equipment, engine house, and personnel quarters, are estimated at \$496,000.

The new fire station would provide superior emergency services and improved response time for the entire south Fontana area. Fire protection throughout the remainder of the City could also benefit because of the added reserve capability provided by the new fire station.

3.7 OPEN SPACE AND RECREATION MASTER PLAN

3.7.1 Intent and Design Concept

The intent of this Master Plan is to establish a community-wide system of open space lands, parks, recreation areas, and trails throughout the Southridge Village planning area. This system will realize several objectives for a well-balanced planned community:

- . To preserve the unique natural features of the Jurupa Mountains for perpetual public enjoyment.
- . To provide a variety of recreational opportunities and open space amenities for residents of Southridge Village and the surrounding community.
- . To create a network of trails for pedestrian, horseback riding, and bicycle use that will encourage recreational activity and non-vehicular access to schools, parks, and community/neighborhood centers.

The Open Space and Recreation Master Plan is illustrated in Exhibit 3.11. This plan identifies a series of elements that are intended to realize the objectives described above. In total, about 42 percent of the planning area (1,062 acres) is proposed for various parks and open spaces uses.

3.7.2 Recreation and Open Space Elements

Regional Park/Open Space

About 906 acres of land (35 percent of the site), including the steeper slopes and higher elevations of the Jurupa Mountains, are designated to be preserved for regional park and natural open space uses. This category includes the City's existing Jurupa Hills Regional Park, located at the eastern edge of the planning area. The plan is intended to accommodate a major expansion of the regional park through acquisition of additional land in the hills. It is expected that a relatively small part of the hills would be improved for recreational purposes, with most regional park land being retained in a natural condition. Uses in this area are expected to include the preservation and interpretation of native vegeta-

tion, wildlife, and archaeological sites; a network of trails for hiking and horseback riding; and areas with improvements for camping, picnicking, and group assembly.

Based on an expected population of approximately 24,200 persons, the plan would provide about 37 acres of regional park/open space land per 1,000 population. This land would also serve a total area and population much greater than that of Southridge Village.

Neighborhood and Community Parks

Neighborhood and community parks within Southridge Village are intended to meet the needs of residents for more active and intensive recreational pursuits. A total of 53.5 acres of land is proposed for these local parks, sited throughout the urban areas of Southridge Village.

Nine neighborhood parks, ranging in size from two to five acres, will provide a total of 39.5 acres of park land for local residential neighborhoods. Most of these parks are located within and adjacent to the Edison and Metropolitan Water District easements. Five of these parks are adjacent to elementary school sites, to provide for joint use opportunities. When combined with adjoining school playgrounds, the parks will achieve effective use areas up to seven acres in size. Uses within the parks will be oriented toward ball sports and picnicking, with turf fields, courts, barbecues, tables, and shaded picnic grounds provided.

A 14-acre community park is also proposed for development on a site adjacent to the subregional center in the western village. An elementary school is located next to this park also. The community park will incorporate the Fontana Bird Park, and provide more extensive recreational areas and a broader range of uses than the neighborhood parks. Parking will be ample, as the subregional center will be directly across the street.

Community-wide Trail System

All of the regional and local parks will be accessible via a community-wide system of trails. This trail network will join together parks and

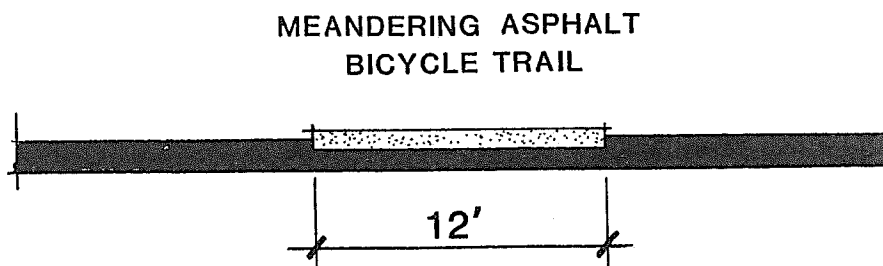
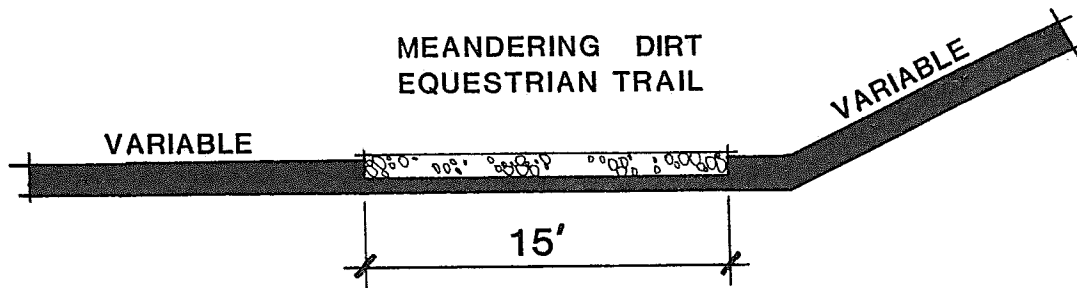
recreation areas, schools, community centers, and residential neighborhoods. The network is intended to link into the City and County regional trail system, and also to provide non-vehicular accessways throughout Southridge Village. Several distinct types of trails are proposed as part of this system:

- . Combined hiking and equestrian trails, located in the regional park/open space area and along major utility corridors; typically unpaved and 15 feet wide.
- . Combined pedestrian and bicycle trails, located off-street along the utility easements and some streets, linking the residential neighborhoods with schools and other activity centers; typically paved and 12 feet wide.
- . Bicycle lanes located along most arterial and collector streets; typically 6 feet wide.
- . Sidewalks located along local, collector, and arterial streets; typically concrete or asphalt paved and 4 to 5 feet wide.

Exhibit 3.12 illustrates typical sections for the first two types of trails. Hiking/equestrian trails and pedestrian/bicycle paths will be physically separated from each other except at intersections. With the exception of in-street bicycle lanes and at street crossings, the trail systems will be safely separated from vehicular travel routes. Bicycle lanes will be properly signed and striped, and trail/street crossings will be well marked.

Hiking/equestrian trails in the regional park/open space area will also serve as dirt fire breaks and, at some locations, as fire access roads. Scenic overlooks in the hills will be incorporated into the hiking/equestrian trail system. One grade-separated crossing of Jurupa Avenue is proposed to encourage safe and convenient equestrian access from the existing community to the north into the Southridge Village trail system.

About 102.5 acres of utility easements outside of the neighborhood parks are designated as greenbelts on the Master Plan. The park areas will be landscaped with turf, shrubs and trees, subject to certain restrictions negotiated with the utility companies. The easement greenbelt areas outside of the parks will be maintained in natural vegetation.



TYPICAL TRAIL SECTIONS

Southridge Village
CREATIVE COMMUNITIES

NOT TO SCALE

pbr

EXHIBIT 3.12

Commercial Recreation

A six-acre site adjacent to and north of the subregional center in the western village is designated for commercial recreation uses. This site is intended to accommodate recreational uses not found in the various park areas such as water slide, veldrome, batting cage, health spa/club, or indoor court sports. In this way a full range of recreational outlets may be provided conveniently for the entire community.

Public Athletic Facilities

The junior high school site is designed to accommodate athletic facilities for all major field, court, and pool sports and to include spectator areas. The athletic facilities will be oriented toward school and public leagues, and general public use during non-school hours. Parking and trail access will be readily available, in addition to restrooms, water, and bleachers.

Private Recreational Areas

The plan indicates that private recreation areas will be provided within all residential areas planned for Townhome, Garden Home, or Carriage Home development. These facilities will be provided by the individual builders for use and maintenance by residents of the respective developments. These additional recreation areas will augment the community-wide public park and recreation facilities. Typically, private recreation areas would include court sports and pool/whirlpool/sauna facilities.

3.8 LANDSCAPE MASTER PLAN

3.8.1 Southridge Village Landscape Theme

The basic intent of the Landscape Master Plan is to enhance the visual qualities of Southridge Village by blending architectural form with the landscape development. Master landscape planting will provide elements that enhance the character of the site, establishing a project theme and community identity.

The Landscape Master Plan will utilize and accentuate the strong visual elements of the site, such as Jurupa Mountains and eucalyptus windrows. The windrow planting will serve the project thematically, as eucalyptus species will become the dominant tree type for the community's master landscape plantings. The eucalyptus, in conjunction with other trees and flowering shrubs, will establish a consistent feeling of community and identity. Wide, tree-lined streets will complement residential architecture in the various neighborhoods. Planting will accent community elements, and walls with flowering vines and shrubs will define neighborhoods.

The landscape concept for Southridge Village emphasizes dominant plant materials, mainly tree forms, which will act as the "canopy" and vertical elements within the community. While each street has a particular identity, a continuity exists in the community by way of the basic form of the plant materials. For example, a eucylaptus windrow presently borders part of the northern edge of the site adjacent to Jurupa Avenue. It is the intent of this plan to incorporate this landmark in the community development program, and to reinforce it by extending the windrow the length of the street.

3.8.2 Landscape Design Guidelines

The following guidelines are intended to promote a consistent and careful treatment of street tree plantings and community-wide landscaping programs.

- Street tree planting should, in most instances, be planted in informal groupings.
- Street tree planting along arterials and collectors should include, in most instances, areas of mounded turf or mounded shrub plantings.
- Tree and shrub areas should be mass planted at key areas to emphasize entries, transitions and destinations.
- All Master Plan landscape plantings shall be adequately irrigated and maintained.
- Landscaping should be used to accentuate view windows into neighborhoods, open space areas, and parks.
- Use of drought-tolerant plant material and drip-irrigation systems encouraged for the purpose of water conservation.
- Vegetation of varying heights, textures, and colors should be used in conjunction with walls and fences that define neighborhood boundaries.

3.8.3 Elements of the Master Landscape Plan

The Master Landscape Plan for Southridge Village, is shown in Exhibit 3.13, identifies a number of areas including community entries, streets, buffer zones and parks which will receive particular kinds of landscape treatments. The plan specifies the character of the landscaping which will be installed in each designated area.

The Master Plan references a series of illustrative sections which depict the proposed character of each master landscape element. These sections are designated by the letters A through N. The following text provides a description of the major elements of the Master Landscape Plan.

Community Entries

The plan proposes special architectural and landscape treatments for major and secondary entries to the community. Three major entries are defined at Cherry and Mulberry, Cherry and Jurupa, and Citrus and Jurupa. The major entries contain plant materials which frame and define specific areas as entrance statements for the community. Vertical accent trees with a backdrop of tall open evergreens act to reinforce the entry statement. The deep, rich green color and vertical silhouettes create a

color and form which identifies to the visitor or resident that he or she is about to enter the community. Low, stone entry walls with project logo and graphics will be utilized to help define the entrance and accentuate the community concept. Other plant materials will be used to enrich this statement.

Secondary entries are located where major collector streets enter the site and are in many ways similar to the major entries. These entries also emphasize the use of evergreens and eucalyptus. They differ from the major entries in magnitude, providing a noticeable entry but at a smaller scale.

Exhibit O presents a typical entry plan view at the intersection of Cherry and Jurupa Avenues. Exhibit P shows a typical elevation view of this entry.

Streetscape Treatments

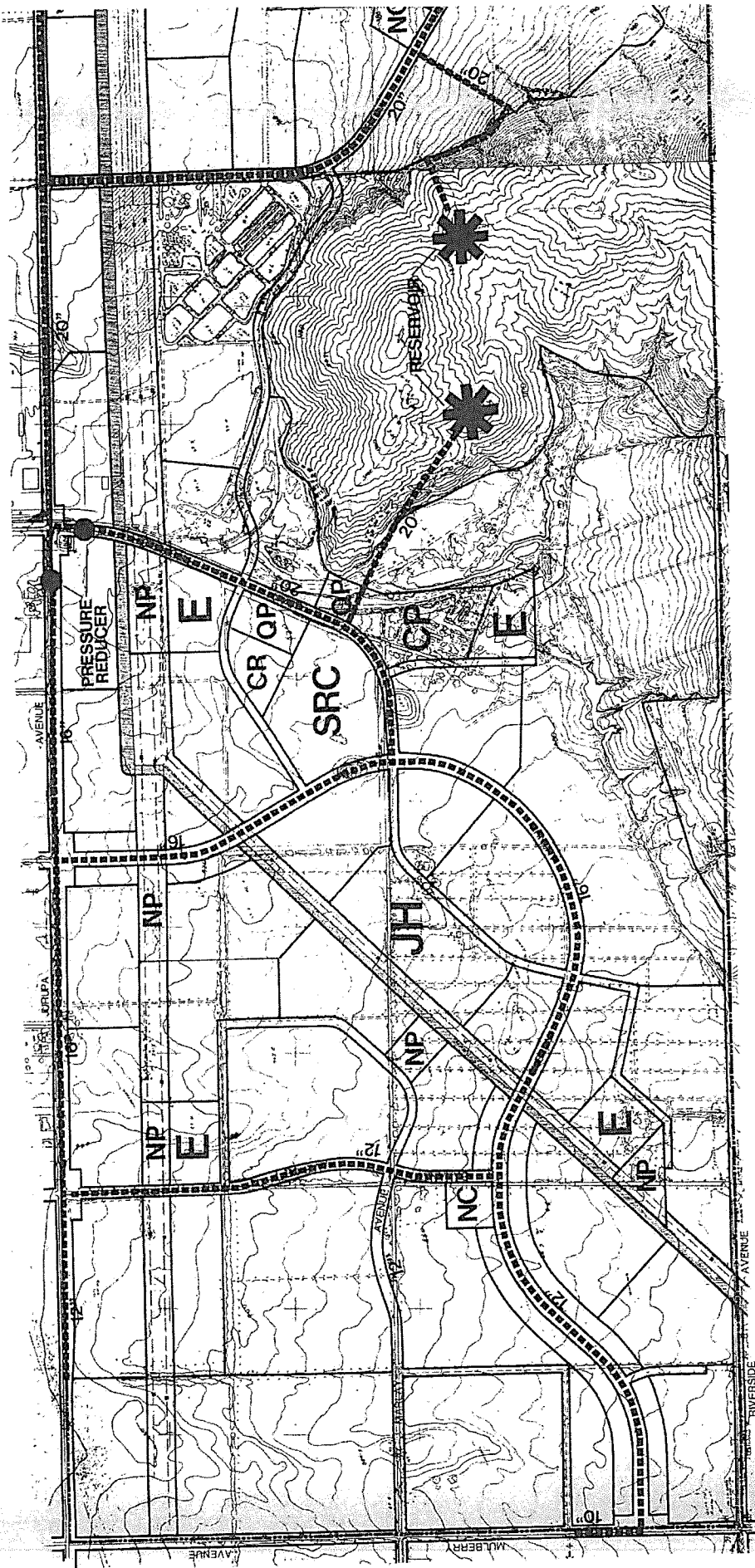
The Master Landscape Plan identifies special design treatments along arterial and collector streets within the community. A variety of elements is included in the streetscape treatments:

- Formal and informal plantings of eucalyptus, evergreen, deciduous, and flowering trees
- Landscape plantings in raised street medians
- Earth berms and mounds in parkways planted with trees, flowering shrubs, and groundcovers
- Meandering sidewalks and paths for pedestrian and bicycle use.

Table 3.6 presents a list of recommended tree species for streetscape plantings in Southridge Village. Illustrative streetscape drawings keyed to the Master Landscape Plan are presented in Sections A through N.

Village Edge Treatment

A unique feature of the Master Landscape Plan is the village edge treatment proposed for the entire length of the site along Jurupa Avenue. A



LEGEND

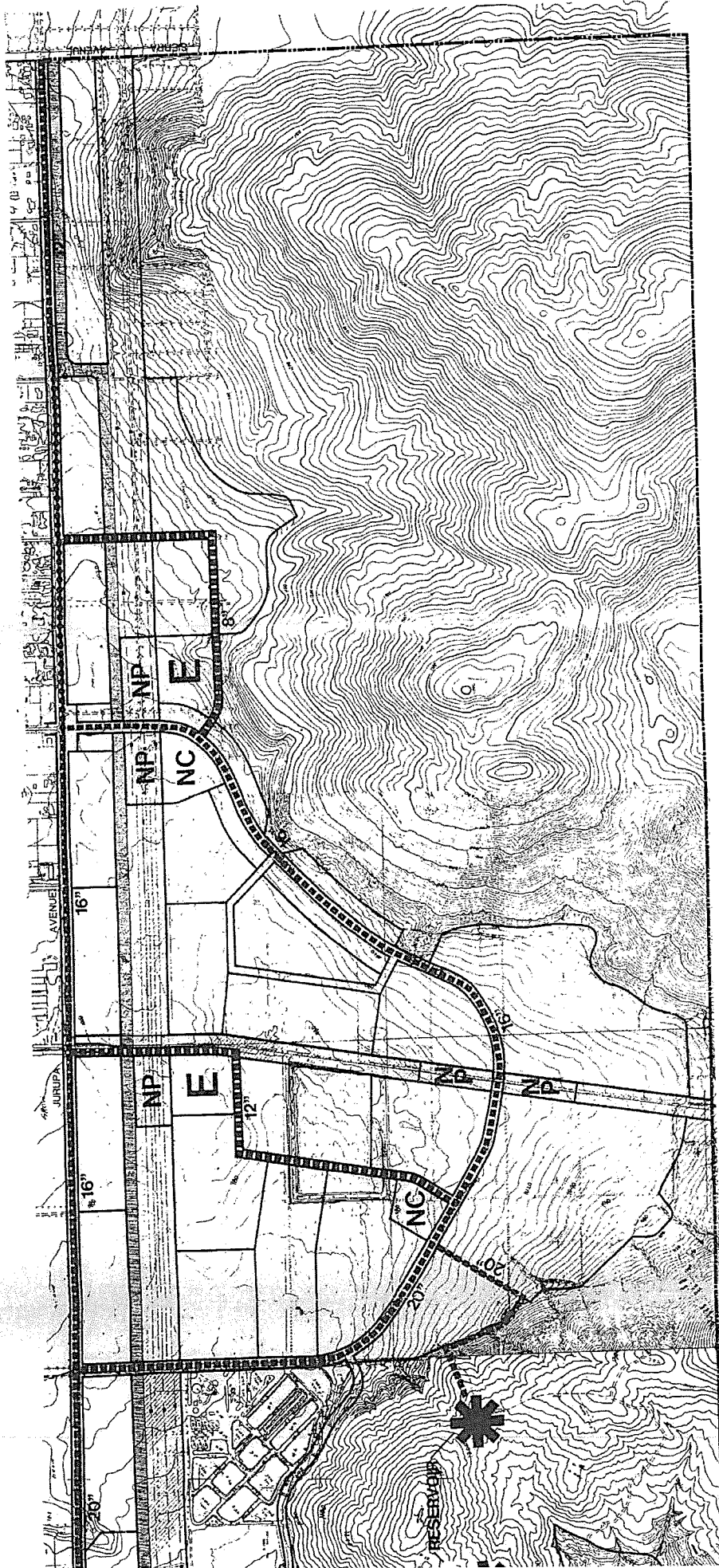
PROPOSED WATER MAIN
and DIAMETER

PROPOSED RESERVOIR

EXISTING WATER MAIN

PROPOSED PRESSURE REDUCER

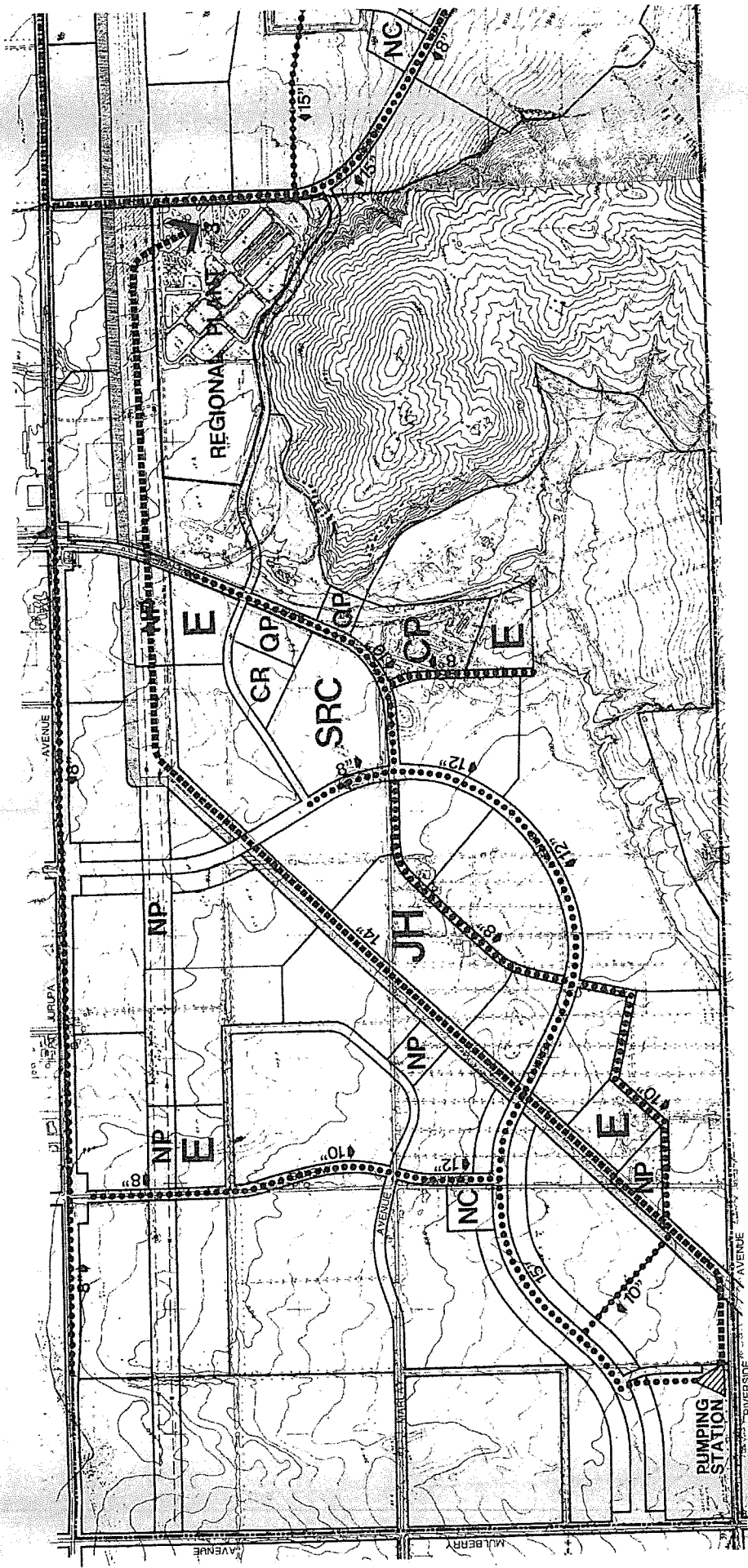
Exhibit 3.8
1 of 2



WATER MASTER PLAN SOUTHRIDGE VILLAGE CREATIVE COMMUNITIES



2012



LEGEND

PROPOSED SEWER MAIN
and
DIAMETER



PROPOSED FORCE MAIN
and
DIAMETER



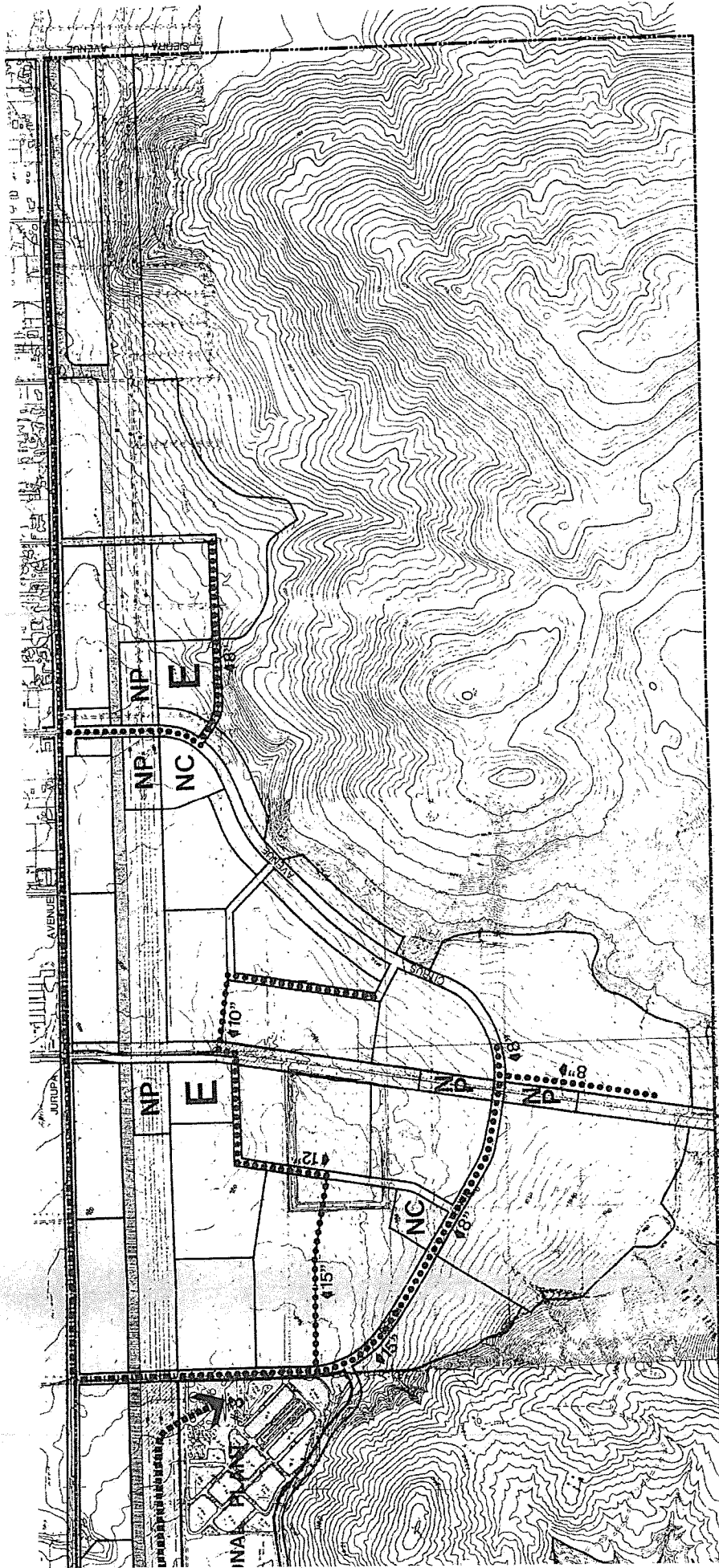
PROPOSED PUMPING STATION



EXISTING SEWER MAIN



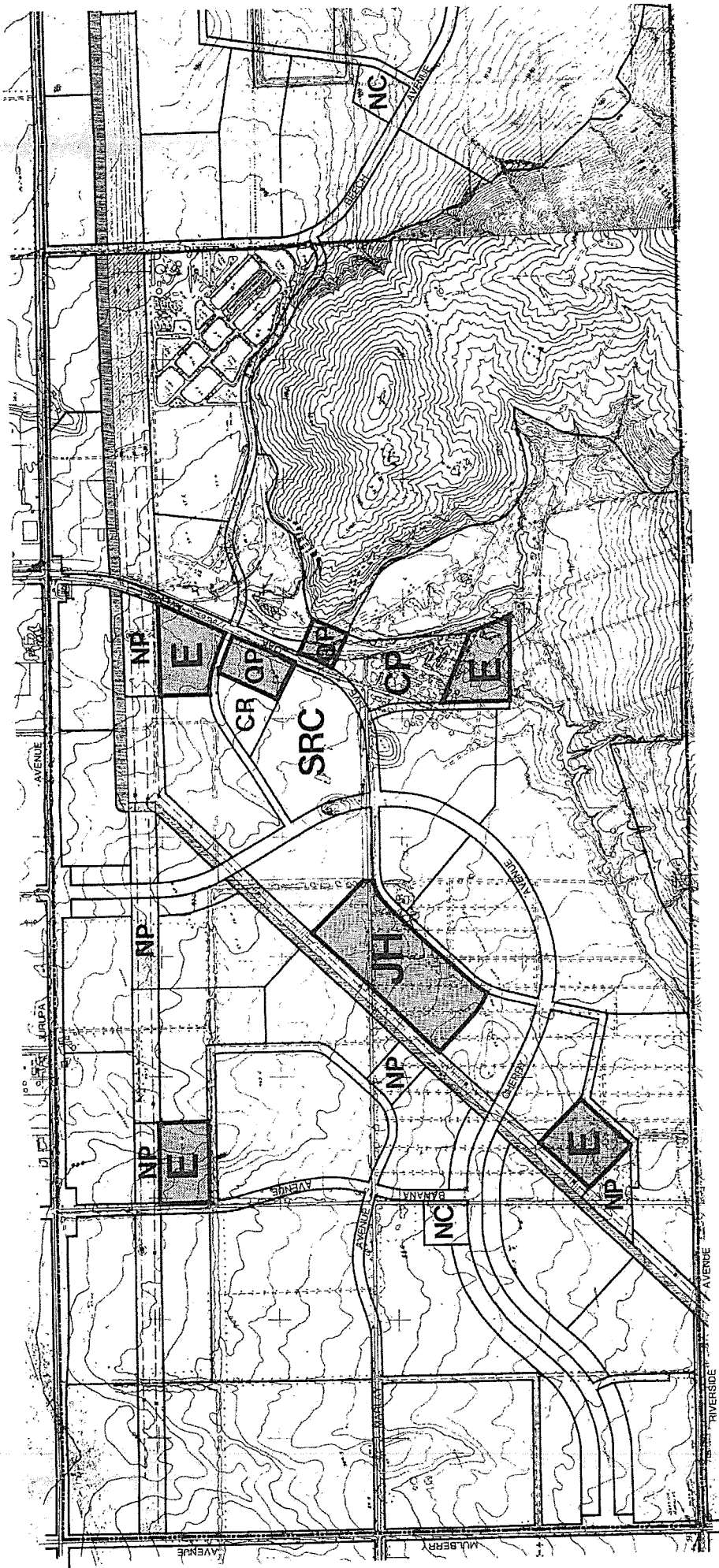
Exhibit
3.9
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SEWER MASTER PLAN
SOUTHRIDGE VILLAGE
CREATIVE COMMUNITIES



2012



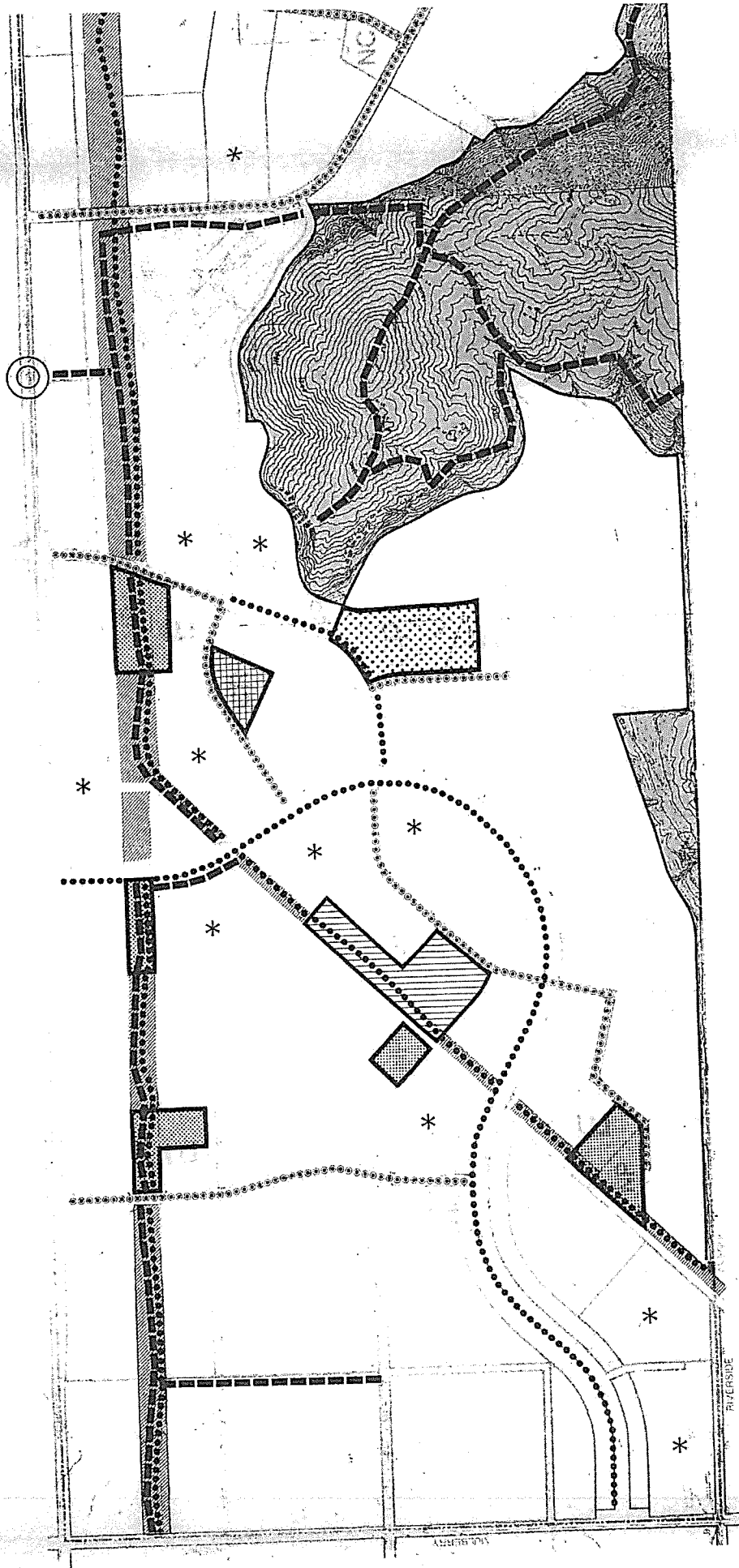
LEGEND

QP QUASI-PUBLIC

JH JUNIOR HIGH SCHOOL

E ELEMENTARY SCHOOL

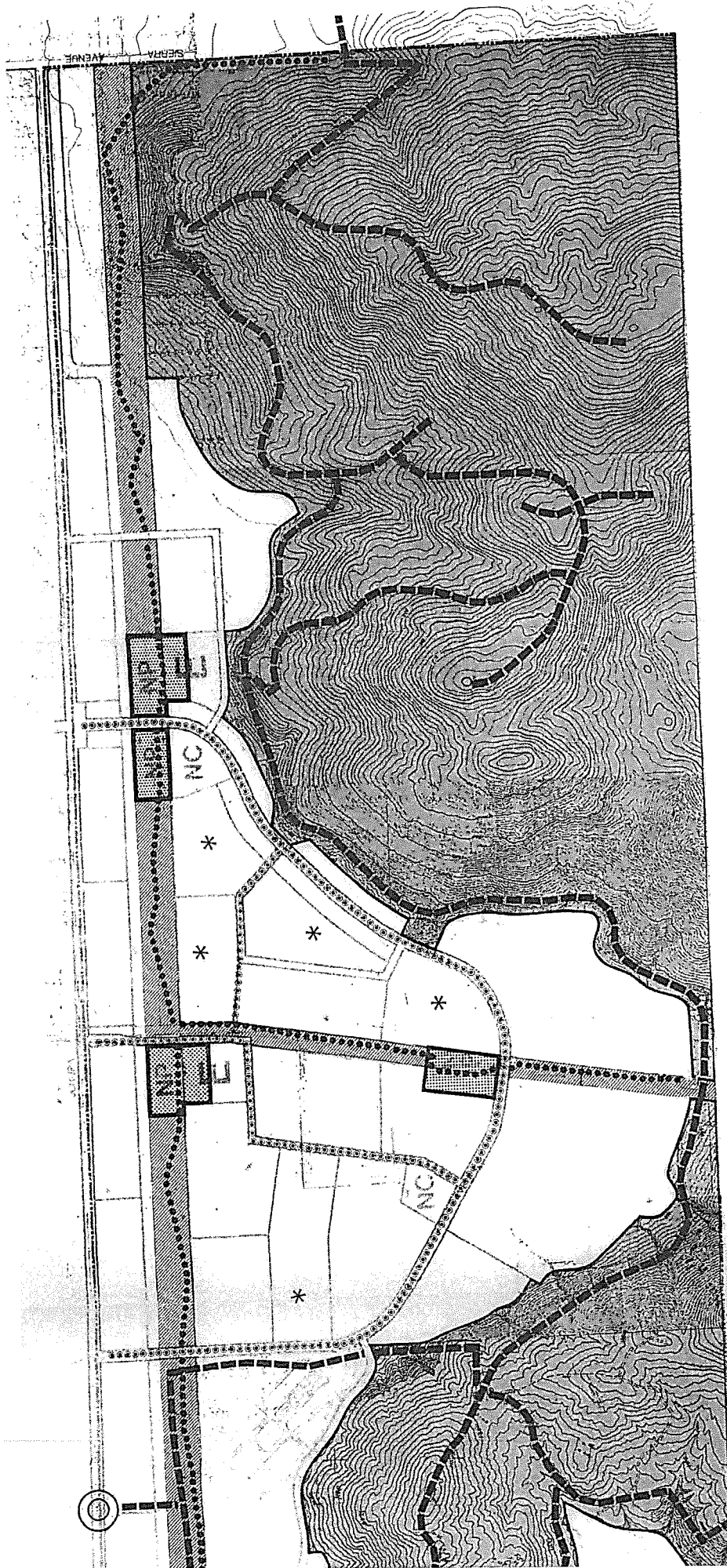
Exhibit 3.10
1 of 2



LEGEND

- REGIONAL PARK / OPEN SPACE
- COMMUNITY PARK
- NEIGHBORHOOD PARK
- PUBLIC ATHLETIC FACILITIES
- PRIVATE RECREATION
- COMMERCIAL RECREATION
- GREEN BELT
- BICYCLE LANE
- BICYCLE/PEDESTRIAN TRAIL
- EQUESTRIAN/HIKING TRAIL
- EQUESTRIAN/HIKING TRAIL CROSSING

Exhibit 3.11
1042



[EQUESTRIAN/HIKING TRAIL

] EQUESTRIAN/HIKING TRAIL CROSSING

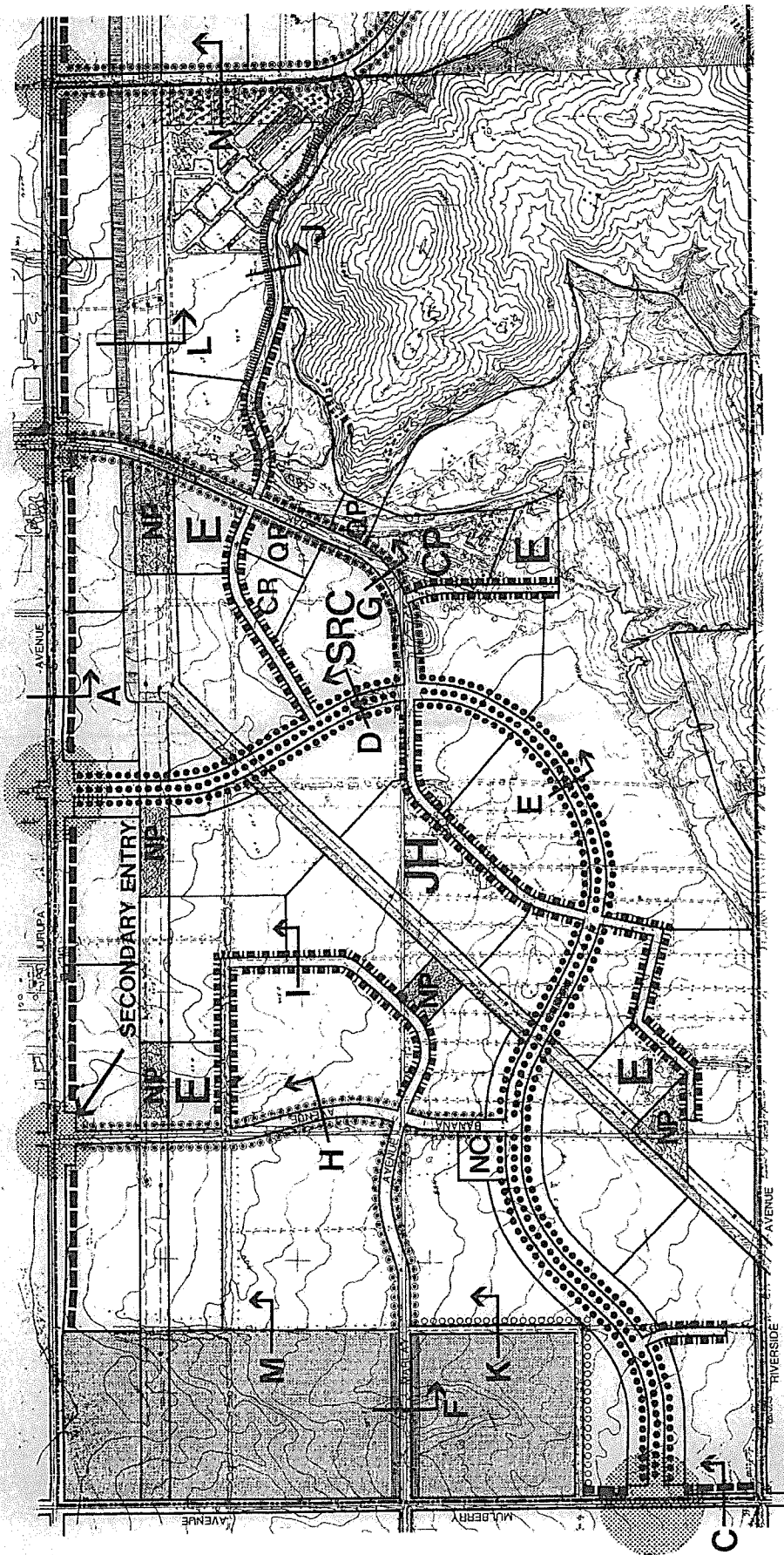
OPEN SPACE/RECREATION PLAN

SOUTHRIDGE VILLAGE

CREATIVE COMMUNITIES

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EXHIBIT 3.11

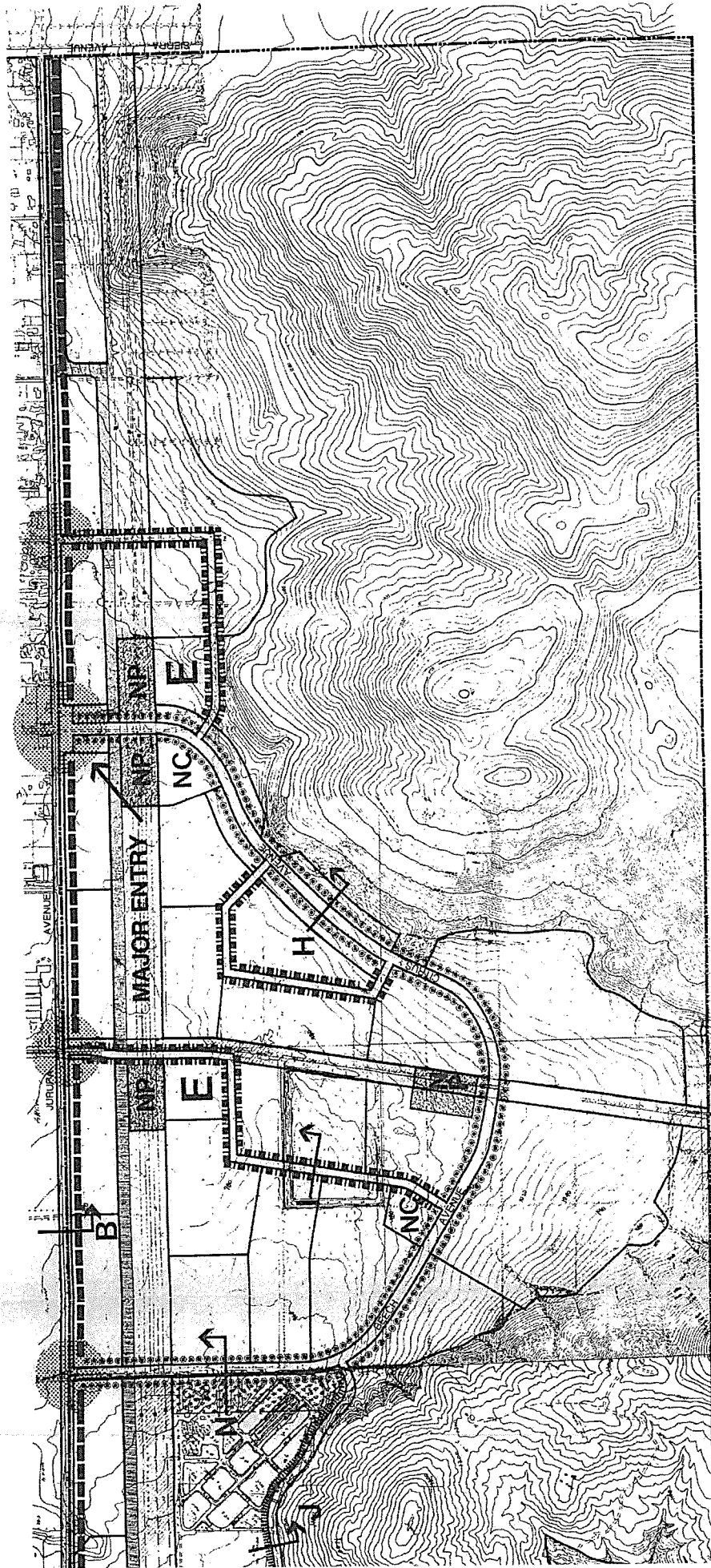
2 of 2



LEGEND

- CHERRY AVENUE: FORMAL PLANTING OF EVERGREEN OR DECIDUOUS TREES WITH TURF OR GROUND COVER WHERE MEDIUM SHRUBS AND PLANTINGS OF LARGE DECIDUOUS TREES AT RANDOM PLACEMENT ON BOTH SIDES OF MEANDERING WALK.
- 64' R.O.W. ENTRY AVENUES: FORMAL PLANTING OF EVERGREEN OR DECIDUOUS TREES WITH TURF OR LOW-GROWING SHRUBS & GROUND COVER
- 88' R.O.W. EXISTING PARKWAY - PLANTINGS TO BE DETERMINED.
- 64' & 72' R.O.W. : RANDOM PLANTING OF TALL, SPREADING CANOPY TREES, WITH TURF OR LOW-GROWING SHRUBS & GROUND COVER.
- 84' R.O.W. AT SEWER PLANT: FORMAL PLANTING OF EVERGREEN CANOPY TREE, WITH LARGE EVERGREEN SHRUBS TO SCREEN.
- 84' R.O.W. ENTRY AVENUES: EXISTING EUCALYPTUS WOOD IN CENTER WITH RANDOM PLANTING OF TALL, OPEN EVERGREEN TREES IN GROVES, AND MEDIUM SIZED EVERGREEN CANOPY TREES, ON BOTH SIDES OF THE PARKWAY. PLANTINGS TO INCLUDE TURF AREAS, FLOWERING SHRUBS AND GROUND COVER.
- 80' R.O.W.: FORMAL PLANTINGS OF DECIDUOUS TREES.
- NEIGHBORHOOD PARK: LARGE OPEN TURF AREA WITH RANDOM GROUPINGS OF EVERGREEN & DECIDUOUS TREES. LARGE EVERGREEN SHRUBS TO SCREEN ADJACENT RESIDENTIAL AREAS.
- LANDSCAPED BUFFERS OF SEWER TREATMENT PLANT: TALL AND MEDIUM HEIGHT, BOTH NARROW AND WIDE SPREADING EVERGREEN TREES PLANTED RANDOMLY ON THE BERMS AND MOUNDS. TALL GROWING EVERGREEN TREES, TALL AND MEDIUM HEIGHT AND FLOWERING SHRUBS AND GROUND COVER IN FOREGROUND, ALONG WITH LARGE TURF AREAS.

Exhibit 3.13
10/2



MAJOR & MINOR ENTRIES, LOW MASONRY WALLS
 WOODED BUFFERS, INFORMAL PLANTING OF ACCENT
 TREES WITH A BACKDROP OF TALL, OPEN EVERGREEN TREES.
 SCALE OF PLANTING & MASONRY WALLS RELATIVE TYPE
 OF ENTRY.

BORHOOD PARK: LARGE OPEN TURF AREA
 RANDOM GROUPINGS OF EVERGREEN TREES
 GREEN BUFFERS, OPEN EVERGREEN SPRINGS
 GREEN ADJACENT RESIDENTIAL AREAS.

SCARPED BUFFER OF SEWER TREATMENT
 TALL AND MEDIUM HEIGHT, BOTH NARROW
 WIDE SPREADING EVERGREEN TREES PLANTED
 ONLY ON THE BERMS AND PLANTED IN ALL
 LOW TO MEDIUM HEIGHT, PLANTED IN
 FLOWERING SHRUBS AND GROUND COVER IN
 SCARPED BUFFER, ALONG WITH LARGE TURF AREAS.

EXISTING DEVELOPMENT
 LANDSCAPE SECTION IDENTIFICATION

LANDSCAPE MASTER PLAN

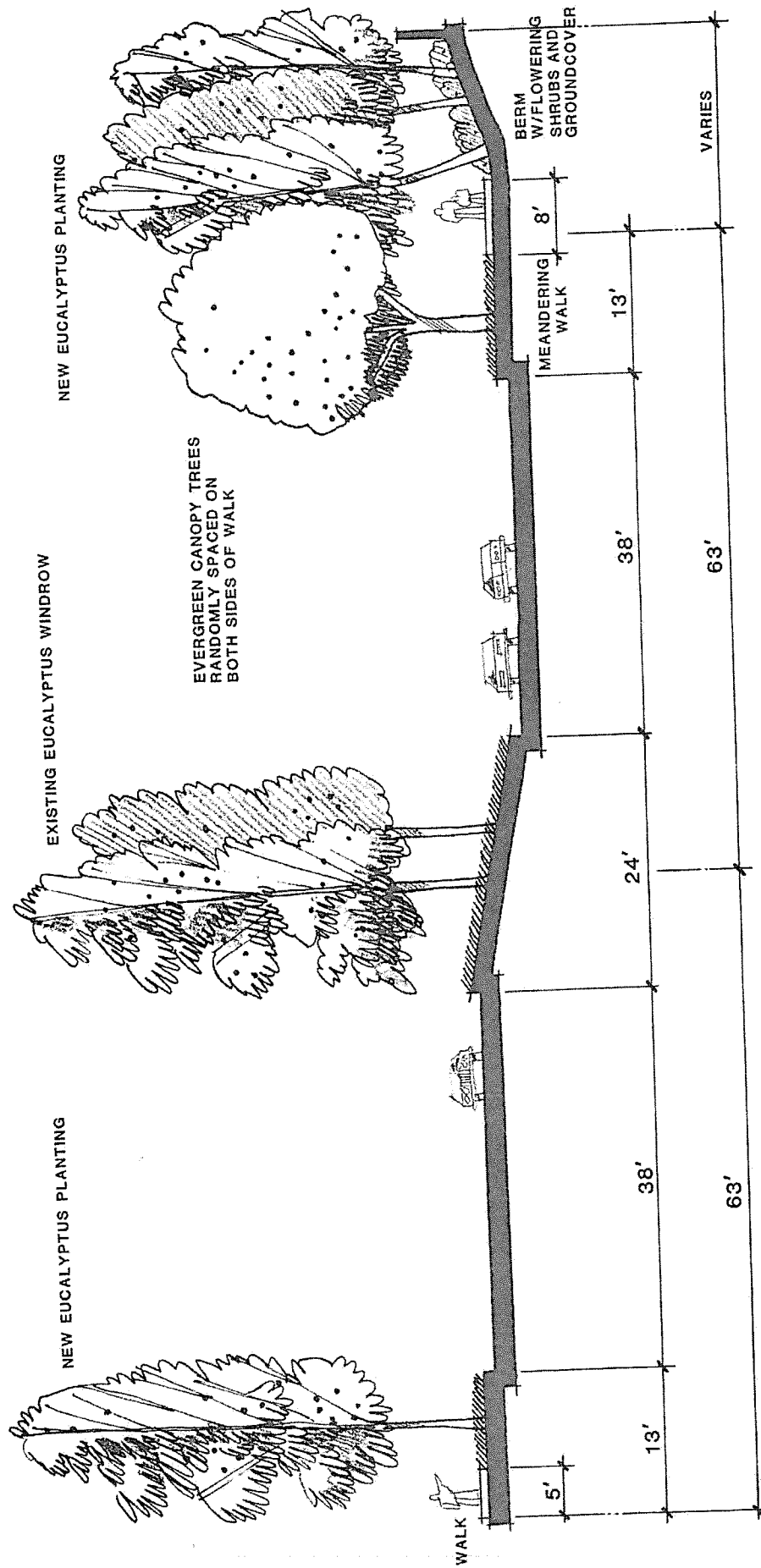
SOUTHRIDGE VILLAGE

CREATIVE COMMUNITIES



EXHIBIT 3.13

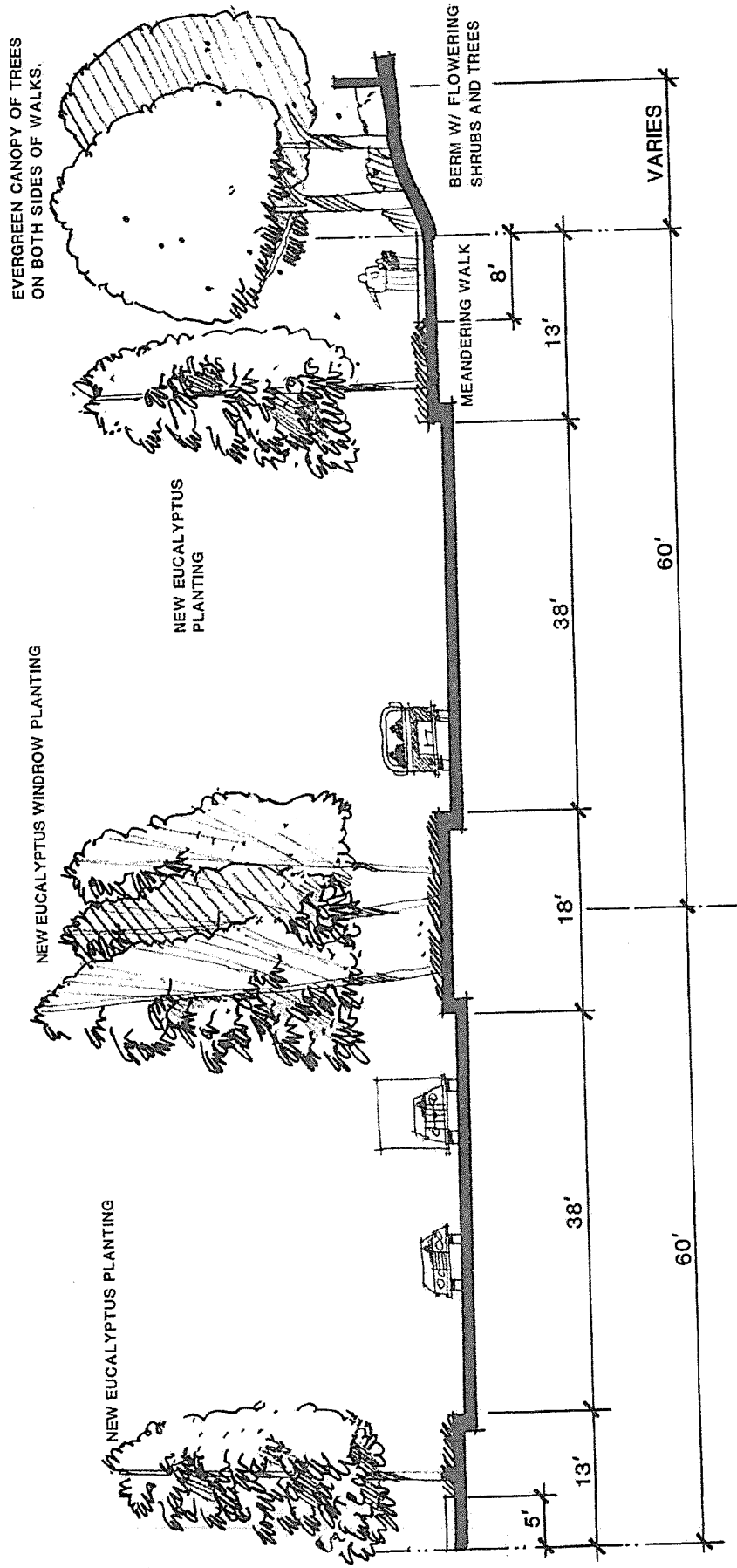
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Southridge Village
CREATIVE COMMUNITIES

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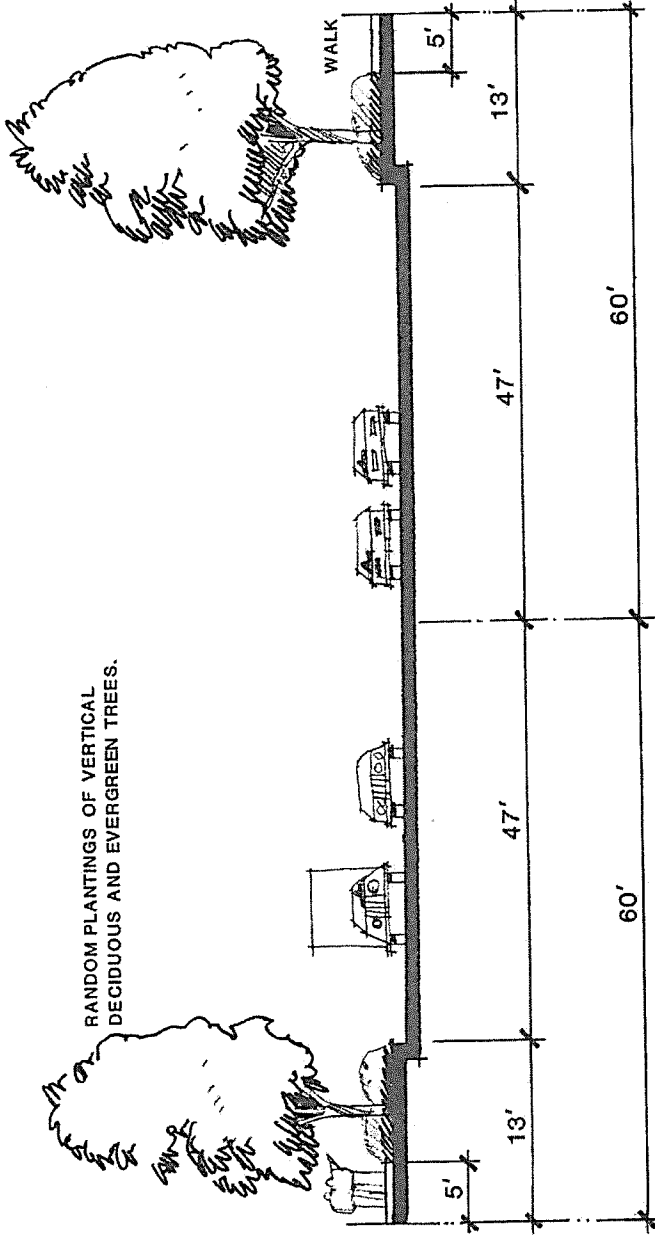


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Southridge Village
CREATIVE COMMUNITIES

RANDOM PLANTINGS OF VERTICAL
DECIDUOUS AND EVERGREEN TREES

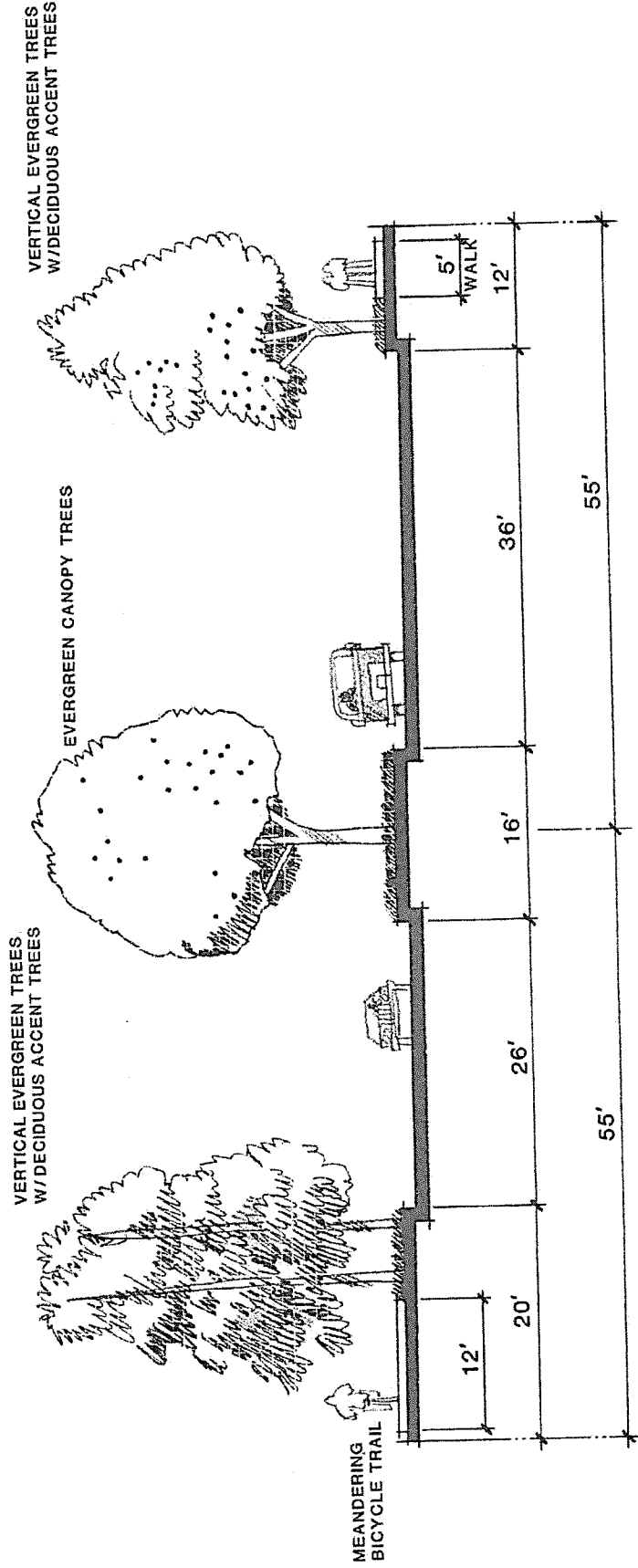


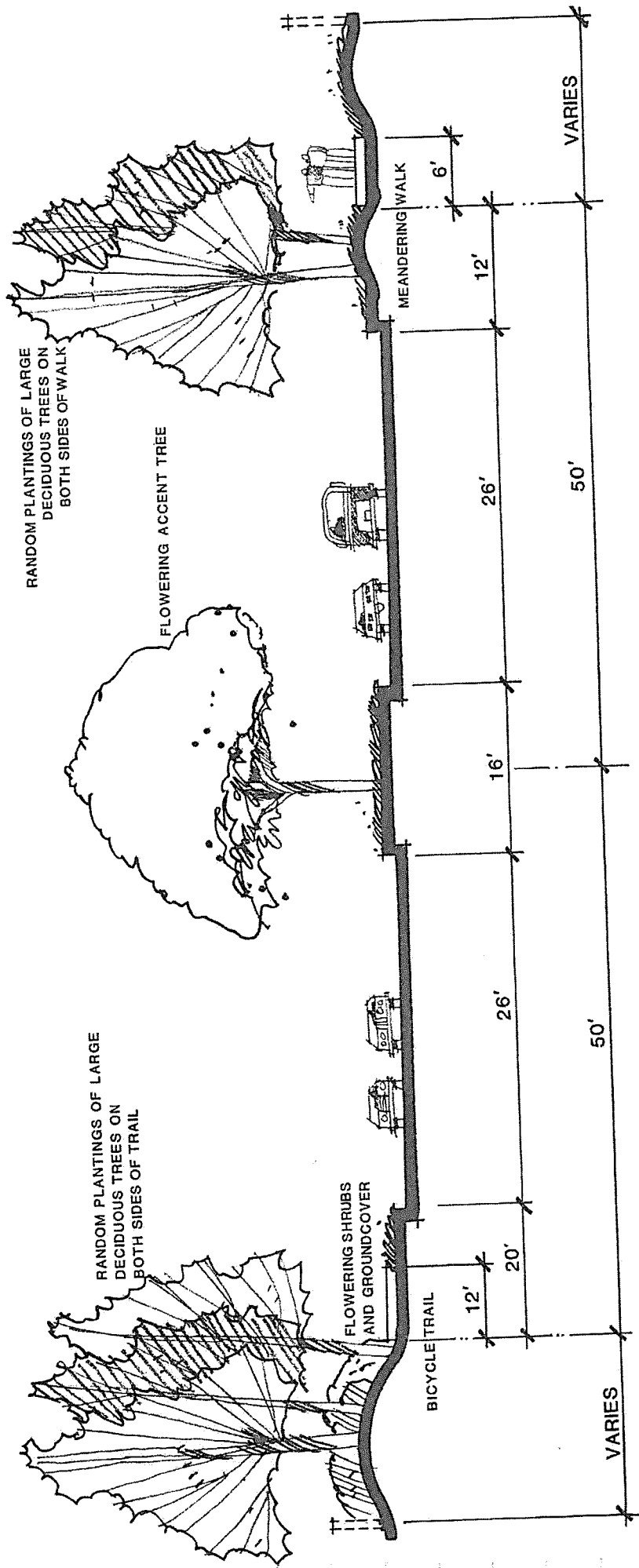
RANDOM PLANTINGS OF VERTICAL
DECIDUOUS AND EVERGREEN TREES.



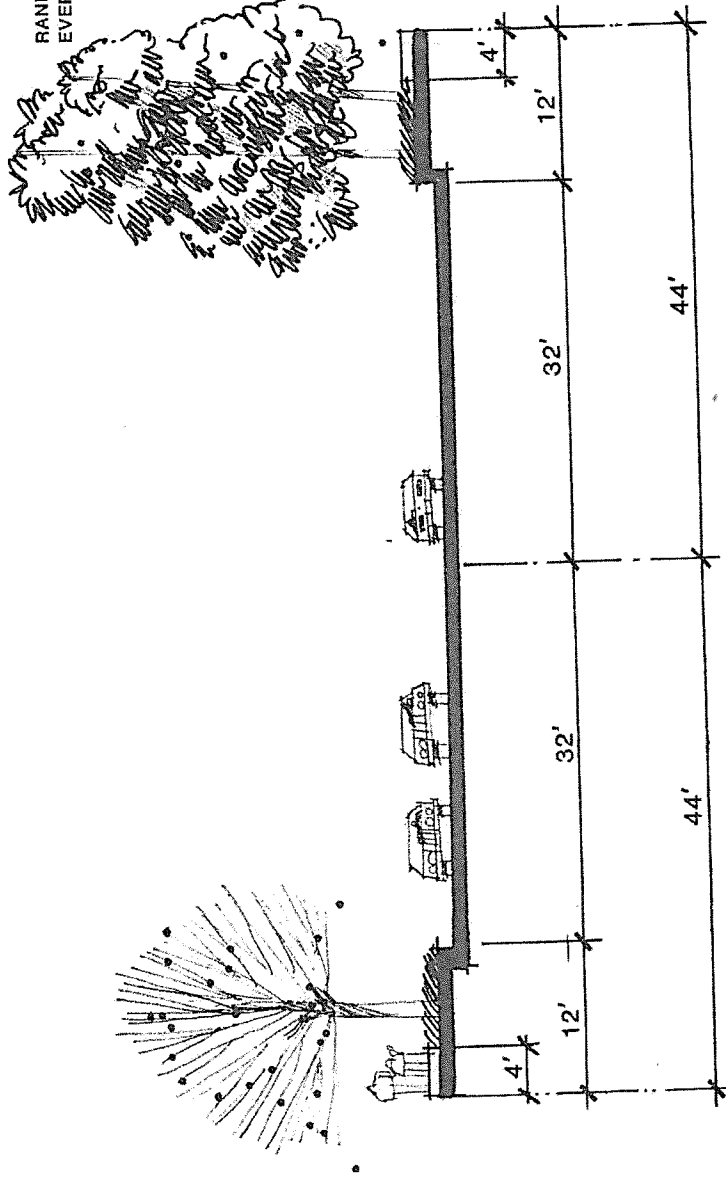
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Southridge Village
CREATIVE COMMUNITIES





RANDOM PLANTING OF VERTICAL
EVERGREEN TREES ON BOTH SIDES OF STREET

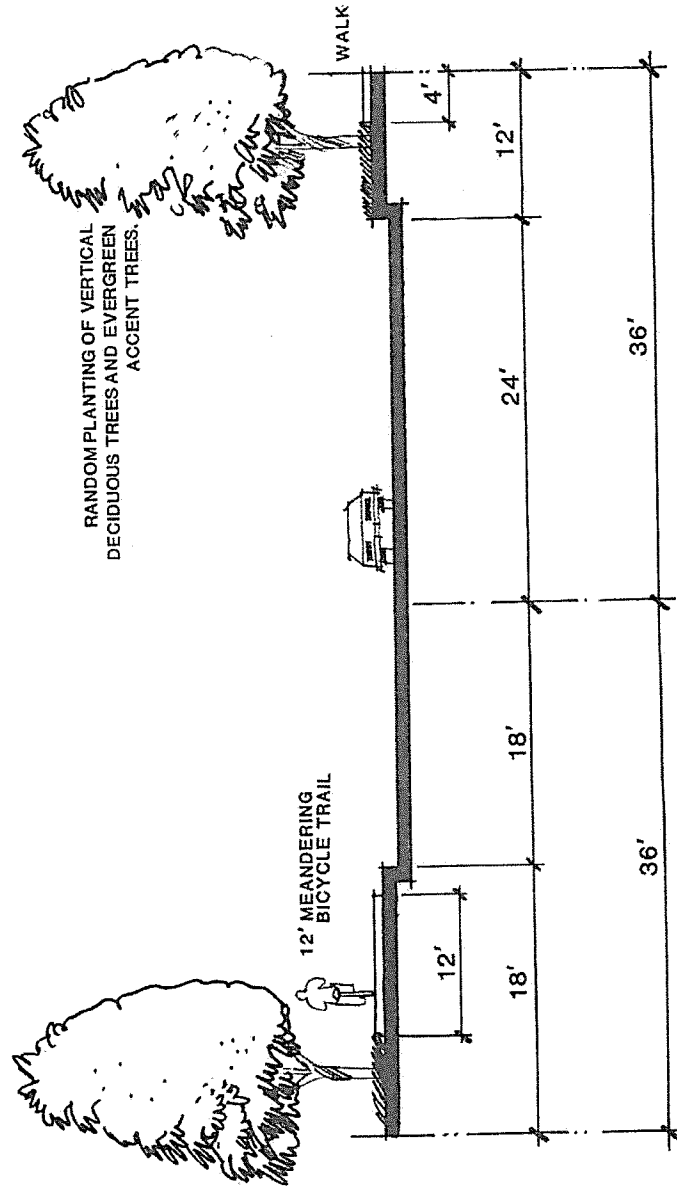


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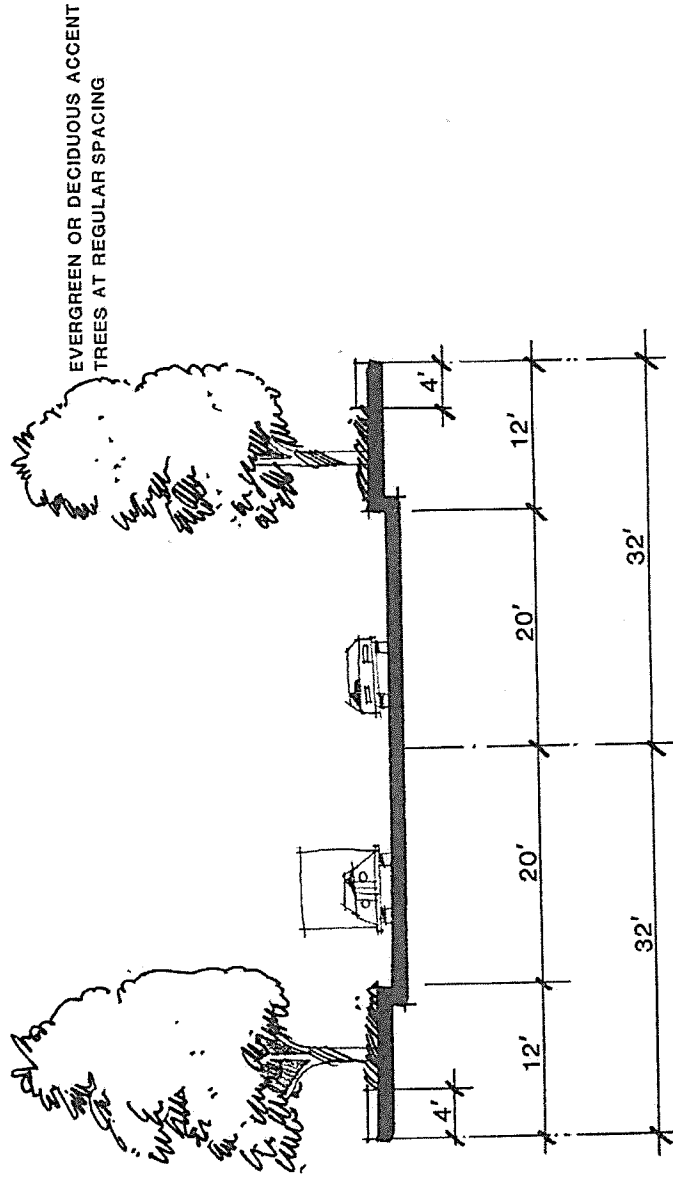


Southridge Village
CREATIVE COMMUNITIES

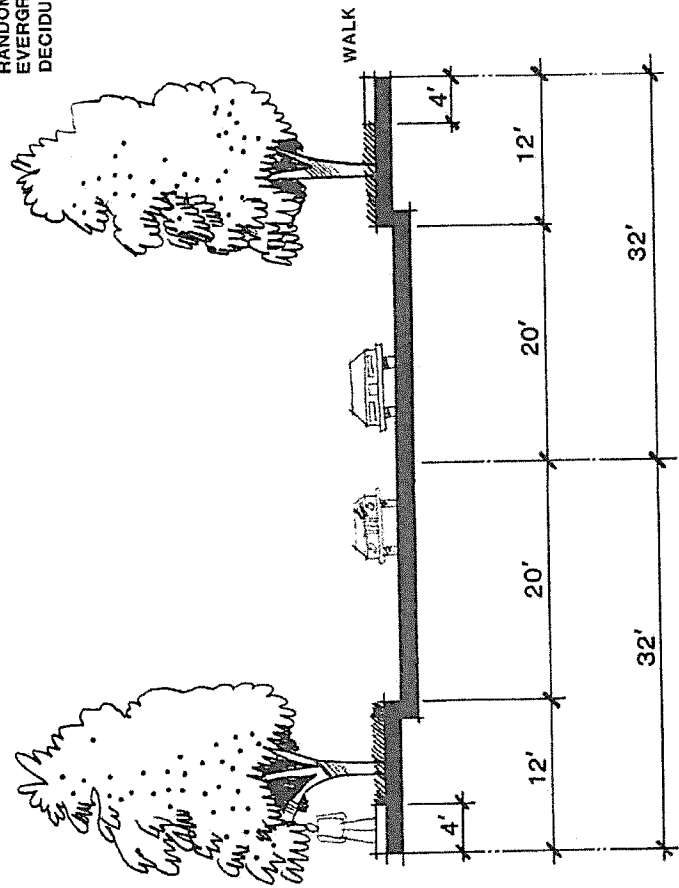


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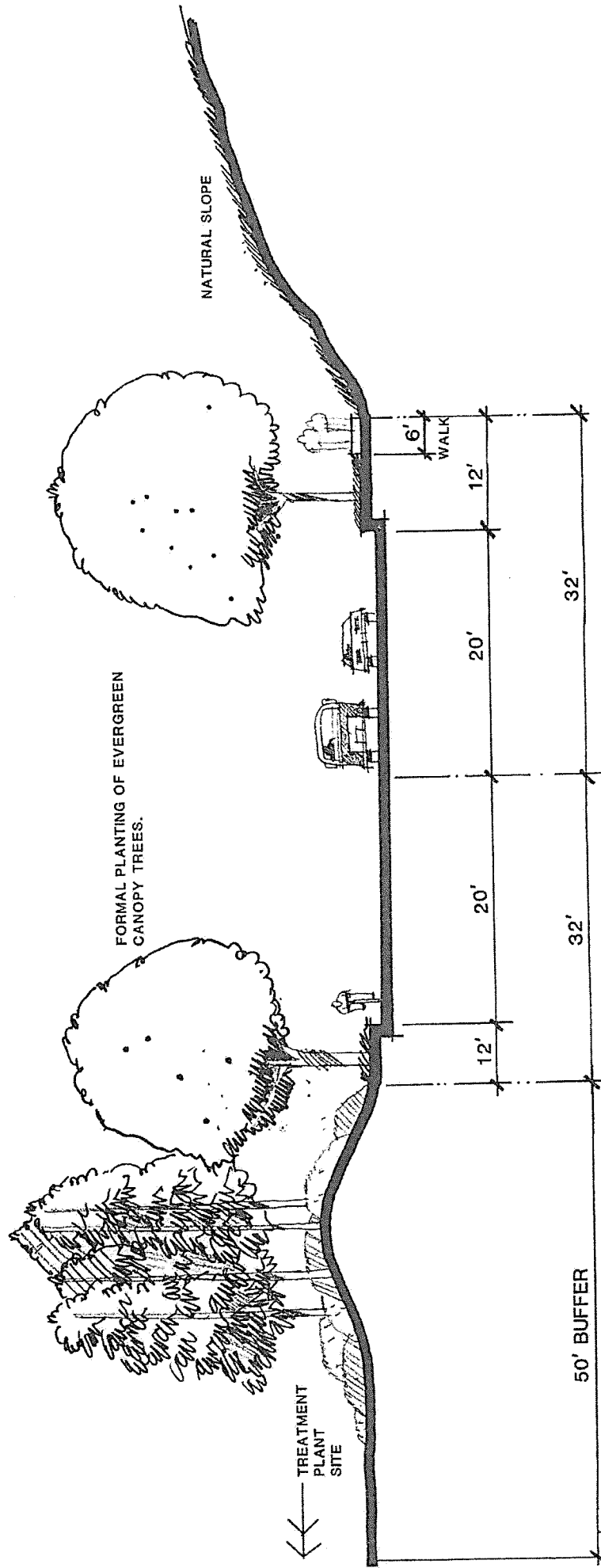


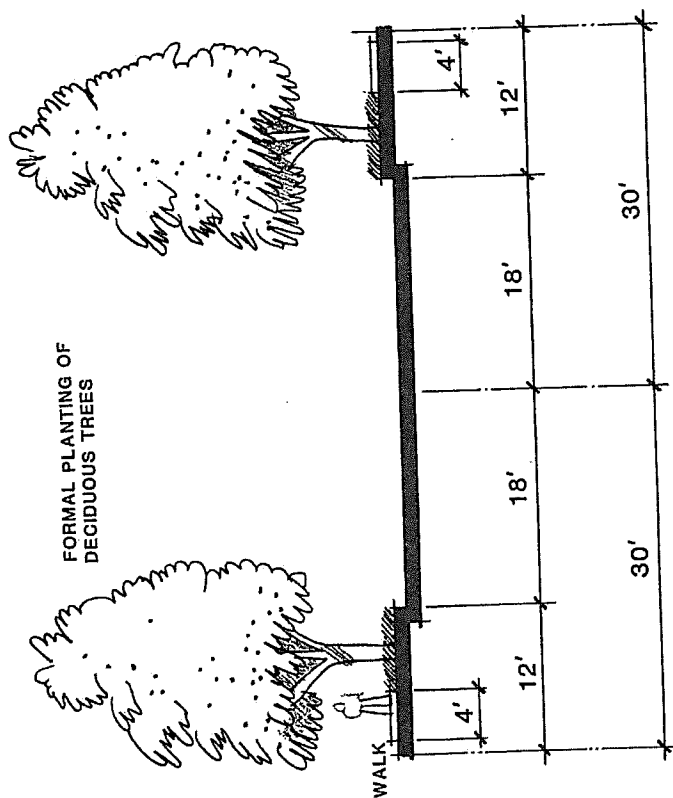
RANDOM PLANTING OF
EVERGREEN OR
DECIDUOUS TREES

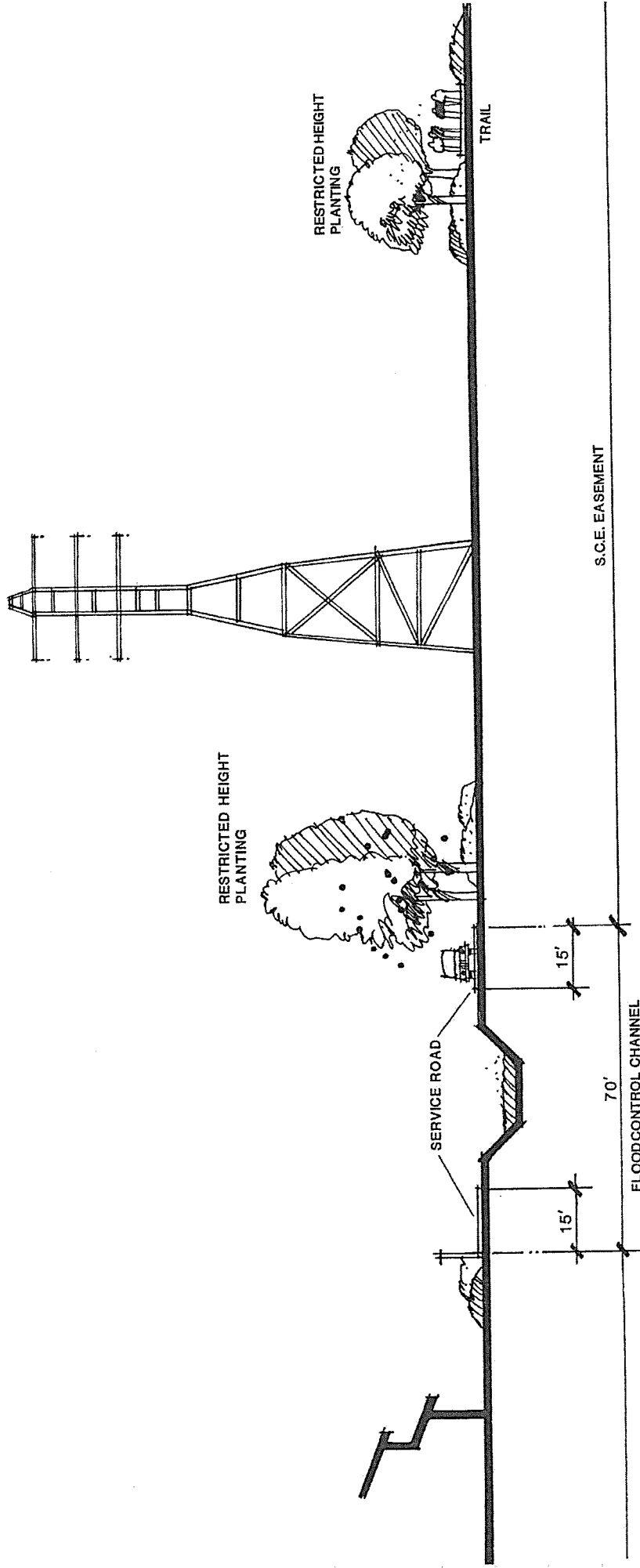


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Southridge Village
CREATIVE COMMUNITIES



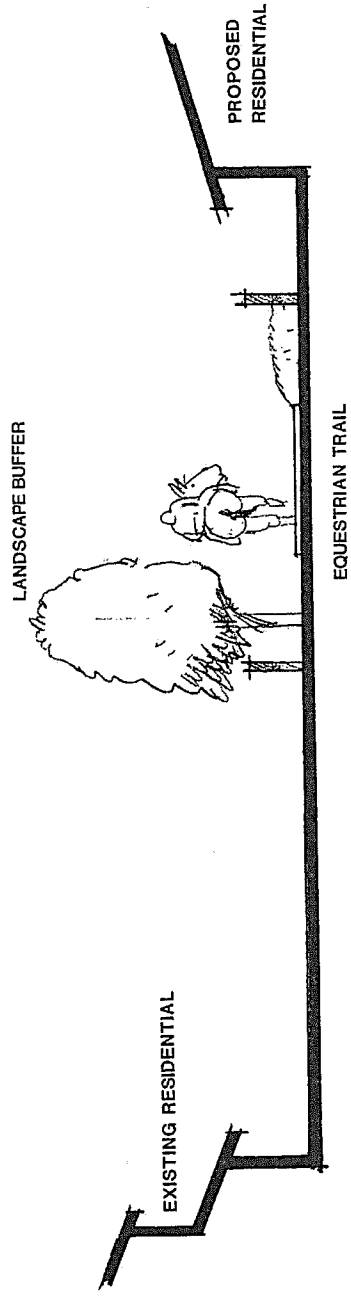




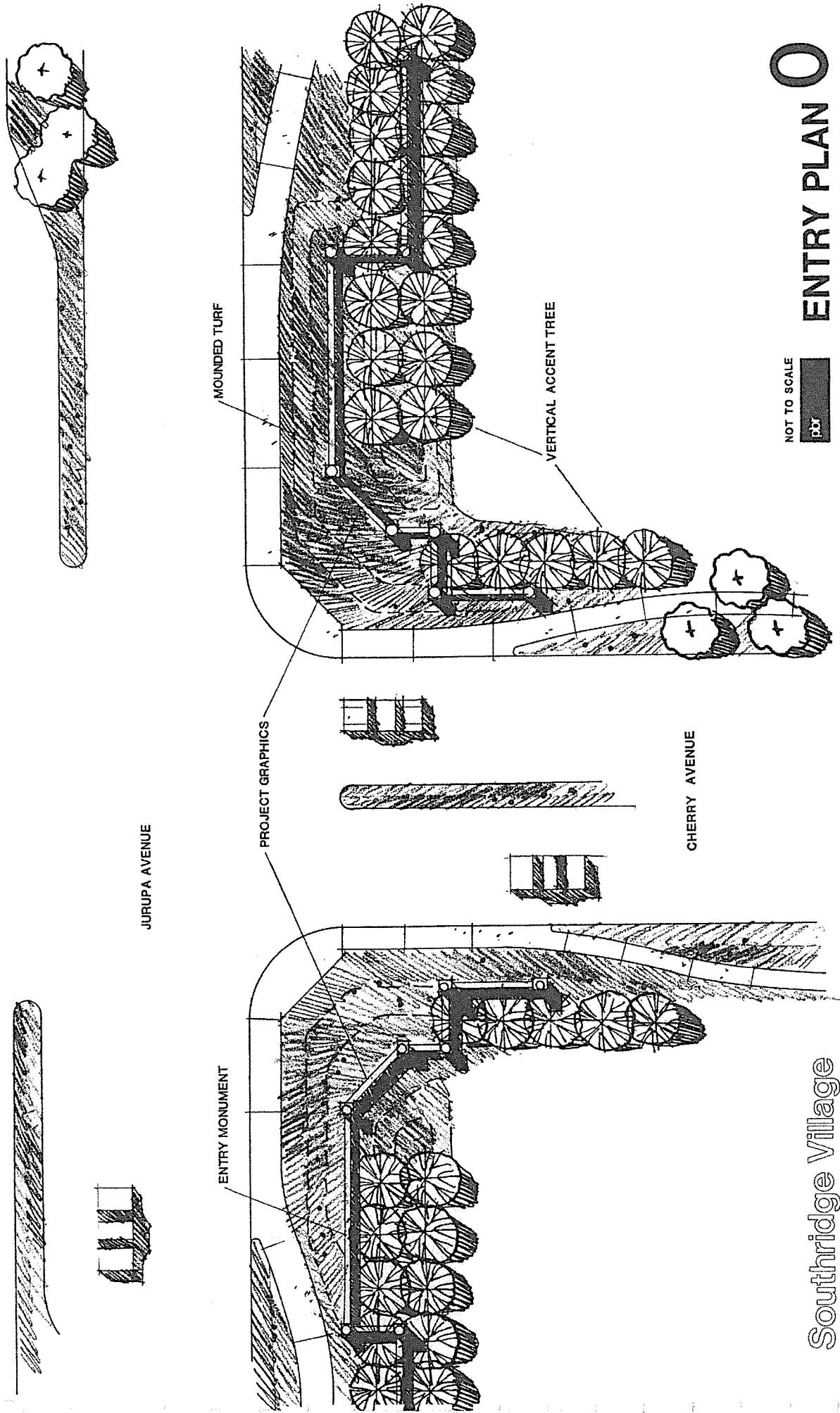
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Southridge Village
CREATIVE COMMUNITIES



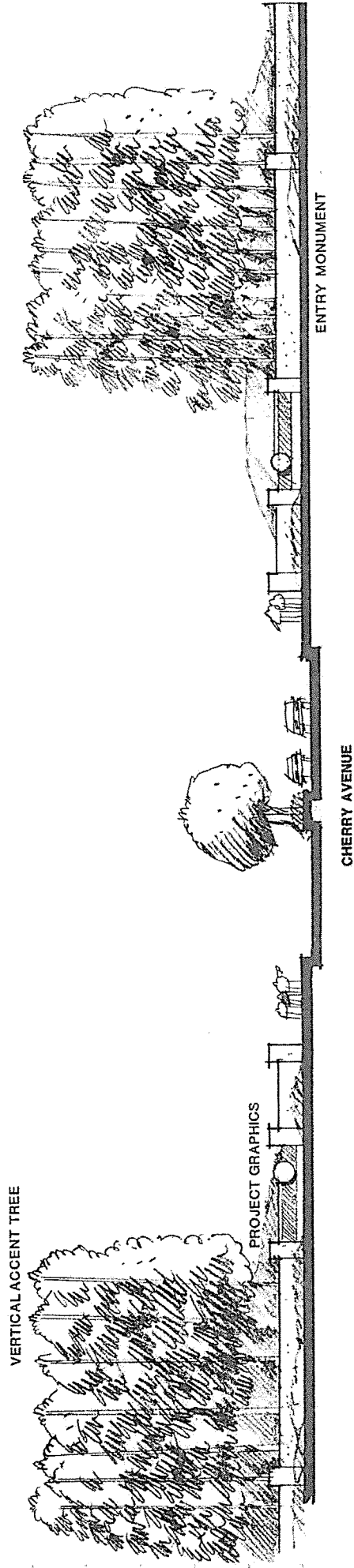




ENTRY PLAN 0

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Southridge Village
CREATIVE COMMUNITIES



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ENTRY ELEVATION P

Southridge Village
CREATIVE COMMUNITIES

Table 3.6

SOUTHRIDGE STREET TREE
MASTER PLANT LIST

Arterials:

Eucalyptus Maculata
Eucalyptus Sideroxylon
Platanus Acerifolia
Cinnamomum Camphora
Jacaranda Acutifolia
Liquidambar Stryraciflua
Brachychiton Populneum
Magnolia Grandiflora
Pinus Canariensis
Pinus Pinea

Collectors:

Eucalyptus Mucalata
Eucalyptus Sideroxylon
Albizia Julibrissin
Tipuana Tipu
Koelreuteria Bipinnata
Cinnamomum Camphora
Pinus Halepensis

Local:

Eucalyptus Ficifolia
Eucalyptus Nicholii
Ligustrum Lucidum
Cupaniopsis Anacardioides
Prunus Pissardii
Pittosporum Rhombifolium
Bauhinia Variegata
Arbutus Unedo
Lagerstroemia Indica
Harpephyllum Caffrum
Acacia Baileyana
Quercus Suber

landscaped median is proposed along this edge. Near the western end of the community, the existing eucalyptus windrow will be incorporated in a 24-foot median. This theme will be carried on to the east by planting eucalyptus trees in a new 18-foot median. The second major feature of the village edge will be a landscaped parkway and additional buffer zone along the south side of Jurupa. This buffer zone will include an 8-foot meandering walk; eucalyptus and evergreen tree plantings; and a rolling earth berm landscaped with flowering shrubs, trees and ground cover.

This village edge treatment along Jurupa is illustrated in landscape sections A and B. The purpose of this edge treatment is to create a distinctive parkway character along Jurupa, to delineate the community boundary, and to buffer adjacent land uses.

Treatment Plant Buffer Zone

The wastewater treatment plant site (RP No. 3) requires special screening to promote compatibility with adjacent land uses. This will be accomplished by creating an earth berm with intensive planting using large-scale trees and shrubs. Landscape Section J shows a fifty-foot buffer zone to be established along the north side of 'C' Street. Section N shows a 300-foot buffer zone to be established east of the treatment plant, along the west side of Beech Avenue.

Land Use Transition Areas

Transitional plantings of trees and shrubs are proposed at the interfaces between residential and commercial land uses. As an example, entries into commercial areas will feature flowering canopy trees, with parking lot edges mounded and planted to screen cars and trucks.

Transitions between neighborhoods and public uses will have a gradual transition of tree types and tree scale. Public use areas will have their own landscape identity, but will be visually connected by blending plant material with adjacent land uses.

Parking Area Planting

Parking lots for commercial zones and attached housing areas will be buffered using berms and tree and shrub plantings. This planting should be designed to break up and partially screen views of the parked cars. Trees should also be planted in curbed islands within the parking areas to break up large expanses of paving, filter views, provide shade, and reduce glare.

Neighborhood Parks

Neighborhood parks will be landscaped to create broad expanses of turf play areas, meandering tree-lined walks, and shaded areas with benches for resting, meeting, and supervising children at play.

3.9 GRADING CONCEPT PLAN

3.9.1 Topography and General Grading Concept

Approximately 35% of the site consists of steeply sloping hills of the Jurupa Mountains. The western half of the planning area slopes gently to the west and southwest, and is more or less level except for a distinct mountainous projection and a small alluvial fan descending from the hills. Drainage flows from northeast to southwest, generally along the diagonal Edison easement. The eastern half of the project site is predominantly mountainous with a uniform bowl-shaped alluvial fan descending from the hills. An area of relatively flat terrain extends along the northern edge of the site. Runoff from the hills and the alluvial fan joins drainage from areas to the north, turning west to follow an alignment roughly parallel to the Edison easement.

Existing slopes in excess of 10% will, for the most part, be left in their natural state. Two exceptions will occur in the alluvial fan and terrace areas, where grading is proposed for areas with approximately 12% natural slopes. Unconsolidated alluvium would be excavated, recompact, and formed to stabilize the area, create building pads, and to establish a terraced relief similar to the original.

Sufficient earth material exists onsite for a balanced cut and fill operation, including landscape berms and minor grades, which will reduce site development costs. It is expected that cut and fill activities can be restricted within each half of the site, thereby reducing hauling distances for borrow activity.

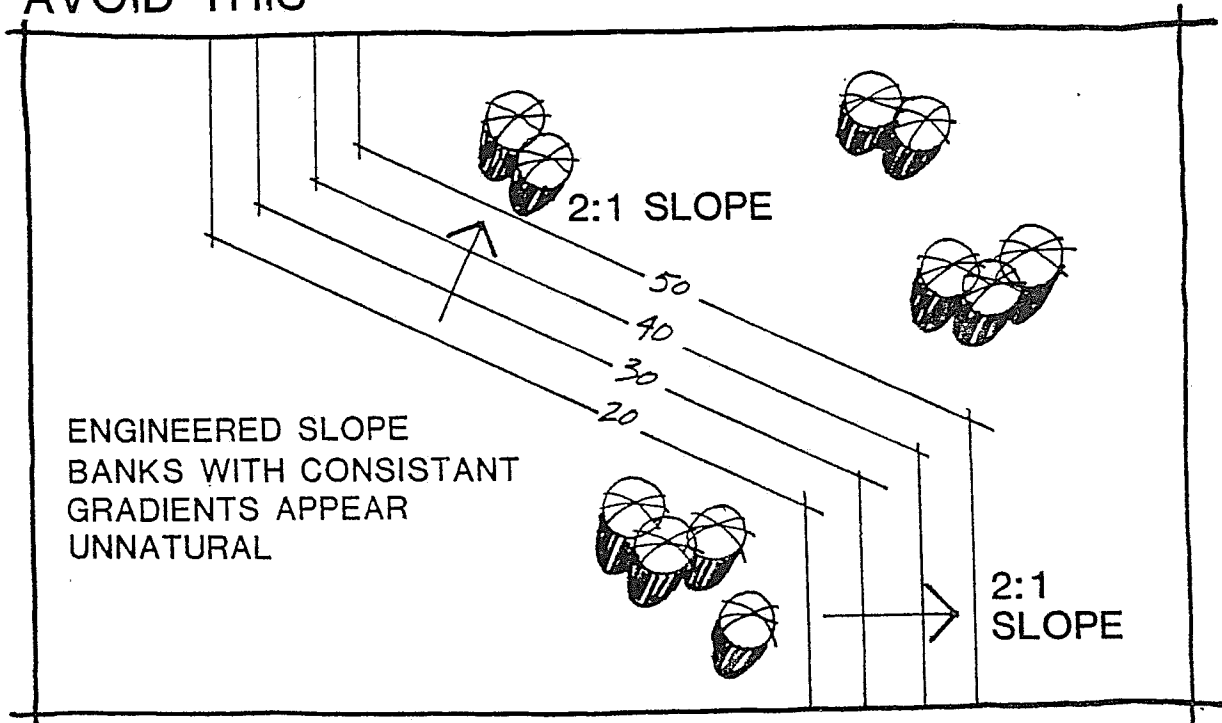
The alluvial character of surface soils will require erosion control mitigations, per City ordinances, when grading and construction activities are undertaken during the rainy season.

Initial grading operations will be designed and phased to overcome hydrologic constraints and to establish proper drainage. Grading of the flood control channel will be among the initial activities undertaken in

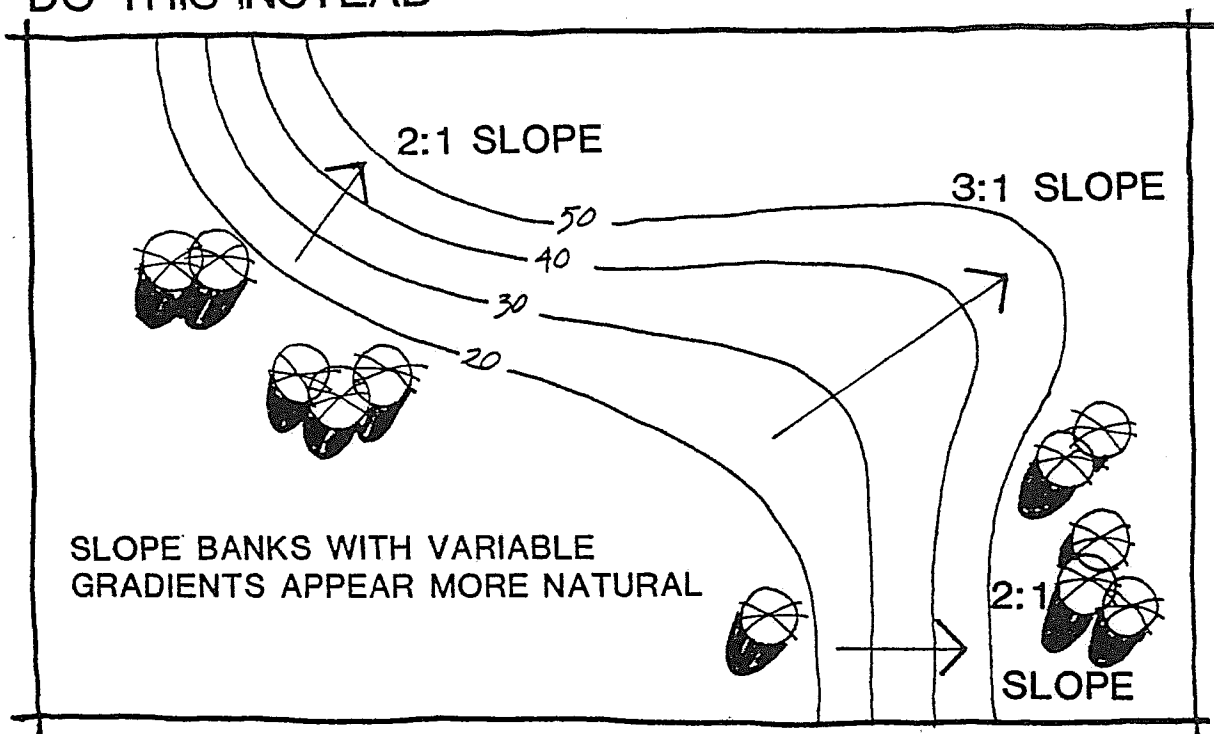
GRADING DESIGN GUIDELINES

SLOPE BANK VARIATIONS

AVOID THIS



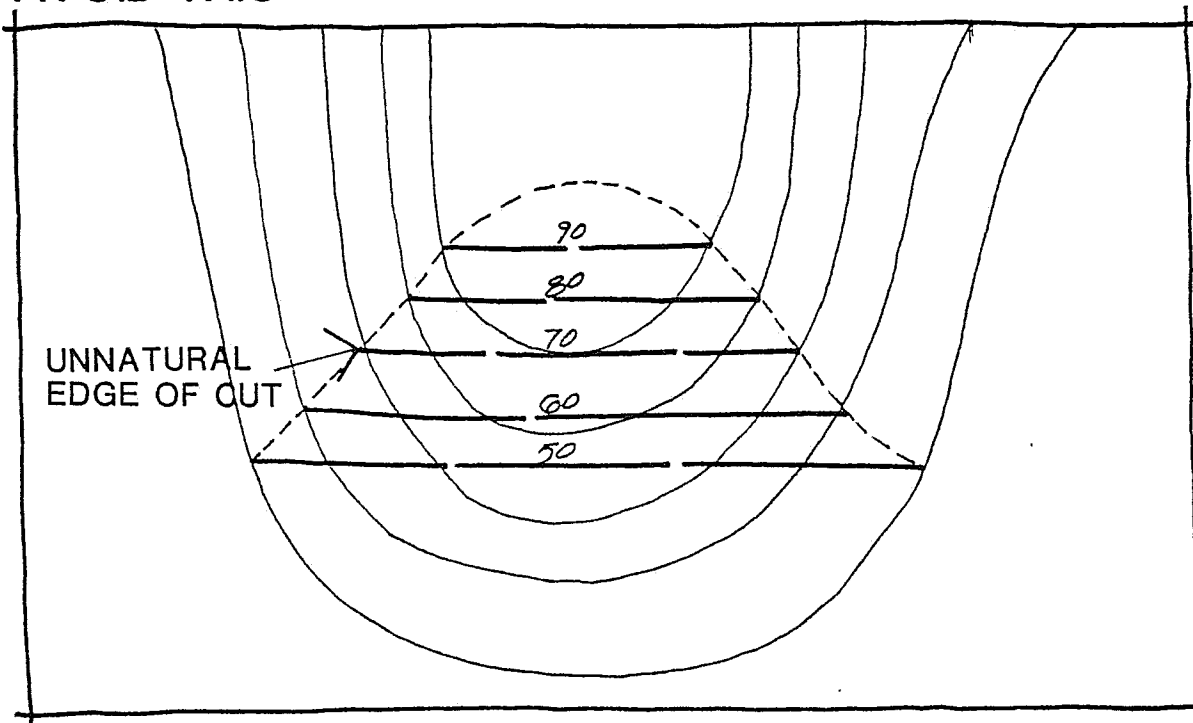
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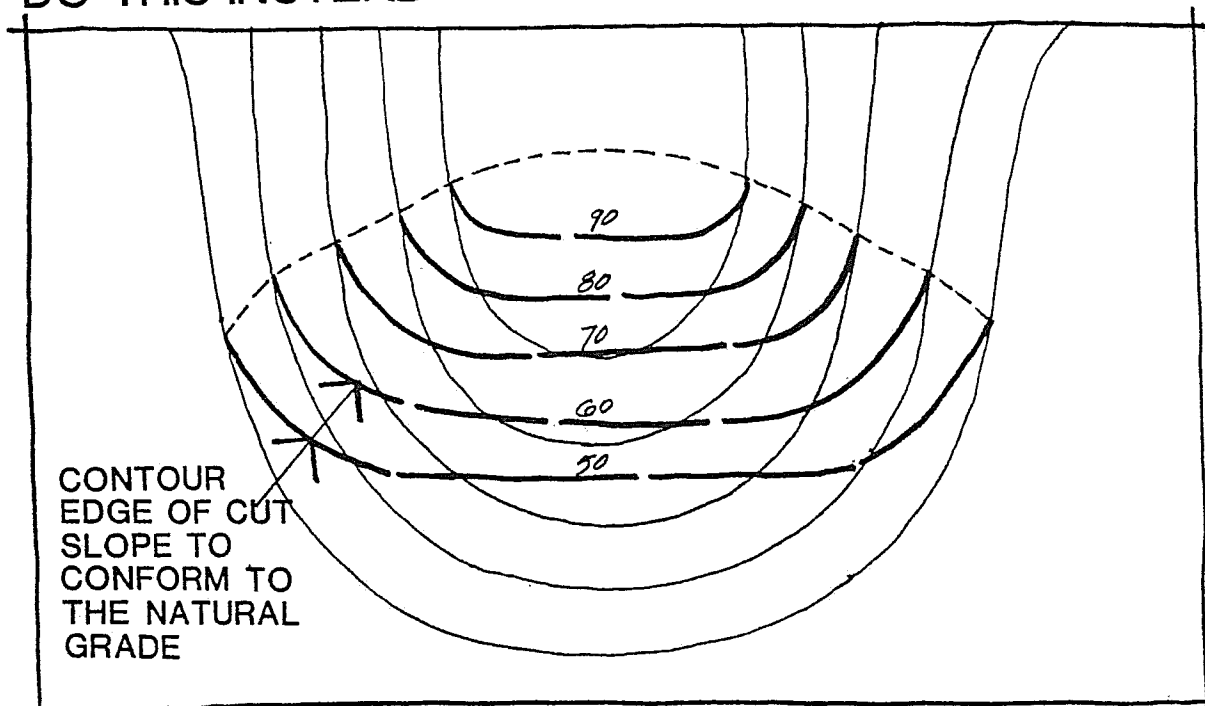
GRADING DESIGN GUIDELINES

CONTOUR TRANSITIONING

AVOID THIS



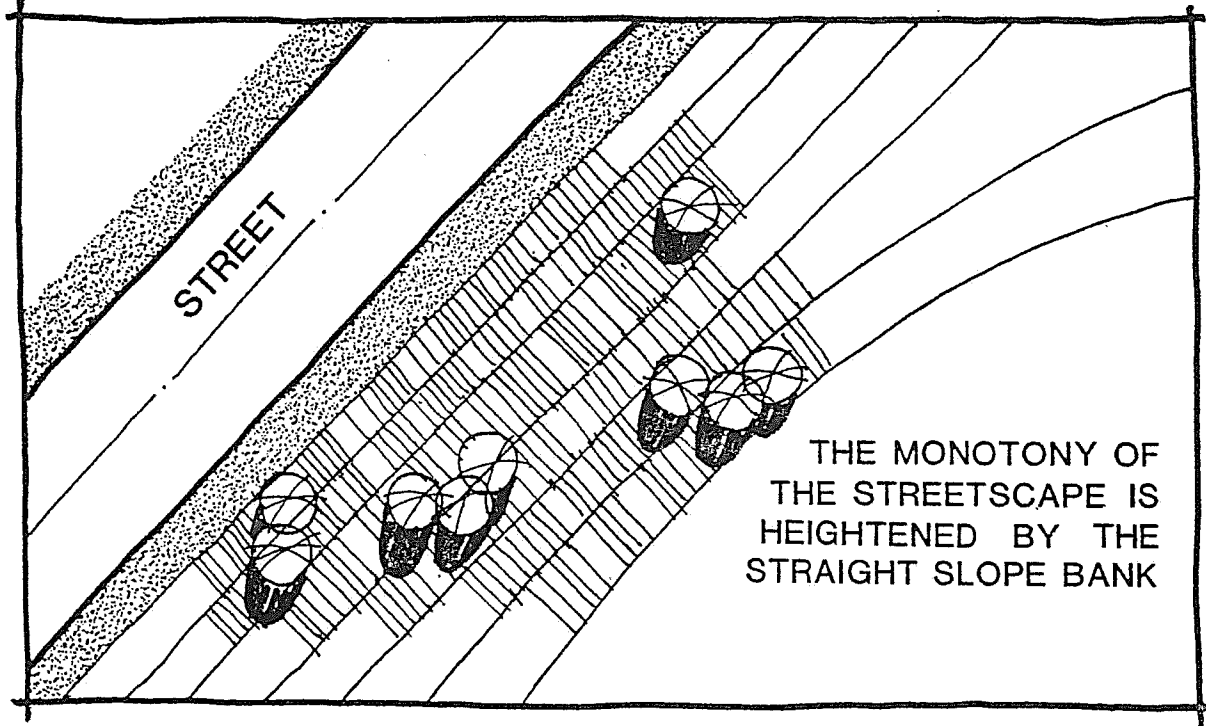
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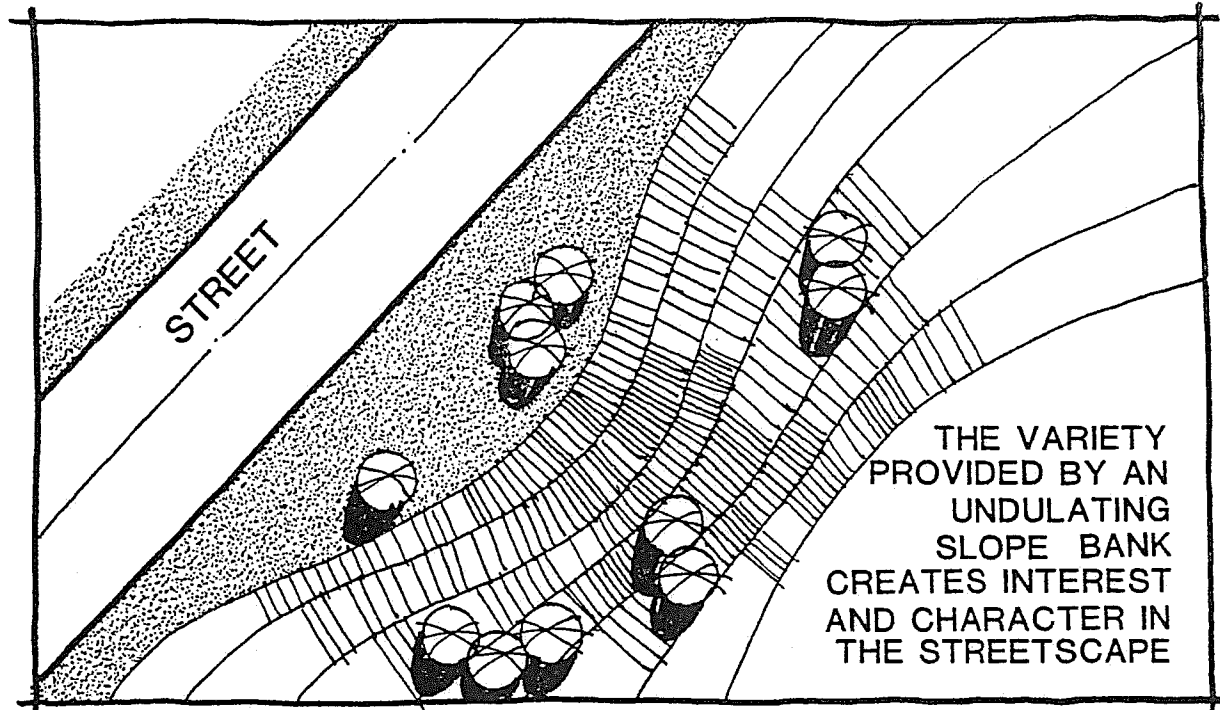
GRADING DESIGN GUIDELINES

UNDULATING BANKS and BERMS

AVOID THIS



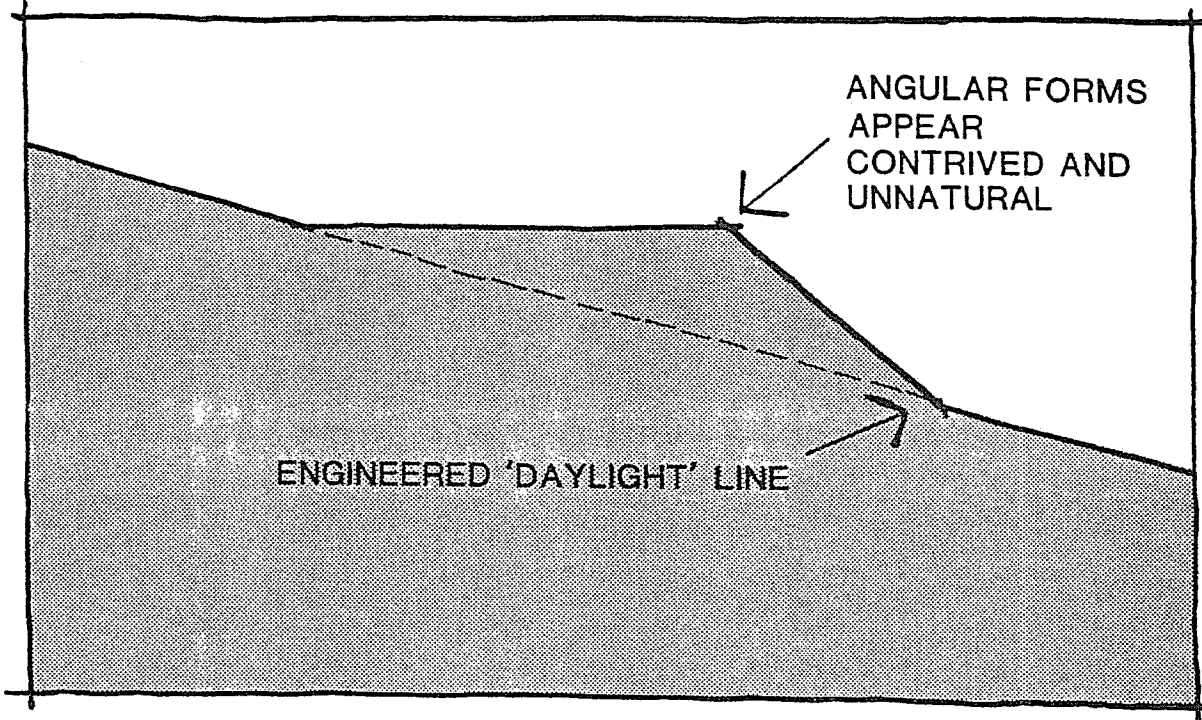
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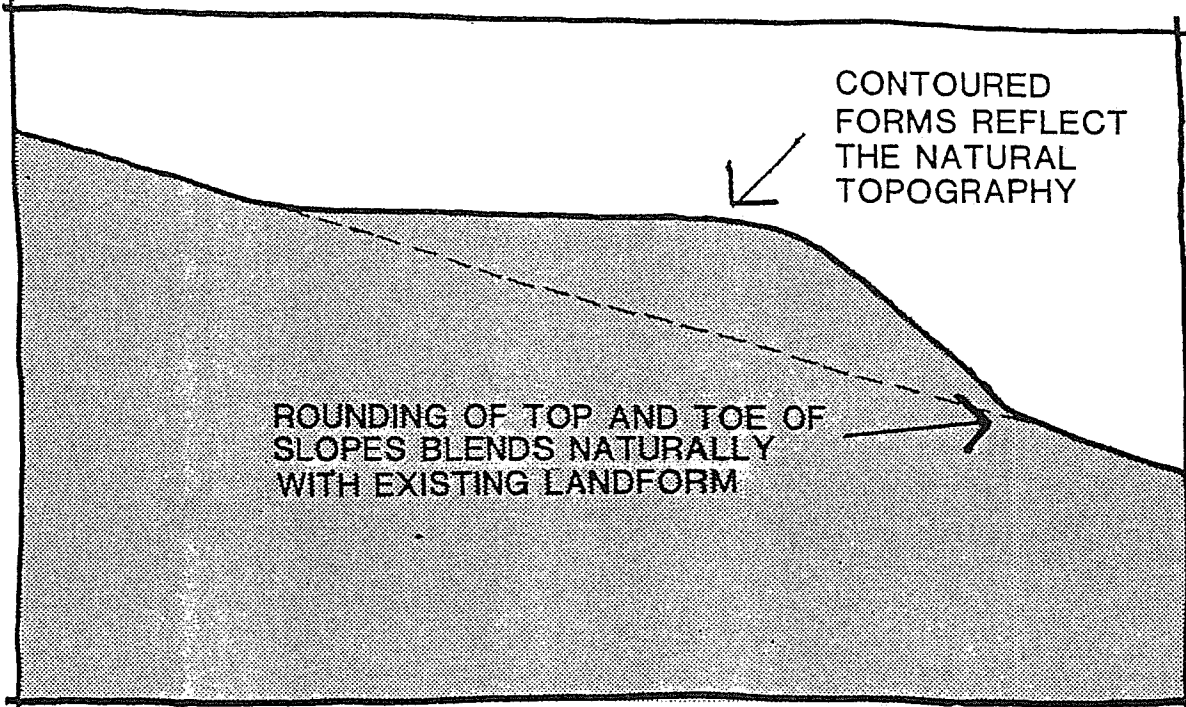
GRADING DESIGN GUIDELINES

SLOPE TOPS and TOES

AVOID THIS



DO THIS INSTEAD



phase one. Generally, grading along the northern edge of the site will provide noise attenuation and land use separations as undulating berms are constructed in the Jurupa Avenue buffer zone.

The location for the water reservoirs in the hills, determined by service requirements, will probably require localized blasting to create suitable building pad sites. This may be necessary because bedrock is approximately 15 feet below the surface in the locations designated as reservoir sites.

3.9.2 Grading Design Guidelines

Specific requirements that must be met prior to issuance of grading permits are established by local ordinance. Engineering specifications incorporated in grading plans are determined by local ordinance, uniform building codes and engineering practice, and by the recommendations of registered professional engineers. These requirements and specifications are designed to ensure public safety and to prevent undesirable practices.

Exhibits 3.14 through 3.17 illustrate several grading design features which are recommended as guidelines for the purpose of enhancing the appearance of finished graded slopes. The use of slope bank variations, contour transitioning, undulating banks and berms, and rounded tops and toes of slopes is encouraged. These design practices can be used to create manufactured slopes with a natural appearance.

3.10 PHASING CONCEPT PLAN

General development phasing for Southridge Village will be determined by a number of factors that will control the implementation of this Specific Plan. Major controlling factors include the development of necessary agreements for the financing of flood control, sewer, street, and other public improvements; current and future trends in housing market demand, supply, and absorption; decisions of the various landowners in the Specific Plan regarding disposition of their property; and decisions of the City, County, Flood Control District, and other responsible agencies regarding public improvements and individual development proposals.

Recognizing that the actual rate and phasing of development will be determined by these factors, this Specific Plan nevertheless includes a conceptual plan for development phasing that is based on an understanding of anticipated market conditions and the physical requirements of community development. The phasing concept plan is based on the assumption that a broad range of public improvements must be constructed prior to or concurrent with the successive increments of residential development. The phasing concept defines a logical sequence of development that will create and extend residential neighborhoods in a way that maximizes the cost-effectiveness of incremental investments in public improvements.

The Phasing Concept Plan is organized into three main phases or increments of development as shown in Exhibit 3.18.

Phase one encompasses that part of the site which lies northwest of the planned alignment for the Declez Channel, and west of Cherry Avenue at Jurupa. The existing Woodhaven subdivision is included in phase one. Land uses in this phase are primarily residential, with one neighborhood commercial site and one elementary school. Critical infrastructure elements include the first increment of the flood control channel; the sewage pump station and force main to RP No. 3; and street, water and storm drain system improvements, both on and offsite. The major entry for phase one will be located at the planned Cherry/Mulberry intersection.

Phase two encompasses the area extending east from the flood control channel to Beech Avenue. Land uses in this phase include higher density residential; the village center with commercial, recreational, quasi-public facilities, and the community park; and the junior high school and three elementary schools. Major infrastructure improvements will include continuation of the Declez Channel; the major tributary drain; bridge crossing of the channel, and additional street, water, sewer and storm drain improvements. Cherry Avenue at Jurupa will serve as the major entry for the second phase of development.

Phase three encompasses the area between Beech and Sierra Avenues. This phase will be primarily residential in character, with additional schools, neighborhood commercial centers, and neighborhood parks. The master planned infrastructure improvements will be completed during this phase. The major entry for phase three will be at Citrus and Jurupa Avenues.

A statistical summary of total community development according to these phases, showing the acreage planned for the various land uses, is provided in Table 3.7.

This Phasing Concept Plan has been used for refinement of the infrastructure engineering analysis for Southridge Village. An analysis of the fiscal and cost implications of this phasing program is presented in Chapter 7.0, FISCAL IMPACT REPORT.

TABLE 3.7
STATISTICAL SUMMARY
TOTAL PROJECT

<u>LAND USE TYPE</u>	<u>ACRES</u>	<u>UNITS</u>	<u>% UNITS</u>
SFD - Woodhaven	107.0	127	1.4
SFD - 10,000 S.F.	8.6	26	0.3
SFD - 6,000 S.F.	410.4	1,846	21.0
Patio Homes	255.1	1,531	17.4
Entry Estates	50.3	402	4.6
Duplexes	129.5	1,036	11.8
Townhomes	115.9	1,391	15.8
Garden Homes	67.6	1,217	13.8
Carriage Homes	<u>49.3</u>	<u>1,233</u>	<u>14.0</u>
SubTotal	1,193.7	8,810	100.0
Neighborhood Parks Exclusive of Easements	7.0		
Neighborhood Parks Within Easements	32.5		
Community Park	14.0		
Commercial Recreation	6.0		
Quasi-Public Uses	6.0		
Neighborhood Commercial	11.0		
Sub-Regional Commercial	20.0		
Elementary Schools	36.0		
Junior High School	<u>20.0</u>		
SubTotal	152.5		
Arterial and Collector Roadways	100.0		
Wastewater Treatment	60.0		
Flood Control Channel	45.0		
Utility Easements Exclusive of Neighborhood Parks	102.5		
Regional Park and Open Space Areas	<u>906.3</u>		
SubTotal	1,213.8		
TOTALS	2,560.0	8,810	

TABLE 3.8
STATISTICAL SUMMARY
PHASE ONE

<u>LAND USE TYPE</u>	<u>ACRES</u>	<u>UNITS</u>	<u>% UNITS</u>
SFD - Woodhaven	107.0	127	5.1
SFD - 10,000 S.F.	8.6	26	1.0
SFD - 6,000 S.F.	82.6	372	14.8
Patio Homes	110.9	665	26.4
Entry Estates	33.7	270	10.7
Duplexes	28.7	230	9.2
Townhomes	31.2	375	14.9
Garden Homes	<u>25.1</u>	<u>452</u>	<u>17.9</u>
SubTotal	427.8	2,517	100.0
Neighborhood Parks Exclusive of Easements	7.0		
Neighborhood Parks Within Easements	9.5		
Neighborhood Commercial	<u>3.0</u>		
SubTotal	31.5		
Arterial Roadways	32.0		
Flood Control Channel	45.0		
Utility Easements Exclusive of Neighborhood Parks	26.7		
Woodhaven Roads and Easement	<u>10.0</u>		
SubTotal	113.7		
TOTALS	573.0	2,517	

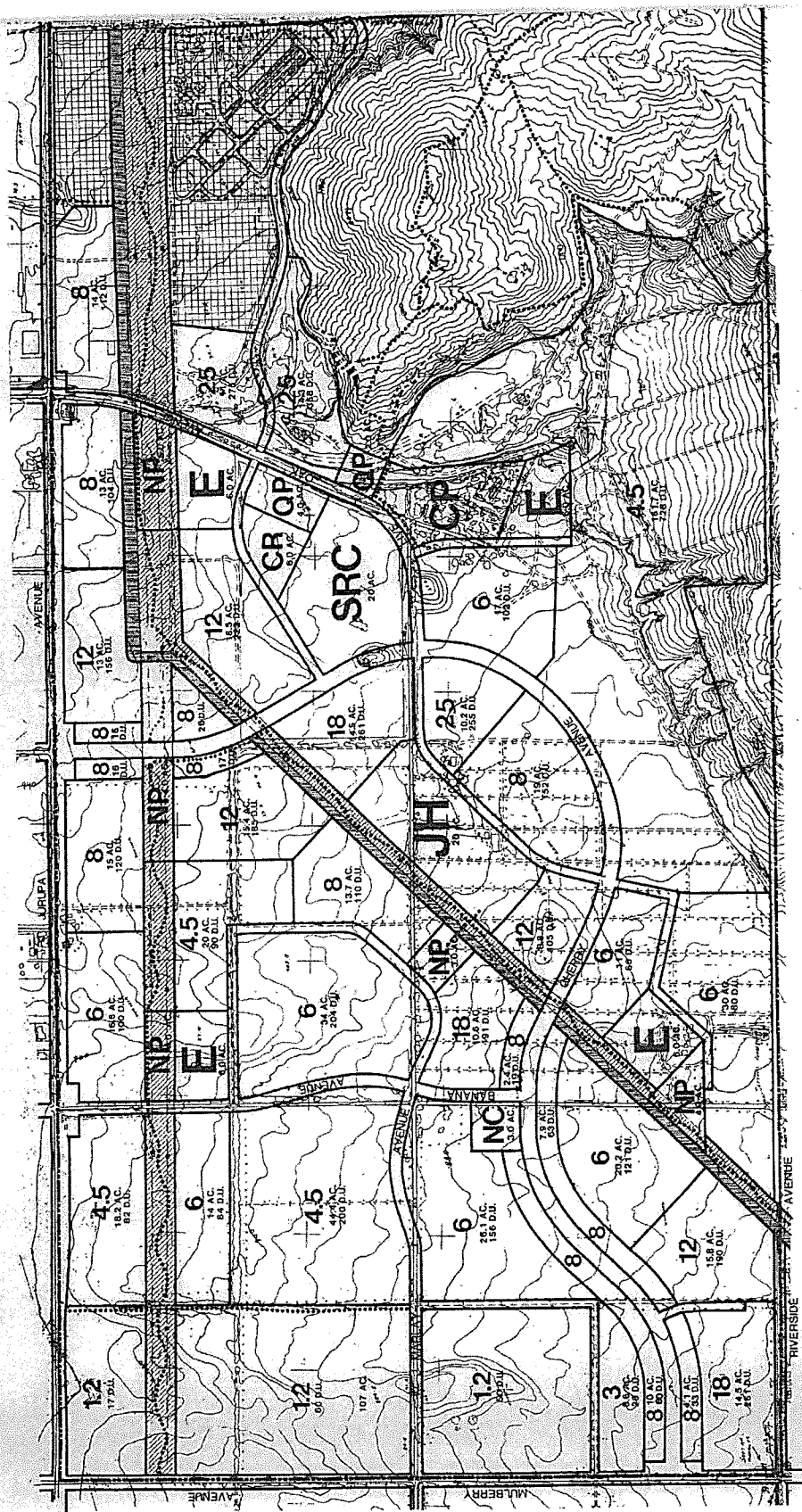
TABLE 3.9
STATISTICAL SUMMARY
PHASE TWO

<u>LAND USE TYPE</u>	<u>ACRES</u>	<u>UNITS</u>	<u>% UNITS</u>
SFD - 6,000 S.F.	161.7	728	23.7
Patio Homes	58.0	348	11.3
Duplexes	46.0	368	12.0
Townhomes	40.3	483	15.7
Garden Homes	14.5	261	8.5
Carriage Homes	<u>35.5</u>	<u>888</u>	<u>28.8</u>
SubTotal	356.0	3,076	100.0
Neighborhood Parks			
Within Easements	5.0		
Community Park	14.0		
Commerical Recreation	6.0		
Quasi-Public Uses	6.0		
Sub-Regional Commercial	20.0		
Elementary Schools	12.0		
Junior High School	<u>20.0</u>		
SubTotal	83.0		
Arterial Roadways	33.5		
Waste Treatment Site	60.0		
Utility Easements Exclusive of Neighborhood Parks	24.5		
Regional Park and Open Space Areas	<u>150.0</u>		
SubTotal	268.0		
TOTALS	707.0	3,076	

TABLE 3.10
STATISTICAL SUMMARY
PHASE THREE

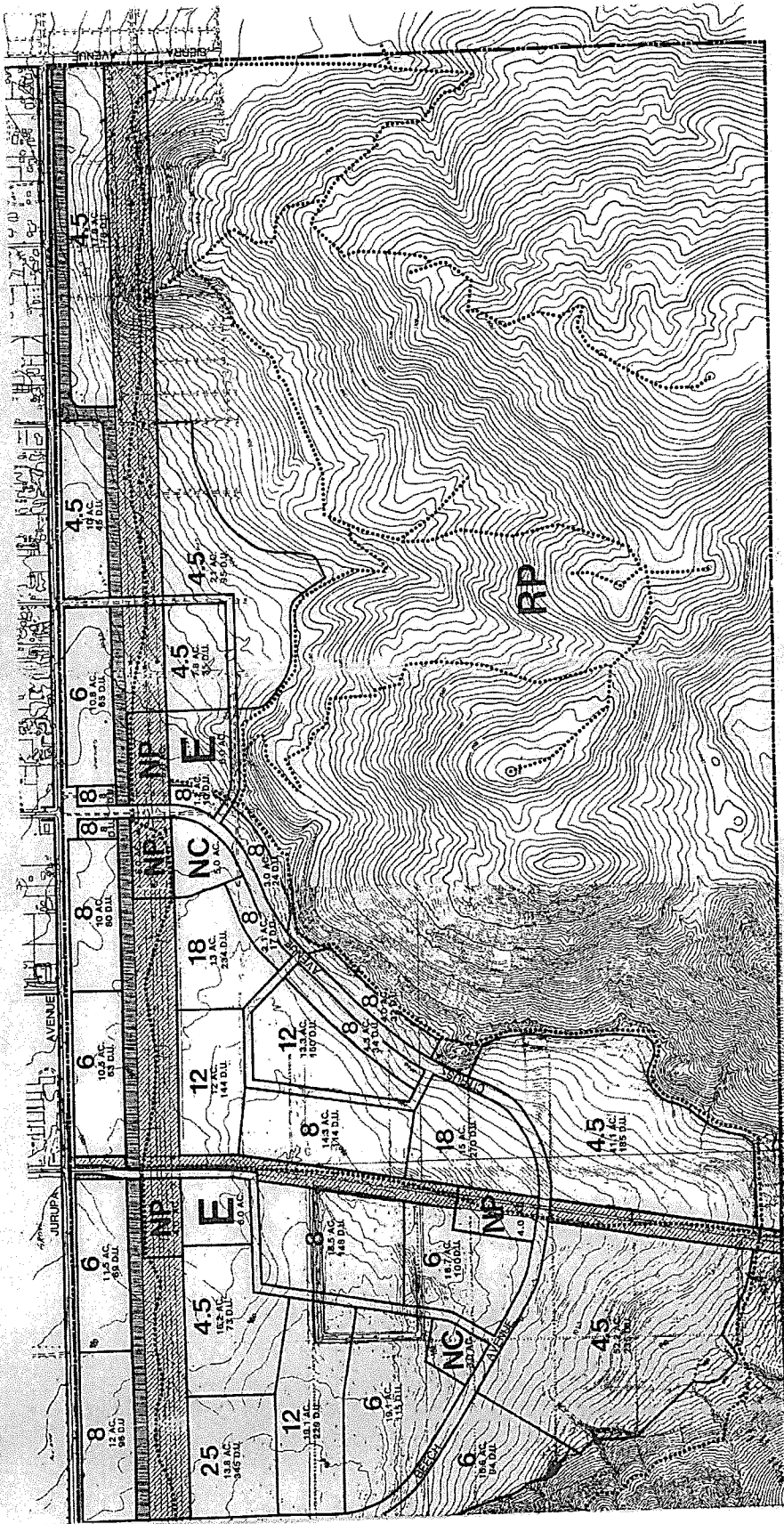
<u>LAND USE TYPE</u>	<u>ACRES</u>	<u>UNITS</u>	<u>% UNITS</u>
SFD - 6,000 S.F.	166.1	746	23.2
Patio Homes	86.2	518	16.1
Entry Estates	16.6	133	4.1
Duplexes	54.8	438	13.6
Townhomes	44.4	533	16.6
Garden Homes	28.0	504	15.7
Carriage Homes	<u>13.8</u>	<u>345</u>	<u>10.7</u>
SubTotal	409.9	3,217	100.0
Neighborhood Parks			
Within Easements	18.0		
Neighborhood Commercial	8.0		
Elementary Schools	<u>12.0</u>		
SubTotal	38.0		
Arterial Roadways	34.5		
Utility Easements Exclusive of Neighborhood Parks	51.3		
Regional Parks and Open Space Areas	<u>746.3</u>		
SubTotal	832.1		
TOTAL	1,280.0	3,217	

Exhibit 3.1
1042



LEGEND

1.2	SINGLE FAMILY	0-2 U/AC	8	DUPLEX	7-9 U/AC	RP	REGIONAL PARK / OPEN SPACE	SRC	SUB-REGIONAL CENTER
3	SINGLE FAMILY	2-4 U/AC	12	TOWNHOMES	9-15 U/AC	CP	COMMUNITY PARK	NC	NEIGHBORHOOD COMMERCIAL
4.5	SINGLE FAMILY	4-5 U/AC	18	GARDEN HOMES	15-21 U/AC	NP	NEIGHBORHOOD PARK	E	ELEMENTARY SCHOOL
6	PATIO HOMES	5-7 U/AC	25	CARRIAGE HOMES	21-25 U/AC	CR	COMMERCIAL RECREATION	JH	JUNIOR HIGH SCHOOL
8	ENTRY ESTATES	8 U/AC				QP	QUASI-PUBLIC USES		



- UTILITY EASEMENTS
- FLOOD CONTROL CHANNEL
- ARTERIAL and COLLECTOR STREETS
- TRAIL SYSTEM
- WATER RECLAMATION FACILITY

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LAND USE MASTER PLAN

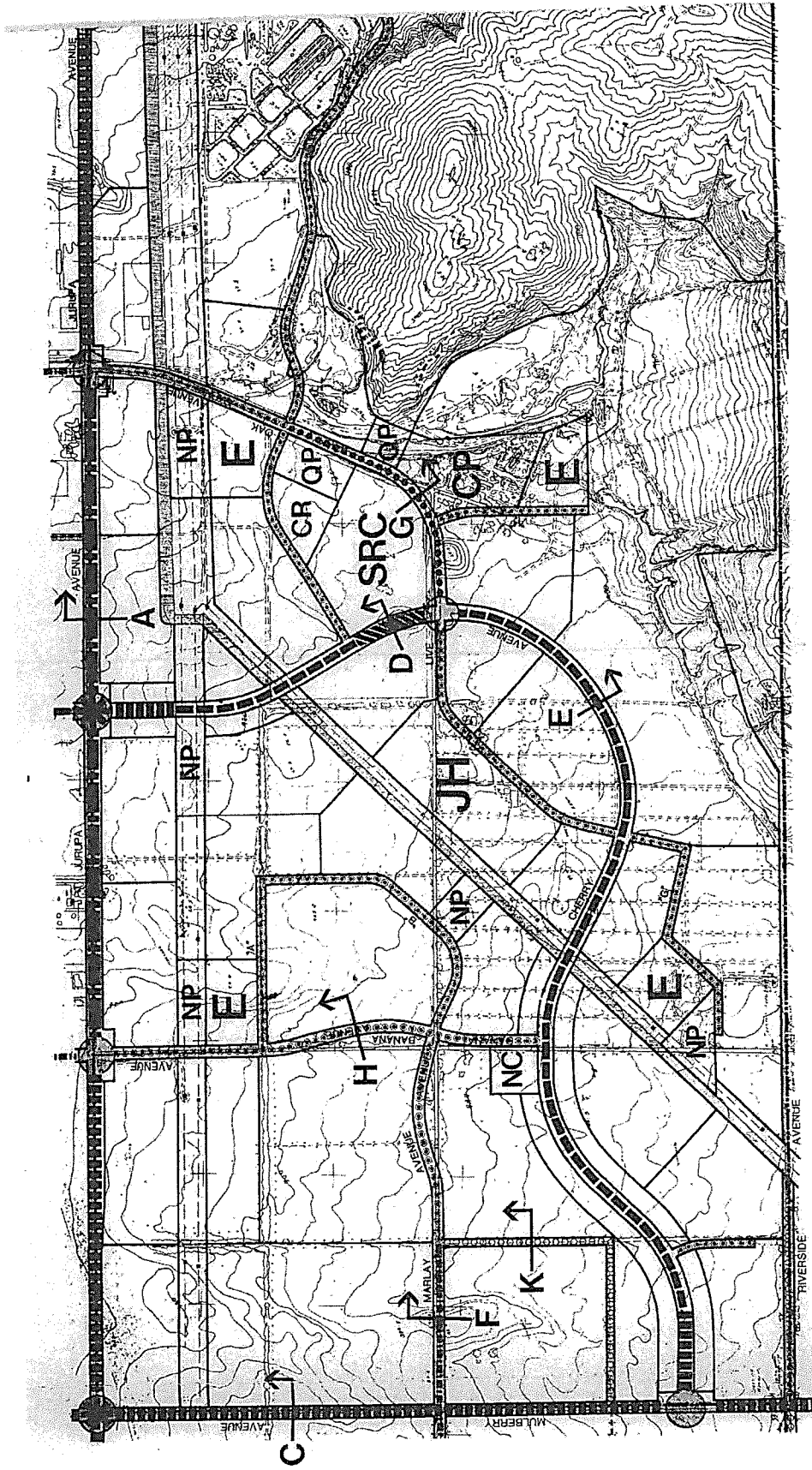
SOUTHRIDGE VILLAGE

CREATIVE COMMUNITIES



EXHIBIT 3.1

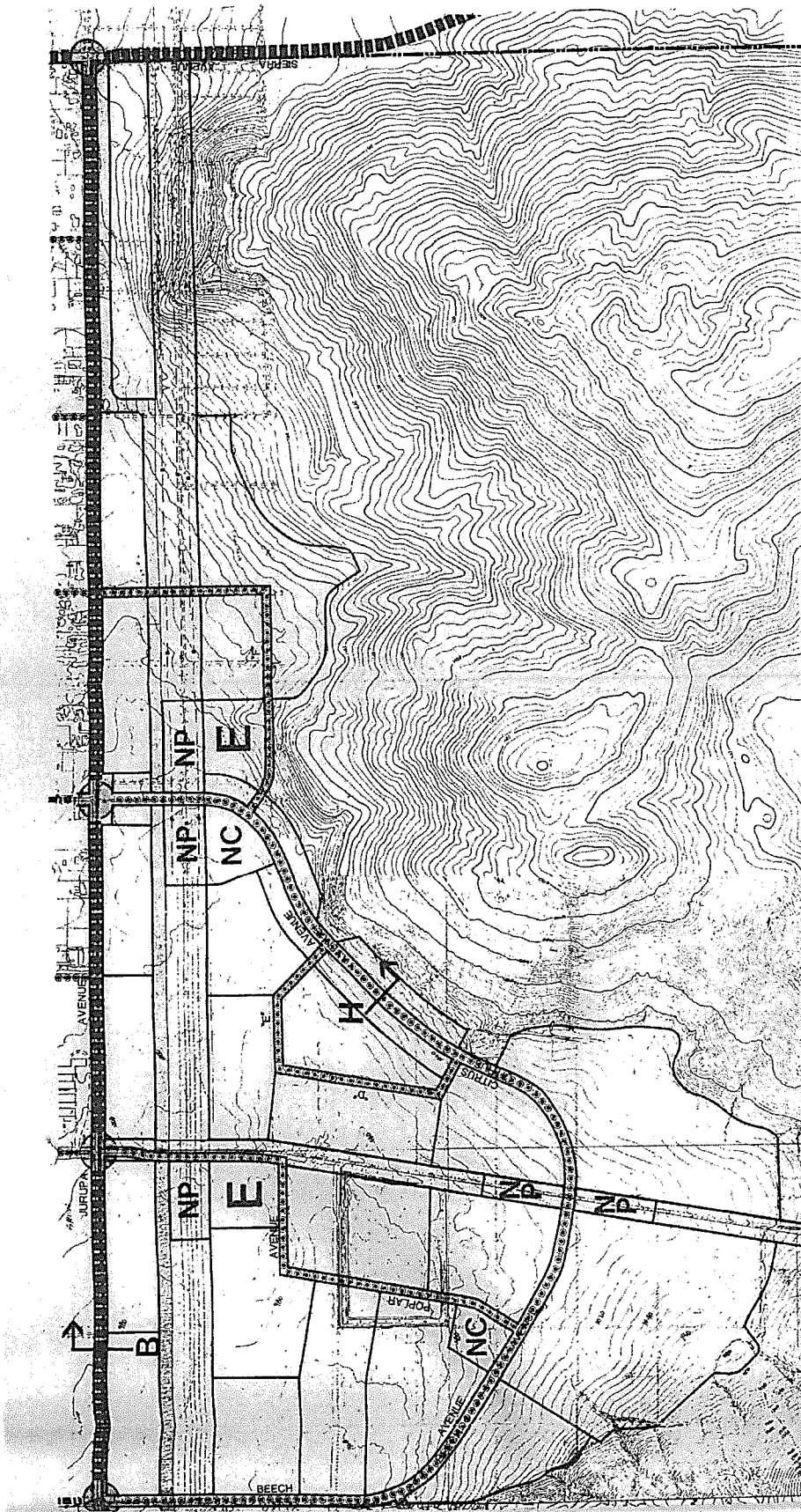
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LEGEND

	126' RIGHT OF WAY		64' RIGHT OF WAY		FLARED RIGHT OF WA
	120' RIGHT OF WAY		88' RIGHT OF WAY		60' RIGHT OF WAY
	110' RIGHT OF WAY		72' RIGHT OF WAY		SIGNALIZED INTERSEC
			STREET SECTION IDENTIFICATION		

Exhibit 3.2
lot 2



Y FOR INTERSECTION

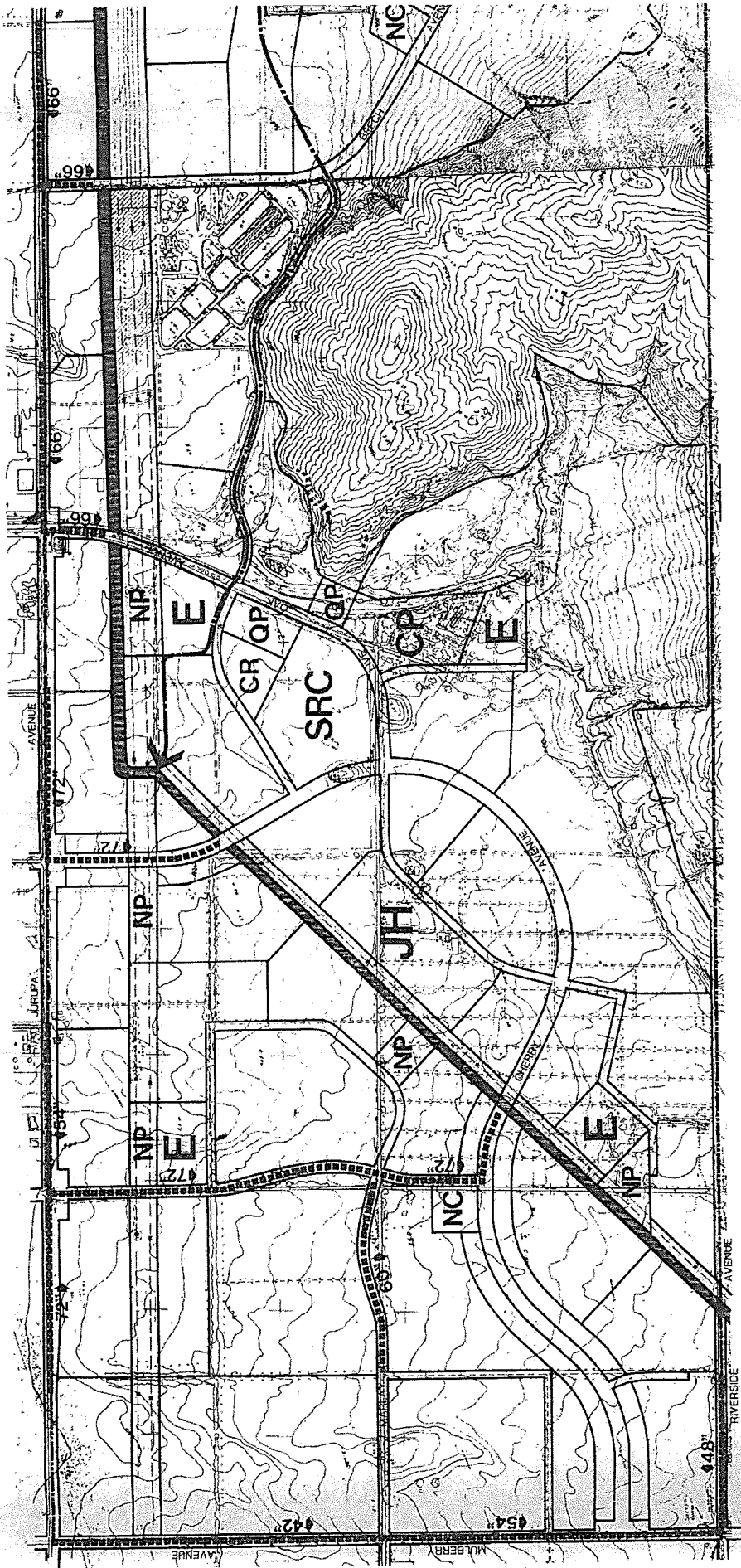
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CIRCULATION MASTER PLAN SOUTHRIDGE VILLAGE CREATIVE COMMUNITIES



EXHIBIT 3.2

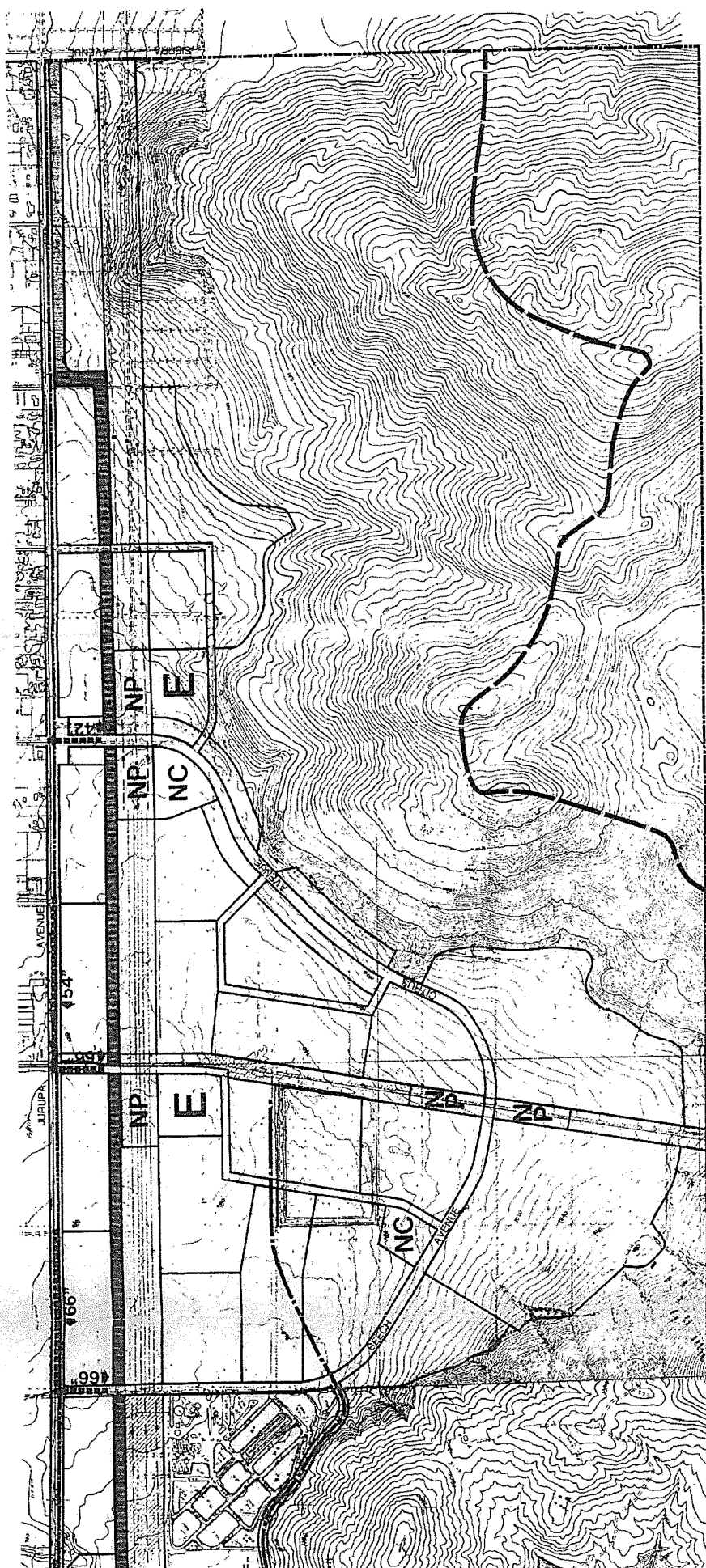
2012



LEGEND

- | | | | |
|--|--|--|---------------------------------------|
| | DRAINAGE BOUNDARY | | TRIBUTARY CHANNEL |
| | REINFORCED CONCRETE
PIPE and DIAMETER | | CONCRETE LINED
TRAPEZOIDAL CHANNEL |

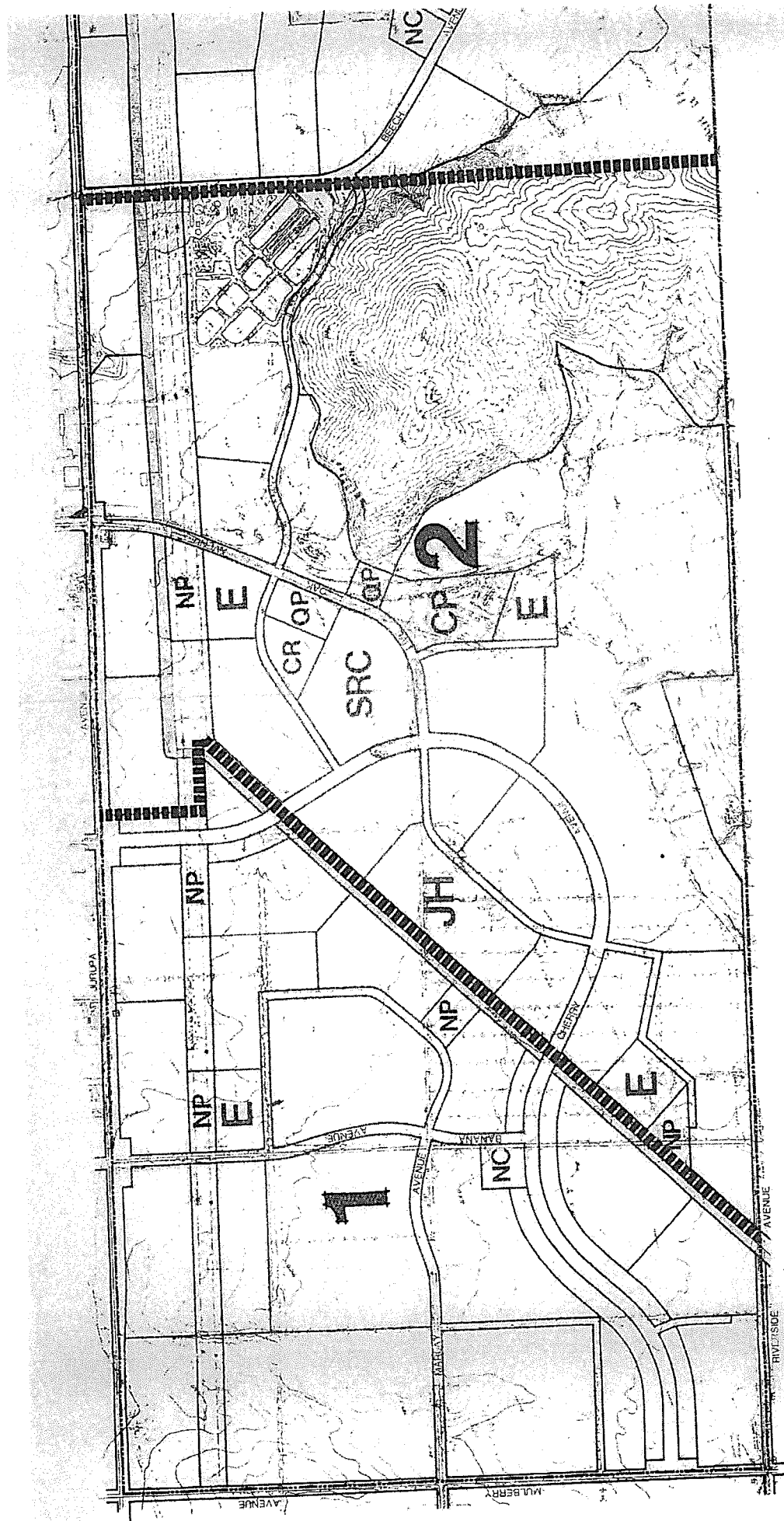
Exhibit 3.3
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DRAINAGE MASTER PLAN
SOUTHRIDGE VILLAGE
CREATIVE COMMUNITIES



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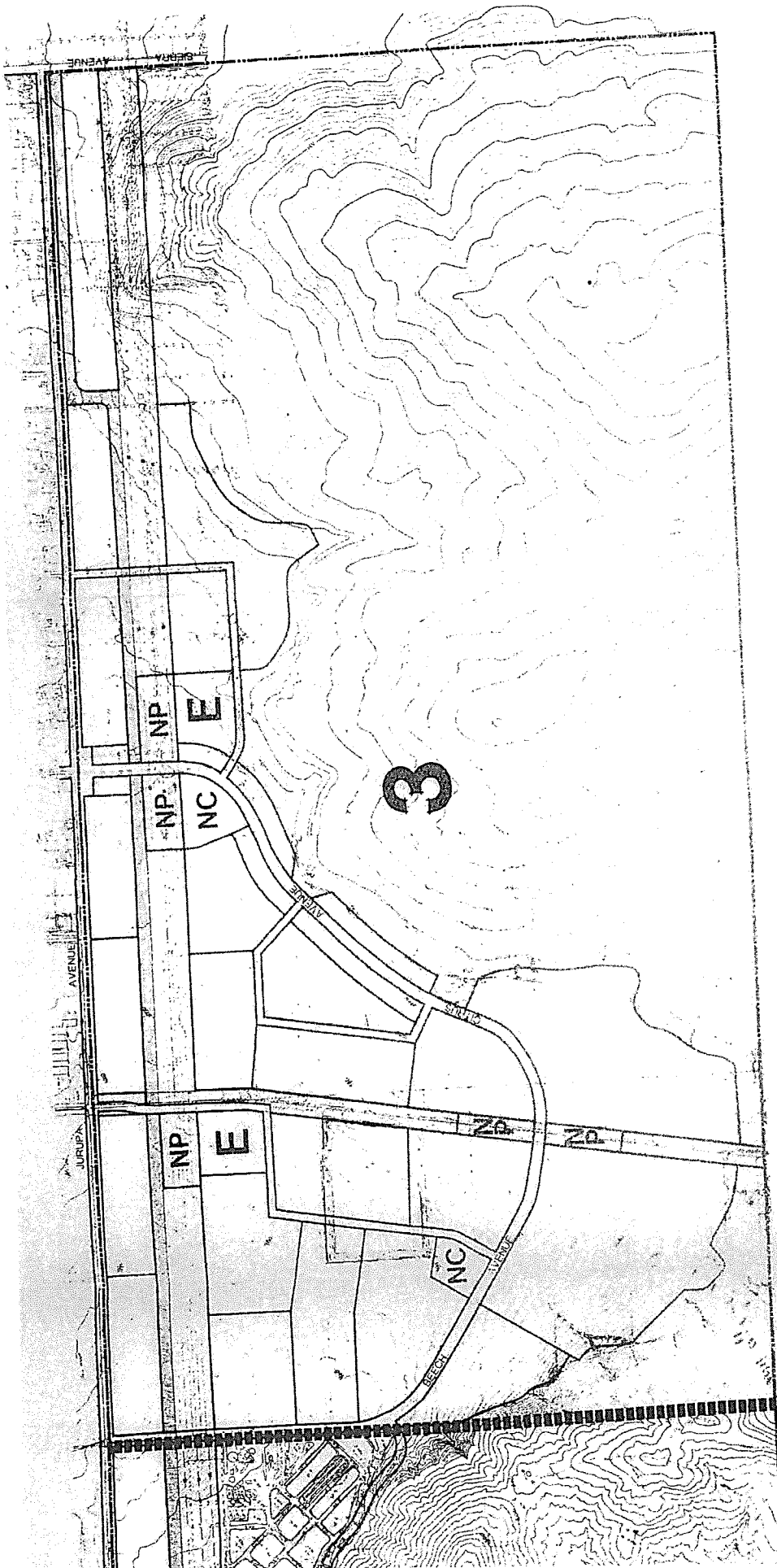
LEGEND

PHASING BOUNDARY

2 PHASING NUMBERS

Exhibit 3.10

1 of 2

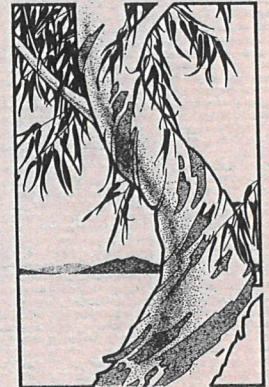


PHASING PLAN
SOUTHRIDGE VILLAGE
CREATIVE COMMUNITIES



2012

Development Standards



4.0

4.0 DEVELOPMENT STANDARDS

4.1 Purpose and Intent

The regulations set forth in this chapter have been established to provide for the development of Southridge Village as a coordinated, comprehensive project in order to take advantage of the superior human environment which results from large-scale community planning. These standards provide for the classification, development and use for a variety of residential housing types, and supporting commercial and community facilities compatible therewith.

The regulations set forth in this chapter are a principal part of the controlling mechanisms for implementation of the Southridge Village Specific Plan. These regulations are intended to encourage the most appropriate use of the land, create a harmonious and coordinated relationship between land uses, and promote the overall health, safety and general welfare of the community. Application of these regulations is specifically intended to establish development standards which assure a safe and comfortable community while at the same time regulate the aesthetic and environmental impacts of urban improvements on the natural landscape.

4.2 General Notes

1. The intent of the Southridge Village Specific Plan is to create a more desirable living environment for the development of this area. Therefore, all developments and/or uses of land proposed within the Southridge Village community shall comply with the provisions of the subdivision and building codes applicable to the City of Fontana. Any details or issues not specifically covered in the Southridge Village Specific Plan shall be subject to the regulations of the City of Fontana Zoning Code. Where a proposed plan is in conformance with the standards and regulations set forth in Chapter 4, Development Standards of the Southridge Village Specific Plan, but is in conflict with the City of Fontana Zoning Code, the Specific Plan Development Standards shall prevail.
2. All residential development, except detached single-family residences, shall be subject to Design Review prior to or concurrent with the approval of a tentative tract map, or application for building or grading permits.
3. All non-residential development, including commercial, commercial-recreation, community facilities, and commonly owned private recreational facilities shall be subject to Design Review prior to or concurrent with the approval of a tentative tract map, or application for building or grading permits.
4. The maximum number of dwelling units is established for each planning unit in Section 3.1 of this Specific Plan, the Land Use Master Plan. No development may exceed the maximum number of units for any individual planning unit without the approval by the City of Fontana of a density transfer. Development of any individual planning unit to a lower density may occur without an amendment to the Southridge Village Specific Plan.
5. Water and wastewater facilities shall be developed in compliance with the Master Plans for water and sewer (Sections 3.4 and 3.5).

6. All development proposals within Southridge Village shall conform to the Drainage Master Plan (Section 3.3) in a manner meeting the approval of the City's Public Works Director and the San Bernardino County Flood Control District.
7. All construction shall comply with applicable provisions of the Uniform Building Code and the Code of the City of Fontana, Chapter, 8, Building Regulations.
8. The density of any residential development shall be based on the gross area and shall be computed by dividing the total number of dwelling units in the planning unit by the gross acres for that planning unit.
9. The acreage figures shown in Section 3.1, the Land Use Master Plan, are based on planimetric measurements and are indicated to within ten percent (10%). Modifications may result from engineering and technical refinements in the Tentative/Final Tract Map and/or Design Review process so long as the total number of dwelling units does not exceed the maximum permitted.
10. Grading permits may be issued outside of the area of immediate development. Stockpile and borrow sites may be permitted within areas scheduled for future development.
11. Terms used in this document shall have the same definitions as provided in the City of Fontana Zoning Code unless otherwise defined herein.
12. Large-lot subdivisions for the purpose of financing, sale or planning shall be permitted as a matter of course subject to the applicable provisions of the Subdivision Map Act.

4.3 Definitions

For the purpose of carrying out the intent of this Specific Plan, words, phrases, and terms shall be deemed to have the meaning ascribed to them in the following sections covering definitions. Terms not specifically described herein shall be deemed to have the meaning described in Chapter 33, Article I of the Code of the City of Fontana. In construing the provisions of this text, specific provisions shall supersede general provisions relating to the same subject.

When not inconsistent with the context, words used in the present tense include the future; words in the singular number include the plural; those in the plural number include the singular; the word "or" includes "and," and the word "and" includes the word "or."

The word "City" shall mean the City of Fontana.

The word "Commission" shall mean the City of Fontana Planning Commission.

The word "Council" shall mean the City of Fontana Common Council, the governing body of the City.

The word "County" shall mean the County of San Bernardino.

The words "Specific Plan" shall mean the Southridge Village Specific Plan.

The word "shall" is mandatory; the word "may" is permissive.

The word "State" shall mean the State of California.

The word "used" includes the words "arranged for," "designed for," "occupied for" or "intended to be occupied for."

The word "permitted" means permitted without the requirement for a discretionary permit but subject to all other applicable regulations.

The words "Zoning Code" or "Code" refer to Chapter 33, Zoning, of the Code of the City of Fontana.

DEFINITIONS (A)

Abutting land: Having a common boundary except that parcels having no common boundary other than a common corner shall not be considered abutting.

Accessory building or structure: A subordinate building located on a building site, the use of which is customarily incidental to that of a main building or to the use of the land.

Accessory use: A use customarily incident and accessory to the principal use of the land, or to a building or other structure but not necessarily located on the same building site as the principal use.

Administrative office: A place of business for the rendering of service or general administration, but excluding retail sales.

Alley: A public or private way permanently reserved as a means of access to abutting property and labeled as an alley on an approved tentative tract map. An alley shall not be considered a street.

Animal clinic: A place where animals no larger than the largest breed of dogs are given medical and surgical treatment. A facility primarily for treatment of outpatients, where only short-time critical patients are kept longer than twenty-four (24) hours. No boarding of animals shall be permitted.

Apartment/apartment house: Any building or portion thereof which is designed, built, rented, let or hired out to be occupied, or which is occupied as the home of residence of three (3) or more families living independently of each other and doing their cooking in said building.

DEFINITIONS (B)

Bedroom: Any habitable room other than a bathroom, kitchen, dining room or living room.

Borrow site: An area used for the extraction of material in an amount in excess of five-thousand (5,000) cubic yards.

Building site: A parcel or contiguous parcels of land which is established in compliance with the building site requirements of this code.

Building site area: The total area, measured horizontally as a level plane, of the land within the boundaries of a building site not including any street right-of-ways, pedestrian or vehicular easements or other easements that prohibit the surface use of the property.

Building site coverage: The area of the land within the perimeter of all structures located on the building site, not including the area under eaves and post-supported overhangs and swimming pools, divided by the building site area.

Building site, panhandle or flag: A building site with access to a street by means of a corridor or accessway which is not less than twenty (20) feet nor more than forty (40) feet in width.

Business or commerce: The purchase, sale or other transaction involving the handling or disposition of any article, substance or commodity for profit or livelihood; the ownership or management of office buildings; recreational or amusement enterprises; maintenance and use of offices by professions and trades-rendering services.

DEFINITIONS (C)

Centerline: A line in the center of the ultimate street right-of-way.

Clinic, medical: An organization of doctors providing physical or mental health service and medical or surgical care of the sick or injured but not including inpatient or overnight accommodations.

Cluster development: Refers to a residential subdivision consisting of a combination of residential lots and privately owned common recreation and open space areas arranged in accordance with a unified comprehensive site plan with adequate provisions for permanent maintenance of the common ownership facilities.

Commercial: Operated or carried on primarily for financial gain.

Commercial recreation: Any use or development, either public or private, providing amusement, pleasure or sport, which is operated or carried on primarily for financial gain including establishments where food and beverages are sold as a secondary or ancillary use.

Common area - commercial (areas used in common): The total area within a unified shopping center, town center, or business park that is not designed for rental to tenants and which is available for common by all tenants or groups of tenants and their invitees; examples: parking and its appurtenances, malls, sidewalks, landscaped areas, public toilets, and service facilities.

Common area - parking: A parking plan whereby tenants of a commercial site, a shopping center or business center share use of a parking area even though lot lines may bisect the parking area. Some or all of the required parking for a given use may be located on a separate and non abutting lot.

Common area - residential: The area within a residential development that is not designed as a residential building site, which is owned in common by homeowners in the development, and which is available for common use or enjoyment by all property owners in the development and their invitees; example: common parking facilities, recreation areas, landscaped areas, open space areas, and natural areas.

Community apartment project: A project in which an undivided interest in the land is coupled with the right of exclusive occupancy of an apartment located thereon.

Community facility: A noncommercial use established primarily for the benefit and enjoyment of the population of the community in which it is located.

Community information center: A temporary or permanent structure principally used as an information pavilion and/or temporary real estate sales office for the first sale of homes in the community including parking and related facilities.

Community service facility: A community service commercial, or nonprofit, noncommercial use established primarily to service the immediate population of the community in which it is located.

Community service commercial facility: A service commercial use established primarily to serve the needs of the immediate population of the community in which it is located, including but not limited to daycare centers, nursery schools, commercial or community recreation centers and facilities.

Condominium: A condominium is an estate in real property consisting of an undivided interest in common in a portion of a parcel of real property together with a separate interest in space in a residential, industrial or commercial building on such real property; examples: an apartment, office or store. A condominium may include, in addition, a separate interest in other portions of such real property.

Condominium project: An entire parcel of real property divided into condominiums, including all structures thereon.

Conventional subdivision: Refers to a subdivision consisting primarily of streets and lots. Commonly owned or special use areas may be included but are secondary and supplementary to the subdivision's design.

DEFINITIONS (D)

Day nursery (including preschool and nursery schools): Any group of buildings, building or portion thereof used primarily for the daytime care

of six (6) or more children at any location other than their normal places of residence, excluding any children who normally reside on the premises.

Density: The number of dwelling units per gross acre.

Development: Residential, commercial, industrial, community facility or other construction, together with the land upon which the buildings or structures are constructed.

Drive (driveway): A vehicular passageway for the exclusive use of the occupants of a project or property and their guests. A driveway shall not be considered a street.

Dry cleaning agency: A service business which provides for the deposit of laundry and dry cleaning on a walk-in or drive-in basis only, for processing either on premises or at a dry cleaning or laundry plant.

DEFINITIONS (F)

Flood: Any temporary rise in stream flow or water surface level that results in adverse effects within the floodplain, including, but not limited to, damages from overflow of land, temporary backwater in local drainage channels, storm drains or sewers, bank erosion or channel diversions, unsanitary conditions or other conditions of nuisance resulting from deposition of materials within or adjacent to watercourses, rise of groundwater coincident with the rise in stream flow and the disruption of traffic circulation resulting from stream or watercourse overflow.

Design flood: The size of the flood for which natural waterways are to be left or modified or for which channelization is to be provided or for which flood proofing is required all to achieve specified flood protection levels.

Floodplain: The land area adjacent to a watercourse which is subject to overflow of floodwaters.

Flood protection levels: Flood protection levels are to be those specified in the County Flood Control District's Hydrology Manual or those required to achieve the goals of the federal Flood Insurance Administration.

One-hundred-year flood: The highest level of flooding that has an average frequency of occurrence in the order of once in one hundred (100) years at a designated location, considering regional meteorological and hydrological conditions characteristic of the geographical region involved. This also means that the level of flooding having a one percent probability of occurrence in any year. The one-hundred-year flood represents a major flood, although it is less severe than is the standard project flood.

Floor area, gross: The total horizontal floor area of all floors of a building, including the exterior walls thereof, measured in square feet; excepting that for commercial, professional and administrative office or industrial buildings or building complexes, areas used in common such as, but not limited to, covered malls, covered walkways, hallways, mechanical equipment areas, stairwells, roofed patio areas, covered entries, covered parking, covered driveways and covered loading areas shall not be included when calculating off-street parking requirements.

Floor area ratio: The numerical value obtained by dividing the gross floor area of a building or buildings located upon a lot or parcel of land by the total area of such lot or parcel of land.

DEFINITIONS (G)

General plan: Refers to the City of Fontana General Plan and Jurupa Hills General Plan Amendment and elements thereof, as they may pertain to the Southridge Village Planned Community.

Gross area: The entire land area within the boundary of a project, measured to the right-of-way line of any abutting public street or highway.

Gross residential density: The density of a residential project computed by dividing the total number of dwelling units in the project by the gross area of the project.

DEFINITIONS (H)

Habitable room: Any room meeting the requirements of the Uniform Building Code, as adopted by the City of Fontana, for sleeping, living, cooking or dining purposes, excluding such enclosed spaces as closets, pantries, bath or toilet rooms, service rooms, connecting corridors, laundries, unfinished attics, foyers, storage spaces, cellars, utility rooms, and similar spaces.

DEFINITIONS (I)

Institution: A social, educational, governmental, health or religious organization.

DEFINITIONS (J)

Joint use of parking: The shared use of off-street parking facilities by more than one type of land use. The same parking spaces are counted to satisfy the off-street parking requirements of more than one land use, e.g., use of the same parking facility to satisfy the off-street parking requirements of a church and an office building.

DEFINITIONS (K)

Kennel: Any property where four (4) or more dogs, or cats, or any combination thereof, over the age of four (4) months, are kept or maintained for any purpose.

DEFINITIONS (L)

Lot: Any parcel shown on a recorded tract map, a record of survey recorded pursuant to an approved division of land, lot line adjustments, a parcel map, or recorded Certificate of Compliance. A lot is not necessarily a building site.

DEFINITIONS (M)

Manufactured housing: A dwelling unit produced in a factory which is either (1) a mobile home as defined in this section or (2) a factory-built/modular home built to meet the Uniform Building Code in accordance with applicable factory-built regulations.

Master Plan of Highways: A component of the Circulation Element of the City of Fontana General Plan designating adopted and proposed routes for all collector, secondary and primary arterials within the City.

Master Plan of Drainage: Refers to an engineering report on a specific watershed area outlining the drainage facilities needed for the proper development of the area.

Mining: The process of obtaining sand, gravel, rock, aggregate, earth, clay or similar materials from an open excavation in the earth for financial gain, but not including removal of minerals extracted by underground methods. The exporting of more than five-thousand (5,000) cubic yards of these materials from any property during each of two (2) consecutive years shall be prima facie evidence of mining.

DEFINITIONS (N)

Net residential area: The area of land remaining in a project, measured in acres or square feet, after deduction of the area contained in public streets, schools, parks, flood control works and any other use, easement or encumbrance which prevents the surface use of the property for a building site or construction of structures.

Net usable acres (nonresidential): The area of land remaining in a project, measured in acres or square feet, after deduction of the area contained in public street and highway rights-of-way, schools, parks, flood control works and any other use, easement or encumbrance which limits the surface use of the property, slopes required to level the site, and required screening and landscaping.

Noncommercial: An enterprise or activity which is not normally conducted for profit or gain.

DEFINITIONS (P)

Parking area, private: An area, other than a street, designed or used primarily for the parking of private vehicles and not open to general public use.

Parking area, public: An area, other than a private parking area or street, used for the parking of vehicles and available for general public use, either free or for remuneration.

Planned Unit Development: A residential project consisting of a combination of residential lots and privately owned common recreation and open space areas arranged in accordance with a unified comprehensive site plan with an identifiable theme or concept and with adequate provisions for permanent maintenance of the common ownership facilities.

Planning Unit: An area of land, not necessarily contiguous, which is depicted on the Land Use Master Plan and which is described in the Statistical Summary contained in Chapter 3.0.

Project: A land development readily recognizable as a unit, e.g., a residential neighborhood, condominium, apartment, shopping center, office or business park development, recreation lake, golf course or similar land developments.

Preliminary landscaping plan: A plan indicating the general location, size, type of plant materials and groundcover to be located in the yards and other open areas of a development.

Private: Belonging to, or restricted for the use or enjoyment of, particular persons rather than the general public.

Professional office: A place where facilities are maintained primarily for the purpose of consulting with and maintaining records for clients and

visitors and where office and research services are performed for clients. Professional offices include banks and other financial institutions.

Public: Belonging and open to, and enjoyed, controlled, used and maintained by and for, the public generally.

Public agency: The United States, the State of California, the County of San Bernardino, any city within said County, and special districts or any other governmental entity authorized by law to perform functions for the public or segment thereof.

Public utility: A business organization, such as a public service corporation, performing some public service and subject to special governmental regulations, usually a protected monopoly.

DEFINITIONS (Q)

Quarrying: The process of removing or extracting stone, rock or similar materials from an open excavation for financial gain. The exporting of more than five-thousand (5,000) cubic yards of these materials from any property during each of two (2) consecutive years shall be prima facie evidence of a commercial extraction operation. Grading for purposes of an approved development shall not constitute a quarry.

DEFINITIONS (R)

Recreation vehicle: A motor home, travel trailer, boat, truck or van camper, or camping trailer, with or without motive power, designed for temporary human habitation for recreational or emergency purposes.

Recreational vehicle storage area: Any area or property where space for parking of two or more recreational vehicles when not in use is rented or held out for rent.

Retail: The selling of goods, wares or merchandise directly to the ultimate consumer.

Riding and hiking trails: Any trail or way designed for and used by equestrians or pedestrians.

Right-of-way: An area or strip of land either public or private, on which an irrevocable right of passage has been recorded for the use of vehicles or pedestrians or both.

DEFINITIONS (S)

Service: An act, or any result of useful labor, which does not in itself produce a tangible commodity. Facility supplying services in response to public demand or one providing maintenance and repair.

Service commercial: A commercial use which charges for a service, rather than a commodity, and which is carried on primarily for financial gain or profit.

Setback area: The area between the building line and the property line, or when abutting a street, the ultimate right-of-way line.

Shopping center: A commercial center, or group of commercial establishments, planned and maintained as a unit, with common off-street parking provided to serve all uses on the property.

Sign: "Sign" and "advertising device" shall not include the following for purposes of this code:

- a. Official notices issued by any court or public body or officer.
- b. Notices posted by any public officer in performance of a public duty or by any person in giving any legal notice.
- c. Intra-community directional signs, warning or informational signs or structures required or authorized by federal, state or county authority.

- d. The flag of the State of California or of the United States of America, or any official flag of any other state, country, county or community.

Advertising device: Any balloon, flag, pennant, propeller, oscillating, rotating, pulsating or stationary light, vehicle or other contrivance (except lawfully permitted signs) used to attract attention for the purpose of promoting (either directly or indirectly) the sale of products.

Advertising display: Any device, contrivance, vehicle, statue or structure (other than a sign) used as a display, regardless of size and shape, for the purpose of attracting attention or making anything known, the origin or place of sale of which is on the property with such advertising display.

Business sign: A sign displaying information pertaining to goods or services offered or produced by the business located on the property, but not including advertising devices or advertising displays.

Combination sign: Any sign incorporating any combination of the features of freestanding, projecting and roof signs.

Community event bulletin board: A ground, pole or wall sign advertising a special community event or event of communitywide interest or significance.

Community facility identification sign: A ground, pole or wall sign containing only the name of the facility and (if desired) identifying symbol.

Community identification sign: A ground, pole or wall sign within the boundaries of a development or subdivision containing only the name and (if desired) identifying symbol of the community, residential development or subdivision.

Construction sign: A temporary sign stating the names of those individuals or firms directly connected with the construction or development project, their addresses and their telephone numbers.

Freestanding sign: An independent sign permanently affixed in or upon the ground, and which is neither attached to nor a part of the building.

a. Ground sign: A freestanding sign mounted on a fence, or a freestanding wall, or a solid base as distinguished from support by a pole or poles.

b. Pole sign: A freestanding sign directly supported by a pole or poles with air space between the grade level and the sign face.

Height of sign: The greatest vertical distance measured from the ground level directly beneath the sign to the top of the sign.

Identification sign: A sign limited to the identifying name, symbol or insignia, or any combination thereof, of a building, use or person occupying the premises on which the sign is located.

Illuminated sign: A sign which has characters, letters, figures, designs or outline illuminated by electric lights or luminous tubes as a part of the sign proper.

Intra-community directional sign: A sign established to direct motorists or pedestrians to communities, neighborhoods, events, or facilities within the Southridge Village.

Lighted sign: A sign that is lighted from a light source that is not an integral part of the sign itself but causes light rays to shine on the sign's surface.

Nameplate: A sign not exceeding one (1) foot by three (3) feet signifying only the name of the occupant and his occupation or specialty.

Monument sign: A freestanding sign attached to the ground along its entire base.

Outdoor advertising structure or sign: A sign placed for the purpose of advertising products or services that are not produced, stored or sold on the property upon which the sign is located.

Price sign: A sign limited to the name or identification of items or products for sale on the premises, and the price of said items or products.

Projecting sign: A sign other than a wall sign suspended from or supported by a building or structure and projecting therefrom.

Real estate sign: A temporary sign advertising the sale, lease or rent of the property upon which it is located, and the identification of the person or firm handling such sale, lease or rent.

Roof sign: A sign erected wholly upon or above the roof of a building or structure. A theatre marquee shall not be construed as a roof sign.

Sign face: The surface, or that portion of a sign that is visible from a single point as a flat surface or a plane and considered as such, together with the frame and the background.

Wall sign: A sign attached to or erected on the exterior wall of a building or structure with the exposed face of the sign in a plane approximately parallel to the plane of the exterior wall.

Site coverage: Refer to definition of "Building site coverage."

Site plan: A plan showing the details of building locations, structures, parking, vehicular access, landscaping and architectural design for a project or building site.

Special community event: A limited temporary commercial or noncommercial event sponsored by a service group, homeowners association, property owners association, or other community organization, including but not limited to the following: parades, swim meets, community picnics, athletic contests, vehicle races, pageants, outdoor programs, and other similar uses.

Story: That portion of a building included between the upper surface of any floor and the upper surface of the floor next above, except that the topmost story shall be that portion of a building included between the upper surface of the topmost floor and the ceiling or roof above.

Street: A public or private vehicular right-of-way other than an alley or driveway, including both local streets and arterial highways.

Street opening: A curb break, or a means, place or way provided for vehicular access between a street and abutting property.

Structure: Anything constructed or erected requiring a fixed location on the ground or attached to something having a fixed location on the ground except business signs, tennis court fences, and other fences around unenclosed outdoor recreation facilities, and other minor improvements. A mobile home on a permanent foundation is a structure.

Structural alterations: Any change in the supporting members of a building or structure.

Swimming pool: An artificial body of water having a depth in excess of eighteen (18) inches, designed, constructed and used for swimming, dipping or immersion purposes by men, women or children.

DEFINITIONS (U)

Ultimate right-of-way: The right-of-way shown as ultimate on an adopted precise plan of highway alignment, or the street rights-of-way shown within the boundary of a recorded tract map, a recorded parcel map or a recorded PC development plan. The latest adopted or recorded document in the above case shall take precedence. If none of these exist, the ultimate right-of-way shall be considered the right-of-way required by the highway classification as shown on the Master Plan of Highways. In all other instances, the ultimate right-of-way shall be considered to be the existing right-of-way in the case of a private street, and the existing right-of-way in the case of a public street.

Usable Open Space: One or more open space areas adjacent to residential uses, the purpose of which is to provide natural or recreational amenities.

Usable Open Space, Private: Usable open space intended for use of occupants of one (1) dwelling unit, normally yards, decks, and balconies.

Use: The purpose for which land or a building is occupied, arranged, designed or intended, or for which either land or building is or may be occupied or maintained.

DEFINITIONS (V)

Vehicular accessway easement: A private, nonexclusive easement affording vehicular access to abutting properties.

DEFINITIONS (W)

Water reclamation facility: A facility for the treatment of sewage and wastewaters for beneficial reuse, established and operated by a local agency.

Wing wall: An architectural feature in excess of six (6) feet in height which is a continuation of a building wall projecting beyond the exterior walls of a building.

DEFINITIONS (Y)

Yard: The open space within a building site that is unoccupied and unobstructed by any structure or portion of a structure from 30 inches above the finished grade upward; except that eaves, fences, walls used as fences, poles, posts and other customary yard ornaments, accessories and furniture may be permitted in any yard subject to the regulations for the district in which it is located.

4.4 RESIDENTIAL REGULATIONS

4.4.1 Low Density Residential

1. Purpose and Applicability

Land so designated in the Southridge Village Land Use Master Plan as Single Family (planning unit designations 1.2, 3, and 4.5) and Patio Homes (planning unit designation 6) is intended for the development of detached single-family dwelling units.

2. Uses Permitted

- a. Detached single-family dwellings, with not more than one such dwelling on any one lot.
- b. Parks, playgrounds, and pedestrian/bicycle trails.
- c. Flood control channels and utility easements.

3. Accessory Uses Permitted

- a. Garages and carports
- b. Swimming pools
- c. Fences, walls and mailboxes
- d. Garden structures and greenhouses
- e. Commonly owned private recreational facilities (subject to Design Review)
- f. Any other accessory use or structure clearly incidental to the principal permitted use and intended for the exclusive use by the resident of the lot as approved by the City.

4. Temporary Uses Permitted

- a. Model homes, temporary real estate offices, and subdivision signs
- b. Temporary onsite construction offices/facilities
- c. Continued use of an existing building during construction of a new building on the same building site.

- d. Real estate signs, future development signs, and subdivision directory signs in conformance with the City Sign Ordinance

5. Site Development Standards

- a. The minimum lot area and lot width shall be as follows:

<u>Designation</u>	<u>Minimum Lot Area</u>	<u>Minimum Lot Width¹</u>
1.2	20,000 sq.ft.	120 ft.
3	10,000 sq.ft.	75 ft.
4.5	6,000 sq.ft.	50 ft.
6	4,500 sq.ft.	45 ft.

- b. Maximum building height shall be thirty-five (35) feet. Structures in excess of thirty-five (35) feet in height shall be subject to the approval of a Conditional Use Permit.

- c. Maximum lot coverage shall be as follows:

<u>Designation</u>	<u>Maximum Lot Coverage</u>
1.2, 3	40%
4.5	50%
6	55%

- d. Minimum building setbacks shall be as follows:

<u>Designation</u>	<u>Front</u>	<u>Side</u>	<u>Rear</u>	<u>Corner-Side</u>
1.2	25 ft.	10 ft.	25 ft.	20 ft.
3	20 ft.	10 ft.	25 ft.	20 ft.
4.5	20 ft.	5 ft.	20 ft.	10 ft.
6	20 ft.	"0"/10 ft. aggregate	15 ft.	10 ft.

¹ Minimum lot widths for lots on a curvilinear street or cul-de-sac may be reduced to 60% of the stated minimum as measured at the right-of-way line.

e. Projections into required setbacks:

(1) No attached or detached covered patio shall be located closer than three (3) feet to a property line except the street-side property line of a corner lot, in which case a minimum distance of ten (10) feet shall be maintained.

(2) Eaves, cornices, chimneys, balconies, and other similar architectural features shall not project more than four (4) feet into any required front, or side setback, nor more than six (6) feet into any required rear setback.

f. Parking requirements: A minimum of two (2) covered spaces shall be provided for each dwelling unit.

4.4.2 Medium Density Residential

1. Purpose and Applicability

Land so designated in the Southridge Village Land Use Master Plan as Entry Estates and Duplex (planning unit designation 8) and Townhomes (planning unit designation 12) is intended for the development of attached single-family units permitting one or more dwellings on any one lot. Residential developments, except detached single-family dwellings are subject to Design Review per General Note No. 2.

2. Uses Permitted

- a. Detached single-family dwellings.
- b. Attached single-family dwellings (including, but not limited to clustered single-family, duplexes, triplexes, fourplexes and townhomes) sharing one (1) or more common walls. Each dwelling may be located on a single lot or one (1) or more dwellings may be permitted on any one lot so long as the other provisions of this article are complied with.

- c. Parks, playgrounds, commonly owned private recreational facilities, and pedestrian/bicycle trails.
- d. Flood control channels and utility easements.

3. Uses Permitted Subject to a Conditional Use Permit

- a. Manufactured housing
- b. Mobile homes placed on permanent foundations

4. Accessory Uses Permitted

- a. Garages, carports and open parking areas.
- b. Swimming pools
- c. Fences, walls, and mailboxes
- d. Garden structures and greenhouses
- e. Any other accessory use or structure clearly incidental to the principal permitted use and intended for the exclusive use by the residents of the development as approved by the City.

5. Temporary Uses Permitted

- a. Model homes, temporary real estate offices, and subdivision signs.
- b. Temporary onsite construction offices/facilities
- c. Continued use of an existing building during construction of a new building on the same building site
- d. Real estate signs, future development signs and subdivision directory signs in conformance with the City of Fontana Sign Ordinance

6. Site Development Standards

- a. The minimum building site area per unit shall be as follows:

<u>Designation</u>	<u>Minimum Building Site Area/Unit</u>
8	3,500 sq. ft.
12	2,500 sq. ft.

b. Maximum building height shall be thirty-five (35) feet. Structures in excess of thirty-five (35) feet in height shall be subject to the approval of a Conditional Use Permit.

c. Maximum building site coverage: 60%

d. Building setbacks:

- (1) The minimum building setback from any public street right-of-way line shall be ten (10) feet, except that the point of entry to any garage shall be a minimum of twenty (20) feet from any public street right-of-way line unless the garage is equipped with an automatic door opener, in which case it shall be not more than five (5) feet.
- (2) From any private street or drive: Five (5) feet minimum provided that enclosed garages situated within twenty (20) feet of any street or drive shall be equipped with automatic garage door openers.
- (3) The minimum side yard setback for each dwelling unit and/or accessory structure shall be "0" feet.
- (4) The minimum rear yard setback for each dwelling unit and/or accessory structure shall be 10 feet.
- (5) The minimum horizontal distance between principal structures shall be ten (10) feet.
- (6) The minimum horizontal distance between accessory structures shall be five (5) feet.
- (7) The minimum setback from any exterior boundary line of the project abutting a low density residential use shall be ten (10) feet. The minimum setback from any exterior boundary line of the project abutting a non-residential use shall be five (5) feet for principal structures and "0" feet for accessory structures.

e. Projections into required setbacks:

- (1) No attached or detached covered patio shall be located closer than three (3) feet to a property line except the

street-side property line of a corner lot, in which case a minimum distance of ten (10) feet shall be maintained.

- (2) Eaves, cornices, chimneys, balconies, and other similar architectural features shall not project more than four (4) feet into any required front, rear or side setback.

f. Trash storage and collection areas: Any residential development proposing more than two (2) dwellings on any one lot shall provide adequate and convenient trash storage area(s) shielded from view by an enclosed building or wall not less than six (6) feet in height.

g. Parking requirements: A minimum of two (2) covered spaces plus one-half (.5) uncovered space shall be provided for each dwelling unit. All required guest parking spaces shall be located off-street.

4.4.3 High Density Residential

1. Purpose and Applicability

Land so designated in the Southridge Village Land Use Master Plan as Garden Homes and Carriage Homes (planning unit designations 18 and 25, respectively) is intended for development of multiple family dwelling units. Residential developments in these categories are subject to Design Review per General Note No. 2.

2. Uses Permitted

- a. Attached single-family dwellings (including, but not limited to clustered single-family, duplexes, triplexes, fourplexes and townhomes).
- b. Multiple-family dwellings (including, but not limited to condominiums, apartments, stock cooperatives, garden homes and carriage homes).
- c. Parks, playgrounds, commonly owned private recreational facilities and pedestrian/bicycle trails.

- d. Flood control channels and utility easements
- 3. Uses Permitted Subject to Conditional Use Permit
 - a. Manufactured housing
 - b. Mobile homes placed on permanent foundations
- 4. Accessory Uses Permitted
 - a. Garages, carports and open parking areas
 - b. Swimming pools
 - c. Fences, walls and mailboxes
 - d. Any other accessory use or structure clearly incidental to the primary permitted use and intended for the exclusive use by the residents of the development as approved by the City.
- 5. Temporary Uses Permitted
 - a. Model homes, temporary real estate offices, and subdivision signs
 - b. Temporary onsite construction offices/facilities
 - c. Continued use of an existing building during construction of a new building on the same building site
 - d. Real estate signs, future development signs, and subdivision directory signs in conformance with the City of Fontana Sign Ordinance
- 6. Site Development Standards
 - a. The minimum building site area shall be twelve-hundred (1,200) square feet per unit
 - b. Maximum building height shall be forty-five (45) feet. Structures in excess of forty-five (45) feet in height shall be subject to the approval of a Conditional Use Permit.
 - c. Maximum building site coverage: 70%.

d. Building setbacks:

- (1) The minimum setback for principal structures abutting a public street shall be twenty-five (25) feet; accessory structures shall be set back a minimum of fifteen (15) feet from public streets.
- (2) The minimum setback from private streets or drives shall be five (5) feet for all structures.
- (3) The minimum setback from any exterior boundary line abutting a Low Density residential use or Medium Density residential use shall be twenty (20) feet and fifteen (15) feet, respectively.
- (4) The minimum horizontal distance between principal structures shall be ten (10) feet, provided that if either structure is in excess of thirty-five (35) feet in height the minimum distance between buildings shall be fifteen (15) feet.
- (5) The minimum horizontal distance between accessory structures shall be five (5) feet.

e. Projections into required setbacks:

- (1) No patio or balcony shall be located closer than ten (10) feet to an exterior boundary line except that a minimum distance of fifteen (15) feet shall be maintained from an abutting public street right-of-way line.
- (2) Eaves, cornices, chimneys, balconies, and other similar architectural features shall not project more than four (4) feet into any required setback.

f. Trash storage and collection areas shall be conveniently located and shielded from view by an enclosed building or wall not less than six (6) feet in height.

- g. Parking requirements: Off-street parking shall be provided as follows:

<u>Unit Type</u>	<u>Covered Spaces</u>	<u>Uncovered Spaces</u>	<u>Guest Spaces</u>
Studio,			
1-bedroom	1/unit	-	0.25/unit
2-bedroom	1/unit	0.5/unit	0.5/unit
3-bedroom+	1/unit	1/unit	0.5/unit

4.5 COMMERCIAL REGULATIONS

4.5.1 Neighborhood Commercial

1. Purpose and Applicability

Land designated in the Southridge Village Land Use Master Plan as Neighborhood Commercial (NC) is intended for the development of commercial retail and service uses and facilities of a neighborhood variety. Only those uses and facilities which are compatible with residential uses are permitted. All neighborhood commercial development is subject to Design Review per General Note No. 2.

2. Uses Permitted

a. Retail businesses including, but not limited to:

- (1) grocery and supermarket
- (2) drug store
- (3) liquor store
- (4) ice cream parlor
- (5) bakery goods store
- (6) restaurant, cafe and drive-in restaurant
- (7) florist shop and plant nursery

b. Service establishments including, but not limited to:

- (1) barber shop
- (2) beauty shop
- (3) dry cleaning
- (4) household appliance repair shop
- (5) automobile service station (subject to Conditional Use Permit)
- (6) daycare center

c. Business and professional offices (including banks and savings and loan)

- d. Community facilities
- e. Public utility structures (subject to Conditional Use Permit)
- f. Accessory uses and structures clearly incidental to any of the above uses.

3. Site Development Standards

- a. Maximum building height shall be thirty-five (35) feet. Structures in excess of thirty-five (35) feet in height shall be subject to the approval of a Conditional Use Permit.
- b. Building setbacks: The minimum building setback from any property line abutting a residential area shall be twenty (20) feet.
- c. Off-street parking requirements: Off-street parking shall be provided as required by the provisions of Article XXII of the City's Zoning Ordinance.
- d. Signs: Signs shall be permitted in accordance with the City's Sign Ordinance.
- e. Lighting: All lighting, exterior and interior, shall be designed and located to confine direct rays to the premises.
- f. Loading: All loading shall be performed on the site. Loading platforms and areas shall be screened from view from adjacent streets, highways, and residential areas.
- g. Trash and storage areas: All storage, including cartons, containers or trash, shall be shielded from view within a building or area enclosed by a wall not less than six (6) feet in height. No such area shall be located within fifty (50) feet of any residentially zoned area unless it is fully enclosed.

- h. Screening abutting residential areas: An opaque screen shall be installed along all site boundaries where the premises abut areas zoned for residential uses. The screening shall have a total height of not less than six (6) feet and not more than seven (7) feet.
- i. Landscaping: Landscaping, consisting of a combination of evergreen or deciduous trees, shrubs, groundcover, or hardscape shall be installed and maintained subject to the following standards:
 - (1) Boundary landscaping abutting public streets is required to an average depth of ten (10) feet with a minimum depth of five (5) feet.
 - (2) An additional amount, equal to at least five (5) percent of the net usable area of the parcel is required and a minimum of twenty percent (20%) of such landscaping shall be located in the area devoted to parking.
 - (3) Separation: Any landscaped area shall be separated from an adjacent vehicular area by a wall or curb at least six (6) inches higher than the adjacent vehicular area or shall in some manner be protected from vehicular damage.
 - (4) Watering: Permanent automatic watering facilities shall be provided for all landscaped areas.
 - (5) Maintenance: Required landscaping shall be maintained in a neat, clean, and healthy condition. This shall include proper pruning, mowing of lawns, weeding, removal of litter, fertilizing, replacement of plants when necessary and the regular watering of all plantings.

4.5.2 Community Commercial

1. Purpose and Applicability

Land designated in the Southridge Village Land Use Master Plan as Sub-Regional Center (SRC) is intended for the development of commercial retail and service uses and facilities appropriate and necessary to serve the needs of the general community. It is the purpose of this section to regulate the design, development and use of a variety of compatible uses, more diverse than that permitted within the Neighborhood Commercial provisions. All community commercial development is subject to Design Review per General Note No. 2.

2. Uses Permitted

- a. Retail commercial establishments
- b. Service commercial establishments
- c. Administrative, business and professional offices
- d. Cultural facilities
- e. Hotels and motels
- f. Restaurants, cafes, bars and cocktail lounges
- g. Amusement establishments
- h. Community facilities and services
- i. Public utility uses, structures and facilities
- j. Accessory uses and structures clearly incidental to any of the above.

3. Site Development Standards

- a. Maximum building height shall be fifty (50) feet.
- b. Building setbacks: The minimum building setback from any property line abutting a residential area shall be twenty-five (25) feet, except that buildings more than thirty-five (35) feet in height shall be set back a distance equal to the height of the building.
- c. Off-street parking requirements. Off-street parking shall be provided as required by the provisions of Article XXII of the City's Zoning Code
- d. Signs. Signs shall be permitted in accordance with the City's Sign Ordinance

- e. Lighting. All lighting, exterior and interior, shall be designed and located to confine direct rays to the premises.
- f. Loading. All loading shall be performed on the site. Loading platforms and areas shall be screened from view from adjacent street, highways, and residential areas.
- g. Trash and storage area. All storage, including cartons, containers or trash, shall be shielded from view within a building or area enclosed by a wall not less than six (6) feet in height. No such area shall be located within fifty (50) feet of any residentially zoned area unless it is fully enclosed.
- h. Screening abutting residential areas. An opaque screen shall be installed along all site boundaries where the premises abut areas zoned for residential uses. The screening shall have a total height of not less than six (6) feet and not more than seven (7) feet.
- i. Landscaping. Landscaping, consisting of a combination of evergreen or deciduous trees, shrubs, ground cover, or hardscape shall be installed and maintained subject to the following standards:
 - (1) Boundary landscaping abutting public streets is required to an average depth of ten (10) feet with a minimum depth of five (5) feet.
 - (2) An additional amount equal to at least five (5) percent of the net usable area of the parcel, is required and a minimum of twenty 20% percent of such landscaping shall be located in the area devoted to parking.
 - (3) Separation. Any landscaped area shall be separated from an adjacent vehicular area by a wall or curb at least six (6) inches higher than the adjacent vehicular area or shall in some manner be protected from vehicular damage.
 - (4) Watering. Permanent automatic watering facilities shall be provided for all landscaped areas.
 - (5) Maintenance. Required landscaping shall be maintained in a neat, clean, and healthy condition. This shall include proper pruning, mowing of lawns, weeding, removal of litter, fertilizing, replacement of plants when necessary and the regular watering of all plantings.

4.5.3 Commercial Recreation

1. Purpose and Applicability

Land designated in the Southridge Village Land Use Master Plan as Commercial Recreation (CR) is intended for the development of commercial recreational uses and facilities compatible with the balance of the community. The unique nature of the permitted uses warrants a separate set of standards for this category. All commercial recreation development shall be subject to Design Review.

2. Permitted Uses

- a. Miniature golf
- b. Water-slides
- c. Roller-skating, ice skating rinks
- d. Electronic, video and amusement game establishments
- e. Health and athletic clubs
- f. Racquetball, handball and tennis clubs
- g. Batting cages
- h. Bowling alleys
- i. Billiard parlors
- j. Other compatible amusement, entertainment and recreational uses and facilities.
- k. Food service establishments
- l. Accessory uses and structures clearly incidental to any of the above.

3. Site Development Standards

- a. Maximum building height shall be thirty-five (35) feet. Structures in excess of thirty-five (35) feet in height shall be subject to the approval of a Conditional Use Permit.
- b. Building setbacks: The minimum building setback from any property line abutting a residential area shall be a distance equal to the height of the building, except in no case shall the setback be less than twenty-five (25) feet.
- c. Setbacks for non-enclosed uses shall be determined at Design Review.

- d. Off-street parking requirements. Off-street parking shall be provided as required by the provisions of Article XXII of the City's Zoning Code.
- e. Signs. Signs shall be permitted in accordance with the City's Sign Ordinance.
- f. Lighting. All lighting, exterior and interior, shall be designed and located to confine direct rays to the premises.
- g. Loading. All loading shall be performed on the site. Loading platforms and areas shall be screened from view from adjacent streets, highways, and residential areas.
- h. Trash and storage areas. All storage, including cartons, containers or trash shall be shielded from view within a building or area enclosed by a wall not less than six (6) feet in height. No such area shall be located within fifty (50) feet of any residentially zoned area unless it is fully enclosed.
- i. Screening abutting residential areas. An opaque screen shall be installed along all site boundaries where the premises abut areas zoned for residential uses. The screening shall have a total height of not less than six (6) feet and not more than seven (7) feet.
- j. Landscaping. Landscaping, consisting of a combination of evergreen or deciduous trees, shrubs, groundcover, or hardscape shall be installed and maintained subject to the following standards:
 - (1) Boundary landscaping abutting public streets is required to an average depth of ten (10) feet with a minimum depth of five (5) feet.
 - (2) An additional amount, equal to at least five (5) percent of the net usable area of the parcel, is required and a minimum of twenty 20% percent of such landscaping shall be located in the area devoted to parking.
 - (3) Separation. Any landscaped area shall be separated from an adjacent vehicular area by a wall or curb at least six (6) inches higher than the adjacent vehicular area or shall in some manner be protected from vehicular damage.
 - (4) Watering. Permanent automatic watering facilities shall be provided for all landscaped areas.

- (5) Maintenance. Required landscaping shall be maintained in a neat, clean and healthy condition. This shall include property pruning, mowing of lawns, weeding, removal of litter, fertilizing, replacement of plants when necessary, and the regular watering of all plantings.

4.6 COMMUNITY FACILITIES REGULATIONS

1. Purpose and Intent

Land designated on the Southridge Village Land Use Master Plan as community facilities (QP) has been established to provide for those additional public and quasi-public uses which may be compatible with the basic permitted uses, but which need the additional review provided for by the Design Review process.

2. Uses Permitted

- a. Open Space
- b. Schools, churches, libraries and post offices
- c. Public and private recreational facilities, non-commercial
- d. Establishments for the care of pre-school children
- e. Fire and police stations, and other public and quasi-public facilities
- f. Community service centers
- g. Public utility uses, structures and facilities
- h. Other community facility uses consistent with the purpose of these regulations which are found to be compatible with the surrounding permitted uses.
- i. Accessory uses and structures clearly incidental to any of the above uses.

3. Site Development Standards

- a. Maximum building height shall be thirty-five (35) feet. Structures in excess of thirty-five (35) feet in height shall be subject to the approval of a Conditional Use Permit.
- b. Building setbacks: The minimum building setback from any property line abutting a residential area shall be a distance equal to the height of the building, except in no case shall the setback be less than twenty (20) feet.
- c. Off-street parking requirements. Off-street parking shall be provided as required by the provisions of Article XXII of the City's Zoning Code.
- d. Signs. Signs shall be permitted in accordance with the City's Sign Ordinance.

- e. Lighting. All lighting, exterior and interior, shall be designed and located to confine direct rays to the premises.
- f. Loading. All loading shall be performed on the site. Loading platforms and areas shall be screened from view from adjacent streets, highways, and residential areas.
- g. Trash and storage areas. All storage, including cartons, container or trash, shall be shielded from view within a building or area enclosed by a wall not less than six (6) feet in height. No such area shall be located within fifty (50) feet of any residential zoned area unless it is fully enclosed.
- h. Screening abutting residential areas. An opaque screen shall be installed along all site boundaries where the premises abut areas zoned for residential uses. The screening shall have a total height of not less than six (6) feet and not more than seven (7) feet.
- i. Landscaping. Landscaping, consisting of a combination of evergreen or deciduous trees, shrubs, ground cover, or hardscape shall be installed and maintained subject to the following standards:
 - (1) Boundary landscaping abutting public streets is required to a minimum depth of five (5) feet.
 - (2) An additional amount, equal to at least five (5%) percent of the net usable area of the parcel, is required and a minimum of twenty (20%) percent of such landscaping shall be located in the area devoted to parking.
 - (3) Separation. Any landscaped area shall be separated from an adjacent vehicular area by a wall or curb at least six (6) inches higher than the adjacent vehicular area or shall in some manner be protected from vehicular damage.
 - (4) Watering. Permanent automatic watering facilities shall be provided for all landscaped areas.
 - (5) Maintenance. Required landscaping shall be maintained in a neat, clean, and healthy condition. This shall include proper pruning, mowing of lawns, weeding, removal of litter, fertilizing, replacement of plants when necessary, and the regular watering of all plantings.

4.7 OPEN SPACE REGULATIONS

1. Purpose and Applicability

The standards set forth in this section are provided to regulate the use and development of land designated in the Southridge Village Land Use Master Plan as Regional Park/Open Space (RP), Neighborhood Parks (NP), Community Park (CP), Edison and MWD easements, and those portions of elementary and junior high school sites to be developed as joint-use recreation areas in conjunction with adjacent park uses.

2. Uses Permitted

- a. Parks, playgrounds and ballfields/sportsfields
- b. Equestrian, pedestrian and bicycle trails
- c. Equestrian facilities (including boarding and rental facilities restricted to regional park designated areas subject to approval of a Conditional Use Permit).
- d. Hardcourt games including, but not limited to volleyball, basketball, tennis and the like.
- e. Swimming pools
- f. Ponds and lakes (including fishing)
- g. Picnicking
- h. Overnight group camping (restricted to regional park areas)
- i. Public utility lines and attended structures and facilities
- j. Such other uses, facilities and events as deemed appropriate and compatible by the Planning Commission.
- k. Accessory uses and structures clearly incidental to any of the above uses.

3. Uses Permitted Subject to a Conditional Use Permit

- a. Water storage, pumping, spreading, spraying, purification, and similar or accessory uses and facilities.

4. Site Development Standards

- a. Special provisions. Uses, facilities, structures, and improvements proposed for land within the Edison and MWD easements shall be approved by the appropriate utility agency prior to or concurrent with Design Review approval.

- b. Design Review approval shall be required for all structures and facilities, excluding utility transmission lines (including electric, gas, water, irrigation, sewer, telephone, and TV cable).

4.8 SUBDIVISION MAPS AND DESIGN REVIEW PROCEDURES

1. Purpose and Intent

The purpose and intent of this section is to assure that future subdivision maps, Design Review approvals, and other land use approvals are consistent with the Southridge Village Specific Plan as well as the City of Fontana General Plan and other applicable development regulations.

2. Procedures

The following procedures shall be adhered to for the development of the various elements and uses of the Southridge Village Specific Plan. There are two general types of actions related to future development: one will be the creation of the planning units as separate parcels and the second will be actions that allow for actual construction within each planning unit; i.e., tract map approvals and review of specific site design details within each planning unit.

a. Tentative Tract Maps

Tentative tract maps for detached single-family products or parcel maps for the creation of planning units shown on the Land Use Master Plan from larger parcels within the Southridge Village Specific Plan shall be submitted to and processed by the City of Fontana in accordance with the requirements of the State Subdivision Map Act and Chapter 28, Subdivisions of the Code of the City of Fontana. Design Review approval shall not be required for tentative maps or parcel maps in these cases.

b. Final Tract Maps

Final tract maps shall be processed in conformance with the State Subdivision Map Act and Chapter 28, Subdivisions of the Code of the City of Fontana.

c. Design Review

All uses and development, excluding detached single-family residences, proposed within Southridge Village shall obtain Design Review approval prior to or concurrent with any tentative tract map approval or issuance of any building, grading, sign, or other permit. The information outlined below shall be submitted for any use or development requiring design review approval by the regulations set forth in this Chapter 4.0, Development Standards of this Specific Plan. This information shall be submitted to the City of Fontana for review to assure consistency with the Southridge Village Specific Plan.

Development plans submitted for Design Review shall contain, but are not limited to the following information:

- 1) Site Plans drawn to scale, dimensioned, and easily readable containing, but not limited to, the following:
 - a) Title block (developer's name and date shown)
 - b) Scale and north arrow
 - c) Property lines of all existing and proposed building sites, dimensioned
 - d) Buildings; existing and proposed, location, and size
 - e) Streets: location, purpose, and width
 - f) Easements: location, purpose, and width
 - g) Access (driveways, etc.), existing and proposed
 - h) Parking areas, designed to City standards
 - i) Signs: location, height, dimensions, and copy, if available
 - j) Fencing (walls): type, location, and height
 - k) Landscape areas
 - l) Existing and proposed topography and grading concept

- m) Outdoor uses, location, and type of use
 - n) Existing structures on abutting properties, location, height, and uses
 - o) Existing topography and drainage improvements (if not shown on accompanying tentative tract map or other documentation)
 - p) Street lighting provisions
- 2) Typical preliminary schematic elevations of all structures and signs, including, but not limited to the following:
 - a) Exterior materials
 - b) Elevations shall include all sides of a structure
 - 3) Typical schematic floor plans
 - 4) Preliminary landscape plans in conformance within the Landscape Master Plan for the Southridge Village Specific Plan.
 - 5) Such other information as may be reasonably required by the Planning Director of the City of Fontana.

3. Design Review Application

- a. An application for Design Review shall be filed with the City of Fontana on the prescribed application form, and shall be accompanied by the following:
 - 1) A completed Initial Study prepared pursuant to the requirements of the City's "Guidelines for Implementation of the California Environmental Quality Act."

The certified Southridge Village Specific Plan Environmental Impact Report (EIR) shall apply to all future

Design Review procedures. The EIR has been determined to meet CEQA requirements pertaining to such considerations.

2) All maps, drawings, plans, tabulations, documents, and other materials prescribed on the application form as required for Design Review, in the amounts and formats specified by the City of Fontana.

3) The required fee.

b. Design Review and approval procedures shall be as prescribed in Article XXXIX, Design Review of the Code of the City of Fontana or as specified in this section.

c. Design Review approval shall become effective after ten (10) days following the date that the approval was given unless a formal appeal has been submitted to the Council.

4. Minor modifications to Design Review approvals, which do not conflict with the provisions of the Southridge Village Specific Plan or adopted City Codes and ordinances may be approved by the Planning Director.

5. Any use proposed for an area, parcel, lot or building site for which the proposed use is not specifically permitted, as determined by the City of Fontana, shall require the approval of a Conditional Use Permit per the provisions of the City's Zoning Code.

4.9 ADMINISTRATION AND ENFORCEMENT

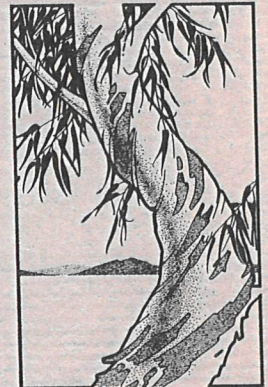
Administration and enforcement: The standards and regulations set forth in the Southridge Village Specific Plan shall be administered by the City Planning Commission. Provisions pertaining to the construction or alteration of any building shall be enforced by the Director of Building Inspection of the City.

The Director of Building Inspection shall withhold final approval or final public utility connections to any structure until all of the standards and regulations specified in this Specific Plan have been complied with.

4.10 SPECIFIC PLAN AMENDMENTS

Any amendments to the Southridge Village Specific Plan shall be in accordance with California Government Codes, Section 65500 through 65507.

Implementation of the Specific Plan



5.0

5.0 IMPLEMENTATION OF THE SPECIFIC PLAN

5.1 INTRODUCTION

The successful development of the Southridge Village community according to this Specific Plan is dependent upon the implementation of necessary public improvements and the provision of required public services. Development of residential neighborhoods and commercial uses cannot be carried to completion unless these improvements are provided.

The master plans presented in Chapter 3.0, SPECIFIC DEVELOPMENT PLAN, identify a series of public improvements considered necessary for development of the community. These improvements may be organized into the following categories:

- . Flood control and drainage
- . Sewer collection, treatment, and disposal
- . Public streets and traffic improvements
- . Public schools
- . Water supply, storage and distribution
- . Police and fire protection facilities
- . Parks and recreation
- . Master landscaping elements

The focused EIR for this Specific Plan and the previous master EIR for the Jurupa Hills General Plan Amendment identified certain other urban services that must be provided (i.e., solid waste disposal, electricity, natural gas, health care, telephone, etc.). These other services are not considered to be problematic at the Specific Plan level of planning, and are therefore not discussed in this Chapter.

Chapter 7.0 of this Specific Plan, FISCAL IMPACT REPORT, presents an analysis of both the one-time and recurring costs and revenues attributable to the major public improvements and services required for the development of Southridge Village. For some of these improvements, the existing funding mechanisms of the City and special districts are expected to be financially adequate. Considering, however, all of the needed improvements together existing funding mechanisms will not be adequate to provide the needed improvements and services.

In section 7.2.3 of the Fiscal Impact Report, a series of additional funding sources and mechanisms are identified which could serve to mitigate potential adverse fiscal effects. Each method of funding has certain limitations which precludes exclusive use of any one source, so that a combination of methods will be required to fund the various improvements. The Fiscal Impact Report reviews the potential feasibility and applicability of several additional or alternative funding sources:

- . Development fees
- . Assessment districts
- . Developer assumption of costs
- . Redevelopment project and tax increment financing
- . Other miscellaneous sources

Section 7.3 of the Fiscal Impact Report presents an outline of financing alternatives to provide a framework for discussion, planning and decision-making by the City, the County, special districts, landowners, and developers. Many other combinations of funding alternatives are possible for each individual type of public improvement.

The fiscal analysis concludes that total additional funding of \$45.2 million will be needed to provide public improvements, in addition to the \$31 million that would be generated from existing development fees. In the event the City requires that all improvements be financed through development fees, developer contributions, and/or assessment districts, this would add about \$11,500 to the cost of the average dwelling unit within Southridge Village: \$4,900 would be attributable to existing fees and \$6,600 due to additional fees or assessments. To the extent that tax increment financing is used to pay for public facilities, the price of housing would be reduced accordingly.

In addition to these funding sources, certain engineering reports, policy determinations, decisions, and agreements between public agencies and private parties will be required if this Specific Plan is to be implemented. In general these implementing mechanisms are specific to each particular class of improvements that must be provided.

The remainder of this chapter describes various implementation requirements and options for consideration by the City, the County, other special districts, developers and landowners.

5.2 IMPLEMENTATION REQUIREMENTS AND OPTIONS

Flood Control and Drainage

Construction of an improved channel along the Declez drainage course is a prerequisite for implementation of the Land Use Master Plan. Only limited acreage in the northwest part of the planning area could be developed in the absence of this improved channel. Protection against 100-year flood inundation must be provided for new residential development.

Development of major regional flood control facilities is estimated to cost about \$10 million. This cost does not include major tributary drains, local storm drains, or bridges and related improvements. Current drainage development fees collected by the City are intended to finance only local drainage improvements. The County of San Bernardino has not programmed or budgeted funds for these flood control improvements; therefore, a new funding source will be required.

Of the possible funding sources, tax increment or assessment district financing would appear to be most viable for flood control improvements. In addition, improvement of the Declez Channel would benefit other properties outside of Southridge Village, both upstream in south Fontana and downstream in Riverside County.

Because of this area-wide benefit, it would be reasonable to consider funding arrangements that would provide some contribution from benefitted lands outside of Southridge Village. This would require cooperation from San Bernardino County or Riverside County or both.

The project engineer recommends that a sedimentation analysis of the Declez watershed under both existing conditions and conditions of ultimate development be conducted. This analysis would determine if a lesser bulking factor is appropriate because of reduced sediment discharge under

urbanized conditions. A reduce bulking factor would likely decrease the necessary channel capacity and corresponding improvements costs.

A detailed design report must be prepared for the flood control improvements plan. Hydrologic analysis and design recommendations must be approved by the San Bernardino County Flood Control District and the City of Fontana. The Riverside County Flood Control District must review and concur with the analysis and design recommendations for the downstream reach of the channel that will be constructed in Riverside County.

An agreement between the City, the two County flood control districts, and affected landowners should be reached regarding mitigation of the effects of increased runoff on downstream flood control facilities. Mitigation through use of floodwater retention within Southridge Village may not be necessary if an agreement to substitute downstream offsite improvements can be reached.

Early action on flood control financing and institutional agreements is recommended because of the magnitude of costs in phase one, the lead time needed for design and construction, and the critical nature of these improvements for community development. The necessary agreements and decisions may involve establishment of a redevelopment project or assessment district or both; memoranda of understanding and agreement among the responsible public agencies; and/or a development agreement between the City and landowners/developers in the planning area, as authorized by Section 65864 et. seq. of the California Government Code.

Sewer Collection, Treatment, and Disposal

The existing uncommitted capacity of Regional Plant No. 3 is not adequate to accommodate full development of Southridge Village together with the additional development expected in the City. Implementation of the Sewer Master Plan for Southridge Village will require the expansion or new construction of regional sewer facilities, as well as provision of the onsite facilities (collectors, pump station, and force main) shown on the Sewer Master Plan.

In itself, funding of the necessary sewer improvements is not a major obstacle for implementation of the Sewer Master Plan. Projected revenues derived from the current sewer expansion and connection fees of \$1,100 per unit should be sufficient to fund the necessary sewage treatment facilities. Current City practice requires developers to provide intract sewage collection facilities. The problematic aspect of sewer facilities funding is related to developing the agreements necessary for design, construction, and financing of regional sewage treatment and disposal facilities.

The responsible agencies that must enter into or concur with the agreements for sewer facilities expansion include Chino Basin Municipal Water District, which owns and operates regional facilities and provides long-term facilities planning; the City of Fontana and other cities in the Chino Basin MWD service area, which provide sewage collection facilities and which are assessing development fees for local funding of regional facilities improvements; the Regional Water Quality Control Board, which establishes standards and issues permits for the discharge of treated wastewater effluent; and the State Water Resources Control Board and the Federal Environmental Protection Agency, which provides and controls disbursement of supplemental state and federal funds for regional facilities construction.

The City's current growth management program calls for a maximum of 1,000 dwelling unit sewer connections per year within the Regional Plant No. 3 service area. The development phasing schedule anticipated for Southridge Village, when considered with other pending new development in the City, would exceed this sewer-related growth management limitation. If the development of Southridge Village is to proceed as planned, a solution must be realized for the sewer capacity problems which led to the City's growth management program.

Short-term and long-term plans and agreements providing adequate wastewater treatment facilities must be developed and implemented. Current Chino Basin MWD facilities plans call for the expansion of RP No. 1 in the City of Ontario; construction of the Fontana Interceptor from RP No. 1 to RP No. 3; and closing down of RP No. 3 when the interceptor is installed.

Construction of the Fontana Interceptor and the expansion of RP No. 1 are considered to be essential for ultimate development of Southridge Village according to the Specific Plan. RP No. 1 must be expanded so that 4 mgd of capacity, to be reserved in this plant for Fontana's use when the interceptor is constructed, will actually be available when it is needed. In order for RP No. 1 to expand in this manner, an agreement for financing the design and construction of this expansion must be reached between Chino Basin MWD, the City of Fontana, and the other cities that would participate in the expansion.

Design and construction of the Fontana Inteceptor, for which federal and state funds have not yet been disbursed, are essential to meeting the long-term needs of Southridge Village and the City of Fontana.

If the development goals for Southridge Village are to be realized, it is necessary for the City, Chino Basin MWD, landowners, and developers in Southridge Village to enter into agreements that would cause these elements of the regional sewer facilities plan to be implemented.

The Specific Plan calls for wastewater from the development of phase one to be carried to RP No. 3 via a new force main. This is programmed to occur before the interceptor is constructed and RP No. 1 is expanded. It is recommended that an interim plan for sewage treatment at RP No. 3 be developed by the City, Chino Basin MWD, landowners, and developers in Southridge Village. This plan should include contingencies for modifying facilities or operations at RP No. 3 or both, to provide for adequate sewage treatment capacity until the interceptor construction and RP No. 1 expansion are realized. Interim plans for RP No. 3 could become a necessity if the ultimate facilities are not completed in a timely manner, and if growth restrictions arising from inadequate sewage treatment capacity are to be avoided.

Public Streets and Traffic Control

The Fiscal Impact Report in this Specific Plan identifies a need for approximately \$9.5 million to fund the onsite and offsite arterial and collector street improvements recommended for Southridge Village. Right-

of-way acquisition costs are not included in this cost estimate. Alternative funding mechanisms include developer provision of right-of-way and street improvements needed to accommodate project-related traffic volumes; City and/or County funding of right-of-way acquisition and improvement cost necessary for regional street improvements; assessment district financing to distribute the costs of street improvement among the landowners that would benefit; and tax increment financing through a redevelopment project.

The selected funding mechanism should consist of some combination of these and perhaps other methods, in accordance with equity considerations and traditional City and County practice.

The phasing of development within Southridge Village and on surrounding lands will have a major influence on the methods actually used to finance necessary street improvements. For example, if lands outside Southridge Village are developed before offsite street improvements are warranted, right-of-way dedication and full or partial street improvements could be required as a condition of development approval. If offsite street improvements are warranted before adjacent lands are developed, however, then condemnation of additional right-of-way (if needed) and construction of street improvements by a public agency would probably be necessary.

Traditional City practice regarding right-of-way dedication and construction of full or partial street improvements as a condition of development approval should be sufficient to accommodate most local circulation needs in Southridge Village. A provision for developer and/or public agency reimbursement of the cost of initial improvements, which benefit lands developed later, would help to ensure an equitable distribution of development costs.

The provision of street improvements to accommodate regional traffic increases is more problematic. This applies to onsite streets that will handle through traffic originating from other areas and also to offsite arterial streets that will handle both project-related and non-project-related traffic. Financing plans for these categories of streets should recognize the distribution of traffic benefits in their allocation of costs of street improvements.

It is recommended that funding programs for circulation system development include a phasing schedule for street improvements. This schedule should be designed to ensure that street improvements will be constructed by the time that such improvements are warranted. This schedule should be tied to the progress of development within Southridge Village, the progress of development on surrounding lands, and/or actual traffic count data obtained from an ongoing monitoring program.

School Facilities

Residential development in Southridge Village is expected to create a student population requiring six elementary schools, a junior high school, and expansion of the existing senior high school. Total school facilities costs are estimated to be about \$32 million, including land acquisition and cost construction of buildings. Current school impact fees in the Fontana Unified School District are intended (and, in fact, limited by State law) only to provide temporary classrooms on existing school sites. These fees will not be adequate to cover the necessary construction of new schools on new sites. The Colton Joint Unified School District would face similar revenue shortfall when development occurs if school district boundaries are not readjusted.

Additional sources of funding for the provision of schools could include tax increment financing; state aid for impacted school districts; additional fees applied to new developments; school construction assessments bonds; and/or developer provisions in the form of land dedication or lease, school site improvements, or new school buildings. While the State in the past has provided aid for capital construction in impacted school districts, the future availability of this aid is uncertain.

It is recommended that school district boundaries be adjusted to allow Fontana Unified School District to provide school services for the entire Southridge Village planning area. This would provide a more logical basis for the phasing of school construction and implementation of funding agreements. It would also permit more cost-effective solutions for construction of a new junior high school and expansion of the Fontana senior high school.

It is recommended that the City, the school district(s), the landowners, and developers within Southridge Village enter into an agreement to ensure that adequate school facilities will be available when needed to avoid overcrowding problems. This might take the form of a development agreement pursuant to Section 65864 et. seq. of the Government Code.

Water Supply Facilities

Domestic water for Southridge Village will be provided by Fontana Water Company. Fontana Water Company (FWC) receives all of their water supplies through the Fontana Union Water Company. Only a small portion of the Southridge Village area is within the existing service boundary of FWC. FWC is, however, committed to serve the area. Upon receipt of "Request for Service" letters from developers in Southridge Village, FWC will obtain certification from the California Public Utilities Commission to initiate service.

Funding of the necessary water transmissions, storage, and distribution facilities identified in the Water Master Plan is not anticipated to be a problem. Funding mechanisms are established by Fontana Water Company and approved by the Public Utilities Commission. These mechanisms ensure that water facilities required for public health and safety will be financed and provided through developer contributions and consumer service charges.

Police and Fire Protection Facilities

The new police contact office in Southridge Village will be owned and operated by the City of Fontana. The new fire station will be owned and operated by the Central Valley Fire Protection District. Estimated capital costs are \$300,000 for police facilities, and \$500,000 for fire protection facilities. The Fiscal Impact Report has concluded that the City and the Fire Protection District will both experience net revenue surpluses once Southridge Village development is completed; and that financing annual operation and maintenance costs for these facilities should present no undue burden on these public agencies. Alternatives for funding the capital facilities cost include public agency financing from operating reserves; developer provision; and assessment district or tax increment financing.

Parks and Recreation Facilities

The Open Space and Recreation Master Plan identifies a series of regional park, community park, neighborhood park, and trail system improvements for development in Southridge Village. Some of these facilities will benefit primarily the future residents of Southridge Village, while others, including the regional park and certain elements of the communitywide trail system, will benefit other residents in the City and County as well.

Park fees are levied by the City at a rate of one percent of the construction value of new homes. For Southridge Village, park fees are expected to average \$350 per new dwelling unit. The Fiscal Impact Report concludes that these park fees will fall short of meeting park capital improvement requirements by approximately \$300,000. This analysis further concludes that annual operation and maintenance costs for parks and recreation can be funded by the City through project-related tax revenues.

Alternatives for financing parks and recreation improvements include developer dedication of park land; additional park fees for new residential development in Southridge Village; park fee contributions from other residential projects in the City; and County park development funds. The last two options would appear to be justified because of the areawide benefits associated with certain trail improvements and the proposed regional park expansion.

Master Landscape Plan Elements

The primary features of the Master Landscape Plan include extensive streetscape plantings and community entries. The City currently levies a development fee of \$60 per dwelling unit for street tree planting. It is not expected that the one-time revenues generated from this fee in Southridge Village would be sufficient to cover the costs of constructing the improvements proposed in the Master Landscape Plan.

Alternatives for implementation of the Master Landscape Plan improvements include joint participation by the City and developers; waiving of the

current City fee with provision of all master landscaping by developers; and assessment district financing.

Several alternative mechanisms are available for maintenance of the communitywide streetscape landscaping. These include the formation of a maintenance assessment district encompassing Southridge Village; a master homeowners association for the community through which fees would be collected and maintenance accomplished; and maintenance of the City of landscaping areas determined to be of areawide benefit.

5.3 SUMMARY

A number of actions, policy determinations, and agreements must be reached if this Specific Plan is to be implemented. Resolution of these issues will ensure that the Specific Plan can be realized in a logical manner and will provide the City, special districts, landowners, and developers with a full understanding of cost-sharing assumptions and mutual rights and responsibilities.

Focused Environmental Impact Report



6.0

6.0 FOCUSED ENVIRONMENTAL IMPACT REPORT

6.1 INTRODUCTION TO THE FOCUSED EIR

A comprehensive environmental impact investigation of the entire Southridge Village planning area was conducted in early 1981. The results of that investigation have been submitted to the City of Fontana and are published in a report entitled, "Draft Environmental Impact Report 81-1, Jurupa Hills General Plan Amendment 12-2," hereinafter referred to as Draft EIR 81-1. Draft EIR 81-1 was distributed for public review on June 19, 1981.

This chapter contains a focused EIR for the Southridge Village Specific Plan, which has been prepared in compliance with California Environmental Quality Act (CEQA) review requirements Sections 15068.5 and 15149 of the State Guidelines. Implementation of CEQA allows subsequent EIRs prepared for specific projects within the same geographic area to reference and summarize material in previous EIRs. This EIR has been prepared in conformance with that initial concept and incorporates by reference the contents of Draft EIR 81-1.

Draft EIR 81-1 is available for public inspection at the City of Fontana Planning Department, 8353 Sierra Avenue, Fontana, California, 92335. In accordance with CEQA, wherever possible, the pertinent data presented in Draft EIR 81-1 has been summarized in this document.

The City of Fontana solicited input from other responsible agencies and known interested parties as an integral part of the preparation of this supplemental EIR. The Notice of Preparation (NOP), included in Appendix 9.2, was mailed to responsible agencies and other concerned agencies and individuals on May 15, 1981. Responses received from NOP distribution were considered in the preparation of this document; these responses are presented in Appendix 9.2..

Draft EIR 81-1 included a full assessment of existing environmental conditions, the impacts of developing a major planned community, and alternative measures to mitigate the identified adverse impacts. Draft EIR 81-1

provided a comparative analysis of four different concept plans based on alternative densities of development (i.e., 3,200, 8,000, 8,800, and 10,500 units).

The supplemental EIR presented in this chapter of the Specific Plan is a more focused analysis. This focus is related primarily to design, public services, improvements, and implementation considerations. The mitigation measures described in this section make extensive reference to other chapters of the Specific Plan, wherein elements of the plan and implementation mechanisms intended to mitigate adverse impacts have been proposed.

6.2 EXISTING CONDITIONS, IMPACTS, AND MITIGATION MEASURES

6.2.1 Topography

Existing Conditions

The gentle topographic relief in the southwestern, western, and northern areas of the site is interrupted in the east and south by portions of the Jurupa Mountains. Elevation ranges from 850 feet in the level southwest area to 2,160 feet in the Jurupa Mountains. Existing topographic conditions are shown in Exhibit 6.1.

Environmental Impacts

As described in section 3.9, Grading Concept Plan, of this document, approximately one-half of the study area will be graded. Existing slopes over 10 percent will be left ungraded except for two areas in the western, southcentral section of the project area. These areas are terraces of soft alluvium that will require excavation, recompaction, and reformation in order to be suitable for development.

Grading operations in the western portion of the study area (west of Beech Avenue) are expected to about generate 2.5 to 3 million cubic yards of cut and fill, while the eastern portion (east of Beech Avenue) will produce 1.5 to 2 million cubic yards of earthwork. Onsite grading operations are expected to balance, with no net import or export, taking into consideration the 12-15 percent reduction of cut material due to compaction when used as fill. Each half of the project area is expected to be balanced with respect to cut and fill operations, in order to reduce hauling distances.

Mitigation Measures

Grading will be phased to control runoff and erosion according to hydrologic and engineering constraints and opportunities. The areas of heaviest water accumulation will be graded in the first phase; the remaining two major phases will direct water flows to appropriate

collection points. Erosion control measures as required by the City's grading ordinance will be implemented concurrent with earth-moving operations.

The Grading Concept Plan, section 3.9 of this Specific Plan, recommends a series of grading design guidelines for consideration in the design of detailed grading plans. Implementation of these design guidelines will help to create aesthetically pleasing and "natural" appearing cut and fill slopes.

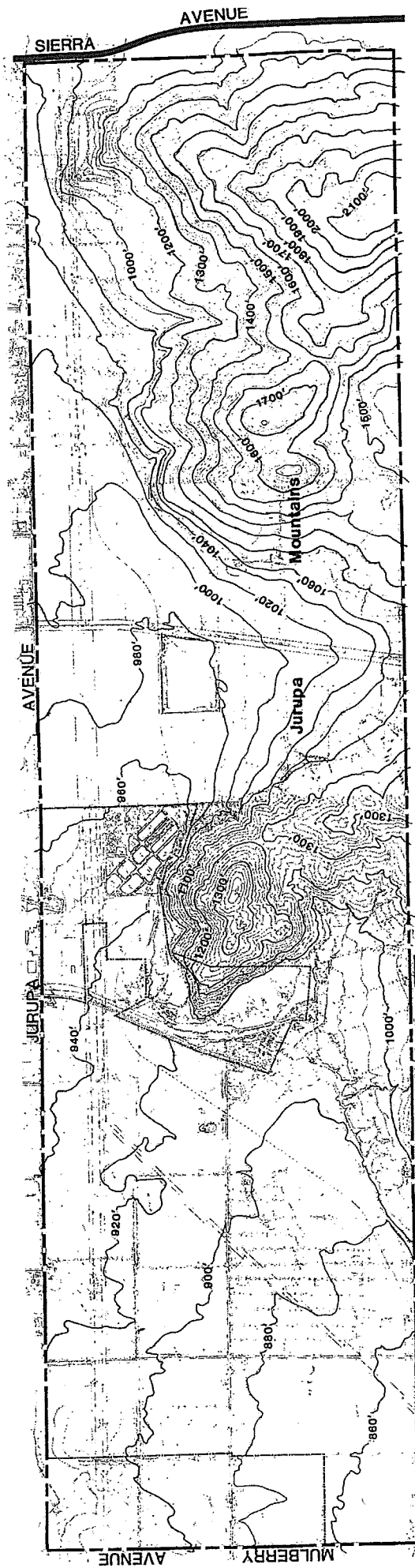
Detailed grading plans for public works and individual development projects will be submitted for review along with project design reports, tentative tract maps, site plans, and other precise plans. All grading operations shall comply with the requirements of local codes.

6.2.2 Geology and Soils

Existing Environmental Conditions

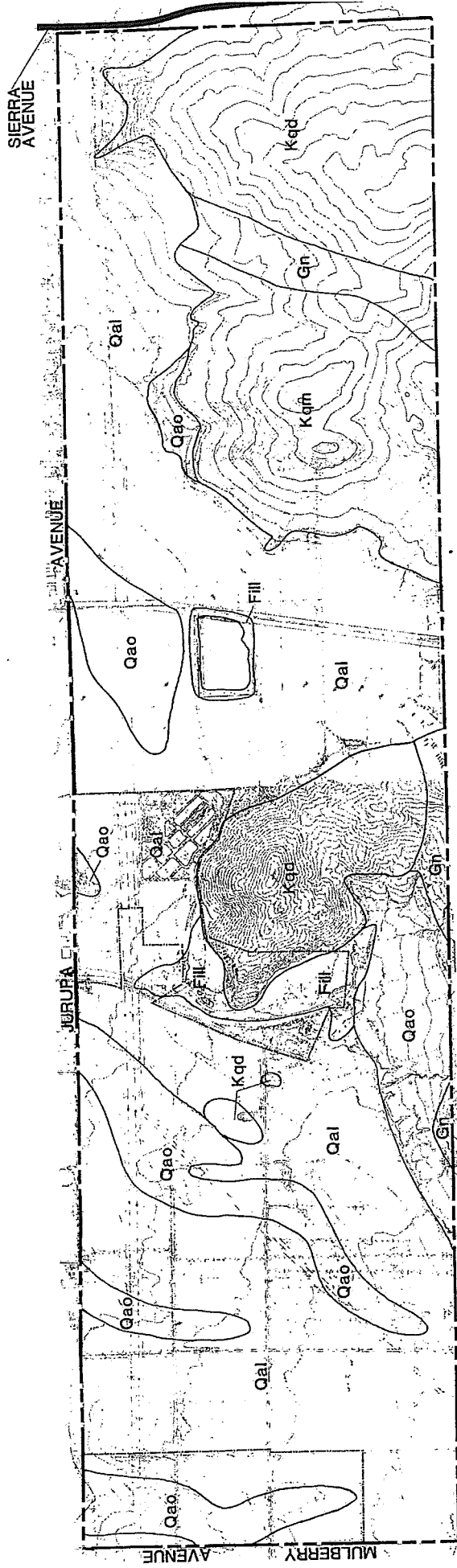
The project area lies at the perimeter of the Chino Basin, a deep geologic structure formed by alluvial sediments, and is underlain by six distinct rock types: man-made fill, younger alluvium, older alluvium, quartz monzonite basement rock, quartz diorite basement rock, and foliated gneiss, a metamorphic rock. Onsite surficial geology is illustrated in Exhibit 6.2. Three soil associations are found onsite: the Tujunga-Soboba Association (alluvial soils) within the relatively flat northern and western areas of the site; the Cieneba-Tollhouse-Friant Association (granitic, schistose, and sedimentary rock) in the hills of the southeastern portion of the site; and the Saugus-Fontana-Nacimiento Association (granitic, schistose, and sedimentary rock) in the hills within the south-central portion of the project area. A soils map for the planning area is presented in Exhibit 6.3. Minimal prime agricultural land is present within the project area.

No known faults exist onsite. The three nearest faults are the San Jacinto fault (9 miles to the northeast), the Cucamonga fault (9 miles to the north), and the San Andreas fault (13.5 miles to the northeast). Potential seismic hazards relating to potential groundshaking from these faults are similar to conditions elsewhere in the City.



EXISTING TOPOGRAPHY Southridge Village CREATIVE COMMUNITIES



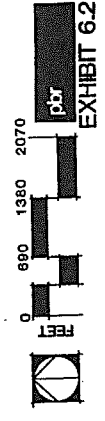


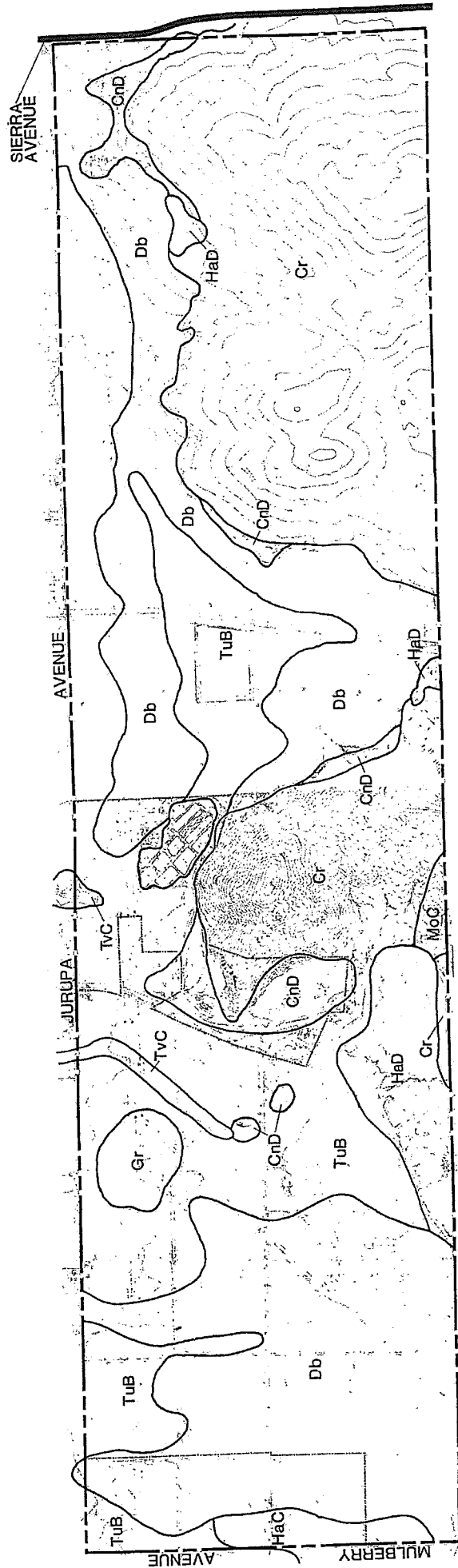
LEGEND

Fill	MAN-MADE FILL
Qal	YOUNGER ALLUVIUM
Qao	OLD ALLUVIUM
Kqm	QUARTZ MONZONITE BASEMENT ROCK
Kqd	QUARTZ DIORITE BASEMENT ROCK
Gn	METAMORPHIC ROCK-FOLIATED GNEISS

EXISTING GEOLOGY
Southridge Village
CREATIVE COMMUNITIES

SOURCE: G.A. NICOLL AND ASSOCIATES, INC.





LEGEND

CnD	CIENEBA SANDY LOAM
Cr	CIENEBA ROCK OUTCROP COMPLEX
Db	DELHI FINE SAND
Gr	GRANGEVILLE SANDY LOAM
HaC	HANFORD COARSE SANDY LOAM

HaD	HANFORD COARSE SANDY LOAM
MoC	MONSERATE SANDY LOAM
TuB	TUJUNGA LOAMY SAND
TvC	TUJUNGA GRAVELLY LOAM SAND

SOURCE: U.S.D.A. SOIL CONSERVATION SERVICE SOILS SURVEY OF SAN BERNARDINO COUNTY, SOUTHWESTERN PART, CALIFORNIA

EXISTING SOILS
Southridge Village
CREATIVE COMMUNITIES

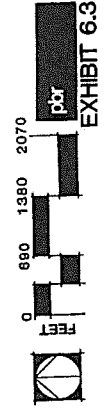


EXHIBIT 6.3

Existing steep natural slopes within the mountainous portions of the study area are commonly covered with large bedrock exposures and rock fragments. No landslides or large surficial soil failures have been identified onsite.

Environmental Impacts

Site soils in areas of lesser slope are well suited for grading, are non-expansive, and may be moved at relatively low costs. No detailed geotechnical evaluations have been made of the steeper Jurupa Mountains; because, except for two proposed water reservoirs, no blasting or grading is proposed in this area. Further geotechnical investigation will be required for the two small alluvial fan areas proposed for development. No active faults are present within the study area; therefore, the risk of ground rupture during seismic events is minimal. Liquefaction potential, landslides, and surficial soil failures do not represent significant geotechnical constraints onsite.

The site is expected to experience groundshaking in the event of regional seismic activity. Man-made fills and near-surface alluvial desposits do not exhibit acceptable compaction characteristics and would require removal and recompaction. Basement rocks in all areas proposed for development are generally rippable to a depth of 15 feet; no blasting is expected to be required. Soils temporarily exposed during grading may be subject to accelerated erosion until stabilizing measures are implemented.

Mitigation Measures

The following measures are recommended in order to minimize any impacts related to geological and soil resources within the study area:

1. Final grading plans shall be accompanied by and shall reflect the recommendations of an engineering geologist and soils engineer. Recommendations based on a detailed evaluation of subsurface conditions shall consider the removal and recompaction of unsuitable soils; foundation design; expansion potential; slope stability of proposed cut and fill areas; and/or other such items as determined to be necessary by the City Engineer.

2. Grading operations should be conducted in a manner to control the potential for erosion by wind and surface water runoff. This may include timing of grading where feasible to coincide with the dry season; the construction of temporary desilting basins; early revegetation of graded areas; and/or other such measures as may be recommended by the City of Engineers.

6.2.3 Hydrology

Existing Conditions

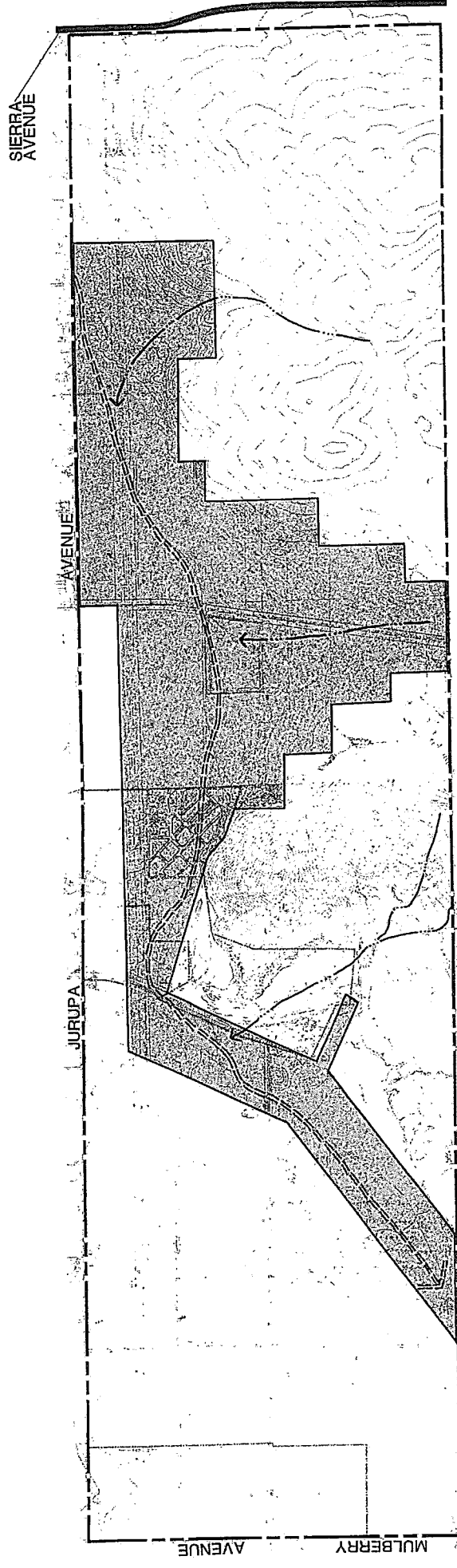
A broad and ill-defined intermittent stream, known as the Declez Channel, flows across the study area and into Riverside County in a southwesterly direction. Existing drainage conditions and flood hazard areas are shown in Exhibit 6.4.

Existing flood hazard within the project area is primarily due to winter storms and is associated with runoff from the Jurupa Mountains. No flood control or drainage facilities have been constructed in the undeveloped portions of the site.

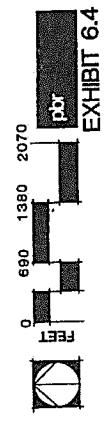
The project site overlies the Santa Ana River groundwater basin. Well data indicates the average depth to groundwater for the study area is approximately 200 feet. Groundwater quality underlying the site is generally good.

Environmental Impacts

The Drainage Master Plan for Southridge Village is presented in section 3.3 of this document. The Declez Channel is planned to be improved from the point of entry at Oleander Avenue to the point of intersection with the improved Fontana Channel in Riverside County. The plan proposes the construction of a reinforced concrete-lined channel adjacent to and located northerly and westerly of the SCE easement. A trapezoidal section channel is recommended. The channel is designed to contain 100-year return period peak flow plus a 25 percent bulking factor. At conditions of ultimate development, the peak flood flow for the total watershed is



SOURCE: DRAFT CITY OF FONTANA GENERAL PLAN



EXISTING HYDROLOGY Southridge Village CREATIVE COMMUNITIES

estimated at 5,100 cfs; the maximum design capacity is 6,400 cfs. Concrete pipe drains will serve to collect and direct area drainage to discharge into the main channel. Bridges and other drainage structures will be built as necessary.

A major MWD water transmission main crosses the Declez Channel within the project area. A wider, shallower section of the flood control channel will be required to provide sufficient fill upstream from the point of intersection and to maintain channel gradient in order to avoid relocation of the service line.

Due to the limited capacity of existing channels, a flood water retarding reservoir is recommended to reduce the possibility of downstream flooding and to reduce peak flows for the 100-year return period flood. One disadvantage to this floodwater retarding reservoir concept is that the design of this type of reservoir does not provide significant reduction in the more frequently occurring flood flows, which are increased by urban development. The current flood control channel capacities in Riverside County are not adequate to contain these increased flows. Riverside County may agree to a plan providing for downstream channel improvements in lieu of onsite flood water retention.

The urban development of alluvial lands within the planning area will have some adverse effect on groundwater recharge because of reduced infiltration of rainfall and natural runoff.

Mitigation Measures

The Southern California Association of Governments in a report entitled Areawide Waste Treatment Management Plan (April 1979), recommends that the following measures be taken to protect water quality: litter control programs to reduce the entry of wastes to receiving waters; effective programs for catchbasin, inlet basin, and storm drain cleaning; and reduction of runoff volume and peak flows from developments via water conservation methods.

The State Department of Water Resources, in its response to the Notice of Preparation for this EIR, recommends that measures to provide for adequate

flood protection and the conservation of natural runoff water supplies be provided where feasible. The measures recommended include revegetating slopes as soon as possible, limiting grading to dry months in order to minimize sediment transport during construction, providing at least one route of ingress and egress to the development for use during a 100-year flood, and protecting structures against a 100-year flood.

Implementation of the Drainage Master Plan will provide adequate flood protection in accordance with applicable local, state, and federal standards. Implementation of this master plan will require a number of agreements and decisions regarding funding sources and engineering design. Requirements and options for implementation are described in detail in Chapter 5.0 of this Specific Plan.

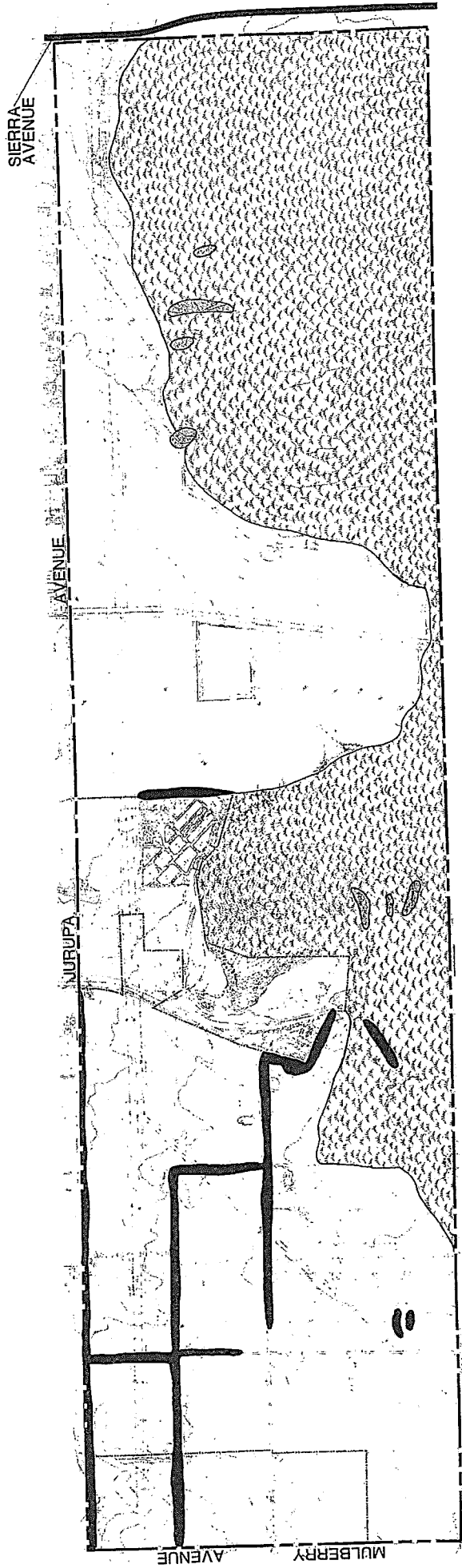
Several measures should be considered for the purpose of mitigating the reduced groundwater recharge impacts of development. These include design of the channel to include an unlined bottom and runoff retention reservoirs, to promote runoff percolation; and continued use of the RP No. 3 percolation basins for wastewater effluent disposal, possibly with an upgraded level of treatment. The extent to which these options may be feasible depends on a number of engineering, cost, water quality, and sewage treatment facilities planning constraints.

6.2.4 Biological Resources

Existing Conditions

Lowland areas within the project site support early successional plants as well as remnant fallow vineyards. Several eucalyptus windrows occur west of Live Oak Avenue, south of Jurupa Avenue, and along the eastern edge of the treatment plant. The mountains generally support coastal sage scrub-chaparral vegetation. A few riparian species are found in the Jurupa Mountains in areas where groundwater and runoff collect. Existing vegetation communities are shown in Exhibit 6.5.

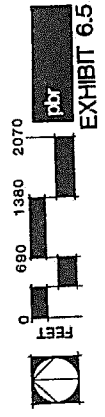
Past and present agricultural operations have adversely impacted the abundance and diversity of wildlife in the project area. The number of



LEGEND

- AGRICULTURE (FALLOW AND CULTIVATED)
- WINDBREAKS
- COSTAL SAGE SCRUB
- RIPARIAN

EXISTING VEGETATION
 Southridge Village
 CREATIVE COMMUNITIES



raptors (i.e., predatory birds) observed indicates a large rodent population may be present. No plant or animal species designated as rare, threatened, endangered, or sensitive were found within the study area.

Environmental Impacts

Development of the planned community will displace native vegetation and agricultural areas in the lowland parts of the site which are proposed for urban uses. This impact is not considered to be significant because of the low habitat values and low species diversity within the planned urban development area.

The plan is sensitive to the more established native vegetation in the Jurupa Mountains. About 906 acres of the steep hillsides are planned to be preserved as natural open space and regional park lands. Only limited trail and recreational uses, in addition to two reservoir sites, are proposed for development in this area.

Mitigation Measures

The Landscape Master Plan presented in section 3.8 of this document provides for extensive and varied streetscape and other landscape planting within the planned community. While intended primarily to serve design and aesthetic purposes, this landscape planting will provide habitat values for a limited range of wildlife adapted to urban conditions.

Tree species, such as pine, eucalyptus, jacaranda, magnolia, and oak, will be included in urban landscaping areas. Animal species that are tolerant of man's presence can be expected to return to Southridge Village as construction activities are completed for the various development phases. These species may include squirrels, rabbits, blackbirds, crows, and sparrows. As landscaping matures and diversifies, a broader range of small mammals and songbirds are expected to return to the urban areas.

6.2.5 Cultural Resources

Existing Conditions

A recent survey located eight archaeological sites within the planning area. One of these sites is on the National Register of Historic Places as the "Fontana Pit and Grove Petroglyph Site". Historical resources present onsite include ruins of the small Pagliuso Family Chapel, the Old Spanish Road, ruins of Declezville, and ruins of the Le Vesu home and winery.

Environmental Impacts

The development plan will directly impact two archaeological sites: ARMC #1 and ARMC #2. A neighborhood commercial center, roadway, and residential uses are planned for development on the ARMC #1 site. This site contains metate fragments, whole manos, mano fragments, flake-scrapers, choppers, scraper-planes, and flakes. Higher density residential uses are planned for the area containing ARMC #2, which features hammerstones and cones in addition to the type of remnants quoted above.

The CA-SBr-1632 site may be indirectly impacted by the trail system along the SCE easement. CA-SBr-7164 is located directly south of an elementary school and roadway.

Depending on the nature of precise plans prepared for individual development projects, certain of the historical resources in the planning area could be adversely by development. The Fontana Bird Park and Declezville site are proposed to be incorporated within the Community Park. The Old Spanish Road and Le Vesu ruins have been heavily impacted over the years by farming, manufacturing activities, road construction, a sewage disposal system, and a fertilizer plant. For these reasons, the planned land uses are not expected to significantly impact these resources. It appears that the Pagliuso Family Chapel is located in an area designated as a landscape buffer zone. This may be compatible with the Historical Society's plans to restore and preserve the Chapel.

Mitigation Measures

In order to mitigate impacts resulting from development, it is recommended that logical collections and testing be conducted by a qualified archaeologist for sites ARMC #1, ARMC #2, and CA-SBr-1632. If cultural deposits are discovered on sites ARMC #1 and ARMC #2, the significant remains should be salvaged. If artifacts are found at site CA-SBr-1632, they also may be salvaged, or, alternatively, the site may be preserved as an unimproved area within the easement.

It is recommended that the City and landowners and developers within Southridge Village cooperate with the Fontana Historical Society for the purpose of preserving any resources determined to be of historical significance. Of particular importance in this regard is the Historical Society's plans to relocate the Pagliuso Family Chapel.

6.2.6 Onsite and Surrounding Land Uses

Existing Conditions

Exhibit 6.6 depicts the types and locations of the major existing land uses within and surrounding the planning area.

Existing onsite land uses include abandoned vineyards and fallow agricultural land; the Woodhaven subdivision; the sewage treatment plant; Southern California Edison (SCE) and Metropolitan Water District (MWD) easements; the Southern Pacific Railroad quarry and railway spur; the Fontana Bird Park; a fertilizer/shavings plant and a recycling center; and several scattered rural residences.

Land uses occupying the area surrounding the study area to the north are predominantly rural-residential, agricultural, and industrial in character. These uses include large lot residential, poultry ranches, construction and trucking companies, citrus groves, a steel refabricating plant and processing facilities, and an asphalt company. The area to the east and west is primarily open space with a few scattered rural residences. Residential development is currently underway along Country Village Road in Riverside County southwest of the Southridge planning areas.

Environmental Impacts

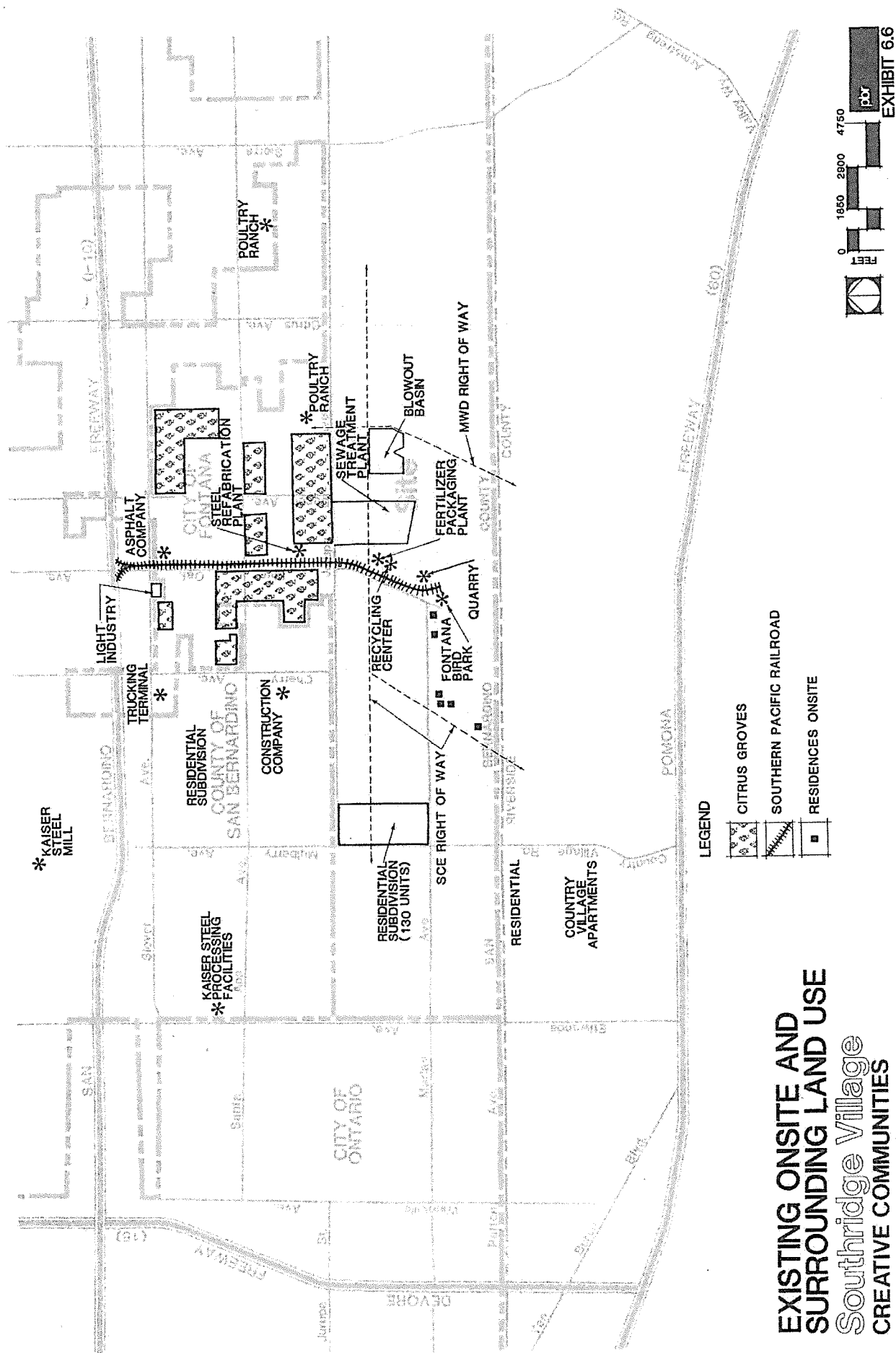
The Land Use Master Plan in section 3.1 of this report provides a complete description of the various land use elements proposed for development in this Specific Plan. The following paragraphs describe the relationships between existing onsite and surrounding land uses and those land uses proposed in the Specific Plan.

Existing uses clearly compatible with the Specific Plan include: the Woodhaven subdivision, designated as a Single-Family Residential area in the plan; the SCE and MWD easements, designated for development of trail systems and neighborhood parks as part of a village-wide greenbelt system; and the Southern Pacific Railway spur, located and planned to remain adjacent to Live Oak Avenue.

Several existing or proposed land uses are incompatible with the Specific Plan. The parcel owned by Jurupa Properties, for which the landowner has proposed warehouse uses, is designated by the Specific Plan for residential development. The Specific Plan proposes residential and some park uses for an area which includes the Southern Pacific Railroad quarry. The fertilizer and shavings plant and the recycling center are both located in an area planned for high density residential uses. The six scattered rural residences lie within areas designated in the plan for a range of higher density residential and public land uses.

Approval of this Specific Plan would cause those existing uses that are incompatible with the plan's land use designations to be treated as lawful nonconforming uses. This means that these uses would no longer be consistent with City zoning; and any major modifications of the existing uses could be approved only at the discretion of the City. Because of economic pressures and concerns for compatibility with new urban uses, adoption of the Specific Plan would encourage the conversion of existing nonconforming land uses over a long-term period.

The Specific Plan does not anticipate that property owners in the planning area would be forced to change their current uses by actions of the City. The only exception to this would be in case where right-of-way for neces-



sary public facilities, such as streets or the flood control channel, would be required. If right-of-way acquisition could not be negotiated in a mutually acceptable manner, the City or other responsible public agency could exercise its powers of eminent domain to acquire the needed right-of-way through condemnation.

Two existing land uses in the planning area, Southern Pacific Rock Quarry and Chino Basin MWD's Regional Plant No. 3, could present compatibility problems for adjacent urban uses proposed in the Specific Plan. According to Southern Pacific, the rock quarry is used infrequently to obtain hard rock for emergency repair work, and this excavation requires blasting operations. Southern Pacific is concerned that urban uses proposed for adjacent lands may make it difficult or impossible for quarry operation and blasting to continue.

Chino Basin's RP No. 3 provides only primary treatment of wastewater effluent. The concern in this case is that residential uses adjacent to the plant may be incompatible because of odor problems arising from treatment plant operations.

In terms of surrounding land uses north of Jurupa Avenue, a major issue raised at the public hearings on the Jurupa Hills General Plan Amendment 12-2 was the compatibility of urban uses in Southridge Village with the mixed rural residential and industrial uses between Jurupa Avenue and Interstate 10. Implementation of the Specific Plan would create growth-inducing pressures on land uses to the north; would require the widening of streets and some additional right-of-way acquisition; and would create higher traffic volumes and increased noise levels along arterial streets through south Fontana.

Mitigation Measures

Setbacks and landscape buffers, as described in section 3.8, the Landscape Master Plan, will create a transition zone between onsite urban uses and existing surrounding uses in south Fontana. The proposed buffer zone with a landscaped median, landscaped earth berm, meandering sidewalks, and building setback along Jurupa Avenue is specifically designed for visual and psychological screening between Southridge Village and land uses to the north.

The provisions for lawful nonconforming uses in the City's zoning code will serve to mitigate impacts in those cases where existing uses within Southridge Village are not consistent with Specific Plan land use designations.

The Southern Pacific Rock Quarry presumably can continue in operation as a nonconforming use. It is recommended that concerns regarding compatibility with proposed adjacent urban uses should be addressed and resolved through implementation of the State Surface Mining and Reclamation Act, and through adoption of an ordinance to regulate mineral extraction, which is currently under consideration by the City. It is incumbent upon the owner of any land to ensure that operations on the land do not create public nuisance or public safety hazard.

Buffering of the treatment plant site is proposed to be accomplished through construction of a perimeter earth berm and intensive landscaping with large-scale trees and shrubs. The Specific Plan assumes that, in accordance with the temporary wastewater discharge order, plant operations at the present minimal level of treatment will not continue indefinitely. Upgrading the level of treatment, conversion of the site to an advanced water reclamation plant, modification of plant operations and/or enclosure of treatment facilities would all serve to further reduce the existing odor problem.

6.2.7 Transportation/Circulation

Existing Conditions

Significant highways in the vicinity of the project site include Interstate 10 (San Bernardino Freeway), located approximately one and a quarter miles to the north; Route 60 (Pomona Freeway), located about one mile to the south; and Interstate 15 (Devore Freeway), located approximately two and one-half miles to the west.

Major area streets with direct access to the regional freeway system include: Etiwanda, Cherry, Citrus, and Sierra Avenues to Interstate 10; Mulberry Avenue (Country Village Road) and Sierra Avenue via Armstrong Road to Route 60; and the planned extension of Jurupa Avenue to Interstate 15.

East-west roads north of the site include Santa Ana, Slover, and Jurupa Avenues. North-south roadways in the vicinity of the site include Mulberry, Banana, Live Oak, Beech, Poplar, Oleander, Juniper, Almond, Catawba, Cypress, Redwood, Calabash, Cherry, Citrus, and Sierra Avenues. The site itself is bounded by Mulberry Avenue to the west, Jurupa Avenue to the north, Sierra Avenue to the east, and the San Bernardino/ Riverside County line to the south.

Due to the local sparse development pattern, traffic volumes are generally low on area streets. Traffic volumes are higher on freeway access approaches, such as Cherry, Citrus, and Sierra Avenues, because traffic is concentrated at these locations. Highest area volumes occur on major highways with 50,000 vehicles per day on Interstate 10, about 35,000 vehicles per day on Route 60, and 10,500 vehicles per day on Etiwanda Avenue near Interstate 10.

Environmental Impacts

A traffic analysis was prepared by Linscott, Law, & Greenspan, Inc., Engineers, to determine what impacts can be expected with the development of 8,800 units in Southridge Village and design a circulation system to best alleviate those impacts. This analysis is summarized below and included in Appendix 9.4 in its entirety.

Traffic Volumes and Distribution

Southridge Village is anticipated to generate a total of 100,390 daily trip ends (i.e., one-way vehicular movement either entering or departing a generating land use), which are evenly divided between in- and out- bound trips. Of the total number of these daily trips, 78,180 trips, 78 percent, are expected to enter and leave the site (external trips); 22,210 or 22 percent are expected to begin and end within the project area (internal trips). Ultimate development north of the project site is expected to generate 170,000 daily vehicle trips. This assumes that the current low/medium density residential and industrial land uses shown on the General Plan for the area south of I-10 will be developed as planned. The cumulative total of project and non-project traffic is estimated to be 248,000 trips per day.

The total forecast traffic volumes of 248,000 trips per day was assigned to area streets and highways. 80 percent of the total traffic volume is expected to arrive and depart to the east or west, with the remaining 20 percent arriving and departing to the north or south. Exhibit 6.7 illustrates the forecast and distribution of project, non-project, and cumulative traffic volumes.

Of the east-west access streets, Jurupa Avenue is expected to receive the greatest impact, with traffic load increasing from the existing 1,400 vehicles per day to an anticipated 30,000 - 41,000 vehicles per day. Cherry Avenue, north of Jurupa Avenue, is anticipated to experience the greatest impact among those streets providing north to south access. The current 2,300 vehicles per day on this portion of Cherry Avenue is expected to increase to 34,000 vehicles per day.

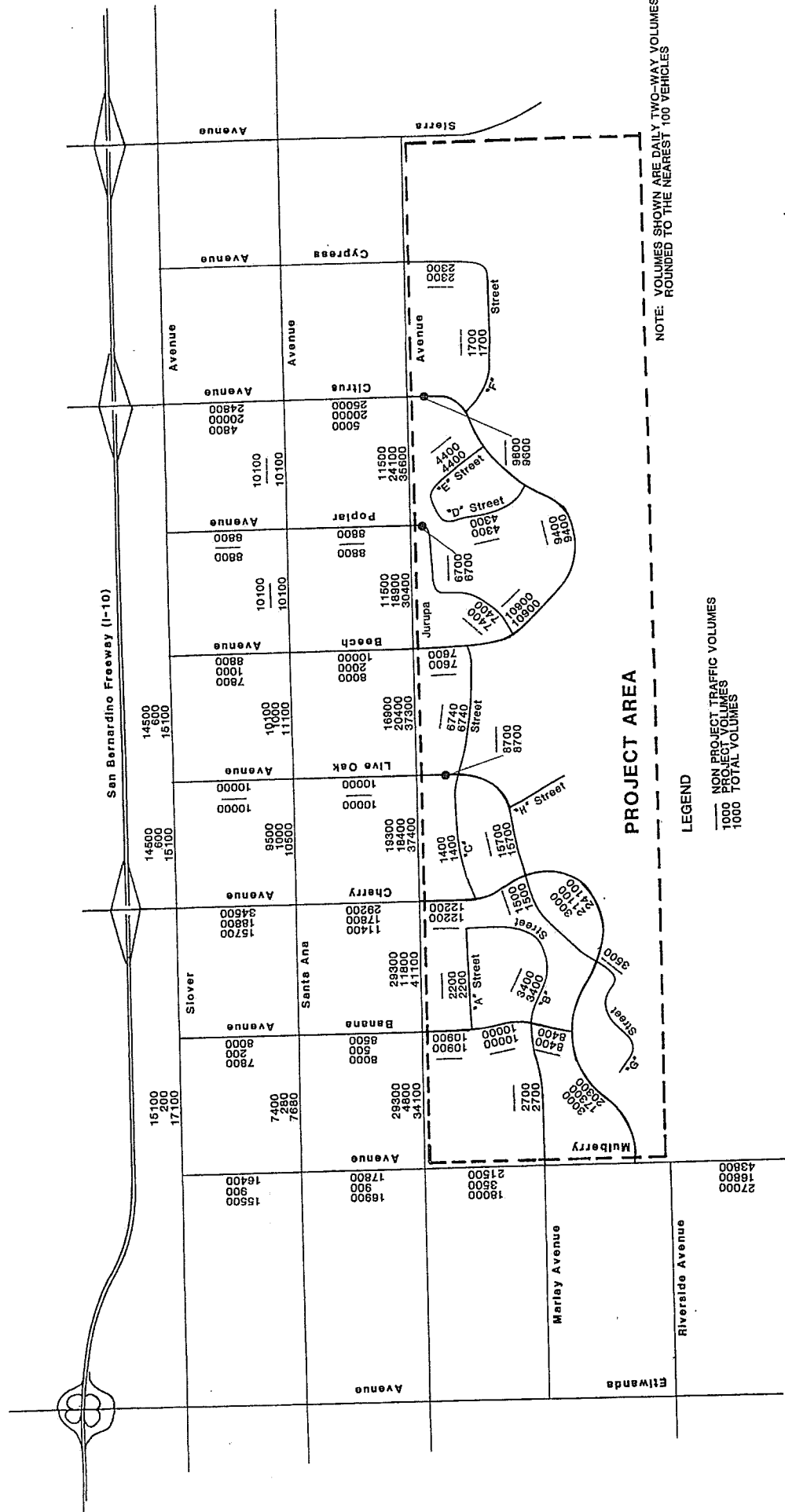
Planned Circulation System

The circulation plan for Southridge Village is illustrated and described in section 3.2 of this Specific Plan. Briefly, the traffic analysis indicates the following roadway requirements:

- Six-lane: Etiwanda Avenue from I-10 into Riverside County
 Jurupa Avenue from Etiwanda to Sierra Avenue
 Sierra Avenue from Jurupa Avenue to Armstrong Road
 Cherry Avenue from I-10 to Jurupa Avenue
 Mulberry Avenue from Jurupa Avenue into Riverside County

- Four-lane: Cherry Avenue onsite
 Slover Avenue
 Mulberry Avenue from I-10 to Jurupa Avenue
 Citrus Avenue from I-10 to Jurupa Avenue
 Sierra Avenue from I-10 to Jurupa Avenue

- Two-lane: Marlay Avenue from Banana Avenue to Etiwanda Avenue
(collector) Banana Avenue from Slover Avenue to Cherry Avenue
 "C" Avenue onsite
 Poplar Avenue



SOURCE: LINSCHOTT, LAW & GREENSPAN, INC. ENGINEERS

NO SCALE

pbr
EXHIBIT 6.7

FUTURE TRAFFIC VOLUMES
Southridge Village
CREATIVE COMMUNITIES

Beech Avenue
Citrus Avenue onsite
Live Oak Avenue
Santa Ana Avenue
Oleander Avenue from I-10 to Jurupa Avenue
Cypress Avenue from I-10 to Jurupa Avenue

Two-lane: "A" Avenue onsite
(local) "B" Avenue onsite
"D" Avenue onsite
"E" Avenue onsite
"F" Avenue onsite
"G" Avenue onsite
"H" Avenue onsite

In order to discourage industrial trips from traveling through Southridge Village, the following measures are incorporated into the Specific Plan: Cherry Avenue will be a curvilinear four-lane arterial south of Jurupa Avenue and a six-lane roadway north of Jurupa Avenue; Mulberry and Jurupa Avenues will be six-lane arterial around the perimeter of the site; proper signing of truck routes will be provided; and special geometrics at the intersections of Cherry, Jurupa, and Mulberry Avenues will provide adequate turning and through travel lanes to encourage smooth traffic flow.

Projected offsite traffic volumes indicate the majority of arterial street intersections would require signalization as future development occurs. All intersections on the perimeter project area will require signalization, except for the Marlay/Mulberry intersection. The Cherry/Live Oak intersection onsite also will require signalization.

Mitigation Measures

Implementation of the Circulation Master Plan presented in this Specific Plan will in itself mitigate the major traffic-related impacts associated with development of Southridge Village. Implementation of this plan will require a number of agreements and decisions regarding funding sources, right-of-way acquisition, phasing requirements, and responsibilities. Requirements and options relating to implementation of the plan are presented in Chapter 5.0 of this Specific Plan.

The traffic analysis for this Specific Plan considered ultimate land use and traffic patterns for the area bounded by Interstate 10, Etiwanda Avenue, Sierra Avenue, and the San Bernardino County line. The City's current comprehensive General Plan update is considering ultimate land use and traffic circulation alternatives (among other issues) for the entire City and its sphere of influence. It is strongly recommended that the results of this Specific Plan traffic analysis be considered together with the overall General Plan analysis, particularly with regard to the capacity of arterial highway interchanges along Interstate 10. The City should work closely with Caltrans to anticipate the need for improvements at these interchanges and develop a plan that ensures adequate traffic capacity at these locations.

6.2.8 Air Resources

Existing Conditions

The study area is located within the South Coast Air Basin (SCAB). Prevailing daytime seabreezes carry pollutants generated in the more urbanized areas of the Los Angeles basin into the Fontana area. Pollutant concentrations are the net result of emissions generated to the west interacting with climatological features of the west San Bernardino Valley. Major point sources of air pollution situated near the study area include Kaiser Steel, Rockwell Industries, and the Witteman Steel Mills, all located in Fontana to the north and northwest of the project area.

Ambient air quality in the vicinity of the study area is monitored by the South Coast Air Quality Management District (SCAQMD) at stations in Fontana and San Bernardino. California standards have been exceeded for all pollutants in recent years; however, carbon monoxide and nitrogen dioxide standards were exceeded less than 1 percent and sulfur dioxide standards were exceeded less than 4 percent of the days monitored in the last five years. Total suspended particulate (TSP) levels violated the state standards an average of 68 percent of the days monitored in the last five years.

Oxidant is the most serious problem locally. Oxidant standards were exceeded an average of 51 percent of the days monitored between 1975 and

1979. In 1979, 95 stage one oxidant episodes occurred at the Fontana station and 62 occurred at the San Bernardino station.

Environmental Impacts

Short-term air quality impacts include those that will be produced during the construction period, such as exhaust emissions from construction equipment and dust generated by soil movement.

Long-term air quality impacts will include those associated with permanent use of the completed project. Air pollutants emitted as a result of 8,800 dwelling units and the supporting commercial development will include both stationary and mobile source emissions. The total of these projected emissions is listed below (using 1995 vehicle emission factors):

	<u>1995 Emissions (tons/day)¹</u>
CO	8.95
HC	0.87
NO _x	1.90
SO _x	0.44
Particulates	0.28

These emissions, when estimated using 1987 vehicle emission factors and as compared to San Bernardino County's and SCAB's emissions forecasted for 1987, represent approximately 0.2 percent of the SCAB's and 1.4 percent of the San Bernardino County's anticipated emissions for 1987.

Maximum eight-hour carbon monoxide concentrations, associated with development of 10,500 dwelling units in Southridge Village, have been estimated for major arterail street intersections. This data is presented in Table 3.15 of Draft EIR 81-1. The maximum eight-hour carbon monoxide concentrations at intersections, resulting from traffic generated by the 8,800 units proposed in this Specific Plan, would be incrementally reduced from the estimates for 10,500 units shown in this table, since traffic volumes at the intersections would be less.

¹ These emission figures were calculated using information given in Appendix 9.5 of this document and Table 3.13 in Draft EIR 81-1.

The project's consistency with the Air Quality Management Plan (AQMP) for the South Coast Air Basin is a function of several factors. The AQMP is based on the adopted SCAG growth forecasts. The population levels associated with the Southridge Village community are not in themselves inconsistent with the SCAG-78A growth forecasts for the West San Bernardino Valley. However, the rate of development anticipated for the combination of Southridge Village and other new urban development planned or approved in the surrounding communities may cause the SCAG growth forecasts to be exceeded. Preliminary projections submitted to SCAG for the west valley area call for substantially higher growth than was forecast in SCAG-78A. If these higher forecasts are adopted, the AQMP will have to be modified to include new control strategies in order to achieve the air quality goals for the region.

Mitigation Measures

By providing relatively affordable housing in close proximity to planned major industrial employment areas, the Southridge Village Specific Plan will help to hold down commuting distances, with resulting beneficial effects on the regional pattern of automobile travel/air quality relationships.

The Specific Plan proposes an extensive system of trails for pedestrian and bicycle use. These trails will provide for convenient and safe non-vehicular access between residential areas and schools, parks, shopping centers, and other community facilities. To the extent that these trails encourage non-vehicular travel, both automobile travel and related vehicular exhaust emissions will be reduced.

Measures to control dust during earth-moving activities could reduce particulate air pollution emissions during construction operations.

6.2.9 Acoustic Environment

Existing Conditions

The Noise Element of the City's General Plan recognizes the state noise standard of 45 CNEL (interior) and 65 CNEL (exterior) for residential land uses.

Existing onsite noise levels are relatively low because of the largely undeveloped, agricultural character of the study area; these noise levels are probably within the 40-50 dBA range. Significant noise sources in the vicinity of the study area include the scattered general industrial land uses north of and adjacent to the site. Aircraft overflights from the Ontario International Airport may occur on occasion, but the site is not within the designated 65 CNEL contour for the airport.

Environmental Impacts

Implementation of the Specific Plan will result in a significant increase in noise levels within and around the project area. Short-term noise impacts will include construction equipment noise. Long-term noise impacts will be of a greater significance and include increased noise levels adjacent to arterial streets used for access to the site and along arterial and major collector streets within the site.

Estimates of the extent of the 65 CNEL noise impact area along major arterial and collector streets were developed for the Jurupa Hills General Plan Amendment EIR. Noise contour estimates for the 8,800 unit density alternative, which is similar to this Specific Plan, are presented on page 4-12 of Draft EIR 81-1. The impact estimates shown on this table are based on approximate traffic volume forecasts and are inadequate for designing sound attenuating walls in individual development projects. Future traffic volumes along arterials and most collector streets, both onsite and offsite, will create noise levels that require mitigation for adjacent residential uses.

Mitigation Measures

Noise impact assessment and mitigation reports, prepared by qualified professional engineers, should be required as a condition of approval for residential development projects in certain areas within Southridge Village. Such reports should identify specific methods whereby noise impacts from street traffic will be reduced to create an acceptable residential living environment. This requirement should apply to all projects proposing residential development adjacent to Jurupa, Mulberry, Cherry, Live Oak, Citrus or Beech Avenues.

6.2.10 Public Services and Utilities

Existing Conditions

Water

Water service in the vicinity of the project area is supplied by two companies: the Fontana Water Company (servicing the area west of Beech Avenue) and the West San Bernardino County Water District (servicing the area east of Beech Avenue). The Fontana Water Company (FWC) has seven reservoirs with a total capacity of 17 million gallons within the service area. FWC has no pump stations or reservoirs south of Interstate 10 at the present time. Water flow is generally by gravity from the northern to the southern portion of the FWC service area. All water currently distributed by the West San Bernardino County Water District (WSBCWD) is produced from wells. A large four million gallon reservoir serving the WSBCWD service area is located south of Interstate 10.

Wastewater

The Chino Basin Municipal Water District (CBMWD) provides wastewater service to the study area and supports two wastewater treatment plants which are affected by the plans for Southridge Village. Regional Plant No. 3 lies within the study area, adjacent to the Beech/Jurupa intersection. Regional Plant No. 3 is a 4.0 mgd capacity primary treatment facility, currently, treating flows of 2.9 mgd and operating under temporary discharge requirements issued by the Regional Water Quality Control Board. In order to continue operation under the terms of this order, the plant will require an advanced wastewater treatment (AWT) scheme, including activated sludge, tertiary filtration, and demineralization, or an equivalent scheme. Regional Plant No. 1, which is located in Ontario, has a capacity of 26 mgd. RP No. 1 is operating at about 81 percent (19 mgd) of its 26 mgd capacity. Construction of the Fontana Interceptor from Regional Plant No. 1 to Regional Plant No. 3 is planned to allow sewage flows to be diverted to RP No. 1, with eventual deactivation of RP No. 3.

Natural Gas

The Southern California Gas Company will provide service to the study area. No facilities currently exist in the undeveloped parts of the planning area. Gas lines adjacent to the site are located within Mulberry, Jurupa, and Juniper Avenues.

Electricity

Electrical service will be provided to the project site by the Southern California Edison Company (SCE). Presently, electricity is being supplied to the site on a small scale. SCE maintains a major power line easement extending across the length of the project area parallel to Jurupa Avenue, and branching southwest in the western portion of the site.

Schools

Currently, the area west of Beech Avenue is within the Fontana Unified School District (FUSD) and the area to the east of Beech is within the Colton Joint Unified School District (CJUSD). Educational facilities currently available to serve the site are as follows:

Fontana Unified School District¹

<u>School</u>	<u>Current Enrollment</u>	<u>Design Capacity</u>
Jurupa Hills Elementary School 10755 Oleander Avenue Fontana	429	406
Sequoia Junior High School 9452 Hemlock Fontana	788	904
Fontana High School 9453 Citrus Fontana	2,218	2,106

¹ Telephone conversation with Carl Coleman, Coordinator, Planning and Research. Fontana Unified School District, February 5, 1981.

Colton Joint Unified School District¹

<u>School</u>	<u>Current Enrollment</u>	<u>Design Capacity</u>
Zimmerman Elementary School 11501 Linden Bloomington	520	690
Bloomington Junior High School 18892 Orange Bloomington	788	904
Bloomington High School 10750 Laurel Bloomington	1,072	1,406

Health Care

There are five existing health care facilities currently serving the residents of Fontana. These are listed below in decreasing order of use.

<u>Facility</u>	<u>Bed Capacity</u>	<u>Occupancy Rate</u>	<u>Distance from Study Site (approximately)</u>
Kaiser Permanente 9985 Sierra Avenue Fontana	479	88	1.75 miles N
San Bernardino Community Hospital 1500 West 17th Street San Bernardino	322	70	9 miles NE
San Bernardino County Hospital 780 East Gilbert San Bernardino	229	66	12 miles NE
Loma Linda Community Hospital 25333 Barton Road Loma Linda	120	79	10.5 miles E
Loma Linda University Medical Center 11234 Anderson Loma Linda	546	89	10.5 miles E

¹ Correspondence with Laura Brown, Colton Joint Unified School District, February 20, 1981.

Police Protection

The City of Fontana Police Department has one station at 17005 Upland Avenue in Fontana, approximately five miles northeast of the site. The department currently is staffed by 42 police officers and 19 civilian personnel. Available vehicles include 20 police vehicles, one three-wheeled motorcycle, and one animal control truck.

Fire Protection

The study area lies within the jurisdiction of the Central Valley Fire Protection District of San Bernardino County. Fire Protection service for the site is provided from two stations, Station No. 2 at 15380 San Bernardino Avenue in Fontana and Station No. 3 at 14360 Arrow Boulevard in Fontana. Response time from Station No. 2 to the site is 7-10 minutes; from Station No. 3 to the site the response is 10-15 minutes. Both stations have three-man crews, two 1,500-gpm (gallons per minute) pumper trucks, and two 500-gpm brush trucks.

Solid Waste

Fontana Rubbish Collectors, Inc., a privately-owned enterprise, will provide solid waste removal and disposal for the site. Currently, wastes are trucked to the Fontana Land Fill, a 82-acre site located east of Sierra Avenue approximately one-half mile north of Highland Avenue. The capacity of the Fontana Land Fill will be reached in 1982, at which time secondary disposal sites in Colton and Ontario will be used. Regional solid waste disposal eventually will be concentrated at the Milikan site in Ontario and the San Timoteo site in Redlands, which have capacities until the year 2000.

Library Service

A branch of the San Bernardino County Library System, located at 8334 Emerald Avenue in Fontana, provides service for the City of Fontana. The 63,000 volumes available are adequate for current community needs. Tentative plans for expansion are proposed for 1986.

Telephone Service

Pacific Telephone will provide service to the study area from two offices. The western portion of the site will receive service from the Riverside exchange, with the remainder of the site serviced by the Fontana exchange. Onsite facilities are limited at the present time.

Environmental Impacts

Water

The 8,800 units, when completed, will require a water supply of about 5.7 million gallons per a day (mgd). The FWC is committed to provide service for the project area, via developers' requests for service and certification from the California Public Utilities Commission. Major on and off-site improvements will be required, including reservoirs, transmission mains, distribution lines, and well reactivation.

Wastewater

Development of the 8,800-unit Southridge Village will generate a total average flow of 2.25 mgd, of which 1.5 mgd is tributary to the southwest corner of the development, and 0.75 mgd is tributary to the site of the existing treatment plant. Major on and offsite improvements will be required including a collection system, pump station, force main, construction of the Fontana Interceptor, and expansion of treatment facilities at RP No. 1.

Natural Gas

The development of 8,800 units within the projected site will result in consumption of approximately 1.2 million cubic feet of natural gas per year.

Electricity

Total electrical consumption (for 8,800 residential units and 36 acres of commercial use) for Southridge Village will be approximately 70 million kilowatt hours per year.

Schools

The 8,800-unit Southridge Village will generate a total of 6,431 students including 4,405 elementary, 1,233 junior high, and 793 high school students. Six new elementary schools, a new junior high school, and expansion of the existing high school will be required.

Health Care

Using the standards developed by the Department of Inland Counties Health Service Agency in Riverside, approximately 60 to 70 hospital beds are estimated to be required to serve the needs of future Southridge Village residents.

Police Protection

The estimated population of 24,200 people for Southridge Village at build-out may require as many as 34 additional officers, based on the current City average of .14 officers per 1,000 population. A new police contact office will be required onsite.

Fire Protection

The proposed project will significantly impact existing fire protection facilities serving the area, requiring a new fire station to be constructed onsite.

Solid Waste

The project at full development will generate approximately 15,000 tons of solid waste a year. Fontana Rubbish Collectors, Inc. has indicated its ability to provide service.

Library Service

The population generated by the project will significantly increase the demands upon existing library facilities. Future expansion of library facilities will probably be required.

Telephone Service

Telephone facilities will have to be extended to the site to accommodate the 8,800 planned residential units.

Mitigation Measures

Water

The Water Master Plan, presented in section 3.4 of this report, provides a complete discussion of water service facilities required by the development of Southridge Village.

An extensive network of water mains and two reservoirs will be required to serve Southridge Village, including fire flow requirements. Existing inactive wells south of Interstate 10 will have to be reactivated, with new mains extended to the site. Water mains will be located under major streets with service lines added as necessary to serve individual developments. The two reservoirs are expected to be situated at elevations of 1,160 and 1,200 feet on part of the Jurupa Mountains extending into the central area of the site. Requirements and options for implementation of the Water Master Plan are described in Chapter 5.0 of this report.

Wastewater

A complete discussion of proposed wastewater collection and treatment facilities is included in the Sewer Master Plan, section 3.5 of this report. Treatment and disposal of wastewater from Southridge Village will be accomplished at RP No. 3 on an interim basis, with ultimate treatment provided at RP No. 1 in Ontario. The Sewer Master Plan recommends construction of the Fontana Interceptor to the maximum size permitted under the available grant funding; deactivation and possible future upgrading of RP No. 3; and connection of the interceptor for treatment and disposal at RP No. 1. An equalization basin could be constructed at the present Regional Plant No. 3 site to store flow during peak hours of the day and discharge this flow to the interceptor during low flow periods.

The basic sewage collection system will be similar regardless of the treatment alternative chosen, although the location of the force mains and need for pumping the sewage flows versus a gravity system will vary according to the final sewage disposal plan that is selected. Requirements and options for implementation of the Sewer Master Plan are extensive; these are described in Chapter 5.0 of this report.

Natural Gas

The specific locations of gas lines to serve the Southridge Village community will be determined at the tentative tract level of planning. Developers should work directly with gas company planners to ensure that facilities are constructed as needed.

Electricity

As tentative tracts and site plans are designed, developers should work directly with Edison Company planners to designate the specific location and configuration of electrical lines and facilities to best serve the Southridge Village community.

Schools

Agreement regarding funding and phasing of school facilities construction must be negotiated among the school districts, the City, and developers. Refer to Chapter 5.0 for a discussion of implementation requirements and options.

Health Care

No mitigation measures are proposed.

Police Protection

The Specific Plan designates two quasi-public sites adjacent to Live Oak Avenue, one of which will include a police "contact office" centrally located to serve the community. Additional information is provided in

section 3.6 of this report, the Community Facilities Master Plan. Implementation requirements and options are described in Chapter 5.0 of this report.

Fire Protection

A new fire station be located in the quasi-public use area located adjacent to Live Oak Avenue and 'C' Street. Refer to the Community Facilities Master Plan in section 3.6 of this report for additional information regarding the Southridge Village fire station. Implementation requirements and options are described in Chapter 5.0 of this report.

Solid Waste

No mitigation measures are proposed.

Library Service

Land designated for quasi-public uses in the Village Center could accommodate a new branch library facility, should county library funds be available for construction.

Telephone Service

Locations of lines will be determined at the tentative tract level of planning.

6.3 PROJECT ALTERNATIVES

A series of alternatives were considered in the development of the Specific Plan. These alternatives addressed various aspects of the plan such as circulation, sewer, the regional park, and residential and commercial land uses. Certain alternatives have been incorporated into the proposed Master Land Use Plan. Other alternatives are presented and discussed in this section. The California Environmental Quality Act (CEQA) requires that all EIRs include a comparative evaluation of the "no project" alternative as well as other alternatives capable of eliminating or reducing environmental impact [Section 15143(d)].

6.3.1 "No Project" Alternative

This alternative assumes that the entire site would remain in its existing land uses. This would include low density residential uses, which are located mostly in the northwestern portion of the site (Woodhaven subdivision), and very low density, rural-residential development in other parts of the study area. Other existing uses of the onsite include open space, fallow vineyards, sewage treatment plant, right-of-way easements for Southern California Edison and the Metropolitan Water District, the Fontana Bird Park, the Southern Pacific quarry, a railroad spur, and a fertilizer processing and packaging operation adjacent to the railway spur. For the location of these existing land uses, please refer to Exhibit 6.6.

The "No Project" alternative would mean that the impacts, both positive and negative, associated with additional development of the study area would not occur. Grading and construction of future onsite development would not be required, and there would be no need for the construction of infrastructure improvements and roadway systems within the study area.

This 3,200-unit alternative would not be economically feasible due to infrastructure costs, housing market conditions, and development timing. The costs of providing improvements is too high for the low density development proposed in the current General Plan. This is in part because of special problems that must be solved, such as regional flood control

and regional traffic circulation, regardless of development density. Another element is the fact that the per unit costs of providing services and improvements for low density development are much higher than for medium and high density development. If the needed improvements could be somehow financed, the resulting costs of development would price half-acre and one-acre estate lots out of the market. The rapid inflation of housing prices has made it very difficult for new families and would-be homebuyers to afford a new home. The proposed plan would provide a broad range of housing types at relatively affordable prices. In contrast, the estate and rural development called for in the current General Plan would provide extensive housing affordable for only a very small segment of the market. Because of the large capital costs involved, rapid development phasing is critical to financing the needed improvements. The slow absorption expected with an estate density program could not support the infrastructure financing that would be needed.

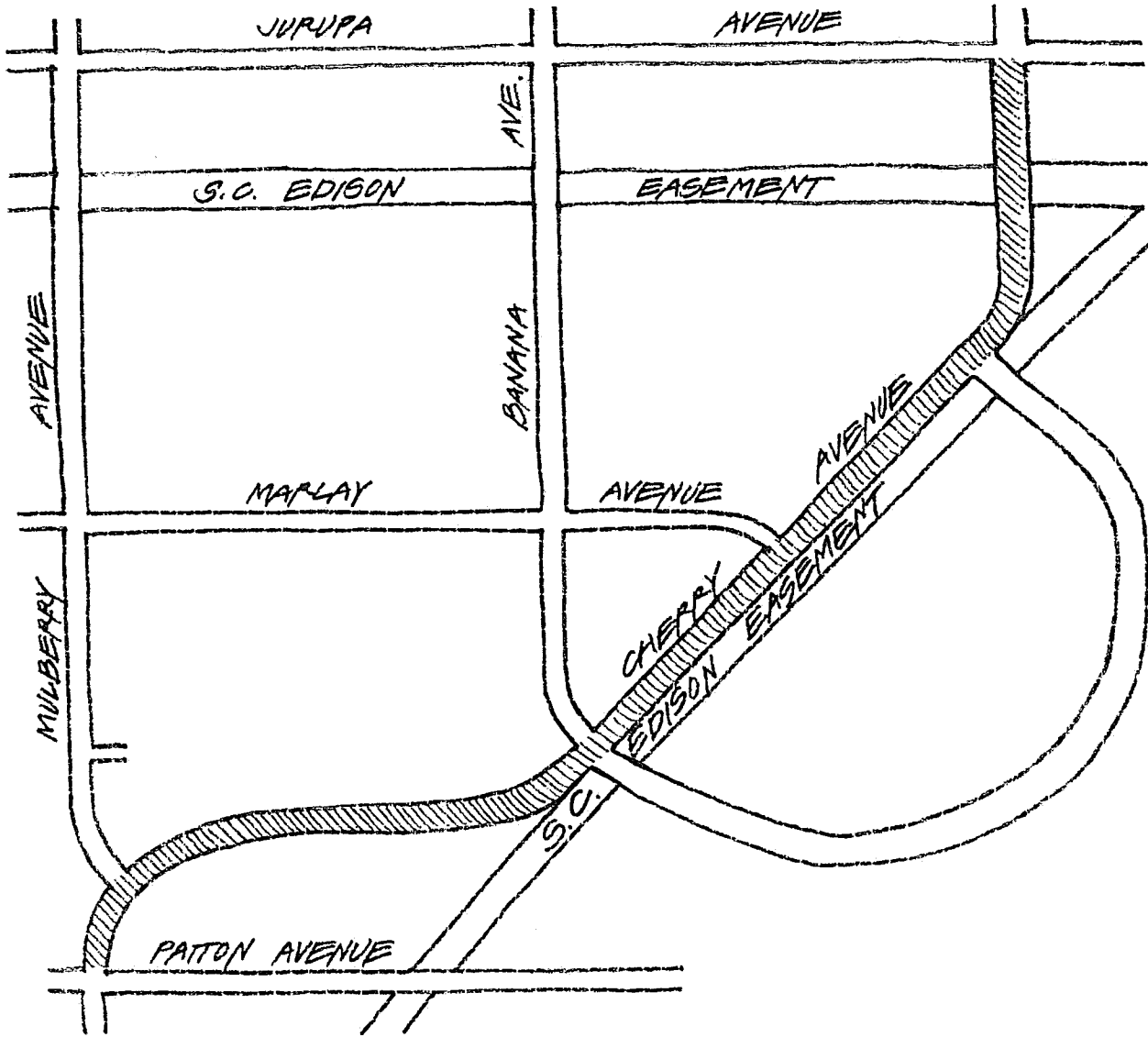
If the study area were not developed further, much of South Fontana's potential contribution to the City's housing supply would not be realized. This would have the effect of shifting much of the potential demand in the housing market to other parts of the market area (i.e., Ontario, Rialto, north and west Fontana), or even to other market areas in the Valley. Without development of the study area, growth pressures in the surrounding parts of south Fontana would still intensify because of the broader growth trends affecting the west San Bernardino Valley area.

If the Southridge Village site were not developed, it is expected that the City's objectives for a diversified job base and industrial development on surrounding lands would not be realized as quickly.

If the General Plan Amendment is approved, no development can occur without a Specific Plan as the amendment requires that a Specific Plan be prepared.

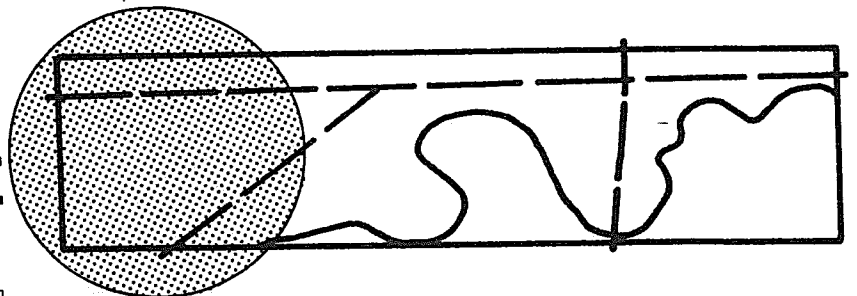
6.3.2 Cherry Avenue Alternative

The Cherry Avenue alternative, shown in Exhibit 6.8, would change the design of Cherry Avenue within the Specific Plan area. This alternative



CHERRY AVENUE ALTERNATIVE

Southridge Village
CREATIVE COMMUNITIES



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would develop Cherry with six lanes, rather than the proposed 4 lanes and with a straight alignment northwest of and parallel to the diagonal SCE easement, requiring Mulberry Avenue to "tee" into Cherry Avenue.

More direct access between Interstate 10 and Route 60 Freeway interchanges and reduction of traffic volumes on Mulberry Avenue, south of Jurupa Avenue, and on Jurupa Avenue, between Mulberry and Cherry, are advantages possible under this alternative. Disadvantages include the encouragement of truck traffic through residential areas, the encouragement of higher traffic velocities on Cherry Avenue, the reduction of useable frontage land along Cherry Avenue, the reduction of access convenience to the sub-regional center and safety/protection services, and the bisection of the residential community.

6.3.3 Pyrite Avenue Connection Alternative

This alternative, shown in Exhibit 6.9, assumes the extension of Pyrite Avenue north from Riverside County, through the Jurupa Mountains, and along the onsite Metropolitan Water District (MWD) easement. Pyrite Avenue would be aligned to join directly with Citrus Avenue, forming a tee intersection with Beech.

A Pyrite Avenue connection would provide additional access to the Glen Avon community between Mulberry Avenue/Country Village Road and Sierra Avenue in Riverside County and could reduce project-related traffic volumes on Mulberry and Sierra Avenues, south of Jurupa Avenue. Such a connection would also provide a new direct connection between two freeways, thereby, encouraging truck traffic through residential development areas on both sides of the mountains. Extensive grading would be required to construct the Pyrite Avenue extension through the Jurupa Mountains. This alternative is no longer a part of Riverside County planning, because this northerly connection was deleted from the Riverside County's Master Plan of Highways.

6.3.4 No 'C' Street Alternative

The no 'C' Street Alternative would delete the planned street connection between the eastern and western portions of the Southridge Village

community. Deletion of 'C' Street would result in underutilization of existing right-of-way, loss of direct access to the Village Center from the eastern portion of the village, the need for an alternative means of access for storm drain routing, and an increase in traffic congestion where intra-community traffic would be diverted directly to Jurupa Avenue.

6.3.5 Low Density Along Jurupa Avenue Alternative

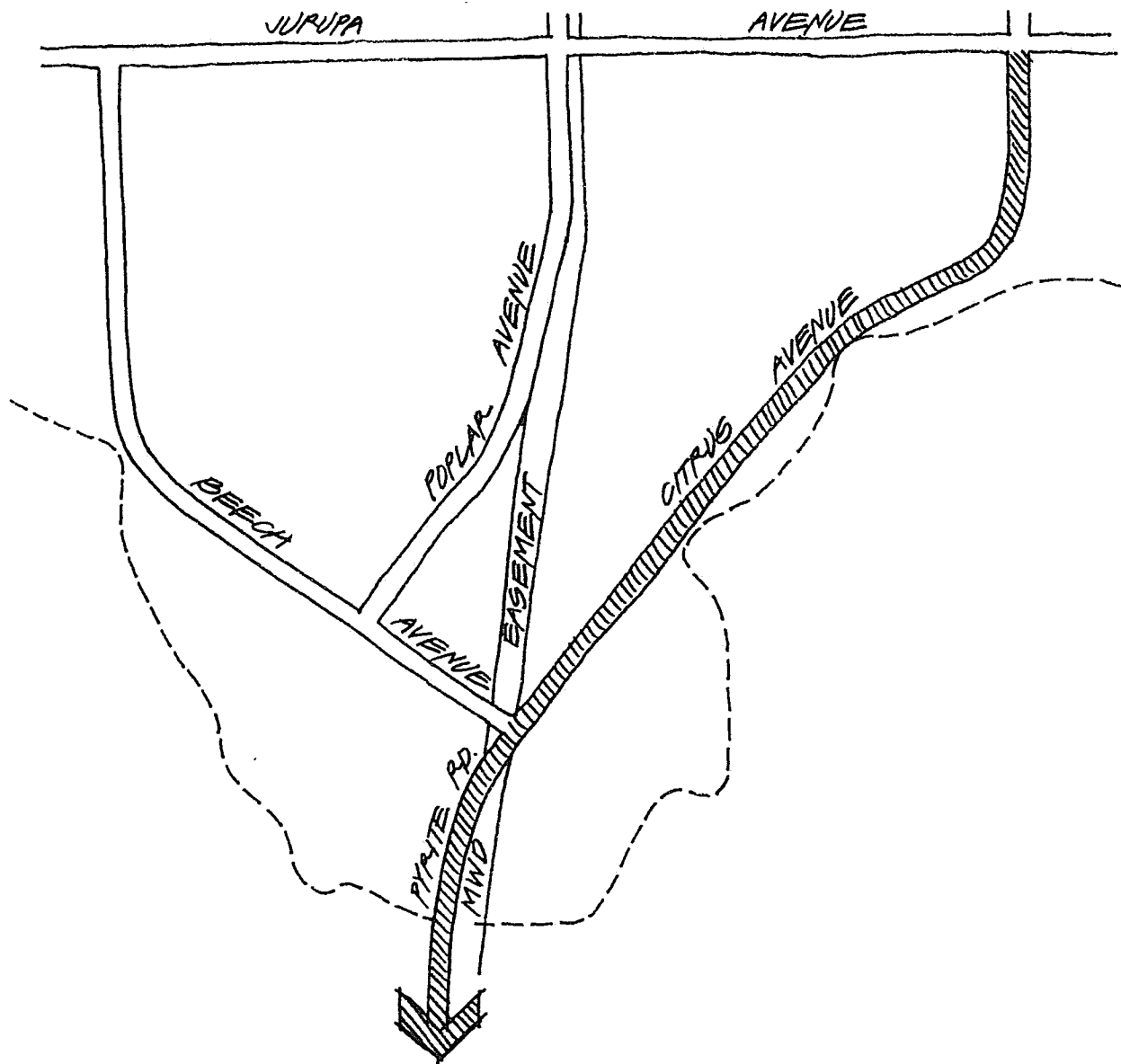
Under this alternative, all residential development along Jurupa Avenue would be low density product types.

Low density products would be compatible with the low density, open space, and agriculture uses to the north of the site. Given the proposed buffer zone with landscaped earth berm along Jurupa, however, it is believed that low density development would be no more compatible than the planned mix of low and medium densities. Under this alternative lot size requirements for an exclusively low density residential use could result in an inefficient use of parcels between the SCE easement and Jurupa Avenue.

6.3.6 Sub-Regional Center Location Alternative

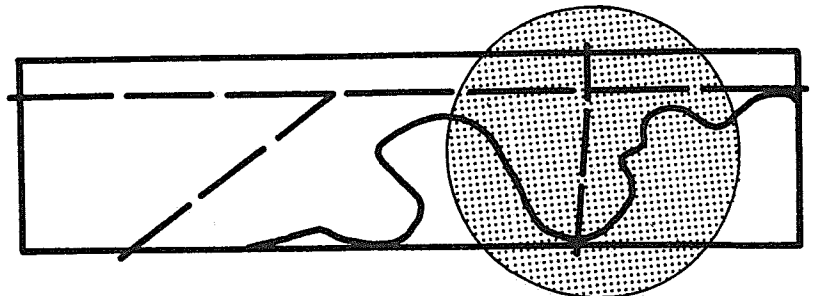
An alternative location for the sub-regional center is at the corner of Jurupa and Cherry Avenues, adjacent to the Edison easement, as illustrated in Exhibit 6.10.

This alternative location would be closer to Interstate 10 and at the corner of two major arterials, which offer potential for better accessibility. This alternative would result in greater traffic congestion at the Jurupa/Cherry intersection and could create excessive and awkward turning movements on these major arterials. Placement of the sub-regional center on the perimeter versus the interior of the project site would create a potential conflict with adjacent zoning to the north, resulting in a loss of desirable noise level reduction between the center and residential uses to the north. By locating the sub-regional center in this manner, all of the benefits associated with the center as the "anchor" or interior centerpiece of the village core could not be realized.

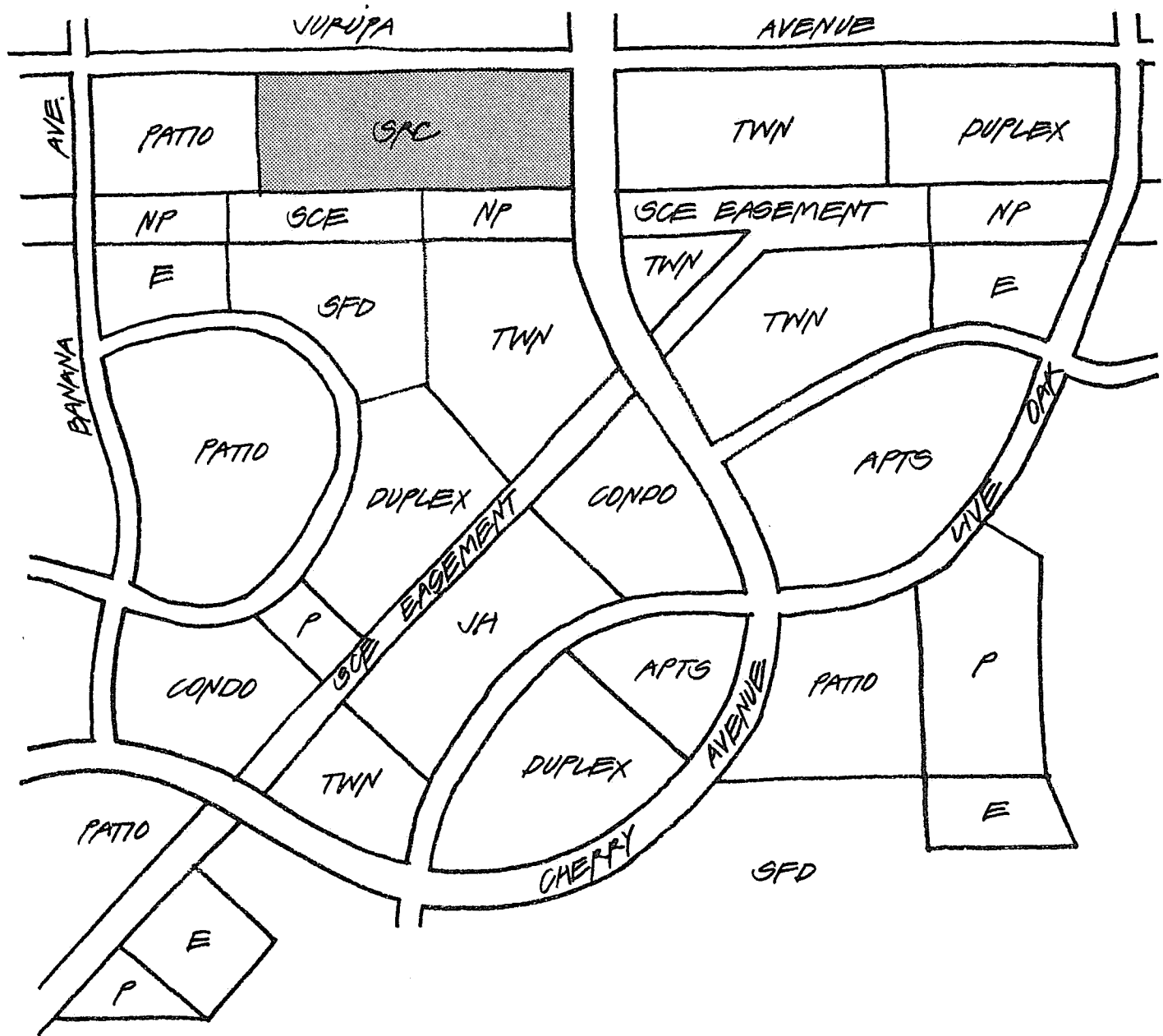


PYRITE AVENUE CONNECTION ALTERNATIVE

Southridge Village
CREATIVE COMMUNITIES

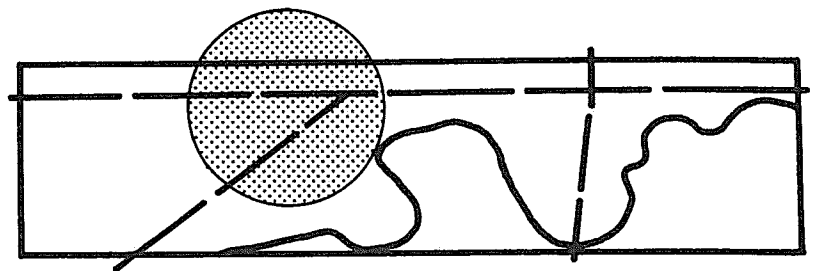


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**SUB-REGIONAL
CENTER
ALTERNATIVE
SITE**

Southridge Village
CREATIVE COMMUNITIES



6.3.7 High Density Core Alternative

This alternative would create a high density core around the sub-regional center and junior high school, as shown in Exhibit 6.11. Residential types within this core would include Carriage Homes, Garden Homes, and Townhomes.

Advantages under this alternative include: concentrating all attached residential uses to one area to provide a better opportunity for more non-vehicular access to the sub-regional center; allowing Phase 3 to be entirely composed of single-family residential; and permitting low density single-family detached uses to be concentrated west of Banana Avenue. However, the high density concentration would also result in higher traffic volumes and the need for larger rights-of-way along Cherry, Live Oak, Banana, 'A', 'B', 'C', 'G', and 'H' Avenues. The occurrence of socioeconomic problems typical of large concentrations of people would be expected to increase with this segregation of high density development from the rest of the community. Additionally, the high density core could present marketing and development phasing problems, because absorption of large tracts of high density housing in early phases of development could be difficult.

6.3.8 Residential Replacement for RP No. 3 Alternative

This alternative is dependent on which long-term regional wastewater facilities program is implemented in the future. If treatment plant No. 3 is removed, residential uses would be proposed for the plant site. Exhibit 6.12 shows a concept plan for this alternative, with single-family detached Townhome, Garden Home, and Patio Home residential types.

Under this alternative, more residential development opportunities would be available and odors and residential compatibility problems would be eliminated with the removal of RP No. 3 from the site. A disadvantage, associated with the closing down of RP No. 3, is the loss of a facility that could be redesigned and upgraded to provide wastewater reclamation, which could provide reclaimed water for irrigation of greenbelts, agriculture, etc. By retaining this site for wastewater treatment, RP No.

3 could also continue to serve as a "safety valve" for the City of Fontana, in the event that long term regional wastewater facility plans (i.e., expansion of RP No. 1 and construction of the interceptor) are delayed.

6.3.9 Non-Residential Buffer of RP No. 3 Alternative

Non-residential uses (i.e., elementary school and neighborhood commercial) are considered under this alternative as a buffer between RP No. 3 and residential uses to the east of the plant (refer to Exhibit 6.13).

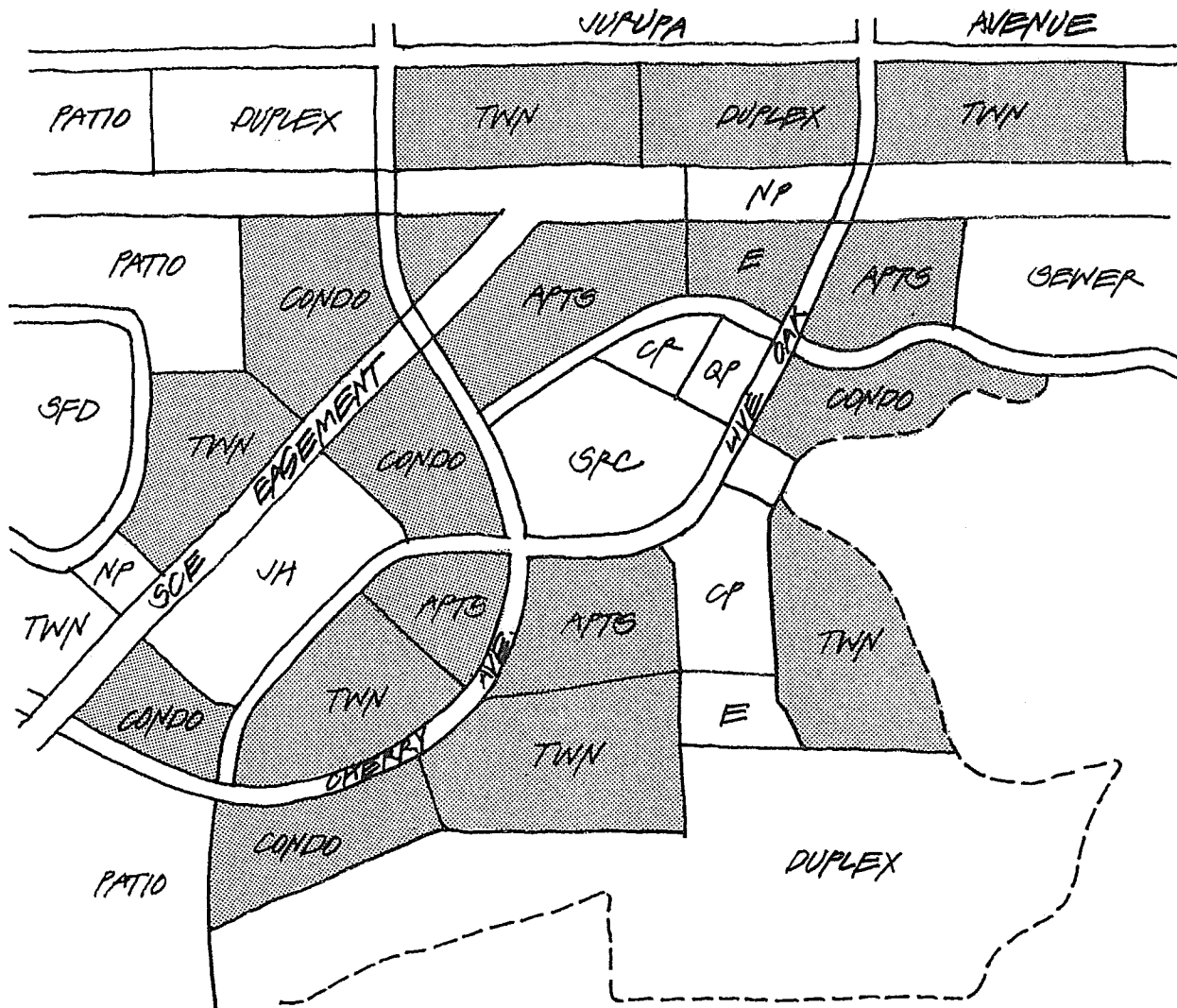
This alternative might eliminate the need for the proposed 300-foot wide landscape buffer between RP No. 3 and residential uses proposed along the eastern edge of the RP No. 3 site. Odor, however, could still pose a problem for adjacent land uses. Additional disadvantages would exist as a result of the placement of two relatively incompatible land uses (i.e., elementary school and neighborhood commercial) adjacent to each other. Moreover, this location for a school and a neighborhood commercial center would not be most desirable when access and service area relationships are considered.

It is important to note that if the plant is upgraded to provide water reclamation through tertiary wastewater treatment, a buffer zone would not be needed.

6.3.10 Open Space Buffer of RP No. 3 Alternative

Under this alternative an open space buffer zone would be established along the east side of Beech Avenue, to separate urban land uses from RP No. 3. This concept is illustrated in Exhibit 6.13-A.

This alternative is probably more consistent with the concern of Chino Basin MWD to minimize land use compatibility problems next to RP No. 3. Placing the buffer zone outside of the treatment plant site would also minimize the need to reconstruct or relocate treatment facilities in the near term, as compared to the proposal to incorporate this buffer zone within the plant site. A disadvantage of this concept is that the buffer



HIGH DENSITY RESIDENTIAL CORE ALTERNATIVE

Southridge Village
CREATIVE COMMUNITIES

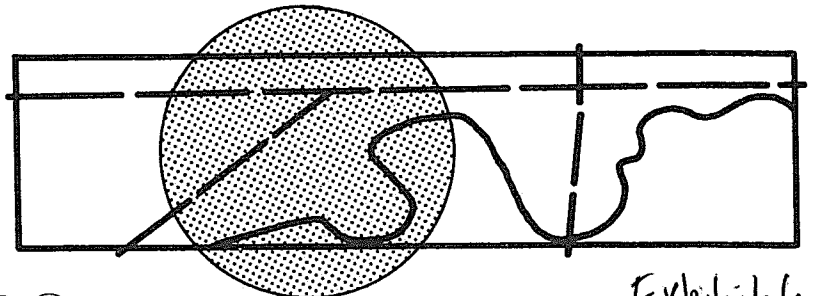
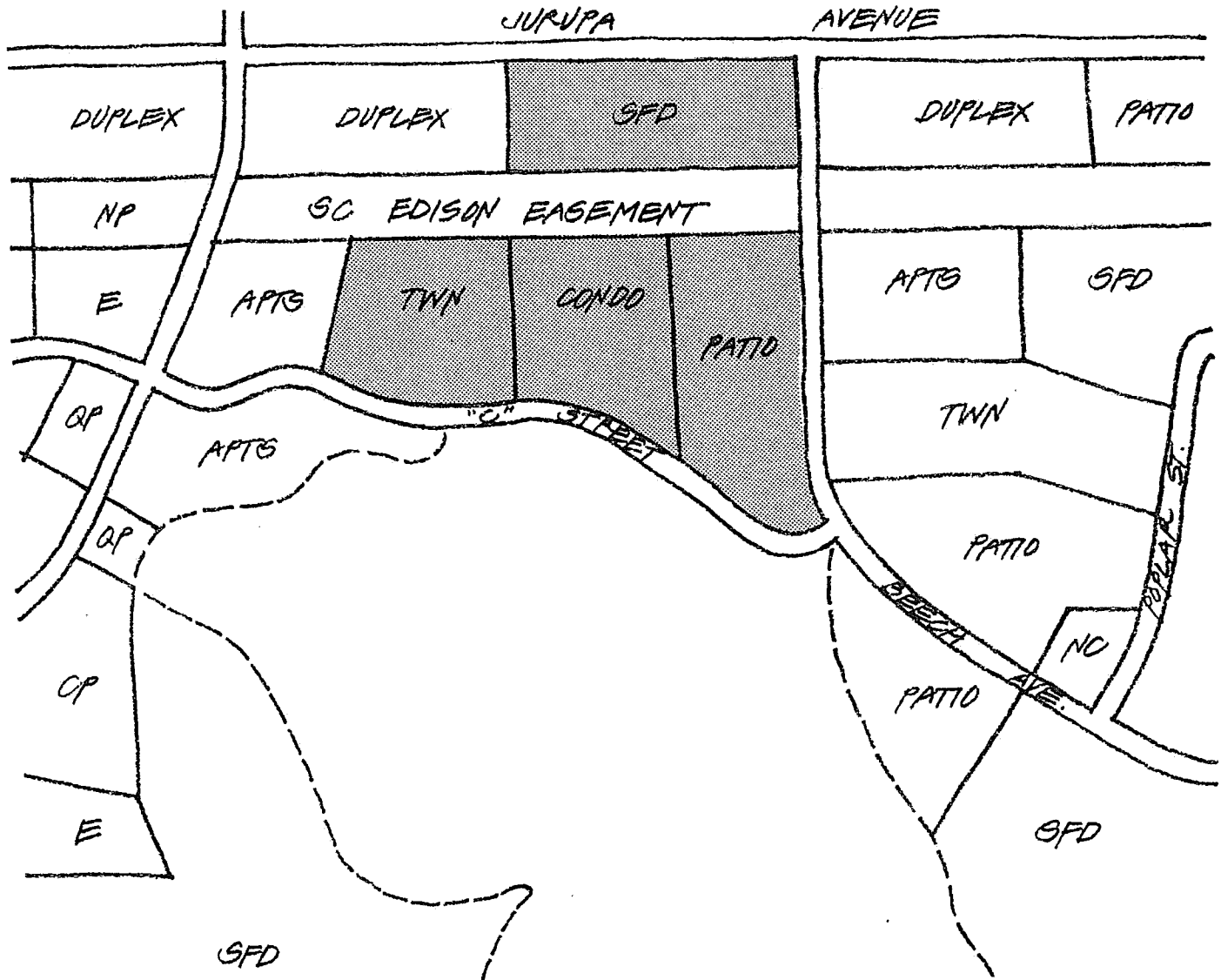


Exhibit 6.11

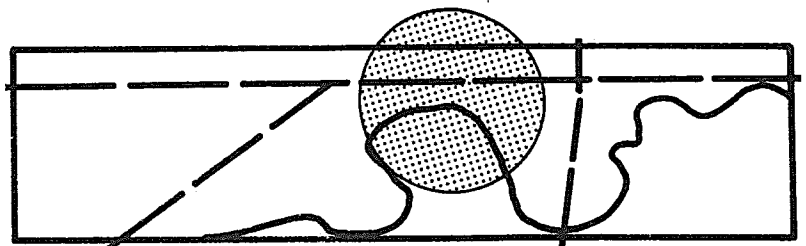
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EXHIBIT 6.11

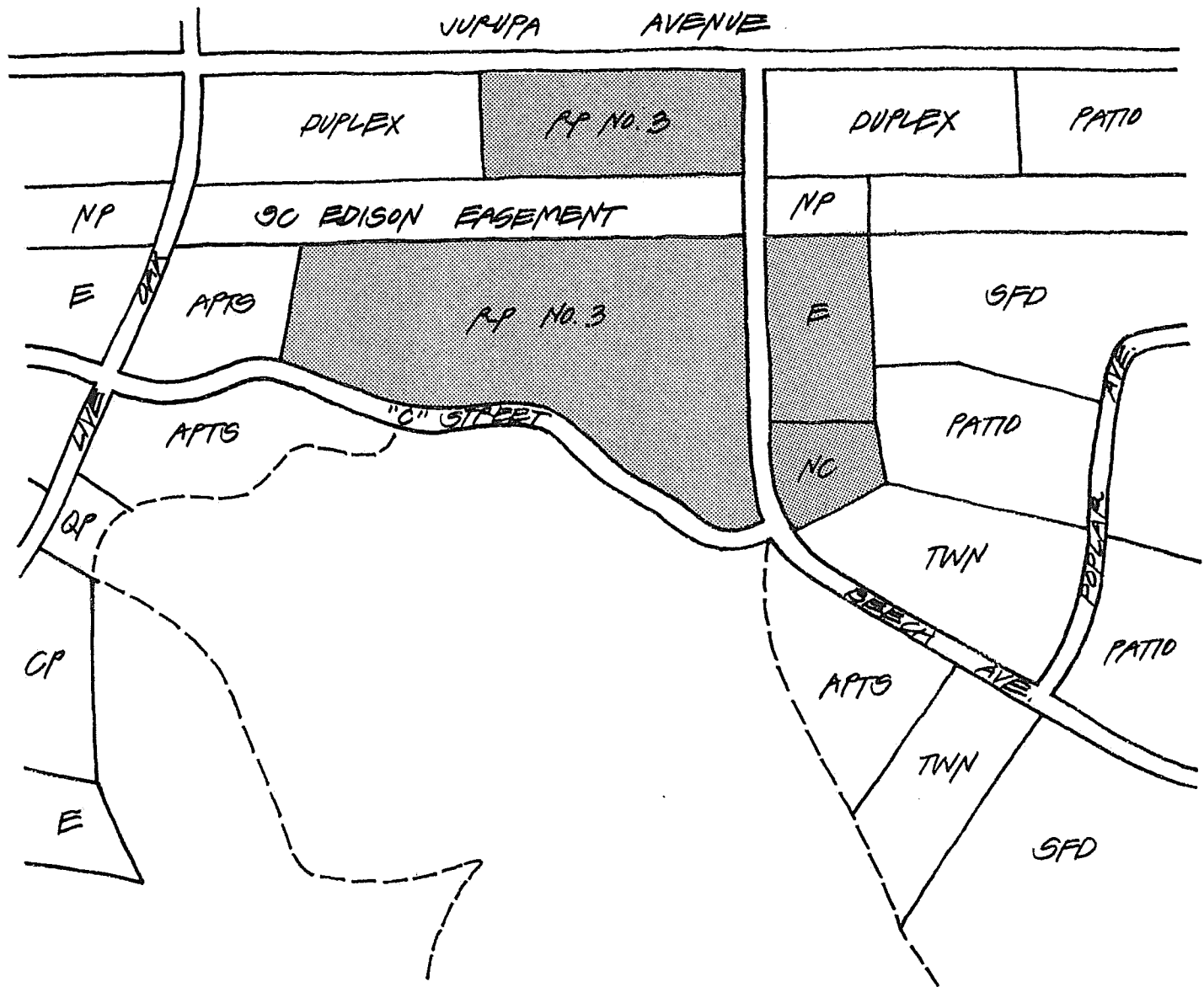


RESIDENTIAL REPLACEMENT FOR R. P. NO.3 ALTERNATIVE

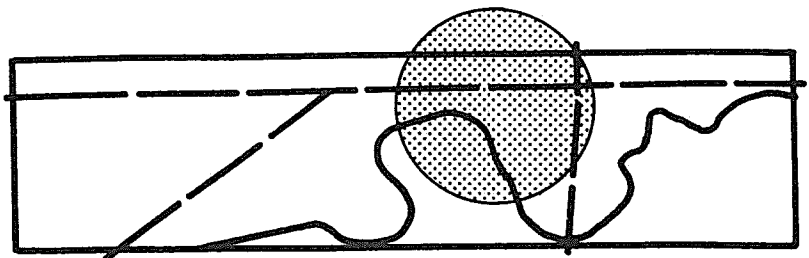
Southridge Village
CREATIVE COMMUNITIES



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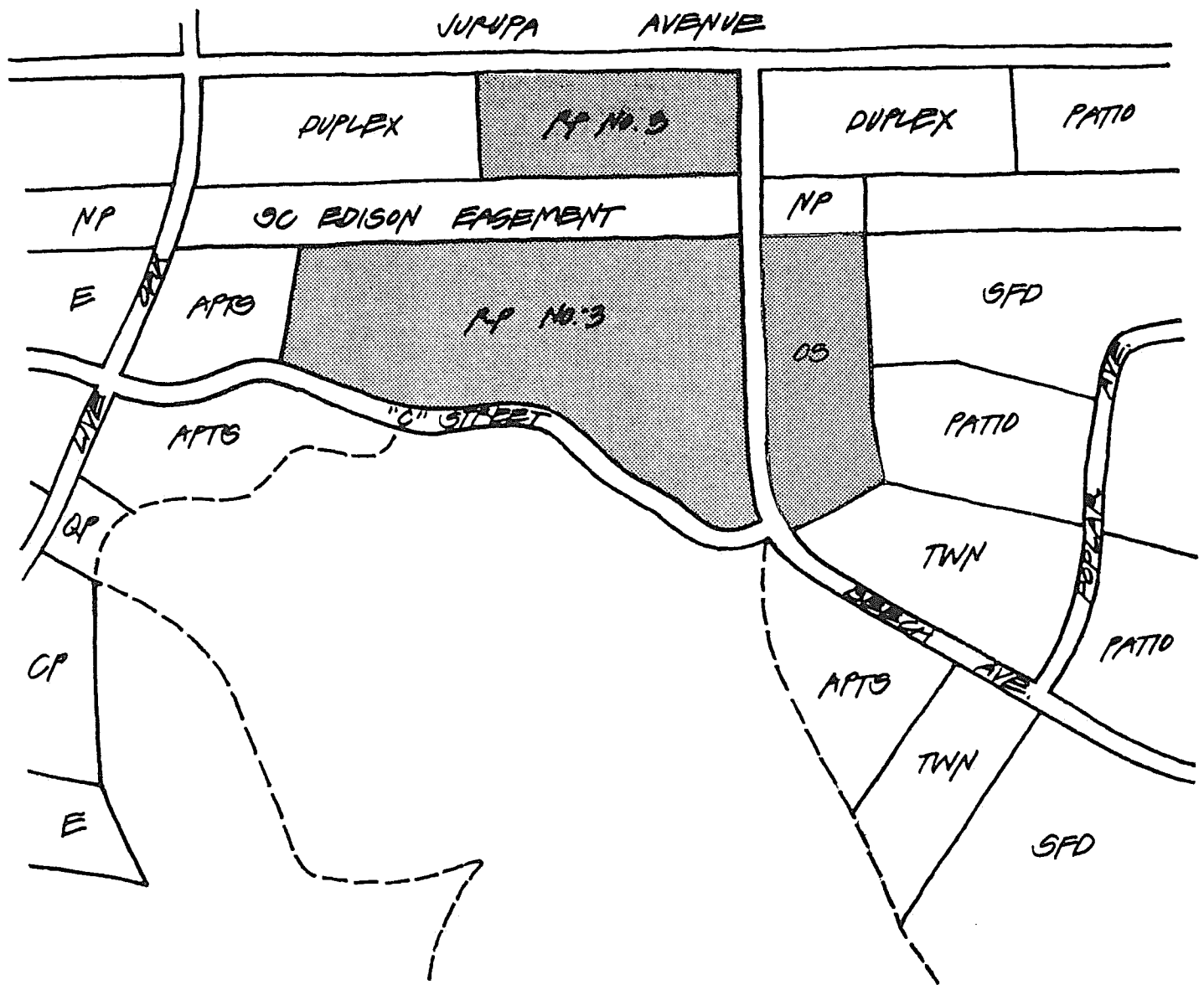
**NON-RESIDENTIAL
BUFFER
OF R. P. NO.3
ALTERNATIVE**



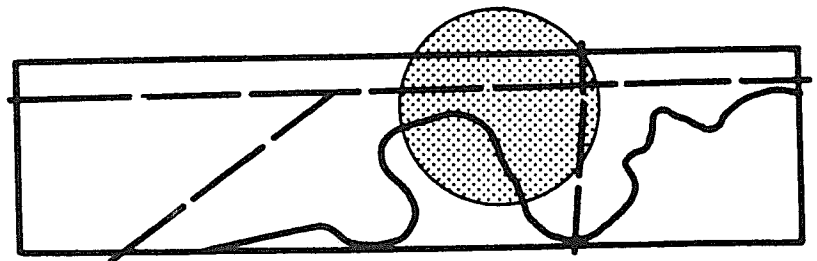
**Southridge Village
CREATIVE COMMUNITIES**



EXHIBIT 6.13



**OPEN SPACE
BUFFER
OF R. P. NO.3
ALTERNATIVE**



**Southridge Village
CREATIVE COMMUNITIES**



EXHIBIT 6.13A

zone land would not be available for residential use, thereby reducing the total number of residential units or increasing average densities in other residential planning areas.

As with the previous alternative, a buffer zone would not be needed if tertiary wastewater treatment facilities were constructed at the RP No. 3 site.

6.3.11 Existing Regional Park Concept Alternative

Under this alternative, the size and configuration of the Jurupa Hills Regional Park would remain as designated in the General Plan and recent park concept plan. This is illustrated in Exhibit 6.14.

The existing plans for the Regional Park provides for a flatland play area, cultural/nature areas, and direct access from Oleander Avenue. Many of the features, however, proposed by the City would be on land that is privately owned and suitable for residential development. Development of this land as part of the park would probably entail condemnation procedures to acquire the land for park use, unless the land is bought at a high market price. There would also be a loss of property tax base if the flat land suitable for residential development were used for park purposes.

6.4 UNAVOIDABLE ADVERSE IMPACTS

Rural-to-urban land use conversion necessitates significant alteration of preexistent conditions. Short-term and primary impacts of development may be readily apparent, while the long-term or secondary effects of a project are more difficult to establish. This section provides a summary of the adverse impacts anticipated to occur within the study area as a result of development as outlined in the Southridge Village Specific Plan. Impacts cited are described in detail in Chapter 6.0, FOCUSED ENVIRONMENTAL IMPACT REPORT, of this Specific Plan and in Chapter 3.0 of Draft EIR 81-1. The following unavoidable adverse impacts assume the development of 8,800 dwelling units and associated village community population of about 24,220 people:

1. Landform/Topography

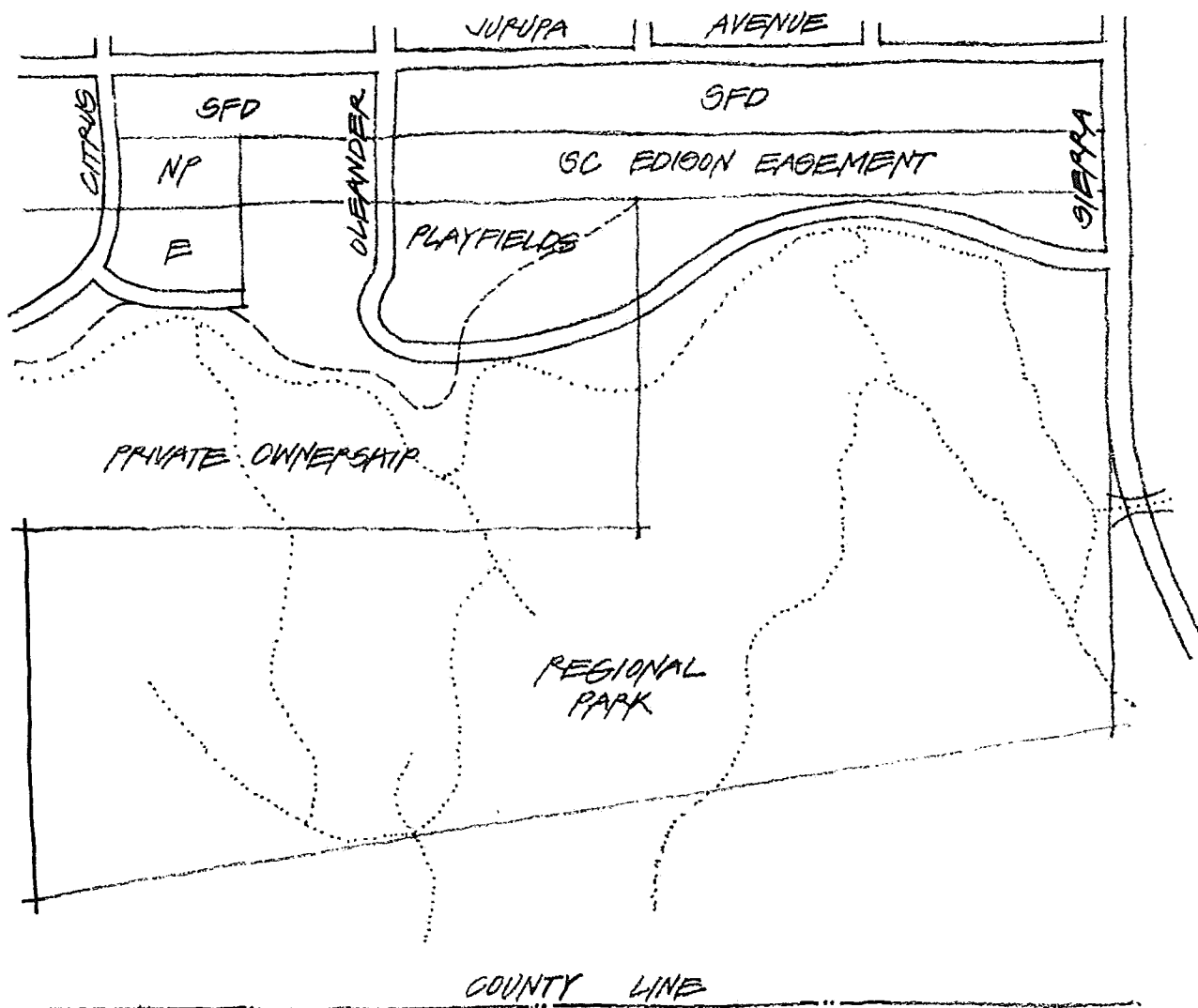
- . Existing landforms will be altered to provide buildable areas for residential and commercial land uses
- . Grading activities will expose underlying soils, increasing susceptibility to erosion.

2. Geology and Soils

- . Onsite development will be subject to groundshaking from three nearby fault zones surrounding the site.
- . Recomaction would be required to provide acceptable compaction for development in man-made fill and near-surface alluvial deposit areas.

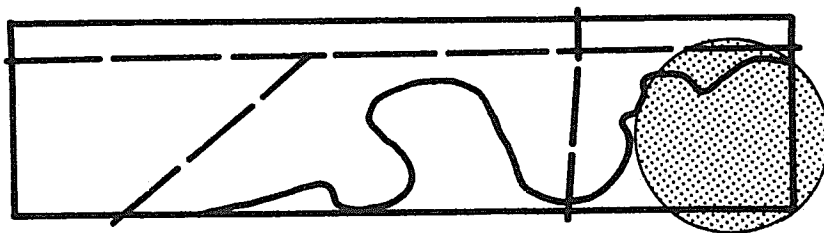
3. Hydrology

- . Grading and construction activities will increase, on a short-term basis; sediment loading and site runoff will increase during storm periods as a result of increasing impermeable surfaces onsite.
- . The quantity and rate of runoff will increase as a result of increasing impermeable surfaces onsite.



**EXISTING
REGIONAL PARK
CONCEPT
ALTERNATIVE**

Southridge Village
CREATIVE COMMUNITIES



- . The quality of runoff will decrease due to the introduction of urban-related pollutants onsite.
- . Development of the study area will incrementally reduce regional groundwater recharge.

4. Biological Resources

- . Grading operations for project implementation will remove most of the existing vegetation from the area of the site to be developed.
- . Following development of the site, few species of native animals will remain in the developed areas.

5. Cultural Resources

- . Development of the site, as specified in this Specific Plan, will directly impact archaeological sites designated as ARMC #1 and ARMC #2 and indirectly impact sites CA-SBr-1632 and CA-SBr-716-A.

6. Onsite and Surrounding Land Uses

- . , Approximately one-half of the natural terrain will be developed by the proposed project.
- . The extension of utilities and roadways into previously undeveloped areas will have cumulative growth-inducing effect on surrounding areas.

7. Transportation/Circulation

- . Complete development of the 8,800 units planned for Southridge Village will generate approximately 100,390 daily vehicle trips.
- . As a result of anticipated traffic volumes, both project, and non-project freeway interchanges and approaches in the vicinity of the site will require major improvements including signalization of ramp intersections with the overcrossing streets.

8. Air Resources

- . Grading, road construction, and building activities are a source of dust emissions that have a substantial short-term impact on local air quality.
- . Air quality will be impacted on a long-term basis due to increased auto usage.

9. Acoustic Environment

- . Short-term acoustic impacts will occur as grading, infrastructure emplacement, and building construction occur.
- . Traffic associated with the proposed project will increase noise level along access routes.

10. Public Services and Utilities

- . The village community will eventually increase regional water demand by 5.2 million gallons per day (mgd).
- . The Southridge Village development at completion will generate 2.25 mgd of wastewater.
- . The total increase in residential and commercial electrical demand, for 8,800 units and 36 acres, respectively, will be 70.1 million kilowatt hours per year.
- . Ultimate development of the 8,800-unit Southridge Village will generate a total of 6,431 students, i.e., 4,405 elementary, 1,233 junior high, and 793 high school students.
- . Southridge Village at completion is expected to require 61-68 hospital beds.
- . 34 additional police officers will be required to serve the Southridge Village community.
- . Development of the community, combined with related municipal growth, will increase demand sufficiently to warrant an additional onsite fire station.
- . The ultimate village development will generate approximately 15,000 tons of solid waste a year.
- . Southridge Village will result in increased demand on library and telephone services.

6.5 GROWTH-INDUCING AND CUMULATIVE EFFECTS

6.5.1 Effects on Adjacent Lands

Implementation of the project will have various indirect effects on areas surrounding the project site; growth-inducing effects are probably the most ubiquitous and significant of the proposed project's impacts on surrounding land uses. The approval of the proposed Specific Plan and the ultimate residential development of the project site will result in a significant increase in population, housing, and labor supply.

By providing certain infrastructure improvements, as well as a broad range of housing for the industrial workforce, the Southridge Village Specific Plan will tend to support the development of industrial uses which are planned for lands to the west and northwest. As a result of the street and utility improvements that would take place within the mixed rural residential and industrial community of south Fontana, incentives and pressures will be created for development of higher density and more intensive land uses between Jurupa Avenue and Interstate 10. Development costs in this area would be reduced and property values would be expected to increase. Development of the Southridge Village community may in itself reduce the rural qualities that attracted certain residents to south Fontana and encourage these residents to redevelop their property and relocate elsewhere; nevertheless, in time, this incentive to develop could occur anyway, even without the Southridge Village project. In response to the concern of existing residents of south Fontana, this Specific Plan includes a number of measures intended to buffer residential uses to the north from the site itself.

6.5.2 Population Growth Trends and Forecasts

Southridge Village and most of the City of Fontana are located in the regional planning area known as Regional Statistical Area (RSA) 28. RSA 28 covers all of Fontana with the exception of north Fontana and also includes all of the cities and unincorporated communities to the west within San Bernardino County.

The Southern California Association of Governments (SCAG) prepares growth forecasts for this and 54 other regional statistical areas every two to four years. These forecasts reflect regional and local growth forecasts. They are used for regional air and water quality planning, and are also considered during the review and approval of applications for federal highway and sewer facilities grant funds. SCAG has initiated the process of developing the 1982 growth forecast and the updated Air Quality Management Plan. Particular attention is being paid to the west valley area of San Bernardino County because of the planned expansion of Ontario International Airport and related industrial and transportation system improvements.

SCAG has projected that RSA 28 will be the fastest growing area within San Bernardino County over the period 1975-2000. Although the SCAG-78A analysis projected a population of 590,000 for this RSA by the year 2000, preliminary revised figures per SCAG-82 suggest that population in the year 2000 may increase to about 650,000 to 700,000 persons. Recent revisions to this preliminary population range suggest an increase of about 92 percent between 1980 (352,000 persons) and the year 2000 (674,800 persons).¹

In 1970, the City of Fontana had a population of approximately 20,670. according to 1980 census data, population has grown to 37,100, almost an 80 percent population increase over the decade. Recent city forecasts estimate a population of 140,000 by the year 2000.

The Southridge Village Specific Plan may be examined in this context. Assuming 8,800 dwelling units and an average of 2.75 persons per household, Southridge Village would provide homes for about 24,200 people. This is well within the growth projections for RSA 28 and the City. Specifically, the project will comprise about 7.5 percent of the total projected growth by the year 2000 for RSA 28 and about 24 percent of the projected growth for the City of Fontana by this same year.

¹ SCAG-82 figures are preliminary draft forecasts and do not yet reflect adopted SCAG policy (per memo to Kerry Forsythe, SANBAG, from William C. Lawrence, July 10, 1981).

The significance of the Southridge Village project can be better understood in the context of these regional growth factors:

1. The fact that this project has been proposed at this time is testimony to current and anticipated growth trends in the west valley of San Bernardino County.
2. The west valley is already projected to be the fastest growing region in southern California.
3. The preliminary 1982 forecasts indicate that the City of Rancho Cucamonga, the City of Ontario, and the County expect growth to occur at an even faster rate than was projected three years ago.
4. Considering several aspects of the growth pressures impinging on the City of Fontana, it may be concluded that the Southridge project is consistent with these growth trends. These factors include:
 - a. The site's proximity to three freeways that provide excellent regional access.
 - b. The thousands of acres of industrial land that are ready for development immediately to the west.
 - c. The shift of new industry to the west valley from places such as Orange County due to the lack of reasonably priced housing in other areas.

6.5.3 Cumulative Effects of Growth

The cumulative effects of Southridge Village development, in combination with the other major community planning areas in the City, will be substantial. Major development is anticipated in the Sierra Heights, Walnut Village, and Rancho Fontana Specific Plans. The City's comprehensive General Plan update envisions a greater amount of future growth than does the current General Plan. Of particular concern in planning for this future growth are the needs for adequate regional sewer, flood control, and traffic circulation systems. Chapter 5.0 of this report recommends a number of actions and policy determinations that the City should consider in order to meet future urban service requirements. The environmental

impact report being prepared for the comprehensive General Plan update should consider these policy alternatives, and should specifically address the cumulative effects of city-wide growth.

6.6 THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The principal effect of the Southridge Village Specific Plan will be to shape the long-term commitment to urbanization and community form in the planning area. The construction of homes on land currently in open space and rural-residential uses will significantly increase the economic value of the property, provide additional residential opportunities to the area, and involve significant capital expenditure in construction and the extension of infrastructure. The effects of implementing the Specific Plan will preclude the long-range use of the study area for agricultural, purposes. However, the construction of a major planned community with necessary services and infrastructure is expected to create significant long-term economic benefits.

6.7 ENERGY CONSERVATION

The ultimate development of 8,800 dwelling units in the project area will make significant demands on water and energy resources. Average water consumption is estimated to be approximately 5.7 million gallons per day (mgd) at project build-out. Total average natural gas consumption is estimated at 1.2 million cubic feet per year. Total average electrical power consumption is estimated at 70 million kilowatt hours per year.

Mitigation of energy and water consumption impacts should be addressed in two areas: the encouragement of conservation measures, and the support of new energy and water supply development projects.

Energy conservation measures for new construction throughout the State are mandated in the State energy conservation standards in Title 24 of the California Administrative Code. A revision of these standards was approved in 1981 by the Energy Commission, and has been submitted to the State Building Standards Commission for final review and approval.

The new Title 24 standards are based on performance, and establish energy budgets that must be met in the various climate zones of the State. Certain energy conservation measures are mandated; these include standards for wall, ceiling, floor, and water heater insulation; weatherstripping and infiltration controls; space conditioning equipment capacity and efficiency; setback thermostats; and interior lighting restrictions. In addition to these mandatory requirements, the standards provide three alternative packages of measures to meet the performance requirements. These packages include a passive solar and thermal mass option; a more conventional approach with strict insulation and window area limit requirements; and an option with less stringent insulation requirements combined with mandatory solar water heating. In place of using one of these approved packages, builders have the option of developing their own package and demonstrating compliance with the performance standards.

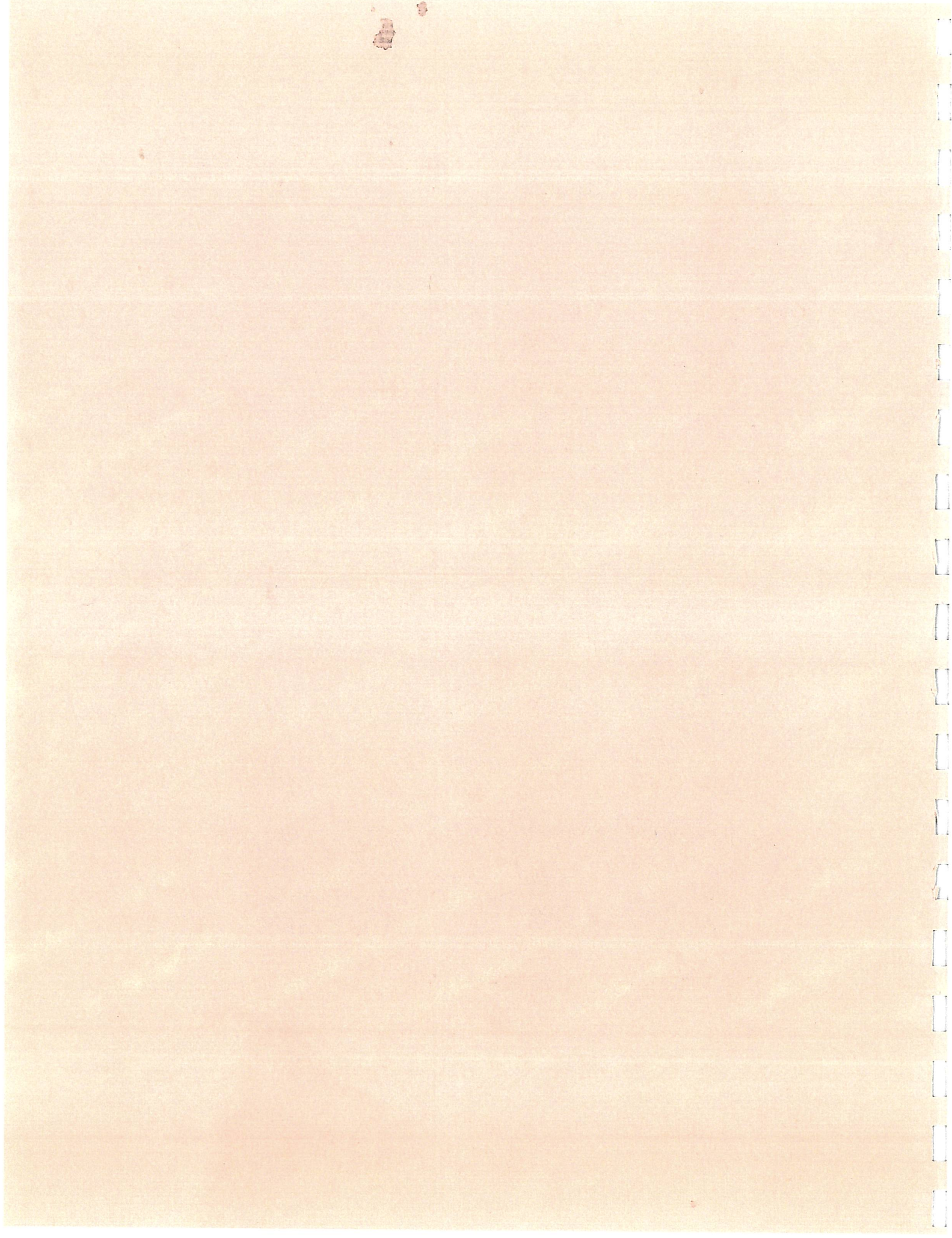
New housing constructed in compliance with Title 24 will save about 50% of the energy consumed in pre-1975 housing constructed before the regulations were in effect. However, these new standards are anticipated to add from \$1,000 to \$4,000 to the initial cost of a new home.

The State Subdivision Map Act contains provisions that encourage the design of subdivisions to promote passive solar design opportunities to the extent feasible. These opportunities for natural heating and cooling can be encouraged through east-west street orientation, landscaping, shading, reduced street widths, etc. According to the Subdivision Map Act, this design effort should consider local climate, contour, configuration of the parcel, and other design and improvement requirements without resulting in the reduction of allowable densities or area of a lot which a structure may occupy under planning and zoning laws applicable at the time the tentative map is filed.

In addition to energy conservation measures, the City can also support the construction of new energy and water supply sources. This support could take the form of public resolutions, public education programs, and lobbying activities. Local agency support of utility companies seeking approval of new power and natural gas facilities can be effective. Local support for completion of the State Water Project, to increase the availability of imported water for this area, should also be considered.

Fiscal Impact Report





7.0 FISCAL IMPACT REPORT

7.1 INTRODUCTION AND BACKGROUND

7.1.1 Introduction

The purpose of this section is to identify the potential effect of the Southridge Village Specific Plan on the costs and revenues of the City of Fontana, the Central Valley Fire Protection District, the Fontana Unified School District, and the Colton Joint Unified School District. Because the project will require major water, sewer, and flood control facilities, financial impacts on the agencies responsible for providing these facilities are also considered. Additionally, alternatives for mitigating potential adverse fiscal impacts on the various public agencies are discussed in subsequent subsection 7.2, "Summary of Impacts and Mitigation Measures."

Fiscal impacts are shown in three phases corresponding to the phased development of Southridge Village. Project build-out is anticipated by 1989 and each phase would be completed during a period of approximately 2-3 years, although site development and construction of some public facilities would overlap the three project phases.

7.1.2 Project Phasing

Population and land use characteristics of each development phase are summarized in Table 7.1. The population projections are based upon an average household size of 2.75 persons per dwelling unit, as suggested by the City Planning Department.

7.1.3 Cost/Revenue Forecasting Methodology

In order to distinguish between one-time and recurring fiscal impacts, cost and revenue forecasts are presented in four categories: one-time capital (i.e., public facility) costs, annual operation and maintenance costs, one-time revenues, and annual revenues. For instance, property taxes are paid and collected on a recurring annual basis, whereas park development fees are paid once at the time building permits are issued.

The forecasts of one-time revenues as well as capital costs are aggregated over each phase. The recurring annual cost/revenues are estimated upon the completion of each phase.

Table 7.1
SOUTHRIDGE VILLAGE
SUMMARY OF PROJECT PHASING

	<u>Increment Added by Each Phase</u>		
	<u>Phase One</u>	<u>Phase Two</u>	<u>Phase Three</u>
Population	6,922	8,459	8,847
Dwelling Units	2,517	3,076	3,217
Commercial Acres	3	20	8
 <u>Cumulative totals, Upon Completion of:</u>			
	<u>Phase One</u>	<u>Phase Two</u>	<u>Phase Three</u>
Population	6,922	15,381	24,228
Dwelling Units	2,517	5,593	8,810
Commercial Acres	3	23	31

The forecasts presented in this report have been prepared in close coordination with City and school district staff. The informed judgements of department heads and Planning Department staff have been heavily relied upon in determining the service and facility needs of the project area. The determination of infrastructure needs and costs has been made by Boyle Engineering Corporation.

In projecting revenues, the basic method has involved the translation of projected land use, population and housing data into estimates of public revenue. This has been accomplished by either extrapolating current relationships, by hypothesizing future relationships based upon economic reasoning (e.g., real sales tax revenues will increase with increases in households and real family income), or by simply multiplying estimated development fees by the appropriate number of land use units (e.g., number of dwelling units times park fees per dwelling unit.)

Expenditures have been projected on the basis of incremental costs attributable to development of Southridge Village under the assumption that current City service levels will be maintained in the project area. Where information on marginal costs related to new development has not been available, average costs such as current cost per equivalent dwelling unit have been used.

To provide a consistent framework for the treatment and presentation of projected costs and revenues, a study design has been developed and followed. The major elements of this design are described below.

1. Time Frame

The analysis assumes build-out of Southridge Village by 1989. The expenditure and revenue calculations associated with each Phase are also predicated on build-out conditions. Therefore, the annual fiscal impacts presented herein reflect the maximum levels attributable to each phase.

2. Inflation and Future Cost/Revenues

Future costs/revenues are estimated in terms of constant 1981 dollars, without adjustments for anticipated inflation, property value appreciation, or public employee salary increases. Therefore, the forecasts can be viewed as the level of costs/revenues the development phases would incur were they developed today.

3. Tax and Fee Rates

Revenues are projected assuming that existing tax and fee rates will remain unchanged through project build-out. The effects of Proposition 13 and SB 180 have been taken into account when calculating property tax distribution. These laws have had the effect of limiting both the total tax that can be levied on a property (Proposition 13) and the allocation of that tax among the various government agencies (SB 180).

4. Current Service Levels

Service costs are projected on the assumption that current City service levels will be maintained through 1989.

5. Schools District Operating Costs

School operating costs are not projected in this analysis since these expenses are presently funded from a combination of local taxes, state aid, and federal apportionments to education. State law prescribes a revenue limit per average daily attendance (A.D.A.) of public school districts and shortfalls/surpluses in local tax revenues are basically offset by increases/decreases in state aid.

6. Fee-Supported Services

The analysis does not forecast operations and maintenance expenses of public services that are fully funded from service fees and charges. These services would include water operations, sewage treatment plant operations, and various City services (e.g., plan check and building inspection) that operate on an enterprise or self-supporting basis.

7.2 SUMMARY OF IMPACTS AND MITIGATION MEASURES

7.2.1 Annual Costs vs. Annual Revenues

Forecasts of annual public expenditures and revenues attributable to development of Southridge Village are shown in Table 7.2. Annual operating surpluses would be generated for the City of Fontana and the Central Valley Fire Protection District upon the completion of each of three phases. The annual City surplus is estimated to be \$255,000 after Phase One, increasing to \$487,000 at project build-out in 1989. For the Central Valley Fire Protection District, projected annual revenues exceed annual costs by very substantial amounts, ranging from \$337,000 upon completion of Phase One to \$840,000 at project build-out.

Table 7.2
COMPARISON OF ANNUAL COSTS AND REVENUE
AT PROJECT BUILD-OUT, 1989
(in Thousands of Constant 1981 Dollars)

CITY OF FONTANA	UPON COMPLETION OF PHASE:		
	ONE	TWO	THREE
Operating Costs:			
Parks and Recreation	\$ 93	\$473	\$605
Public Works	142	320	502
Police	325	731	1,149
General Government	99	223	350
TOTAL	\$659	\$1,747	\$2,606
Operating Revenues:			
Secured Property Tax	279	607	996
Unsecured Property Tax	1	5	7
Property Transfer Tax	27	27	27
Sales & Use Tax	408	867	1,366
Misc. Revenue	199	442	697
TOTAL	\$914	\$1,948	\$3,093
ANNUAL SURPLUS	\$255	\$201	\$487
CENTRAL VALLEY FIRE PROTECTION DISTRICT	UPON COMPLETION OF PHASE:		
	ONE	TWO	THREE
Operating Costs:	-	\$371	\$371
Operating Revenues ¹	337	739	1,211
ANNUAL SURPLUS	\$337	\$368	\$840

¹ Secured and unsecured property taxes.

In conclusion, public funding of police operations, fire protection, parks maintenance, public works maintenance, and other City operating programs should not pose any financial difficulty. Revenues generated by development of the project area should be more than sufficient to fund the attendant operating service requirements. Furthermore, water and sewage treatment operations are fully funded from user fees, thus negating any net fiscal impact on the entities responsible for these services.

7.2.2 One-Time Public Facility Costs and Revenues

A comparison of one-time capital costs and one-time revenues by public agencies is shown in Table 7.3. With the exceptions of sewage treatment and water supply facilities to be provided by Chino MWD and Fontana Water Company, projected revenues are not sufficient to cover facility costs.

The most significant fiscal impacts on the City of Fontana involve street and traffic facilities, bridges, and storm drains. Furthermore, the City does not currently levy fees to support new police facilities and its existing fees for storm drains and parks will not be sufficient to cover the full cost of these facilities. The City has at its disposal, however, various measures for mitigating these adverse financial impacts, including requirements for developer provisions or contributions toward needed public facilities (as discussed later).

The provision of school facilities presents a major financial obstacle to development of Southridge Village. Assuming a school facility fee of \$2,000 per new dwelling unit, revenue shortfalls are still anticipated upon the completion of each development phase, and the total shortfall is estimated to be over \$14 million at project buildout. Approximately \$32 million will be required to acquire school sites and to construct buildings for six elementary schools, a junior high school, and an addition to the existing Fontana Unified High School. The \$2,000 fee, which is being assumed for project planning purposes, would only generate revenue of \$17.6 million.

Development of the project area will also require construction of major regional flood control facilities at a total estimated cost of \$10.5

Table 7.3
COMPARISON OF ONE-TIME CAPITAL COSTS AND FEE REVENUES
BY FACILITY DURING DEVELOPMENT PHASES, 1981-1989
(in Thousands of Constant 1981 Dollars)

CITY OF FONTANA	Development Phase			
	ONE	TWO	THREE	TOTAL
Streets and Traffic:				
Cost	\$4,300	\$4,500	\$ 700	\$9,500
Revenue	0	0	0	0
Net ¹	(4,300)	(4,500)	(700)	(9,500)
Basic On-Site Sewers:				
Cost	2,000	0	0	2,000
Revenue	0	0	0	0
Net	(2,000)	0	0	(2,000)
Bridges and Storm Drains:				
Cost	4,200	4,000	1,800	10,000
Revenue	598	526	585	1,709
Net	(3,602)	(3,474)	(1,215)	(8,291)
Parks and Recreation:				
Cost	700	2,000	700	3,400
Revenue	940	1,030	1,127	3,097
Net	240	(970)	427	(303)
Police:				
Cost	0	300	0	300
Revenue	0	0	0	0
Net	0	(300)	0	(300)

¹ Net = Revenue Minus cost: Surplus/(Deficit)

Table 7.3 (continued)

COMPARISON OF ONE-TIME CAPITAL COSTS AND FEE REVENUES
BY FACILITY DURING DEVELOPMENT PHASES, 1981-1989
(in Thousands of Constant 1981 Dollars)

Central Valley Fire District	Development Phase			
	ONE	TWO	THREE	TOTAL
Fire Station:				
Cost	0	500	0	500
Revenue	0	0	0	0
Net ¹	0	(500)	0	(500)

School Districts

School Facilities:

Cost	6,564	18,808	6,564	31,936
Revenue	5,034	6,152	6,434	17,620
Net	(1,530)	(12,656)	(130)	(14,316)

San Bernardino County

Flood Control:

Cost	8,200	2,000	300	10,500
Revenue	0	0	0	0
Net	(8,200)	(2,000)	(300)	(10,500)

Chino MWD

Sewage Treatment:

Cost	8,400	0	0	8,400
Revenue	2,391	2,922	3,057	8,370
Net	(6,009)	2,922	3,057	(30)

¹ Net = Revenue Minus cost: Surplus/(Deficit)

million of which over \$8 million will be required during Phase One. The County of San Bernardino has not programmed or budgeted funds for these facilities; therefore, a new funding source will be required to support construction of these essential flood control facilities.

While the Central Valley Fire Protection District does not levy a fire facilities fee, the annual operating surpluses generated by development of Southridge Village should be more than adequate to cover the \$500,000 cost of a new fire station that will be needed during Phase Two. As discussed previously, the district will receive substantial amounts of property tax revenue in excess of operating expenses attributable to the project.

7.2.3 Mitigation Measures

In the absence of additional funding sources, the provision of public improvements needed to serve the residents of Southridge Village will pose an inordinate financial burden on the City of Fontana, the school districts, and the County of San Bernardino. A number of methods are available to mitigate potential adverse fiscal effects, however. Each method has limitations which preclude exclusive use of any one source. A combination of methods will therefore be required to fund the various improvements. A brief discussion of these methods is provided below.¹ This is followed by an outline of financing alternatives applicable to Southridge Village.

Development Fees

The City of Fontana and other public entities currently assess a number of development fees to support the cost of certain improvements associated with new development. Such fees are usually levied at the time of subdivision of acreage to be developed. These fees currently average about \$3,700 per new dwelling unit.²

¹ The discussion of mitigation measures is largely taken from: "Jurupa Hills Redevelopment Project, Economic Feasibility Analysis," prepared by Katz, Hollis, Coren & Associates, July 1981.

² Sewer expansion (\$950), sewer connection (\$150), parks (\$350), trees (\$60), storm drains (\$200), and schools (\$2,000, proposed).

The principal limitation to the use of development fees for residential developments is the impact such fees will have upon the eventual sales price of the individual housing unit. These fees are paid early in the construction phase of the development. As a result, these costs must be financed by the developer/builder. Including a financing cost of 16% per year on funds borrowed to meet these costs, per unit development fees would total \$4,350 per unit. Assuming an additional 12% is added for builder overhead and profit, the development fees would add nearly \$4,900 per unit to the cost of housing (approximately 6.7% of the projected average sales price). As the average sales price is increased, the number of available, eligible purchasers of the homes is reduced. A stated goal of the developer has been the provision of quality homes at a cost below the current prevailing market price. As development fees are increased, his ability to meet this goal is diminished.

Assessment Districts

Certain public improvements, whose benefits are more locally focused, may be financed through the issuance of assessment bonds. Such bonds create a lien against the property within the assessment districts and require annual debt service payment by the property owner. Public improvements, which are typically financed through the use of assessment bonds, include local roadways, sewers, parks, storm drains, water systems, and flood control improvements.

The previous discussion of the effect of development fees on the cost of housing is equally applicable to assessments. The assessments will affect housing costs in one of two ways. Either the assessments will be prepaid prior to sale of the housing units and, therefore, added to the price of the housing, or the housing units may be sold with the assessments in place, thereby assumed by the purchaser and taken into account by potential mortgage lenders in determining income eligibility levels.

Developer Assumption of Costs

Any of the required public improvements may be financed and constructed by the developer. Typically, developer responsibilities includes dedication of rights-of-way and public building sites; construction of internal roadways; and water, storm drain, and sewer systems.

Any assumption of improvement costs by the developer will similarly increase the price of housing.

Miscellaneous Sources

Those required improvements which provide benefits to surrounding areas in addition to the proposed project may be eligible for financing from other sources. Portions of the flood control improvements for the project, which will benefit a proposed adjacent residential development in Riverside County, may be paid from contributions by that development. Improvements to regional roadways may be eligible for "gas tax" funding. Improvements to the regional park may be paid from park fees levied against other pending residential developments within the City which can be reasonably be expected to benefit by the regional park.

Redevelopment Project and Tax Increment Financing

Assuming the legal requirements could be satisfied, the City of Fontana could designate the project area as a redevelopment project and make use of tax increment financing. Under this arrangement, virtually all of the property taxes generated by development within the project area could accrue to the City's Redevelopment Agency.

Should other sources not be sufficient to provide financing, tax increment revenues may be available to finance construction of public improvements. A provision of the California Redevelopment Law (Section 33445 of the Health & Safety Code) allows the use of tax increment financing for public improvements if all of the following conditions are met:

- a. The improvements are of benefit to the project area or the immediate neighborhood in which the project is located;
- b. No other reasonable means of financing is available to the community;
and
- c. Each public improvement is provided for in the redevelopment plan.

7.3 OUTLINE OF FINANCING ALTERNATIVES

The financing alternatives outlined in Table 7.4 are intended to provide a framework for further discussion and planning. Many other combinations of alternatives are possible for a given type of public improvement.

In total, additional funding of \$45.2 million will be needed to provide public improvements. This amount is in addition to \$31 million that would be generated from existing development fees. In the event the City requires that all improvements be financed through development fees, developer contributions, and/or assessment districts, this would add about \$11,500 to the cost of the average dwelling unit within Southridge Village: \$4,900 would be attributable to existing fees and \$6,600 due to additional fees or assessments. To the extent that tax increment financing is used to pay for public facilities, the price of housing would be reduced accordingly. A reduction in the price of housing would be of great benefit to would-be homebuyers, particularly in today's market conditions of rapid inflation and high interest rates. A reduction in the price of housing would also be consistent with and supportive of the City's General Plan Housing Element.

TABLE 7.4

SOUTHRIDGE VILLAGE

FINANCING ALTERNATIVES FOR PUBLIC IMPROVEMENTS

IMPROVEMENTS	ADDITIONAL FUNDS REQUIRED ¹	FINANCING ALTERNATIVES	ESTIMATED HOUSING PRICE INCREASE ¹
A. Streets & Traffic	\$ 9,500,000	1. Developer provision of local streets or R/W at cost of \$8 million 2. Assessment district to fund regional roads at cost of \$1.5 million 3. Tax increment financing or regional roads	1,160 215 0
B. On-site Sewers	2,000,000	1. Developer provision in accord with existing City requirements	290
C. Bridges & Storm Drains	8,300,000	1. Additional developer fee, or developer provision, and/or assessment district	1,205
D. Parks & Recreation	300,000	1. Developer dedication of park land 2. Park fee contributions from other residential projects in City	45 0
E. Police	300,000	1. City funding from operating reserves since project will generate excess operating revenue 2. Developer provision	0 45
F. Flood Control	10,500,000	1. Tax increment financing 2. Assessment district 3. Contributions from benefiting developments in Riverside County	0 1,525 unknown
G. Schools	14,300,000	1. Tax increment financing 2. Additional development fee 3. State impact aid	0 2,080 unknown

¹ In addition to existing development fee revenues of \$3,700 per unit, which increase the price of housing by about \$4,900 per unit.

7.4 ANNUAL REVENUES

7.4.1 Property Tax Revenue

Property Tax Distribution

The State Constitutional Amendment resulting from passage of Proposition 13 establishes a maximum property tax rate equal to one percent of the market value of property (i.e., General Tax Levy) plus any rates needed to retire public debt (i.e., Public Debt Tax Levy) as approved by the voters prior to January 1, 1978. The property taxes paid by the property owners in an area are distributed to public agencies based upon complex formulae contained in Senate Bill 180. Under the formulae, the percentage of property tax revenue that a particular agency receives from an area or parcel depends upon the tax rate area¹ (TRA) in which the property is located.

The project area is located within parts of four different TRAs: 10006, 10010, 10011, and 10019. The portion of TRA 10010 that falls within the project area contains a single parcel that is exempt from property taxation. The percentage of property taxes that the various public agencies would receive from growth in the market value of property within the remaining TRAs is shown in Table 7.5. Since the distribution percentages for TRAs 10011 and 10019 do not vary by more than two-hundredths of a percentage point, they are combined for purposes of this analysis.

It should also be noted that the projected tax distribution among agencies is based on existing allocation formulae and thus does not indicate the effects of redevelopment financing. Under tax increment financing, for example, all of the increase in property taxes attributable to the project area could accrue to the City's Redevelopment Agency.

In addition to the General Tax Levy equal to one-percent of market value, the TRAs within the project area have a tax levy to retire public debt,

¹ "Tax rate area" is territory served by the same combination of taxing entities.

principal and interest. Table 7.6 presents public debt tax rates by agency and TRA. These tax rates are expressed in terms of dollars per \$100 dollars assessed valuation of property. Assessed valuation (AV) is equal to 25% of market value.

Since tax revenues generated from these public debt tax levies can only be used to finance specific public improvements that are either already built or under construction, these funds will not be available to pay for new public facilities needed to serve Southridge Village. Any public debt tax levies that are paid by future property owners in the project area will, however, enable public agencies to reduce their tax rates as their annual debt service requirements are spread over a larger tax base.

Table 7.5
GENERAL TAX LEVY
PERCENTAGE DISTRIBUTION¹

Taxing Agency	Tax Rate Area	
	10006	10011 and 10019
City of Fontana	14.5%	16.3%
Fontana Unified School District	9.6	-
Colton Joint Unified School District	-	25.0
Central Valley Fire District	17.5	19.7
County of San Bernardino	24.3	27.4
County Flood Control Agency	3.42	2.53
Chino Basin MWD	3.7	-
San Bernardino Valley MWD	-	2.2
Other Agencies	<u>27.0</u>	<u>6.9</u>
TOTAL	100.0%	100.0%

- ¹ Rounded to nearest one-tenth percentage point.
- ² Flood Control Zone No. 1.
- ³ Flood Control Zone No. 3.

Table 7.6
PUBLIC DEBT TAX LEVY
TAX RATES PER \$100 ASSESSED VALUATION¹

Taxing Agency	Tax Rate Area	
	10006	10011 and 10019
Fontana Unified Schools-Bldg.	\$.046	-
Fontana Unified Schools-Bonds	.130	-
Chino Basin MWD	.056	-
City of Fontana-Sewer Bonds	-	1.002 ²
Colton Joint Unified School-Bldg.	-	.205
Colton Joint Unified School Dist.-Bonds	-	.135
Colton H.S. Bonds	-	.018
Flood Zone 2 Bonds	-	.013
San Bernardino Valley MWD	-	.820

Market Value of Secured Property

Upon completion of each development phase, Southridge Village will have estimated market values of secured property, including residential and commercial, as shown in Table 7.7. These market values are derived by multiplying the number of residential units and commercial acres by their respective selling prices. The number of units and average unit prices used to make these computations are also shown in Table 7.7. The estimates of average housing prices are based upon a market analysis conducted by Market Profiles³ and are consistent with prices that prospective builders intend to charge for the various residential products.

¹ Source: San Bernardino County, Auditor-Comptrollers Office

² Levied in TRA #10019 only.

³ "Southridge Village Feasibility Analysis," Market Profiles, March 1981.

Table 7.7

MARKET VALUE OF SECURED PROPERTY

Land Use Type	Price Per Unit	Number of Units (Cumulative)			Market Value (\$000)		
		1	2	3	Phase: 1	2	3
SFD -Woodhaven	\$110,000	127	127	127	13,970	13,970	13,970
SFD - 10,000 S.F.	100,000	26	26	26	2,600	2,600	2,600
SFD - 6,000 S.F.	90,000	372	1,100	1,846	33,480	99,000	166,140
Patio Homes	75,000	665	1,013	1,531	49,875	75,975	114,825
Entry Estates	75,000	270	270	402	20,250	20,250	30,150
Duplexes	75,000	230	598	1,036	17,250	44,850	77,700
Townhomes	75,000	375	858	1,391	28,125	64,350	104,325
Garden Homes	55,000	452	713	1,218	24,860	39,215	66,990
Carriage Homes	50,000	-	888	1,233	-	44,400	61,650
Commercial (Acres)	600,000	3	23	31	1,800	13,800	18,600
Total Dwelling Units (Cumulative)		2,517	5,593	8,810	TOTAL \$192,210	\$418,410	\$656,950

Total market value of secured property upon completion of the three phases is thus estimated to be \$192 million, \$418 million and \$657 million, respectively. One percent of these amounts provides estimates of total property tax revenue that would be generated from secured property under the General Tax Levy.

Annual Property Tax Revenue from Secured Property

Total annual property tax from the General Tax Levy - one-percent of market value - is estimated to be \$1,922,000, \$4,184,000 and \$6,570,000 upon completion of the three phases, respectively. The distribution of these amounts to the various public agencies is shown in Table 7.8, assuming continuation of existing allocation formulae as contained in Senate Bill 180.

The percentage distribution factors used to allocate tax revenue among agencies for Phases One and Two are those for TRA 10006. Since Phase Three falls within TRAs 10011 and 10019, different distribution factors (i.e., those shown in Table 7.5) are used to allocate the tax increment contributed by the last phase.

TABLE 7.8
DISTRIBUTION OF ANNUAL GENERAL TAX LEVY
(\$ Thousands)

Taxing Agency	Upon Completion of Phase:		
	ONE	TWO	THREE
City of Fontana	\$279	\$607	\$996
Colton Unified School District	-	-	596
Fontana Unified School District	185	402	402
Central Valley Fire District	336	732	1,202
County of San Bernardino	467	1,017	1,670
County Flood Control Agency	65	142	202
Chino Basin MWD	71	155	155
San Bernardino MWD	-	-	52
Other Agencies	519	1,129	1,295
TOTAL	\$1,922	\$4,184	\$6,570

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County Flood Control Agency	65	142	202
Chino Basin MWD	71	155	155
San Bernardino MWD	-	-	52
Other Agencies	519	1,129	1,295
TOTAL	\$1,922	\$4,184	\$6,570

Annual Property Tax From Unsecured Property

Unsecured property is property which the County Assessor regards as not being sufficient to secure payment of taxes. Examples are boats, airplanes, and lease-hold interest. The tax rate on unsecured property is currently the same as the secured rate (i.e., 1% plus voter-approved tax rates). While it is difficult to predict the value of unsecured property in an area, a reasonable approach is to assume that the value of unsecured property generated by commercial property within the project area will follow the experience throughout the State. Generally, commercial property generates \$15 of unsecured market value per square foot of building area.¹ Assuming that building area will occupy 25% of an average commercial acre, a commercial acre would generate about \$163,000 of unsecured market value (i.e., 10,890 square feet times \$15 per square foot), or \$1,630 in property taxes (i.e., one percent of market value). Multiplying \$1,630 by the number of commercial acres and using the tax distribution factors (Table 7.5) results in the projections shown in Table 7.9.

Table 7.9
DISTRIBUTION OF UNSECURED PROPERTY TAXES
(\$ Thousands)

Taxing Agency	Upon Completion of Phase:		
	ONE	TWO	THREE
City of Fontana	0.7	5.4	7.2
Colton Joint Unified School District	-	-	3.3
Fontana Unified School District	0.5	3.6	3.6
Central Valley Fire District	0.9	6.6	9.2
County of San Bernardino	1.2	9.1	12.7
County Flood Zone	0.2	1.3	1.6
Chino Basin MWD	0.2	1.4	1.4
Other Agencies	1.2	10.1	11.2
TOTAL	\$4.9	37.5	50.5

¹ Source: Katz, Hollis, Coren and Associates, Inc., financial consultants.

7.4.2 Real Property Transfer Tax

A real property transfer tax of 55 cents on each \$500 of consideration is levied on all taxable real estate transactions within the City. The City receives half of the tax which is collected by the County. Consideration is defined by the County as the equity involved in the real estate transaction. The tax applies to new home and commercial property sales as well as resales. Revenues from new property sales can be derived by multiplying the property transfer tax rate by the equity portion of the total secured market value of property. For the purposes of this analysis, it is assumed that the equity portion of the total secured market value is represented by an average down payment equal to 20% of the market value of property. Table 7.10 presents the real property transfer tax revenue that can be expected from the initial sale of property.

Table 7.10
REAL PROPERTY TRANSFER TAX REVENUE
FROM NEW SALES IN PROPERTY
(\$ Thousands)

1. Total Secured Market Value at Build-out	\$656,950
2. Equity Portion of Market Value (20%)	131,390
3. Equity Divided by \$500	263
4. Total Taxes (3 above times .55), 1982-1989	144
a. City Share (50%)	72
b. County Share (50%)	72
5. Annual Taxes, 1982-89 (one-eighth of 4 above)	18
a. City Share	9
b. County Share	9

Assuming that the project will be phased in equal annual increments over the next eight years, annual property tax transfer revenue from new property sales during each of the next eight years would be about \$9,000 for both the City and County.

Estimating revenues from property resales is difficult without knowing the turnover rate of property and the equity share of property at the time of resale. Under the assumptions that property will change ownership every six years on the average, and that the equity portion of these resales will represent 30% of total market value, then annual property tax transfer revenue from resales would be twice the amount of revenue from annual new sales, as shown in Table 7.11.

Table 7.11
ANNUAL PROPERTY TAX TRANSFER REVENUE

New Property Sales	\$18,000
Property Resales	<u>36,000</u>
TOTAL	54,000
City Share (50%)	27,000
County Share (50%)	27,000

7.4.3 Sales Tax Revenue

Sales tax revenue attributable to development of Southridge Village is projected on the basis of the anticipated average income of project households and the current relationship between average household income and sales tax receipts in Fontana. The current average household income in Fontana is estimated to be about \$20,000 annually.¹ Current City sales tax revenues are \$1.74 million annually,² an average of \$131 per household (\$1.74 million divided by 13,333 households). This level of sales tax revenue per household does not include sales taxes generated outside city limits by Fontana residents, but does include sales taxes generated within

¹ City of Fontana Planning Department

² 1980-81 Budget, City of Fontana; City Council approved estimate.

the City by non-residents. In this analysis, it is assumed that the current level of City sales tax receipts per household of \$131 will increase with rises in real household income and will not be significantly affected by shifts in visitor spending or be changed in "inside vs. outside" of City spending on the part of Fontana residents. The \$131 figure, of course, already accounts for the existing net effect of these spending patterns.

The projected levels of the average household income upon completion of the various development phases are shown in Table 7.12. These income estimates are predicated on the minimum gross family income required to obtain home financing on the averaged priced home in the project area. Also, no assumption is made regarding the percentage of residential units that will be devoted to affordable housing.

Monthly home payments, including principal, interest, property taxes, and insurance typically amount to 25-35% of gross monthly income of new home buyers. A 35% factor is used for purposes of this analysis to reflect the trend toward higher ratios of housing expenditures to income levels. Assuming a mortgage term of 30 years, an interest rate of 15% and a 20% downpayment, monthly payments on a home purchased for \$76,000 would be \$860. This amount includes property taxes of \$63/month (\$760) annually and insurance of \$15/month. Dividing \$860 by a factor of .35 yields a monthly household income level of \$2,460 or about \$29,500 annually. Using this methodology, average households incomes are estimated for each Phase.

Reliable estimates of sales tax revenue as a percentage of household income are best obtained from actual household expenditure studies. In the absence of such studies at the local level, it is necessary to employ a less ideal method. The Internal Revenue Service allows taxpayers to use Optional State Sales Tax Tables to compute sales tax payments for income tax purposes. The table amounts for California indicate that as household income rises from \$20,000 (current Fontana average) to \$29,500 (Southridge average after Phase One) and to \$27,400 (Southridge after Phases Two and Three), household sales tax payments increase by 24% and 18%, respectively. Multiplying these percentage increases by the current average sales tax revenue per household of \$131 yields \$162 and \$155, respectively.

Table 7.12
AVERAGE HOUSING PRICES AND HOUSEHOLD INCOME

Average Values	Upon Completion of Phase:		
	ONE	TWO	THREE
Home Price ¹	\$76,000	\$72,000	\$72,000
Monthly Housing Payment ²	860	800	800
Monthly Household Income ³	2,460	2,285	2,285
Annual Household Income	29,520	27,420	27,420

Projected sales tax revenue attributable to Southridge Village is then computed as number of households times average sales tax payment per household, as indicated in Table 7.13.

It should be noted that the sales tax projections take into account not only taxes that would be generated by anticipated Southridge Village commercial development, but also increased sales that can be expected from expanded patronage of existing and new commercial activity in the rest of the City.

Table 7.13
PROJECTED ANNUAL SALES TAX REVENUE, 1989

	Upon Completion of Phase:		
	ONE	TWO	THREE
Average Sales Tax Revenue per household	\$162	\$155	\$155
Total Households	2,517	5,593	8,810
Total Sales Tax Revenue (in \$ thousands)	408	867	1,366

- 1 Total market value of secured property (less commercial) divided by number of residential units.
- 2 Assumes: 20% downpayment, 15% interest rate, 30-year mortgage term, annual property taxes equal to 1% of home price, and insurance equal to \$15-20 per month.
- 3 Monthly housing payment divided by .35.

7.4.4 Miscellaneous Revenue Estimates

The balance of City of Fontana annual revenues are estimated on the basis of population. These revenues include those listed below:

<u>Miscellaneous Revenue Sources</u>	<u>1980-81 Budget Amount</u>
1. Business Licenses	\$165,000
2. Recreation Programs	48,200
3. Dog License and Impounds	17,000
4. Court Fines	7,500
5. Highway Carrier Business License	4,500
6. Motor Vehicle in Lieu	496,000
7. Alcoholic Beverages	16,000
8. Cigarette Tax	90,000
9. Gas Tax	75,000
10. Privileges & Franchises	<u>231,000</u>
TOTAL	\$1,150,200

The estimating procedure is simply to determine the current level of revenues per capita (i.e., divide total annual revenues from these sources by the present City population of 40,000) and then multiply this per capita amount by the population level expected at the completion of the three phases. The results of this procedure are shown in Table 7.14

Table 7.14
MISCELLANEOUS REVENUE SOURCES

	<u>Upon Completion of Phase:</u>		
	<u>ONE</u>	<u>TWO</u>	<u>THREE</u>
Revenue Per Capital ¹	\$28.75	\$28.75	\$28.75
Population	6,922	15,381	24,228
Total Annual Revenue	\$199,000	\$442,000	\$697,000

¹ Computed as \$1,150,200 divided by population of 40,000.

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7.5 ONE-TIME REVENUES

The City of Fontana and other public entities currently assess various development fees to support the cost of certain improvements associated with new development. Table 7.15 provides a summary of fees currently levied by the City and School district and the phasing of revenue to be generated by the fees, if assessed, based upon the planned development schedule.

7.5.1 Park Fees

Park fees are levied by the City at a rate of 1% of construction value of new homes. Assuming a construction value of \$31.10 per square foot,¹ park fees per dwelling unit would be as follows:

<u>Product Type</u>	<u>Park Fee/Dwelling Unit</u>
Single Family Detached	\$622.00
Single Family Detached	529.00
Single Family Detached	389.00
Patio Home	358.00
Entry Estates	358.00
Duplex	342.00
Townhome	358.00
Garden Homes	342.00
Carriage Homes	264.00

Construction value for the above fees was determined as follows:

<u>Product Type</u>	<u>Square Footage</u>	<u>Construction Value per Square Foot</u>	<u>Total Construction Value</u>
Single Family Detached	2,000	\$31.10	\$62,200
Single Family Detached	1,700	31.10	52,870
Single Family Detached	1,250	31.10	38,875
Patio Homes	1,150	31.10	35,765
Entry Estates	1,150	31.10	35,765
Duplex	1,100	31.10	34,210
Townhomes	1,150	31.10	35,765
Garden	1,100	31.10	24,310
Carriage	850	31.10	26,435

¹ City Building Safety Department

Multiplying the above park fees per dwelling unit by the number and type of units anticipated for each Phase results in total park fees as shown in Table 7.15

Table 7.15
ONE-TIME REVENUES
(in \$ Thousands)

Type of Fee	Phase: One	Two	Three	Total
Parks	\$940	\$1,030	\$1,127	\$3,097
Tree Planting	152	185	193	529
Sewer Expansion	2,341	2,922	3,057	8,370
Sewer Connection	378	460	483	1,321
Storm Drains	598	526	585	1,709
School Facilities	5,034	6,152	6,434	17,620

7.5.2 Other One-Time Revenues

Development fees are also levied for the following purposes:

<u>Type of Fee</u>	<u>Fee/Dwelling Unit</u>
Tree Planting	\$ 60
Sewer Expansion	950
Sewer Connection	150
Storm Drain	1,400 per gross acre (privately owned)
School Facilities	2,000 (proposed for Southridge Village)

Total revenues from these sources are also shown in Table 7.15. Since the storm drain fees are levied on privately owned land, total fees from this source are estimated by multiplying the total of residential and commercial acres by \$1,400 per acre.

7.6 ONE-TIME CAPITAL COSTS

7.6.1 School Facilities

Based upon existing district boundaries, the project area will be served by the Fontana Unified School District (FUSD) and the Colton Joint Unified School District (CJUSD). About two-thirds of the proposed development (that portion west of proposed Beech Avenue) falls within FUSD.

Projected Student Generation

Both districts forecast student enrollments as a function of the number of dwelling units, but FUSD uses a generation factor of 0.73 students per new dwelling unit whereas CJUSD uses a factor of 0.81. Since it would be illogical to assume that Southridge Village households will have lower or higher average family sizes depending upon whether they reside east or west of Beech Avenue, a single student generation factor, 0.73 students per dwelling unit, is used for purposes of this analysis. The FUSD's factor is considered more appropriate for the project area for two reasons: 1) FUSD will serve the vast majority of the households of Southridge Village, and 2) the 0.73 factor is based on data relating to over ninety percent of developed areas within the City of Fontana.

FUSD's student generation factor is delineated by school level as follows:

.50	elementary student/dwelling unit
.14	junior high student/dwelling unit
<u>.09</u>	senior high student/dwelling unit
.73	total

Multiplying the above factors by the number of dwelling units yields projected student enrollments shown in Table 7.16.

Table 7.16
PROJECTED STUDENT ENROLLMENT

School Level	Upon Completion of Phase:		
	ONE	TWO	THREE
Elementary	1,259	2,797	4,405
Junior	352	783	1,233
Senior	227	503	793
Total Enrollment	1,838	4,083	6,431

Projected School Facilities

FUSD school facilities are presently operating at or over capacity enrollment at all levels, elementary, junior high, and senior high, and the District has no plans to construct new schools due to lack of funds. The District has been granted "impaction" status by the City, but impaction fees (1,400 per new residential unit) can only be used to pay for interim classroom facilities. Therefore, the availability of these funds does not provide a permanent long-term solution to the problem of inadequate school capacity.

The CJUSD currently has capacity for an additional 300 students and 150 students at the elementary and senior high levels, respectively. This excess capacity, however, will be utilized in large part by new residential projects that are either under construction or in the final planning phases within the District.

Lack of existing school facility capacity will require that virtually all school-age residents of Southridge Village be accommodated at new facilities. The need for new schools is indicated in Table 7.17. The projected number of schools is based upon student enrollments and anticipated school facility capacities of 800, 1,100 and 1,000¹ for elementary, junior high, and senior high levels, respectively. For example, completion of Phase

¹ Capacity of proposed addition to existing high school. Only 70% of the capacity will be used by students of Southridge Village at project build-out. Therefore, only 70% of facility costs are allocated to the project.

One is expected to generate 1,259 elementary students. Two elementary schools would be required to accommodate these students assuming each school has a capacity of 800 enrollments. Phase One would also generate an estimated 352 junior high students and 227 senior high students. These enrollment levels, however, are considered insufficient to warrant construction of new school sites. Therefore, it is assumed that these students would be temporarily accommodated at existing school sites through the provision of modular facilities and that the cost of these facilities would be offset by impaction fees.

Table 7.17
PROJECTED NUMBER OF SCHOOLS

Level	Upon Completion of Phase:		
	ONE	TWO	THREE
Elementary	2	4	6
Junior High	0	1	1
Senior High	0	1*	1

* Reflects addition to existing high school (see Estimated School Facility Costs).

Estimated School Facility Costs

Cost estimates for new school facilities by school level are shown in Table 7.18. As noted, the sources for this information are state facility standards, Fontana Unified School District, and school facility architects. The senior high school facility, with an estimated cost of \$6.256 million, represents an addition to the existing high school facility. Officials of FUSD anticipate that this facility could accommodate up to 1,000 additional students without the acquisition of additional land.

Multiplying the projected number of school facilities needed upon completion of each phase by the estimated cost per school yields total school facility costs as shown in Table 7.19.

Table 7.18
PER SCHOOL FACILITY COSTS ESTIMATES

	Elementary	Junior	Senior
1. Enrollment Capacity	800	1,200	700
2. Site Area in Acres	6	20	-
3. Building Area in Sq.Ft. ¹	40,000	90,000	56,000
4. Construction Cost per sq.ft. ²	\$63	\$66	\$68
5. Costs:			
a. Land Acquisition at \$22,000 per acre ³	\$132,000	\$440,000	-
b. Construction Cost	2,520,000	5,940,000	3,808,000
c. Site Preparation and Development at 20% of Construction Cost ²	504,000	1,188,000	381,000
d. Furnishings and Equipment at 5% of Construct Cost ²	126,000	297,000	190,000
TOTAL COST PER SCHOOL	\$3,282,000	\$7,865,000	\$4,379,000

Table 7.19
PROJECTED SCHOOL FACILITY COSTS
(in \$ Thousands)

	Phase: One	Two	Three	Total
Elementary	\$6,564	\$6,564	\$6,564	\$19,692
Junior High	-	7,865	-	7,865
Senior High	-	4,379	-	4,379
TOTAL	\$6,564	\$18,808	\$6,564	\$31,936

¹ Based on school facility standards contained in "Applicant Handbook", Leroy F. Green State School Board, State of California, February 1981, Section 3983. These standards are also consistent with data furnished by Carl Coleman Jr., Coordinator of Planning and Research, Fontana Unified School District.

² Based on cost data furnished by Davis-Duhaime and Associates, architects for numerous school districts in the southern California area.

³ City Parks and Recreation Department.

⁴ Reflects only 10% of construction cost since site has already been generally prepared as part of existing high school site.

7.6.2 Other Capital Facilities

Public facility requirements and related costs for sewer, water, roads and traffic, flood control and drainage, and park facilities have been estimated by Boyle Engineering Corporation. A detailed discussion of these requirements and cost estimates are contained in referenced reports (Appendix 9.3). The need for police and fire facilities is discussed below. Table 7.20 shows a summary of total capital costs by type of facility, as prepared by Boyle Engineering. The costs include those related to both onsite and offsite facilities needed to serve the project.

Under existing public agency policies, it is anticipated that the developer will be responsible for constructing most onsite infrastructure, including sewers, water mains, streets and traffic controls, and flood control and drainage facilities. Additionally, the developer may be financially responsible for some offsite road improvements, depending upon the extent to which such improvements would serve local vs. regional transportation needs. Alternatives for financing capital costs, including school facility outlays, is discussed in the Summary (Section 7.2).

Fire Protection Facilities

The Central Valley Fire Protection District provides fire service within the City of Fontana. According to District personnel, any significant increase in service demands occasioned by new development will severely strain the capability of the District to maintain the existing level of citywide fire protection service.¹ Development of the project area would pose an especially troublesome fire protection problem. The nearest fire station is located over three miles from the project area and the response time to the area is seven to ten minutes, which is significantly higher than the current average response time citywide. Furthermore, back-up support would come from the "second-in" station located four and one-half miles from the project site and the response time from there ranges between ten and fifteen minutes, depending upon road conditions.

¹ Letter to PBR from D.H. Mellinger, Fire Chief, Central Valley Fire Protection District, February 3, 1981.

Table 7.20
CAPITAL COSTS
(in Thousands)

Operating Entity: Facilities	Phase			Total
	One	Two	Three	
City of Fontana:				
Parks and Landscaping	700	2,000	700	3,400
Roads and Utilities	4,300	4,500	700	9,500
Bridges and Stormdrains	4,200	4,000	1,800	10,000
Basic onsite sewers	2,000			2,000
Police Facility		300		300
County of San Bernardino:				
Flood Control Channels	8,200	2,000	300	10,500
Central Valley Fire District:				
Fire Station		500		
Fontana Water Company:				
Water supply system	1,900	1,400	1,200	4,500
Chino MWD				
Sewer Treatment	8,400			8,400
MWD of So. Cal:				
Drainage Relocation		500		500
TOTAL	\$29,700	\$15,200	\$4,700	\$49,600

A new fire station, located in the vicinity of Cherry and Jurupa Avenues, would be needed to adequately serve future residents of the project area to ensure that citywide service levels are maintained. While four District fire stations currently serve a city population of 40,000, only one additional station, if located properly, would be necessary to serve the project's population of over 24,000.

The Central Valley Fire Protection District has provided detailed estimates of fire facility costs, as follows:

	Fire Facility Costs
Land Acquisition (1 acre at \$22,000/acre)	\$22,000
Site Improvements and Utilities	58,000
Engine House and Personnel Quarters	160,000
Equipment and Furnishings	56,000
Fire Apparati (Fire Engine, Brush Truck and Equipment)	<u>200,000</u>
Total	\$496,000

Police Facilities

The Police Department of the City of Fontana has indicated that development of the proposed project would require construction of a "contact office" to ensure adequate service for the site. The facility would not be a 24-hour office and could be constructed in conjunction with the fire station planned to service the study area. The facility should include a reception area, telephones, private interrogation rooms, storage, and standard parking and lighting provisions. The facility is expected to require a minimum of 900 square feet. It is estimated that the cost for this facility would be approximately \$35 a square foot for a total construction cost of about \$32,000. Capital outlay to provide equipment for the contact office and the additional personnel is estimated at \$200,000.² Thus total police facility and capital outlay costs are estimated at \$232,000.

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- 1 Letter to PBR from D.H. Mellinger, Fire Chief, Central Valley Fire Protection District, February 3, 1981.
 - 2 Conversation with Bob Beiry, Finance Director, City of Fontana. Amount includes vehicles and personnel equipment.

7.7 ANNUAL OPERATIONS AND MAINTENANCE COSTS

7.7.1 Parks and Recreation

Southridge Village would entail development of community and neighborhood parks, a regional park, and an extensive trail system on utility easements. Estimates of park acres and operating and maintenance costs per acre for the various park lands are shown in Table 7.21. The cost estimates are based on discussions with City staff as to maintenance requirements (i.e., personnel, supplies, irrigation, etc.) for the various park types. Regional park costs reflect only the cost increments for operating and maintaining acres that would be added to the existing 300-acre Jurupa Hills Regional Park.

Table 7.21
PARKS AND RECREATION
ANNUAL OPERATING AND MAINTENANCE COST
(\$ Thousands)

Public Facilities	Upon Completion of Phase:		
	ONE	TWO	THREE
Community and Neighborhood Parks:			
Developed Acres	15.5	40.5	62.5
Cost (at \$6,000/acre)	\$93.0	\$243.0	\$375.0
Regional Park (expansion):			
Developed Acres	-	30	30
Cost (at \$6,000/acre)	-	\$180	\$180
Undeveloped Acres	-	155	442
Cost	-	\$25	\$25
Hiking trails on Easements:			
Cost	-	\$25	\$25
Total Cost	\$93	\$473	\$605

7.7.2 Fire Protection

Additional fire protection expenditures would be related to staffing and operation of a new fire station (see Section 7.6.2). Detailed cost estimates for personnel have been provided by the Central Valley Fire Protection District and include staffing expenses for three rotating shifts on a 24-hour basis, with one captain, one engineer, and one firefighter on duty at all times. These personnel expenses are as follows:

Captains wages, overtime, fringe, and mandated costs annually are $\$437,600 \times 3 =$	\$113,000
Engineers wages, overtime, fringe, and mandated costs annually are $\$34,300 \times 3 =$	103,000
Firefighters wages, overtime, fringe, and mandated costs annually are $\$31,300 \times 3 =$	<u>94,000</u>
Subtotal	\$310,000

Additional station operating costs will be ensured for the following items: equipment and station maintenance, utilities, dispatch services, office and household supplies, first aid supplies, contractual services, and miscellaneous. These expenses average about \$61,000 per station for the District's six existing stations.

Since the new fire station would be required in Phase Two, annual operating expenses would total \$371,000 during Phases Two and Three.

7.7.3 Police, Public Works, and General Government

These service costs are projected taking into consideration both residential and non-residential demands for services as currently experienced within the City. The method used below is a standardized approach for estimating costs of functions that provide significant levels of service to both sectors of the community. This method has been applied to the project area by Keyser Marston and Associates, economic consultants to the City's Redevelopment Agency. The following analysis is largely

taken from their report: "Fiscal Impact Analysis of the Redevelopment Project Area Plan, Fontana California," (June 15, 1981).

Cost Forecasting Methodology

The method used to quantify annual operating costs in this analysis was adapted from the Cost-Revenue Impact System (CRIS) developed by the Association of Bay Area Governments.

Stated briefly, average costs of current service provision were calculated on a per dwelling unit basis. Each existing dwelling unit in Fontana was considered as one dwelling unit for purposes of municipal service provision. In addition, nonresidential developed acreage was converted into Equivalent Dwelling Units (EDU's) at a rate of five EDU's per acre for commercial and industrial uses, and one EDU per five acres for agricultural uses.¹

To estimate future annual operating costs, the total EDU's attributable to future development in the project area were first calculated. Then, the average current cost per existing EDU was applied to the EDU figure calculated for the proposed project, to produce an estimated annual cost of future service provision attributable to the project. Future ongoing service costs are projected on the assumption that current City service levels generally will be maintained through Phase Three.

Additionally, in order to overcome the limitations of predicting future costs based exclusively on average current costs, major City service division directors were interviewed to identify any specific operating or capital costs which might be incurred as a result of the proposed development. Such costs are discussed below.

The data used to calculate the City of Fontana's current aggregate Equivalent Dwelling Unit figure were provided by the City of Fontana Planning Department. The calculation is shown in Table 7.22 below:

¹ Rate suggested by Association of Bay Area Governments to convert commercial and industrial acreage into equivalent dwelling units.

Table 7.22
CITY OF FONTANA
EXISTING EQUIVALENT DWELLING UNITS

<u>Use</u>	<u>Existing Units/ Developed Acreage</u>	<u>EDU Calculation</u>
Residential	13,800 DU's	13,800
Commercial ¹	666 Acres	3,330
Industrial ¹	840 Acres	4,200
Agricultural ²	690 Acres	138
Total EDUs		21,468

SOURCE: Keyser Marston and Associates, Inc. based on information from City of Fontana Planning Department and adopted from the Association of Bay Area Governments' fiscal impact model.

The EDU count for Southridge Village was calculated at the completion of each Phase, as shown in Table 7.23.

Table 7.23
SOUTHRIDGE VILLAGE
PROJECT EQUIVALENT DWELLING UNITS

<u>Upon Completion:</u>	<u>Residential Units</u>	<u>Commercial Acres³</u>	<u>EDUs</u>
Phase One	2,517	3	2,532
Phase Two	5,593	23	5,708
Phase Three	8,810	31	8,965

Current City Operating Costs

Base data used for establishing current City of Fontana operating costs for the provision of ongoing municipal services were obtained from the

- ¹ Calculated at 5 EDUs per acre.
- ² Calculated at 1 EDU per five acres.
- ³ Calculated at 5 EDUs per acre.

City of Fontana Annual Budget for 1980-81. The calculation of current operating costs per EDU for each major service area is contained in Table 7.24.

Table 7.24
CITY OF FONTANA
CURRENT ANNUAL OPERATING COSTS PER EDU¹

<u>Activity</u>	<u>Total Costs</u>	<u>Per Existing EDU</u>
Public Safety ²	\$2,183,650	\$102
Public Works ³	1,212,580	56
General Government ⁴	835,630	39

Projected Costs Attributable to Project Area

The projected costs of providing police, public works, and general government services to the project area are shown in Table 7.25. These costs are computed as the product of the current average cost per EDU within the City and number of EDUs planned for Southridge Village at the completion of each Phase.

The public safety costs include services for police and animal control. The annual costs of police services in the project area were first projected at \$914,000 per year at buildout, assuming that the City's police budget would increase on an average EDU basis in the project area for both sworn and support personnel. However, subsequent discussions with City staff resulted in the identification of annual public safety operating costs of \$235,000 more at buildout than those projected on an average EDU basis. Consequently, the public service costs were increased on this basis.

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- ¹ Based on 1980-81 City of Fontana Annual Budget; includes only municipal services funded through General Fund; self-supporting municipal activities are funded through revenues (enterprise funds), and thus incur no net fiscal impact.
 - ² Includes Police and Animal Control; fire services are provided by the Central Valley Fire Protection District.
 - ³ Includes Public Works, and Building and Safety.
 - ⁴ Includes staff and control agencies, and contingencies.

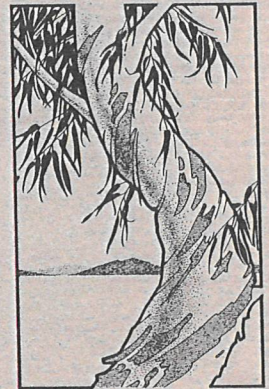
The public works costs to be generated by the project area include maintenance of streets and related lighting, maintenance of public areas, engineering, as well as ongoing planning and building inspection functions not funded by construction-related fees. The costs of certain public works-related services, such as sewage treatment, are in self-sustaining enterprise funds supported by user fees, and thus incur no fiscal impact.

Table 7.25
PROJECTED ANNUAL OPERATING COSTS
(in \$ Thousands)

City Service	Upon Completion of Phase:		
	One	Two	Three
Public Safety	\$325	\$731	\$1,149
Public Works	142	320	502
General Government	99	223	350

The costs of general government services include both fixed costs, which do not vary significantly with population, and variable costs, which are more directly related to population growth. In this analysis, the costs of general government were calculated on an average EDU basis. As such, they may overstate to some degree the actual costs attributable to the project area, as there are certain economies of scale present in the provision of general government services. However, given the relative magnitude of development in the project area, it is quite likely that considerable general government resources will be focused on the project area during its development. Thus, an average EDU basis will probably reflect an acceptable service cost for the project area.

Relationship to General Plan Elements



8.0

8.0 RELATIONSHIP TO GENERAL PLAN ELEMENTS

The Southridge Village Specific Plan is governed by and is intended to implement the City's General Plan. The original Fontana General Plan, published in 1962, includes Open Space, Residential, Commercial, Industrial, Public Facilities, Transportation and Circulation, and Utilities Elements. In 1976, certain revisions to the 1962 General Plan were made to include the Open Space and Conservation, Park and Recreation, Safety, Noise, and Scenic Highways Elements. A General Plan Amendment revising land use designations in south Fontana was approved in 1978. For the last year, the City has been preparing a comprehensive update and revision for all elements of the General Plan.

The Southridge Village Specific Plan incorporates a number of the community goals, objectives, and principles contained in the City of Fontana's General Plan. In terms of land use patterns, the Specific Plan differs substantially from the General Plan for south Fontana as approved in 1978. This Specific Plan has been designed to implement General Plan Amendment 12-2, which is currently being considered by the City. If this General Plan Amendment is approved, it would require the preparation of a Specific Plan for the Southridge Village area. If the General Plan Amendment is not approved, then this Specific Plan could not be adopted as it is proposed.

8.1 LAND USE

The 1978 South Fontana General Plan is based on the following policies: preservation of existing environmental quality and open space character of the area; equalization of areas developed as low density and areas developed as estate residential, commercial, industrial, and open space; reduction of area zoned as commercial, industrial, and medium-high residential; designation of more single family residential development; development of a wide variety of parks; improvements via landscaping of thoroughfares; and preservation of valuable man-made features.

The existing Land Use Element (per the 1978 amendment) designates approximately two-thirds of the study area as Low Density Residential (0-2

dwelling units per acre). The north-central portion of the site is designated for sewer plant operation. The central and south-central parts of the site are designated for Open Space and Very Low Density Residential, which allows 0-0.5 dwelling units per acre. The Regional Park designation on the 1978 General Plan extends into the southeastern corner of the study area.

The General Plan Amendment currently being considered by the City of Fontana proposes changes within the Southridge Village project area only. The land uses proposed in this General Plan Amendment are illustrated in Exhibit 2.3. The General Plan Amendment proposes the same land use designations as are shown in this Specific Plan. These include: Low, Medium, and High Density residential designations ranging from 0 to 25 dwelling units per acre; commercial areas; elementary schools and a junior high school; open space and parks; quasi-public uses; wastewater alternative treatment plant sites; flood control channel; and arterial streets.

The Southridge Village Land use Master Plan is clearly not consistent with the 1978 General Plan for south Fontana, as the Specific Plan proposes more intensive urban development with a much broader range of housing types. If and only if General Plan Amendment 12-2 is approved by the City would this Specific Plan be in conformance with the Land Use Element.

8.2 HOUSING

The Southridge Village Specific Plan is consistent with and directly responds to the goals of the Housing Element. These goals include the following: provide decent, safe, sanitary, and affordable housing for all Fontana residents; provide a range of housing to meet the housing needs of all age groups and various household types; provide for the maintenance and upgrading of existing residential areas to ensure a viable community; and provide equal housing opportunities for all residents.

Most of the existing housing in the City of Fontana is single-family detached or rural-residential in nature. The Specific Plan will increase the variety of housing offered in Fontana, providing a broad range of housing densities and types at relatively affordable prices. Preliminary

market studies and development cost analyses give an indication of housing prices for Southridge Village. The estimated price range for the three types of single-family residential is \$90,000-\$110,000. Sales prices for Patio Home, Entry Estate, Duplex, and Townhome units (i.e., medium density) are estimated at approximately \$75,000. The high density units, Garden Homes and Carriage Homes, are expected to be priced starting at \$50,000 to \$55,000.

If the Specific Plan area is declared a redevelopment project area tax increment financing methods are used, then very specific requirements for the provision of low and moderate income housing would be mandated by state law.

8.3 OPEN SPACE AND CONSERVATION

The Open Space and Conservation Element is concerned with the conservation of natural resources (e.g., the Jurupa Mountains, windbreaks, agricultural lands, and cultural resources) as well as the preservation of open space lands. According to the goals of the Open Space and Conservation Element, the Jurupa Mountains are to be conserved as open space and in the south-east portion of the site are designated for Regional Park development. This element also includes a provision for a joint use trail to be extended along the length of the northern study area.

The Specific Plan provides for the preservation of those portions of the Jurupa Mountains within the planning area. The mountains are proposed for an expanded regional park, natural open space, and an extensive community-wide trail/greenbelt system. Although some agricultural land in the lowland parts of the site will be converted to urban uses, the Specific Plan is consistent with Open Space Element goals relating to the Jurupa Mountains and trail systems.

8.4 PARKS AND RECREATION

The Southridge Village Specific Plan, in compliance with the Park and Recreation Element, provides an extensive system of park and recreation areas for the benefit of future community residents.

By providing for regional hiking, equestrian, and bicycle trails, and by preserving land for expansion of Jurupa Hills Regional Park, the Plan also will benefit residents of the surrounding community. Neighborhood parks are planned throughout the community to serve residents in the immediate area, and a larger community park is planned near the core of the village. Over 900 acres of land is designated as regional park and natural open space. A park is located adjacent to each elementary school and a system of greenbelt trails links all of the parks together.

This element has set a standard of five acres of parkland for every 1,000 persons. The Specific Plan designates over 1,000 acres of parkland and open space, exceeding the standards of the Park and Recreation Element.

8.5 TRANSPORTATION AND CIRCULATION

The Specific Plan complies with the objectives of the Transportation and Circulation Element. These objectives include integrating streets and highways for the safe and efficient transport of people and goods, and the coordination of City street and highway standards with the adopted Master Plan of Highways.

The South Fontana General Plan includes proposals for streets adjacent to the study area. The General Plan proposes that Jurupa Avenue be widened, extended, and improved, establishing it as an important east-west thoroughfare. Mulberry Avenue/Country Village Road is considered by the General Plan to be an entrance to the City, because it serves as the north-south connection with the Pomona Freeway. The General Plan proposes that Beech Avenue provide for increased traffic capacity through the planned industrial area between Slover and Jurupa Avenues.

The Specific Plan incorporates all these proposals and includes additional road improvements designed to enhance easy access to the nearby freeways. A hierarchy of interior streets will deliver traffic to the two major arterials, Jurupa and Mulberry Avenues, which border the site to the north and west, and also to the northbound arterials, Cherry and Citrus. The design of onsite and surrounding roadways and intersections reflects not only needs generated by the Southridge Village project but also cumulative needs of future development in south Fontana.

8.6 SCENIC HIGHWAYS

The Southridge Village Specific Plan incorporates tree-lined streets, landscaped medians, and eucalyptus windbreaks to preserve and enhance the scenic resource areas and scenic views from existing and proposed major arterials. This is consistent with the goal of the Scenic Highways Element. In addition the Jurupa Mountains, a major scenic asset, will be largely preserved in their natural state; where development is proposed, measures for aesthetic grading design and landscaping will be undertaken to maintain existing topographic and scenic character.

8.7 SAFETY

The goal of the Safety Element is "to reduce the loss of life, injuries, damage to property, and economic and social dislocation from safety hazards in the community". Safety concerns include seismic and geologic hazards, flooding hazards, crime, fire hazards, and traffic hazards. The Southridge Village Specific Plan incorporates within its design the following safety measures in accordance with the Safety Element: major flood control facilities to serve the south Fontana community; provisions for a police contact office and fire station at the core of the community to provide adequate protection against crime and fire hazards; and adequate roadway design and traffic controls to minimize traffic related hazards.

8.8 NOISE

The Noise Element establishes as a goal the protection of the community's health and welfare through the identification and control of noise pollutants. The Specific Plan conforms with this goal by proposing that individual residential development proposals in certain locations be conditions to require adequate mitigation of noise from heavily-travelled arterial streets.

Appendices



9.0

9.1 ORGANIZATIONS AND PERSONS CONSULTED

9.1 ORAGNIZATIONS AND PERSONS CONSULTED

9.1.1 Participants

This document was prepared by Phillips Brandt Reddick, Inc., a professional consulting firm specializing in land planning and environmental studies. The following personnel participated in the study:

Principal-in-Charge	Michael Doty
Associates	Tom Paradise John McKenna
Project Manager	Joanne K. Pease
Assistant Project Manager	Robin Doering
Planner/Designer	Jeff Haspell
Planner	Will Miyawaki Paul Haden
Environmental Research and Analysis	Beverly Bruesch Lori Hickey Luana Vogelsang
Graphics	Greta Bergdahl Lynn Buhlig Cathy McDonald
Word Processing	Barbara Heath Mary Christle Pamela Richardson Ellen Curry

9.1.2 Consultants

Technical assistance in the preparation of this study was provided by the following consultants:

Drainage, Water, Wastewater Analysis

Hal Fones

Boyle Engineering Corporation

P. O. Box 2471

Riverside, California 92516

Traffic Analysis

Jerry Craybill

Linscott, Law & Greenspan,

Inc, Engineers

150-C Paularino Avenue, Suite 120

Costa Mesa, California 92626

NOTICE OF PREPARATION

TO: Phillips Brandt Reddick
18012 Sky Park Circle
Irvine, CA 92714

FROM: City of Fontana

Box 518

Fontana, CA 92335

SUBJECT: Notice of Preparation of Draft Environmental Impact Report

The City of Fontana will be the Lead Agency in the preparation of an environmental impact report (EIR) for the project identified and described in attachments. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities as related to the proposed project. A draft EIR will be provided at a later time per CEQA requirements.

The project is described in Attachment A. A vicinity map is provided as Exhibit 1.

Due to the time limits mandated by state law, your response should be received by the earliest possible date, but no later than 45 days after receipt of this notice.

Please send your response to Mr. Terry Draper at the address shown above. We also request the name of a contact person in your agency.

Project Title: EIR 81-4 Specific Plan #5 SOUTHRIDGE VILLAGE

Project Applicant: Creative Communities, 7072 Garfield, Huntington Beach,
California 92648

Date: MAY 15, 1981

Signature:

Title: Planning Assistant

Telephone: (714) 823-3411 ext. 25

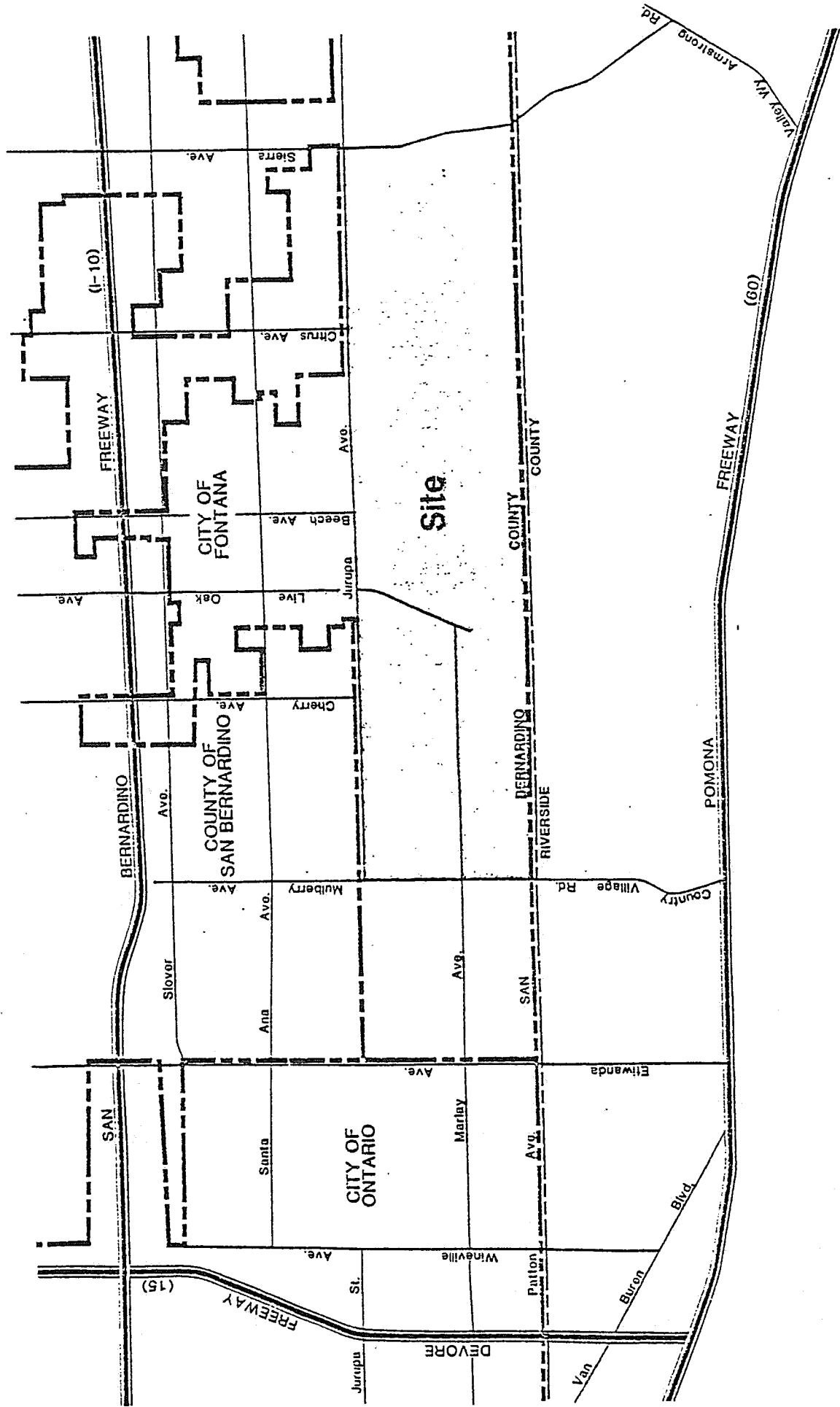
ATTACHMENT A

Project Description

The proposed project would include the preparation and adoption of a Specific Plan for the Jurupa Hills study area, pursuant to Section 65450 et. seq. of the California Government Code. The Jurupa Hills study area encompasses approximately 2,560 acres in south Fontana. The study area is bounded by Jurupa Avenue on the north, Sierra Avenue on the east, Mulberry Avenue on the west, and the San Bernardino/Riverside County line on the south. Exhibit 1 shows the location of the study area.

The Southridge Specific Plan study area includes a portion of south Fontana for which a general plan amendment (GPA 12-2) is being considered. If this general plan amendment is approved by the City, a specific plan will be prepared for the purpose of implementing the general plan for the Jurupa Hills area. A draft environmental impact report (EIR 81-1) is currently being prepared for the general plan amendment. This EIR (81-1) is designed to serve as the master element of a program EIR. The specific plan EIR would reflect the conclusions and recommendations of EIR 81-1, and would also provide a more detailed and focused environmental assessment appropriate to the specific plan.

The proposed project would consist of a master planned residential community providing a mix of housing types with supporting commercial, public facilities, recreation, open space, and other non-residential land uses. The general plan amendment currently being considered addresses several alternatives ranging from "no project" conditions to the development of 8,000 to 10,500 dwelling units. If the general plan amendment is approved, the specific plan will be designed to reflect the target density or range of densities established by the general plan amendment.



0 1062 2125 31p7



VICINITY MAP **SOUTHRIDGE** **SPECIFIC PLAN**

APPENDIX I

City of Fontana
Planning Department

INITIAL STUDY FORM
(Environmental Checklist)

FILING DATE: 5/13/81 DISCRETIONARY ACTION BY: _____ DATE: _____

APPLICANT: CREATIVE COMMUNITIES

ADDRESS: 7072 GARFIELD

HUNTINGTON BEACH, CA 92648

PHONE NUMBER: (714) 842-5527 DATE REVIEWED: May 14, 1981

CASE NO. ETR 81-4 LOG NUMBER. NA

PROJECT: SPECIFIC PLAN #5 - SOUTH RIDGE VILLIAGE

PROJECT LOCATION: SOUTH OF JURUPA BETWEEN SIERRA AND MULBERRY

(Explanations of all "yes" and "maybe" answers are required on attached sheets.)

- | 1. <u>Soils and Geology.</u> Will the proposal
Result in: | <u>YES</u> | <u>MAYBE</u> | <u>NO</u> |
|---|------------|--------------|-----------|
| a. Unstable ground conditions or in
changes in geologic relationships? | _____ | <u>X</u> | _____ |
| b. Disruptions, displacements, com-
paction or burial of the soil? | <u>X</u> | _____ | _____ |
| c. Change in topography or ground
surface contour intervals? | <u>X</u> | _____ | _____ |
| d. The destruction, covering or
modification of any unique
geologic or physical features? | _____ | <u>X</u> | _____ |
| e. Any potential increase in wind
or water erosion of soils,
affecting either on or off
site conditions? | <u>X</u> | _____ | _____ |
| f. Changes in erosion siltation,
or deposition? | <u>X</u> | _____ | _____ |

	<u>YES</u>	<u>MAYBE</u>	<u>NO</u>
g. Exposure of people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards?	—	<u>X</u>	—
h. An increase in the rate of extraction and/or use of any mineral resource?	—	<u>X</u>	—
2. <u>Hydrology</u> . Will the proposal result in:			
a. Changes in currents, or the course of direction of flowing streams, rivers or ephemeral stream channels?	<u>X</u>	—	—
b. Changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff?	<u>X</u>	—	—
c. Alterations to the course of flow of flood waters?	<u>X</u>	—	—
d. Change in the amount of surface water in any body of water?	—	—	<u>X</u>
e. Discharge into surface waters, or any alteration of surface water quality?	<u>X</u>	—	—
f. Alteration of groundwater characteristics?	<u>X</u>	—	—
g. Change in the quantity of groundwaters, either through direct additions or withdrawals, or through interference with an aquifer?			
Quality?	<u>X</u>	—	—
Quantity?	<u>X</u>	—	—
h. The reduction in the amount of water otherwise available for public water supplies?	<u>X</u>	—	—
i. Exposure of people or property to water related hazards such as flooding or seiches?	—	<u>X</u>	—

	<u>YES</u>	<u>MAYBE</u>	<u>NO</u>
j. Significant changes in the temperature, flow, or chemical content of surface thermal springs?	—	—	<u>X</u>
3. <u>Air Quality</u> . Will the proposal result in:			
a. Constant or periodic air emissions from mobile or indirect sources? Stationary sources?	<u>X</u> <u>X</u>	— —	— —
b. Deterioration of ambient air quality and/or interference with the attainment of applicable air quality standards?	—	<u>X</u>	—
c. Alteration of local or regional climatic conditions, affecting air movement, moisture of temperature?	—	—	<u>X</u>
4. <u>Biota</u> .			
<u>Flora</u> . Will the proposal result in:			
a. Change in the characteristics of species, including diversity, distribution, or number of any species of plants?	<u>X</u>	—	—
b. Reduction of the numbers of any unique, rare or endangered species of plants?	—	—	<u>X</u>
c. Introduction of new or disruptive species of plants into an area?	<u>X</u>	—	—
d. Reduction in the potential for agricultural production?	<u>X</u>	—	—
<u>Fauna</u> . Will the proposal result in:			
a. Change in the characteristics of species, including diversity, distribution, or numbers of any species of animals?	<u>X</u>	—	—
b. Reduction of the numbers of any unique, rare or endangered species of animals?	—	—	<u>X</u>

	<u>YES</u>	<u>MAYBE</u>	<u>NO</u>
c. Introduction of new or disruptive species of animals into an area, or result in a barrier to the migration or movement of animals?	<u>X</u>	_____	_____
d. Deterioration or removal of existing fish or wildlife habitat?	<u>X</u>	_____	_____
5. <u>Population</u> . Will the proposal result in:			
a. Will the proposal alter the location, distribution, density, diversity, or growth rate of the human population of an area?	<u>X</u>	_____	_____
b. Will the proposal affect existing housing, or create a demand for additional housing?	<u>X</u>	_____	_____
6. <u>Socio-Economic Factors</u> . Will the proposal result in:			
a. Change in local or regional socio-economic characteristics, including economic or commercial diversity, tax rate, and property values?	<u>X</u>	_____	_____
b. Will the project costs be equitably distributed among project beneficiaries i.e., buyers, tax payers or project users?	_____	<u>X</u>	_____
7. <u>Land Use and Planning Considerations</u> . Will the proposal result in:			
a. A substantial alteration of the present or planned land use of an area?	<u>X</u>	_____	_____
b. A conflict with any designations, objectives, policies, or adopted plans of any governmental entities?	<u>X</u>	_____	_____
c. An impact upon the quality or quantity of existing consumptive or non-consumptive recreational opportunities?	<u>X</u>	_____	_____
8. <u>Transportation</u> . Will the proposal result in:			
a. Generation of substantial additional vehicular movement?	<u>X</u>	_____	_____

	<u>YES</u>	<u>MAYBE</u>	<u>NO</u>
b. Effects on existing streets, or demand for new street construction?	<u>X</u>	_____	_____
c. Effects on existing parking facilities, or demand for new parking?	<u>X</u>	_____	_____
d. Substantial impact upon existing transportation systems?	<u>X</u>	_____	_____
e. Alterations to present patterns of circulation or movement of people and/or goods?	<u>X</u>	_____	_____
f. Alterations to or effects on present and potential waterborne, rail, mass transit or air traffic?	<u>X</u>	_____	_____
g. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?	<u>X</u>	_____	_____
9. <u>Cultural Resources.</u>			
a. Will the proposal result in the alteration of or the destruction of a prehistoric or historic archaeological site?	_____	<u>X</u>	_____
b. Will the proposal result in adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object?	_____	<u>X</u>	_____
c. Does the proposal have the potential to cause a physical change which would affect unique ethnic cultural values?	_____	_____	<u>X</u>
d. Will the proposal restrict existing religious or sacred uses within the potential impact area?	_____	_____	<u>X</u>
NOTE: Authority cited: Section 21083, Public Resources Code; Reference: Sections 21001 and 21068, Public Resources Code.			
10. <u>Health, Safety, and Nuisance Factors.</u>			
Will the proposal result in:			
a. Creation of any health hazard or potential health hazard?	_____	<u>X</u>	_____

	<u>YES</u>	<u>MAYBE</u>	<u>NO</u>
b. Exposure of people to potential health hazards?	—	<u>X</u>	—
c. A risk of an explosion or the release of hazardous substances (including, but not limited to, oil, pesticides, chemicals or radiation) in the event of an accident or upset conditions?	—	—	<u>X</u>
d. An increase in the number of individuals or species of vector or pathenogenic organisms or the exposure of people to such organisms?	—	<u>X</u>	—
e. Increases in existing noise levels?	<u>X</u>	—	—
f. Exposure of people to potentially dangerous noise levels?	—	<u>X</u>	—
g. The creation of objectionable odors?	—	<u>X</u>	—
h. An increase in light or glare?	<u>X</u>	—	—
i. Possible interference with an emergency response plan or an emergency evacuation plan?	—	—	<u>X</u>
11. <u>Aesthetics</u> . Will the proposal result in:			
a. The obstruction or degradation of any scenic vista or view?	—	<u>X</u>	—
b. The creation of an aesthetically offensive site?	—	<u>X</u>	—
c. A conflict with the objective of designated or potential scenic corridors?	—	<u>X</u>	—
12. <u>Utilities and Public Services</u> . Will the proposal result in impacts on the following:			
a. Electric power?	<u>X</u>	—	—
b. Natural gas or packaged gas?	<u>X</u>	—	—
c. Communications systems?	<u>X</u>	—	—
d. Water supply?	<u>X</u>	—	—

	<u>YES</u>	<u>MAYBE</u>	<u>NO</u>
e. Wastewater facilities?	<u>X</u>	_____	_____
f. Flood control structures?	<u>X</u>	_____	_____
g. Solid waste facilities?	<u>X</u>	_____	_____
h. Fire protection?	<u>X</u>	_____	_____
i. Police protection?	<u>X</u>	_____	_____
j. Schools?	<u>X</u>	_____	_____
k. Parks or other recreational facilities?	<u>X</u>	_____	_____
l. Maintenance of public facilities, including roads and flood control facilities?	<u>X</u>	_____	_____
m. Other governmental services?	<u>X</u>	_____	_____
13. <u>Energy and Scarce Resources.</u> Will the proposal result in:			
a. Use of substantial or excessive fuel or energy?	<u>X</u>	_____	_____
b. Substantial increase in demand upon existing sources of energy?	<u>X</u>	_____	_____
c. An increase in the demand for development of new sources of energy?	_____	<u>X</u>	_____
d. An increase or perpetuation of the consumption of non-renewable forms of energy, when feasible renewable sources of energy are available?	_____	<u>X</u>	_____
e. Substantial depletion of any nonrenewable or scarce natural resources?	_____	<u>X</u>	_____
14. <u>Mandatory Findings of Significance.</u>			
(a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or			

YES

MAYBE

NO

wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

— X —

- (b) Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is on which occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future.)

X — —

- (c) Does the project have impacts which which are individually limited, but cumulatively considerable? (Cumulatively considerable means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, other current projects, and probable future projects.)

X — —

1. DISCUSSION OF ENVIRONMENTAL EVALUATION.
(i.e., of affirmative answers to the above questions.)

11. DETERMINATION. (To be completed by the Lead Agency.)

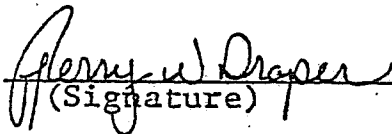
On the basis of this initial evaluation:

_____ finds the proposed project should not have a significant effect on the environment, as determined by the Initial Study, and a NEGATIVE DECLARATION will be prepared.

finds that although the proposed project could have a significant effect on the environment, as determined by the Initial Study, there will not be a significant effect in this case if the mitigation measures identified in the Initial Study are incorporated in the project. If the mitigation measures are not incorporated in the project, the Negative Declaration is void, and the project shall be returned to the Environmental Analysis Division for further environmental review. A NEGATIVE DECLARATION WILL BE PREPARED.

ENVIRONMENTAL REVIEW OFFICER finds the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

Date MAY 14, 1981


(Signature)

CITY OF FONTANA

(For)



EDMUND G. BROWN JR.
GOVERNOR

State of California
GOVERNOR'S OFFICE
OFFICE OF PLANNING AND RESEARCH
1400 TENTH STREET
SACRAMENTO 95814

May 29, 1981

TO: Reviewing Agencies
FROM: Ron Bass *Ron Bass by rm*
SUBJECT: City of Fontana
Southridge Village, ~~EIR 81-4~~ Specific Plan #5
SCH #81052210

Attached for your review is the City of Fontana's Notice of Preparation of a draft Environmental Impact Report (EIR) for Southridge Village, EIR 81-4, Specific Plan #5.

Responsible agencies must transmit their concerns and comments on the scope and content of the EIR, focusing on specific information related to their own statutory responsibility, within 45 days of receipt of this notice. We encourage commenting agencies to respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Terry Draper
City of Fontana
Box 518
Fontana, CA 92335
714/823-3411 ext. 25

with a copy to the Office of Planning and Research. Please refer to the State Clearinghouse number noted above in all correspondence concerning this project.

If you have any questions about the review process, call me at 916/322-8515.

RB:nl

Attachments

cc: Terry Draper

DISTRIBUTION LIST



Gary Agid
Air Resources Board
1102 O Street
Sacramento, CA 95814
916/445-0960



William Travis
California Coastal Commission
631 Howard Street, 4th Floor
San Francisco, CA 94105
415/543-3555



Linda Fain
California Energy Commission
1111 Howe Avenue, MS 43
Sacramento, CA 95825
916/924-2057



Burd Miller
CalTrans - Division of Aeronautics
1120 N Street
Sacramento, CA 95814
916/322-9954



Kaye Hall
Dept. of Boating and Waterways
1629 S Street
Sacramento, CA 95814
916/322-4165



Rik Davis, Environ. Program Coord.
Dept. of Conservation
1416 Ninth Street, Room 1354
Sacramento, CA 95814
916/322-5873



Robert Tharratt
Dept. of Fish and Game
1416 - 9th Street
Sacramento, CA 95814
916/445-1383



Dr. Gordon Snow
Dept. of Food and Agriculture
1220 N Street
Sacramento, CA 95814
916/322-1992



Cliff Chapman
Dept. of Forestry
1416 Ninth Street, Room 1506-17
Sacramento, CA 95814
916/445-9144



James Hargrove
Dept. of General Services
1015 L Street
Sacramento, CA 95814
916/445-0780



Harvey Collins
Dept. of Health
714 P Street, Room 430
Sacramento, CA 95814
916/322-2308



Dave Williamson
Dept. of Housing & Community Dev't.
921 - 10th Street, 6th Floor
Sacramento, CA 95814
916/445-4725



James Tryner
Dept. of Parks and Recreation
1220 K Street Mall, Third Floor
Sacramento, CA 95814
916/445-7067



Nick del Ciccio
Office of Historic Preservation
1220 K Street Mall, Third Floor
Sacramento, CA 95814
916/322-8703



Robert Penny
Public Utilities Commission
350 McAllister Street
San Francisco, CA 94102
415/557-1249



Neil Schwartz
Reclamation Board
1416 Ninth Street
Sacramento, CA 95814
916/445-3624



Robert Bacha
S.F. Bay Cons. & Dev't. Comm.
30 Van Ness Avenue, Room 2011
San Francisco, CA 94102
415/557-3626



Bob Steppy
Solid Waste Management Board
825 K Street, Suite 300
Sacramento, CA 95814
916/322-2652



Ted Fukushima
State Lands Commission
1207 - 13th Street
Sacramento, CA 95814
916/322-7813



John Huddleson
State Water Resources Control Board
1416 Ninth Street
Sacramento, CA 95814
916/322-1583

☒ Region 4 R

☐ Division of Water Rights

☐ Delta Unit





Ken Fellows
Dept. of Water Resources
1416 Ninth Street
Sacramento, CA 95814
916/445-7416


STEVE RIKALA, LGU


DISTRIBUTION LIST


Department of Transportation District Contacts


 Bob Brown
Department of Transportation
District 1
1656 Union Street
Eureka, CA 95501


 Robert E. McBroome
Department of Transportation
District 2
1657 Riverside Drive
Redding, CA 96001


 R. D. Skidmore
Department of Transportation
District 3
703 B Street
Marysville, CA 95901


 Robert W. Siaker, Jr.
Department of Transportation
District 4
150 Oak Street
San Francisco, CA 94102


 Win Evans
Department of Transportation
District 5
50 Higuera Street
San Luis Obispo, CA 93401


 Mert Parlier
Department of Transportation
District 6
1352 West Olive Avenue
Fresno, CA 93778

 A. H. Hendrix
Department of Transportation
District 7
120 Spring Street
Los Angeles, CA 90012


 Harvey Sawyer
Department of Transportation
District 8
247 West Third Street
San Bernardino, CA 92401


 Jim Jelinek
Department of Transportation
District 9
500 South Main Street
Bishop, CA 94514


 John Gagliano
Department of Transportation
District 10
1976 East Charter Way
Stockton, CA 95206


 Jim Cheshire
Department of Transportation
District 11
2829 Juan Street
San Diego, CA 92138


Fish and Game - Regional Offices

 A. Naylor, Regional Manager
Department of Fish and Game
627 Cypress
Redding, CA 96001

 P. Jensen, Regional Manager
Department of Fish and Game
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670

 B. Hunter, Regional Manager
Department of Fish and Game
Yountville Facility, Bldg. C
Yountville, CA 94599

 G. Nokes, Regional Manager
Department of Fish and Game
1234 East Shaw Avenue
Fresno, CA 93725

 Fred A. Worthley Jr., Regional Manager
Department of Fish and Game
350 Golden Shore
Long Beach, CA 90802

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION809 INDIANA AVENUE, SUITE 200
RIVERSIDE, CALIFORNIA 92506

PHONE: (714) 684-9330



June 10, 1981

Terry Draper
City of Fontana
P. O. Box 518
Fontana, CA 92335

Dear Mr. Draper:

NOP: Southridge Village, Specific Plan #5, SCH#81052210

We have reviewed the Notice of Preparation for Southridge Village Specific Plan #5. The draft environmental impact report should, at a minimum, address the following issues:

- I. WATER QUALITY (Surface and Groundwater)
 - A. Applications or permits required.
 - B. Kinds and quantities of materials to be disposed of and treatment and disposal facilities - this should include a discussion of the relationship of the project's discharge to the capacity of existing and proposed treatment facilities.
 - C. Construction activities (including grading) that could result in water quality impacts.
 - D. Soil characteristics related to water quality (erosion, siltation, percolation, seismic characteristics).
 - E. Potential impacts of the proposed project on surface and groundwater quality (degree of change and seasonal variation).
 - F. Mitigation measures, including plans for preventing impacts from industrial spills, where applicable.
 - G. Water Rights
 1. Existing water rights and pending applications.
 2. Availability of water for the proposed project.
 3. Availability of water to protect existing in-stream beneficial uses of water.

II. WASTEWATER

A. Existing Conditions

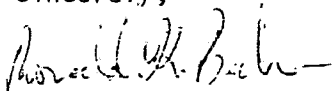
1. Existing treatment facilities.
2. Existing service capacities for treatment plant.
3. Current capacity for treatment plant.
4. Location of treatment facilities.
5. Discharge areas (where effluent is discharged, relate back to Section I Part G-3)
6. Master treatment facilities expansion plan.
7. Location of major trunk lines (capacities).
8. Treatment standards.

B. Project Impacts

1. Calculate sewage generation for project development.
2. Impact on local treatment facilities.
3. Location of tie-in's to existing facilities.
4. Relationship to master expansion plan.
5. The need for pretreatment of industrial flows.

If you have any questions, please contact this office.

Sincerely,



Ronald K. Baker
Environmental Specialist

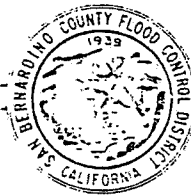
cc: Ron Bass
Office of Planning & Research
1400 Tenth Street
Sacramento, CA 95814

RKB:db

San Bernardino County

FLOOD CONTROL DISTRICT

825 East Third Street • San Bernardino, CA 92415 • (714) 383-1665

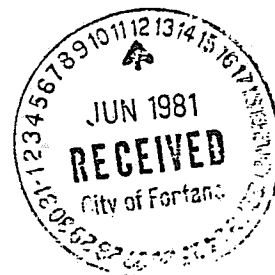


**COUNTY OF SAN BERNARDINO
ENVIRONMENTAL
PUBLIC WORKS AGENCY**

JOHN M. BERNARD
Agency Administrator

June 10, 1981

File: 1-813/1.00
2-100/1.00
213.0212



City of Fontana
P. O. Box 815
Fontana, CA 92335

Attention: Mr. Terry Draper
Assistant Planner

Re: Zone 1 and 2, Fontana Drainage
Draft Environmental Impact Report 81-4
Specific Plan No. 5 Southridge Village

Gentlemen:

Reference is made to your correspondence dated May 15, 1981 with accompanying vicinity map, and Environmental Impact Report Attachment "A", requesting the District's review and comments. The project is located on the south side of Jurupa Avenue, between Mulberry Avenue and Sierra Avenue, in the south portion of the City of Fontana.

This office has previously reported on this area to the City of Fontana by letter dated April 15, 1981. A copy of our correspondence is enclosed for your reference. Our comments and recommendations remain the same.

Should you have any further questions concerning this matter, please contact Mr. Allan J. Kielhold, Chief, Water Resources Division at (714) 383-2388.

Very truly yours,

JOHN R. SHONE, Director
Dept. of Transportation & Flood Control

By *Ruben V. Montes*
Ruben V. Montes
Asst. Flood Control Engineer
Planning - Engineering

RVM:AAL:mjs
Encl. as noted

San Bernardino County
FLOOD CONTROL DISTRICT

825 East Third Street • San Bernardino, CA 92415 • (714) 383-1665

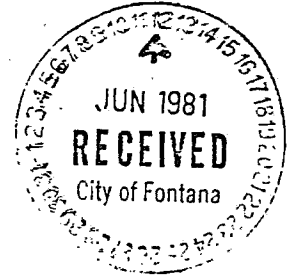
COUNTY OF SAN BERNARDINO
ENVIRONMENTAL
PUBLIC WORKS AGENCY

C. J. PIETRO, Flood Control Engineer

JOHN M. BERNARDI
Agency Administrator

April 15, 1981

File: 1-813/1.00
2-100/1.00
213.0212



City of Fontana
Planning Department
P. O. Box 518
Fontana, CA 92335

Attention: Mr. Terry W. Draper

Re: Zone 1 & 2, Fontana Drainage
Draft EIR No. 81-1

Gentlemen:

The District is in receipt of your letter dated January 29, 1981, with regards to Draft Environmental Impact Report No. 81-1, for a site located south of Jurupa Avenue, west of Sierra Avenue and east of Mulberry Avenue in the City of Fontana. There are no existing Flood Control District facilities in the site area.

It appears portions of the site are traversed by natural broad swales and drainage courses originating in the Jurupa Mountains within the southerly and central portions of the site.

Therefore, in our opinion, those portions of the site lying in and abutting the broad swales and natural drainage courses and their overflow areas, are subject to infrequent flood hazards by reason of overflow, erosion and debris deposition until adequate channel improvements are provided to intercept and conduct the flows through and away from the tract.

Also, portions of the site may be subject to excessive street flows and accumulated drainage from the north. It is therefore recommended that a separate report be obtained from the City Engineer's Office with respect to local and onsite drainage conditions.

Most of the drainage from this site is proposed to outlet through Riverside County to the Santa Ana River, via the proposed Declez Channel and San Sevaine Channel. In the past Riverside County Flood Control District has objected to the addition of waters into the San Sevaine Channel northerly of the county line, until an adequate outlet is provided through Riverside County to the Santa Ana River. Any increased runoff from this site can be expected to aggravate any existing downstream problems. Therefore, we would recommend no additional (increased) runoff from this site be directed into Riverside County until it can be shown provisions have been made for handling any increased or concentrated runoff. Any proposal should be reviewed with Riverside County Flood Control District for their approval.

Letter to the City of Fontana
April 15, 1981
Page 2

We are including a set of the District's preliminary proposed Declez Channel drawings, showing the typical channel sections and two proposed alignments for the proposed concrete channel from the county line to Jurupa Avenue.

Should you have any further questions concerning this matter, please contact Mr. Allan J. Kielhold, Chief, Water Resources Division at (714) 383-2388.

Very truly yours,

C. J. DI PIETRO, Flood Control Engineer

By *Ruben V. Montes*
Ruben V. Montes
Asst. Flood Control Engineer
Planning - Engineering

RVM:MGM:mjs
Encl. as noted
cc: Boyle Engineering
Gordon Lutes

DEPARTMENT OF FISH AND GAME

750 Golden Shore
Long Beach, CA 90802
(213) 590-5113



June 2, 1981

Mr. Terry Draper
City of Fontana
Box 518
Fontana, CA 92335

Dear Mr. Draper:

We have reviewed the Notice of Preparation for Southridge Village, EIR 81-4, Specific Plan #5 (SCH 81052210) and have the following comments. To enable our staff to adequately review and comment upon the project, we recommend the following information be included in the EIR:

1. A complete assessment of flora and fauna within the project area should be provided. Particular emphasis should be placed upon identifying rare, endangered, and locally unique species.
2. Documentation of the direct, indirect, and cumulative impacts which would adversely affect biotic resources within and adjacent to the project site should be included in the EIR. In addition, we believe CEQA requires discussion within the EIR of specific mitigation measures that the applicant proposes to implement.
3. An assessment of potential urban growth-inducement factors attributable to the project should be provided. Of particular concern to us is the impact of urban growth upon natural open space and biological resources within and adjacent to the project site. A discussion of how this project is going to provide for the preservation of open space should be included in the EIR.
4. An assessment of the potential impacts upon wetlands and riparian woodlands should be provided. We recommend that watercourses be retained in their natural state to provide habitat for wildlife. Any alteration within the high water mark of a streambed will require notification to the Department of Fish and Game pursuant to Section 1603 of the Fish and Game Code. This notification and the subsequent agreement must be completed prior to commencement of the streambed alteration.
5. The project should include the setting aside of natural open space in sufficient acreages to provide habitat for native wildlife.

Mr. Terry Draper

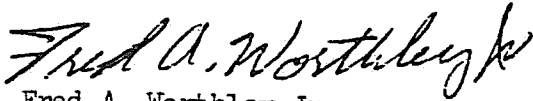
-2-

June 2, 1981

6. Landscape programs should include native trees and shrubs to provide habitat for wildlife.

Thank you for the opportunity to review and comment on this project. If you have any questions, please contact Jack L. Spruill or Kris Lal of our Environmental Services staff at (213) 590-5137.

Sincerely,



Fred A. Worthley Jr.
Regional Manager
Region 5

cc: Office of Planning & Research

May 26, 1981

City of Fontana
Planning Department
Post Office Box 518
Fontana, California 92335

Attention: Mr. Terry Draper
Planning Assistant

Subject: ~~EIR 81-4 Specific Plan #5~~
Southridge Village

Gentlemen:

We have reviewed your Initial Study Form for the subject report and find no significant effect upon the environment from the project.

There will be a substantial need for new water facilities to supply the area. Installation of the new facilities will be made under our extension policies in effect at the time of development.

Very truly yours,



I. G. Holmberg
Vice President and
General Manager

IGH:am

Southern California Edison Company

P.O. BOX 788
RIALTO, CALIFORNIA 92376

CHRISTINA M. GARANT
AREA MANAGER

May 21, 1981

TELEPHONE
(714) 875-5100
EXT. 593

City of Fontana Redevelopment Agency
P. O. Box 518
Fontana, California 92335

Attention: T. W. Draper

Gentlemen:

This is to advise that the subject property is located within the service territory of the Southern California Edison Company and that the electric loads of the project are within parameters of projected load growth which Edison is planning to meet in this area.

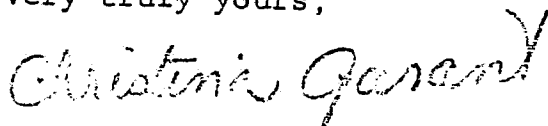
Unless the demand for electrical generating capacity exceeds our estimates, and provided that there are no unexpected outages to major sources of electrical supply, we expect to meet our electrical load requirements for the next several years.

Our total system demand is expected to continue to increase annually; and, if our plans to proceed with future construction of new generating facilities are delayed, our ability to serve all customer loads during peak demand periods could become marginal by 1984.

In addition, the major fuel used in Edison's generating facilities is low sulfur fuel oil. We now believe that our low sulfur fuel oil inventory, together with our contractual commitments for delivery and our customers' conservation efforts will permit us to meet the current forecasted demands for electricity through 1981.

It is our intention to continue to do everything that can reasonably be accomplished to provide our customers with a continuous and sufficient supply of electricity.

Very truly yours,



C. M. Garant

/jac

CITY OF



ONTARIO

CITY HALL

ONTARIO, CALIFORNIA 91764

AREA CODE 714

986-1151

May 21, 1981

Terry W. Draper
City of Fontana
Box 518
Fontana, CA 92335

RE: EIR 81-4, Specific Plan #5, Southridge Village

Dear Terry:

Thank you for the opportunity to review the Notice of Preparation on the Jurupa Hills Specific Plan. The Planning Department has no comments at this time. We look forward to reviewing the Draft Environmental Impact Report when it is available.

The contact person for the Planning Department will be Glen Worthington.

Sincerely,

ONTARIO PLANNING DEPARTMENT

Joyce I. Babicz, City Planner

Glen D. Worthington
Glen D. Worthington
Associate Planner

GDW/ljk



FRANK PLESKO - ENV. ANALYSIS
SECTION - SOLID WASTE MGMT. ED
do not have jurisdiction or approval authority SACTO

NAP?

EIR ⁸¹⁻³₈₁₋₄ Cumulative impacts
in watershed area

Would like to see brief description
of existing facilities and method
of disposal.



Volume of materials expected
to be generated — per capita
rates — use local

Location, capacity, life
expectancy of existing landfills

Brief desc. of future

Mitigation — reduction thru
local recycling/resource
recovery — possible

2-3 days ago

(916) 322-1448 — JAB - 6/11/81

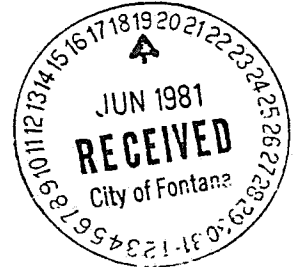
AIR RESOURCES BOARD

102 Q STREET
P.O. BOX 2815
SACRAMENTO, CA 95812



June 15, 1981

SCH No. 81052210



Mr. Terry Draper
City of Fontana
Box 518
Fontana, CA 92335

Dear Mr. Draper:

Your May 15, 1981, Notice of Preparation for the Specific Plan #5 Southridge Village Draft Environmental Impact Report has been reviewed.

The Regional Programs Division of the Air Resources Board and local government decision makers need to be aware of the individual and cumulative impacts that projects might have on the attainment and maintenance of air quality standards in the South Coast Air Basin.

Enclosed is a recommended outline which will assist you in the preparation of the air quality analysis for the proposed project and will provide the information useful to our review.

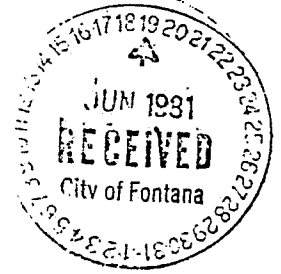
For additional information, please contact Roxane Dal Porto of my staff at (916) 445-0960.

Sincerely,

Michael D. Redemer, Manager
General Projects Section

Enclosure

cc: Terry Roberts, SCH
Joseph A. Stuart, South Coast AQMD



RECOMMENDED CONTENTS OF AIR QUALITY ANALYSES

The preparation of general plans, general plan amendments, and all environmental impact reports (EIRs) are subject to the environmental evaluation requirements of the California Environmental Quality Act. As a result, an air quality analysis is needed as part of this evaluation to help inform decision makers of potential air quality constraints and impacts of all proposed project (activities subject to CEQA) alternatives. Therefore, to inform and to help assist decision makers in assessing potential air quality impacts and measures to minimize these impacts, we recommend the following information be included in an air quality analysis. This information is to be used as a guide in the preparation of EIRs for proposed projects. Many of the items listed may be satisfied through incorporation by reference. Those pollutants listed under Section II may or may not be applicable and are not to be considered as all inclusive.

I. Environmental Setting

A. Conditions affecting air pollution potential (the following items need to be discussed as to their relationship and/or effect on air pollution):

1. Meteorology and Climate

- a. Wind rose (plotted wind direction and speed)
- b. Atmospheric stability
- c. Seasonal air flow patterns
- d. Inversion characteristics

2. Topography

B. Standards and Regulations affecting air quality:

1. Federal
2. State
3. Regional
4. County
5. City

C. Three to five year summary of ambient air quality pollutants subject to primary and secondary (health and welfare) standards:

1. Monthly maximum concentrations
2. Trend analysis (number of days/number of hours standards were violated)
3. Emission Sources
 - a. Stationary
 - b. Mobile

D. Effects of existing air pollutants on sensitive receptors such as:

1. Schools (children)
2. Hospitals (patients)
3. Convalescence homes (elderly)
4. Agricultural areas (crops)

II. Impact of Project Proposal and Alternatives

A. Stationary Sources (Tons/Day):

1. Carbon Monoxide
2. Oxides of Nitrogen
3. Total Hydrocarbons
4. Total Suspended Particulates
5. Sulfur Dioxide
6. Lead

B. Mobile Sources (Tons/Day):

1. Carbon Monoxide
2. Oxides of Nitrogen
3. Total Hydrocarbons
4. Lead

III. Mitigation Measures for Project Proposal and Alternatives

A. Measures considered for the following sources:

1. Stationary
2. Mobile

B. Measures incorporated for the following sources:

1. Stationary
2. Mobile

IV. Cumulative Impacts

The cumulative impact (the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects).

V. Consistency Demonstration

A. Nonattainment Plans (NAPs)/State Implementation Plans (SIPs):

The EIR shall discuss any inconsistencies between the proposed project and the applicable NAP or SIP once promulgated.

1. Comparison of projected population growth for projects with NAP/SIP forecasts.
2. Comparison of project identified transportation control measures with NAP/SIP control strategies.
3. Identification of responsible agencies to enforce/implement mitigation measures.

B. Prevention of Significant Deterioration (PSD) Regulations:

The EIR shall demonstrate project compliance with pertinent PSD regulations by including discussion on the following:

1. Project proximity to existing federal proposed Class I areas.
2. Transport potential of pollutants to Class I areas.
3. Project effect on available increment of deterioration in Class I and II areas.
4. Project effect on visibility impairment in the Class I area.

NOTE: Material is available to assist you in doing an air quality analysis. To obtain a copy of, "Procedure and Basis for Estimating On-Road Motor Vehicle Emissions," contact Ed Yotter, Air Resources Board, Technical Services Division, at (916) 322-3984. Also, the Plans and Projects Evaluation Section of the Air Resources Board is available to answer any concerns and questions. The number is (916) 445-0960.



FONTANA UNIFIED SCHOOL DISTRICT

9680 CITRUS AVENUE • FONTANA, CALIFORNIA 92335
714/829-6011

BOARD OF EDUCATION

DICKSIE SPOLAR, PRESIDENT
JAMES ALTMAN, CLERK
TIMON E. COVERT, MEMBER
THOMAS RABONE, MEMBER
WILLIAM TUNNEY, MEMBER

May 21, 1981

Mr. Terry W. Draper, Planning Assistant
Planning Department
City of Fontana
Post Office Box 518
Fontana, CA 92335

Dear Mr. Draper:

In response to the Notice of Preparation of Draft Environmental Impact Report EIR81-4 Specific Plan #5 Southridge Village, allow me to provide you with the following information.

Based upon information received, it's anticipated that 65% of the 8,000 to 10,500 dwelling units would be located within the Fontana Unified School District. Using updated student generation factors, these units would produce from 2,756 to 3,617 elementary, 728 to 956 junior high, 416 to 546 high school students and an unspecified number of additional special education pupils. These additional students would create a need for five to six elementary schools, a junior high school and a sizeable addition to the high school.

Present district schools are impacted and we have no means whereby new schools can be constructed. These additional students would create a major positive impact upon our district.

The school district's contact person in matters of this nature is Carl Coleman, Coordinator of Planning & Research. If you have further questions, he may be reached at 829-6440.

Sincerely,

Rudy Macioge
Acting Superintendent

RM:mn

cc: Jim Balsano
Carl Coleman

...education teaches us to walk alone - in concert with others.

BOARD OF DIRECTORS

ROBERT A. SCHERER
PRESIDENT

OLIVER P. ROEMER
VICE PRESIDENT

FRANCES H. HACKER
JOHN S. TAYLOR
ROGER W. ZIMMERMAN

*West San Bernardino
County Water District*

855 WEST BASE LINE
P. O. BOX 188
RIALTO, CALIFORNIA 92376
PHONE (714) 875-1804

ADMINISTRATIVE STAFF

IRA B. PACE
GENERAL MANAGER-SECRETARY

BESSIE J. HILL
AUDITOR-OFFICE MANAGER

ANTHONY W. ARAIZA
SUPERINTENDENT

NICHOLAS E. PRESECAN
CONSULTANT

May 20, 1981

City of Fontana Redevelopment Agency
Box 518
Fontana, CA 92335
Attn: Mr. Terry Draper

Re: Jurupa Hills Redevelopment Project and
Specific Plan #5 Southridge Village.

The West San Bernardino County Water District has no comment on the Notices of Preparation for these two projects but reserve rights for comments on the Draft Environmental Impact Report when prepared.


Ira B. Pace
GENERAL MANAGER

IBP/cak

enclosures

Ref. Eir 81-1



600 South Commonwealth Avenue • Suite 1000 • Los Angeles • California • 90005 • 213/385-1000

DATE: June 23, 1981.
TO: Terry Draper
City of Fontana
Box 518
Fontana, Ca. 92335



FROM: Metropolitan Clearinghouse
SUBJECT: Southridge Village - DEIR #81-4
SCAG File Number: SB-18065-NP

Thank you for submitting the Notice to Prepare the environmental document for the referenced project for SCAG review. SCAG staff does not have comments at this time but looks forward to reviewing the environmental document when available.

Sincerely,

Loretta Anaya
Clearinghouse Official

LA/bb

DEPARTMENT OF TRANSPORTATION

STRICT 8, P. O. BOX 231
N BERNARDINO, CALIFORNIA 92403



July 13, 1981



Notice of Preparation
Southridge Village
EIR 81-4, Specific Plan
No. 5
Fontana
08-SBd-10-12.1/16.2
SCH #81052210

Mr. Terry Draper
City of Fontana
P. O. Box 518
Fontana, CA 92335

Dear Mr. Draper:

This is in response to your May 15, 1981 Notice of Preparation of a Draft Environmental Impact Report for Specific Plan No. 5, Southridge Village, in Fontana (residential, commercial, recreation, and open space uses on 2560 acres).

We would appreciate an opportunity to review and comment on the proposed Environmental Impact Report in order to evaluate the possible impacts to the transportation system. It appears from the preliminary data provided that the proposal could have an impact on Interstate 10.

Consideration should be given to the cumulative effects that continued development in the area will have on the transportation system. Discussion of the impacts to the transportation system should include traffic growth, traffic safety, drainage, and any anticipated need for additional work to the state highway system. The report should also consider the use of public transit, car-pooling/vanpooling, reservation of areas for park 'n ride facilities, and bicycling as possible mitigation measures, costs related to any transportation improvements, potential for funding and sources of funds.

We suggest that bicycle lanes be incorporated as an integral part of the circulation system for the development.

If you have any questions, please contact Mr. Harvey Sawyer at (714) 383-4550.

Very truly yours,

R. G. POTE
Chief, Transportation Planning

9.3 DRAINAGE, WATER, WASTEWATER ANALYSIS

JURUPA HILLS REDEVELOPMENT PROJECT
SUPPLEMENTARY REPORT
JUNE 26, 1981

This memorandum provides revised concepts and estimated costs for this project on the basis of additional information obtained. It also indicates additional evaluations and considerations that will be required in the design report for flood control facilities.

The channel alignment adopted by the client is the one designated as Alternative 1 in previous reports and is shown on Figure 1. Storm drain alignments have been revised as required to conform with planned street alignments. Final grade lines for storm drains will depend on street grading plans.

For the crossing of the MWD service line it is planned to provide sufficient fill upstream from the crossing to maintain channel gradient without requiring relocation of the service line. Channel dimensions have been revised to provide a wider and shallower channel section which can be accommodated by the service line in its present location (Figure 2).

Declez Channel has been designed to contain the estimated 100-year return period peak flood flow plus a 25 percent bulking factor for possible sediment inclusion. For the total watershed (10.91 sq. mi.) the estimated peak flood flow under existing conditions is 4200 cfs and for conditions of ultimate development is 5100 cfs. The maximum design capacity requirement (10.91 sq. mi. drainage area) is $5100 \text{ cfs} \times 1.25 = 6400 \text{ cfs}$. See Table 1 for capacity requirements at other locations.

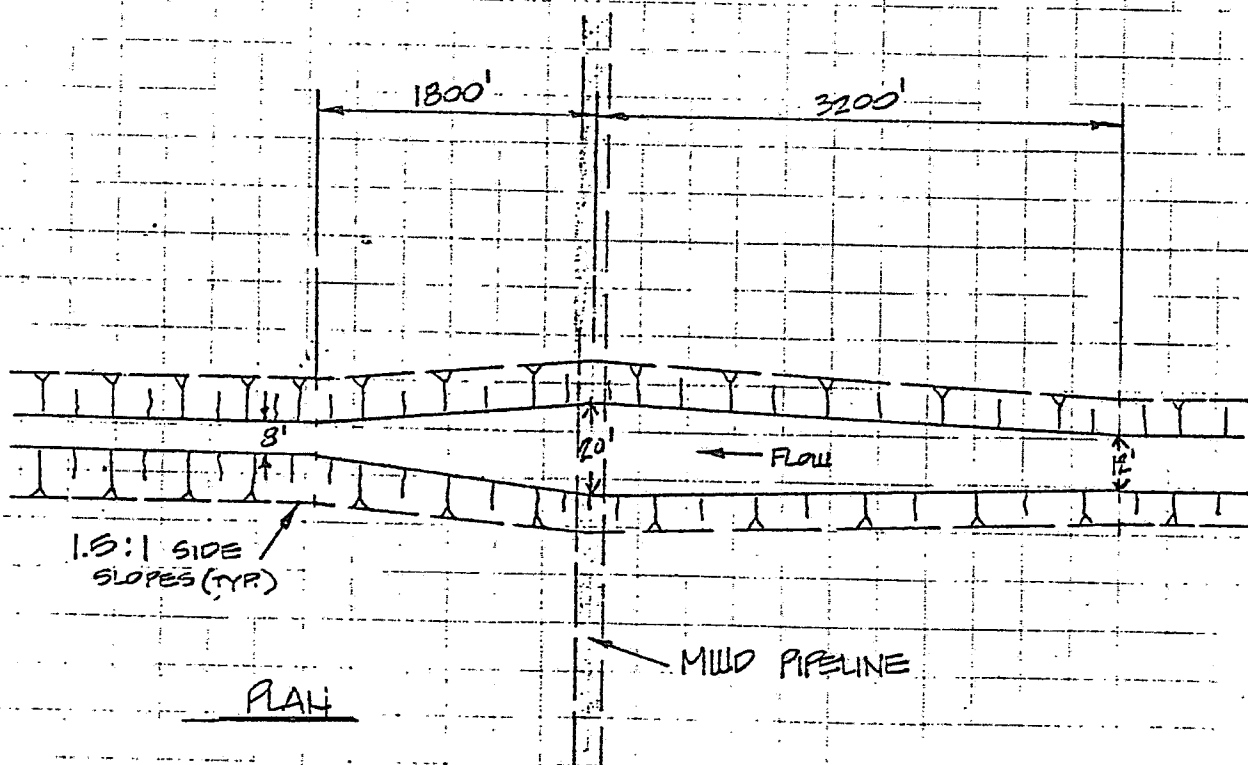
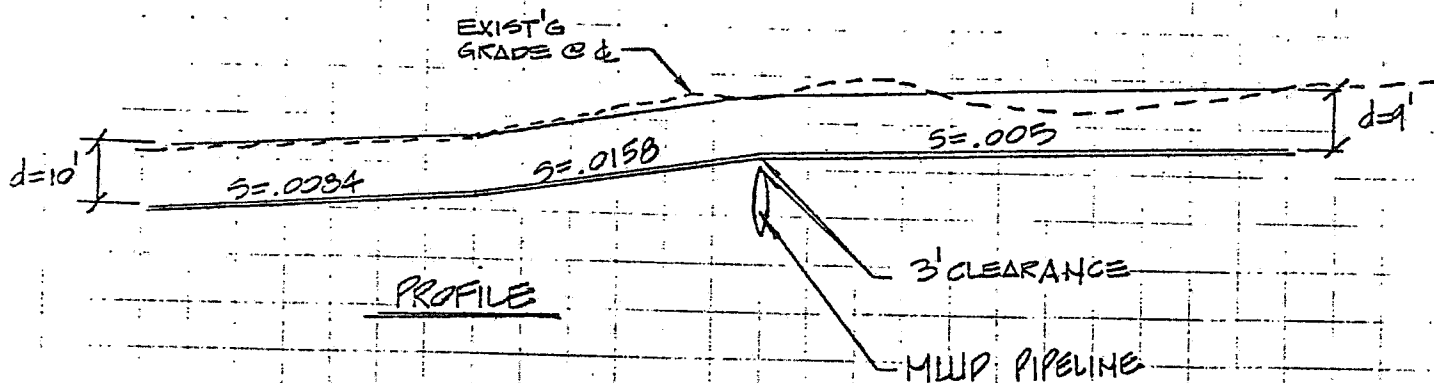


Figure 2
Deeley Channel Crossing
MWB Service Line

TABLE 1

DECLEZ CHANNEL CAPACITY REQUIREMENTS
100-YEAR RETURN PERIOD (INCLUDING 25 PERCENT BULKING FACTOR)

Concentration Point*	100-Year Peak Flood Flow (cfs)	Bulking Factor Percent	100-Year Design Capacity (cfs)
3	5100	25	6400
4	2800	25	3500
5	1000	**	1000
6	600	**	600

* See Figure 1 for location

** Tributary with no bulking factor added

Table 2 shows the capacity requirements and channel characteristics at various locations on the Declez Channel.

It is noted that with full development the peak flow increases from 4200 cfs to 5100 cfs, or an increase of over 21 percent. However, with mature urban development, sediment production is probably about one-tenth that from existing land use. With full urban development only the Jurupa Hills would remain as a natural sediment producing areas.

A sedimentation analysis of the watershed on the basis of existing conditions and for conditions of ultimate development should be made to determine if a lesser bulking factor is appropriate on the basis of reduced sediment production as the peak flood flows increase because of urban development.

A letter report on the hydrologic analysis has been submitted to the Director of Public Works for the city of Fontana for review and clearance with the S.B.C.F.C.D. Further investigations and clearances will be required to obtain a possible reduction in the required bulking factor.

The present design capacities of Declez Channel in the various reaches appear to be conservatively high. A reduction in the required bulking factor may cause a significant reduction in the cost of flood control facilities.

The comparative costs of a trapezoidal section channel (Figure 3) and a rectangular section channel have been estimated. The rectangular section channel (Figure 4) is estimated to cost about 20 percent more than the trapezoidal section channel with consideration of reduced bridge and right-of-way costs

TABLE 2
CHANNEL DIMENSIONS AND CAPACITIES

Location	Capacity (cfs)	Channel Dimensions*	
		Bottom Width (ft.)	Depth** (ft.)
Country Village Rd.	6400	10	12
San Bernardino County Line	5700	8	12
Cherry Avenue First Bridge	5000	8	11
Cherry Avenue Second Bridge	4200	8	11
Live Oak Avenue Bridge	3300	8	11
Beech Avenue Bridge	2800	8	10
Above MWD Pipeline	2600	20	9
Adjacent to Citrus Avenue	2200	12	9

* Trapezoidal Section (Figure 2)

**Includes 3' freeboard

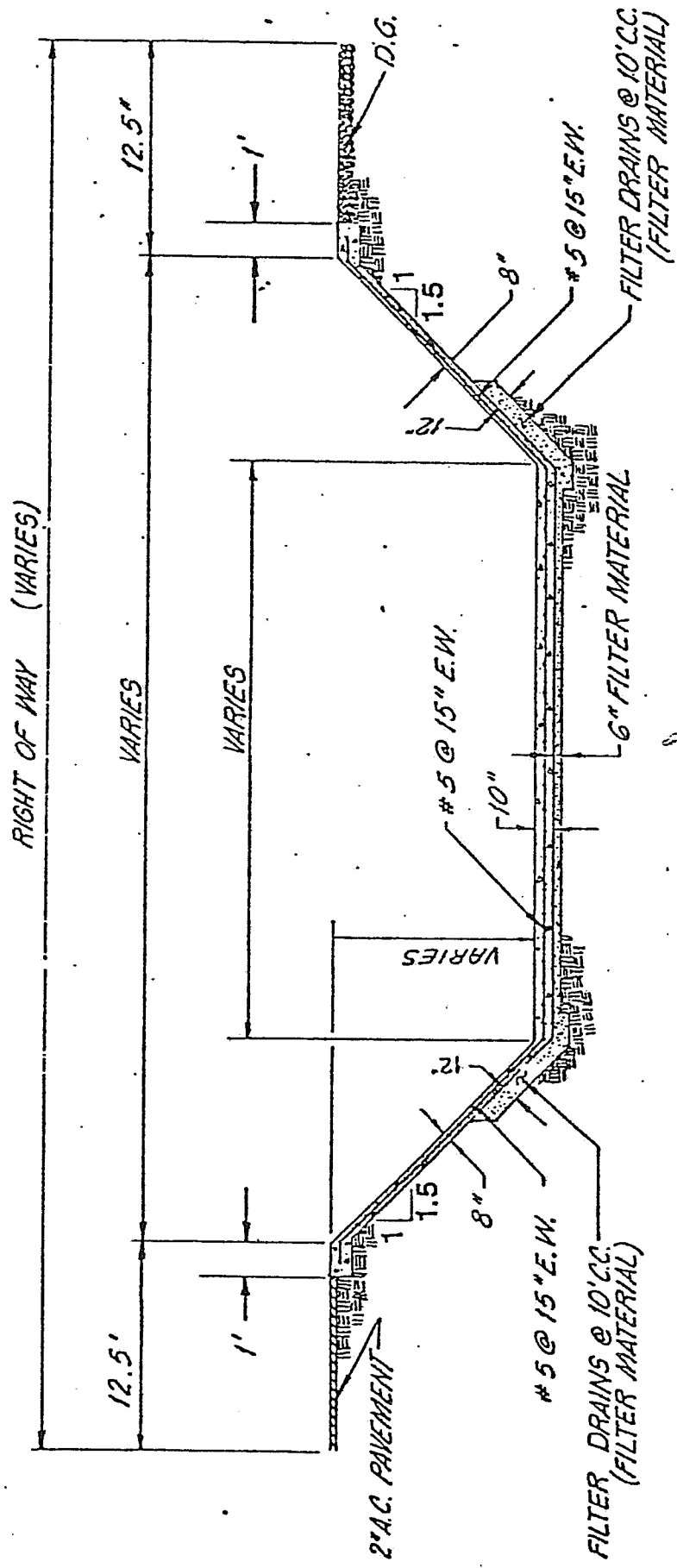


FIGURE 3

9.2 NOTICE OF PREPARATION AND RESPONSES



FIGURE 4

with the rectangular section channel. It has been assumed that the trapezoidal section channel will be used.

The estimated costs to install the Declez Channel from its inlet at Oleander Street to its junction with the improved Fontana Channel (capacity 3100 cfs) in Riverside County is shown on Table 3. The estimated costs to install the tributary channel to drain the low area between the MWD service line crossing and its junction with the Declez Channel are shown on Table 4.

A floodwater retarding reservoir is planned to reduce the peak flood flows for the 100-year return period flood from those that are estimated to occur under conditions of ultimate development to those that are estimated to occur under existing conditions. The estimated installation cost for this facility is shown on Table 5.

One disadvantage to this floodwater retarding reservoir concept is that it does not provide significant reduction in the more frequently occurring flood flows which are also increased by the urban development. In that the flood control channel capacities in Riverside County are not adequate to contain these flows they may agree to the developer assisting in other downstream (off-site) mitigation measures instead of providing the floodwater retarding reservoir.

The estimated costs to install all storm drains tributary to the Declez Channel are shown on Table 6.

TABLE 3
ESTIMATED COSTS
DECLEZ CHANNEL - TRAPEZOIDAL SECTION

Item	Units	Unit Cost	Quantity	Cost
Clear and grub	Ac.	\$1980.00	33.5	\$66,330
Excavation	Cu.Yd.	2.50	285,390	713,475
6' C.L. Fence	L.F.	9.90	41,470	410,550
A.C. Paving	Sq.Yd.	6.95	25,343	176,135
D.G. Road	Cu.Yd.	10.00	1,411	14,110
Concrete	Cu.Yd.	87.00	27,904	2,427,650
Rebar	Lbs.	0.50	1,872,846	936,425
Filter Base	Cu.Yd.	8.00	17,687	141,495
Compacted Fill	Cu.Yd.	6.30	55,700	350,910
Dewatering	L.F.	46.20	20,735	957,955
Subtotal				\$6,195,035
Utility Relocation and Contingency (10%)				619,505
Total Estimated Construction Cost				6,814,540
Engineering and Administration (20%)				1,362,910
Right-of-way (\$50,000 per Ac.) - 33.5 Ac.				1,675,000
TOTAL ESTIMATED INSTALLATION COST				\$9,852,450

TABLE 4
ESTIMATED COSTS
TRIBUTARY TO DECLEZ CHANNEL
REINFORCED CONCRETE BOX/TRAPEZOIDAL CHANNEL

Item	Unit Cost	Quantity	Cost
Clear and grub (Ac.)	\$2000.00	8.1	\$16,200
Excavation (cu. yds.)	2.50	87,787	219,468
Embankment Fill (cu. yds.)	6.30	24,000	151,200
Concrete (cu. yds.)			
Reinforced Concrete Box	150.00	9,302	1,395,300
Trapezoidal Channel	87.00	2,978	259,086
Rebar (lb.)	0.50	1,558,259	779,130
Gravel Base (cu. yds.)	13.50	2,234	<u>30,159</u>
Subtotal			\$2,850,543
Contingency (20%)			<u>570,109</u>
Total Estimated Construction Cost			\$3,420,652
Engineering and Administration (20%)			684,130
Right-of-way (\$50,000 per Ac.) - 5.9 Ac.			<u>259,000</u>
TOTAL ESTIMATED INSTALLATION COST			<u>\$4,399,782</u>

TABLE 5
ESTIMATED COST
FLOODWATER RETARDING RESERVOIR
(IN-CHANNEL)

Item	Units	Unit Cost	Quantity	Cost
Clear and Grub	Ac.	\$2000.00	11.7	\$23,400
Riprap	Cu.Yd.	30.00	3900	117,000
Excavation	Cu.Yd.	2.50	206,000	515,000
Embankment	Cu.Yd.	6.30	12,000	<u>75,600</u>
Subtotal				\$731,000
Contingency (20%)				<u>146,200</u>
Total Estimated Construction Cost				\$877,200
Engineering and Administration (20%)				175,440
Right-of-way (\$50,000 per Ac.) - 11.7 Ac.				<u>585,000</u>
TOTAL ESTIMATED INSTALLATION COST				\$1,637,640

TABLE 6
ESTIMATED COSTS
STORM DRAIN SYSTEM

Item	Units	Unit Cost	Quantity	Cost
Reinforced Concrete Pipe	L.F. 42"	84.00	3450	\$289,800
Reinforced Concrete Pipe	L.F. 48"	96.00	1300	124,800
Reinforced Concrete Pipe	L.F. 54"	108.00	5250	567,000
Reinforced Concrete Pipe	L.F. 60"	120.00	3250	390,000
Reinforced Concrete Pipe	L.F. 66"	132.00	4600	607,200
Reinforced Concrete Pipe	L.F. 72"	144.00	6950	1,000,800
Reinforced Concrete Pipe	L.F. 78"	156.00	1550	241,800
Inlet Facilities	Each	- Not Included -		
Subtotal				\$3,221,400
Contingency (10%)				<u>322,140</u>
Total Estimated Construction Cost				\$3,543,540
Engineering and Administration (20%)				<u>708,710</u>
TOTAL ESTIMATED INSTALLATION COST				\$4,252,250

The benefits that will be obtained by the installation of the flood control channel include:

1. Protection against the 100-year return period flood flows. This protection allows the more intensive land use (urban development) planned for this area.
2. The storm drainage system provides capacities to contain the 10-year return period flood flows and assumes that drainage capacities within the streets will contain the difference between the 25-year return period flood flows and the 10-year return period flood flows. When grading plans for the streets become available street capacities will be determined and if not adequate to contain this differential the capacities of the storm drains will be increased accordingly.

These storm drains will provide nuisance protection from the more frequently occurring floods and the less frequently occurring larger floods will not cause significant danger to property or life because of the relatively small drainage areas.

3. The flood control facilities will provide benefits to the larger community by providing protection for public facilities, including roads.

There will be other impacts that will occur because of the urban development and the improved drainage system:

1. Peak flood flows will be increased because of the urban development providing more impervious surfaces thus reducing infiltration rates on the watershed.

2. These increased peak flows may cause additional flooding downstream because of capacity limitations of existing channels.
3. Increased urban development will cause reductions in sediment production as it provides more surface protection from erosion forces. This reduced sediment production will cause less requirement for a bulking factor for flood flows and less flood damage downstream from loss of channel capacities by deposition.

The major institutional requirements for proceeding with the design report for the flood control facilities are:

1. Approval of the hydrologic analysis by the city of Fontana (after review and approval by the S.B.C.F.C.D.) and concurrence by the Riverside County Flood Control District as a basis for evaluating impacts on their flood control system.
2. A final decision from the S.B.C.F.C.D. as to the percentage requirement for bulking factor to be used for flood control facility design. This may require a sedimentation analysis of the watershed for existing and planned ultimate conditions as a basis for influencing this decision.
3. An agreement between the developer and the two flood control districts regarding mitigation measures to offset the effects of development in increasing peak flood flows. The use of a floodwater retarding reservoir on-site may not be needed if agreement can be reached on substituting other off-site mitigation measures.

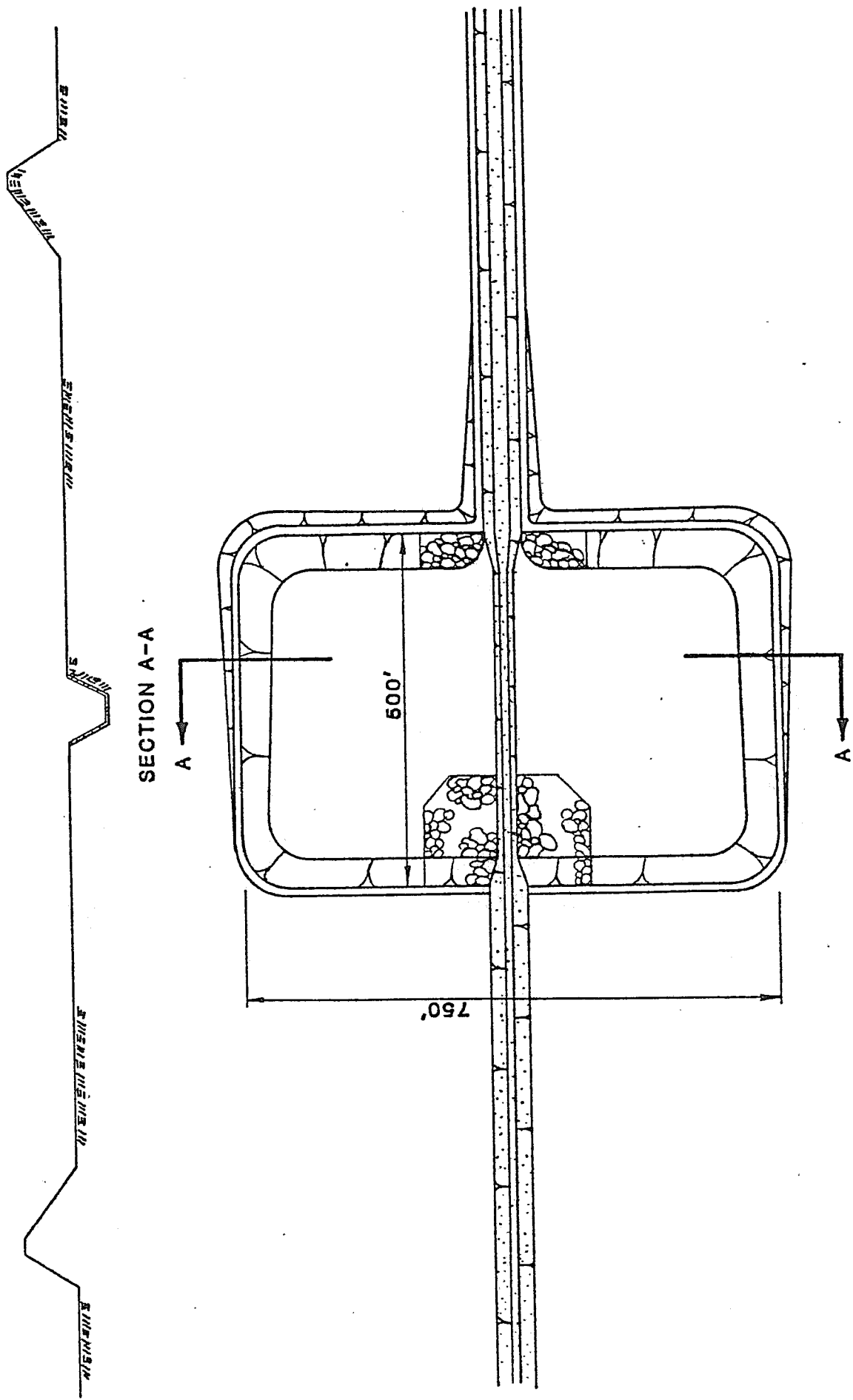
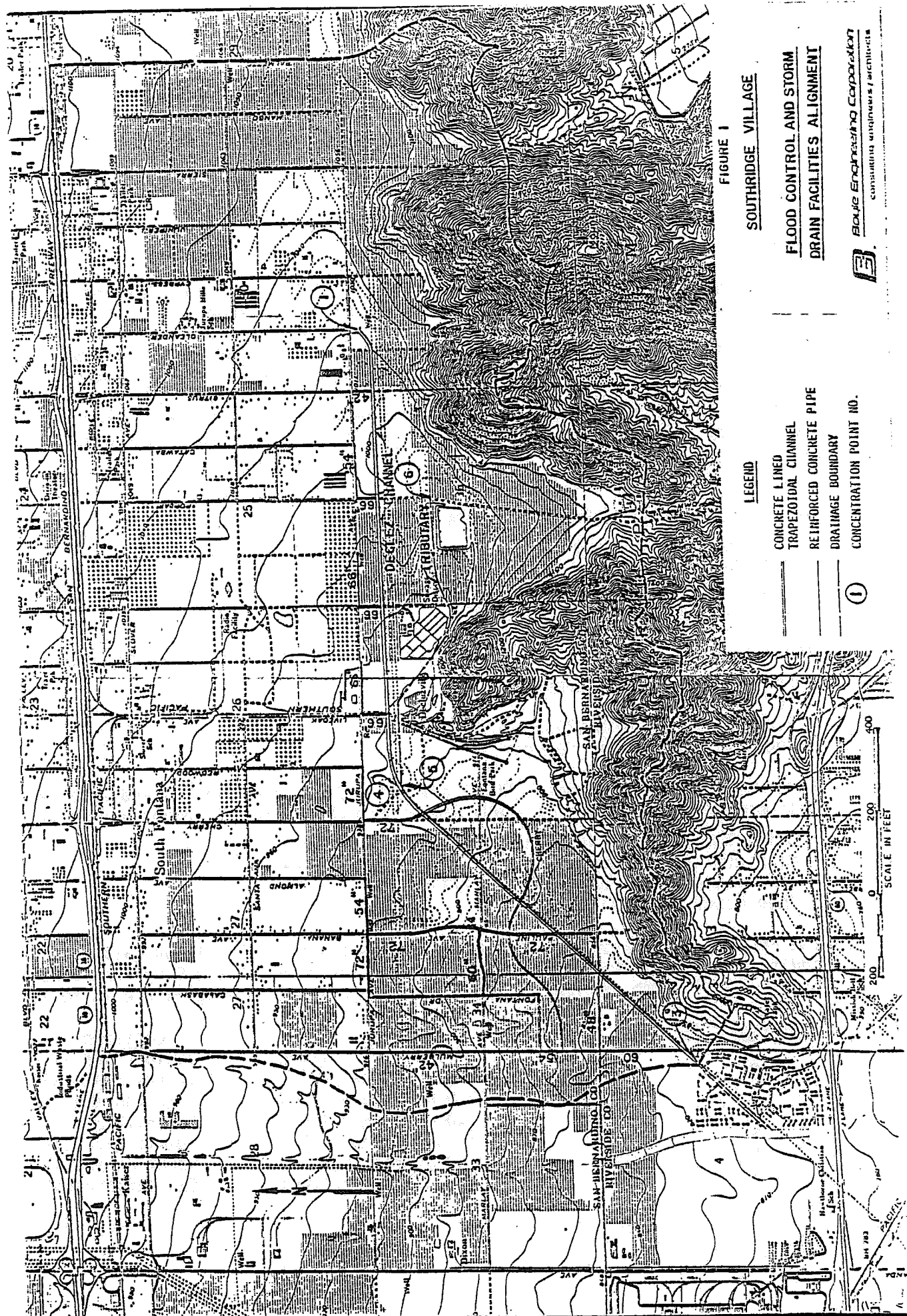


FIGURE 6
FLOODWATER RETARDING RESERVOIR
WITH LOW FLOW CHANNEL

TABLE 7

JURUPA HILLS
ESTIMATED COSTS
BRIDGES

<u>Appendix C Map Symbol</u>	<u>Location</u>	<u>Estimate Including Engineering, Contingencies, etc.</u>
K	Jurupa at San Sevaine Channel	999,000
	Flood Control Channel	
DD	Cherry	383,300
EE	Cherry	383,300
FF	Live Oak	261,900
GG	Beech	242,800
HH	Citrus	236,400
JJ	Country Village	334,000
KK	Poplar (Future)	<u>242,800</u>
		3,083,500



WATER PLAN
SOUTHRIDGE VILLAGE

General

Southridge Village service elevation varies from 845 feet to 1,400 feet; however, the maximum service elevation could be 1,190 feet.

The Fontana Water Company can now deliver 14,000 gpm south of the freeway to serve the Southridge Village and the other service areas. This general area is now largely agricultural. Fontana Water Company utilizes surface water through a 20 million gallon a day treatment plant and meets peak demands by pumping various wells, none of which are south of the freeway.

Water Facilities

Water in the City of Fontana is distributed by:

Fontana Water Company
8440 Nuevo Avenue
Fontana, California 92335
E. W. Butcher, General Manager

Fontana Water Company (FWC) receives all of their water supplies through:

Fontana Union Water Company
16779 Spring Street
Fontana, California 92335
Roger Brett, General Manager

Fontana Union Water Company (FUWC) has Lytle Creek water rights and also receives Metropolitan Water District (MWD) water from the local MWD member agency which is:

Chino Basin Municipal Water District
8555 Archibald Avenue
Rancho Cucamonga, California 91730
Theo Nowak, General Manager

The FWC has seven reservoirs with a total capacity of 17 million gallons. In addition, two reservoirs are planned in the north end of the City, the locations and sizes of which are not determined. The existing reservoirs are as follows:

<u>Reservoir No.</u>	<u>Capacity</u>	<u>Location</u>
1	1.5 million gallons	Juniper and Valencia
2	0.75 million gallons	Cherry and ATSF RR
3	3.0 million gallons	Highland and Alder
4	1.0 million gallons	Foothill and Beech
5	4.75 million gallons	Summit and Citrus
6	3.0 million gallons	Baseline and Alder
7	3.0 million gallons	San Bernardino and Cherry

The flow of water in the FWC service area is generally by gravity from the high ground at the north end of Fontana to the lower areas to the south. FWC has no pump stations or reservoirs south of Interstate 10.

Fontana Water Company has the following eight pipes crossing Interstate 10, with estimated flow capacities:

At Etiwanda	10"	1,400 gpm
At Calabash	10"	1,400 gpm
At Cherry	14"	3,300 gpm
At Hemlock	8"	800 gpm
At Elm	8"	800 gpm
At Catawba	8"	800 gpm
At Oleander	8"	800 gpm
At Juniper	16"	4,800 gpm
		<u>14,100 gpm</u>

Impacts

Construction

In addition to the general impacts listed in Appendix B - Sewer, there will be the need for blasting to construct the level sites for the reservoirs.

Groundwater

Development will increase the storm water runoff. This loss of groundwater will be offset to some extent by additional water percolating from landscape and park irrigation.

Benefits

The water system will provide for increased fire protection which is not substantial at this time.

Institutional Requirements

Very little of the proposed Southridge Village property is within the existing service boundary. However, FWC is committed to serve the area. Upon receipt of a "Request for Service" letter from the developer, FWC will obtain certification from the California Public Utilities Commission to initiate service.

Water Requirements

Based on the proposed plan for Southridge Village, the following is the maximum estimated development potentials for water consumption for 8,800 dwelling units.

	Acres	Units	Average Day Gallons	Peak Day Gallons
Low density	374	748	1,009,000	3,027,000
Medium density	424	1,272	1,145,000	3,435,000
Medium	549	3,294	1,647,000	3,300,000
Medium high	250	3,486	1,674,000	3,348,000
Other	963	N/A	225,000	890,000
Totals	<u>2,560</u>	<u>8,800</u>	<u>5,700,000</u>	<u>14,000,000</u>

There are natural divisions created by existing jurisdictional areas, pressure zones, and pipe in place. It is useful to look at each square mile section as a unit.

	<u>Sections 34 & 35</u>	<u>Section 36</u>	<u>Section 31</u>
Pressure elevation	1,120 feet	1,260 feet	1,260 feet
Peak day	8,200,000 gals	4,800,000 gals.	1,000,000 gals.
Peak hour	683,000 gals.	399,000 gals.	83,000 gals.
Peak hour gpm	11,390	6,670	1,390
Average day	3,500,000	1,850,000	350,000
Average day gpm	2,400	1,350	250

Sections 36 & 31
Southridge Village

	<u>May 1982</u>	<u>May 1983</u>	<u>May 1984</u>	<u>May 1985</u>	<u>May 1986</u>	<u>May 1987</u>
Average day gpm	150	180	440	800	1,300	1,575
Peak day gpm	350	440	1,100	1,970	3,280	3,940
Peak hour gpm	700	880	2,200	3,940	6,560	7,880
Storage required				X	X	X

Storage Amount

Fire flow 1,500 gpm x 4 hours = 360,000
 Peak hour x 2 = 1,050,000
 Operating reserve = 590,000
2,000,000 gals.

On-line booster pumps and the reactivation of existing wells would be required for the additional flow. These inactive wells are:

Fontana Union #5 at Slover and Poplar
 Fontana Union #6 at Santa Ana and Cypress
 Fontana Union #18 at Slover and Live Oaks
 Fontana Union #29 at Santa Ana and Banana

At the present time, Fontana Water Company and Fontana Union Water Company are implementing a dual water system. Surface flows will be more extensively used in the future in lieu of potable water for industrial purposes.

Well capacity south of Interstate 10 should be raised to 5,200 gallons per minute for peak flows.

Estimated Water Main Costs
Phase I

Mulberry - Cherry to the north	600'	10"	\$ 12,000
Cherry - Mulberry to Banana	3,200'	12"	57,600
Marlay - Banana to the west	1,500'	12"	27,000
Jurupa - Calabash to Banana	1,350'	12"	24,300
Banana - Jurupa to Cherry	3,400'	12"	61,200
Cherry - Banana to Flood Control	600	16"	14,400
Cherry - Jurupa to Flood Control	1,400	16"	33,600
Jurupa - Banana to Live Oak	5,300'	16"	127,200
Live Oak - Jurupa to Slover	5,300'	24"	190,800
Minor Streets	4,200'	8"	52,400

\$600,500

15% Construction Contingencies

690,580

15% Adm. and Engineering

794,100

6/29/81

D-3

Estimated Water Costs
Phase II

Live Oak - Jurupa to Cherry	4,800'	20"	\$ 144,000
Cherry	1,000'	20"	30,000
	3,800'	16"	91,200
Reservoir Connection	2,200'	20"	66,000
Reservoir	--	--	750,000
Minor Streets	9,200'	8"	114,800
			<u>\$1,196,000</u>
15% Construction Contingencies			1,375,400
15% Adm. and Engineering			1,581,700

Estimated Water Costs
Phase III

Jurupa - Live Oak to Beech	2,640'	20"	\$ 79,200
Beech	2,200'	20"	66,000
	2,500'	16"	60,000
Jurupa - Beech to Citrus	5,300'	16"	127,200
Citrus	5,040'	16"	121,000
Jurupa - Cypress to Sierra	2,650'	12"	47,700
Minor Streets	4,000'	12"	72,000
	7,200'	8"	86,400
Reservoir Connection	1,000'	20"	30,000
Reservoir	--	--	750,000
			<u>\$1,439,500</u>
15% Construction Contingencies			1,655,400
15% Adm. and Engineering			1,903,700

Mulberry Avenue

Calabash Avenue

Banana Avenue

Almond Avenue

Cherry Avenue

Redwood Avenue

Live Oak Avenue

24"

Hemlock Avenue

Beech Avenue

Jurupa

Avenue

12"

16"

16"

20"

20"

P.R.
P.R.

20" Reservoir

CREATIVE COMMUNITIES
SOUTHRIDGE VILLAGE

Major Water Lines



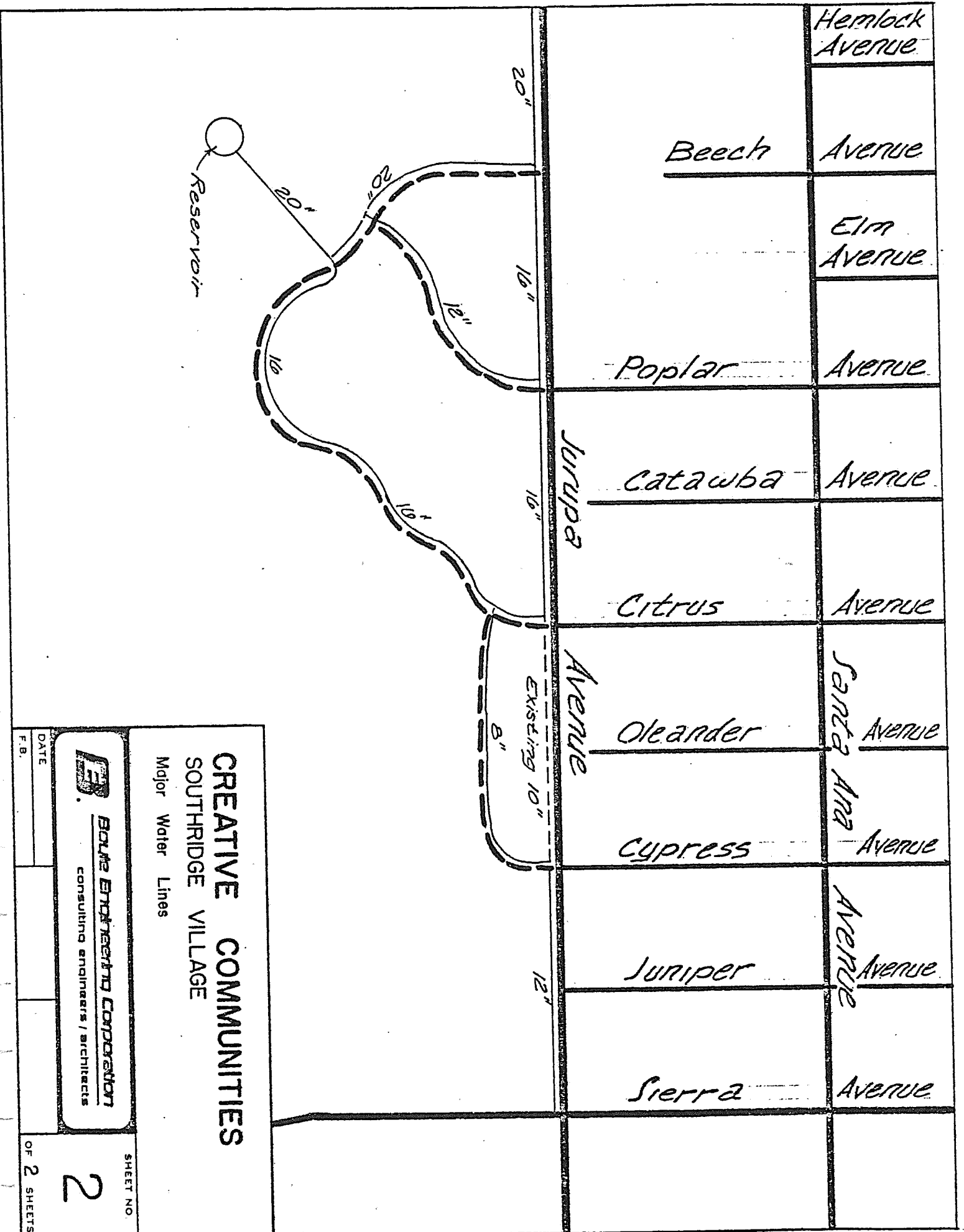
Boyle Engineering Corporation
CONSULTING ENGINEERS / ARCHITECTS

SHEET NO

Riverside County Line

DATE
F D

OF 2 SHEETS



CREATIVE COMMUNITIES
SOUTHRIDGE VILLAGE
Major Water Lines

BOULE ENGINEERING CORPORATION
consulting engineers / architects

SHEET NO.

2

OF 2 SHEETS

DATE

F.B.

**SOUTHRIDGE VILLAGE
SEWER COLLECTION, TREATMENT,
AND DISPOSAL ALTERNATIVES**

**Prepared for
Jurupa Hills Redevelopment Project**

**By
Boyle Engineering Corporation**

June 1981

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* * * * *

1.0 DESCRIPTION OF PROJECT

1.1 Purpose and Need

Sewage collection, treatment, and disposal facilities are required for the development of 8,800 residential units proposed for Southridge Village in the city of Fontana, San Bernardino County, California. The sewage collection system will consist of a gravity system to convey wastewater to the Chino Basin Municipal Water District's (CBMWD) proposed Fontana Interceptor. Treatment and disposal of the wastewater will be at CBMWD's Regional Plant No. 1 (RP No. 1) in Ontario, California.

The purpose of the environmental phase of the project is to provide adequate sewage treatment and disposal facilities to meet the requirements of the state and local regulatory agencies.

1.2 Applications and Permits

The disposal of wastewater from the proposed Southridge Village development will eliminate the need for permits from the California Regional Water Quality Control Board, Santa Ana Region (SARWQCB). However, application will have to be made to CBMWD for annexation of the easterly portion and the payment of fees to the city of Fontana on behalf of CBMWD for treatment capacity. The following three tasks will be required to provide sewage treatment and disposal at the development site:

1. Application to city of Fontana for plan check and inspection of the proposed onsite and offsite sewer improvements.

2. Application to CBMWD for annexation to the district and payment of annexation fees.
3. Application to city of Fontana for connection of 8,800 dwelling units to the treatment system operated by CBMWD and the payment of fees in the amount of \$950 per dwelling unit.

The procedures to implement the required steps are subject to review of the environmental documentation for the proposed onsite wastewater facilities.

1.3 Materials To Be Treated or Transported

Southridge Village will consist of an estimated 8,800 residential units, from which primarily domestic strength sewage will be generated for treatment and disposal. Projection of the design flow from the proposed development was based on the following parameters data.

1. Per capita average daily flow = 85 gpd.
2. Peak-to-average flow ratio = 1.55.
3. Land use based on Land Use Plan by PBR dated April 10, 1981, for 8,800 dwelling units.
4. 2.8 people per dwelling unit.

The total average flow is 2.25 million gallons per day (mgd) of which 1.5 mgd is tributary to the southwest corner of the development and 0.75 mgd to the site of the existing treatment plant.

Methods of Treatment and Disposal

Alternative methods have been considered for the treatment and disposal of wastewater from the proposed Southridge Village development. There are several variations of the individual alternatives, but basically they fall into three categories. They are (1) expand and upgrade CBMWD's RP No. 3 on the existing site or a new site and continue to percolate the effluent into the local groundwater basin in existing or new percolation ponds; (2) transport the sewage flows from Southridge Village to RP No. 1 by way of the CBMWD's proposed Fontana Interceptor or a new parallel interceptor; and (3) No Project.

The backbone sewage collection system will be similar regardless of the treatment alternative chosen. The location of the force mains and the need for pumping the sewage flows versus a gravity system will vary with the chosen alternative.

The alternative recommended to the applicant is to construct the master planned Fontana Interceptor to the maximum size permitted without jeopardizing grant funding, deactivate RP No. 3, and connect to the interceptor for treatment and disposal by CBMWD at RP No. 1. As peak flows from the interceptor's master planned tributary area increase to the pipeline capacity, an equalization basin could be constructed at the present RP No. 3 site to store flow during the peak hours of the day and discharging them to the interceptor during low flow periods. This will allow CBMWD time to

crystallize its regional wastewater reclamation plans and the role the existing RP No. 3 will play. A possibility would be to construct a pilot reclamation plant of approximately 1 mgd with capability of expansion to 4 mgd.

1.5

Existing Sewage Facilities

CBMWD currently operates RP No. 3 in addition to two other regional plants in Ontario (RP No. 1) and Chino (RP No. 2). RP No. 3 is a 4-mgd primary treatment plant centrally located on the northern edge of the proposed Southridge Village tract. RP No. 3 was constructed in 1957 to treat the sewage flows from the city of Fontana. Following primary clarification, the effluent is percolated to the groundwater in 30 acres of percolation ponds. RP No. 3 is operating under temporary discharge requirements issued by the SARWQCB. The SARWQCB has indicated that to continue percolating effluent, RP No. 3 will probably have to meet the basin plan objectives of 330-milligrams per liter (mg/l) total dissolved solids (TDS) and a limit of 20-mg/l BOD and 20-mg/l suspended solids. The 20-20 limitation on BOD and suspended solids is consistent with the discharge requirements issued by the SARWQCB for RP No. 1 in Ontario. Thus, to continue operation in the future, including groundwater recharge, RP No. 3 will probably require an advanced wastewater treatment (AWT) scheme to include activated sludge-tertiary filtration and demineralization or an equivalent treatment scheme.

1.6 New Wastewater Facilities

New wastewater facilities will depend on the alternative chosen for the project. The intended use of the wastewater will determine the degree and type of treatment required. For example, if the wastewater is to be reused within the community, extensive treatment will be required. If the wastewater from the project area is exported to CBMWD's RP No. 1 by way of an interceptor pipeline, then no treatment would be required except for possibly hydraulic flow equalization.

2.0 ENVIRONMENTAL SETTING

2.1 Location

Southridge Village encompasses approximately 2,560 acres in the southern portion of the city of Fontana between Jurupa Avenue and the San Bernardino/Riverside county line from Mulberry Avenue on the west to Sierra Avenue on the east. The sewage treatment and disposal facilities will be served by CBMWD.

2.2 Regional Setting

The project site is located in the south-central section of San Bernardino County. The San Bernardino Freeway is located 1.25 miles to the north, and the Devore Freeway is 2.5 miles to the west. The southern and eastern portions of the site extend into the Jurupa Mountains, rising to elevations of 1,700 feet. The northerly and westerly portions slope gently to the southwestern corner of the site.

2.3 Project Characteristics

Southridge Village involves the subdivision of 2,560 acres of vacant land into 8,800 residential units of various types. The proposed project involves implementation of the proposed Fontana Interceptor and connection thereto for treatment of the wastewater generated within the proposed development. The existing RP No. 3 would be deactivated now with the possibility of upgrading and reactivating at some time in the future for production of a maximum of 4-mgd reclaimed wastewater if resolution of CBMWD's master plan indicates it is cost effective.

2.4 Topography

The Southridge Village site is bounded on the southerly side by a substantial mountainous range which protrudes into the site at the center. This divides the site into two areas: the easterly half slopes to varying degrees in a northwest direction to the site of the existing RP No. 3 and the westerly half slopes to the southwest corner of the site.

Gravity sewerlines will follow the natural drainage patterns. Flow generated in the southwesterly corner may require pumping, depending upon the final route selected for the Fontana Interceptor.

2.5 Groundwater

Groundwater underlies the proposed project area and is part of the Chino II subbasin of the Upper Santa Ana River Watershed.

2.6 Groundwater Quality

The quality of the groundwater in the Chino II subbasin is of good quality. The groundwater quality objectives for this subbasin as determined by the SARWQCB are 330-mg/l TDS, 15-mg/l chloride, 180-mg/l hardness, 5-mg/l nitrate nitrogen, 15-mg/l sodium, and 10-mg/l sulfate.

3.0 IMPACTS

3.1 Construction Impacts

The grading of the treatment plantsite will result in irreversible changes to the natural topography. In addition, the visual features of the area will be altered by construction of the facilities.

The construction of the Fontana Interceptor will cause the following short-term unavoidable adverse impacts:

1. The creation of noise, dust, and air pollutants from the operation of mechanical construction equipment.
2. Disturbance to natural vegetation and wildlife habitat.
3. Landform alterations through the disposal of excavated material generated by trenching activities and cut and fill operations required for emplacement of the reservoirs.
4. Increased risks of erosion, sedimentation, flooding, fire, and accidental injury.
5. Temporary disruption of traffic flow along roadways in which the pipeline will be emplaced.

The magnitude of these short-term impacts will be reduced substantially through the incorporation of mitigation measures in the project design and construction contracts, but their effects cannot be eliminated entirely.

3.2 Changes in Surface Water Quantity and Quality

Should it become feasible to upgrade and reactivate RP No. 3 for reclaimed wastewater production, irrigation will be done using application rates that prevent runoff into the surface water stream. Whatever is not utilized for irrigation may be percolated utilizing the ground as a filter. There will be no changes to surface water quantity or quality.

3.3 Changes in Groundwater Quantity and Quality

If RP No. 3 is upgraded and reactivated, the treatment effluent will have an indirect impact on the groundwater quality both locally and downstream.

Most of the impacts of using effluent for irrigation would occur whether or not domestic supply or reclaimed wastewater is used. Irrigation generally has a degradative effect on the quality of receiving waters, regardless of the source of the irrigation water. This is due primarily to the concentrating effect of evaporation and vegetative transpiration. Mineral constituents present in the applied irrigation water are deposited and become concentrated in the soil profile and are eventually carried into receiving groundwater basins.

In evaluating the impacts of irrigation with reclaimed wastewater, a comparison must be made between the quality of the reclaimed wastewater and the water which would otherwise be used for irrigation - in this case, domestic water purchased from Fontana Water Company. The important points are the incremental additions from domestic use, taking into account removals or alterations by treatment.

The groundwater in the local basin is considered to be of very good quality. One of the main concerns with underground disposal is the buildup of minerals in the groundwater. CBMWD is currently operating RP No. 3 under temporary discharge requirements issued by the SARWQCB. The SARWQCB has indicated that to continue percolating effluent, RP No. 3 will probably have to meet the basin plan objectives of 330-mg/l TDS and a limit of 20-mg/l BOD and 20-mg/l suspended solids. The 20-20 limitation on BOD and suspended solids is consistent with the discharge requirements issued by the SARWQCB for RP No. 1 in Ontario. Thus, to continue operation in the future, including groundwater recharge, RP No. 3 will probably require an AWT scheme to include activated sludge-tertiary filtration and demineralization or an equivalent treatment scheme.

The mineral constituents in the effluent can be reduced by processing it through a reverse osmosis unit. Reverse osmosis is a water treatment process that uses a semipermeable membrane that acts

as a molecular filter to remove up to 95 percent of all dissolved solids. A typical installation consists of a pump, pressure vessels with membranes, and controls to regulate the process.

If the effluent is processed through a reverse osmosis unit, the standard objectives of the SARWQCB can be met consistently and there will be no degradation. If, however, the effluent is not processed through a reverse osmosis unit, there could be an incremental degradation to the quality depending upon the quality standards set by the SARWQCB.

Mitigation of the mineral limits by treating sewage can be done but is costly. Plants actually performing this operation report a cost of \$22 per 1,000 gallons of effluent that is processed through the reverse osmosis system.

3.4 Land-Use Changes

The upgraded and reactivated treatment plant will be located at the present plantsite. If an interim flow equalization basin is required, it would also be located within the present plantsite.

Drainage from local runoff can be readily diverted around each side of the new effluent wet-weather storage reservoir onto the an area where runoff currently goes.

The existing percolation ponds will continue to be used for the same purpose with minor drainage improvements to control runoff and divert it around the site.

3.5

Regional and Local Policies

CBMWD will serve the proposed project to provide sewage collection, treatment, and disposal. The area east of Beech Avenue will require deannexing from the San Bernardino Municipal Water District and annexation by CBMWD. The district presently has a permit from the SARWQCB setting discharge standards for its sewage effluent. The future modification of the district's RP No. 3 to upgrade the existing facility and accommodate the project if it proves regionally feasible will be done to meet new discharge standards set by the SARWQCB. The policy of the district is to serve the area within its boundary.

3.6

Air Quality

If the upgrading and reactivating of RP No. 3 is incorporated in CBMWD's reclamation master plan, a potential concern with wastewater treatment facilities is the emission of odors which may (or may not) be offensive to some people. The two most common reasons for such odors are (1) biological upset of the plant, or (2) waste solids handling.

One of the major reasons for selecting the treatment process is its ability to withstand shock loadings and not be subject to biological upset. However, even the best designed and operated plants will create minor musky odors which may or may not be offensive to people.

Solids handling could be minimized at the RP No. 3 site by diverting them into the Fontana Interceptor for handling at RP No. 1.

3.7 Operation of the Treatment Plant

If an upgraded RP No. 3 is reactivated, proper operation of the plant will require good operator skills and routine monitoring. An important aspect of operation is an adequate budget with which to make repairs and purchase new parts.

Electrical power outages are one aspect of operation that can make the plant inoperative during which time the biological process can become upset and fail, thus resulting in strong odors. This potential problem can be eliminated by including an electrical generator for standby power during outages.

The treatment plant will normally discharge its oxidized, disinfected, and filtered effluent into percolation ponds where it can be used for irrigation purposes or percolate into the groundwater basin.

4.0 PROJECT ALTERNATIVES

4.1 General

Eleven project alternatives are given on the following pages. A description of each alternative is provided followed by a schematic for clarification. Estimated costs were developed for all of the alternatives including the no project alternative.

Other alternatives were studied, but were not considered viable in view of the project. One such alternative considered upgrading RP No. 3 to secondary treatment and percolating the effluent into the local groundwater basin. As discussed earlier, the SARWQCB has indicated that effluent used for recharge directly to the groundwater

basin would probably be subject to the basin plan's mineral objective of 330 mg/l as measured by TDS. Since the influent to RP No. 3 is currently 508 mg/l, secondary treatment which does not remove dissolved minerals would not produce an effluent able to meet the basin plan's mineral objective.

Other alternatives included septic tank treatment and a blending scheme with potable water to remove the need for demineralization. The septic tank alternative was not considered viable because the SARWQCB has historically advocated a policy of sewerage undeveloped areas to a centralized publicly operated treatment facility.

An alternative to upgrade RP No. 3 to tertiary filtration and blend the effluent with domestic drinking water was also considered not viable because of the huge volume of blending water required. The "blending" alternative would lower the concentration of dissolved minerals through dilution to meet the basin plan's mineral objective. Assuming influent TDS = 508 mg/l, influent flow rate = 2.25 mgd, and a domestic water TDS of 278 mg/l, the blending alternative would require 7.70 mgd of domestic water to reduce the wastewater TDS to 330 mg/l.

ALTERNATIVE 1a

No Project. Southridge Village is not constructed. Fontana Interceptor built with federal and state participation.

There are two variations of the No Project alternative. They are listed as Alternative 1a and Alternative 1b. Alternative 1a is described here and Alternative 1b is described in the following alternative.

The no project alternative represents the baseline assumptions that are expected to occur whether or not Southridge Village is built. In this alternative Southridge Village is not constructed. The Fontana Interceptor is built with federal, state, and local funds to bypass Regional Plant No. 3 to route the sewage flows from the city of Fontana to CBMWD's Regional Plant No. 1 in Ontario. The interceptor would be oversized to carry the anticipated peak flow rate of 11.3 MGD at the upstream end. Under this alternative a Clean Water Grant would finance 87½ percent of the grant eligible costs of the pipeline. The interceptor would be oversized from the grant eligible flow of 10.2 MGD to 11.3 MGD. The sewage flow would be treated through primary, secondary and tertiary filtration at Regional Plant No. 1. Regional Plant No. 3 (Fontana) would be deactivated indefinitely.

ALTERNATIVE 1b

No Project. Southridge is not constructed. Fontana Interceptor is built with local funds only.

This alternative is a variation of Alternative 1a and represents the case where the Fontana Interceptor is built with local funds only, i.e., no federal or state participation in the financing. As in the case of Alternative 1a,

ALTERNATIVE 4

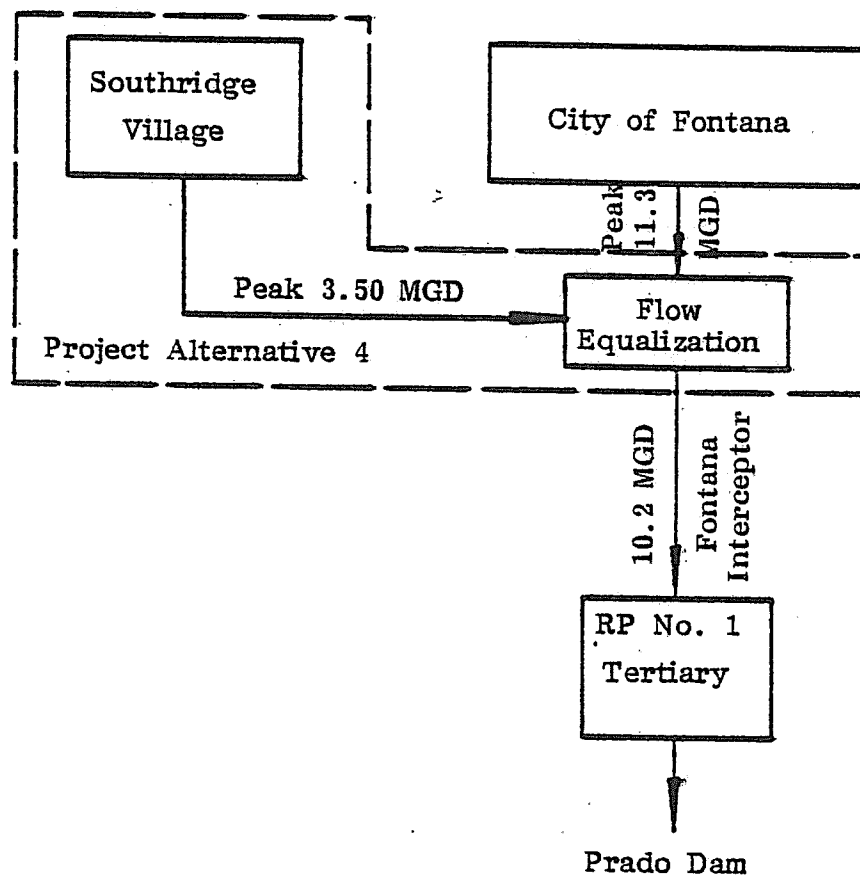
Route Southridge Village flows to Regional Plant No. 1 in the Fontana Interceptor using flow equalization to dampen peak flows.

Rather than constructing an entirely new interceptor (Alternative 3) to handle Southridge Village flows, add flow equalization to the headworks of the Fontana Interceptor and run it at a constant flow. This would utilize the off-peak capacity in the Fontana Interceptor and preclude the necessity of building a second interceptor. RP No. 3 would be deactivated indefinitely.

ALTERNATIVE 5

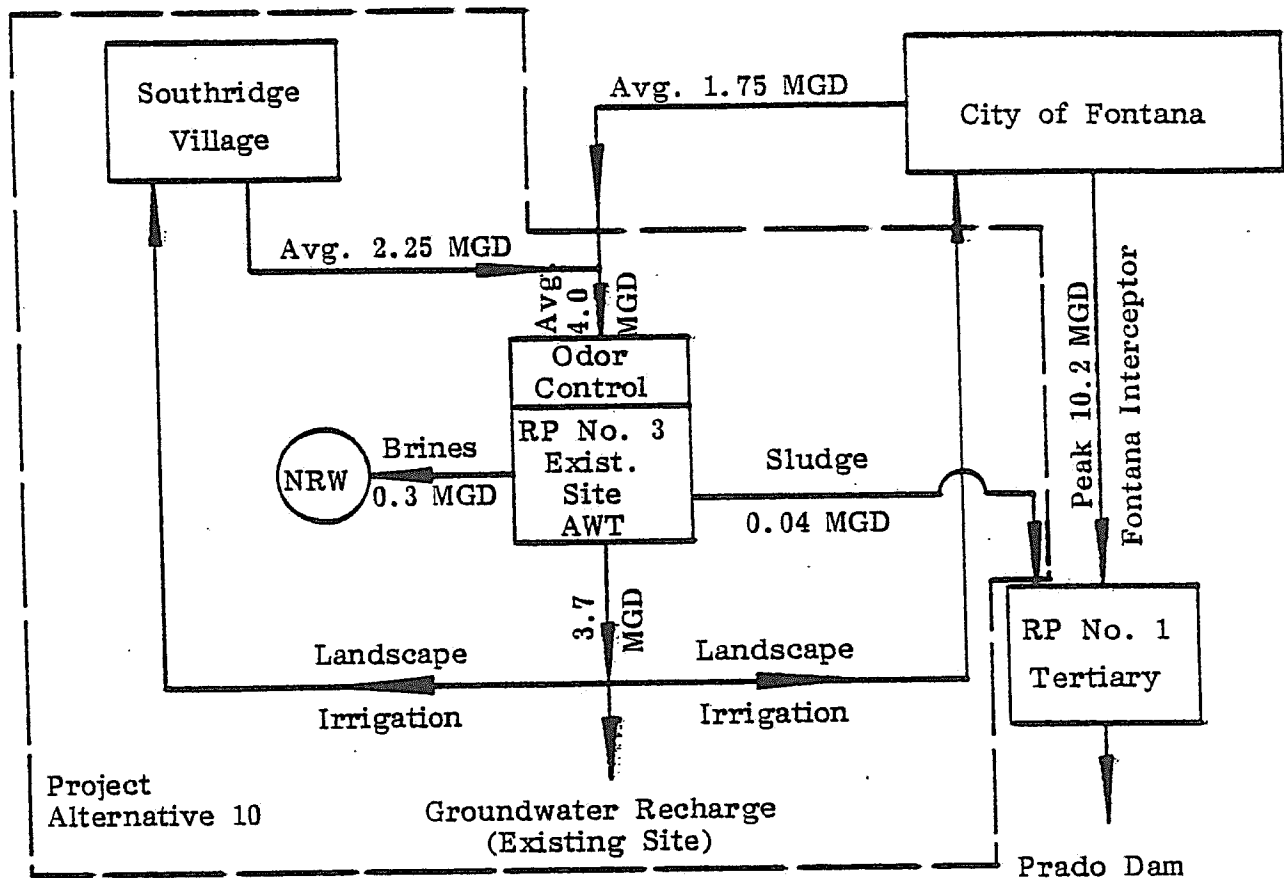
Upgrade Regional Plant No. 3 to treat and reclaim Southridge Village flows. Use reclaimed water for groundwater recharge and landscape irrigation.

Upgrade RP No. 3 to 2.25 MGD of advanced wastewater treatment. This would entail primary, secondary, tertiary filtration, and reverse osmosis demineralization. It was assumed that demineralization would be necessary in order to meet the Regional Board's basin plan objectives for the Chino II groundwater subbasin. Fifty percent of the plant's total flow would require demineralization to meet the basin plan objectives. RP No. 3 would remain at the existing site and all of its treated effluent would be used for either groundwater recharge or landscape irrigation. RP No. 3 would treat only Southridge Village influent. Flows from the city of Fontana would be routed to the Fontana Interceptor. The brine wastes from the reverse osmosis unit would be routed to the nonreclaimable waste line. It was estimated that 3 units of capacity would be purchased in the NRW line. RP No. 3 would produce 2.08 MGD of high quality reclaimed water for reuse.



1. Southridge Village is developed to 8800 dwelling units.
2. Fontana Interceptor is built to grant eligible flow of 10.2 MGD.
3. Flow equalization is utilized to dampen diurnal peak flows from Southridge Village (3.50 MGD) and the city of Fontana (11.3 MGD) to Regional Plant No. 1.
4. Regional Plant No. 3 is deactivated.
5. Capital cost of alternative for flow equalization basins, sewage treatment capacity at CBMWD's Regional Plant No. 1, and sewage collection system is \$11,758,000.
6. Annual cost of alternative for capital amortization, O&M, sewage treatment cost is \$1,983,000. See Table IV for cost details.





1. Southridge Village is developed to 8800 dwelling units.
2. RP No. 3 sludge is piped to RP No. 1 for treatment.
3. Odor control measures are instituted at RP No. 3.
4. RP No. 3 is upgraded to 4.0 MGD AWT, and remains located at the existing site.
5. Assume demineralization of reclaimed water necessary to meet Regional Board's standards for reuse.
6. 3.70 MGD of reclaimed water available for reuse.
7. 0.30 MGD of brine wastes routed to NRW for disposal.
8. Capital cost of alternative for RP No. 3 upgrade, odor control facilities, sludge pipeline, reclaimed water distribution system, NRW capacity, sewage collection system, and land is \$23,526,000. (Southridge Village share only.)
9. Annual cost of alternative for capital amortization, O&M, and sludge treatment at RP No. 1 is \$5,501,000. (Southridge Village share only.)
10. Annual value of reclaimed water is \$2,900,000. See Table X for cost details.

TABLE X

ESTIMATED COSTS OF ALTERNATIVE 10

Expand Regional Plant No. 3 to 4-mgd AWT Capacity and Enclose Main Odor Sources; Transport Sludge Via Pipeline to Regional Plant No. 1. Continue to Percolate Effluent in Existing Ponds.(1)

Treatment Costs	(2) Size mgd	(3) Construction Costs (\$)	(4) Annual Costs (\$)
Preliminary Treatment	2.25	217,000	
Influent Pumping	2.25	491,000	
Flow Equalization	2.25	235,000	
Primary Sedimentation	2.25	234,000	
Activated Sludge-Aeration	2.25	666,000	
Secondary Clarification	2.25	358,000	
Chemical Addition	2.25	134,000	
Filtration	2.25	530,000	
Reverse Osmosis	2.0(5)	4,000,000	
Blending Reservoir	3.7	250,000	
Sludge Pipeline (6)	0.015	900,000	
Odor Control Facilities (7)	---	250,000	
Reclaimed Water Distribution System (8)		5,000,000	
Subtotal		\$13,265,000	
Contingencies at 15%		1,990,000	
Technical Services at 20%		3,051,000	
NRW Capacity - Initial Charges		100,000	
Collection System		2,620,000	
Land for Plantsite (9)		2,500,000	
Total Project Cost		\$23,526,000	2,763,000
NRW - Volumetric and Standby Charges (10)			154,000
O & M - Treatment Plant (10)			2,015,000
O & M - Sludge Pipeline (8)			20,000
O & M - Reclaimed Water Distribution System (8)			25,000
Sludge Treatment Cost at Regional Plant No. 1 (11)			524,000
Total Annual Cost			\$5,501,000
Annual Value of 3.7 mgd of Reclaimed Water			2,900,000(11)

(1) The costs shown represent only that portion of treatment beyond the no project alternative.

(2) The capacities shown represent only that portion of treatment attributable to Southridge Village.

(3) Capital costs are indexed to second quarter 1981 costs. (2Q/81) 200.

(4) Assumes 20-year average life of entire facility at 10% interest.

(5) Assumes demineralization of 50% of total flows.

(6) 34,600 feet of 6-inch-diameter pipe to carry raw sludges from Regional Plant No. 3 for treatment at Regional Plant No. 1. Assume \$26/linear foot.

(7) Odor control facilities include 2,800 square feet of cover on primary sedimentation basin at \$30/square foot. Additional cost estimated for air scrubbing unit also included.

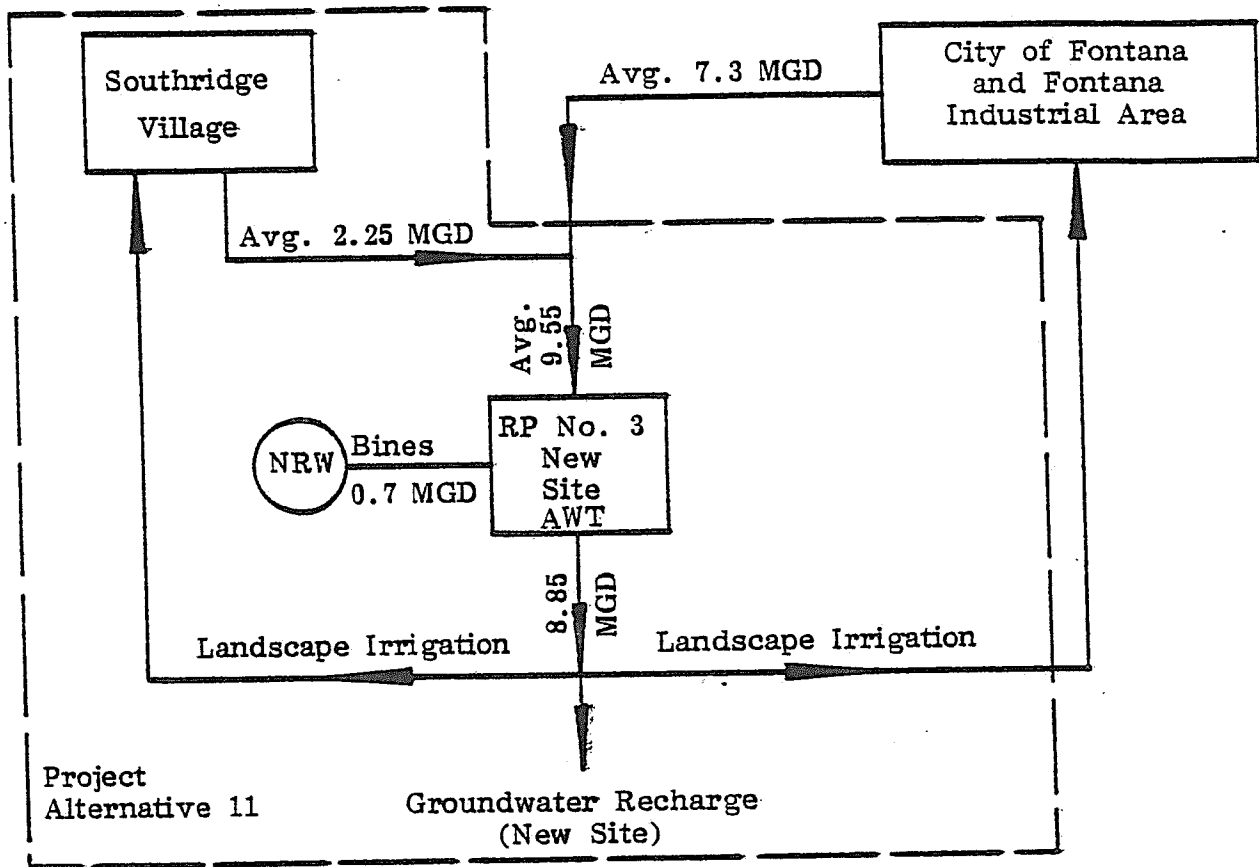
(8) Estimated cost.

(9) Assume plant would require 50 acres at \$50,000/acre.

(10) Anticipated mean annual cost over 20-year life of the facility inflated at 10% per annum.

(11) See Footnote 8, Table V. 3.7 mgd x 1,120 acre-feet/year/mgd x \$690/acre-foot = \$2,900,000.

(12) Assume average annual cost of sludge treatment over 20-year period to be \$524,000/year. This is based on a current estimated annual cost of \$202,000 inflated at 10% per annum. \$202,000 is difference in treatment plant O & M costs between Alternative 9 and Alternative 10 prior to inflation.



1. Southridge Village is developed to 8800 dwelling units.
2. Fontana Interceptor is not built. All flows from the city of Fontana (Q avg. = 7.3 MGD) and all flows from Southridge Village (Q avg. = 2.25 MGD) are treated at RP No. 3. RP No. 3 is relocated to the industrial area southwest of the project area.
3. Assume demineralization required to meet Regional Board standards.
4. 8.85 MGD of reclaimed water available for reuse.
5. 0.7 MGD of brines are routed to NRW for disposal.
6. Capital cost for RP No. 3 upgrade, reclaimed water distribution system, NRW capacity, sewage collection system, and land is \$31,492,000. (Southridge Village share only.)
7. Annual cost of alternative for capital amortization and O&M is \$8,340,000. (Southridge Village share only.)
8. Annual value of reclaimed water is \$6,800,000. See Table XI for cost details.



TABLE XI

ESTIMATED COSTS OF ALTERNATIVE 11

Build New Plant Out of Project Area Southwest in
Industrial Area and Percolate Effluent in New Ponds (1)(2)

Treatment Costs	(3) Size (mgd)	(4) Construction Costs (\$)	(5) Annual Costs (\$)
Preliminary Treatment	2.25	217,000	
Influent Pumping	2.25	491,000	
Flow Equalization	2.25	235,000	
Primary Sedimentation	2.25	234,000	
Activated Sludge-Aeration	2.25	666,000	
Secondary Clarification	2.25	358,000	
Chemical Addition	2.25	134,000	
Filtration	2.25	530,000	
Reverse Osmosis	4.80(6)	9,600,000	
Blending Reservoir	8.85	300,000	
Sludge Thickening-Flotation	2.25	109,000	
Anaerobic Digestion	2.25	403,000	
Percolation Ponds (7)	8.85	100,000	
Reclaimed Water Distribution System (8)		<u>5,000,000</u>	
Subtotal		\$18,377,000	
Contingencies at 15%		2,757,000	
Technical Services at 20%		4,227,000	
NRW Capacity - Initial Charges		196,000	
Collection System		3,435,000	
Land for Plantsite (9)		<u>2,500,000</u>	
Total Project Cost		\$31,492,000	3,699,000
NRW - Volumetric and Standby Charges (10)			352,000
O & M - Treatment Plant (10)			4,264,000
O & M - Reclaimed Water Distribution System (8)			<u>25,000</u>
Total Annual Cost			\$8,340,000
Annual Value of 8.85 mgd of Reclaimed Water			6,800,000(11)

(1) Assume any industrial flows influent to plant will not exceed heavy metals concentrations of existing Regional Plant No. 1 discharge requirements and that percolation of effluent to the groundwater basin will be allowed by Santa Ana Regional Board.

(2) The costs shown represent only that increment of treatment beyond the no project alternative.

(3) The capacities shown represent only that portion of treatment through filtration attributable to Southridge Village. All of treatment past filtration attributed to Southridge Village.

(4) Capital costs indexed to second quarter 1981 costs (2Q/81) 200.

(5) Assume 20-year average life of facility at 10% interest.

(6) Assume 50% of plant flow is demineralized with 85% water recovery, i.e., 15% of demineralized flow is wasted as brine.

(7) Cost of land for ponds not included in this cost.

(8) Estimated cost.

(9) Assume entire facility would require 50 acres at \$50,000/acre.

(10) Anticipated mean annual cost over 20-year life of the facility inflated at 10% per annum.

(11) See Footnote 8, Table V. 8.85 mgd x 1,120 acre-feet/year/mgd x \$690/acre-foot = \$6,800,000.

DISCUSSION

This investigation has presented several viable options for treating or disposing of the sewage flows from the proposed Southridge Village. Those options basically fall into three categories:

- (1) upgrade RP No. 3 and recycle or recharge the effluent, and
- (2) route the flows to RP No. 1 by way of an interceptor pipeline.

An ever-present third category is, of course, the no project alternative. Odor control mechanisms could be added to the alternative treatment schemes with only a nominal increase in capital costs.

Upgrading RP No. 3 to meet the anticipated stringent regulatory requirements for wastewater reuse would be costly. AWT never has been inexpensive. A scheme to reuse the highly treated reclaimed water in Southridge Village would provide the development with a measure of independence from drought because reclaimed water is not usually subject to rationing during dry spells. Building a reclaimed water system would lessen the demand for potable water if the reclaimed water were used for landscape irrigation as is practiced in Orange County at the Irvine Ranch Water District. Recharging the groundwater basin with effluent from an upgraded RP No. 3 would help to maintain a high quality groundwater resource for the community. An AWT plant, however, is expensive to build and expensive to maintain. The AWT O&M costs were taken from EPA's "Analysis of Operations and Maintenance Costs for Municipal Wastewater Treatment Systems,"

May, 1978, and Orange County Water District's "The Cost of Water Reclamation by Advanced Wastewater Treatment," David G. Argo, October, 1978. EPA's annual O&M cost equations were used in addition to Argo's reported O&M costs for reverse osmosis. Since reverse osmosis treatment is rare, it was assumed that EPA's AWT cost equations did not include the O&M cost of demineralization. Argo's unit O&M cost reported from actual experience at Water Factory 21 in Fountain Valley, California, was used in approximating the O&M cost of a reverse osmosis process for RP No. 3.

Reverse osmosis was chosen as the demineralization process of choice because of its ability to remove organics as well as dissolved minerals from wastewater. Reverse osmosis, though, requires extensive pretreatment of influent flows to remove suspended solids to prevent premature fouling of the membranes. Chemical addition and filtration were included in the treatment scheme as pretreatment processes to reverse osmosis. Pilot plant testing would be required to verify the efficacy of chemical addition and filtration following biological treatment to produce an effluent low enough in suspended solids for demineralization by reverse osmosis.

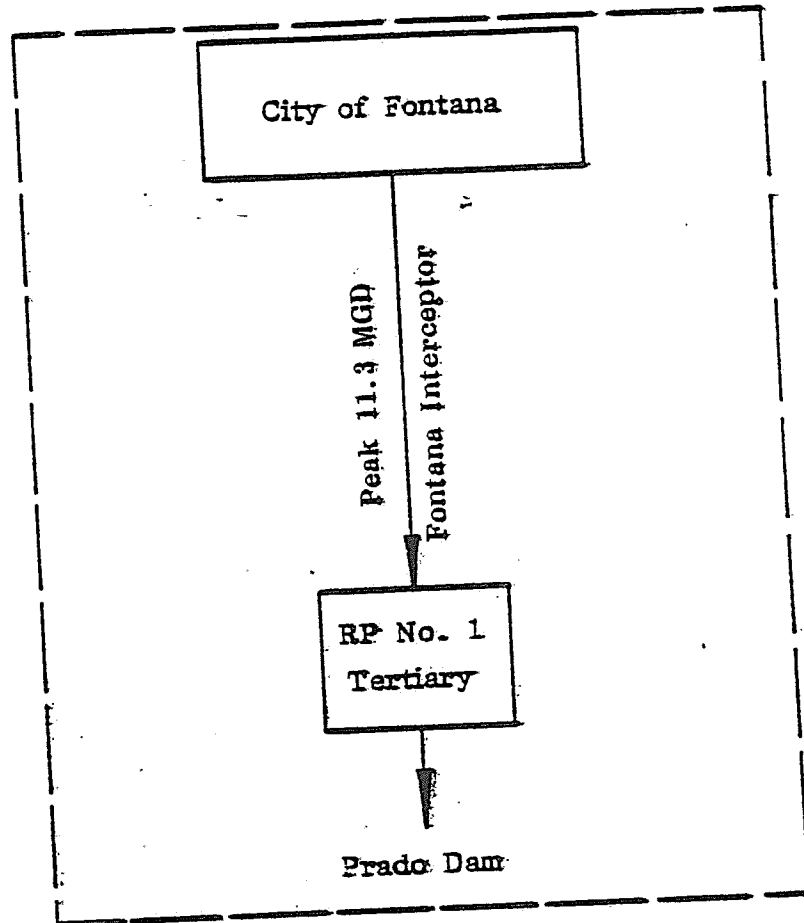
The second category of alternatives would route the sewage flows from Southridge Village in an interceptor pipeline to RP No. 1 in Ontario. The "interceptor" alternatives fall into two basic categories: (1) transport the flows in the Fontana Interceptor or (2) transport the flows in a new interceptor. Using the Fontana Interceptor to carry both the flows from Southridge Village and the city of Fontana would overload the pipeline during peak flow periods because the interceptor was not

TABLE XII
SUMMARY OF COSTS FOR PROJECT ALTERNATIVES

Alternative Number	Alternative	Average Flow (mgd)	Peak Flow (mgd)	Capital Cost (\$)	Annual Cost (\$)	Value of RW (\$)	Net Annual Cost (\$)	Remarks
1a	No Project w/Grant	7.3	11.3	423,000	1,326,000	0	1,326,000	Chances appear slim for federal grant
1b	No Project w/o Grant	7.3	11.3	8,495,000	2,274,000	0	2,274,000	More realistic no project cost
2	Fontana Interceptor and SRV	9.55	14.8	10,522,000	1,836,000	0	1,836,000	Interceptor could not handle peak flows
3	New Interceptor	2.25	3.5	16,966,000	2,650,000	0	2,650,000	Two interceptors would be redundant
4	Fontana Interceptor w/Flow Equalization	2.25	3.5	11,785,000	1,983,000	0	1,983,000	Flow equalization to handle peak flows
5	RP No. 3, Existing Site and Ponds	2.25	3.5	20,475,000	4,520,000	1,600,000	2,920,000	Odor problems, AWT is costly
6	RP No. 3, New Site, Existing Ponds	2.25	3.5	22,635,000	4,787,000	1,600,000	3,187,000	Odor problems, AWT is costly
7	RP No. 3, New Site, and Ponds	2.25	3.5	21,358,000	4,624,000	1,600,000	3,024,000	Odor problems, AWT is costly
8	RP No. 3, SRV and Fontana	4.0	6.2	22,645,000	5,378,000	2,900,000	2,478,000	Odor problems, AWT is costly
9	RP No. 3, Odor Control	4.0	6.2	24,715,000	5,621,000	2,900,000	2,721,000	Odor control, some capacity for city of Fontana
10	RP No. 3, Sludge to RP No. 1	4.0	6.2	23,526,000	5,501,000	2,900,000	2,601,000	Odor control and no sludge treatment
11	RP No. 3, No Fontana Interceptor	9.55	14.8	31,492,000	8,340,000	6,800,000	1,540,000	Supply reclaimed water may exceed demand

TABLE XIII
BEC RANKING OF ALTERNATIVES

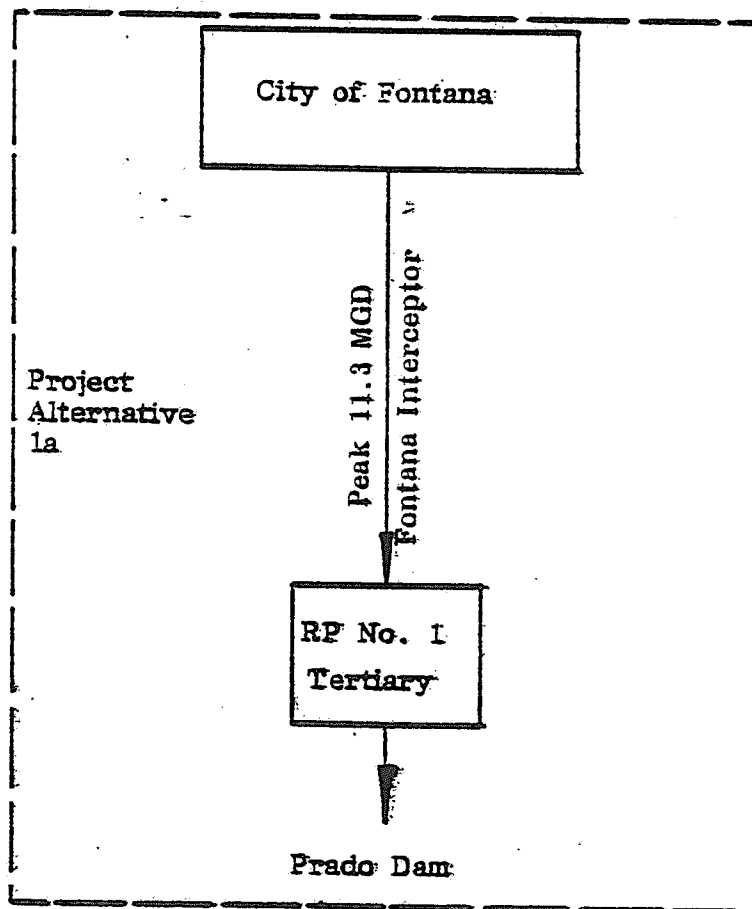
<u>Ranking</u>	<u>Alternative</u>	<u>Remarks</u>
1	4	Would provide feasible solution at the lowest cost.
2	3	Although redundant, a second interceptor would relieve community of odors and O & M problems of a sophisticated treatment plant.
3	10	Provides reclaimed water to community while minimizing odor and O & M problems.
4	9	Provides reclaimed water to community while minimizing odor problems.
5	5, 6, 7, 8	Provides reclaimed water to community.
6	11	Further study required to determine if demand exists for 8.55 mgd of reclaimed water. Would preclude building of Fontana Interceptor.
7	2	Not recommended--Fontana Interceptor would be overloaded during daily peak flows.
No ranking	1a, 1b	Community must decide whether or not to build project. Alternative 1b is more realistic than Alternative 1a.



Project Alternative 1b

1. Southridge Village is not developed.
2. Fontana Interceptor is built with local funds only - no federal/state participation.
3. Fontana Interceptor is sized to carry 11.3 MGD.
4. City of Fontana's flows are treated through tertiary filtration at Regional Plant No. 1.
5. Regional Plant No. 3 is deactivated.
6. Capital cost of alternative for Fontana Interceptor is \$8,495,000.
7. Annual cost of alternative for capital amortization, O&M and sewage treatment cost is \$2,274,000. See Table I for cost details.





1. Southridge Village is not developed.
2. Fontana Interceptor is built with Clean Water Grant and local funds to oversize capacity.
3. Fontana Interceptor is sized to carry city of Fontana's year 2000 peak flow of 11.3 MGD.
4. City of Fontana's sewage flows treated through tertiary filtration at Regional Plant No. 1.
5. Regional Plant No. 3 is deactivated.
6. Capital cost of alternative for Fontana Interceptor (local share only) is \$423,000.
7. Annual cost of alternative for capital amortization, O&M, and sewage treatment cost is \$1,326,000. See Table I for cost details.



Bous Engineering Corporation
consulting engineers / architects

Alternative 1a
No Project

Figure 1a

TABLE I

ESTIMATED COSTS OF ALTERNATIVE 1

No Project Alternative, Southridge Village is Not Constructed,
Fontana Interceptor is Built, and
Regional Plant No. 3 is Deactivated

	Size (mgd)	Construction Costs (\$)	(2) Annual Costs (\$)
<u>Alternative 1a - Federal/State Clean Water Grant</u>			
Pipeline Costs (1)	11.3(3)		
Construction		323,000	
Technical Services		45,000	
Right-of-Way		0	
Lost Grape Vines		0	
Contingencies at 15%		<u>55,000</u>	
Total Project Cost (local share only)		\$423,000	50,000
O & M - Pipeline (4)			65,000
Sewage Treatment Cost (5)			<u>1,211,000</u>
Total Annual Cost			\$1,326,000
<u>Alternative 1b - No Federal/State Clean Water Grant</u>			
Pipeline Costs (1)	11.3(3)		
Construction		6,245,000	
Technical Services		935,000	
Right-of-Way		142,000	
Lost Grape Vines		65,000	
Contingencies at 15%		<u>1,108,000</u>	
Total Project Cost		\$8,495,000	998,000
O & M (4)			65,000
Sewage Treatment Cost (5)			<u>1,211,000</u>
Total Annual Cost			\$2,274,000

(1) Pipeline costs, except the contingency fee, were taken from CBMWD's "Fontana Interceptor Pre-Design Report," August, 1978. Costs shown are for Alternative Route 2 and all costs were adjusted for inflation. The EPA Wastewater Treatment Plant cost indice for second quarter 1981 was estimated to be 200.

(2) Assumes 20-year average life of facility at 10% interest.

(3) Pipeline oversized to handle city of Fontana's 2000 year peak flow of 11.3 mgd; grant eligible flow is 10.2 mgd.

(4) O & M cost shown represents cost after 10 years at an annual inflation rate of 10%. Current O & M cost taken from Footnote 1 reference above.

(5) $\$721/\text{MG} \times 4.6 \text{ mgd} \times 365 \text{ days/year}$; $\$721/\text{MG}$ is the adjusted sewage treatment cost inflated at 10% per annum to the midpoint of the facility life at 10 years. Current treatment charge is $\$278/\text{MG}$. 4.6 mgd is the mean 20-year flow rate.

Alternative 1b would route all of its sewage flows to Regional Plant No. 1 through the Fontana Interceptor sized at 11.3 MGD at the upstream end to handle the year 2000 peak flows from the City of Fontana. Regional Plant No. 3 would be deactivated indefinitely.

ALTERNATIVE 2

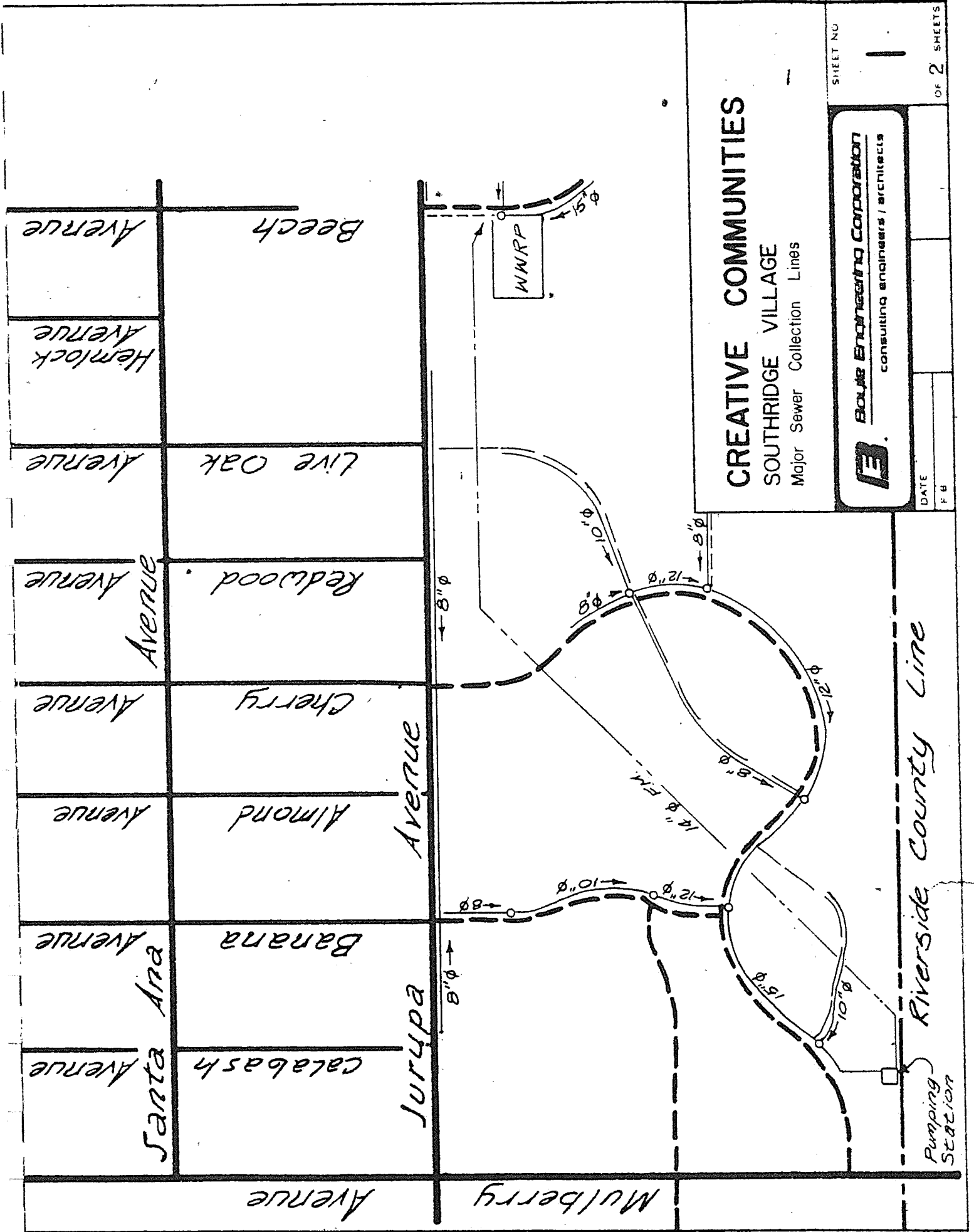
Route Southridge Village flows to the Fontana Interceptor for transport to Regional Plant No. 1.

Southridge Village is built to 8800 dwelling units and its sewage flows are routed to CBMWD's RP No. 1 for treatment via the Fontana Interceptor. RP No. 3 is deactivated for an indefinite period. This alternative assumes that by paying the CBMWD hook-up fee, currently priced at \$950/dwelling unit, that sewage service is afforded to Southridge Village by Chino Basin Municipal Water District.

ALTERNATIVE 3

Route Southridge Village flows to Regional Plant No. 1 in a new interceptor.

Since the Fontana Interceptor was not designed to accommodate flows from Southridge Village, it would be overloaded during periods of high flow if Southridge Village flows are tributary. Alternative 3, then, proposes to construct a separate pipeline to carry the flows from Southridge Village to CBMWD's RP No. 1 for treatment. RP No. 3 would be deactivated for an indefinite period. It was assumed that the Southridge Village project would have to pay for the new interceptor in addition to the hook-up fees to CBMWD.



CREATIVE COMMUNITIES
SOUTHRIDGE VILLAGE
 Major Sewer Collection Lines

B **Bouie Engineering Corporation**
 consulting engineers / architects

SHEET NO

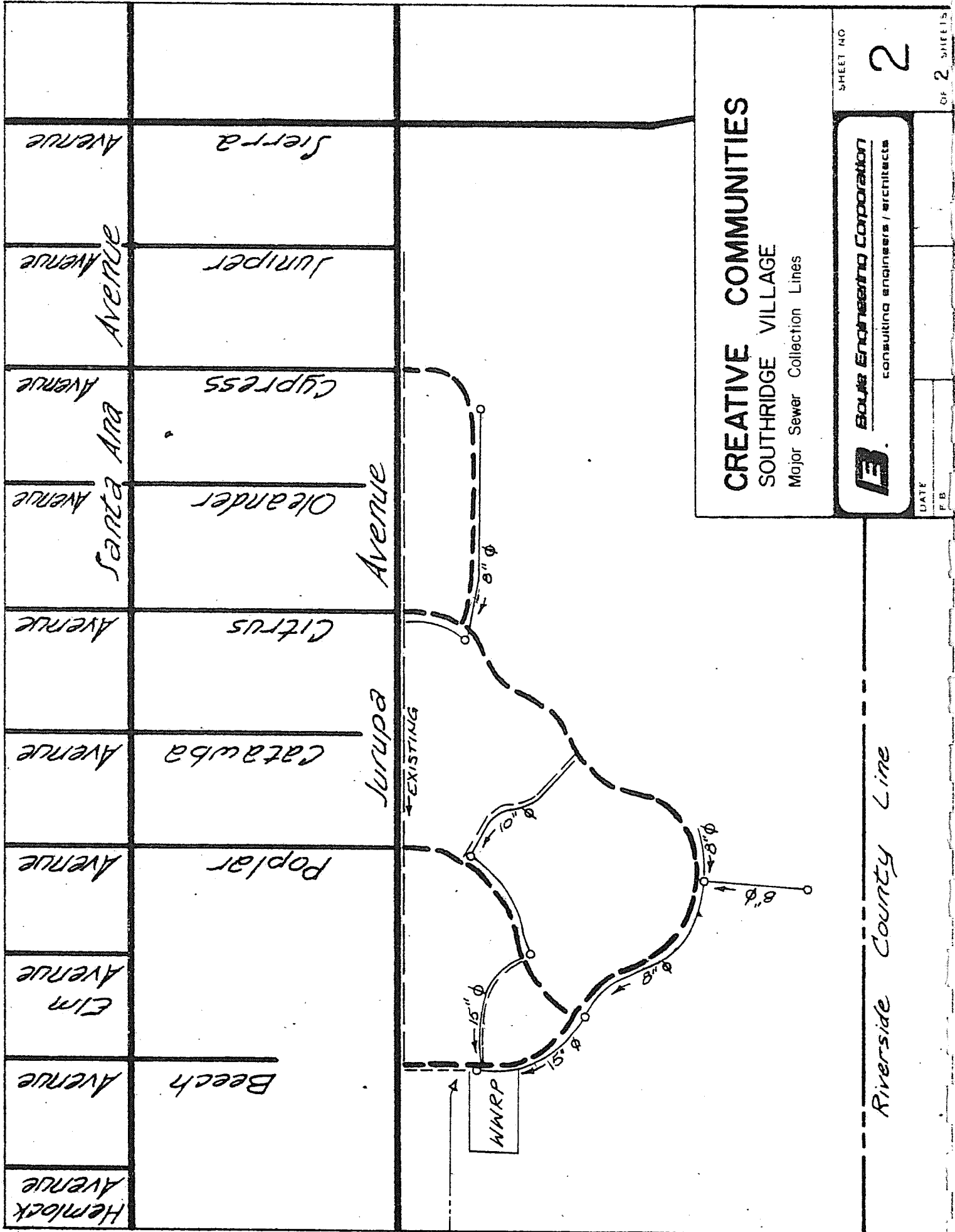
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DATE
 P.B.

OF 2 SHEETS

Riverside County Line

Pumping Station



CREATIVE COMMUNITIES
SOUTHRIDGE VILLAGE
 Major Sewer Collection Lines

BOYLE Engineering Corporation
 consulting engineers / architects

SHEET NO.

2

OF 2 SHEETS

Riverside County Line

Construction sites will be kept as neat and clean as practical. Programs to minimize adverse impacts of workmen's activities will be implemented, such as:

- Collection of workmen's personal refuse, cans, bottles, paper, and trash at regular intervals for removal.
- Portable toilets onsite, if necessary, to be available for workmen and staff with normal personal disposal facilities.
- All waste products (fuels, greases, oils, etc.) to be stored at all times to prevent spillage on the soil. All excess waste products to be removed or dumped in a suitable manner.

6.2 Groundwater Quality

If RP No. 3 is reactivated, it is reasonable to expect that the SARWQCB only set standards for the plant similar to the current orders. For RP No. 1 it will be necessary to process the domestic water through the reverse osmosis unit discussed previously to mitigate effluent quality and meet their requirements.

This mitigation measure would provide a quality of water suitable for either unrestricted irrigation use or percolation to the groundwater.

Even without the removal of minerals by reverse osmosis, the potential change in quality will be an improvement with the addition of secondary and tertiary treatment. This can be compared to the

present plant which percolates effluent into the groundwater basin after primary treatment only.

6.3 Soils and Geological Considerations

Design of the interceptor and treatment plant modifications will require the following analysis by a qualified soils engineer and geologist:

- Types of foundations and depths.
- Soil-bearing pressures
- Compaction and backfill requirements including erosion control for slopes
- Groundwater
- Expected cut slopes and embankment slopes
- Geologic-seismic factors with recommended seismic acceleration.
- Slope stability analysis for reservoir walls

This analysis will provide design data to mitigate earthquake factors, soil factors, and geologic considerations for the proposed project.

designed to carry Southridge Village flows. Flow equalization could be added to the pipeline to alleviate the periods of peak flow by utilizing the offpeak capacity. If the community does not wish to reuse the effluent from RP No. 3, then the Fontana Interceptor with flow equalization represents the least costly practical alternative.

In the event the Fontana Interceptor cannot be utilized by the Southridge Village project, a new interceptor could be built to transport the project's sewage to RP No. 1. Although it would seem redundant to build a second interceptor to RP No. 1, it is less costly than the alternatives proposing to upgrade RP No. 3 and does present an effective means of handling the sewage from Southridge Village.

Assuming the developers of Southridge Village wish to proceed on a schedule prior to CBMWD's resolution of their long-range plans for RP No. 3, the most reasonable and cost-effective alternative is to proceed with construction of and connection to the Fontana Interceptor for treatment at CBMWD's RP No. 1. Provisions of an equalization basis at the existing RP No. 3 site would allow the interceptor's capacity to be used more fully and provide additional time for finalization of CBMWD's regional plans.

.0 MITIGATION

3.1 Construction Procedures

Where applicable, the following protective measures should be incorporated into construction contracts to reduce environmental degradation to a minimum: specifications written to limit definable impacts, all laws with regard to environmental conservation be obeyed, and measures taken after construction to return

the areas not built upon as early as practicable to its original state.

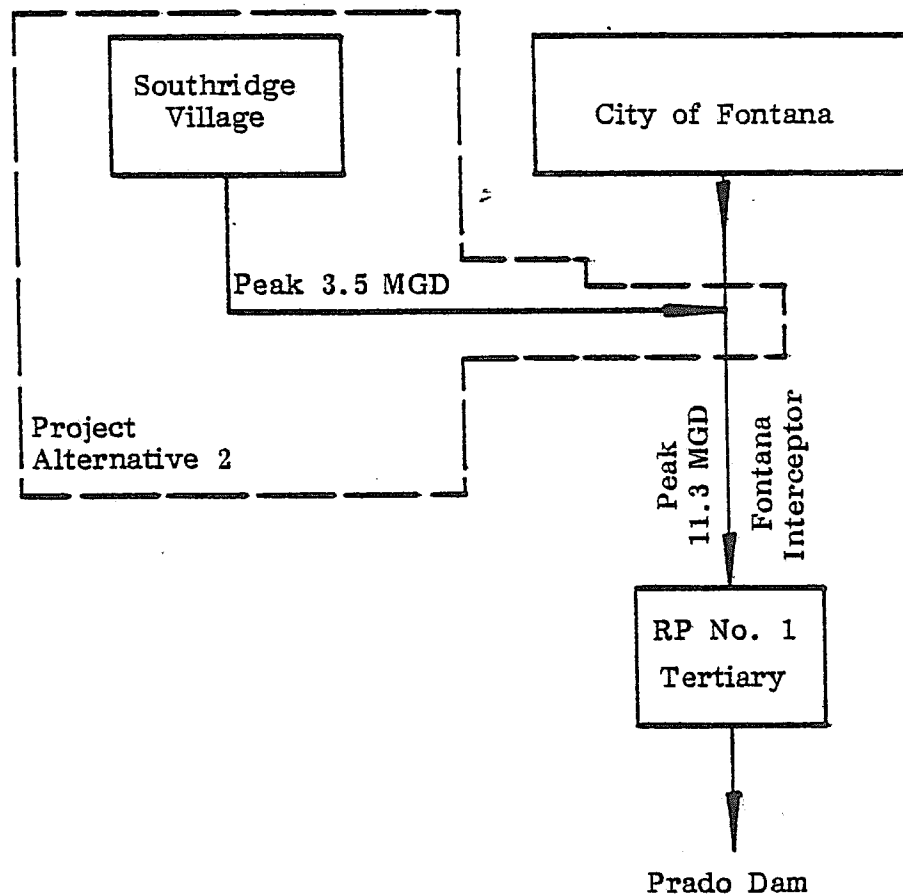
All roads must be kept open to traffic, as this is a requirement for emergency vehicles (i.e., fire and police departments).

Construction noise should be minimized by maximal use of muffled or quiet equipment and scheduling work to minimize noise intrusion. The state has legal restrictions on noise for internal combustion engines. Occupational safety and health act noise exposure requirements will not be exceeded as to residents, businesses, or workmen. Protective equipment will be used by workmen exposed to high noise levels.

Contractors' specifications should include measures to protect the public's health and safety during the construction phase. Safety is a major consideration, since the site is accessible to the public. Safe construction procedures should be enforced. Equipment and machinery must be stored where children cannot gain ready access to it; thus, fencing and security measures will be required to preclude any injuries occurring on the project site.

Contract methods to minimize erosion and maintain environmental protection will be achieved through contract documents, plans, and specifications including optimal scheduling of work.

Demolition wastes and any generated spoil not used onsite will be disposed of in an approved site and in an aesthetically pleasing manner. The contractor must comply with all applicable regulations covering the transportation of excavated material in trucks on city streets.



1. Southridge Village is developed to 8800 dwelling units.
2. Fontana Interceptor used to transport sewage flows from both city of Fontana and Southridge Village to Regional Plant No. 1 for treatment.
3. Regional Plant No. 3 is deactivated.
4. Assume Chino Basin MWD sewage treatment capacity charge "buys" Southridge Village into regional Fontana Interceptor.
5. Capital cost of alternative for sewage treatment capacity and sewage collection system is \$10,522,000.
6. Annual cost of alternative for capital amortization, O&M costs, and sewage treatment cost is \$1,836,000. See Table II for cost details.



TABLE II

ESTIMATED COSTS OF ALTERNATIVE 2

Route Southridge Village Sewage Flows to the
Fontana Interceptor for Transport to
Regional Plant No. 1 (Ontario) (1)

	(2) Construction Costs (\$)	(3) Annual Costs (\$)
Cost of Sewage Treatment Capacity at CBMWD Regional Plant No. 1 (4) Collection System	9,222,000 <u>1,300,000</u>	
Total Project Cost	\$10,522,000	1,236,000
O & M Cost - Pipeline (5)		8,000
Sewage Treatment Cost (6)		<u>592,000</u>
Total Annual Cost		\$1,836,000

(1) The costs shown represent only that increment of treatment beyond the no project alternative.

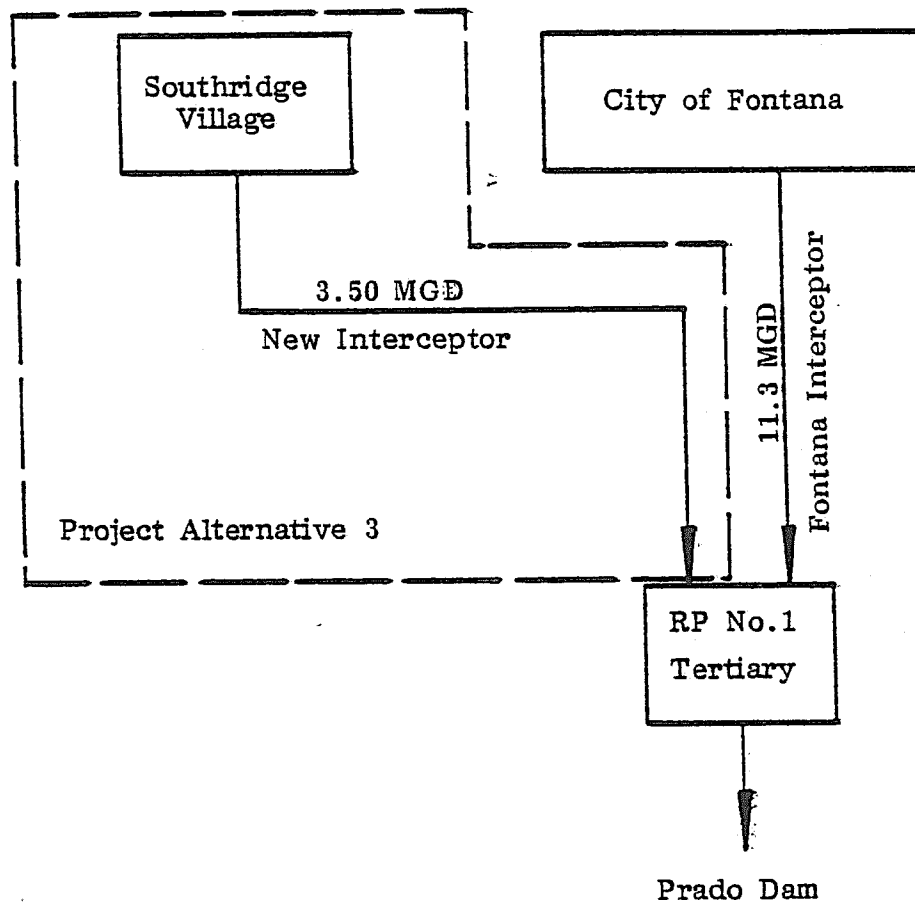
(2) Construction costs are indexed to second quarter 1981 (2Q/81) costs. 2Q/81 200.

(3) Assumes 20-year average life at 10% interest.

(4) \$1,048/d.u. x 8,800 d.u.; assume \$1,048/d.u. is mean rate over three years of construction at a 10% per year increase. Current rate is \$950/d.u.

(5) Estimated O & M expenses.

(6) \$721/MG x 2.25 mgd x 365 days/year; \$721/MG is anticipated mean sewage treatment cost over 20-year facility life based on annual increases of 10%. Current cost is \$278/MG.



1. Southridge Village is developed to 8800 dwelling units.
2. New interceptor is constructed to carry year 2000 peak flow from Southridge Village (3.50 MGD) to Regional Plant No. 1.
3. Regional Plant No. 3 is deactivated.
4. Capital cost of alternative for new interceptor, sewage collection system, and Chino Basin MWD's sewage treatment capacity charge is \$16,966,000.
5. Annual cost of alternative for capital amortization, O&M, and sewage treatment cost is \$2,650,000. See Table III for cost details.



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Alternative 3

Figure 3

TABLE III

ESTIMATED COSTS OF ALTERNATIVE 3

Route Southridge Village Sewage Flows to
Regional Plant No. 1 (Ontario) in a New Interceptor (1)

	(2) Construction Costs (<u>\$</u>)	(3) Annual Costs (<u>\$</u>)
<u>Treatment Costs</u>		
Pipeline Costs		
34,600-foot 24-inch interceptor	4,567,000	
Contingencies at 15%	685,000	
Technical Services at 20%	1,050,000	
Right-of-Way (4)	<u>142,000</u>	
Construction Cost	\$6,444,000	
Cost of Sewage Treatment Capacity at CBMWD (5)	9,222,000	
Collection System	<u>1,300,000</u>	
Total Project Cost	\$16,966,000	1,993,000
O & M Cost - Pipeline (6)		65,000
Sewage Treatment Cost (7)		<u>592,000</u>
Total Annual Cost		\$2,650,000

(1) The costs shown represent only that increment of treatment beyond the no project alternative.

(2) Construction costs are indexed to second quarter 1981 (2Q/81) costs. 2Q/81 200.

(3) Assumes 20-year average life at 10%.

(4) Assume right-of-way costs for this pipeline would approximate total right-of-way costs of Fontana Interceptor.

(5) \$1,048/d.u. x 8,800 d.u. See Footnote 4, Table II.

(6) Assumes O & M costs for this pipeline would approximate total O & M costs of Fontana Interceptor.

(7) \$721/MG x 2.25 mgd x 365 days/year. See Footnote 6, Table II.

TABLE IV

ESTIMATED COSTS OF ALTERNATIVE 4

Proposed Fontana Interceptor With Flow Equalization (1)

	(2) Construction Costs (<u>\$</u>)	(3) Annual Costs (<u>\$</u>)
<u>Treatment Costs</u>		
Flow Equalization (1.43 MG)	750,000	
Contingencies at 15%	113,000	
Technical Services at 20%	173,000	
Land (4)	<u>200,000</u>	
Subtotal	\$1,236,000	
Cost of Sewage Treatment Capacity at CBMWD Regional Plant No. 1 (5)	9,222,000	
Collection System	<u>1,300,000</u>	
Total Project Cost	\$11,758,000	1,381,000
O & M Cost - Equalization Basin (6)		10,000
Sewage Treatment Cost (7)		<u>592,000</u>
Total Annual Cost		\$1,983,000

(1) The costs shown represent only that increment of treatment beyond the no project alternative.

(2) Construction costs are indexed to second quarter 1981 (2Q/81) costs. 2Q/81 200.

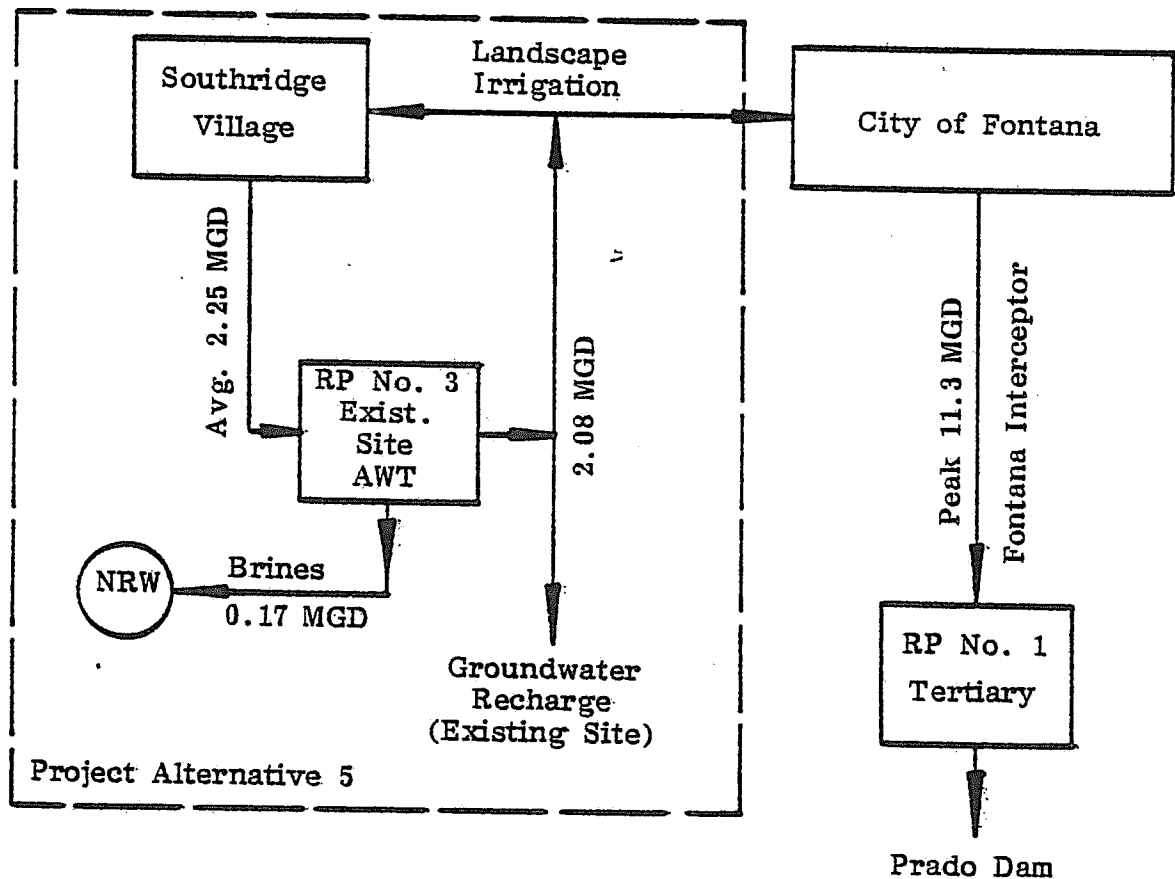
(3) Assumes 20-year average life of facility at 10% interest.

(4) Assume 4 acres required for flow equalization basins at \$50,000/acre.

(5) \$1,048/d.u. x 8,800 d.u. See Footnote 4, Table II.

(6) Estimated annual O & M cost.

(7) \$721/MG x 2.25 mgd x 365 days/year. See Footnote 6, Table II.



1. Southridge Village is developed to 8800 dwelling units.
2. Regional Plant No. 3 is upgraded to 2.25 MGD of advanced wastewater treatment (AWT) and remains located at existing site.
3. 2.08 MGD of effluent from Regional Plant No. 3 is available for groundwater recharge and landscape irrigation.
4. 0.17 MGD of concentrated brine wastes from demineralization are disposed in the nonreclaimable waste (NRW) line.
5. Assume demineralization of 50% of RP No. 3's influent is required to meet Regional Board's reuse standards.
6. Capital cost of alternative for RP No. 3 upgrade, reclaimed water distribution system, sewage collection system, NRW capacity, and land is \$20,475,000.
7. Annual cost of alternative for capital amortization and O&M is \$4,520,000.
8. Annual value of reclaimed water produced at RP No. 3 is \$1,600,000. See Table V for cost details.



Bour Engineering Corporation
consulting engineers / architects

Alternative 5

Figure 5

TABLE V

ESTIMATED COSTS OF ALTERNATIVE 5

Upgrade Regional Plant No. 3 to 2.25 mgd of AWT at Existing Site and Continue Reusing the Effluent (1)

Treatment Costs	Size (mgd)	(2) Construction Costs (\$)	(3) Annual Costs (\$)
Preliminary Treatment	2.25	217,000	
Influent Pumping	2.25	491,000	
Flow Equalization	2.25	235,000	
Primary Sedimentation	2.25	234,000	
Activated Sludge-Aeration	2.25	666,000	
Secondary Clarification	2.25	358,000	
Chemical Addition	2.25	134,000	
Filtration	2.25	530,000	
Reverse Osmosis	1.125(4)	2,500,000	
Blending Reservoir	2.08	200,000	
Sludge Thickening-Flotation	2.25	109,000	
Anaerobic Digestion	2.25	403,000	
Reclaimed Water Distribution System (5)		<u>5,000,000</u>	
Subtotal		\$11,077,000	
Contingencies at 15%		1,662,000	
Technical Services at 20%		2,548,000	
Nonreclaimable Waste (NRW)			
Line - Initial Charges		68,000	
Collection System		2,620,000	
Land for Plantsite (6)		<u>2,500,000</u>	
Total Project Cost		\$20,475,000	2,405,000
NRW-Volumetric and Standby Charges (7)			88,000
O & M - Treatment Plant (7)			2,002,000
O & M - Reclaimed Water Distribution System (5)			<u>25,000</u>
Total Annual Cost			\$4,520,000
Annual Value of 2.08 mgd of Reclaimed Water			1,600,000(8)

(1) The costs shown represent only that increment of treatment beyond the no project alternative.

(2) Construction costs are indexed to second quarter 1981 (2Q/81) costs. 2Q/81 200.

(3) Assumes 20-year average life of entire facility at 10% interest.

(4) Assume demineralization of 50% of total flows.

(5) Estimated cost.

(6) Assume plant would require 50 acres at \$50,000/acre.

(7) Anticipated mean annual cost over 20-year life of the facility inflated at 10% per annum.

(8) Assume reclaimed water is valued at same rate as the domestic water it replaces. Current retail price of domestic water in the Fontana area is approximately \$266/acre-foot. Assume a mean value over 20-year life of facility at 10% increase per year is \$690/acre-foot. 2.08 mgd x 1,120 acre-feet/mgd x \$690/acre-foot = \$1,600,000.

ALTERNATIVE 6

Upgrade Regional Plant No. 3 on an alternate site to treat Southridge Village flows. Use reclaimed water for groundwater recharge and landscape irrigation.

This alternative is identical to Alternative 5 except RP No. 3 is built on a new site. The reclaimed water is pumped back to the original percolation ponds at the existing RP No. 3 site for groundwater recharge. The reclaimed water would also be used for landscape irrigation in the community during periods of demand for irrigation water.

ALTERNATIVE 7

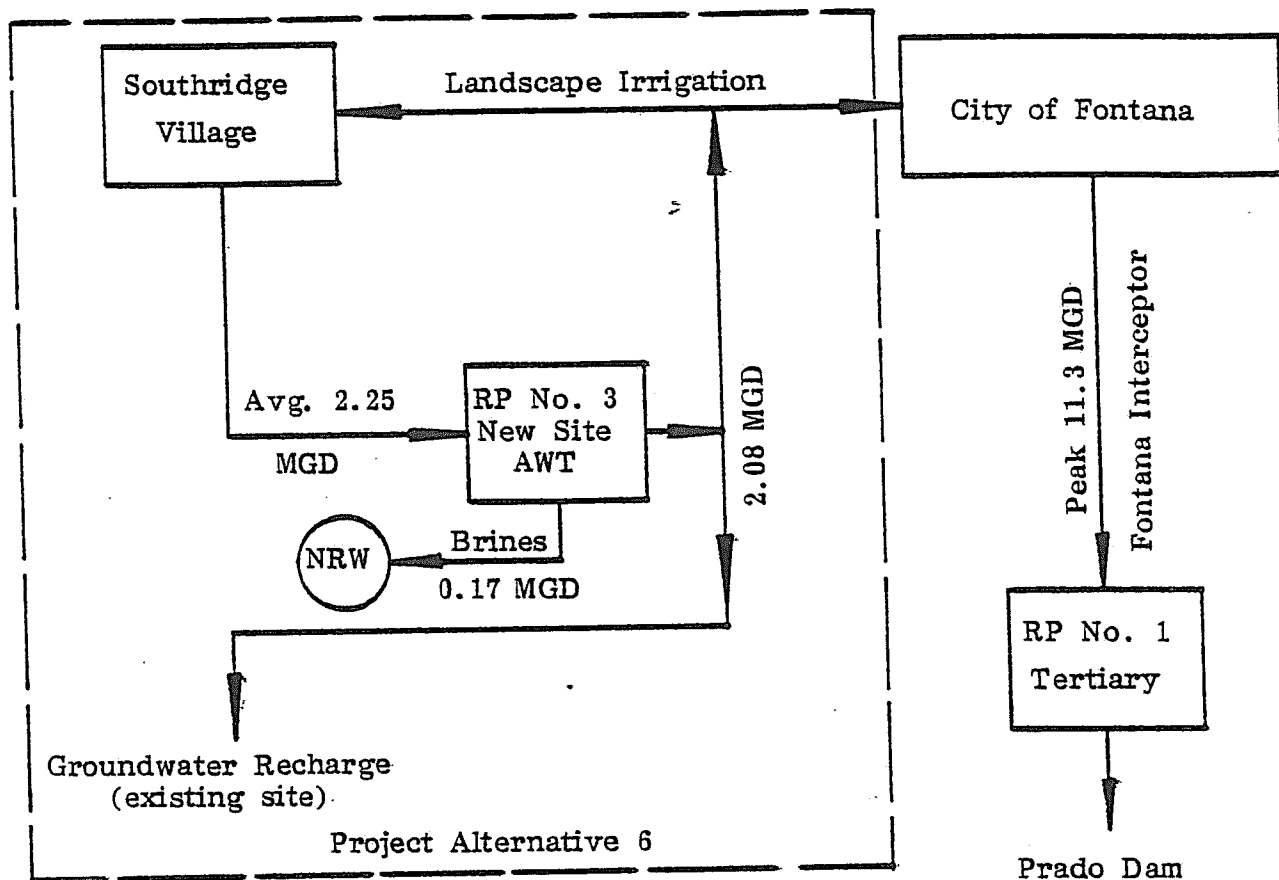
Upgrade Regional Plant No. 3 and build percolation ponds on a new site. Treat only Southridge Village flows and reuse the treated effluent.

This alternative is also identical to Alternative 5 except both the treatment plant and the percolation ponds are built on a new site. The reclaimed water is used for groundwater recharge on site, or landscape irrigation throughout the community.

ALTERNATIVE 8

Upgrade Regional Plant No. 3 to treat 4 MGD of flows from Southridge Village and the city of Fontana.

RP No. 3 would be upgraded to 4 MGD of advanced wastewater treatment which would include primary, secondary, tertiary filtration, and reverse osmosis demineralization. RP No. 3 would treat 2.25 MGD of flow from Southridge Village and 1.75 MGD of flow from the city of Fontana. The remainder of Fontana's flows would be routed to the Fontana Interceptor.



1. Southridge Village is developed to 8800 dwelling units.
2. Regional Plant No. 3 (RP No. 3) is relocated to new site, but reclaimed water for groundwater recharge is piped back to existing percolation ponds.
3. RP No. 3 is upgraded to 2.25 MGD AWT. Assume demineralization of reclaimed water necessary to meet Regional Board's standards for reuse.
4. 2.08 MGD of reclaimed water available for groundwater recharge and landscape irrigation.
5. 0.17 MGD of brine wastes routed to NRW for disposal.
6. Capital cost of alternative for RP No. 3 upgrade, groundwater recharge return pipeline, reclaimed water distribution system, sewage collection system, NRW capacity, and land is \$22,635,000.
7. Annual cost of alternative for capital amortization and O&M is \$4,787,000.
8. Annual value of reclaimed water produced at RP No. 3 is \$1,600,000. See Table VI for cost details.



Bouie Engineering Corporation
consulting engineers / architects

Alternative 6

Figure 6

TABLE VI
ESTIMATED COSTS OF ALTERNATIVE 6

Upgrade Regional Plant No. 3 to 2.25-mgd AWT on Alternate Site;
Continue to Percolate Effluent in Existing Percolation Ponds (1)

<u>Treatment Costs</u>	<u>Size (mgd)</u>	<u>(2) Construction Costs (\$)</u>	<u>(3) Annual Costs (\$)</u>
Preliminary Treatment	2.25	217,000	
Influent Pumping	2.25	491,000	
Flow Equalization	2.25	235,000	
Primary Sedimentation	2.25	234,000	
Activated Sludge-Aeration	2.25	666,000	
Secondary Clarification	2.25	358,000	
Chemical Addition	2.25	134,000	
Filtration	2.25	530,000	
Reverse Osmosis	1.125(4)	2,500,000	
Blending Reservoir	2.08	200,000	
Sludge Thickening-Flotation	2.25	109,000	
Anaerobic Digestion	2.25	403,000	
5,000'-21" Return Line to Existing Percolation Ponds (5)	2.25	620,000	
Reclaimed Water Distribu- tion System (6)		<u>5,000,000</u>	
Subtotal		\$11,697,000	
Contingencies at 15%		1,755,000	
Technical Services at 20%		2,690,000	
NRW Capacity - Initial Charges		68,000	
Collection System		3,925,000	
Land for Plantsite (7)		<u>2,500,000</u>	
Total Project Cost		\$22,635,000	2,659,000
NRW - Volumetric and Standby Charges (8)			88,000
O & M - Treatment Plant (8)			2,015,000
O & M - Reclaimed Water Distribution System (6)			<u>25,000</u>
Total Annual Cost			\$4,787,000
Annual Value of 2.08 mgd of Reclaimed Water			1,600,000(9)

(1) The costs shown represent only that increment of treatment beyond the no project alternative.

(2) Capital costs are indexed to second quarter 1981 costs (2Q/81) 200.

(3) Assumes 20-year average life of entire facility at 10% interest.

(4) Assume demineralization of 50% of total flows.

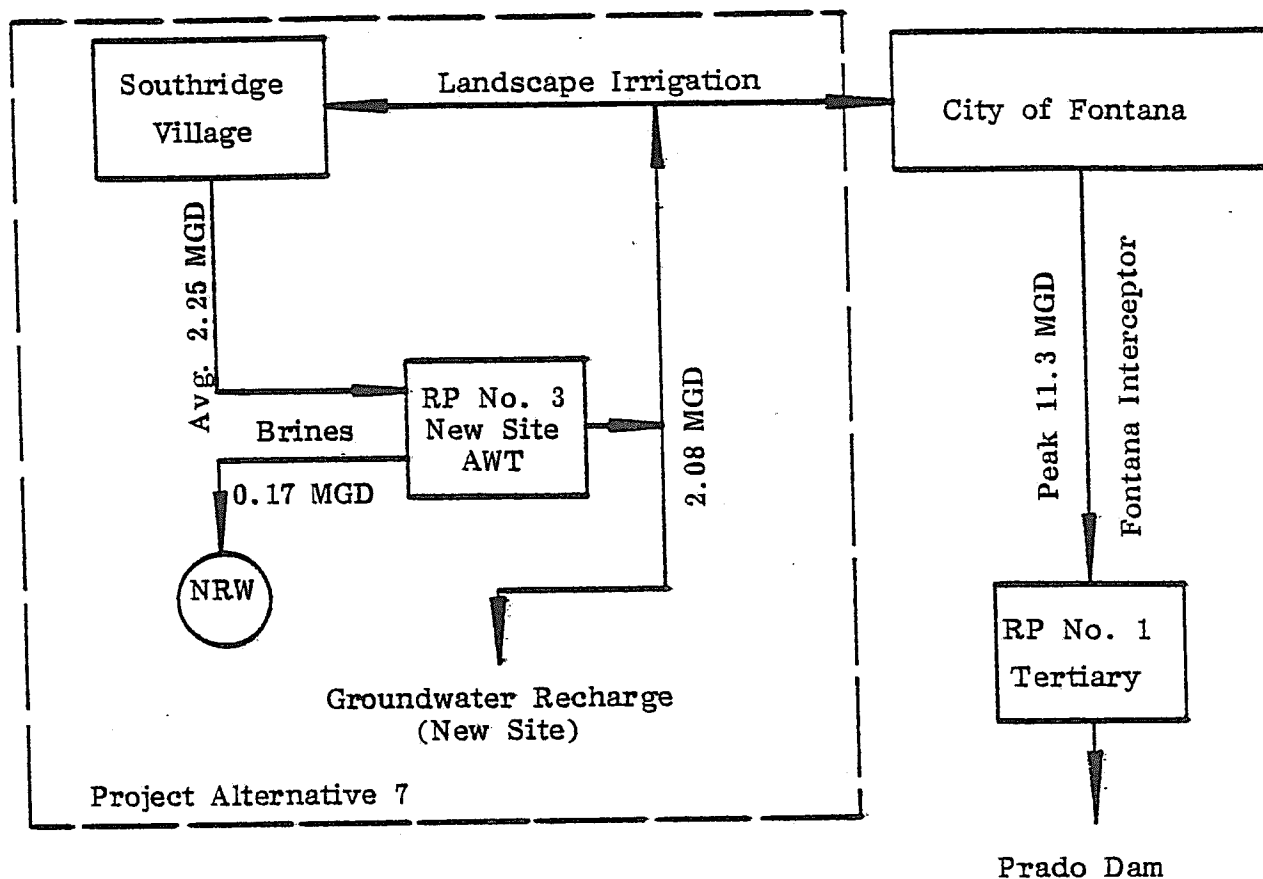
(5) Assume cost of pipe is \$124/foot.

(6) Estimated cost.

(7) Assume plant would require 50 acres at \$50,000/acre.

(8) Anticipated mean annual cost over 20-year life of the facility inflated at 10% per annum.

(9) See Footnote 8, Table V.



1. Southridge Village is developed to 8800 dwelling units.
2. Regional Plant No. 3 is relocated to new site, and reclaimed water for groundwater recharge is percolated on site.
3. RP No. 3 is upgraded to 2.25 MGD AWT. Assume demineralization of reclaimed water necessary to meet Regional Board's standards for reuse.
4. 2.08 MGD of reclaimed water available for groundwater recharge and landscape irrigation.
5. 0.17 MGD of brine wastes routed to NRW for disposal.
6. Capital cost of alternative for RP No. 3 upgrade, reclaimed water distribution system, NRW capacity, sewage collection system, and land is \$21,358,000.
7. Annual cost of alternative for capital amortization and O&M is \$4,624,000.
8. Annual value of reclaimed water produced at RP No. 3 is \$1,600,000. See Table VII for cost details.



TABLE VII

ESTIMATED COSTS OF ALTERNATIVE 7

Upgrade Regional Plant No. 3 to 2.25-mgd AWT on an
Alternate Site; Percolate Effluent in New Percolation
Ponds Onsite (1)

<u>Treatment Costs</u>	<u>Size (mgd)</u>	<u>(2) Construction Costs (\$)</u>	<u>(3) Annual Costs (\$)</u>
Preliminary Treatment	2.25	217,000	
Influent Pumping	2.25	491,000	
Flow Equalization	2.25	235,000	
Primary Sedimentation	2.25	234,000	
Activated Sludge-Aeration	2.25	666,000	
Secondary Clarification	2.25	358,000	
Chemical Addition	2.25	134,000	
Filtration	2.25	530,000	
Reverse Osmosis	1.125(4)	2,500,000	
Blending Reservoir	2.08	200,000	
Sludge Thickened-Flotation	2.25	109,000	
Anaerobic Digestion	2.25	403,000	
Percolation Ponds (5)	2.08	50,000	
Reclaimed Water Distribution System (6)		<u>5,000,000</u>	
Subtotal		\$11,127,000	
Contingencies at 15%		1,669,000	
Technical Services at 20%		2,559,000	
NRW Line - Initial Charges		68,000	
Collection System		3,435,000	
Land for Plantsite (7)		<u>2,500,000</u>	
Total Project Cost		\$21,358,000	2,509,000
NRW - Volumetric and Standby Charges (8)			88,000
O & M - Treatment Plant (8)			2,002,000
O & M - Reclaimed Water Distribution System (6)			<u>25,000</u>
Total Annual Cost			\$4,624,000
Annual Value of 2.08 mgd of Reclaimed Water			1,600,000(9)

(1) The costs shown represent only that increment of treatment beyond the no project alternative.

(2) Capital costs are indexed to second quarter 1981 costs (2Q/81).

(3) Assumes 20-year average life of entire facility at 10% interest.

(4) Assume demineralization of 50% of total flow.

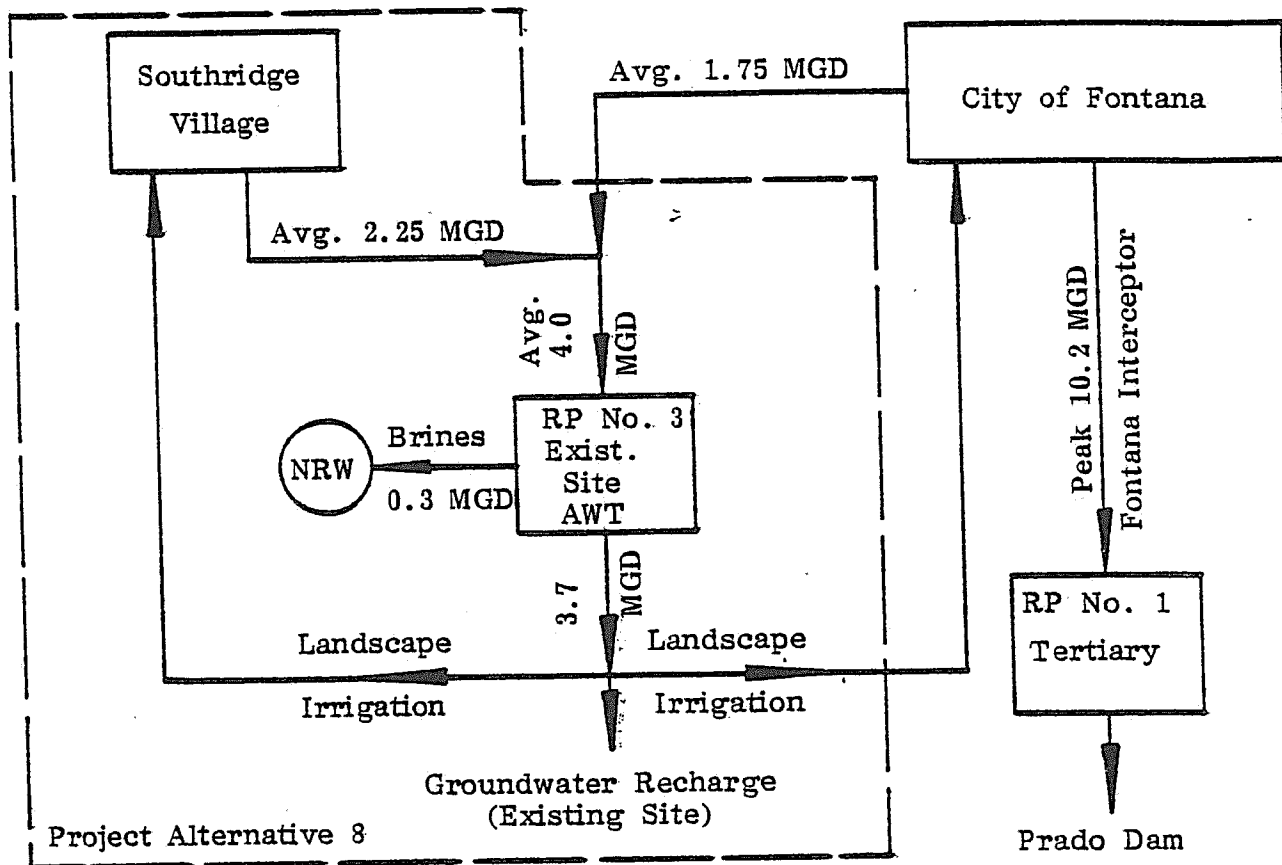
(5) Cost of land for ponds not included in cost.

(6) Estimated cost.

(7) Assume entire facility would require 50 acres at \$50,000/acre.

(8) Anticipated mean annual cost over 20-year life of the facility inflated at 10% per annum.

(9) See Footnote 8, Table V.



1. Southridge Village is developed to 8800 dwelling units.
2. Regional Plant No. 3 is upgraded to 4 MGD Advanced Wastewater Treatment (AWT), and remains located at existing site. (2.25 MGD of flow from Southridge Village and 1.75 MGD of flow from city of Fontana)
3. Assume demineralization of reclaimed water necessary to meet Regional Board's standards for reuse.
4. 3.7 MGD of reclaimed water available for groundwater recharge and landscape irrigation.
5. 0.3 MGD of brine wastes routed to NRW for disposal.
6. Capital costs of alternative for RP No. 3 upgrade, reclaimed water distribution system, NRW capacity, sewage collection system, and land is \$22,645,000. (Southridge Village share only.)
7. Annual cost of alternative for capital amortization and O&M is \$5,378,000. (Southridge Village share only.)
8. Annual value of reclaimed water produced at RP No. 3 is \$2,900,000. See Table VIII for cost details.

TABLE VIII

ESTIMATED COSTS OF ALTERNATIVE 8

Upgrade Regional Plant No. 3 to 4-mgd AWT and Continue to
Percolate the Effluent (1)

<u>Treatment Costs</u>	(2) Size (mgd)	(3) Construction Costs (\$)	(4) Annual Costs (\$)
Preliminary Treatment	2.25	217,000	
Influent Pumping	2.25	491,000	
Flow Equalization	2.25	235,000	
Primary Sedimentation	2.25	234,000	
Activated Sludge-Aeration	2.25	666,000	
Secondary Clarification	2.25	358,000	
Chemical Addition	2.25	134,000	
Filtration	2.25	530,000	
Reverse Osmosis	2.0(5)	4,000,000	
Blending Reservoir	3.7	250,000	
Sludge Thickening-Flotation	2.25	109,000	
Anaerobic Digestion	2.25	403,000	
Reclaimed Water Distribution System (6)		<u>5,000,000</u>	
Subtotal		\$12,627,000	
Contingencies at 15%		1,894,000	
Technical Services at 20%		2,904,000	
NRW Capacity - Initial Charges		100,000	
Collection System		2,620,000	
Land for Plantsite (7)		<u>2,500,000</u>	
Total Project Cost		\$22,645,000	2,660,000
NRW - Volumetric and Standby Charges (8)			154,000
O & M - Treatment Plant (8)			2,539,000
O & M - Reclaimed Water Distribution System (6)			<u>25,000</u>
Total Annual Cost			\$5,378,000
Annual Value of 3.7 mgd of Reclaimed Water			2,900,000(9)

(1) The costs shown represent only that increment of treatment beyond the no project alternative.

(2) The capacities shown represent only that portion of treatment attributable to Southridge Village.

(3) Construction costs are indexed to second quarter 1981 (2Q/81) costs. 2Q/81 200.

(4) Assumes 20-year average life of entire facility at 10% interest.

(5) Assume demineralization of 50% of total flow.

(6) Estimated cost.

(7) Assume plant would require 50 acres at \$50,000/acre.

(8) Anticipated mean annual cost over 20-year life of the facility inflated at 10% per annum.

(9) See Footnote 8, Table V. 3.7 mgd x \$690/acre-foot x 1,120 acre-feet/year/mgd = \$2,900,000.

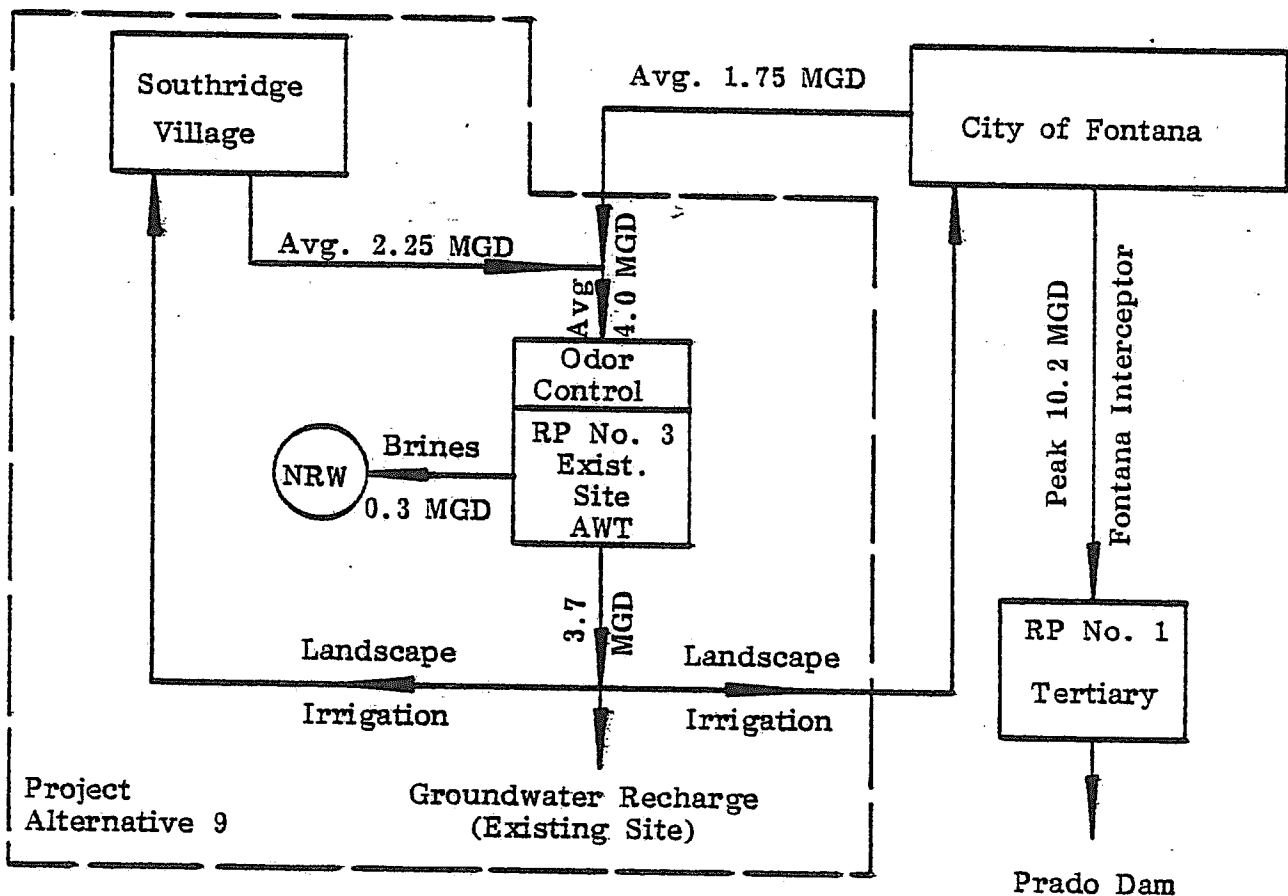
Only those flows beyond the no project alternative, that is the 2.25 MGD Southridge Village flows through tertiary filtration, and all of the demineralized flows, were attributed to the Southridge Village project costs. The remaining flows, that is, those flows in excess of 2.25 MGD through tertiary filtration, were deemed not attributable to Southridge Village in that they originate from other sources and would have to be treated whether or not Southridge Village is constructed or not.

3.7 MGD of reclaimed water would be available for reuse under this alternative. Five units of capacity in the NRW line would be purchased for disposal of the waste brines from the reverse osmosis unit process.

ALTERNATIVE 9

Upgrade Regional Plant No. 3 to treat 4 MGD of flows from Southridge Village and city of Fontana, and add odor control systems to plant.

This alternative is identical to Alternative 8 except odor control mechanisms have been added to the plant to mitigate any potential odor problems. The primary sedimentation basin, sludge thickener, and sludge drying beds would be covered to control the escape of odors to planned nearby residential areas. An exhaust system to circulate the enclosed air through scrubbing units prior to discharge to the atmosphere would also be provided. 3.7 MGD of reclaimed water would be available for groundwater recharge and landscape irrigation under this alternative.



1. Southridge Village is developed to 8800 dwelling units.
2. Odor control measures are instituted at RP No. 3.
3. RP No. 3 is upgraded to 4.0 MGD AWT, and remains located at the existing site.
4. Assume demineralization of reclaimed water necessary to meet Regional Board's standards for reuse.
5. 3.70 MGD of reclaimed water is available for groundwater recharge and landscape irrigation.
6. 0.3 MGD of brine wastes routed to NRW for disposal.
7. Capital cost of alternative for RP No. 3 upgrade, reclaimed water distribution system, odor control facilities, NRW capacity, sewage collection system, and land is \$24,715,000. (Southridge Village share only.)
8. Annual cost of alternative for capital amortization and O&M is \$5,621,000. (Southridge Village share only.)
9. Annual value of reclaimed water produced at RP No. 3 is \$2,900,000. See Table IX for cost details.



TABLE IX
ESTIMATED COSTS OF ALTERNATIVE 9

Expand Regional Plant No. 3 to 4-mgd AWT Capacity and
Enclose Main Odor Sources; Continue to Percolate Effluent
in Existing Ponds (1)

<u>Treatment Costs</u>	(2) Size mgd	(3) Construction Costs (\$)	(4) Annual Costs (\$)
Preliminary Treatment	2.25	217,000	
Influent Pumping	2.25	491,000	
Flow Equalization	2.25	235,000	
Primary Sedimentation	2.25	234,000	
Activated Sludge-Aeration	2.25	666,000	
Secondary Clarification	2.25	358,000	
Chemical Addition	2.25	134,000	
Filtration	2.25	530,000	
Reverse Osmosis	2.0(5)	4,000,000	
Blending Reservoir	3.7	250,000	
Sludge Thickening-Flotation	2.25	109,000	
Anaerobic Digestion	2.25	403,000	
Odor Control Facilities (6)	---	1,500,000	
Reclaimed Water Distribution System (7)		<u>5,000,000</u>	
Subtotal		\$14,127,000	
Contingencies at 15%		2,119,000	
Technical Services at 20%		3,249,000	
NRW Capacity - Initial Charges		100,000	
Collection System		2,620,000	
Land for Plantsite (8)		<u>2,500,000</u>	
Total Project Cost		\$24,715,000	2,903,000
NRW - Volumetric and Standby Charges (9)			154,000
O & M - Treatment Plant (9)			2,539,000
O & M - Reclaimed Water Distribution System (7)			<u>25,000</u>
Total Annual Cost			\$5,621,000
Annual Value of 3.7 mgd of Reclaimed Water			2,900,000(10)

(1) The costs shown represent only that increment of treatment beyond the no project alternative.

(2) The capacities shown represent only that portion of treatment attributable to Southridge Village.

(3) Capital costs are indexed to second quarter 1981 costs (2Q/81) 200.

(4) Assumes 20-year average life of entire facilities at 10% interest.

(5) Assumes demineralization of 50% of total flows.

(6) Odor control facilities include 27,140 square feet of cover on primary sedimentation basin, gravity sludge thickener, and sludge drying beds at \$30/square foot. Additional cost estimated for air scrubbing units also included.

(7) Estimated costs.

(8) Assume plant would require 50 acres at \$50,000/acre.

(9) Anticipated mean annual cost over 20-year life of the facility inflated at 10% per annum.

(10) See Footnote 8, Table V. 3.7 mgd x 1,120 acre-feet/year/mgd x \$690/acre-foot = \$2,900,000.

ALTERNATIVE 10

Upgrade Regional Plant No. 3 to treat 4 MGD of flows from Southridge Village and the city of Fontana. Add odor control systems to plant and route sludge to Regional Plant No. 1 for treatment.

This alternative is identical to Alternative 9 except the sludge is piped to RP No. 1 for treatment instead of being treated on site at RP No. 3. This would relieve the treatment plant of the main odor causing unit processes, that is, the sludge processing steps, and minimize the amount of odor control equipment still needed. 3.7 MGD of reclaimed water would be produced for groundwater recharge and landscape irrigation under this alternative.

ALTERNATIVE 11

Relocate Regional Plant No. 3 to industrial area southwest of project area. Upgrade and expand plant to treat 9.55 MGD of flow from Southridge Village and city of Fontana.

Regional Plant No. 3 would entertain the same treatment scheme as the previous treatment alternatives and would treat its sludge on site. All of the flows from the city of Fontana and Southridge Village would be treated, thus precluding the need for an interceptor pipeline to RP No. 1. 8.85 MGD of reclaimed water would be available for reuse applications. Since the treatment plant would be located in an industrial area, no provision for odor control was included. The average inflow of 9.55 MGD to the plant was based on an average 7.3 MGD from the city of Fontana and 2.25 MGD from Southridge Village. Only the costs of those flows attributable to Southridge Village, that is, 2.25 MGD capacity through tertiary filtration, and all of the demineralized flows, were considered in the cost estimates.

9.4 TRAFFIC

LINSCOTT, LAW & GREENSPAN, INC., ENGINEERS
TRANSPORTATION, TRAFFIC, PARKING, CIVIL ENGINEERING
150 C PAULARINO, SUITE 120, COSTA MESA, CALIFORNIA 92626 (714) 641-1587

July 27, 1981

Mr. Thomas L. Paradise
Phillips Brandt Reddick
18012 Sky Park Circle
Irvine, California 92714

Subject: Southridge Village Specific Plan
Fontana, California

Dear Mr. Paradise:

We are pleased to submit our Traffic Study Report relative to the proposed development of Southridge Village in the City of Fontana, California.

The data contained herein is based in part on a previous study prepared by Larry Greer and Company entitled "Traffic and Circulation Plan for Southridge Village" dated May, 1981. Our report will serve to validate and/or modify their findings with respect to off-site roadway requirements and will also provide specific recommendations with respect to on-site roadway requirements. These recommendations will include the required project area roadway widths, striping requirements at key locations, specific intersection requirements if necessary, and required traffic control devices.

A traffic generation forecast has been prepared based on data supplied by Phillips Brandt Reddick as well as data contained in the aforementioned Greer analysis. Additional data obtained from the latter analysis includes the anticipated distribution of project and non-project traffic volumes. Our study recognizes the areas north of Southridge Village as potential traffic generators and as such, has included its impact in the recommended project area street improvements.

PROJECT DESCRIPTION AND LOCATION

The proposed project is located in a predominantly vacant area at the southern portion of the City of Fontana, California. The project area is bounded by Jurupa Avenue on the

north and Riverside Avenue on the south. East and west boundaries are formed by Mulberry Avenue/Country Village Road and Sierra Avenue, respectively. Current plans call for the Southridge Village area to consist of the development of a Master Planned Community composed of residential units, parks, police and fire facilities, commercial areas, and elementary/junior high schools.

TRAFFIC GENERATION

Traffic generation is expressed in vehicle trip ends, where a trip end is a one-way vehicular movement either entering or departing a generating land use. Where all traffic generated by a given site has origins or destinations external to the site area, the number of trip ends produced by the project would equal the number of vehicles physically added to the street system. However, in order to adequately assess the impact of project traffic on area roadways, it was necessary to separately consider those trips which would be internal to the site so that double counting of internal trips would not occur. Therefore, trip overlap reductions have been applied to each land use based on the interrelationship between trip generation characteristics as determined by Greer & Co./Linscott, Law & Greenspan, Inc., and the total trip generation expected by the various land uses.

For analysis purposes, Southridge Village was divided into numerous zones from which appropriate compensations for internal trips were applied. The resulting value was the maximum number of trips which would be generated by each land use. In the case of the Southridge Village Project, the following reductions were applied to account for project area internal trips:

- 6% residential for social/recreational purposes
- 100% neighborhood commercial
- 50% subregional commercial trips
- 100% elementary/junior high school trips
- 100% neighborhood/community park trips
- 5% regional park trips
- 50% commercial recreational
- 10% fire and police trips

Table 1 presents our Traffic Generation Forecast for the Southridge Village Project. The forecast is based on data obtained from the Institute of Transportation Engineers, the California Department of Transportation, the City of Fontana, and from Larry Greer and Company. As shown, a total of 100,390 daily trip ends are forecast for the project, evenly divided between inbound and outbound. Of the total, 78,180 trips (78%) would enter and leave the site (external trips) while 22,210 trips (22%) would both begin and end within the site (internal trips). In addition to the anticipated project volumes, traffic

TABLE 1
TRIP GENERATION

LAND USE	UNITS	DATA SOURCE	DAILY 2-WAY	
			RATE ²	TRIPS ³
Residential 1.2 DU/AC	127 DU	Greer & Co. ¹	10	1270
Residential 3 DU/AC	26 DU	"	10	260
Residential 4.5 DU/AC	1846 DU	"	10	18,460
Residential 5 DU/AC	247 DU	"	10	2,470
Residential 6 DU/AC	1531 DU	"	10	15,310
Residential 8 DU/AC	1046 DU	"	8	8,370
Residential 12 DU/AC	1391 DU	"	8	11,130
Residential 18 DU/AC	1217 DU	"	8	9,740
Residential 25 DU/AC	1233 DU	"	8	9,860
SUB-TOTALS	8664 DU	----	----	76,870
Neighborhood Commercial	11 Acres	ITE ⁵	500	5,500
Subregional Commercial	20 Acres	"	500	10,000
Elementary Schools	4679 Students	City of Fontana ⁶ and ITE ⁵	1.02	4,770
Jr. High School	1212 Students	City of Fontana ⁶ and ITE ⁵	1.02	1,240
Neighborhood Parks	40.5 Acres	CALTRANS ⁴	6	240
Community Park	14.0 Acres	CALTRANS ⁴	6	84
Regional Park ⁸	20 Acres	CALTRANS ⁴	6	120
Commercial Recreation ⁹	35 Courts	ITE ⁵	42.6	1,490
Quasi-Public Uses ¹⁰	55 Offices 20 Support	City of Fontana and LL&G	1.0	80
SUB-TOTALS	-----	-----	-----	100,390
Less Overlap				22,210
TOTALS				78,180

TABLE 1 (CONTINUED)
FOOTNOTES

¹"Traffic Circulation Plan for Southridge Village", Greer & Co., May 1981.

²Rate is the number of trip ends per dwelling unit, acre, or student.

³Daily 2-way Trips rounded to nearest 10 vehicles.

⁴CALTRANS - 10th and 11th Project Report on Trip Ends. California Department of Transportation.

⁵ITE - "Trip Generation, An Informational Report". Institute of Transportation Engineers, 1979.

⁶Telcom with Planning Director, City of Fontana, May 26, 1981.

⁷Overlap Considers:

- 6% Residential Trips for social/recreational purposes
- 100% Neighborhood Commercial
- 50% Subregional Trips
- 100% Elementary School Trips
- 100% Junior High School Trips
- 100% Neighborhood & Community Park Trips
- 5% Regional Park Trips
- 50% Commercial Recreational
- 10% Quasi-Public Uses (Fire & Police Trips)

⁸15-20 Acres planned for Park use.

⁹Racquetball/Handball Courts - assumed 35 courts

¹⁰Police and Fire facilities - EIR 81-1, City of Fontana, June 1981.

volumes attributable to the potential future development of areas northerly of the project were estimated and assigned to area roadways. As before, project data as supplied by Phillips Brandt Reddick was employed with appropriate generation factors being derived from the analysis prepared by Greer & Company. Current plans call for this area to be devoted to a mixture of low/median density residential units and industrial uses. Based on a review of project data, analysis reveals that approximately 170,000 daily vehicle trips could be generated by those other developments. Therefore, the combination of project trips and non-project trips would generate approximately 248,000 trips per day.

TRAFFIC DISTRIBUTION AND ASSIGNMENT

The forecast project and non-project traffic volumes have been distributed and assigned to area streets and highways consistent with the travel orientations outlined in the Greer and Company Southridge Village Traffic Impact Report. Accordingly, it is estimated that 40% of the total traffic would arrive and depart to both the east and west with the remaining 20% arriving and departing to the north. Based on the above, Exhibit 1 illustrates the anticipated traffic volumes on project area roadways as they would exist at the completion of the Southridge Village project and the areas north of the site. Inasmuch as the proposed project completion is scheduled for the early 1990's, the illustrative traffic volumes include provisions for the expected growth of through traffic as determined from City supplied growth data.

TRAFFIC ANALYSIS

Off-Site Roadways

Review of Exhibit 1 reveals that of the roadways providing east-west access to the site, the greatest impact would occur on Jurupa Avenue. Currently, Jurupa Avenue is serving approximately 1400 vehicles per day. With the addition of anticipated project area traffic volumes, the Exhibit shows that volumes on the order of 30,000 to 41,000 vehicles per day could be expected.

With respect to off-site roadways providing north-south access, Cherry Avenue north of Jurupa Avenue would experience the greatest impact. On that roadway, current daily traffic volumes of 2300 vehicles per day would be increased to about 34,000 vehicles per day. Table 2 summarizes the anticipated project and non-project volumes on off-site roadways.



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SOURCE: PHILLIPS, BRANDT & REDDICK
IRVINE, CA.

NOTE: VOLUMES SHOWN ARE DAILY

2-WAY VOLUMES ROUNDED

TO THE NEAREST 100 VEHICLES

KEY

--- = NON PROJECT VOLUMES

XXXX- PROJECT VOLUMES

XXXX- TOTAL VOLUMES

SOUTHRIDGE VILLAGE

DAILY TRAFFIC VOLUMES

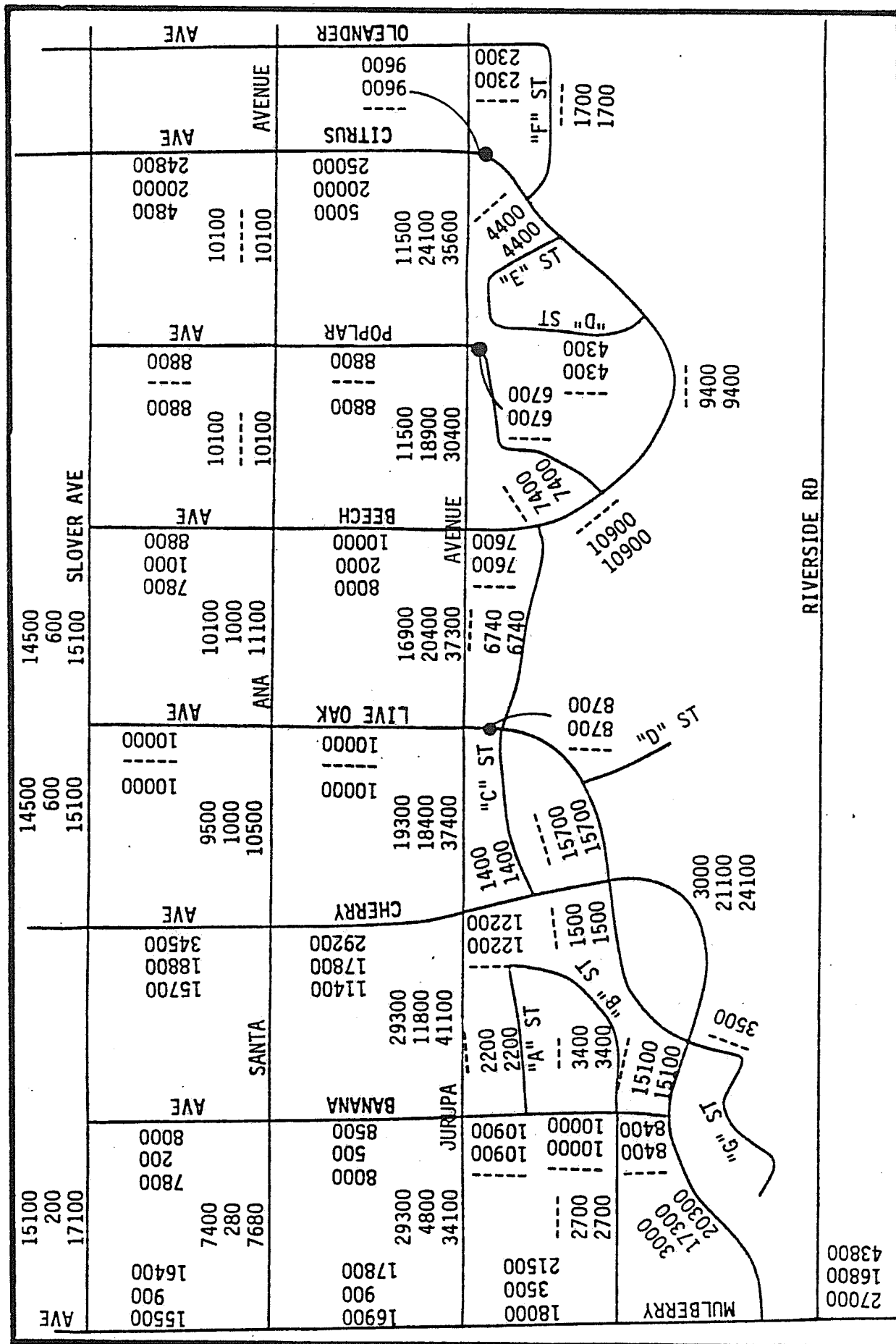


TABLE 2
OFF-SITE TRAFFIC VOLUMES¹

ROADWAY	PROJECT VOLUMES	NON-PROJECT VOLUMES	TOTAL VOLUMES
Etiwanda Ave. (north of Slover Ave.)	6,200	20,000	26,200
Mulberry Ave. (north of Jurupa Ave.)	900	16,900	17,800
(south of Jurupa Ave.)	16,800	27,000	43,800
Banana Ave. (north of Jurupa Ave.)	500	8,000	8,500
Cherry Ave. (north of Jurupa Ave.)	15,700	18,800	34,500
Live Oak Ave. (north of Jurupa Ave.)	10,000	NOM	10,000
Beech Ave. (north of Jurupa Ave.)	2,000	8,000	10,000
Poplar Ave. (north of Jurupa Ave.)	8,800	NOM	8,800
Citrus Ave. (north of Jurupa Ave.)	20,000	5,000	25,000
Sierra Ave. (north of Jurupa Ave.)	10,000	7,000	17,000
(south of Jurupa Ave.)	10,500	27,000	37,500
Slover Ave.	600	17,500	18,100
Santa Ana Ave.	1,000	10,100	11,100
Marlay Ave. (west of Mulberry Ave.)	1,600	6,600	8,200
Riverside Ave. (west of Mulberry Ave.)	1,000	3,300	4,300

¹Vehicles per day - reflects maximum anticipated volumes at indicated locations.

In order to evaluate the projected traffic volumes described in Table 2, a generally recognized set of criteria is employed which relates ultimate roadway traffic volumes to the number of lanes needed to service those volumes. As shown in Table 3, these values range from 12,000 vehicles per day (2-lane roadway) to 40,000 vehicles per day (6-lane divided highway). By comparing the values given in Table 2 to those shown in Table 3, a reliable estimate of future off-site street sections can be obtained.

TABLE 3
TRAFFIC VOLUMES VS. LANE REQUIREMENTS¹

36,000-40,000	6-lane divided
32,000-35,000	6 lanes
24,000-26,000	4-lane divided
20,000-24,000	4 lanes
12,000-15,000	2 lanes

Based on the Specific Plan data as supplied by Phillips Brandt Reddick, our analysis reveals that the majority of project area street sections as recommended by Greer & Company are correct. Because of the more refined nature of the Specific Plan however, our analysis revealed that two previously defined 4-lane major arterials could operate under a 2-lane Master Planned classification while 3 other arterials required modifications only to the points at which they should begin or end.

As shown in the Greer & Company analysis, Santa Ana Avenue and Beech Avenue are recommended as 4-lane major arterials. With the distribution and assignment of Specific Plan project volumes however, the resulting volumes on these roadways would be on the order of 10,000 vehicles per day. Based on the criteria described in Table 3, it is therefore recommended that the Master Planned classification of the above roadways be revised to reflect 2-lane roadways. The proposed extension of Beech Avenue is shown in the Greer analysis as partially offset from Beech Avenue north of Jurupa Avenue. A review of those comments described in their report are correct in that "...the southerly extension of Beech should be located on the same centerline as the existing Beech right-of-way, north of Jurupa...." Further review of the previous analysis by Greer & Company reveals that Sierra Avenue, Mulberry Avenue (from Cherry Avenue south), and Cherry Avenue should be classified as 6-lane roadways. As was previously mentioned, our analysis of the Specific Plan verified these conclusions while adding some necessary refinements.

¹Larry Greer & Company, "Traffic Circulation Plan for Southridge Village", May, 1981.

Sierra Avenue has been proposed as a 6-lane roadway from the San Bernardino Freeway to Armstrong Road. Review of project data reveals that anticipated traffic volumes on that roadway would be about 17,000 vehicles per day north of Jurupa Avenue with approximately 37,000 vehicles per day south of Jurupa Avenue. These volumes suggest that adequate roadway sections would include a 4-lane and a 6-lane arterial for the portions north and south of Jurupa Avenue, respectively. Although it is recognized that future developments could create the need for an overall 6-lane configuration, it is suggested that its inclusion at this time would be premature. With respect to Mulberry Avenue and Cherry Avenue, modifications will be required to facilitate a proposed redistribution of anticipated industrial traffic. These modifications are explained in the following section entitled "Traffic Analysis/On-Site Roadways".

TRAFFIC ANALYSIS

On-Site Roadways

The major roadway through Southridge Village is Cherry Avenue. As shown in both analyses, the traffic volumes attributable to the project alone would require only a 4-lane roadway. With the addition of non-project volumes, however, a 6-lane roadway from the San Bernardino Freeway to Mulberry Avenue could be required. Inasmuch as industrial traffic within the Southridge Village is undesirable, the following Traffic Engineering techniques are recommended to minimize through traffic.

In order to reduce through volumes, a more desirable travel route should be created for the potential industrial volumes. If Cherry Avenue remains in its proposed 6-lane configuration, no inducement to alternate routes would exist. Moreover, if the Cherry Avenue "attraction" were eliminated and relocated, the redistribution of industrial volumes would occur. Therefore, it is recommended that Cherry Avenue, south of Jurupa Avenue, be reclassified to a 4-lane arterial. North of Jurupa Avenue, the proposed 6-lane arterial roadway should remain. To produce the desired reduction in Cherry Avenue volumes (industrial trips south of Jurupa) the proposed 4-lane configuration of Mulberry Avenue, currently proposed to end at Cherry Avenue, should also be partially modified by a northerly extension of the 6-lane requirement from its current beginning point at Cherry Avenue, to a new beginning point at Jurupa Avenue. With the exception of intersection approach modifications, Mulberry Avenue north of Jurupa Avenue would require no modification and could remain in its 4-lane configuration as recommended by Greer & Company. Further techniques would include the use of proper signing and intersection geometrics at Cherry Avenue and Jurupa

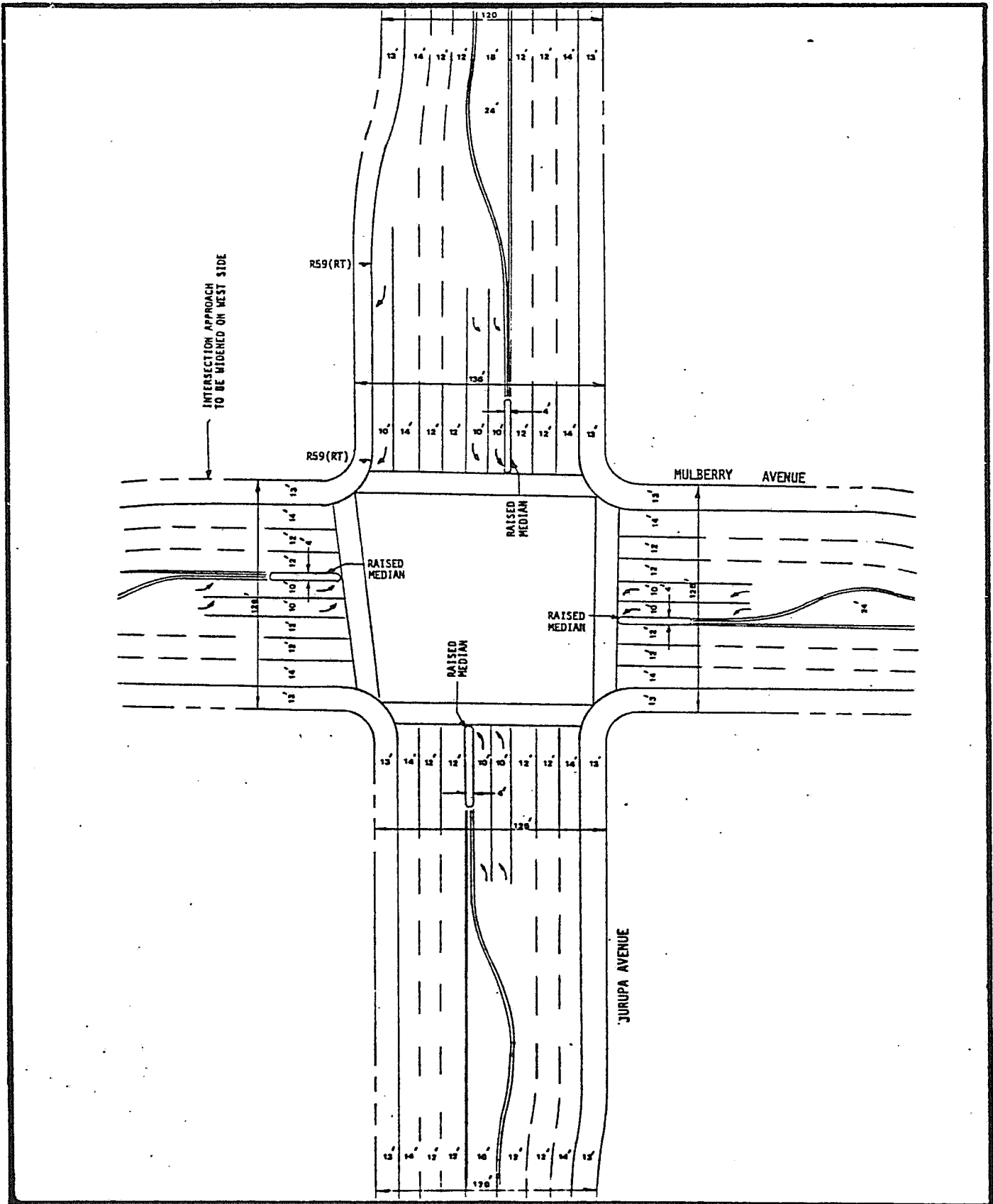
Avenue. With the above improvement, it is estimated that non-project volumes using Cherry Avenue would be reduced by approximately 70% of those proposed, allowing the roadway to operate as a 4-lane arterial. Exhibit 2 illustrates the recommended improvements required at the intersection of Cherry and Jurupa Avenues while Exhibit 3 illustrates the recommended intersection improvements at Mulberry Avenue and Jurupa Avenue. Exhibit 4 illustrates the beginning and ending points of the proposed 4- and 6-lane configuration of Cherry and Mulberry Avenues.

Further review of Exhibit 1 discloses that traffic volumes on the site extension of Live Oak Avenue are slightly above the upper limit of a 2-lane roadway. These volumes are primarily attributable to the proposed Subregional Center. In order to preclude the possibility of a capacity deficiency at that location, it is recommended that a fifth lane be constructed on Cherry Avenue to service northbound traffic destined for the center. The resulting volumes on Live Oak would therefore be within the defined capacity limits. Exhibits 5 and 6 illustrate the proposed Cherry Avenue and Live Oak Avenue cross-section at the Subregional Center while Exhibit 7 describes the proposed Cherry Avenue intersection with Mulberry Avenue.

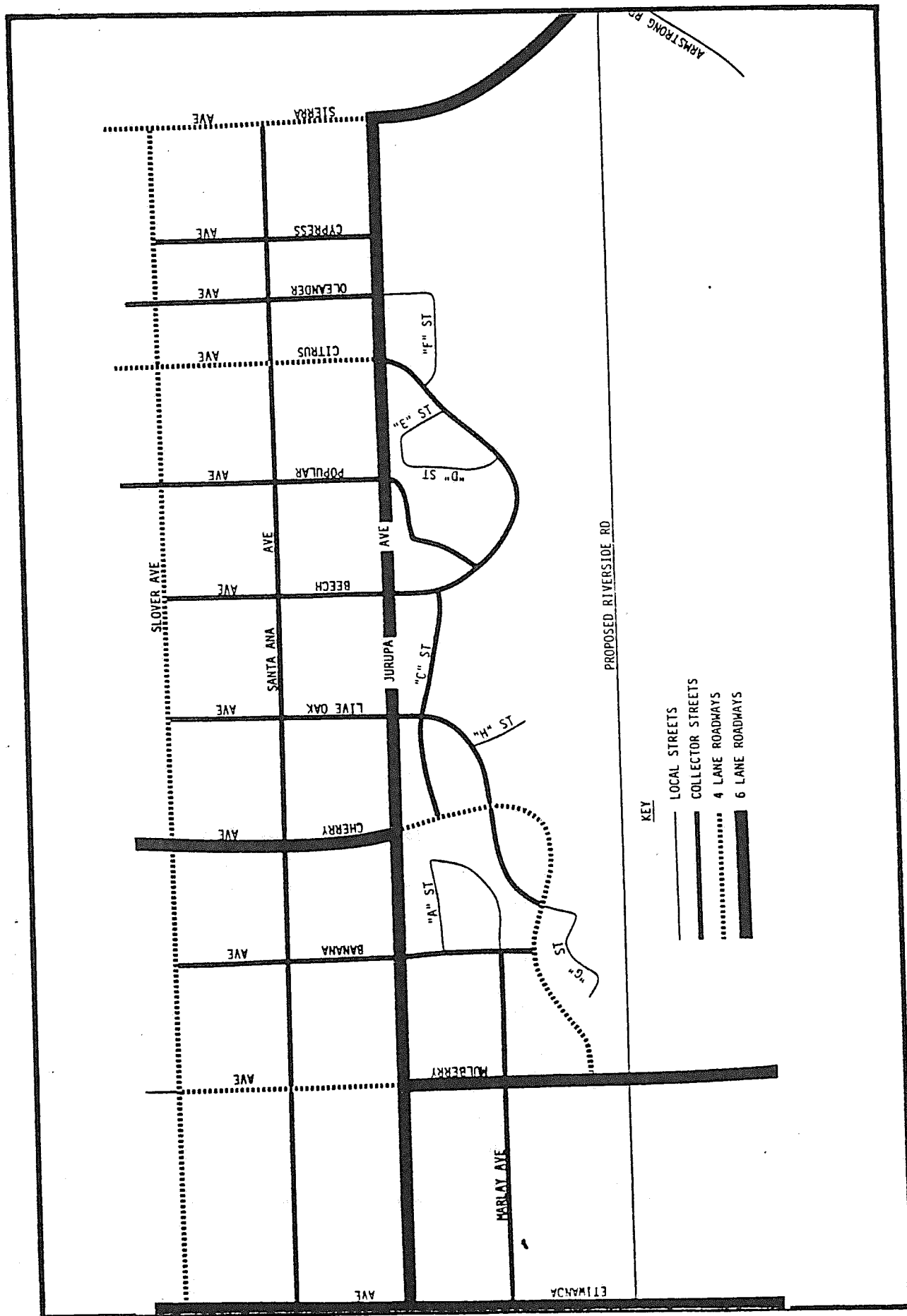
The proposed southerly extensions and connection of Beech and Citrus Avenue are anticipated to service site-area volumes of about 11,000 vehicles per day. Therefore, these roadways will provide an adequate Level of Service under a 2-lane configuration. According to City/County Circulation plans and the analysis described herein, Citrus Avenue, north of Jurupa Avenue, is projected as a 4-lane highway. As shown in Table 4, such a roadway would be classified as a Secondary Highway requiring 88 feet of right-of-way. Inasmuch as Citrus Avenue south of Jurupa Avenue has a projected 64-foot right-of-way, slight modifications to the intersection would be necessary. Exhibit 8 illustrates the proposed intersection configuration of Jurupa and Citrus Avenues.

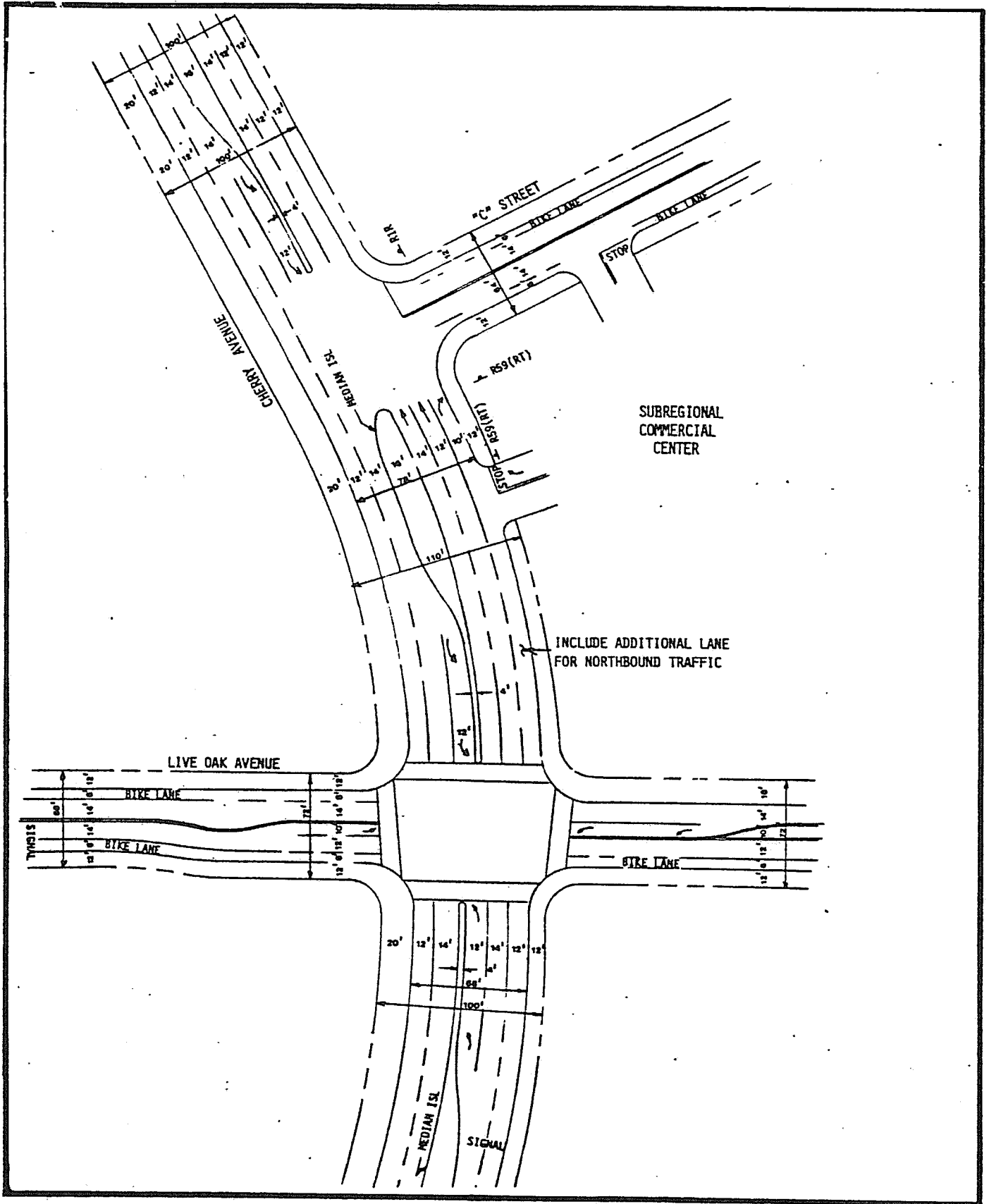
Marlay Avenue, east of Mulberry Avenue, currently exists as an 88-foot roadway. Review of projected traffic volumes reveals that a 64-foot right-of-way would be adequate to serve the anticipated project volumes. Therefore, it is recommended that the 64-foot right-of-way configuration be constructed to a point east of Calabash Avenue where a transition to the 88-foot right-of-way configuration would occur (Exhibit 9).

For purposes of discussion, the remainder of site-area roadways have been designated as "A" Street through "H" Street. Review of Exhibit 1 shows that the anticipated volumes range

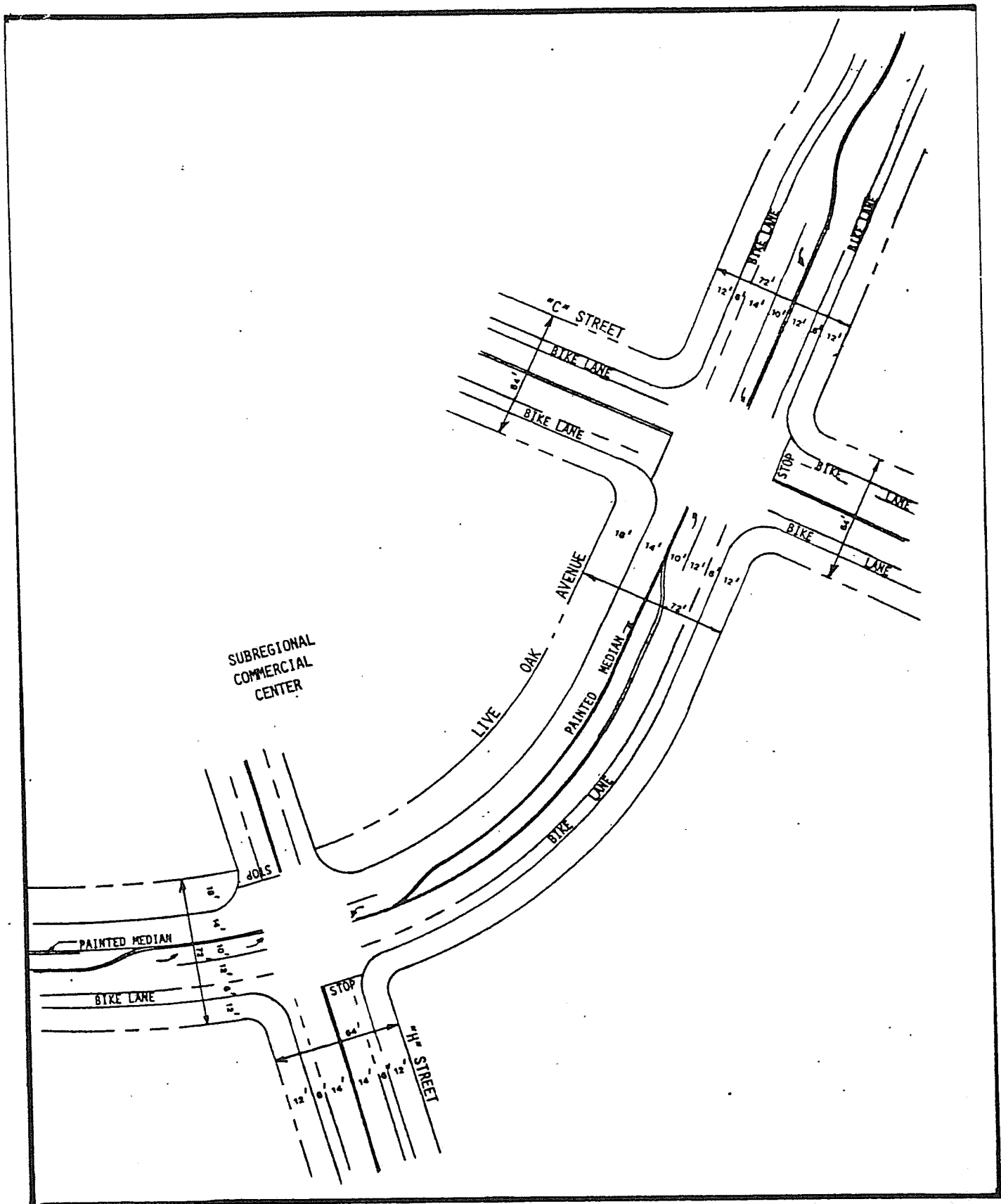


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NORTH

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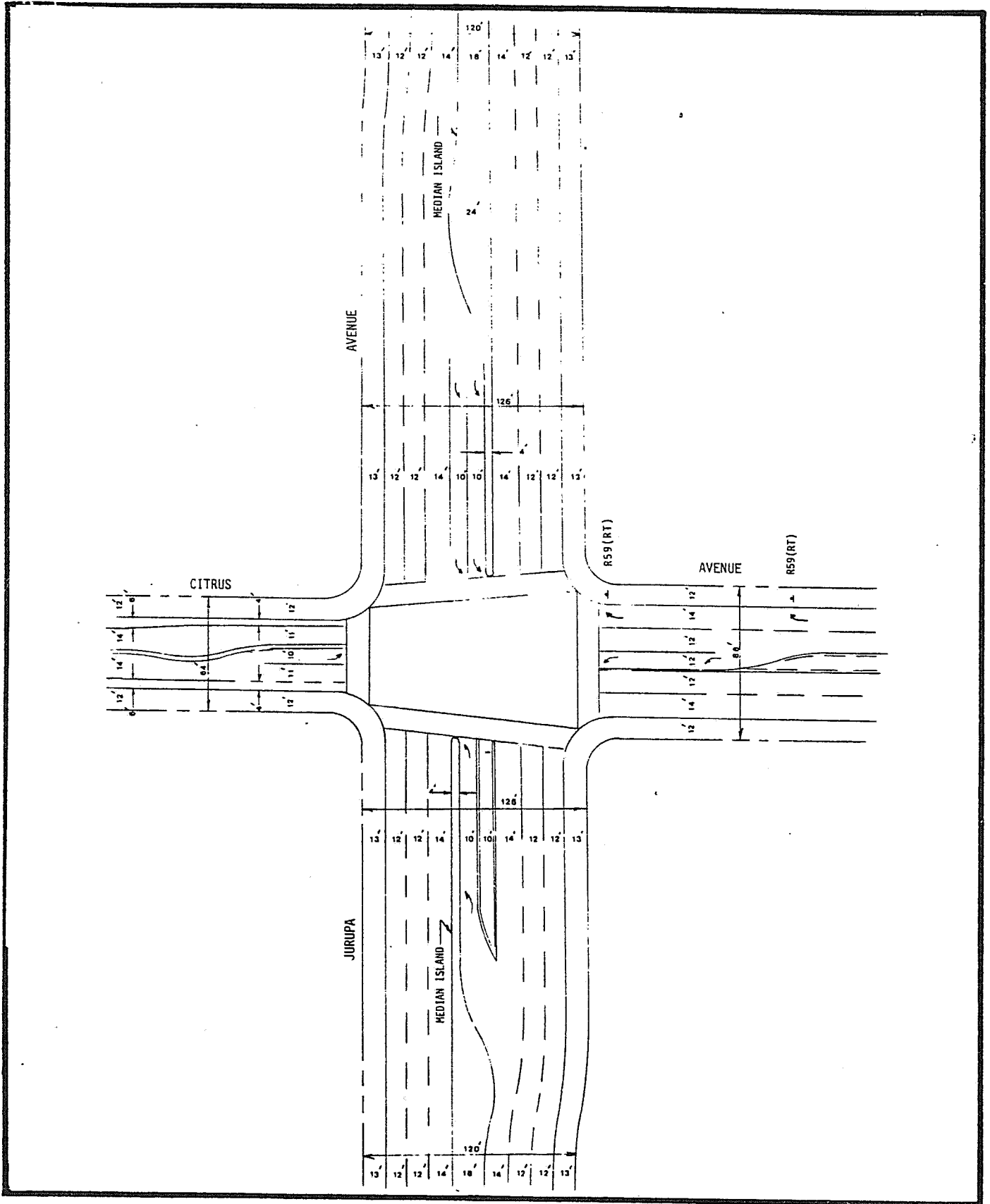
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SOUTHRIDGE VILLAGE
LIVE OAK AVENUE LANE CONFIGURATION AT
THE SUBREGIONAL COMMERCIAL CENTER

TABLE 4
CITY OF FONTANA
TYPICAL ROADWAY CROSS-SECTION

ROADWAY CLASSIFICATION	ROW ¹ WIDTH	CURB-TO- CURB WIDTH	LANES PROVIDED	MEDIAN WIDTH
Major Divided Highway	120'	94'	6	18'
Major Highway	100'	78'	6	16'
Secondary Highway	88'	68'	4	16'
Collector Street	64'	40'	2	N/A
Local Street	60'	36'	2	N/A

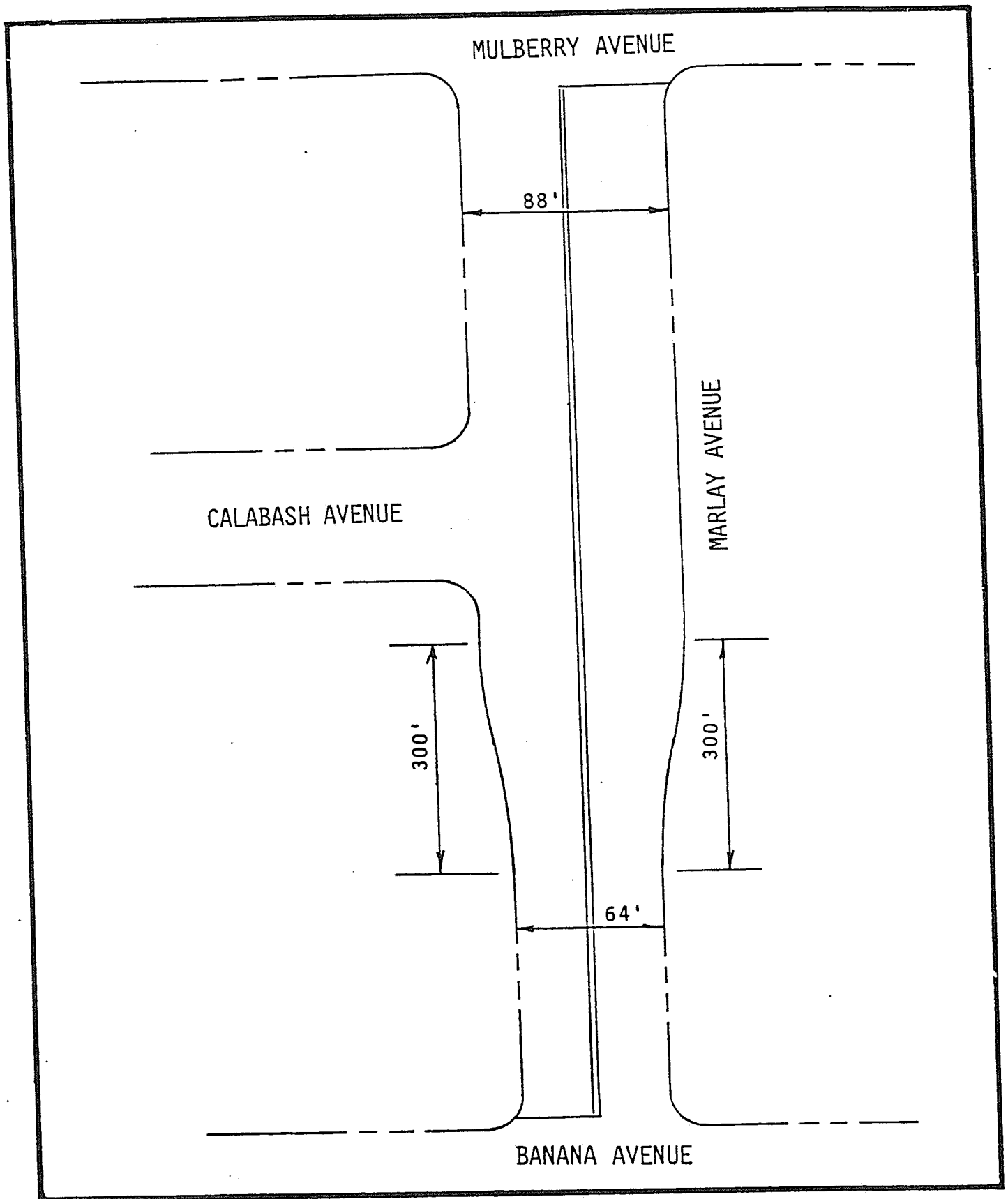
¹ROW = Right of Way Width.



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NORTH



NORTH

from 1400 to 4400 vehicles per day. Therefore, it is recommended that these roadways be given a Master Planned designation of a 2-lane roadway.

In terms of on-site intersection locations, no apparent problems were discovered from Specific Plan data. It is recommended, however, that with the final design of the "C" Street/Beech Avenue and "F" Street/Beech Avenue intersections, particular attention should be given to those locations to prevent sight distance problems. Exhibit 4 illustrates the proposed site area roadway requirements.

SITE AREA TRAFFIC CONTROL REQUIREMENTS

Traffic signal warrants have been investigated at all site-area intersections. With the exception of Mulberry Avenue and Marlay Avenue, virtually all intersections on the perimeter of the site will require eventual signalization. Because of the anticipated Cherry/Live Oak traffic volumes, that intersection will also require signalization - the remaining on-site intersections should be stop sign controlled. Exhibit 10 illustrates site-area intersections and the recommended methods of control.

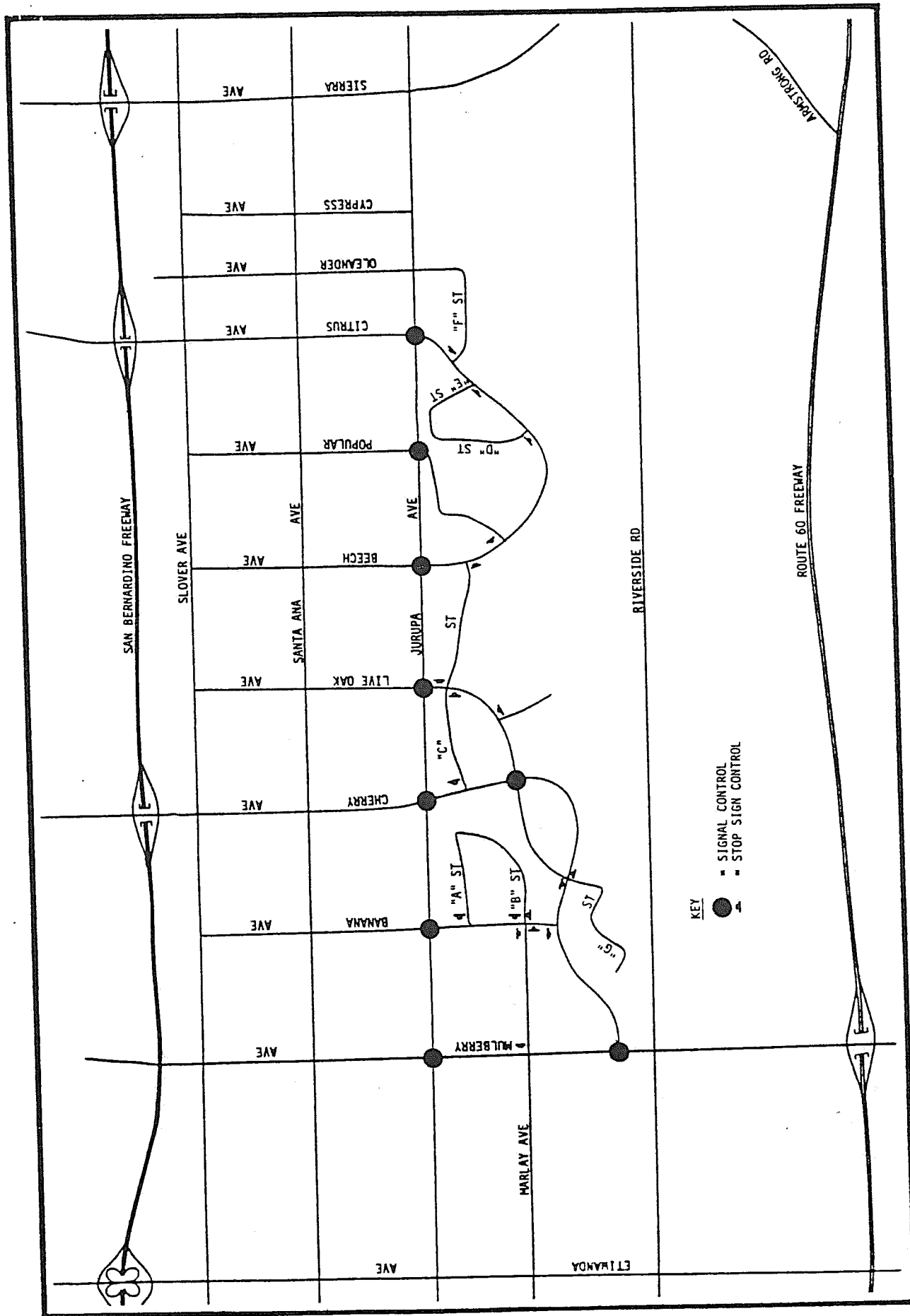
OFF-SITE TRAFFIC CONTROL REQUIREMENTS

Review of Exhibit 1 and the previous Greer Analysis reveals that the information described therein is correct. Projected off-site traffic volumes indicate that the majority of the arterial street intersections would require signalization as future development occurs. Based on a minimum distance of 660' (1/8 of a mile) between traffic signals, review of the Specific Plan reveals that the proposed off-site intersection spacing will be adequate. It is recommended that a Master Planned Traffic Signal Development program be prepared and implemented as the various improvements progress.

MITIGATION MEASURES

Based on the proposed roadway cross-sections and the anticipated traffic volumes, an adequate Level of Service will be available on project area roadways in 1990. At the San Bernardino (I-10) and Pomona (Route 60) Freeways however, it should be noted that the cumulative impact of project and non-project traffic volumes will create capacity deficiencies at those locations.

Currently, the existing lane configuration at the San Bernardino freeway over-crossings at Etiwanda, Cherry, Citrus and Sierra Avenues are too narrow to accomodate future traffic



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SOUTHRIDGE VILLAGE

SITE-AREA TRAFFIC CONTROLS

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volumes. Similarly, the Pomona Freeway over-crossings at Etiwanda Avenue, Country Village Road, and Armstrong Road will be insufficient to provide an adequate Level of Service in 1990. It is therefore recommended that the appropriate City and County agencies initiate cooperative efforts with the California Department of Transportation to provide for major street improvements at those locations.

Recommended improvements would include the widening of Etiwanda Avenue to a six-lane configuration at both the I-10 and Route 60 interchanges. At the San Bernardino Freeway, Cherry Avenue would require a six-lane over-crossing configuration while Citrus Avenue would require localized widening from 4 lanes to 6 lanes between Santa Ana Avenue and the San Bernardino Freeway. Although projected traffic volumes at Sierra Avenue do not warrant the over-crossing widening at this time, it should be recognized that future developments could create the need for such an improvement.

At the Pomona Freeway, the anticipated traffic volumes would also require the improvement of the existing 2-lane over-crossing to 6 lanes. East of the project area, Armstrong Road is projected to service approximately 37,000 vehicles per day. Therefore, a 6-lane roadway requirement would be necessary at that location as well as its interchange with the Pomona Freeway.

In terms of future over-crossing signal requirements, it is anticipated that all arterial to freeway ramp systems at these project area over-crossings would require eventual signalization.

Further mitigation strategies could include the use of ramp metering devices, freeway operational improvements, truck routing system, and carpool/vanpool matching systems.

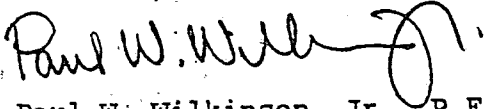
UNAVOIDABLE ADVERSE IMPACTS

The proposed Southridge Village Project will generate an estimated 100,390 vehicle trip ends daily which represent 78,180 vehicle trips added to the area street and highway system. With the inclusion of other projects north of the site, an estimated 248,000 daily trips will be generated. Due to the anticipated traffic volume, site-area freeway interchanges and approaches will require major improvements including signalization of ramp intersections with the overcrossing streets.

Linscott, Law & Greenspan, Inc., Engineers

It has been a pleasure being associated with you in the preparation of this study. We stand ready to provide further assistance or consultation as may be required. Please contact me if you have any questions.

Very truly yours,
LINSCOTT, LAW & GREENSPAN, INC.


Paul W. Wilkinson, Jr., P.E.
Vice President

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