HIGHLAND RESERVE NORTH SPECIFIC PLAN

AMENDMENT TO THE NORTH CENTRAL ROSEVILLE SPECIFIC PLAN

Prepared for the City of Roseville

June, 1997

Highland Reserve North Specific Plan

Adopted May 28, 1997
Resolution #97-128

Amended:

August 18, 1999: Resolution #99-346
June 7, 2000; Resolution #00-220
October 10, 2001; Resolution #01-515
April 17, 2002; Resolution #02-131
January 7, 2004; Resolution #04-16
August 3, 2005; Resolution #05-403
March 28, 2007; Resolution #07-143

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1. Introduction

1.1 The Highland Reserve North Specific Plan: An Amendment to the North Central Roseville Specific Plan

The Highland Reserve North ("HRN") Specific Plan established a development framework for a 615 acre portion of the North Central Roseville Specific Plan ("NCRSP") located north of Highway 65. As adopted by the City of Roseville on July 5, 1990, the NCRSP designated the Highland Reserve North acreage "Urban Reserve," with future urbanization subject to amendment of the Specific Plan. This Specific Plan for Highland Reserve North amends the NCRSP to extend the basic concepts of community form and design from the NCRSP area south of Highway 65 to the Urban Reserve area to the north. In so doing, it completes the specific planning process begun with the adoption of the original NCRSP.

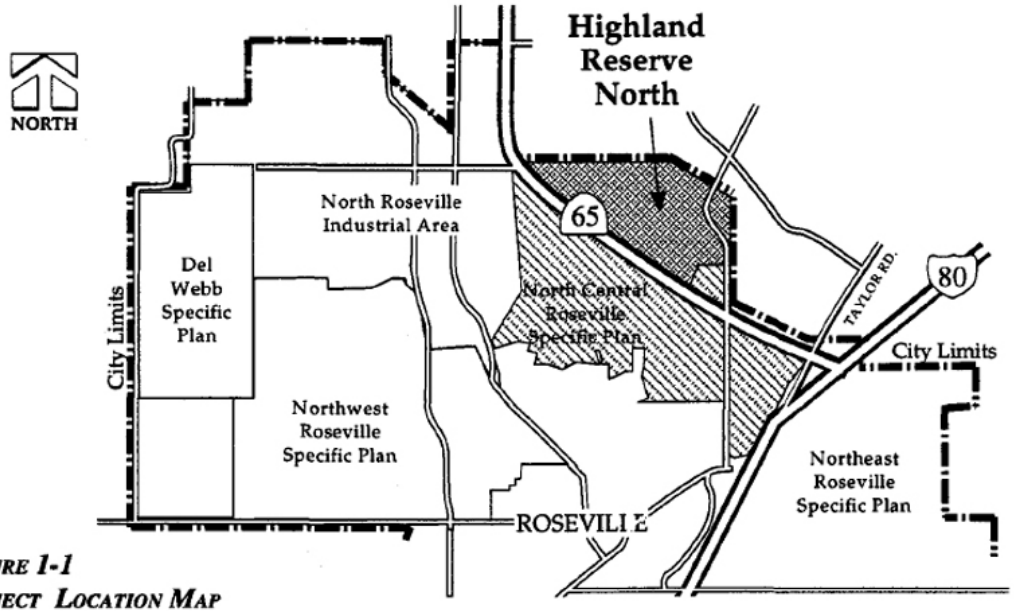


Figure 1-1
Project Location Map

Although this plan amendment builds upon the planning objectives of the original NCRSP, it is intended to serve as a stand-alone specific planning document. As such, it establishes in a single, self-contained reference document the specific plan concepts, policies, and guidelines applicable to the HRN plan area. These include both carryover policy and guidelines from the existing NCRSP and new policy and guidelines applicable to the HRN area only. With adoption of this plan amendment, all individual projects within the HRN plan area are subject to the concepts, policies and guidelines set forth herein.

1.2 Project Concept

This Highland Reserve North Specific Plan Amendment proposes a mix of residential neighborhoods, parks, open space, schools, commercial and employment related uses. A total of 1,669 dwelling units are to be provided in traditional neighborhoods.

The HRN Specific Plan area consists predominantly of rolling grassland terrain with no native trees or significant vegetation. Seasonal drainages and wetlands do exist and have been incorporated into the plan where feasible.

The plan area includes approximately two miles of Highway 65 frontage providing prime visibility and access. This visibility and access provides a substantial opportunity for convenient shopping and for regional commercial as well as commercial/office mixed uses.

The plan is organized around the following key concepts which are described in more detail in Section 2, Land Use and summarized in Figure 1-2:

- The Village Square – a pedestrian oriented community center which will include a neighborhood commercial center, the central park and an elementary school.
- Traditional neighborhoods organized around interior neighborhood parks.
- A Pedestrian Pathway System which will link the neighborhoods into the Village Square and tie the Plan Area together.
- A regional commercial band adjacent to Highway 65 which makes use of the prime freeway access and visibility while buffering the neighborhoods to the north.
- Preservation and utilization of watershed open space corridors.
- Quality Design which emphasizes the design of public spaces with a particular focus on common area landscaping.

1.3 Project Objectives

Highland Reserve North will serve to strengthen the Roseville community and advance the values which make Roseville a desirable place to live and work. The principal objectives of the Highland Reserve North Specific Plan Include:

- Serve as a catalyst for construction of the Pleasant Grove Interchange.
- Compliment and expand the existing NCRSP Regional Retail Core with its planned regional mall and adjacent regional commercial uses.
- Generate positive fiscal impacts resulting from regional commercial expansion along Highway 65.
- Provide a range of housing density, type and affordability centrally located in close

Traditional Neighborhoods

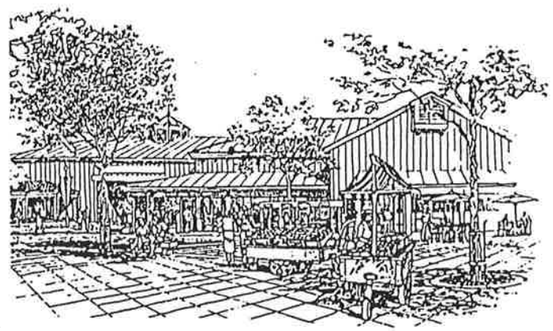
- Distinct Neighborhoods each with its own sense of place and with a shared sense of connection to the broader community.
- Park is a focal point in each neighborhood

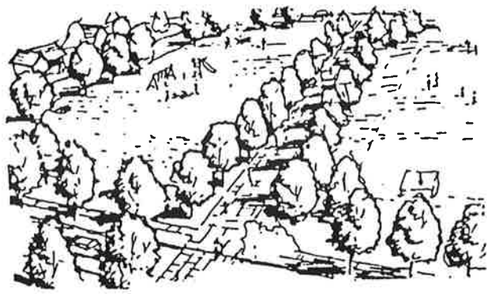
Common Element Design Themes

- Enhanced landscape corridors
- Coordinated design of common areas

The Village Square

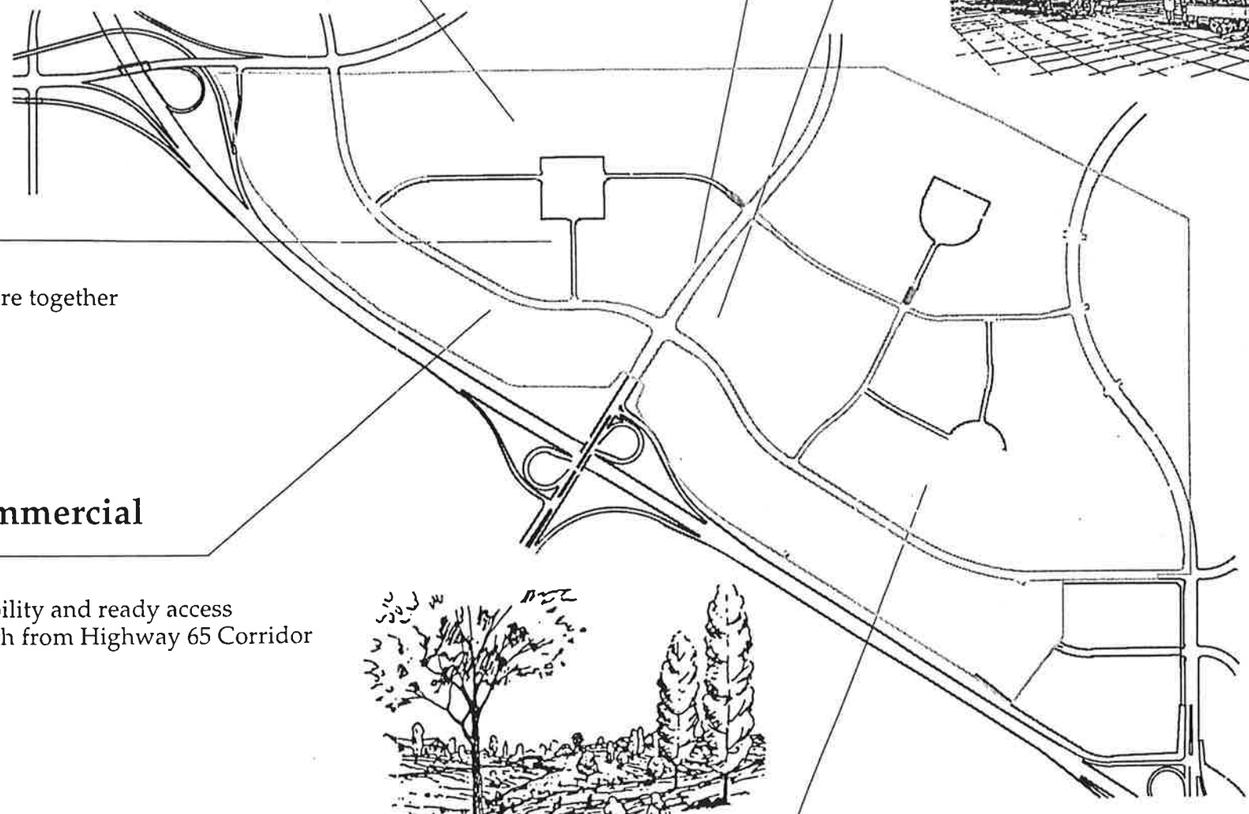
- The "heart" of the Community
- Emphasis on pedestrian links
- Broad array of activities and services
- Integrates the park, the school and the commercial center





Pedestrian Pathway System

- Focus on ease of access
- Ties the neighborhood and Village Square together



Highway-Oriented Commercial

- Optimal use of high freeway visibility and ready access
- Buffers neighborhoods to the north from Highway 65 Corridor

Watershed Open Space Corridors

- Preservation of riparian habitat and vegetation
- Natural Drainage channels

FIGURE 1-2
PLAN AREA CONCEPTS

NORTH

proximity to job generating land uses in the existing NCRSP, the North Industrial Area, and the Northeast Specific Plan as well as along the Highway 65 employment corridor.

- Provide roadway improvements that will tie together surrounding development south of Highway 65 and north of the City of Roseville boundary with the City of Rocklin.

- Build upon the themes of high quality/high amenity community design which distinguish the NCRSP.

- Enhance employment development opportunities by planning for adequately improved sites, support services and facilities, and master planned residential neighborhoods affordable to workers.

- Enhance the sense of community through the organization of land uses around a centrally located Village Square.

- Provide shopping, recreation and services such that HRN residents will not need to travel outside the plan area for most routine daily needs.

1.4 Project Phasing

The Highland Reserve North Specific Plan contemplates two primary phases of development, with each primary phase further divided into multiple sub-phases. Phase I consists of that portion of the NCRSP Urban Reserve (approximately 386 acres) located east of the future alignment of Pleasant Grove Boulevard. Phase II includes the remainder of the NCRSP Urban Reserve area (approximately 228 acres) located to the west of Pleasant Grove Boulevard.

The entitlements vested by the project Development Agreement include both Phase I and Phase II land uses. The phasing analysis contained in the HRN Specific Plan allows the land uses which are being vested on a plan-wide basis, together with the associated infrastructure, to be developed and financed in multiple phases.

1.5 Unit Transfer

The single family residential component of HRN Phase I consists of 732 already approved and fully entitled residential units transferred from NCRSP multi-family properties to the south of Highway 65. This transfer of units results in reduced multi-family densities on existing NCRSP Parcels 20, 21A and a 8.56 acre portion of 21B, as well as redesignation of the remaining 10.46 acre portion of existing NCRSP Parcel 21B for business-professional use.

1.6 Related Documents

The supporting documents listed below play a key role in the implementation of this Highland Reserve North Specific Plan Amendment. These documents will be used in conjunction with this Specific Plan Amendment to ensure full implementation of General Plan goals and policies.

Development Agreement

The property owner and the City of Roseville have executed a project Development Agreement in accordance with Sections 65864 et seq. of the Government Code of the State of California, as implemented through Article V, Chapter 19.84 of the Roseville Zoning Ordinance. The project Development Agreement vests development rights to specified uses of the HRN property as well as to the densities and intensities of use. In addition, the HRN Development Agreement sets forth needed infrastructure improvements, park dedication requirements, timing and methods of financing improvements and other specific

performance obligations of the property owner and the City of Roseville as such obligations relate to the development of the individual properties within the HRN Specific Plan area.

Environmental Impact Report

The HRN Environmental Impact Report (EIR) was certified concurrent with the adoption of this Specific Plan Amendment. The EIR describes the environment, examines the environmental impacts of the proposed plan amendment and focuses on changes in the environment that would result from all phases of the project including planning, construction and operation. The EIR identified mitigation measure as appropriate to reduce significant impacts and incorporates a Mitigation Monitoring Plan. In accordance with CEQA, it is intended that the HRN EIR form the environmental basis for approval of subsequent development within and in compliance with this HRN Specific Plan.

1.7 City of Roseville General Plan Consistency

The growth management component of the City of Roseville General Plan 2010 (adopted November 18, 1992) addresses the potential for urban uses in the northern part of the City. This Highland Reserve North Specific Plan Amendment is consistent with the goals, policies, and objectives of the General Plan.

1.8 Legal Authority

The City of Roseville, as a charter city, adopts this Specific Plan Amendment in accordance with a procedure consistent with the provisions set forth in Article 8, Sections 65450 through 65457 of Title 7 Planning and Land Use Law, California Government Code. These provisions require that a specific plan must be consistent with the adopted general plan of the jurisdiction within which the plan is located. It is required that all subsequent subdivision and development, all public works projects and zoning regulations must be consistent with the specific plan.

2. Land Use Element

The Highland Reserve North Land Use Element establishes the location, density/intensity and organization of the land uses proposed in the HRN plan area.

2.1 Land Use Summary

The HRN Land Use Map, Figure 2-1, encompasses a total of approximately 610 acres. The prominent land uses include single-family detached residential, multifamily attached residential, commercial, parks, schools and open space uses. A total of 1,770 (1,669[1]) dwelling units are proposed at an average gross density of approximately 6.4 dwelling units per acre. Based on a projected average of 2.54 persons per household, the specific plan would be home to 4,790 residents.

Figure 2-1, the Land Use Map also illustrates the proposed phasing of the plan. Phase I includes that portion of the HRN Specific Plan area east of Pleasant Grove Boulevard; Phase II includes that portion west of Pleasant Grove Boulevard. Phasing is described in more detail under Section 2.3 of this Element.

1 Please refer to Table 2-2 for current units and acres.

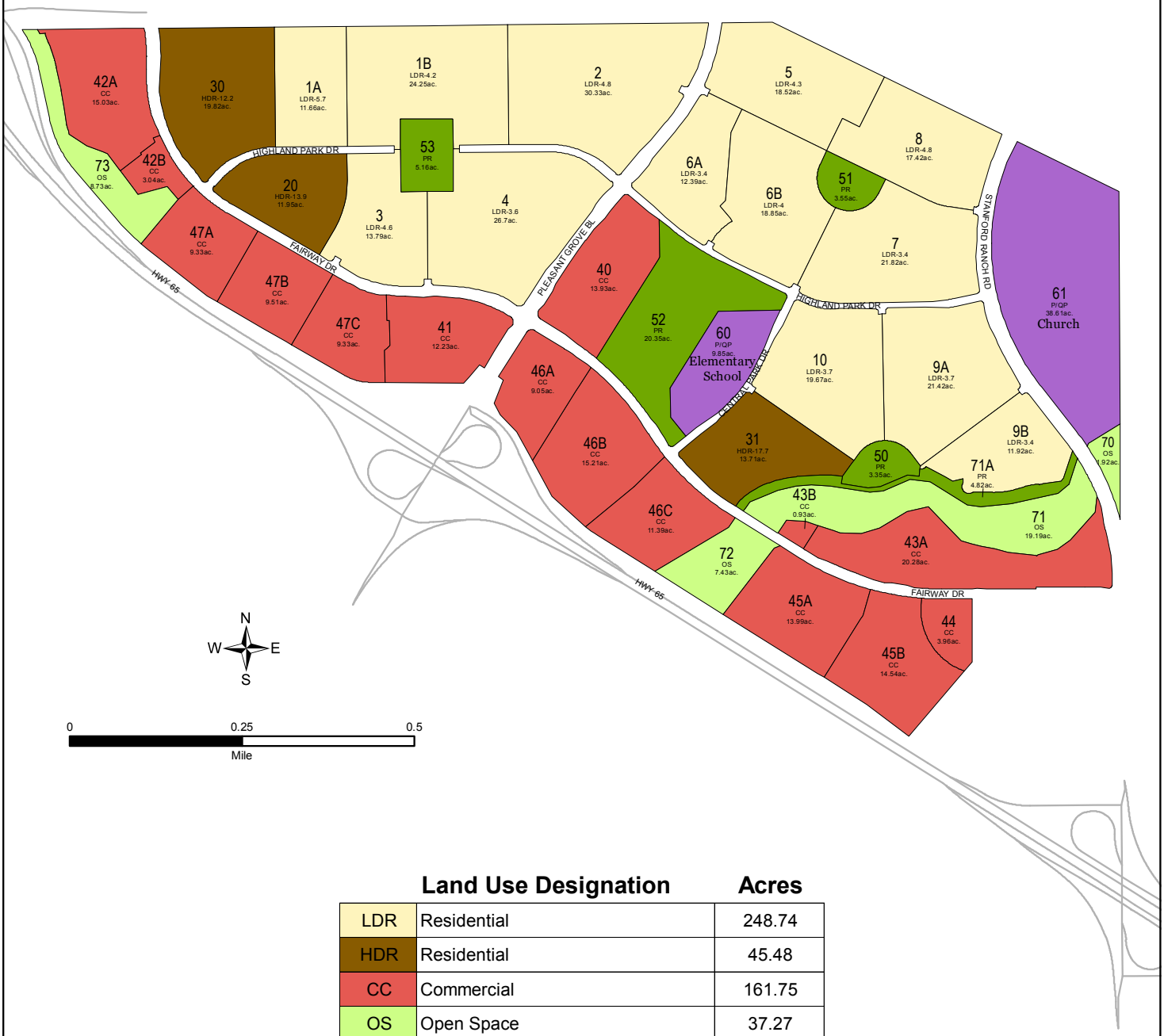
Highland Reserve North Land Use Summary

GENERAL PLAN LAND USE (Specific Plan Land Use)	ACRES	% OF TOTAL ACRES	UNITS	% OF TOTAL UNITS
RESIDENTIAL				
LDR (Residential)	248.74	36.74%	1,018	60.99%
HDR (Residential)	45.48	6.72%	651	39.01%
Subtotal	294.22	43.46%	1,669	100.00%
SERVICE AND EMPLOYMENT				
CC (Commercial)	161.75	23.89%	0	0.00%
Subtotal	161.75	23.89%	0	0.00%
OPEN SPACE AND PUBLIC				
OS (Open Space)	37.27	5.51%	0	0.00%
PR (Park)	37.23	5.50%	0	0.00%
PQP (Church)	38.61	5.70%	0	0.00%
PQP (Elementary School)	9.85	1.45%	0	0.00%
ROW (Right of Way)	98.74	14.49%	0	0.00%
Subtotal	221.03	32.65%	0	0.00%
Total	677.00	100.0%	1,669	100.0%

Last Updated: December 10, 2014

HIGHLAND RESERVE NORTH LAND USE PLAN

Figure 2-1



Land Use Designation		Acres
LDR	Residential	248.74
HDR	Residential	45.48
CC	Commercial	161.75
OS	Open Space	37.27
PR	Park	37.23
P/QP	Church	38.61
	Elementary School	9.85
ROW	Right of Way	98.74

*See Land Use By Parcel table for Unit totals

Totals: 677.67

Table 2-2: Highland Reserve North Land Use by Parcel Number

Parcel	General Plan Land Use (Specific Plan Land Use)	Zoning	Acres	Allocated Units	Finaled Units	Available Units	Density
1A	LDR (Residential)	RS/DS-HR	11.66	66	66	0	5.7
1B	LDR (Residential)	RS/DS-HR	24.25	101	101	0	4.2
2	LDR (Residential)	RS/DS-HR	30.33	145	145	0	4.8
3	LDR (Residential)	RS/DS-HR	13.79	64	64	0	4.6
4	LDR (Residential)	RS/DS-HR	26.70	96	96	0	3.6
5	LDR (Residential)	RS/DS-HR	18.52	80	80	0	4.3
6A	LDR (Residential)	RS/DS-HR	12.39	42	42	0	3.4
6B	LDR (Residential)	RS/DS-HR	18.85	75	75	0	4.0
7	LDR (Residential)	RS/DS-HR	21.82	75	75	0	3.4
8	LDR (Residential)	RS/DS-HR	17.42	83	83	0	4.8
9A	LDR (Residential)	RS/DS-HR	21.42	79	79	0	3.7
9B	LDR (Residential)	RS/DS-HR	11.92	40	40	0	3.4
10	LDR (Residential)	RS/DS-HR	19.67	72	72	0	3.7
20	HDR (Residential)	R3	11.95	166	166	0	13.9
30	HDR (Residential)	R3	19.82	242	242	0	12.2
31	HDR (Residential)	R3	13.71	243	243	0	17.7
40	CC (Commercial)	CC/SA-HR	13.93	0	0		0.0
41	CC (Commercial)	CC/SA-HR	12.23	0	0		0.0
42A	CC (Commercial)	CC/SA-HR	15.03	0	0		0.0
42B	CC (Commercial)	CC/SA-HR	3.04	0	0		0.0
43A	CC (Commercial)	CC/SA-HR	20.28	0	0		0.0
43B	CC (Commercial)	CC/SA-HR	0.93	0	0		0.0
44	CC (Commercial)	CC/SA-HR	3.96	0	0		0.0
45A	CC (Commercial)	CC/SA-HR	13.99	0	0		0.0
45B	CC (Commercial)	CC/SA-HR	14.54	0	0		0.0
46A	CC (Commercial)	CC/SA-HR	9.05	0	0		0.0
46B	CC (Commercial)	CC/SA-HR	15.21	0	0		0.0
46C	CC (Commercial)	CC/SA-HR	11.39	0	0		0.0
47A	CC (Commercial)	CC/SA-HR	9.33	0	0		0.0
47B	CC (Commercial)	CC/SA-HR	9.51	0	0		0.0
47C	CC (Commercial)	CC/SA-HR	9.33	0	0		0.0
50	PR (Park)	PR	3.35	0	0		0.0
51	PR (Park)	PR	3.55	0	0		0.0
52	PR (Park)	PR	20.35	0	0		0.0
53	PR (Park)	PR	5.16	0	0		0.0
60	P/QP (Elementary School)	P/QP	9.85	0	0		0.0
61	P/QP (Church)	P/QP	38.61	0	0		0.0
70	OS (Open Space)	OS	1.92	0	0		0.0
71	OS (Open Space)	OS	19.19	0	0		0.0
71A	PR (Park)	PR	4.82	0	0		0.0
72	OS (Open Space)	OS	7.43	0	0		0.0
73	OS (Open Space)	OS	8.73	0	0		0.0
ROW	Right of Way		98.74				
Total			677.67	1669	1669	0	

Last Updated: December 10, 2014

2.2 Land Use Concept

Land use in the Highland Reserve North Specific Plan area is organized on five key themes or features. These features establish the placement and general character of specific land uses. The key themes are:

1. The Village Square

At the heart of the Highland Reserve North land use plan is the 45 acre Village Square. This pedestrian oriented community center will make readily accessible community activities of critical importance to the functional integration of the HRN Plan area. The Village Square is envisioned as the traditional "town center" that serves as the social, shopping, recreational and leisure center of the community. The Village Square includes the neighborhood commercial center, a large community park or "Central Park" and an elementary school.

2. Traditional Neighborhoods Organized Around Neighborhood parks

The residential portions of the plan area are organized in three distinct neighborhoods. Traditional design features have been employed to establish within each neighborhood a sense of social scale and definition as well as a sense of connection to the broader community. Each neighborhood is oriented around an interior neighborhood park. These parks form the centerpiece for each neighborhood – an "outdoor living room" for the residents. Modeled on the small neighborhood parks found in may older communities, the Highland Reserve North neighborhood parks are intended as a place for residents to meet and socialize and for children to play.

3. Pedestrian Pathway System

Land use and circulation are designed to facilitate walking and bicycling. A pedestrian walkway system will be a prominent feature of the Highland Reserve North land use plan. This system links the residential neighborhoods (and the neighborhood parks around which the neighborhoods are organized) with the Village Square. Walkways will extend from the primary pedestrian loop into the neighborhoods to create a pedestrian network that ties the entire plan area together. In addition, the HRN pedestrian loop will connect to the City-wide bikeway system by way of the Harding Boulevard/Stanford Ranch Road and Pleasant Grove Boulevard interchanges.

4. Highway-Oriented Commercial Buffer

Non-residential uses are located in a high intensity land use band along the approximately two miles of Highway 65 frontage where they can take advantage of the high freeway visibility and ready access. These non-residential land uses also serve as a traditional freeway buffer for the residential land uses which fill the interior of the Highland Reserve North Specific Plan area.

5. Preservation and Utilization of Open Space

Approximately 77 acres, or 12.5 percent (12.5%), of the total land area within Highland Reserve North is designated in open space uses. Open Space includes the neighborhood parks, the Village Square Center Park and the watershed corridors.

2.3 Project Phasing and Unit Transfer

The Highland Reserve North Specific Plan contemplates two phases of development. Phase I consists of that portion of the NCRSP urban reserve (approximately 368 acres) located east of the future alignment of Pleasant Grove Boulevard. Phase II includes the remainder of the NCRSP urban reserve area (approximately 211 acres) located to the west of Pleasant Grove Boulevard. Table 2-2, Land Use by Parcel, details HRN land uses by phase.

The two primary phases of HRN development are in turn divided into multiple sub-phases (see Figure 7-1 at page 7-2 of this Specific Plan). Each sub-phase is designed to include the infrastructure necessary to provide adequate service consistent with all City standards. The HRN Infrastructure Phasing Element (Chapter 7 of this Specific Plan) provides a detailed description of the roadways, water, sewer, storm drain and electrical improvements to be installed with each sub-phase of development.

The single family component of HRN Phase I consists of 732 already entitled residential units transferred from NCRSP multifamily properties to the south of Highway 65. This transfer results in reduced multifamily densities on existing NCRSP parcels 20, 21A and an 8.56-acre portion of 21B, as well as redesignation of the remaining 10.46-acre portion of existing NCRSP parcel 21B for Business-Professional use.

The impact of phasing on circulation and infrastructure systems is discussed in more detail in the Circulation and Public Facilities and Services Elements of this Specific Plan.

2.4 Permitted Uses

The permitted, conditionally permitted and administratively permitted uses for each HRN parcel designated with RS, R3, P/QP, PR and OS zoning shall be as provided by the zoning assigned to each parcel pursuant to the then current Roseville Zoning Ordinance.

The permitted uses within the HRN Community Commercial zone districts are modified from the Zoning Ordinance general districts by the provisions of the Special Area (SA) overlay district. This overlay district allows for modification of the underlying general district regulations (with respect to both uses and development standards) by reference to regulations adopted in the ordinance rezoning the property so classified. The HRN Specific Plan contains these regulations and is incorporated into the ordinance establishing the Community Commercial zone district.

The development standards for the Small Lot Residential (RS) zone district have also been modified from the Zoning Ordinance general district. This has been accomplished through the provisions of the Development Standards (DS) overlay zone. The applicable development standards are included in the Community Form and Design Guidelines attached to this HRN Specific Plan as Appendix A.

All use types referenced below are fully defined in Chapter 19.08 of the Roseville Zoning Ordinance. Use types not identified as principally, administratively or conditionally permitted are prohibited. Use types identified as administratively or conditionally permitted require approval of an Administrative or Conditional Use Permit as specific in Article V of the Roseville Zoning Ordinance.

2.4.1 Residential Land Use

The plan area includes a mix of housing types and densities ranging from single family detached residential units to multifamily attached apartments.

2.4.1.1 Low Density Residential (1.0 to 6.9 du/ac)

GP LAND USE DESIGNATION: *Low Density Residential (LDR)*

ZONING DISTRICT: *Small Lot Residential-Development Standard Overlay (RS/DS)*

Purpose: Low density residential, single family homes, account for a total of 1,018 units. Of these LDR units, 546 are included in Phase I and 472 in Phase II. Low density residences are distributed in three neighborhoods. The relatively gentle terrain and separation from Highway 65 make the northern portions of the HRN Specific Plan area highly suitable for low density, single family dwellings.

Dwelling types in this density range may include attached or detached single family units. The types of lots anticipated in this density range include small lots and clustered lots as well as conventional lots. In addition, it is anticipated that a portion of one or more of the LDR large lot parcels (Parcels 1-10) may be developed as a MDR small lot subdivision. The inclusion of a MDR small lot subdivision within any LDR designated large lot parcel requires approval of a Rezone, General Plan Amendment, Specific Plan Amendment and associated environmental review, with the application for such approval to be processed concurrently with the small lot subdivision map to which the MDR designation is to apply.

Permitted Uses and Development Standards:
As specified for the RS zone district by the Roseville Zoning Ordinance, Section 19.10.020. Development standard are as reflected in the Community Form and Design Guidelines attached to this HRN Specific Plan as Appendix A.

2.4.1.3 High Density Residential (13+ du/ac)

GP LAND USE DESIGNATION: *High Density Residential (HDR)*

ZONING DISTRICT: *Attached Housing (R3)*

Purpose: The Specific Plan provides three multifamily sites (Parcel 31 in Phase I and Parcel 20 and 30 in Phase II). A total of 868 (651[2]) dwelling units, or approximately 39% of the total housing stock in the Plan area, are in this higher density category. HDR Parcels 20, 30 and 31 reflect densities of 14.0, 13.1 and 18.23 dwelling units per acre, respectively.

Multifamily housing in the plan area is located in close proximity to the major employment areas and shopping areas. This convenient access to commercial uses will facilitate pedestrian usage and provide a resident population to support these activities. The proximity of multifamily housing to employment generating uses is intended to support the jobs/housing goals of the City of Roseville.

Permitted Uses and Development Standards:
As specified for the R3 zone district by the Roseville Zoning Ordinance, Section 19.10.020 and 19.10.030. See also the Community Form and Design Guidelines attached as Appendix A.

2 Please refer to Table 2-2 for current units and acres.

2.4.2 Village Square Commercial

GP LAND USE DESIGNATION: *Community Commercial (CC)*

ZONING DISTRICT: *Community Commercial - Special Area Overlay (CC/SA)*

Purpose: The Village Square Commercial site (Phase I - Parcel 40) is part of the centrally located Village Square and will serve as a primary focal and activity center for the community's residents. This Community Commercial site is approximately 13.93 acres in area and is intended to include uses such as retail shops, services and restaurants. The quantity and mix of shops and services are intended to be sufficient to meet the convenience shopping needs of the residents and employees in the Plan area. The center may also be utilized for office uses. The Village Square Community Commercial sites in the HRN Specific Plan area due to its neighborhood oriented focus and its unique interface with the adjacent Central Park.

Permitted Uses and Development Standards:
Because of the unique character of Parcel 40 as part of the HRN Village Square, a Special Area (SA) overlay district has been applied modifying the uses otherwise permitted on this parcel by the Community Commercial (CC) zone district. The modifications will prohibit those uses that have the potential to conflict with adjacent or proximate uses, and/or are considered inconsistent with the Village Square character as further described in the Community Form and Design Guidelines include extensive design requirements relative to the Village Square (see Appendix A).

Permitted uses for the Village Square Community Commercial zone district are reflected on Table 2-3.

2.4.3 Community Commercial

GP LAND USE DESIGNATION: *Community Commercial (CC)*

ZONING DISTRICT: *Community Commercial - Special Area Overlay (CC/SA)*

Purpose: The HRN Specific Plan proposes 148.50 acres of Community Commercial uses adjacent to Highway 65. Community commercial land use sites (Phase I Parcel 43A/B, 44, 45A/B, and 46A/B/C; Phase II Parcels 41, 42A/B and 47A/B/C) are intended to provide a mix of shops and services for plan area residents as well as serving as destination shopping for other nearby communities. To this end, the Community Commercial sites are intended to be both pedestrian oriented and auto oriented. Regional access is primarily from Highway 65 via Pleasant Grove Boulevard and Stanford Ranch Road. The commercial uses are an extension of the approved commercial uses on the adjacent power center site (NCRSP Parcel 34) and will complement the regional mall (NCRSP Parcel 35) and associated commercial uses south of Highway 65. The Highway 65 freeway frontage west of the Pleasant Grove Interchange (Phase II - Parcel 47 A/B/C) is particularly well suited to a mixed commercial and office park environment that could include either sole users or multi-tenant buildings. Site constraints on Parcel 43A/B in Phase I also suggest a business-professional/commercial land use mix. To reflect the possibility that significant office development will occur as a permitted use on both CC Parcels 43A/B and 47A/B/C, the HRN environmental analysis assumes that 50% of each site will be built out as office.

Permitted Uses and Development Standards:
Community Commercial uses have been modified through the Special Area Overlay and are reflected on Table 2-3. See also the Community Form and Design Guidelines attached as Appendix A.

Table 2-3 Permitted Uses for the Community Commercial (CC) Land Use

Civic Use Types	Parcel 40	Parcels 41-47
Community Assembly	P	P
Community Services	P	P
Essential Services	P	P
Hospital Services		
General Hospital Services	--	CUP
Psychiatric Hospital Services	--	CUP
Libraries & Museums, Private	P	P
Public Parking Services	P	P
Schools		
College and University	P	P
Elementary and Secondary	--	P
Secondary	CUP	CUP

Residential Use Types	Parcel 40	Parcels 41-47
Caretaker/Employee Housing	--	CUP
Dwelling		
Multi-Family	CUP	CUP
Single Family	--	CUP
Two Family	--	CUP
Family Day Care Home, Small	--	P
Family Day Care Home, Large	--	CUP

Commercial Use Types	Parcel 40	Parcels 41-47
Animal Sales & Services		
Grooming & Pet Store	P	P
Veterinary Clinic	P	P
Veterinary Hospital	CUP	CUP
Automotive & Equipment		
Automotive Rentals	--	--
Automotive Repairs	CUP	CUP
Automotive Sales	--	CUP
Car Wash & Detailing	CUP	CUP
Gasoline Sales	P	P
Banks & Financial Services	P	P
Bars & Drinking Places	P	P
Building Material Stores	CUP	CUP
Business Support Services	P	P
Commercial Recreation		
Amusement Center	P	P
Indoor Entertainment	P	P
Indoor Sports & Recreation	P	P
Community Care Facility	--	P
Day Care Center	P	P
Eating & Drinking Establishments		
Fast Food w/ Drive Through	P	P
Convenience	P	P
Full Service	P	P
Food & Retail Sales	P	P
Funeral and Internment Services	--	P
Lodging Services	P	P
Maintenance & Repair	P	P
Medical Services		
General	P	P
Offices, Professional	P	P
Personal Services	P	P
Retail Sales & Services	P	P
Specialized Education & Training		
Vocational Schools	P	P
Specialty Schools	P	P
Storage, Personal Storage Facility	--	CUP

Industrial Use Types	Parcel 40	Parcels 41-47
Laundries, Commercial	CUP	CUP

Transportation & Communication Use Types	Parcel 40	Parcels 41-47
Antennas & Communication Facilities I & II		
Developed Lot	P	P
Undeveloped Lot	A	A
Heliport	--	CUP
Intermodal Facilities	CUP	CUP

2.4.4 Church/Private School

GP LAND USE DESIGNATION: *Public/ Quasi-Public (P/QP)*

ZONING DISTRICT: *Public/Quasi-Public (P/QP)*

Purpose: Parcel 61 is a 36.55 (38.61[3]) acre site in Phase I that will be used for a church and private school. The use will include a sanctuary, school classrooms, multi-purpose facilities, play fields, parking and other facilities related to the church use.

Permitted Uses and Development Standards:
As specified for the P/QP zone district by the Roseville Zoning Ordinance, Sections 19.16.020 and 19.16.030.

2.4.5 Public Elementary School

GP LAND USE DESIGNATION: *Public/Quasi-Public (P/QP)*

ZONING DISTRICT: *Public/Quasi-Public (P/QP)*

Purpose: A 9.85-acre K-6 elementary school (Parcel 60) is planned on the southwest corner of Highland Drive and Central Park Drive within the Village Square. The Parcel 60 elementary school is discussed in more detail in the Public Facilities and Services Element of this Plan.

Permitted Uses and Development Standards:
As specified for the P/QP zone district by the Roseville Zoning Ordinance, Sections 19.16.020 and 19.16.030.

2.4.6 Neighborhood and Parks Community

GP LAND USE DESIGNATION: *Park and Recreation (PR)*

ZONING DISTRICT: *Park and Recreation (PR)*

Purpose: The HRN Specific Plan proposes three neighborhood parks and community/City-wide parks which vary in approximate size from 3.35 acres to 20.35[3] gross acres and encompass a total of approximately 36.72 gross acres. The three neighborhood parks (Parcels 50 and 51 in Phase I and Parcel 53 in Phase II) are smaller parks ranging in size from 2.67 to 4.03 acres net of roadway IOD and slope areas. An additional 4.31 acre sliver of Park and Recreation zoned land is located adjacent to Open Space Parcel 71. These neighborhood parks will provide opportunity for both passive and active recreational uses. The community/City-wide park (Phase I-Parcel 52), which encompasses 20.35 acres, will provide the primary active recreation facilities in the HRN Specific Plan area. The park and recreation facilities of the HRN Specific Plan are further described in the Public Facilities and Services Element.

Permitted Uses and Development Standards:
As specified for the PR zone district by the Roseville Zoning Ordinance, Sections 19.16.020 and 19.16.030.

3 Please refer to Table 2-2 for current units and acres.

2.4.7 Open Space

GP LAND USE DESIGNATION: *Open Space (OS)*

ZONING DISTRICT: *Open Space (OS)*

Purpose: The HRN Specific Plan area includes two watershed corridors of approximately 31.14 (Phase I - Parcels 70, 71 and 72) and 8.73[4] (Phase II - Parcel 73) acres. These corridors have been designated for preservation as open space. They serve the following purpose:

- Provide a buffer between land uses
- Provide view corridors.
- Provide opportunities for on-site wetland preservation (see Resource Management Element).
- Provide space for on-site management of stormwater drainage (see Public Facilities Element).

Permitted Uses and Development Standards:

- As specified for the OS zone district by the Roseville Zoning Ordinance, Sections 19.16.020 and 19.16.030. See also the Community Form and Design Guidelines attached as Appendix A.

2.5 Minor Density Adjustments Within Plan Area

- It is the intent of this HRN Specific Plan to permit flexibility in adjusting the number of residential units allocated to any HRN large lot LDR parcel in response to market demand and subdivision design considerations. To further this intent, units may be transferred between HRN large lot LDR parcels, provided:
- The transfer and receiving parcels are within the HRN Specific Plan area;
- The cumulative increase or decrease in units resulting from the minor density adjustment does not change by more than twenty percent (20%) the number of pre-transfer units allocated to either the transfer or receiving parcel as established by the June, 1997 Specific Plan;
- The transfer and receiving parcels have existing General Plan land use designations of LDR and the density adjustment does not result in densities on either parcel above or below such existing land use designation; and
- The transfer and receiving parcels can accommodate such density adjustment without resulting in impacts beyond those identified in the HRN EIR.

Such minor density adjustments, if consistent with the above criteria, are contemplated by and within the intent of this HRN Specific Plan and the HRN EIR and will not require an amendment to the Specific Plan or the City General Plan.

To request a minor density adjustment, the owner or owners of both the transfer and receiving parcels shall submit to the Planning Director a

4 Please refer to Table 2-2 for current units and acres.

Notice of Minor Density Adjustment, identifying the impacted parcels, designating the number of units being transferred and providing other documentation as required by the Planning Director to determine compliance with the above unit transfer criteria. Applicant shall also provide a revised HRN Specific Plan Table 2-2 "Land Use By Parcel" reflecting the adjusted unit counts and densities. The revised table will be the official record tracking unit allocations to each HRN large lot LDR parcel.

If the Planning Director determines that the minor density adjustment is not consistent with the above criteria, the minor density adjustment shall be denied or may be referred or appealed to the Planning Commission for resolution. Any determination of consistency may, at the discretion of the Planning Director, be forwarded to the Planning Commission for review. Applicant may request density adjustments that do not comply with the above criteria. Such requests shall require an amendment to the HRN Specific Plan.

All unused units must be transferred prior to approval by the Roseville City Council of the last small lot final map for any LDR large lot parcel. Any unused units not approved for transfer shall revert to the City unit pool and Landowner shall have no subsequent claim to such units.

3. Housing Element

3.1 Housing Objectives

The Housing Element of the City of Roseville General Plan establishes a goal to "...maximize efforts to meet affordable housing needs by requiring ten percent (10%) of new housing units to be affordable..."

As originally approved on July 5, 1990, the North Central Roseville Specific Plan Incorporated a housing affordability program designed to achieve this goal. The NCRSP targeted a total of ten percent (10%) of all NCRSP units for inclusion in the City's affordable housing program. The HRN Specific Plan amendment has been designed to assure that the North Central Roseville Specific Plan as amended continues to provide a range of housing opportunities consistent with the 10% affordable goal.

3.2 NCRSP Housing Affordability Program

The North Central Roseville Specific Plan as amended by the HRN Specific Plan will provide a total of 5,896[1] residential units under the full project. Approximately 44% of the NCRSP housing stock will be multi-family units and approximately 56% of the NCRSP housing stock will be single family units, with 210 units reserved for allocation to either plan area.

In order to meet the General Plan 10% affordability goal, the NCRSP as amended must incorporate a housing affordability program involving 590 units. Of these affordable units, 75% are to designated as rental and purchase units affordable to low income households and 25% as purchase units affordable to middle income households. The NCRSP as amended by the Highland Reserve North Specific Plan accomplishes these objectives.

1 Please refer to Table 2-2 for current units and acres.

The NCRSP affordability program, as amended to accommodate the HRN expansion as well as the transfer of 732 existing entitled units from the NCRSP area south of Highway 65 to HRN properties, will result in the affordable housing allocation shown in Table 3-1[2].

2 Please refer to Table 2-2 for current units and acres.

Table 3-1 Affordable Housing Goals and Allocations North Central Roseville Specific Plan as Amended by HRN Full Project

Affordable Housing Goals:	Units
Total Number of Dwelling Units	5,896
10% Affordability Goal	590
Middle Income Goal (25%)	124
Low/Very Low Income Goal (75%)	466
Middle Income Affordability Program	**Units**
A. Middle Income Purchase Unit Allocation NCRSP Plan Area - South of Highway 65	124
Total Middle Income Allocation/Reservation	**124**
Low/Very Low Income Affordability Program	**Units**
A. Affordable Rental Unit Allocation NCRSP Plan Area - South of Highway 65 (1,868 total HDR units)	428
B. HRN Parcel 30 (242 total HDR units)(purchase units)	40
Total Low/Very Low Income Allocation	**468**

3.3 Affordable Housing Program in Highland Reserve North

As indicated above, the North Central Roseville Specific Plan, as amended by HRN, complies with the General Plan Housing Element by designating ten percent (10%) of the total plan area housing stock for participation in the Affordable Housing Program defined in this section. The middle income portion of the identified need will be addressed through single family purchase housing. The low and very low income portion of identified need will be addressed through multi-family rental housing.

Affordability is, to a certain extent, related to housing densities. In general, it is presumed that higher residential densities, notably multi-family housing, equate to housing prices which may be more affordable households in the lower end of the income range. The lower prices can be attributed to the smaller dwellings and lower land costs per unit associated with higher densities. Consequently, the mix of low, medium and high density housing is considered to be a factor in addressing housing affordability for the full range of household income groups.

As amended by the HRN proposal, approximately forty-six percent of the NCRSP housing stock (46%) will be multi-family in character. Even without subsidies to reduce the rents to more affordable levels, these multi-family units will provide a very important resource for addressing the housing needs to those households in the lower end of the income range.

3.3.1 HRN Housing Affordable to Middle Income Households

The existing North Central Roseville Specific Plan makes provision for 124 single family purchase units which are designated for participation in the middle income component of Roseville's Housing Affordability Program. These middle income affordable units have been allocated to specific parcels as set forth in the NCRSP and are required to be made available at prices affordable to middle income households at the time of sale. The developer for each of the designated NCRSP single family parcels is required to provide the affordable housing and no subsidy is required from the City.

3.3.2 HRN Rental Housing Affordable to Low and Very Low Income Households

The low/very low income affordable goal for the NCRSP as amended by the HRN Specific Plan is 466 units. The NCRSP area south of Highway 65 makes provision for 428 low income affordable rental units, leaving a numerical requirement in the Highland Reserve North portion of the NCRSP of 38 low income affordable units. This low income affordability obligation is met through the HRN program of 40 low income purchase units provided on parcel 30.

3.4 Definition of Housing Affordability

Housing affordability is based on household income categories defined by the U.S. Department of Housing and Urban Development (HUD). The standard measure is the median household income for households of one to four persons. The median household income is calculated for the Sacramento Metropolitan Statistical Area (MSA) and each jurisdiction within the region utilizes the same basic income level distribution in that community. City of Roseville household income levels reflect income levels of the Sacramento MSA. The household income categories defined under this calculation are summarized in Table 3-2.

Table 3-2
Definition of Household Income Categories

Income Category	
Very Low Income	less than 50% of median
Low Income	51% to 80% of median
Middle Income	81% to 100% of median
Moderate Income	101% to 120% of median
Above Moderate Income	121% of median

Source: City of Roseville General Plan, 1992.

The median household income by category and household size in November 1996 is summarized in Table 3-3. Although median household income is provided by HUD for each household size the most relevant household size categories for the plan area are two and four persons per household. The average household size for the City of Roseville residents is 2.54 persons per unit (U.S. Census, 1990, Roseville General Plan, 1992). Household income translates to a housing purchase price with several assumptions regarding the percent of household income that should be spent for housing, the percentage of purchase price required as a down payment, the current mortgage interest rate and other factors.

Table 3-3
Annual Income Levels by Household Income Category

Income Eligibiligy Household Size	2 Person	4 Persons	6 Persons
Very Low Income	$18,500	$23,200	$26,900
Lower Income	$29,700	$37,100	$43,050
Median Income	$37,100	$46,400	$53,800
Moderate Income	$44,550	$55,700	$64,560

Source: U.S. Department of Housing and Urban Development, November, 1996.

The City of Roseville assumes that low and very low income households should not spend more than thirty percent (30%) of their monthly gross income on rental housing costs, defined as rent and utilities. Maximum affordable rents for middle income households are calculated using thirty-five percent (35%) of the monthly household income. Home purchase prices for low and middle income households are calculated using thirty percent (30%) of gross income based on lender's allowable lending ratios. Housing costs for purchase housing includes principal, interest, taxes, insurance and bonded debt.

All of these factors change with time and thus, designation of a specific price range for affordable dwelling units would be applicable in the plan area only for a short time. It is appropriate and relevant to establish the standard for affordability in relation to the median household income at a point in time.

3.5 Density Bonus

The City may, in accordance with Chapter 19.28 of the Roseville Zoning Ordinance (the Density Bonus Ordinance), assign additional residential units to projects in the Highland Reserve North Specific Plan area. The additional dwelling units would be assigned for the purpose of achieving the affordable housing goal by providing a "density bonus" and, thereby, reducing the average development cost of the individual units.

Such density bonus units would be assigned by a supplemental Affordable Housing Development Agreement to individual projects on a case-by-case basis, and may constitute a portion of the compensation for the provision of units affordable to low income households.

3.6 Flexibility in Implementation

The affordable housing allocations and the affordable housing program described in this HRN Specific Plan Amendment are intended to be applied with flexibility. In particular, HRN residential developers are encouraged to explore creative approaches to the provision of a range of housing opportunities suited to the needs of low and middle income households.

4. Circulation Element

4.1 Circulation System Concept

The circulation system includes public streets, pedestrian paths and bikeways.

Much of the traffic within the plan area will be passing through on major streets to other off-site destinations. Pleasant Grove Boulevard and Stanford Ranch Road will carry regional traffic through the plan area. Pleasant Grove Boulevard will provide the principal access to Highway 65 and points north from the southwest. This intersection will provide access to Highway 65 for Hewlett Packard, NEC, Del Webb, and the existing neighborhoods in Northwest Roseville.

The alignments of Stanford Ranch Road and Pleasant Grove Boulevard are intended to connect with the existing or planned configurations of these roadways in the adjacent plan areas within the City of Rocklin. The HRN Specific Plan area will participate in and facilitate the development of the Pleasant Grove interchange at Highway 65. Blue Oaks Boulevard will provide secondary plan access to Highway 65 by way of the Blue Oaks interchange. The location of the Blue Oaks Boulevard/Fairway Drive intersection shown on the HRN Conceptual Land Use Map reflects the preliminary alignment approved by the City of Rocklin as part of the Sunset West General Development Plan Land Use Map. The location of this intersection will be finalized as part of the Blue Oaks interchange design.

The street system is organized around a hierarchy of roadways. The major arterials (Pleasant Grove Boulevard and Stanford Ranch Road) will carry regional traffic through the plan area and provide both HRN residents and workers with plan area ingress and egress. Minor arterials and collector streets will provide access to the commercial and employment related uses along the Highway 65 frontage, and will connect residential neighborhoods to the major arterial streets and to the Village Square.

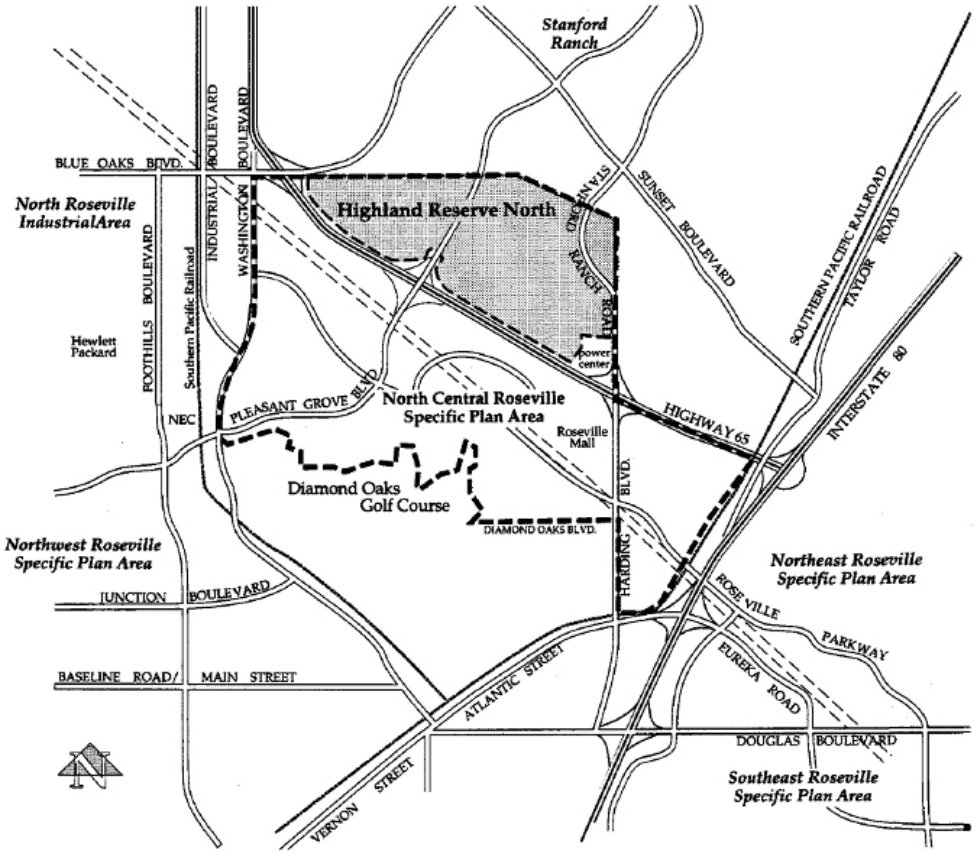


FIGURE 4-1
AREA CIRCULATION SYSTEM

Bicycling and walking alternatives are a primary focus of this plan. Bicycling and walking are viable alternatives to driving that people may use regularly for short trips if they can proceed with convenience and in relative safety. A primary pedestrian and bikeway path system will be incorporated into the landscape corridor along arterial and collector streets to provide a distinct "pedestrian loop" system through the plan area. This loop pathway system will connect the neighborhood parks, which serve as the centerpiece of each of the three HRN neighborhoods, with the Village Square, school and central park. Local residential streets will provide sidewalks that link neighborhoods to the pedestrian loop.

Table 4-1
Summary of Street Improvements

Street Type	R.O.W.*	Lanes	Median	L.C.**
Arterials				
Stanford Ranch Rd.	112'	(6)12'	14'	18'-50'
Pleasant Grove Blvd.	100'	(6)12'	14'	30'-50'
Minor Arterials				
Fairway Drive	76'	(4)12'	14'	18'-40'
Collectors				
Highland Drive	40'	(2)13'	--	15'-30'
Central Park Drive	40'	(2)13'	--	15'-25'
Residential Streets	54'***	(2)10'	--	5'****

* The R.O.W. adjacent to the LDR and MDR parcels has been expanded to include the landscape corridor.
** Landscape Design Guidelines, Appendix B.
*** Highland Drive extension west of Pleasant Grove Boulevard will have a 57' ROW.
**** Greenway strip.

4.2 Streets

A summary of the HRN Specific Plan street improvements is provided in Table 4-1. These improvements include the following:

4.2.1 Arterial Streets

The arterial streets within and adjacent to the Specific Plan area will require signalization of intersections as shown in Figure 4-2, the Circulation Master Plan.

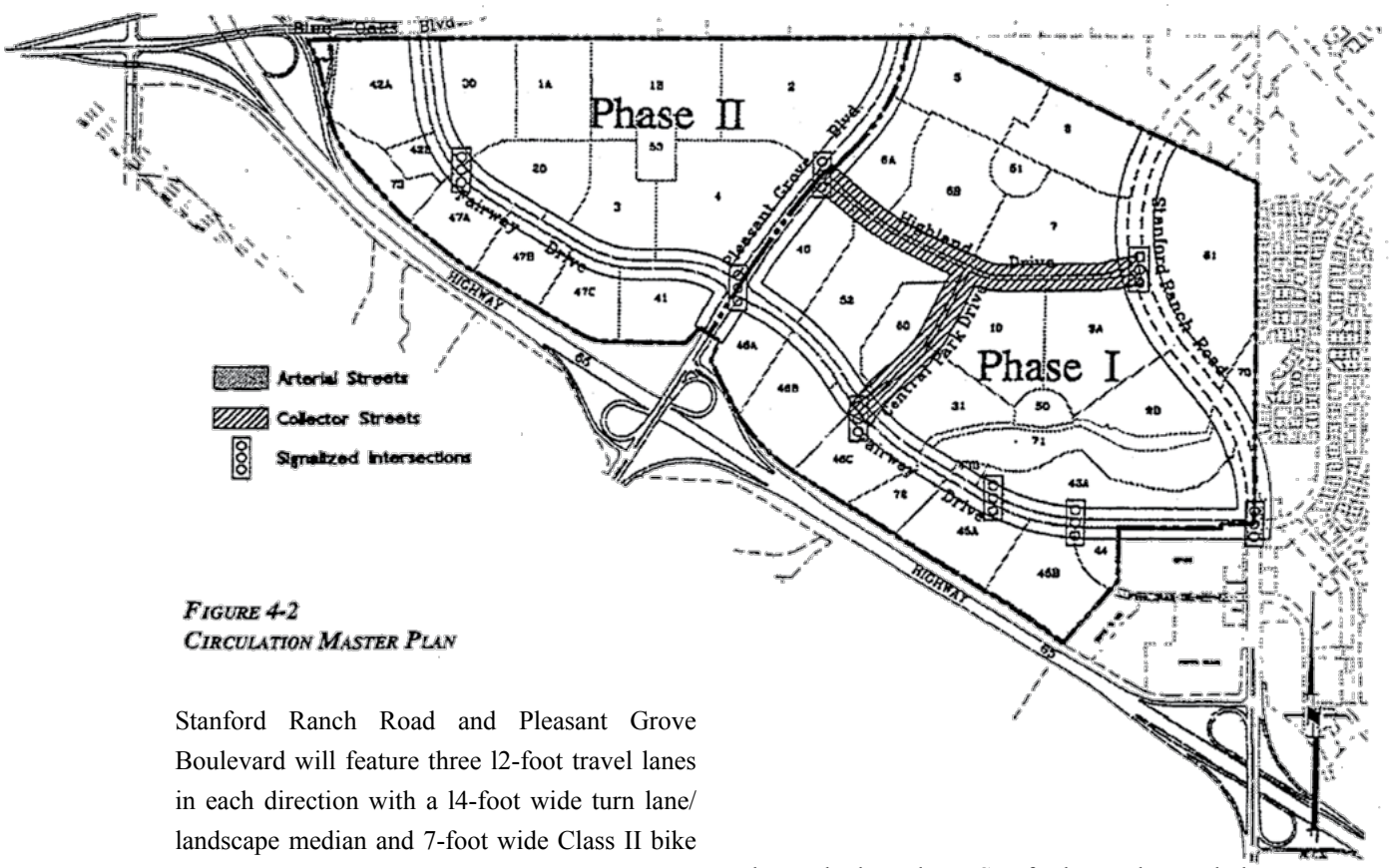


Figure 4-2
Circulation Master Plan

Stanford Ranch Road and Pleasant Grove Boulevard will feature three l2-foot travel lanes in each direction with a l4-foot wide turn lane/ landscape median and 7-foot wide Class II bike lanes with curb and gutter.

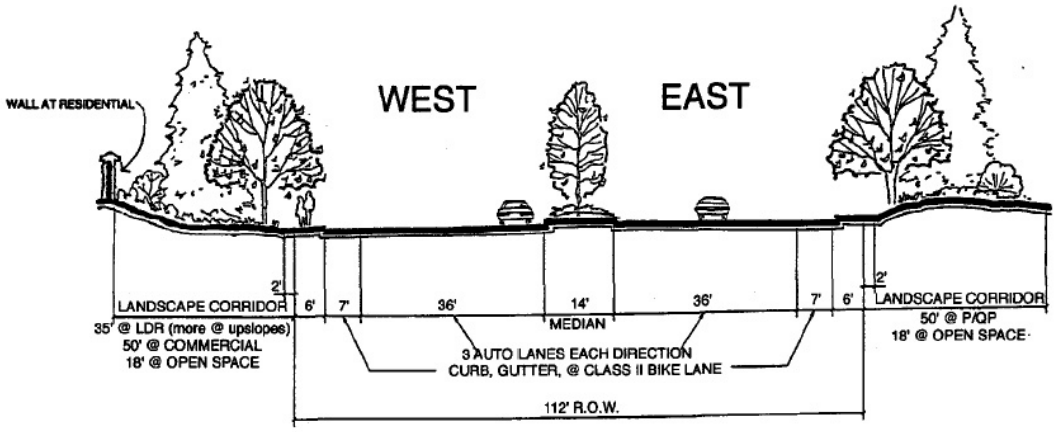
The existing Stanford Ranch Road section contains an additional 6-foot of right-of-way on both sides of the roadway, resulting in an overall right-of-way of 112 feet, as shown in Figure 4-3.

Pleasant Grove Boulevard has an overall right-of-way of 100 feet, as shown in Figure 4-4.

Fairway Drive extends from Stanford Ranch Road on the east, ultimately to Blue Oaks Boulevard in the northwest. Fairway Drive features a 76-foot right-of-way with two l2-foot travel lanes in each direction, a 14-foot turn lane/landscape median, and 7-foot wide Class II bike lanes with curb and gutter, as shown in Figure 4-5.

Landscape corridors along arterial roadways range from 18 to 50 feet in width and incorporate 8-foot-wide walkways. Typically, walkways along arterial streets will be set back ten feet from the curb, but along Stanford Ranch Road the existing terrain conditions require the sidewalk to be placed at the back of curb except where existing conditions permit separation.

Slopes necessary for residential or commercial site grading are allowed to encroach into landscape corridors. No parking will be permitted on arterial streets.



* This street section includes existing curbs, gutter and pavement on the eastern edge of Stanford Ranch Road. The ROW is set by the existing design for Stanford Ranch Road.

FIGURE 4-3
STANFORD RANCH ROAD

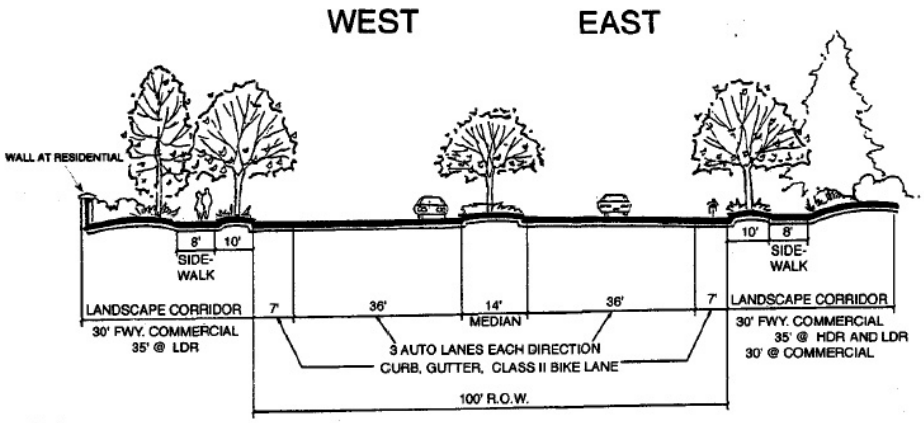


FIGURE 4-4
PLEASANT GROVE BOULEVARD

4.2.2 Collector Streets

Collector streets in the Specific Plan area, Highland Drive and Central Park Drive, are designed to link local streets and non-residential land uses to the arterial street system (Highland Drive west of Pleasant Grove Boulevard is classified as a residential rather than a collector street.) No parking will be permitted on collector streets.

Highland Drive and Central Park Drive will feature two 13-foot travel lanes and 7-foot wide Class II bike lanes with curb and gutter. These collector streets will also have 15 to 25-foot wide landscape corridors with 5 foot wide sidewalks on both sides. The overall street right-of-way for Highland Drive and Central Park Drive will be 40 feet as shown in Figure 4-6.

4.2.3 Local Residential Streets

The local residential streets provide access to homes within residential projects. Local neighborhood streets will be designed through the subdivision and design review process for individual projects. The pattern of local streets will be designed to facilitate access within neighborhoods to the Village Square, parks and schools.

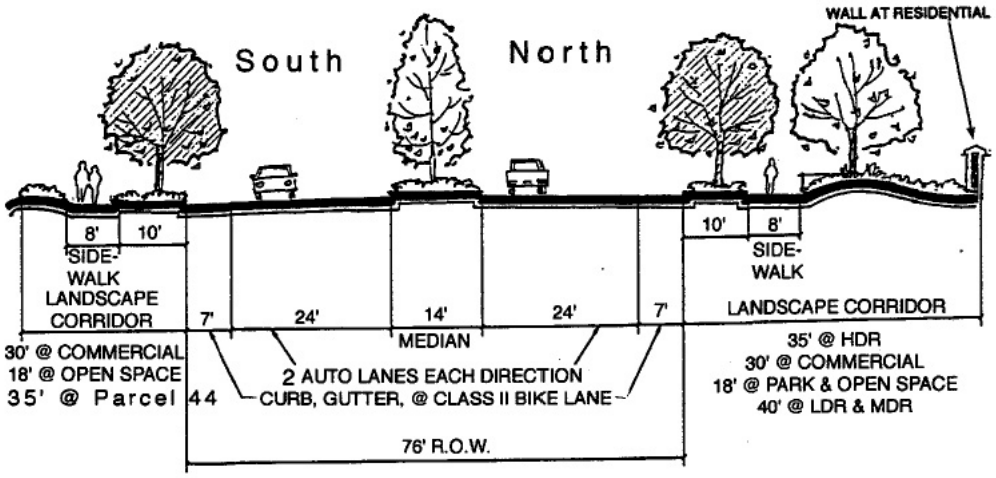


FIGURE 4-5
FAIRWAY DRIVE

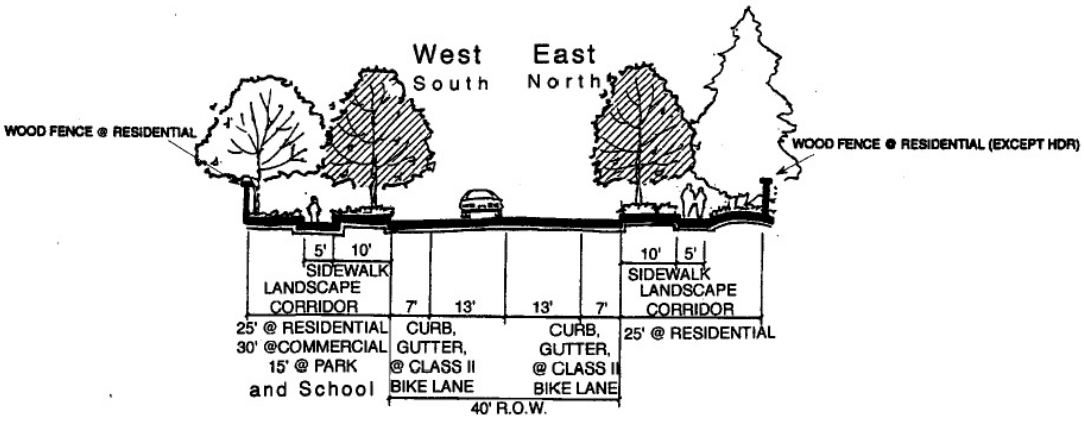


FIGURE 4-6
HIGHLAND DRIVE (EAST OF PLEASANT GROVE BOULEVARD) AND CENTRAL PARK DRIVE

Local residential streets typically will have a 54-foot right-of-way that provides two 10-foot travel lanes and a parking lane on both sides. Also provided are 5-foot wide sidewalks on both sides separated from the street by 5-foot wide greenway strips, as shown in Figure 4-7, Typical Residential Street.

In order to enhance the pedestrian environment and provide a shade canopy over the street and sidewalk, trees will be planted within the greenway strip between the sidewalk and street.

4.2.4 Landscape Corridor Design

Design of the greenway strips adjacent to the HRN residential streets and of the landscape corridors adjacent to HRN arterial and collector streets, including corridor width, sidewalk, and sound wall treatment, are addressed in the Landscape Design Guidelines attached to this plan as Appendix B.

4.2.5 Roadway Phasing

The Highland Reserve North Specific Plan contemplates the development of a major

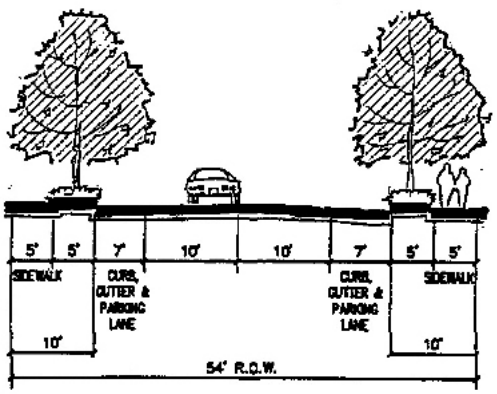


FIGURE 4-7
TYPICAL RESIDENTIAL STREET

transportation system over a period of years. The system has been designed in two primary phases with multiple sub-phases. Each phase is designed to be able to function independently as a complete circulation system. Land use and infrastructure phasing is detailed in Section 7 with specific funding and construction obligations included in the HRN Development Agreement.

4.3 PUBLIC TRANSPORTATION

Bus service is the most probable near-term public transit that would be extended to the Highland Reserve North planning area. Roseville Fixed Route Transit provides regularly scheduled fixed route service, and Roseville area Dial-A-Ride (RADAR) provides on-call service throughout the City. The Fixed Route and RADAR systems will be expanded to the plan area as demand for these services occurs and funds are available as determined by the City.

Bus turnouts will be provided as determined by the City as part of improvement plans and development review. Likely locations include intersections and mid-block turnouts adjacent to major projects or public facilities. All residents and employees within the plan area will be in close proximity to potential bus routes. This level of service will facilitate ease of access and encourage high levels of ridership.

4.4 PARK AND RIDE LOTS

Park and ride lots will be located as determined by the City within the plan area to provide convenient places for commuter car pooling. Likely locations include the commercial sites and the church parking lot.

Where park and ride lots are within a business parking area, they should be located so as to not interfere with business operations. The park and ride spaces may be included as part of the normal parking requirement for the planned business or community commercial use if peak use of the park and ride does not coincide with peak use of the business or commercial use and if approved by the City.

Park and ride parking spaces may be established in the approval process for commercial or public/ quasi public uses. In all cases, the park and ride spaces are to be clearly marked through pavement markings and directional signage. Spaces are reserved exclusively for park and ride Monday through Friday from 6:30 a.m. to 6:30 p.m.

4.5 TRANSPORTATION SYSTEM MANAGEMENT

Traffic impacts on Roseville streets can be reduced through TSM measures which encourage employees to rideshare and to travel at times outside the normal peak travel periods.

The City of Roseville adopted an ordinance implementing TSM in 1991. The ordinance is directed at reducing the number and length of home-to-work commuting trips through a variety of methods. All projects in the Highland Reserve North Specific Plan area are required to comply with the provisions of the City's then current Transportation Systems Management (TSM) ordinance.

4.6 Pedestrian/Bikeway System

Pedestrian circulation is a key theme of the HRN Specific Plan. The plan is designed to encourage people to walk or bicycle by providing a variety of opportunities and options.

The pedestrian/bikeway system within the HRN Specific Plan is made up of several components:

- 8 foot wide pathways within the landscape corridors along all arterial roadways.
- 5 foot wide pathways along all local residential streets and within the landscape corridors adjacent to collector roadways.
- 7 foot wide on street Class II bike lanes along all arterial and collector roadways.
- A pedestrian promenade which extends across the Village Square tying together the commercial, park and school land uses.

These components provide opportunities for pedestrians and cyclists to travel safely and conveniently within and through the HRN Specific Plan area. Combined, they form a Pedestrian Loop System shown in Figure 4-8 that connects the major activity areas of the plan and tie together the neighborhoods on both sides of Pleasant Grove Boulevard, the neighborhood parks and the Village Square.

The plan area provides two primary opportunities to connect with the future city-wide trail system identified in the City of Roseville Bikeway Master Plan (September 1994). Plan area residents may travel on trails and pathways within the plan area to Pleasant Grove Boulevard and Stanford Ranch Road, which provide direct links to the city-wide trail system just south of the plan area by way of the Stanford Ranch Road/Highway 65 interchange and the Pleasant Grove Boulevard/ Highway 65 interchange. From these locations, residents may utilize the city-wide trail system for recreational and commuter needs.

Design details for the pedestrian pathway system are provided in the Community Form and Design Guidelines and the Landscape Design Guidelines attached as Appendices A and B, respectively.

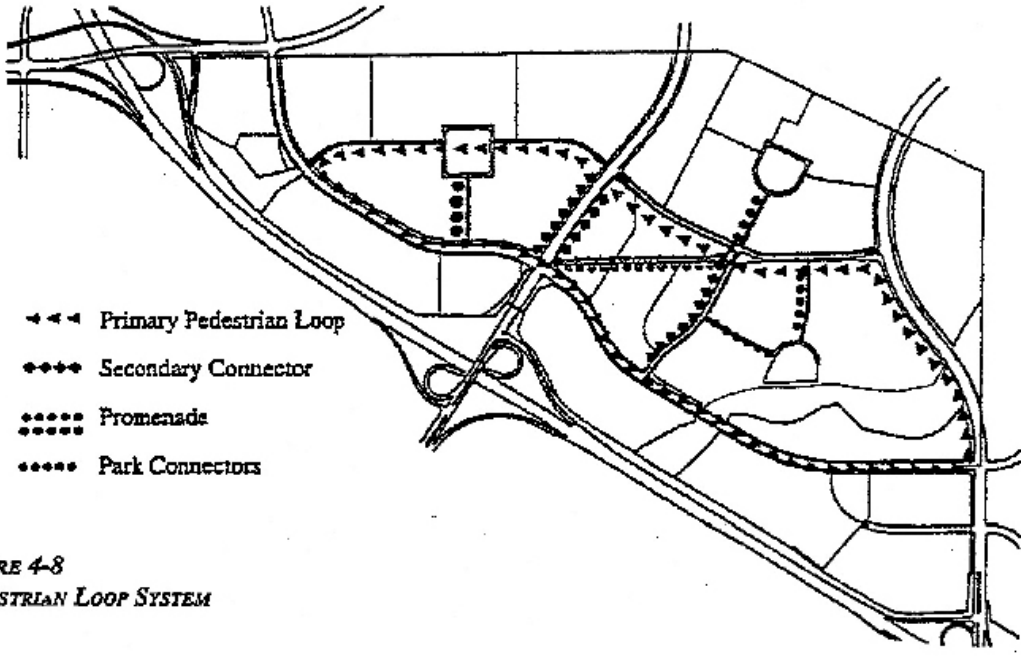


Figure 4-8
Pedestrian Loop System

In general, pathways and bike lanes will be constructed by the landowner as roadways and individual projects are developed.

5. Resources Management Element

5.1 Resource Management Concept

The Highland Reserve North Specific Plan is designed to conserve natural resources and mitigate, to the extent practicable, the impacts associated with the development of the plan area. This is accomplished through two primary means. First, the plan establishes open space corridors to protect sensitive habitat areas, provide natural drainage and lend open space to the adjacent urban land use. Second, the plan includes circulation design features that facilitate walking, bicycling and public transit use as alternatives to auto use.

With the exception of wetlands and soils (see Sections 5.2 and 5.3 below), the HRN Specific Plan area is relatively free of resource constraints. In its undeveloped condition, the HRN property consists, for the most part, of gently rolling grasslands with no established tree growth. As a result, one of the principle goals of the HRN Landscape Design Guidelines attached as Appendix B is to implement a plan for public spaces (parks, landscape corridors, medians, greenway strips), that emphasizes trees and plantings.

HRN development impacts on water and air quality, energy and water supplies, and historical and cultural resources have been evaluated in the project EIR. The HRN properties will be developed in the context of and in conformity with a local, state and federal regulatory framework that, in conjunction with the mitigation measures identified in the EIR, assure urban applications that are sensitive to these resource concerns and that mitigate, to the extent practical, project impacts.

Two areas of resource management that warrant particular attention within the HRN Specific Plan area are wetlands and soils.

5.2 Wetlands

There are several types of wetlands found within the Highland Reserve North Specific Plan area. Development which directly impacts such wetlands is subject to a permit issued by the U.S. Army Corps of Engineers under Section 404 of the 1972 Clean Water Act, as well as the jurisdiction of other federal and state agencies.

The Highland Reserve North site obtained an Army Corps of Engineers (ACOE) wetland verification on July 15, 1994. The verification is valid for three years (Regulatory Section #199300755). Subsequent to receiving the ACOE verification a Pre-Discharge Notification was prepared outlining the proposed wetland preservation and compensation plan as well as the areas proposed for development.

The ACOE issued a conditional Nationwide 26 authorization on November 16, 1994. The authorization is conditional upon compliance with Section 7 of the Endangered Species Act (ESA). This requires consultation with US Fish and Wildlife Service (USFWS) to review the potential for vernal pool fairy and tadpole shrimp presence on the site. Formal consultation is ongoing with USFWS. The anticipated request from USFWS to provide additional compensation for proposed impacts to fairy shrimp habitat has resulted in modifications to the wetland mitigation plan.

The ACOE approved mitigation plan had proposed that all wetland preservation and compensation be placed on-site. The increased wetland compensation required to satisfy USFWS Endangered Species Act (ESA) concerns has resulted in a proposal to mitigate off-site the wetland compensation. Upon completion of the formal consultation with USFWS, a modification to the wetland mitigation plan is anticipated relocating all of the wetland compensation to a site outside the HRN Specific Plan area. Upon meeting the conditions of the N-26, the authorization will be valid for two years after that date.

In tandem with the ACOE permit the California Department of Fish and Game (CDFG) recommends that a mitigation plan be developed that is based upon the concept of "no net loss" to wetland habitat values or acreage and no adverse impact upon any state listed sensitive plant or animal species. Consequently, the specific plan incorporates a comprehensive program of wetlands avoidance, creation and maintenance of off-site preserve areas, and enhancement of wetlands designed to achieve a cumulative "no net loss" of values.

Due to the scattered distribution of vernal pools and other seasonal wetlands, all wetlands in the Highland Reserve North Specific Plan area cannot realistically be avoided if development is to occur. The land use plan avoids wetlands to the extent "practicable" in accordance with the guidelines established by the Environmental Protection Agency (EPA), the ACOE, the USFWS, and the CDFG.

Required permits or agreements for streambed alteration, filling and other applicable activities, shall be obtained prior to any development activity on the affected portion of the permitted property. All mitigation measures including preservation, avoidance, compensation, and off-site mitigation of wetland areas shall occur in compliance with the required permits.

5.3 Soils and Soil Protection

Portions of the HRN site lie in areas of Mehrten formation, a solidified volcanic mud flow deposit that in its natural state provides limited foundation for vegetative growth. In recent years, however, construction techniques have been developed locally to deal with the semi-impervious subgrade. In the process, the presence of Mehrten as a land use constraint has been largely overcome.

The Landscape Design Guidelines (Appendix B) include provisions for planting trees and other plant materials within the shallow soils and underlying Mehrten formation found within the HRN Specific Plan area.

6. Public Facilities and Services Element

6.1 Public Facilities and Services Objectives

This Public Facilities and Services Element of the Specific Plan identifies the basic infrastructure system needed to serve Highland Reserve North. All of the proposed projects within the HRN Specific Plan area will be reviewed to ensure that the public facility improvements are as specified by the project Development Agreement, are coordinated with the timing of development and are constructed in conformity with City standards. Major infrastructure facilities include improvements that provide water, wastewater, drainage, electric, and other plan-wide services.

Table 6.1
Service Providers

Service	Provider
Water	City of Roseville/PCWA
Sanitary Sewer	City of Roseville/SPMUD
Drainage	City of Roseville
Solid Waste Disposal	City of Roseville
Police & Fire Protection	City of Roseville
Parks & Recreation	City of Roseville
Library	City of Roseville
Street Lighting	City of Roseville
Elementary Schools	Roseville City School District
High School	Roseville Joint Union High School District
Electric Service	City of Roseville Electric Department
Natural Gas	Pacific Gas & Electric
Telephone	Roseville Telephone Company
Cable Television	Various privately owned services

6.2 Infrastructure Phasing

The infrastructure required to serve the HRN Specific Plan is intended, as are the land uses within the plan area, to be developed in two primary phases with multiple sub-phases. Each phase is designed to be able to function independently as a complete system. Land use and infrastructure phasing is detailed in Section 7 with specific funding and construction obligations included in the HRN Development Agreement.

6.3 Water

The location of the Plan area makes it feasible to connect directly to existing water system infrastructure. The conceptual water system for the Highland Reserve North Specific Plan area Phases I and II, including the location and size of waterlines and points of connection with the existing system, is illustrated in Figure 6-1, Proposed Conceptual Water Plan. Existing City of Roseville water transmission facilities located within the NCRSP area just south of Highway 65 and existing/future PCWA facilities located to the east and north of the Plan area will be the main water supply sources for Highland Reserve North.

Phase I will be served by three sources:

1. An existing 16 inch main is located at Fairway Drive just west of Stanford Ranch Road.

2. The extension of a 12 inch line from an existing transmission facility south of Highway 65 through an existing conduit under the highway to Highland Reserve North.

3. An existing 12 inch PCWA main in Stanford Ranch Road.

Parcel 61, which is east of Stanford Ranch Road, will receive water service by connecting to existing PCWA facilities in Stanford Ranch Road and Marlee Way.

Phase II will provide a third City of Roseville connection under Highway 65, which will consist of the extension of a 12 inch water main through an existing conduit under the highway. In addition, the Phase II HRN water system will also include interties to future PCWA facilities located at Pleasant Grove Boulevard and Fairway Drive at the project boundary.

The HRN water transmission system will generally consist of 12 inch water mains located in arterial and collector streets. A 12 inch main will also cross HRN Parcels 43A, 71 and 9 connecting the water transmission facilities in Fairway Drive and Highland Drive. The in tract improvements for Parcels 5 and 6 will also incorporate a 12 inch main that will serve as a loop connection between Highland Drive and Pleasant Grove Boulevard.

In addition, Phase I will require the construction of a booster pump station and installation of pressure reducing valves for the development of parcels above the elevation of approximately 210 feet (Figure 6-1). All or a portion of the HRN property may be served with PCWA water subject to a wholesaling agreement with the City of Roseville. If PCWA provides water pursuant to a wholesaling agreement, the booster pump will be installed by the City and paid for out of the City's Connection Fee. In the alternative, adequate water supply can be delivered by way of the City of Roseville system as illustrated in Figure 6-2, Conceptual Optional Water Plan.

As individual parcels develop, they will construct internal loop water systems consisting of six and eight inch lines which will connect to the 12 inch mains. Unless otherwise approved by the City, all

areas of the HRN Specific Plan will, at all times, be supplied by a looped system.

The water mains will be constructed with the roadway system or when required to provide service to developing parcels as specified in Section 7 of this Specific Plan. Construction drawings will be prepared to meet then current City improvement standards and will be reviewed and approved by the City. Water lines will be stubbed to serve the park sites, the school, the commercial sites and other non-residential uses as appropriate concurrent with construction of the primary infrastructure.

6.4 Wastewater

The plan area will be served by the Roseville Regional Wastewater Treatment Plant located on Booth Road near Dry Creek. The conceptual plan for sewer service within the plan area is illustrated in Figure 6-3, Conceptual Sewer Plan.

Highland Reserve North is comprised of two main sewer shed areas which are generally east and west of Pleasant Grove Boulevard. Existing sanitary sewer facilities in the vicinity of the site consist of the following:

1. An 18 inch trunk outfall pipeline crosses Highway 65 from the south to north approximately 3,000 feet west of Stanford Ranch Road. This line meanders in a northeasterly direction in Parcel 71, the open space corridor, and terminates as an 8 inch line roughly 500 feet west of Stanford Ranch Road. This trunk facility drains the eastern 1/2 of the site and is a major component of the sewer collection system for the NCRSP. This line has adequate capacity to serve the proposed land uses of Highland Reserve North Phase I.
2. An existing 24 inch pipeline terminates just south of Highway 65 approximately 2,500 feet west of the future Pleasant Grove Boulevard interchange. This pipeline is the northernmost trunk outfall pipeline for the NCRSP. This outfall facility will convey the flows from Highland Reserve North Phase II. There is an existing 30 inch reinforced concrete pipe conduit located under Highway 65 at the location of the 24 inch pipeline for future extension of sewer facilities into Highland Reserve North. The 24 inch trunk outfall facility was originally designed and constructed to outfall sewage flows for a large portion of the NCRSP. This line has adequate capacity remaining to accept flows from Phases I and II development of Highland Reserve North.

Subject to a service agreement with SPMUD, Parcel 61 may outfall its on site sewer system to SPMUD facilities as illustrated in Figure 6-4, Conceptual Optional Sewer Plan.

A conventional gravity flow collection system will be designed and constructed to City standards and specifications for the Highland Reserve North project. This system, internal to the site, will generally convey the wastewater from north to south and east to west to the outfall facilities described above. The collection system will be comprised of pipelines ranging in size from 6 inches to 18 inches with alignments that will follow topographic features along proposed roadways.

The sewer mains will be constructed with the roadway system or when required to provide service to developing parcels as specified in Section 7 of this Specific Plan. Construction drawings will be prepared to meet then current City improvement standards and will be reviewed and approved by the City.

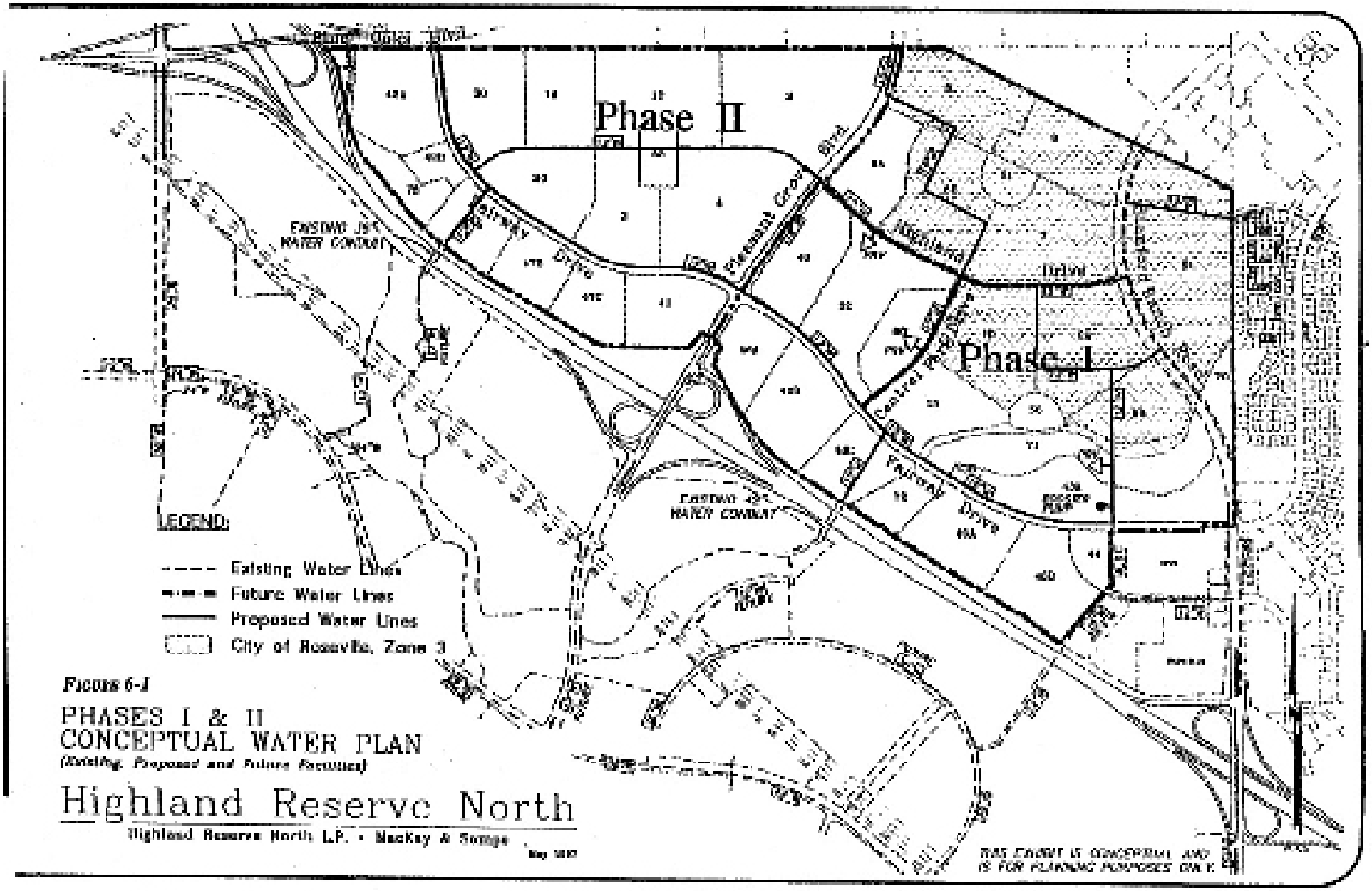


Figure 6-1

PHASES I & II
CONCEPTUAL WATER PLAN
(Existing, Proposed and Future Facilities)

Highland Reserve North

Highland Reserve North L.P. • MacKay & Somps

Phase II
Phase I
Existing Water Lines
Future Water Lines
Proposed Water Lines
City of Roseville, Zone 3
Figure 6-2
PHASES 1 & II
CONCEPTUAL OPTIONAL WATER PLAN
Highland Reserve North

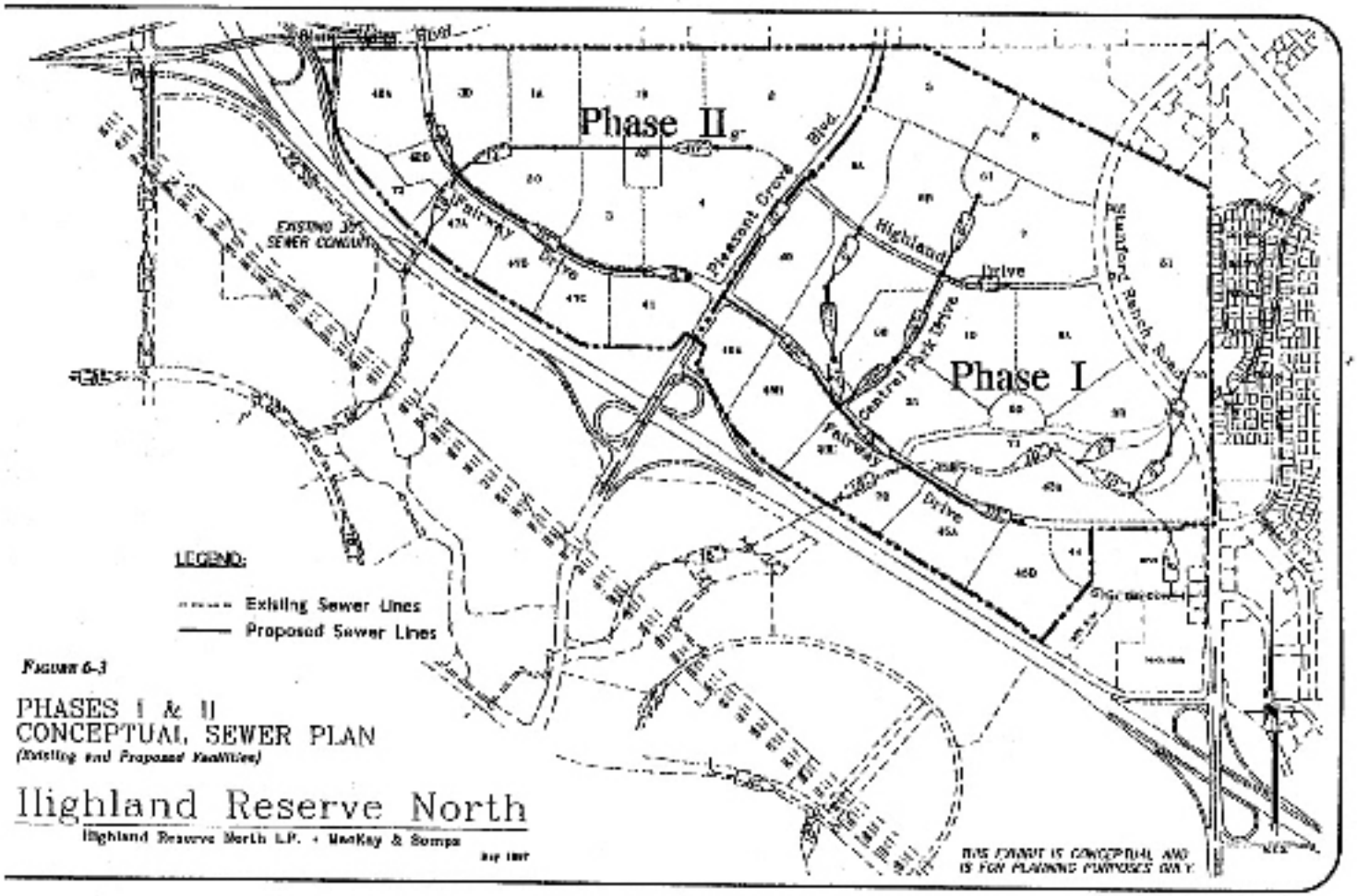


FIGURE 6-3

PHASES I & II
CONCEPTUAL SEWER PLAN
(Existing and Proposed Facilities)

Highland Reserve North

Highland Reserve North L.P. + MacKay & Somps

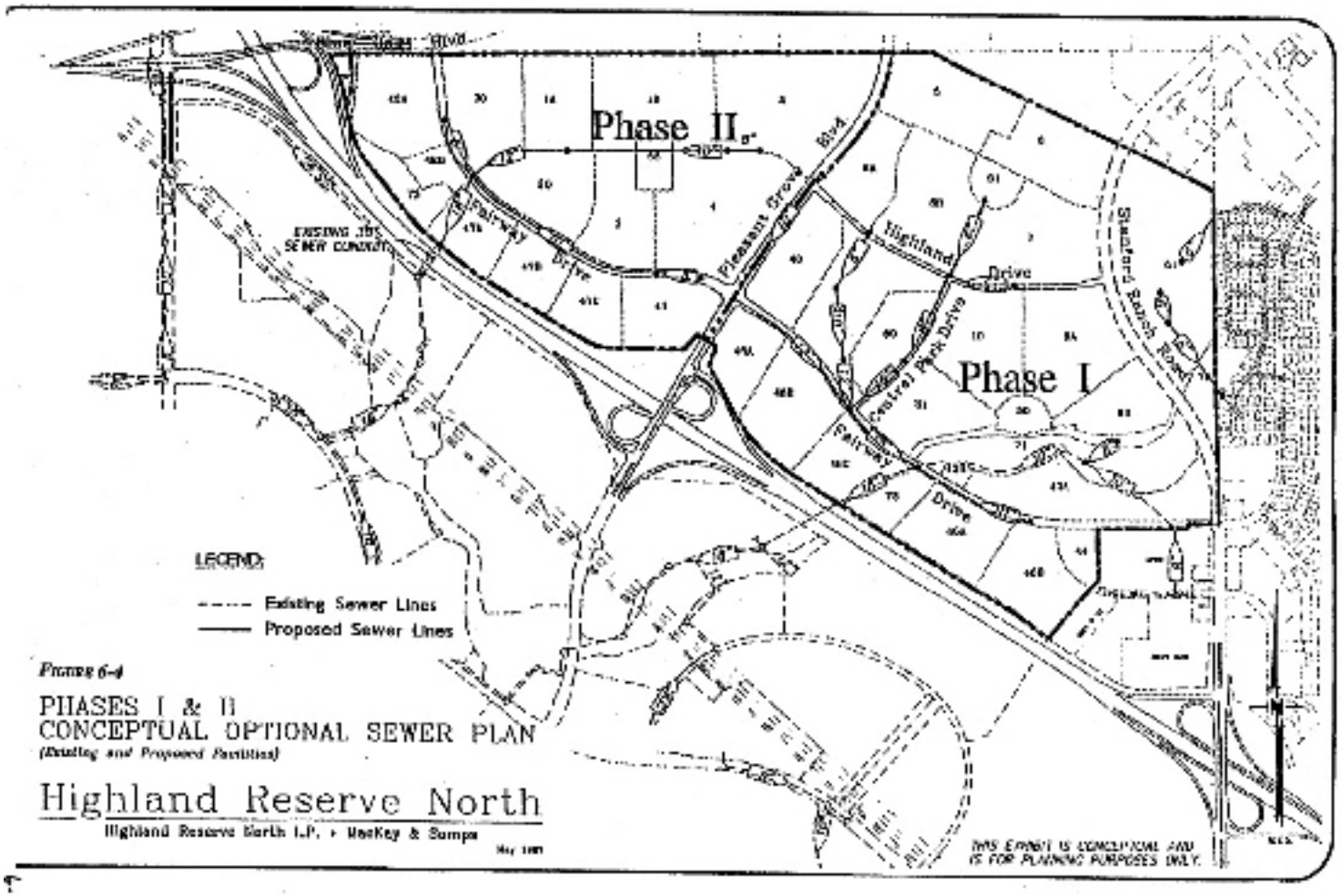


FIGURE 6-4

PHASES I & II
CONCEPTUAL OPTIONAL SEWER PLAN
(Existing and Proposed Facilities)

Highland Reserve North

Highland Reserve North L.P. + MacKay & Somps

Sewer lines will be stubbed to serve the park sites, the school, the commercial sites and other non-residential uses as appropriate concurrent with construction of the primary infrastructure.

6.5 Drainage and Flood Control

The Highland Reserve North Specific Plan is comprised of two basins drainage by an unnamed tributary to Pleasant Grove Creek. This tributary joins the main branch of Pleasant Grove Creek immediately east of Industrial Boulevard. The 100-year floodplain of this tributary will remain as designated open space.

Natural run-off in the plan area is generally very swift due to the shallow soil depths and underlying Mehrten formation. These natural conditions have a run-off coefficient similar to developed areas. Although the existing channels are capable of handling large flows during a storm, they are normally dry shortly after the event. Because of the inherent impervious nature of the soils, storm water run-off will not increase substantially; however, development will tend to concentrate flows faster than natural conditions.

Figure 6-5, Conceptual Drainage Plan, identifies drainage facilities designed to accommodate plan related flows in accordance with the City of Roseville standards. Appropriate measures, including the construction of an on-site 8.5 acre foot detention basin to be located on Parcel 42B (in Phase 2) adjacent to watershed Parcel 73 or participation in an off-site detention facility, will be implemented to reduce the 100-year discharge to an amount equal to pre-project flow conditions at specified locations on Pleasant Grove Creek and its tributaries.

The HRN Specific Plan area is part of a drainage shed that, at the time of Plan approval, includes a total of 990.2 undeveloped acres consisting of 609.85 HRN acres and 380.32 acres of NCRSP property south of Highway 65. No more than 50% or 495.1 acres of the undeveloped drainage shed acreage will be approved for development until the Parcel 42B detention basin or a comparable off-site alternative is constructed. Additional details relative to the HRN detention obligations and implementation timing are identified in Section 7.2.7 of the Specific Plan and in the HRN Development Agreement.

No significant drainage facilities exist on the project site. Large conveyance facilities (culverts) have been constructed under Stanford Ranch Road and Highway 65 adjacent to the project site. A tributary to Pleasant Grove Creek flows across the southeastern corner of the site before crossing under Highway 65. This tributary is designated as open space Parcels 70, 71 and 72. After traversing through the NCRSP area south of Highway 65, the tributary crosses back under Highway 65 to Highland Reserve North across Parcel 73, which is also designated as open space.

Storm drainage facilities will be constructed in Highland Reserve North to direct urban runoff from the developed HRN area to the preexisting watersheds. The storm drainage facilities will consist of a system of curbs and gutters, swales, and drainage pipe networks.

Trunk storm drainage facilities will be constructed in conjunction with the arterial and collector roadways as specified in Section 7 of this Specific Plan. The trunk system will consist of pipelines generally ranging in size from 12 inches to 66 inches, which will outfall to the tributary to Pleasant Grove Creek. Local storm drainage facilities will be constructed with the development of local roadways serving individual parcels. The City Public Works Department will review and approve all drainage facilities in the Plan area.

The design and construction of storm water collection facilities will be in accordance with the current City of Roseville improvement Standards. Best Management Practices (B.M.P.'s) will be implemented throughout the construction process. B.M.P.'s to reduce erosion may consist of the following: soil stabilization, dust control and runoff control prior to discharge into the tributary to Pleasant Grove Creek.

6.6 Solid Waste Disposal

The City of Roseville will provide disposal service to the plan area. Solid waste will be transported and disposed of at the Western Regional Landfill Authority facility located on Athens Road northwest of the city. The landfill is a Class III facility, accepting all refuse except hazardous and infectious waste.

A material recovery facility (MRF) is in operation at the landfill site. The MRF facility receives, separates, processes and markets all recyclable material.

6.7 Police Protection

The Highland Reserve North Specific Plan area will be served by the Roseville Police Department. The police department provides all operations and patrols out of a control location located at 401 Oak Street, approximately 5 miles from the plan area.

6.8 Fire Protection

Fire protection is provided throughout the city by the Roseville Fire Department. Four existing fully-staffed fire stations provide first response protection to designated sub-areas of the city. The Roseville Fire Department responds to all basic and advanced life support assistance requests within the city by providing emergency medical technician (EMT) trained staff. Ambulance service is provided by private companies.

A fire station is planned in the North Central Specific Plan area on Roseville Parkway less than one mile from the plan area. This will provide first response to the Plan area.

In addition, provision is made for an interim fire station site on Parcel 43B if an interim station becomes necessary.

6.9 Parks & Recreation

The Highland Reserve North Specific Plan is an amendment to the North Central Specific Plan and as such is considered a functional element of that existing plan area with respect to parks. Facilities in both components of the North Central plan area (the existing NCRSP plan and the Highland Reserve North Amendment) will meet the recreation needs for residents of the complete North Central plan area. The more active facilities, such as softball fields, will to a large extent be located in the existing NCRSP plan area south of Highway 65. The parks in the HRN plan area will focus on neighborhood facilities and the Village Square Central Park, which serves a special multi-functional role.

The park designs illustrated in Sections 6.9.3 and 6.9.4 below are conceptual in character. The final facilities plan for each of the HRN parks is subject to review and approval by the City's Department of Parks and Recreation Director.

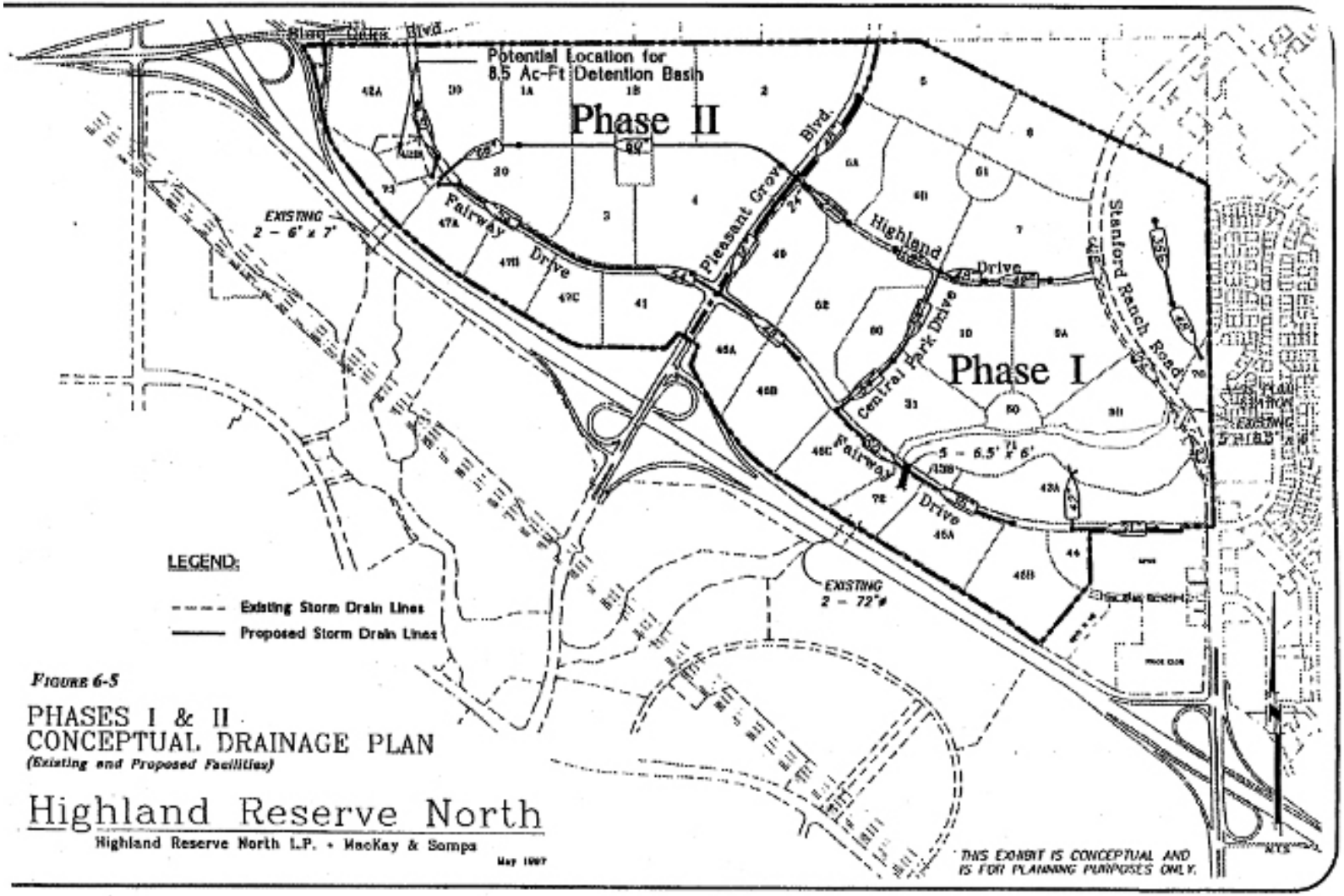


FIGURE 6-5

PHASES I & II
CONCEPTUAL DRAINAGE PLAN
(Existing and Proposed Facilities)

Highland Reserve North

Highland Reserve North L.P. + MacKay & Somps

May 1997

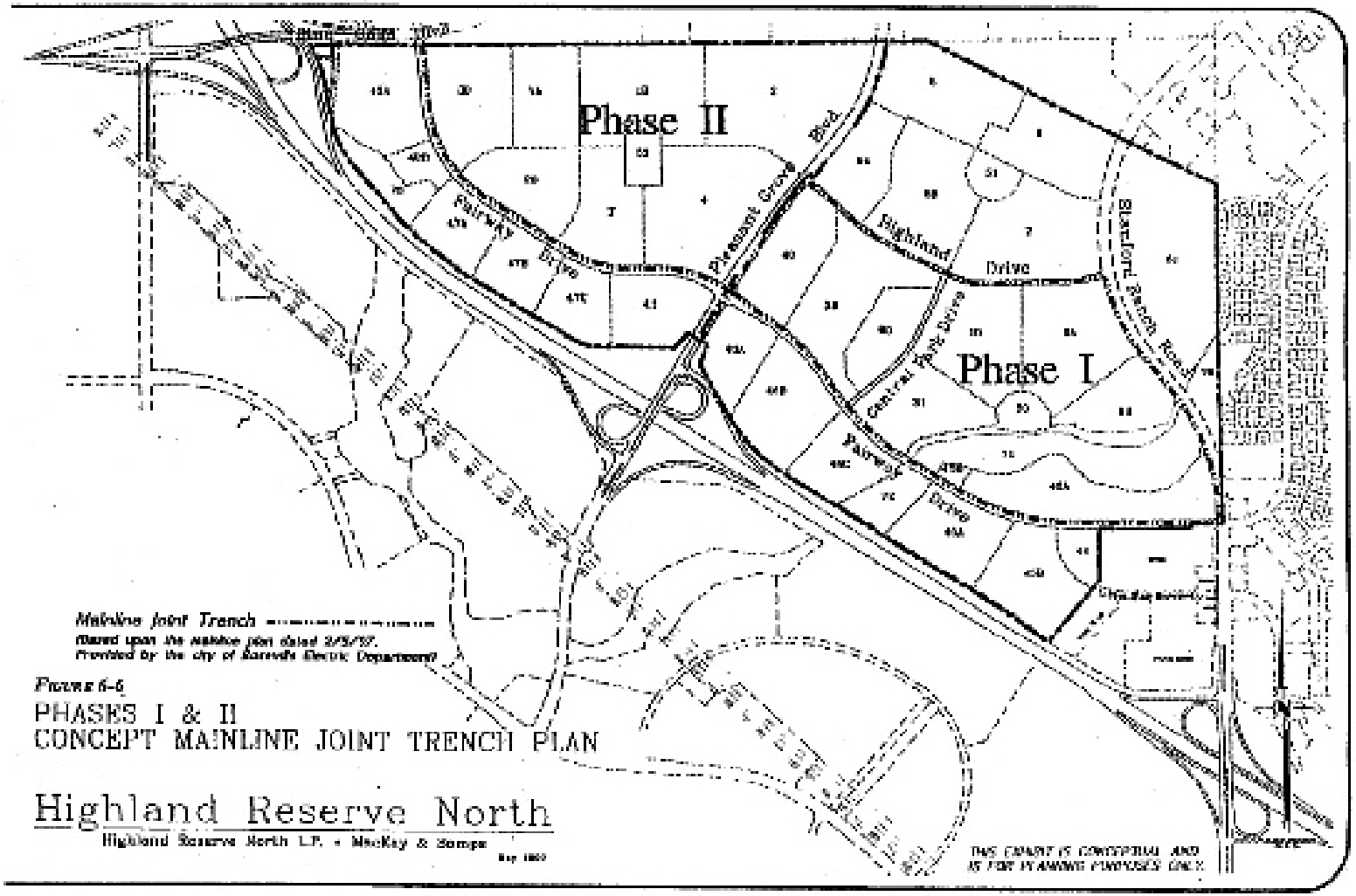


Figure 6-6
PHASES I & II
CONCEPT MAINLINE JOINT TRENCH PLAN

Table 6-2
Highland Reserve North
Parkland Dedication Requirements

Total HRN Units	**1,886**
HRN Transfer Units	732
Estimated Population	1,859
Required Park Acreage	5.6
HRN New Units	1,154
Estimated Population	2,931
Required Park Acreage	26.4
Total HRN Park Dedication Requirement	**32.0**

6.9.1 City of Roseville Parks and Recreation Requirements

The need for specific park facilities is determined on the basis of population standards. The city has adopted a standard of 9 acres of park land per 1,000 residents.

The HRN Specific Plan will include 1,886 (1,669[1]) residential units. Of this total, 732 units are existing entitled units from the NCRSP. These transfer units have previously met their park dedication requirement and are entitled to a credit of 6 acres per 1,000 population. The transfer units remain responsible for the neighborhood park component (3 acres per 1,000 population) of the City's park dedication requirement. These 732 units will generate a population of 1,859 and a park dedication requirement (calculated at 3 acres per 1,000 population) of 5.6 acres. The remaining 1,154 new HRN units will generate a population of 2,931 and a park dedication requirement (calculated at 9 acres per 1,000 population) of 26.4 acres. The total HRN park dedication obligation is 32.0 acres.

Table 6-3
Park and Recreation Acreage Credits

Parcel	Net Acres	Allowance	Credit Acres
Parks			
Parcel 50	2.93	1:1	2.93
Parcel 51	2.67	1:1	2.67
Parcel 52	20.35	1:1	20.35
Parcel 53	4.03	1:1	4.03
Subtotal	**29.98**		**29.98**
Open Space			
Parcel 71	19.66	1:10	1.96
Parcel 71A	4.31	1:10	0.43
Subtotal	**23.97**		**2.39**
Total	**53.95**		**32.37**

6.9.2 Plan Area Park and Recreation Credits

The Highland Reserve North Specific Plan designates a total of 4 park sites encompassing a total of 29.98 acres net of roadway IOD and slope area (32.41 gross acres). In addition, the plan designates a total of 39.87 acres of primary open space which is designated to preserve wetland areas and floodplain. Of this open space, 23.97 acres may provide passive recreational opportunities and is granted credit towards park dedication requirements.

Each acre set aside for active park use is credited as a full acre. Partial credit ranging from 1:5 to 1:10 (1 credit acre for every 5 to 10 actual acres dedicated) may be granted for open space which enables the preservation of unique environment opportunities. The total park area credited to the plan is 32.37 acres which exceeds the total park acreage required of 32.0 acres. The park and open space area allocation and credits are shown in Table 6-3.

1 Please refer to Table 2-2 for current units and acres.

Park land dedication/conveyance requirements will be in accordance with the relevant provisions of the project Development Agreement.

6.9.3 Neighborhood Parks

Neighborhood parks are intended to serve as focal points of activity within each of the Highland Reserve North neighborhoods and to provide opportunities for recreation facilities, such as softball and other field sports. There are three neighborhood parks within the Specific Plan area that are centrally located within their respective neighborhoods.

The location of the parks is identified on Figure 2-1 and each is described below:

The neighborhood park on Parcel 50 (Phase 1) is located in the southeastern portion of the plan area and adjacent to a large open space corridor (Parcel 71). Facilities in this park may include an informal turfed play area, a picnic area and a tot lot.

The neighborhood park on Parcel 51 (Phase 1) is located in the north-eastern portion of the plan area between Pleasant Grove Boulevard and Stanford Ranch Road, and north of Highland Drive. Facilities in this park may include a turf area which may serve as an informal ball field, a picnic area and a tot lot.

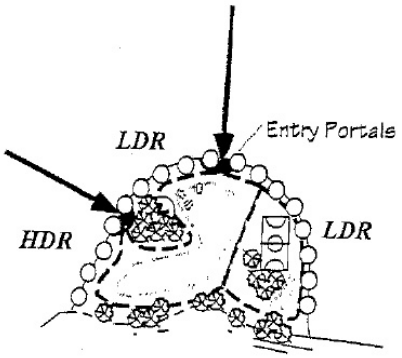


FIGURE 6-7
PARCEL 50: 2.93 Net Acres

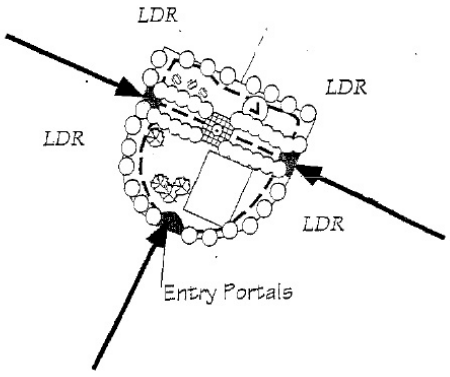


FIGURE 6-8
PARCEL 51: 3.19 NET ACRES

The neighborhood park on Parcel 53 (Phase 2) is located in the northwestern portion of the plan area generally north of Fairway Drive and west of Pleasant Grove Boulevard. Facilities in this park may include both active and passive recreation facilities including a ball field, picnic area and tot lot. The park lies across the axis of the primary pedestrian loop and the pedestrian pathway will be incorporated in the park design.

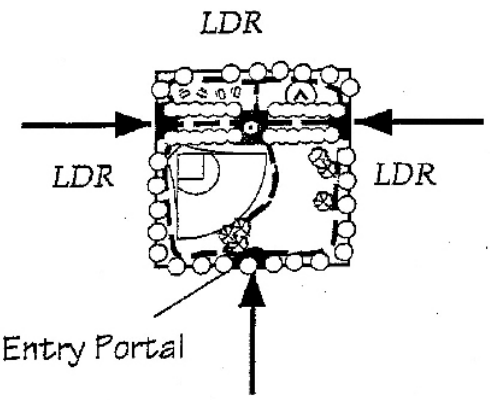


FIGURE 6-9
PARCEL 53: 4.03 Net Acres

6.9.4 Community/City-wide Park

The HRN Specific Plan also includes a community / City-wide Park located in the center of the Plan area. This "Central Park" feature is part of the Village Square. It is bounded by the neighborhood commercial site (Parcel 40) on the west and the K-6 school site (Parcel 60) on the east.

The Central Park is bisected by the pedestrian promenade and is intended to be the center of activity and focal point for the Highland Reserve North community. Recreational facilities may include both active and passive types including ball fields for various field sports; volleyball, tennis and basketball courts; an outdoor amphitheater; trails, picnic areas and tot lots.

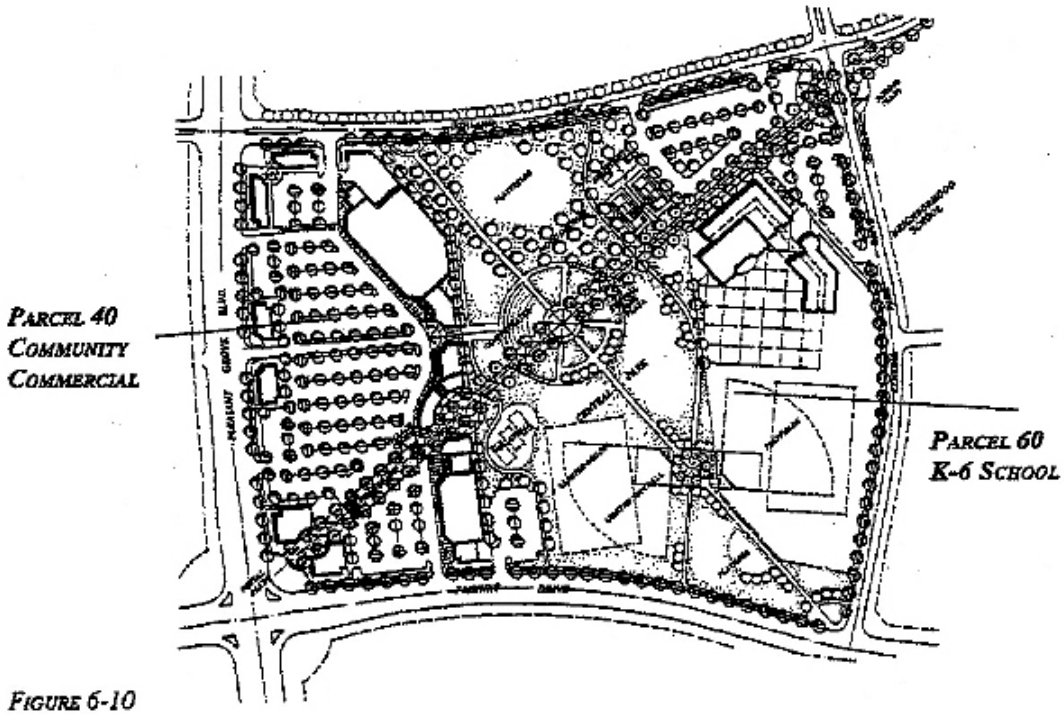


FIGURE 6-10
PARCEL 52 CENTRAL PARK
20.35 Net Acres

6.10 Schools

The Highland Reserve North Specific Plan area is entirely within the Roseville City School District and the Roseville Joint Union High School District.

Build out of the area will generate an estimated total of 678 students in kindergarten through eighth grade. Of that amount, approximately 522 students will be in grades K-6 with the remaining 156 students in grades 7-8.

In addition, 279 high school students will be generated creating a total estimated student population of 957 students generated from build out of the plan area, as shown in Table 6-4[2], School Facilities Requirements.

One elementary school site (Parcel 60-Phase 1), encompassing 10.0 acres, is designated within the plan area to accommodate the projected K-6 elementary school-aged population. The Parcel 60 school site will be reserved for purchase and development by the Roseville City School District in accordance with the relevant provisions of the project Development Agreement.

Students in grades 7-8 will attend Buljan Intermediate School located near Pleasant Grove Boulevard and Washington Boulevard.

Woodcreek Oaks High School is located in the Northwest Roseville Specific Plan area on Woodcreek Oaks Boulevard. This facility will accommodate and ultimate enrollment of 1,800 students. Roseville High School is located approximately 2 miles south of the Plan area on Atlantic Street. High school students generated from the Plan area may be assigned to either of the two schools.

Land owners will be required to fully mitigate school impact in accordance with the relevant provisions of the project Development Agreement.

6.11 Library

The City of Roseville operates a public library system which includes the main library at 225 Taylor Street and the Maidu Branch at the Maidu Regional Park. A City branch library is planned in the Northwest Roseville Specific Plan area within Mahany Park and a second branch library in planned in the North Central Roseville Specific Plan area at the northeast intersection of Roseville Parkway and East Park Drive. Residents in the Highland Reserve North Specific Plan area will be adequately served by the existing and planned library system in accordance with the level of service standards included in the City General Plan.

2 Table data is based on the unit allocation at the time of the HRN Specific Plan adoption and has not been updated to reflect current units. Please refer to Table 2-2 for current units and acres.

Table 6-4
School Facilities Requirements

	Single Family/ Detatched	Multi-Family	Students Generated	School Capacity	Schools Required
Roseville City School District					
Units	1,018	868			
Grades K-6 (77%)	0.3988	0.1340	522	600	0.87
Grades 7-8 (23%)	0.1193	0.0400	156	800	0.20
Subtotal:			**678**		
Roseville High School District					
Units	1,018	868			
Grades 9-12	0.2362	0.0445	279	1,800	0.16
Subtotal:			**279**		
Plan Area Total:			**957**		

6.12 Dry Utilities

The dry utilities necessary to serve the HRN Specific Plan area include electric, gas and communication services. Connections to the HRN Specific Plan area can be extended from existing facilities located within that portion of the NCRSP south of Highway 65 and along Stanford Ranch Road at Fairway Drive.

The dry utilities will generally be located in public utility easements (PUE's) along project roadways. The PUE's will be the same width as the landscape corridors along arterial and collector streets. PUE's adjacent to residential streets will be 12.5 feet in width.

The dry utilities will be constructed in conjunction with the associated arterial and collector roadways or when required to serve developing parcels.

6.12.1 Electric Service

The Roseville Electric Utility Department will provide electricity in the plan area from main electrical feeder lines within the vicinity of the plan area. The primary source of electricity will be from existing facilities south of Highway 65 at Gibson Drive and the powerline corridor. Service will be extended north along Pleasant Grove Boulevard to HRN.

Electric service will be stubbed to the park sites, the school site, the commercial sites and other non-residential uses as appropriate concurrent with construction of the primary infrastructure. All electric facilities will be constructed in accordance with then current City standards.

6.12.2 Street Lighting

Street lighting will be provided along all public streets within the Plan area in accordance with then current City standards. The height and intensity of street lighting will correspond to the function of the street.

Street lights will be financed and constructed as part of the roadway frontage improvements. Installation will be done by the City of Roseville Electric Department.

6.12.3 Natural Gas

Natural gas will be provided by Pacific Gas and Electric Company (PG&E) on request and in accordance with the rules and tariffs of the California Public Utilities Commission. There are several nearby gas facilities that may be extended to the site. Although PG&E's long-range plans provide for availability of gas service to accommodate increased demand, delivery of gas service to any particular development will need to be reviewed by PG&E as each development is proposed.

6.12.4 Communication

The Highland Reserve North Specific Plan area will be served by Roseville Telephone Company and one or more private cable television companies. Distribution lines to individual tracts will occur as development takes place.

7. Land Use and Infrastructure Phasing

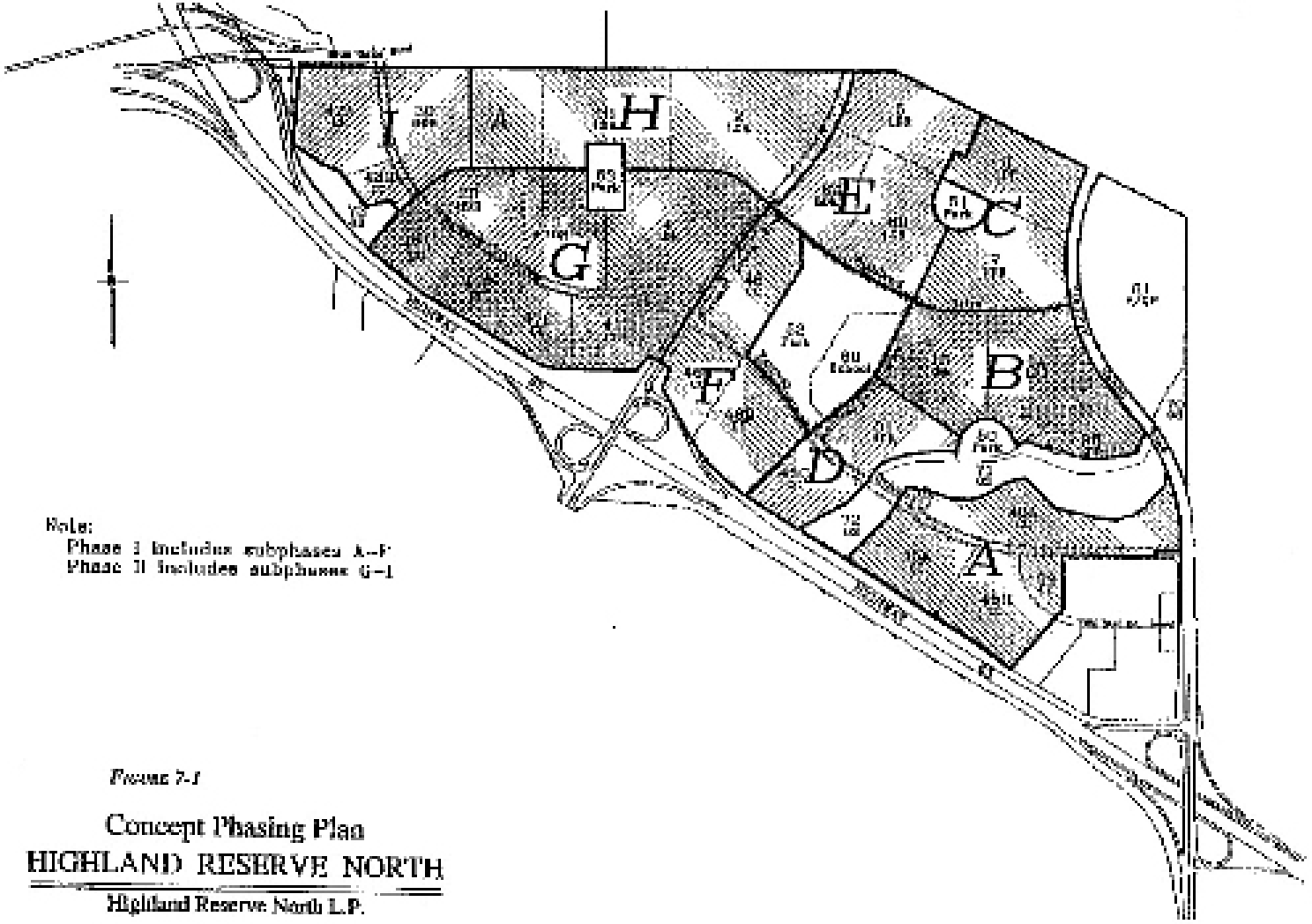
7.1 Introduction

The Highland Reserve North land uses and the infrastructure required to serve them are designed to be developed in two primary phases with multiple sub-phases. Phase I, involving land uses east of Pleasant Grove Boulevard, includes six sub-phases (Sub-phases A-F) as shown on Figure 7-1; Phase II, involving land uses west of Pleasant Grove Boulevard, includes three sub-phases (Sub-Phases G-I) also as shown on Figure 7-1.

Sub-phases A-I are designated to be developed and constructed sequentially beginning with sub-phase A and continuing alphabetically, unless Landowner requests City approval to develop a sub-phase in a different order. The phasing plan contemplates two such variations. The phasing is designed to allow development of sub-phase D. In addition, the phasing plan contemplates the development of sub-phases G, H and I in any order. Where non-sequential development is proposed, infrastructure improvements necessary to adequately serve the developing portion of the site must be provided. Such non-sequential development will be permitted provided adequate service is demonstrated. The foregoing does not preclude the construction of all of the infrastructure in the HRN Specific Plan, or a group of sub-phases of infrastructure, in a single phase.

7.2 Infrastructure Improvements by Sub-Phase

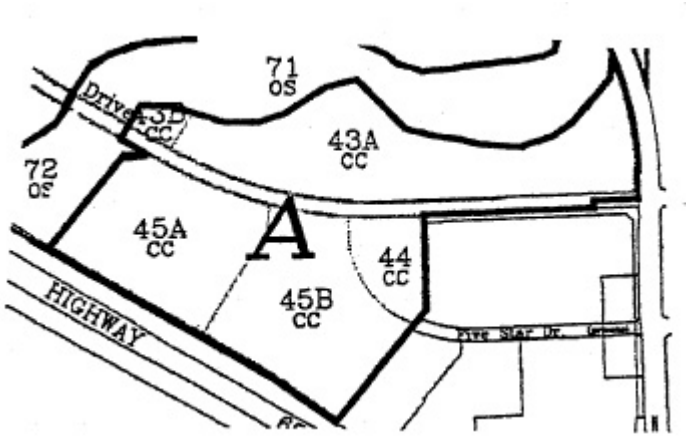
Prior chapters of this Specific Plan contain a conceptual description of the manner in which public facilities will be extended to serve the Highland Reserve North Specific Plan area (see, in particular, the discussion of roadways and roadway connections in the Circulation Element, Chapter 4, and the discussion of water, wastewater, drainage and flood control in Section 6.2 of the Public Facilities and Services Element, Chapter 6). This Highland Reserve North lnfrastructure Phasing Plan provides a detailed listing of the roadway, sewer, water, storm drain and electric facilities to be constructed with each sub-phase of Highland Reserve North development.



Note:
Phase I includes subphases A–F
Phase II includes subphases G–I

Figure 7-1

Concept Phasing Plan
HIGHLAND RESERVE NORTH
Highland Reserve North L.P.
Newville • MacKay & Somps • California



7.2.1 Sub-phase A

The following infrastructure will be installed to serve the Sub-phase A land uses:

Roads:

- Construct westerly frontage lane for Stanford Ranch Road along Sub-phase A.
- Construct frontage lanes for Fairway Drive, both sides and 14' wide backbone median landscaping.
- Construct signal poles at Fairway Drive and Five-Star Drive intersection.

Sewer:

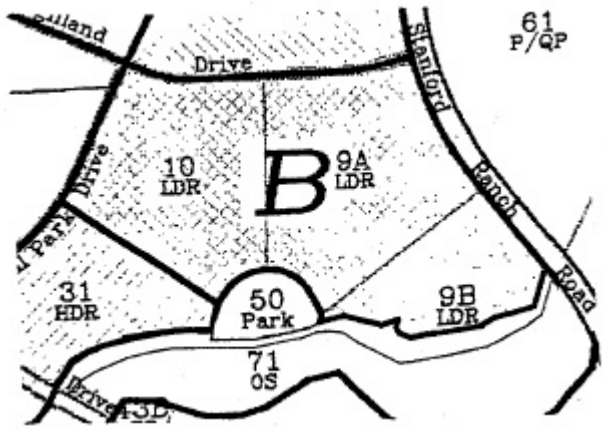
- Parcel 61 shall construct a sewer line to the existing main in Parcel 71 watershed.
- Construct l0-inch sewer in Fairway Drive.

Water:

- Extend 12-inch line from Gibson Drive through NCRSP Parcel 43A across Highway 65 to Fairway Drive. Construct 12-inch main from Fairway Drive frontage.
- Constuct 12-inch main from Fairway Drive across Parcel 71 upon development of Parcel 43A (Lower Pressure Zone).

Electric:

- Joint trench to be constructed in Stanford Ranch Road from Fairway Drive to south driveway at Parcel 61.
- Street light to be constructed along entire length of Stanford Ranch Road.
- Construct joint trench and street lights along Fairway Drive.
- Construct electric underground feed from Gibson Drive substation to Pleasant Grove Boulevard south of Highway 65.
- Construct temporary overhead electric line from underground feed across Highway 65 east along Fairway Drive to terminus of Sub-phase A joint trench.



7.2.2 Sub-phase B

The following infrastructure will be installed to serve the Sub-Phase B land uses:

Roads:

- Stanford Ranch Road, construct westerly frontage improvements, center pavement widening along east side of median, median curb and landscaping from the northerly boundary of Sub-phase A to the northerly project limits.
- Construct full Highland Drive from Stanford Ranch Road to Central Park Drive.
- Construct full Central Park Drive from Highland Drive to southern boundary of Parcel 10.
- Construct signal improvements at Highland Drive and Stanford Ranch Road intersection.

Sewer:

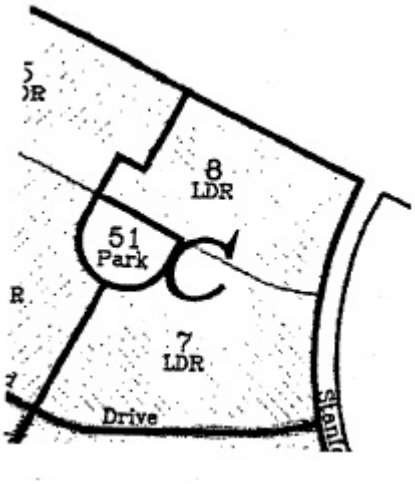
- Construct 8-inch sewer main extension from Parcel 98 to existing main in Parcel 71 watershed.
- Construct 6-inch main in Highland Drive.
- Construct 8-inch and l0-inch mains in Central Park Drive to Fairway Drive.
- Construct 15-inch main in Fairway Drive to existing main in watershed.

Water:

- Construct two 12-inch main connections, with flow meters, to PCWA 12-inch main in Stanford Ranch Road.
- Construct two Pressure Reducing Valves (PRV) for the connections within the Upper Reserve Zone.
- Construct 12-inch main loop in Central Park Drive and Highland Drive (Upper Pressure Zone).
- Construct 12-inch main from Fairway Drive across Parcels 43 and 71 to Parcel 9B if not previously constructed with Parcel 43A development.

Electric:

- Construct Stanford Ranch Road joint trench from Highland Drive to terminus of joint trench constructed with Sub-phase A.
- Construct joint trench and street lights on Highland Drive from Stanford Ranch Road to Central Park Drive.
- Construct temporary overhead electric loop from Central Park Drive terminus to Fairway Drive, including street lights along Parcel 10 frontage.



7.2.3 Sub-phase C

The following infrastructure will be installed to serve the Sub-phase C land uses:

Roads:

- None

Sewer:

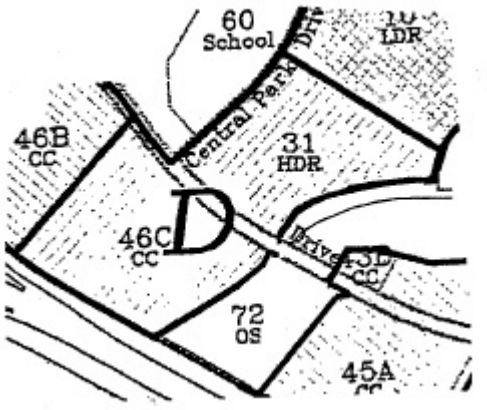
- If Phase I of Central Park Parcel 52 is to be developed, construct portion of sewer through Phase I of Park Parcel 52.

Water:

- None. Intact waterlines to be constructed with development of small lot subdivisions to provide internal looped system.

Electric:

- None



7.2.4 Sub-phase D

The following infrastructure will be installed to serve the Sub-phase D land uses:

Roads:

- Construct balance of full Central Park Drive.
- Construct frontage lanes and 14' wide backbone median landscaping along Fairway Drive from terminus of Phase A to west edge of Sub-phase D.
- Construct signal improvements at Fairway Drive and Central Park Drive intersection.

Sewer:

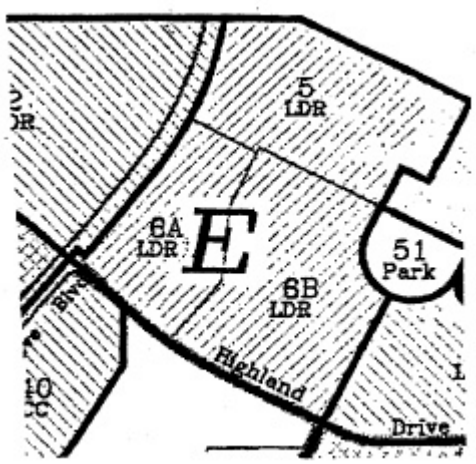
- Construct 12-inch main in Fairway Drive from western boundary of Sub-phase D to Central Park Drive.

Water:

- Complete 12-inch main in Central Park Drive.
- Complete 12-inch main in Fairway Drive from Central Park Drive to terminus of Sub-phase A.

Electric:

- Construct joint trench and street lights on Fairway Drive from terminus of Phase A to western edge of Phase D.
- Construct street lighting on Central Park Drive along Parcel 20 frontage.



7.2.5 Sub-phase E

The following infrastructure will be installed to serve the Sub-phase E land uses:

Roads:

- Construct full Highland Drive from Central Park to Pleasant Grove Boulevard.

- Construct Pleasant Grove Boulevard frontage lanes and 14' wide median landscaping from Highland Drive to north boundary. Should either the Pleasant Grove Boulevard interchange or Park Drive not be constructed at the time of construction of Sub-phase E, this requirement may be satisfied through a deferred improvement agreement.

Sewer:

- Construct 6-inch, 10-inch and l2-inch mains in park site from Fairway Drive to Highland Drive. (Portion of sewer through Park Site Parcel 52 may be previously constructed with Phase I park improvements.)

Water:

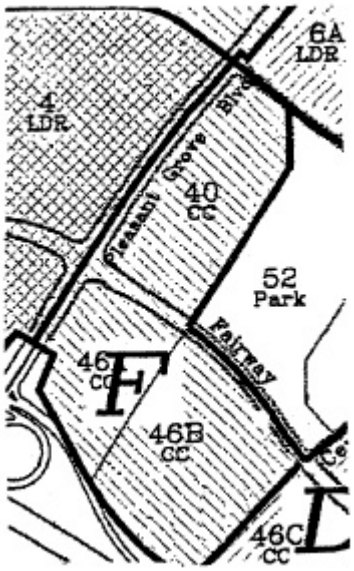
- Construct Highland Drive 12-inch main from Central Park Drive to Pleasant Grove Boulevard with Pressure Reducing Valve. Intract development will construct a tie from Highland Drive to PCWA system at north boundary.

- Construct 12-inch mainline connection at Pleasant Grove Boulevard, with flow meter, for purpose of tying into PCWA mainline at northern boundary upon completion of intact waterline.

Electric:

- Construct joint trench and street lights in Highland Drive from Central Park Drive to Pleasant Grove Boulevard.

- Construct temporary overhead electric loop along Pleasant Grove Boulevard from Fairway Drive to Highland Drive to replace temporary overhead in Central Park Drive.



7.2.6 Sub-phase F

The following infrastructure will be installed to serve the Sub-phase F land uses:

Roads:

- Construct Pleasant Grove Boulevard frontage lanes from Highland Drive to Fairway Drive or to Interchange, if the interchange is constructed, with 14' wide median landscaping.

- Construct Fairway Drive frontage lanes and 14' wide backbone median landscaping from Pleasant Grove Boulevard to terminus of Sub-phase D.

- Construct signal improvements at Pleasant Grove Boulevard and Fairway Drive intersection.

Sewer:

- Construct 10-inch main Pleasant Grove Boulevard from Highland Drive to Fairway Drive.

- Construct l2-inch main Fairway Drive from Pleasant Grove Boulevard to eastern edge of Sub-phase F.

Water:

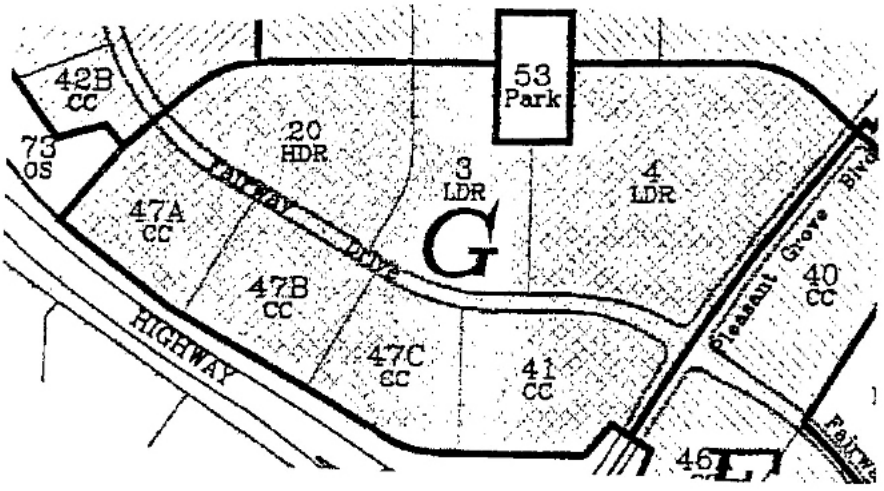
- Construct 12-inch main in Pleasant Grove Boulevard from Highland Drive to Fairway Drive.

- Construct 12-inch main in Fairway Drive from Pleasant Grove Boulevard to eastern edge of Sub-phase F.

Electric:

- Complete joint trench and street lights on Fairway Drive to Pleasant Grove Boulevard from eastern edge of Sub-phase F.

- Construct joint trench and street lights on Pleasant Grove Boulevard from Fairway Drive or from Highway 65, if Interchange is constructed, to Highland Drive.



7.2.7 Sub-phase G

The following infrastructure will be installed to serve the Sub-Phase G land uses:

Roads:

- Construct Fairway Drive frontage lanes, including 14' wide backbone median landscaping for Sub-phase G frontage or any portion of Sub-phase G frontage provided it connects to either Pleasant Grove Boulevard or Blue Oaks Boulevard.

Sewer:

- Construct 8-inch and l0-inch sewer mains in Fairway Drive to provide service to developing portion of Sub-Phase G.

- Construct l8-inch sewer main from Fairway Drive across Highway 65 to existing sewer main.

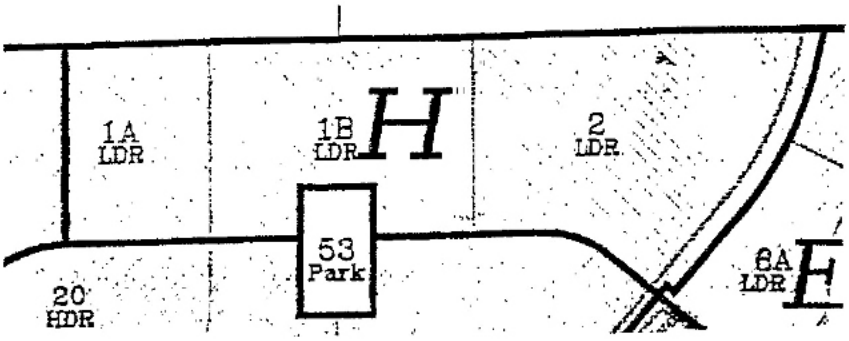
Water:

- Construct looped water system from existing facilities to provide service to developing portion of Sub-phase G, as approved by the Environmental Utilities Director.

- Construct 12-inch waterline across Highway 65 to Roseville Parkway if not previously constructed with Sub-phase H.

Electric:

- Construct joint trench and street lights along Fairway Drive from Pleasant Grove Boulevard to provide service to developing portion of Sub-phase G.



7.2.8 Sub-phase H

The following infrastructure will be installed to serve the Sub-phase H land uses:

Roads:

- Construct frontage lanes of Pleasant Grove Boulevard and 14' wide median landscaping from Highland Drive to North Boundary if not previously constructed with Sub-phase E. Should either the Pleasant Grove Boulevard Interchange or Park Drive not be constructed at the time of construction of Sub-phase H, this requirement may be satisfied through a deferred improvement agreement.

- Construct signal improvements at Pleasant Grove Boulevard and Highland Drive intersection.

Sewer:

- Construct 10-inch and 12-inch sewer mains in Highlands Drive to existing system across Highway 65 to provide adequate service to developing portion of Sub-phase H to the satisfaction of Environmental Utilities Director.

- Construct 10-inch sewer main in Pleasant Grove Boulevard to terminus of Sub-phase F.

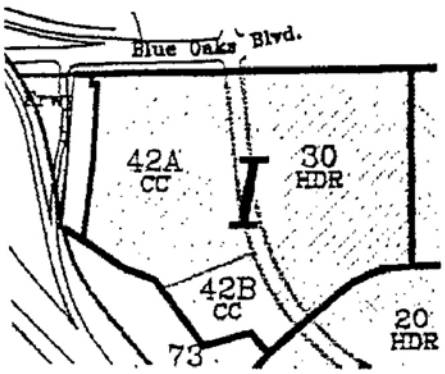
Water:

- Construct looped system as approved by Environmental Utilities Director.

- Construct 12-inch waterline across Highway 65 to Roseville Parkway if not previously constructed with Sub-phase G.

Electric:

- Construct intract joint trench and street lights to the satisfaction of the Electric Department.



7.2.9 Sub-phase I

The following infrastructure will be installed to serve the Sub-phase I land uses:

Roads:

- Construct frontage lanes of Fairway Drive from Blue Oaks Boulevard to western boundary of Sub-Phase G, including 14' wide backbone median landscaping.
- Construct signal improvements at intersection of Fairway Drive and Highland Drive extension.

Sewer:

- Construct 8-inch main in Fairway Drive to connect to existing system.
- Construct sewer lines as necessary to connect to existing system across Highway 65.

Water:

- Construct 12-inch main in Fairway Drive from southern boundary of Parcel 42 to the project's northern boundary.
- Construct waterline improvements as necessary to provide onsite looped system to the satisfaction of the Environmental Utilities Director.
- Construct 12-inch main line connection to tie to PCWA system if constructed to Blue Oaks and Fairway Drive intersection, and provide flow meter.
- Construct 12-inch waterline across Highway 65 to Roseville Parkway if not previously constructed with Sub-phase G or H.

Electric:

- Construct joint trench in Fairway Drive from the southern boundary of Parcel 42 to the northern boundary of the property.
- Install street lights along Fairway Drive from the southern boundary of Parcel 42 to the northern boundary of the property.

7.3 Park Facilities Phasing Plan

The primary source of funding for the Highland Reserve North park facilities is the park fee revenues generated by Highland Reserve North residential development. In order to provide for the construction of park facilities in advance of the availability of park fee revenues, however, landowner will fund the construction of the Park Site 50 improvements with the development of Sub-phase B.

Landowner funding of the Neighborhood Park Site 50 improvements will allow the first increment of park fees to be used to build Phase I of the Central Park, including a combined baseball/ soccer facility. It is anticipated that sufficient park fee revenues will be collected with construction of the first 250 homes in the Highland Reserve North Specific Plan area to fund construction of Phase I of the Central Park.

8. Implementation

8.1 Implementation of HRN Specific Plan

The HRN Specific Plan will be implemented through a combination of financing mechanisms (including assessment districts, development fees and developer direct financing) to fund the construction and maintenance of the HRN public facilities and through City review of individual development projects. All development activity within the HRN Specific Plan Area is required to be consistent with this Specific Plan, the project Development Agreement, the project EIR, the City General Plan and all other applicable local, state and federal requirements.

8.2 Public Facility Financing

A majority of the base plan infrastructure including basic street improvements, wastewater collection system, water distribution and storm drainage, electric infrastructure, certain park improvements and street lighting facilities will be funded on a phased basis principally through a combination of the HRN Community Facilities District, developer direct financing, developer fees, or other financing mechanisms. In addition, certain components of the improvements will be funded directly by the developer of the adjacent parcel as a condition of such development. Land use and infrastructure phasing are summarized in Section 7 of this Specific Plan.

Details relating to the Community Facilities District, improvement obligations, payment of fees, reimbursements, land dedications and conveyances, maintenance of public areas and facilities, and other public facility financing obligations are included in the HRN Development Agreement.

8.3 Development Approval Process

Development projects within the HRN Specific Plan area are subject to the standard permit requirements of the Roseville Zoning Ordinance and other applicable documents. In addition, permits may be required by other agencies such as the US Army Corps of Engineers and Department of Fish and Game.

8.3.1 Other Development Permits

Depending upon the type of development proposed, the following permits and associated review and approval processes may be required:

Administrative Permit (AP)

This permit is used for determining the appropriateness of certain administratively permitted uses. This process is also used for minor modifications to approved permits. Evaluation and approval of the administrative permit is performed by City staff in accordance with the procedures outlined in Article V of the Roseville Zoning Ordinance.

Design Review Permit (DRP)

With the exception of single-family and two-family residences, the Design Review Permit is issued for development of principally permitted uses. Evaluation and approval of the Design Review Permit will be performed by City staff and City Design Review or Planning Commission in accordance with the procedures outlined in Article V of the Roseville Zoning Ordinance. The evaluation will be based on the proposed project's consistency and substantial compliance with the provisions of this Specific Plan, the HRN EIR, the project Development Agreement, and other applicable City requirements.

Design Review Permit for Residential Subdivisions (DRRS)

This permit is used to modify, expand or eliminate the supplemental design standards for residential small lot (RS) districts. A DRRS is processed concurrent with or following processing an application for a tentative residential subdivision map or as a separate permit. The approving authority for a DRRS is the Planning Commission.

Major Project Permit (MPP)

This permit is used to stage review of large projects as specified in Chapter 19.82 of the City Zoning Ordinance. The approving authority for Stage 1 of an MPP is the Planning Commission, Stage 2 is the Design Review Commission, and Stage 3 is the City staff.

Conditional Use Permit (CUP)

This permit process is used for conditionally permitted uses. Evaluation and approval of the permit will be performed by City staff and City Planning Commission in accordance with the procedures outlined in Article V of the Roseville Zoning Ordinance. The evaluation will be based on the proposed project's consistency and substantial compliance with the provisions of this Specific Plan, the HRN EIR, the project Development Agreement, and other applicable City requirements.

Sign Permit

This permit is required by the Roseville Sign Ordinance for any new signs. Evaluation of the permit will be performed by City staff and/or City commissions in accordance with the provisions outlined in the Sign Ordinance and applicable design guidelines.

Tentative Maps

Parcel or subdivision maps are required for the creation of new non-residential parcels, new multi-family residential parcels or single family residential lots. Such maps will be reviewed to ensure compliance with the Roseville Subdivision Ordinance and Subdivision Map Act.

Transportation Systems Management Plan

Non-residential development is subject to the Transportation Systems Management planning requirements of state laws and the City's TSM Ordinance.

US Army Corps of Engineers 404 Permits

This permit is described in the HRN EIR and in the Resources Management Element (Chapter 5) of this Plan, and is a mitigation measure for construction related impacts to jurisdictional waters such as vernal pools and other wetlands. This permit is issued and regulated by the US Army Corps of Engineers.

RWQCB Water Quality Certification

This permit is described in the HRN EIR and is a mitigation measure for construction related impacts to wetlands and the HRN watershed corridor. It is also a condition of the 404 permit. This permit is issued and regulated by the Central Valley Regional Water Quality Control Board.

California Dept. of Fish and Game Streambed Alteration Agreement

This permit is described in the HRN EIR and is a mitigation measure for construction related impacts to plants, animals and water quality in the Pleasant Grove Creek tributaries. This permit is issued and regulated by the Department of Fish and Game.

State Storm Water/NPDES Permits

These permits are described in the HRN EIR and are mitigation measures for construction and project operation related impacts to water quality, and are required by state and federal permitting agencies. These permits are issued and regulated by the State Water Resources Control Board.

PCAPCD Authority to Construct

This permit is described in the HRN EIR and is a mitigation measure for construction and project operation related impacts to air quality. This permit is issued and regulated by the Placer County Air Pollution Control District.

Hazardous Materials Permits

These permits may be required as determined by the Roseville Fire Department or other applicable regulatory agencies.

8.4 HRN Specific Plan Consistency and Amendment Process

One of the primary objectives of the HRN Specific Plan is maintaining flexibility and the ability to react quickly to changes. To achieve this, the following process is established which allows the Planning Director to interpret plan consistency and the need for a possible plan amendment.

1. Substantial Conformity with Plan – The Planning Director may make the determination that a proposed change is consistent with the intent and basic provisions of the HRN Specific Plan, and therefore in substantial conformity with the Plan. In such cases, no amendment to the Plan is required.

2. Modification to the Plan - When a proposed change results in a deviation or inconsistency with the adopted HRN Specific Plan, an amendment to the Plan is required. Such amendments require action by the Planning Commission and City Council.

Any determination of conformity with or proposed change to the HRN Specific Plan may, at the discretion of the Planning Director, be forwarded to the Planning Commission for review.

APPENDIX A

Highland Reserve North Community Form and Design Guidelines

1.0 INTRODUCTION

The HRN Community Form and Design Guidelines are intended to define the overall vision underlying the HRN Specific Plan and to establish a framework of planning concepts, public improvements and design standards to be used in implementing the HRN vision. While these guidelines reflect an extension of the basic concepts of community form and design from the NCRSP area south of Highway 65, it is intended to provide an independent and self-contained frame of reference. As such, it includes both carry over policies from the existing NCRSP and new policies responsive to the unique opportunities presented by the HRN Specific Plan area.

The HRN Guidelines are also intended to supplement the City of Roseville Zoning Ordinance and Community Design Standards which govern the design of commercial, office, industrial and multifamily projects. These HRN Community Form and Design Guidelines include only design standards that are project specific in character and standards for low and medium density residential projects. Where the provisions of the HRN Guidelines are either more restrictive than or inconsistent with the Community Design Standards and/or the Zoning Ordinance, the HRN Guidelines are to govern development within the HRN plan area. These guidelines are intended to encourage innovative design solutions while maintaining sufficient flexibility to accommodate the realities of the market place.

2.0 OVERALL DESIGN VISION OF THE HRN SPECIFIC PLAN

A key objective of the HRN Specific Plan is to create an urban identity that makes the highest and best use of the opportunities presented by the infill location and freeway proximity of the HRN property, while at the same time preserving and emphasizing a fundamentally human scale of development. Because the HRN Specific Plan area is served by almost two miles of freeway frontage and three existing or planned interchanges, it is uniquely situated to provide a mixed use community which includes both regional serving commercial and business/ professional development as well as residential neighborhoods and related local serving retail and office uses. The underlying challenge of the HRN Specific Plan is to integrate these diverse urban uses in a manner that emphasizes the traditional values of community and the feel of a small community environment.

2.1 Design of Public Spaces

The common areas of the HRN Specific Plan area: the parks, the sidewalks, the plazas, the promenades, the natural open space and the roadways, provide a critical opportunity to shape the HRN community identity in a synergistic way that is experienced most immediately and directly by those who live, work and visit the community. Not only do these public amenities themselves create a sense of place but they can give shape to the development which occurs around them. Because the design of the public space can be established through the specific planning process, the HRN Specific Plan emphasizes these common area features as a means of tying together a variety of land uses and of transforming the HRN design vision into reality.

3.0 Organization of HRN Land Uses

The HRN Community Form and Design Guidelines feature four key elements of community form and design:

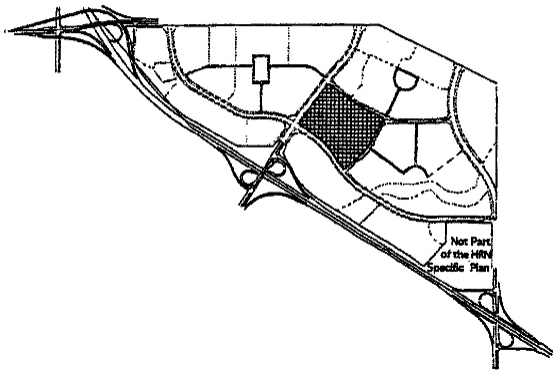
- The Village Square
- Highway oriented commercial development
- Traditional neighborhoods organized around interior neighborhood parks
- Open space

These four elements form a comprehensive design framework for the HRN community. The role of each of these elements is detailed as follows:

3.1 The Village Square

The most important defining element of the plan and the focal point of the HRN community is the centrally located 44 acre Village Square. Its neighborhood orientation provides a critical contrast to the regional orientation of the land uses abutting the Highway 65 frontage. The Village Square emphasizes a pedestrian scale and is designed to encourage human interaction and community based activity whereas the highway related land uses are by their nature designed around a motor vehicle priority. The Village Square includes a neighborhood commercial center, a large community park, and an elementary school.

Figure A-1
Village Square Key Plan



3.2 Highway Oriented Commercial

Except for the Village Commercial Center, non-residential land uses are located in the high intensity band along the approximately two miles of Highway 65 frontage where they can take advantage of the high freeway visibility and ready access. These non-residential uses also serve as transitional freeway buffers for the residential land uses which fill the interior of the HRN Specific Plan area.

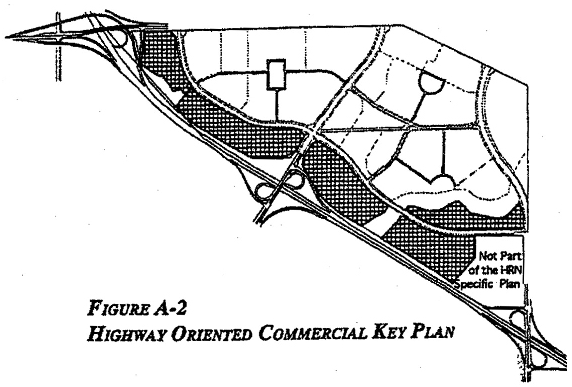


FIGURE A-2
HIGHWAY ORIENTED COMMERCIAL KEY PLAN

3.3 Traditional Neighborhoods

The residential component of the HRN Specific Plan consists of three neighborhoods organized around the Village Square. Each of the three neighborhoods will have as its centerpiece an interior neighborhood park. These neighborhood parks are two to four acres in size, making them large enough to accommodate a range of active and passive uses and small enough to provide a more intimate and personal sense of scale. Surrounded primarily by single loaded streets, the neighborhood parks will open to the neighborhood providing ease of access and surveillance. Serving not only as a center of informal recreational activity but also as the neighborhood gathering place, the neighborhood parks are intended to act as an "outdoor living room" for the neighborhood residents.

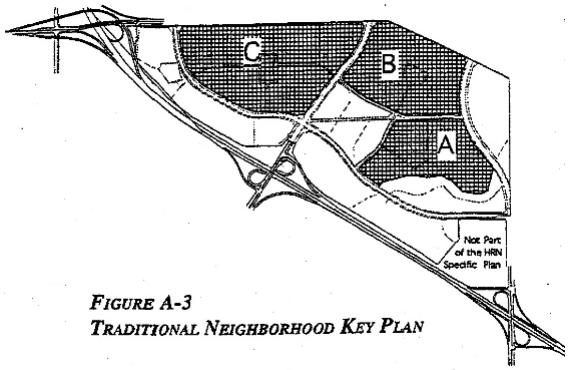


FIGURE A-3
TRADITIONAL NEIGHBORHOOD KEY PLAN

3.4 Open Space

A significant portion of the plan area is devoted to open space. The plan provides a total of four parks including a centrally located 20 acre community park. Additionally, the large natural watershed corridor that crosses the southeast corner of the plan together with the small watershed area in the northwest corner of the plan have been set aside for preservation as open space. These natural and enhanced open space elements will provide active and passive recreational opportunities for the plan area residents. In addition, these open space areas provide additional tree canopy to the urban forest enhancing local air quality and micro-climate conditions, and providing visual continuum among plan area elements.

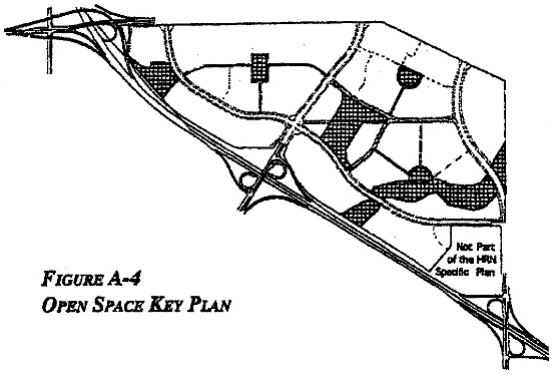


FIGURE A-4
OPEN SPACE KEY PLAN

4.0 HRN DESIGN STANDARDS

The discussion that follows examines individually each of the four key elements of the HRN land use plan.

4.1 The Village Square

The Village Square is organized around the following eight design features as shown on Figure A-5:

The Village Commercial Center (Parcel 40)

1. The Portal Plaza
2. The Village Court
3. The Midway Plaza

- The Central Park (Parcel 52) and Central Park Plaza
- The Promenade
- The Neighborhood School (Parcel 60)
- The School Plaza

4.1.1 The Village Commercial Center

The commercial portion of the Village Square abuts Pleasant Grove Boulevard and serves as a gateway to the Highland Reserve North community. It also contains the westerly portal plaza which acts as a visual gateway and provides the community with one of several outdoor

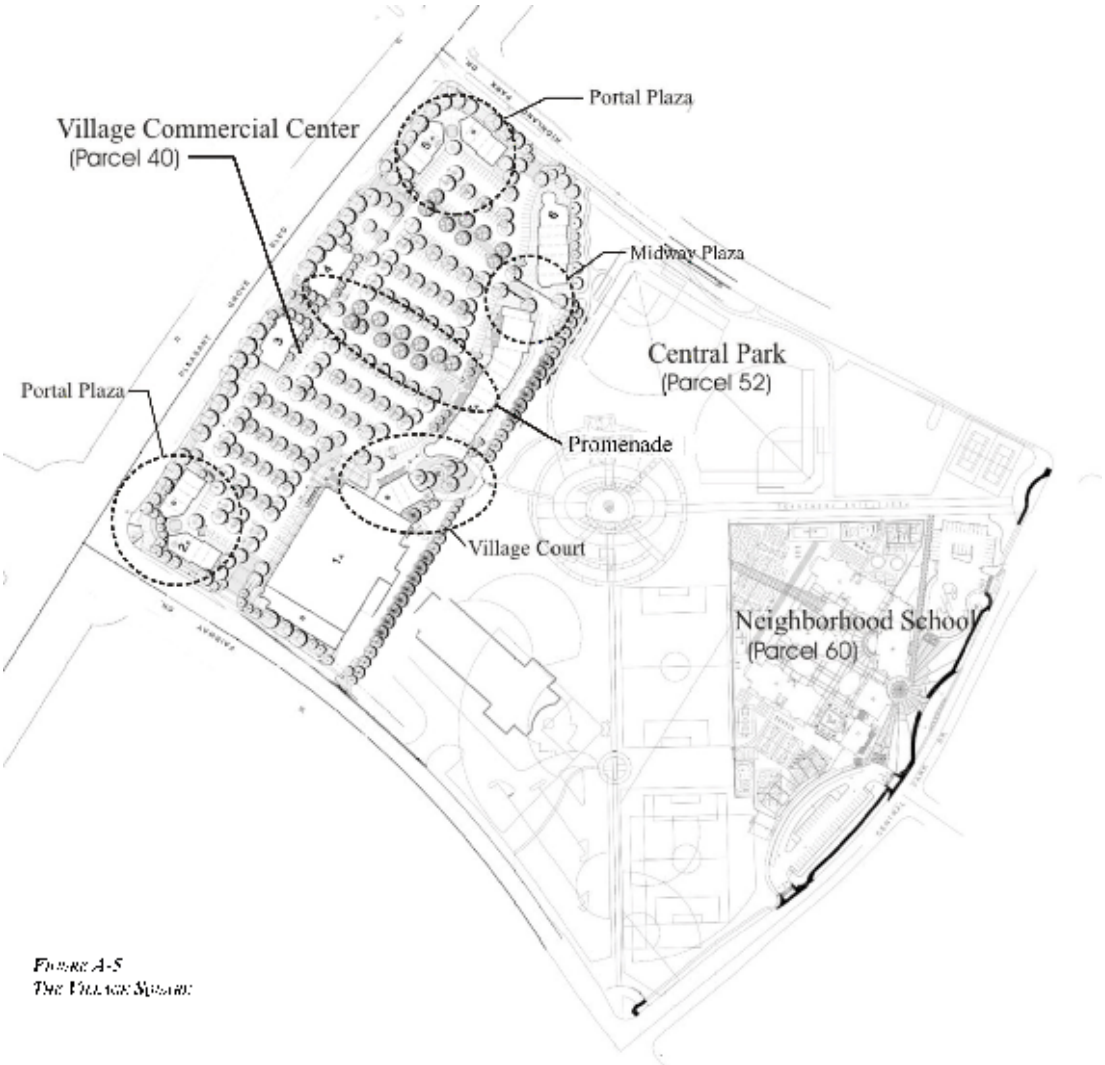


FIGURE A-5
THE VILLAGE SQUARE

gathering spaces. The Village Commercial Center is intended to include a variety of neighborhood serving retail uses, that when combined with the envisioned gathering and activity spaces in the center, will provide the intimacy and pedestrian scale of a neighborhood marketplace with the convenience of automobile accessibility.

The boundary between the Village Commercial Center and the Central Park has been designed to allow pedestrian access and a seamless visual interface between the commercial uses and the park. Openings between buildings and extension of pedestrian hardscape to the turfed open areas of the park are encouraged.

The northeastern boundary between the Village Commercial Center and the Central Park incorporates an angled configuration to provide a more interesting edge condition and to encourage the developer of the commercial center to design a master plan for the site that moves away from the typical L-shaped building layout.

The following HRN guidelines will be applied to development of the Village Commercial Center:

- The Village Commercial Center shall be submitted for review and approval as a singular master planned project. The project may be constructed in phases.

- Within the Village Commercial Center, buildings are to have a unifying design theme. This requirement is not intended to discourage variety in design. Special emphasis shall be given to architectural elements, artwork, site furnishings, and/or special hardscape design at the pedestrian intensive Plaza areas.

- The master plan for the Village Commercial Center shall provide for a 14 foot wide Promenade which bisects the site from Pleasant Grove to an outdoor Plaza space located approximately halfway between the Village Court and the Midway Plaza. At least one additional pedestrian accessible opening to the park, in addition to the access provided by the Promenade, shall be provided north of the Promenade. This "Midway Plaza" is encouraged to align with the Central Park Plaza.

A ten (10) foot wide setback/transition zone is to be established along the eastern property line, contiguous to the Central Park, to provide a seamless transition between the Village Commercial Center and the Central Park. This setback/transition zone will be divided into the following sub-zones:

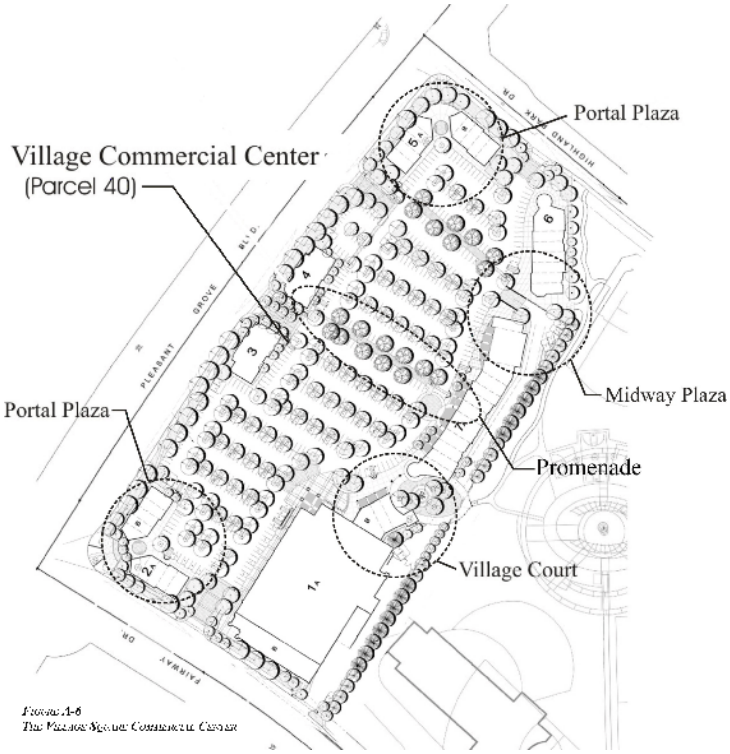


FIGURE A-6
THE VILLAGE SQUARE COMMERCIAL CENTER

Pedestrian Zones

1. The Village Commercial Center shall incorporate an extension of the Village Court into the setback/transition zone which will connect to the Promenade. The entrance to the Village Court shall incorporate a 'gateway' consisting of plaster pilasters and a decorative metal trellis structure to act as a visual terminus of the Promenade as it engages the Village Court. The Central Park shall include a 20 foot wide "interface zone" along the common boundary with the Village Commercial Center to accommodate connections to the park pathway system. The Center shall incorporate pedestrian elements such as tables, benches, artwork, planter pots, and/ or special hardscape design. Deciduous shade trees are encouraged to provide shade in the summer. These trees shall be placed at least 10 feet away from the face of any building wall.

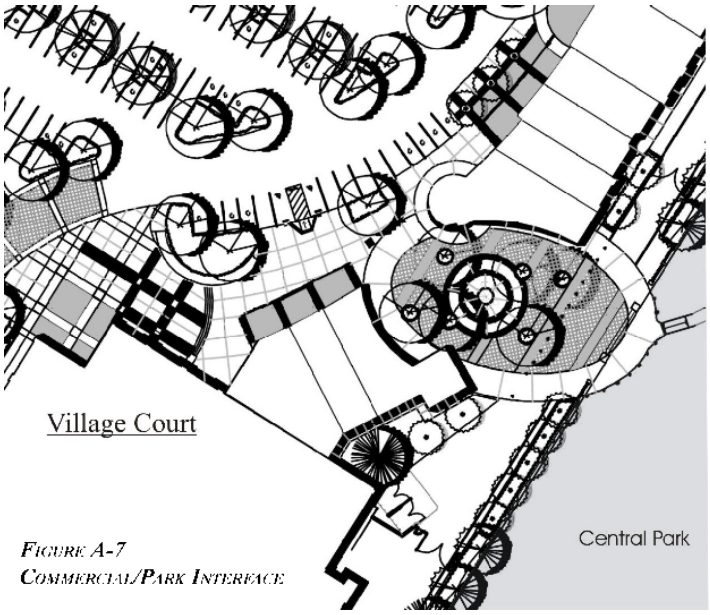


Figure A-7
Commercial/Park Interface

2. Buildings surrounding the Village Court and extending along the park/commercial edge 40 feet in both directions shall be oriented with windows and public entries overlooking the Village Court, the terrace and the Central Park.

Non Pedestrian Setback Zones

1. Those portions of the ten (10) foot wide setback/transition zone that do not incorporate pedestrian elements as described above, shall be designated to be sensitive to the interface with the Central Park. Where the rear walls of buildings are facing the park, the setback/transition zone shall be landscaped with trees and understory plantings consistent with the immediately adjacent park areas. Wall mounted lattice work, special materials or other architectural elements are encouraged to add detail and scale to building walls.

2. Building elevations shall incorporate similar architectural elements on the rear of the building as used on the front.

- Within the Village Commercial Center there shall be a minimum of three plazas defined as follows:

"The Portal Plaza"

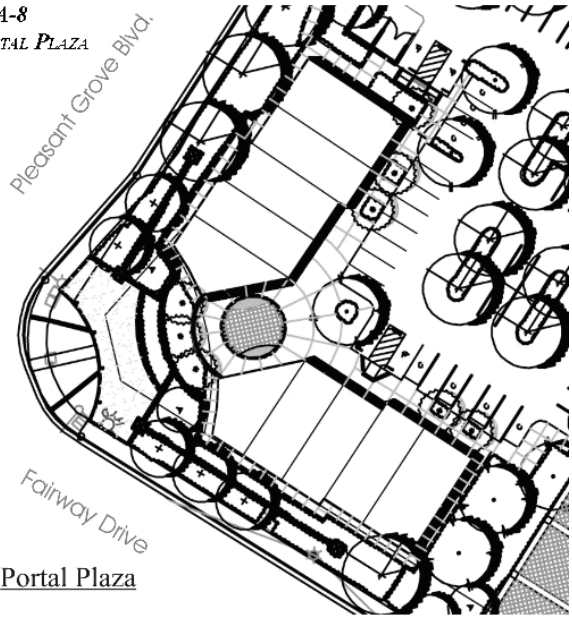
The following HRN design guidelines will be applied to development of the Portal Plaza:

1. The Portal Plaza is to be designed as an integral part of the master plan for the Village Commercial Center.

2. The Portal Plaza is to be a minimum of 2,500 square feet in area with special emphasis given to special hardscape design features, site furnishings, and thematic lighting.

3. Buildings adjacent to the Portal Plaza shall be set back a minimum of 100 radial feet from a radius point that is the intersection of the street right of way line for Fairway Drive and Pleasant Grove Boulevard.

FIGURE A-8
THE PORTAL PLAZA



4. The Portal Plaza is to incorporate:

   a. Paving design that is consistent with and/or complementary to the design established for the Village Court.

   b. Planters, paving patterns, bollards, site furniture or other design features to provide a visual link to through the project to the intersection of Pleasant Grove Boulevard and Fairway Drive.

   c. Thematic lighting compatible with that used in the Village Court to supplement standard street lighting and promote evening access to and use of the portal plaza as an outdoor amenity.

5. The design of the Plaza shall incorporate low walls, terraced planters, and entry monumentation at the intersection of Pleasant Grove and Fairway Drive. The terraced planters shall include approved plant materials and Crape Myrtle trees that define the edge of the Plaza.

6. To the extent that buildings are located adjacent to the Portal Plaza, such buildings shall be oriented with windows and public entries overlooking the Plaza and promote use of the Plaza.

7. The Portal Plaza shall be developed concurrently with the directly adjacent commercial development.

8. The developer of the Village Commercial Center shall be responsible for financing, construction, and maintenance of the Portal Plaza.

"The Village Court"

The following HRN design guidelines will be applied to development as an integral part of the master plan for the Village Commercial Center:

1. The Village Court is to be designed as an integral part of the master plan for the Village Commercial Center.

2. The Village Court is to be a minimum of 12,450 square feet in area inclusive of any portion of the Promenade which passes through it, 675 square feet of which shall extend into the Central Park. The Village Court shall average approximately 70 feet in width and shall not be less than 90 feet wide at its mid point framed by retail buildings that reinforce the pedestrian use and promote activity in the court. The Central Park parcel (Parcel 52) shall include an easement to accommodate that portion of the Village Court extending into the park.

3. The design of the Court may incorporate two linear colonnades of shade trees. These trees shall be placed aligned with visual connection to the park. Any building or portion of a building may not be placed closer than 10 feet to any tree.

4. The Village Court shall incorporate a paving design that is consistent with and/or complementary to the design established by the rest of the Village Center.

5. The Village Court shall be designed to accommodate tables, chairs and benches for outdoor dining and casual seating as well as carts for outdoor vending.

6. Thematic lighting compatible with that used in other pedestrian areas of the project shall be incorporated into the Village Court design to promote evening use.

7. The Village Court shall be developed concurrently with the directly adjacent commercial development.

8. The developer of the Village Commercial Center shall be responsible for financing, constructing, and maintaining the Village Court.

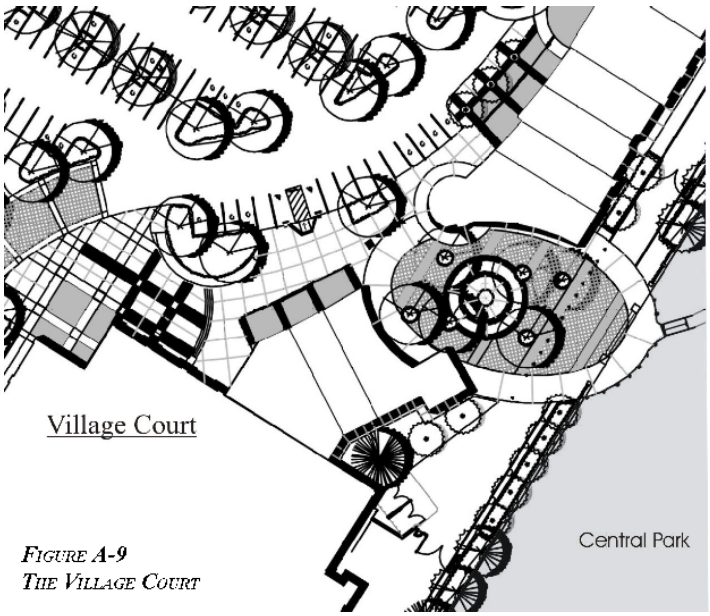


FIGURE A-9
THE VILLAGE COURT

"The Midway Plaza"

1. The Midway Plaza shall be located at the required secondary break in the retail building massing along the park edge north of the Village Court. This plaza shall connect with the rear pedestrian zone defined above.

2. The break in the building massing shall be a minimum of 30 feet wide.

3. The Midway Plaza is to be designed as an integral part of the master plan for the Village Commercial Center.

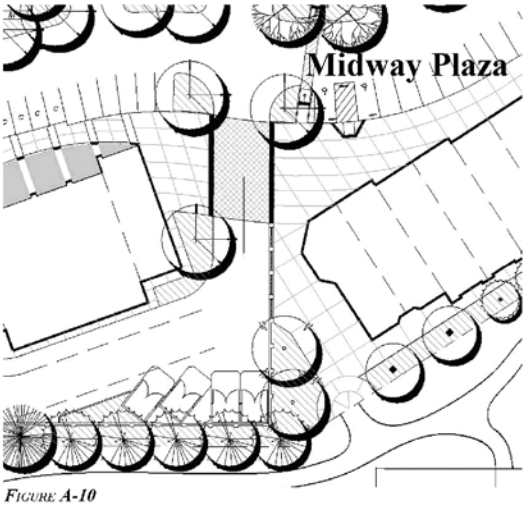


FIGURE A-10
THE MIDWAY PLAZA

4. The Midway Plaza is encouraged to accommodate a pedestrian pathway linking it to the Central Park Plaza.

5. The Midway Plaza shall incorporate a paving design that is consistent with and/or complementary to the design established by the Promenade and the terrace feature.

6. Building facades fronting on the Midway Plaza shall be oriented with windows and public entries overlooking the Plaza.

7. Thematic lighting compatible with that used along the Promenade and/or the terrace feature shall be incorporated into the Midway Plaza to promote evening use.

8. The Midway Plaza shall be developed concurrently with the directly adjacent commercial development.

9. The developer of the Village Commercial Center shall be responsible for financing, constructing, and maintaining the Midway Plaza.

- Loading areas and truck service drives shall comply with the following requirements:

Loading Areas

Building tenants 10,000 square feet or larger that back to the Central Park shall be permitted to include side or rear loaded delivery bays, provided the bays (and associated service/refuse areas) are screened from the park by a wall and/or landscaped berm. Where feasible, side loaded delivery bays are encouraged. Delivery bays shall not be permitted for tenants less than 10,000 square feet in size.

Truck Service Drives

Truck service drives are discouraged behind the Village Commercial Center. If service drives are included behind retail buildings, they shall be screened from the park by a wall and/or landscaped berm.

- In order to lend variety to the frontage streetscape and to enhance the overall pedestrian scale of development, some buildings are encouraged to be located directly along the Pleasant Grove Boulevard, Highland Drive, and/or Fairway Drive frontages.

- The intersection of Highland Drive and Pleasant Grove Boulevard shall be designed as follows:

1. The sidewalk and landscape setback area at the Southeast quadrant of Highland Drive and Pleasant Grove Boulevard shall be designed as an integral part of the Village Square commercial master plan.

2. This area may include seating areas, special paving and be similar in character to the design features of the Portal Plaza.

Related requirements for this feature are

included in Appendix B, Landscape Design Guidelines.

- If a service station use is proposed within the Commercial Center, the use shall comply with the following standards:

    1. All service station related buildings shall front on the adjacent street frontage.

    2. All pump islands shall be oriented internal to the Village Commercial Center.

    3. A service station is not permitted adjacent to the Portal Plaza or Promenade.

- Second-story office or retail space is allowed above any of the retail spaces.

4.1.2 The Central Park and Central Park Plaza

The connecting element of the Village Square is the Central Park and the Central Park Plaza. The park emulates the public commons or town greens found in many older communities. It is a modern adaptation of an old traditional form that serves as the community living room.

The elements of the Village Square are organized around the Central Park so that activities in the school, park and commercial center will complement one another. The Village Court, the Midway Plaza, and the terrace areas in the Village Commercial Center overlook the park to allow interaction with the park activities.

The centerpiece of the community, within the Central Park, is the Central Park Plaza. This plaza feature serves as the central unifying element of the Village Square to tie together the retail activities of the Village Commercial Center, the civic activities of the Neighborhood School, and the recreational and leisure activities of the Central Park.

The Central Park also provides a buffer between the Neighborhood School and the Village Commercial Center. The park is configured to provide a minimum 600 foot separation between the school site, Parcel 60, and the commercial site, Parcel 40, to ensure appropriate separation between the school and commercial activities.

The following HRN design guidelines will be applied to development of the Central Park Plaza:

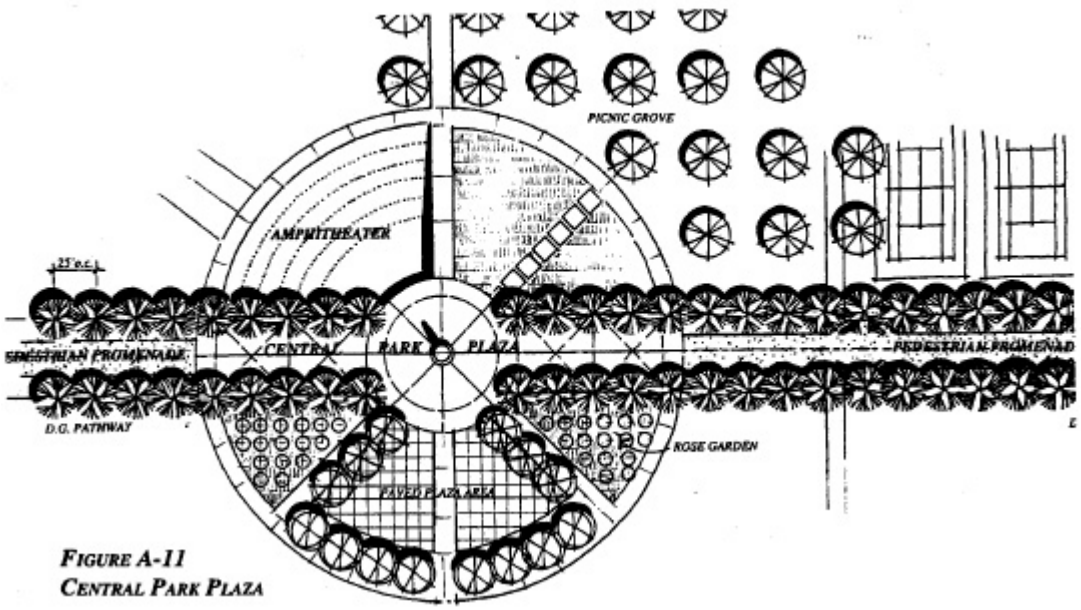


FIGURE A-11
CENTRAL PARK PLAZA

- The Central Park Plaza is to be master planned by the Village Commercial Center landowner in collaboration with the City to assure consistency of design with the Promenade and the other plaza features of the Village Square.

- The design of the Central Park Plaza is to include:

    1. A visual focal point for the Promenade as it passes through the center of the plaza, which may consist of a fixed or kinetic sculpture.

    2. A small, turfed amphitheater may be provided space for both informal and programmed activities (with a stage design that can serve either a small audience seated in the amphitheater itself or a larger audience seated on the adjacent turf area).

    3. A formal rose garden may be planted to provide color and aesthetic interest.

- Where the Promenade crosses the Central Park Plaza, the design of the Plaza shall incorporate the two linear colonnades of trees that define the Promenade. These trees shall be placed in two rows along the Promenade edges directly aligned with the park Promenade trees.

- The Central Park Plaza shall be constructed by the City Parks and Recreation Department and shall be financed out of Neighborhood Park Fees.

4.1.3 The Promenade

The Promenade is a linear pedestrian tie between the Village Commercial Center and the School Plaza. The Promenade functions as a pedestrian path for the Village Square, linking the surrounding uses and activities, visually and physically. For much of its length, the Promenade will consist of a paved path with seating provided at periodic intervals. Lighting will be used to encourage evening use. It will be lined with deciduous canopy trees defining the Promenade as well as providing shaded walkways and gathering areas.

The following HRN design guidelines will be applied to development of the Promenade:

- The Promenade is to be master planned by the City in collaboration with the Village Commercial Center landowner to assure consistency of design along its entire length from Pleasant Grove Blvd. to the School Plaza.

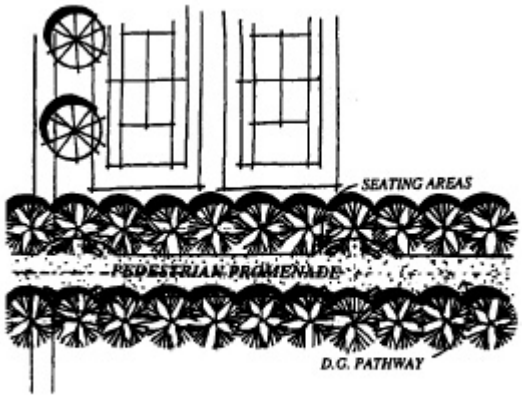


FIGURE A-12
THE PROMENADE DESIGN DETAIL

- The design of the Promenade is to include:

    1. An overall width of 50 feet from the School Plaza to the Village Court, and an overall width of 14 feet from the Village Court to Pleasant Grove Blvd.

    2. A paved walkway shall be located at the center of the Promenade from the School Plaza to the Village Court. From the Village Court to Pleasant Grove Blvd. shall be a paved walkway with an overall

width of 14 feet including planting areas and enhanced paved areas of walkway not less than 8 feet in width.

3. A dual colonnade of trees shall be placed in two rows along the Promenade edges from the School Plaza to the Village Court. From the Village Court to Pleasant Grove Blvd. a colonnade of Aristocrat Pear trees shall alternate on either side of the walkway.

4. Thematic lighting to promote evening use.

5. The Promenade design shall allow two driveway crossings within the Village Commercial Center to provide cross circulation between the adjacent parking areas flanking the Promenade.

6. The paved surface or surfaces shall incorporate decorative elements. These decorative elements may include the use of enhanced materials or treatments such as stamped concrete, stained or integral colors, scored patterns, special finishes including exposed aggregate or sandblasted surfaces, pavers and tile inserts.

7. The portion of the Promenade that passes through the Village Commercial Center connecting Village Court and Pleasant Grove Blvd shall be constructed concurrently either with the development of the Village Commercial Center or with the initial phase of such development if the Center is constructed in phases.

8. The developer of the Village Commercial Center shall be responsible for financing and constructing that portion of the Promenade between Pleasant Grove Blvd. and the eastern most edge of the Village Court.

9. The portion of the Promenade between the eastern most edge of the Village Court and the School Plaza shall be constructed by the City Parks and Recreation Department concurrently with the Central Park and shall be financed out of Neighborhood Park fees.

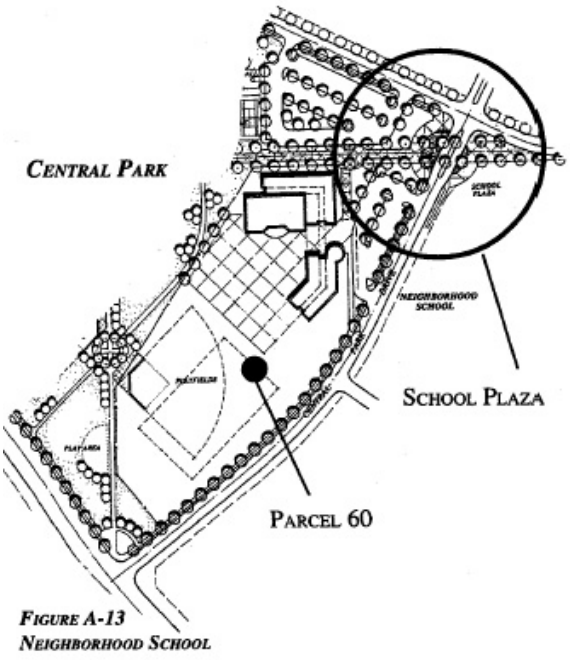


FIGURE A-13
NEIGHBORHOOD SCHOOL

4.1.4 The Neighborhood School

The K-6 Neighborhood School anchors the eastern edge of the Village Square. The school is centrally located within the plan area for ease of access and provides a strong civic orientation and local focus to the Village Square. Although the ten acre school site is large enough to accommodate a K-6 school on a stand alone basis, the Central Park which abuts the school's western boundary provides key opportunities for joint use of recreational facilities.

Along the school and Central Park edge, or at other locations interior to the school boundary, school officials will have the option of providing open fencing as necessary to separate school activities from adjacent park activities or to provide for secured outdoor school play areas. Along that portion of the pedestrian Promenade which abuts the school, it is anticipated that future school buildings will be configured to provide for activity separation and for direct visibility to student drop off points from the school administration offices.

4.1.5 The School Plaza

The School Plaza anchors the northeast corner of the Village Square and the Promenade. It serves as the pedestrian entry into the Village Square from the east. The School Plaza is designed not only as a gathering point for parents dropping their children off at school but also as a connection to the parking lot on the north side of the Promenade and the Neighborhood School to the south.

The following HRN design guidelines will be applied to development of the School Plaza:

- The School Plaza shall be a minimum of 5,000 square feet in area.

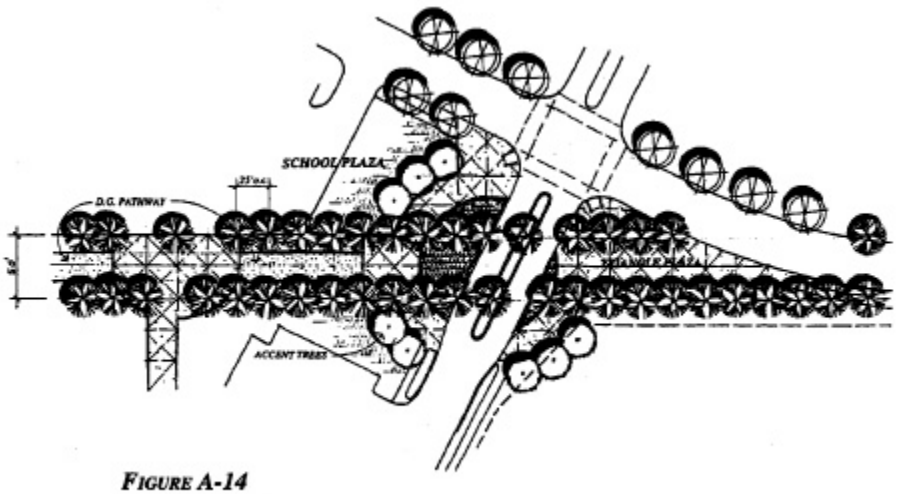


FIGURE A-14
SCHOOL PLAZA

- The School Plaza is to incorporate:

  1. A paving design that is consistent with and/or complementary to the design established for the Promenade;

  2. Planter areas, paving patterns, bollards, site furniture or other design features to direct pedestrians and school children to crosswalks at the intersection of Highland Drive and Central Park Drive, to the adjacent parking/bus drop off to the north, and to the neighborhood school; and

  3. Thematic lighting compatible with that used along the Promenade to supplement standard street lighting and promote evening access to and use of the Community Park, the Promenade and the Village Commercial Center by way of the School Plaza.

- Where the Promenade crosses the School Plaza, including the triangular plaza across Highland Drive, the design of the Plaza shall incorporate the two linear colonnades of the Promenade. These trees shall be placed exactly 25 feet on center in two rows exactly 50 feet apart along the Promenade edges directly aligned with the park Promenade trees.

The School Plaza, including the triangular plaza across Central Park Drive, is to be developed concurrently with the development of the Central Park improvements or the Neighborhood School, whichever occurs first. The School Plaza will be financed by neighborhood park fees.

- The triangle plaza located across Central Park Drive shall be financed and installed by the adjacent landowner. Alternatively, the adjacent landowner may enter into a deferred improvement agreement with the City.

- Any residential fences that back up to the triangle plaza shall maintain a minimum clearance of 20 feet from the Promenade trees.

4.2 Highway Oriented Commercial

The Highway 65 corridor defines the southern edge of the HRN Specific Plan area. The HRN freeway frontage is approximately two miles in length with the existing Harding/Stanford Ranch Road Interchange anchoring the eastern reach and the future Blue Oaks Interchange anchoring the west. At the center of the HRN Highway 65 frontage is the planned Pleasant Grove Interchange. This interchange will provide a major link between Roseville and Rocklin by way of Pleasant Grove Boulevard which will become Park Drive in Rocklin, and provide direct access to these highway oriented commercial parcels.

4.2.1 HRN Parcels Abutting Highway 65

Fairway Drive is designed to provide direct access from the three Highway 65 Interchanges to the band of highway oriented commercial properties. The parcels within this band have a minimum depth of 600 feet designed to assure market flexibility in accommodating a mix of land uses serving both the plan area and nearby communities. This band also serves as a transitional buffer for the residential neighborhoods to the north of Fairway Drive from Highway 65 and the adjacent non-residential uses.

Due to freeway proximity, future buildings on many HRN commercial parcels may be visible to SR 65 motorists. Although the mass of future buildings will be screened to some degree by the cut slopes along the edge of the right of way as most of the commercial areas are higher than the freeway, the following design standards are incorporated to further soften the development edge along the SR 65 corridor:

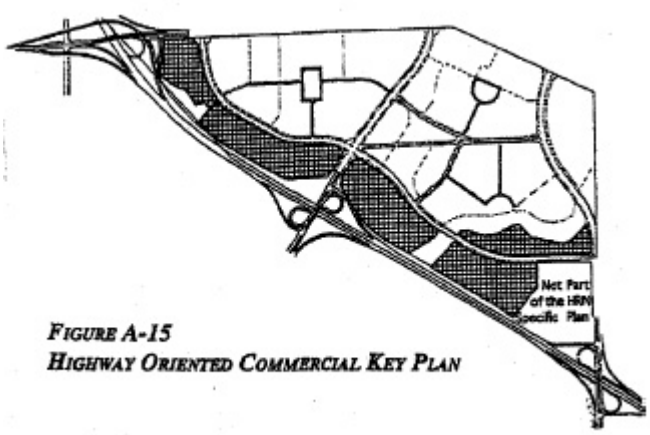


Figure A-15
Highway Oriented Commercial Key Plan

- Commercial buildings are to be set back a minimum of 50 feet from the SR 65 right-of-way. Commercial parking areas, including driveways and delivery bay areas, are to be set back a minimum of 25 feet from the SR 65 right of way. Any dumpster enclosures, service entries, and/or loading dock shall be fully screened from view with a combination of block walls and landscaping.

- Setback and open areas between future buildings or parking and the freeway right-of-way are to be landscaped with a mix of trees, shrubs and ground covers.

- The primary tree along the SR 65 frontage shall be the Bloodgood London Plane tree planted in a staggered Pattern at 30 feet on center.

- Where permitted by individual site development plans, tree planting pockets abutting the setback area should be developed between adjoining buildings or clusters of buildings or at "dead spaces"

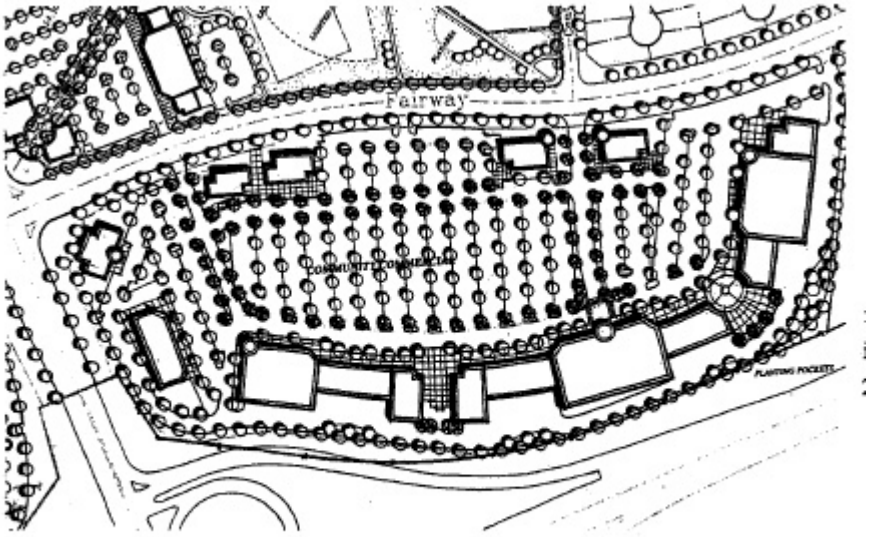


FIGURE A-16
HIGHWAY ORIENTED COMMERCIAL

occurring within individual site development plans. The tree planting pockets are intended to introduce a rhythm of intermittent tree groves along the freeway edge.

- Approximately one third of the trees planted in the setback and pocket areas should be conifer trees for vertical scale and screening.

- All building elevations visible from the freeway should be designed to incorporate architectural detail that is sensitive to such visibility and that avoids the featureless design typically associated with "backside" facades.

- Where these commercial parcels lie adjacent to watershed open space parcels, a landscape buffer is to be installed along the abutting edge of the non-open space parcel. The minimum buffer width is 10 feet for parking and 25 feet for buildings.

- Although highway commercial parcels are not required to be master planned, considerations of internal function shall be addressed in the context of a conceptual site plan at the time a development proposal is initiated for any portion of the individual sites. Where a mix of uses is anticipated for the site, particular attention shall be given to site circulation, access and parking. A clearly defined pedestrian link running parallel to the freeway is encouraged.

- In order to lend variety to the frontage streetscape and to enhance the overall pedestrian scale of the development, some buildings are encouraged to be located directly along the Fairway Drive frontage.

The HRN highway oriented commercial parcels are also zoned to accommodate a business/ professional component should office demand extend to the north of Highway 65. HRN Parcels 43A/B and 47A/B/C, in particular, would be logical parcels for office development. For this reason the environmental review for the HRN Specific Plan assumed that 50% of these two parcels developed as office and 50% developed as commercial.

4.2.2 HRN Parcel 43A/B

HRN Parcel 43A/B is the only Highway Oriented Commercial parcel that does not have freeway frontage. The Community Commercial zoning designation assigned to Parcel 43A/B permits a variety of uses including business/professional in addition to commercial uses. Given the irregular shape of this parcel, the ability to choose from a wide range of uses provides important flexibility in developing a site design that is responsive to market demand as well as the constraints of the site.

Although the City's Community Design Guidelines establish design criteria applicable to development of Parcel 43A/B, the following parcel-specific design guidelines are incorporated to enhance the interface between Parcel 43A/B and the adjacent watershed corridor (Parcel 71) and to assure compatibility between the range of uses permitted on Parcel 43 and the residential uses planned for the parcels across the open space corridor to the north:

- The Parcel 43A/B frontage along the watershed open space to the north shall include a minimum setback width of 20 feet for parking and 25 feet for buildings. Windows and active use areas oriented to the open space are encouraged. In the absence of other site features such as decks, terraces and/or trellises, this setback corridor shall be landscaped with a mix of deciduous and coniferous trees in order to provide appropriate screening throughout the year.

- All building elevations visible from the residential parcels across the watershed corridor to the north shall be designed to avoid solid blank walls and service areas and shall incorporate architectural detailing that is sensitive to such visibility.

- Because of the difference in elevation between Parcel 43A/B and the residential parcels to the north, particular attention should be given to the screening of all roof-mounted equipment on Parcel 43A/B structures so they are not visible.

- Where feasible, the building mass along the open space corridor should include at least one opening of at least 25 to 30 feet in width. The most northerly point of Parcel 43A/B across from the neighborhood park (Parcel 50) should be given consideration as a particularly appropriate location for such an opening.

- In order to lend variety to the frontage streetscape and to enhance the overall pedestrian scale of the development, some buildings are encouraged to be located directly along the Fairway Drive frontage.

4.3 Residential Neighborhoods

4.3.1 Neighborhood Design

The residential portions of the HRN Specific Plan area are organized in three distinct neighborhoods. Each neighborhood is oriented to a small neighborhood park. Modeled on the small interior neighborhood parks found in many older communities, the parks are intended as a place where neighborhood children can play and residents can meet and socialize.

Figure A-17
Traditional NeighborhoodsKey Plan

Neighborhood identity will be further established by landscape materials or design themes in the gateways, project identification signs, streetscape and park design in each neighborhood which are detailed in the Landscape Guidelines section.

Residential neighborhoods shall be designed with the following guidelines:

- The internal street system will be designed to allow residents to walk easily to their neighborhood park. Where the street network

does not allow easy access to the pedestrian pathway system, a paseo or pedestrian portal will be used to provide access from interior residential streets as defined in the Landscape Design Guidelines.

- The HRN neighborhoods will incorporate detached sidewalks separated from the local residential streets by a 5 foot wide greenway strip. Each neighborhood will have a primary street tree which will be planted in the greenway strip in accordance with the standards in the Landscape Design Guidelines. The trees will help to define the neighborhood character by providing a clear separation between the street and the adjacent residential lots, by enhancing the appearance of the streetscape, by providing an increased sense of privacy and safety to the residents, and by creating a more intimate neighborhood setting.

- The residences will be oriented toward the parks. The neighborhood parks will front on a single loaded residential street to provide for visibility and ready access by the neighborhood residents.

- The HRN neighborhoods located adjacent to the watershed open space corridor will provide access to the watershed area where residential streets about the open space edge. A variety of alternative street patterns and residential lot configurations may be used to achieve visual as well as physical access.

  These alternatives provide open space views and allow for a more direct interaction between the built environment and the natural setting. Used in combination with the more traditional double loaded street configurations (with residences backing onto the open space corridor), these alternatives also provide variety to the subdivision design.

- Where residential lots are adjacent to the open space corridor, the use of open type fencing, such as decorative wrought iron, rather than solid fencing or walls, is encouraged. In general, the interface between the urban uses and the open space should be carefully designed to avoid long stretches of solid fencing or walls along the open space edge. The use of solid fencing or walls may be appropriate, however, in instances where privacy, security and/or noise attenuation are of concern.

4.3.2 Residential Site Design

The City of Roseville Community Design Guidelines do not include design standards for single family residential developments. The following HRN specific design standards will be applied to development of the medium and low density residential land uses:

- Homes within each neighborhood are to be architecturally compatible with each other while allowing a variety of building shapes, rooflines, heights, and color schemes.

- Lots are to back-up (or side-on) to arterial and collector streets along the perimeters of neighborhoods, separated from such streets by landscape corridor buffers, as detailed in the Landscape Design Guidelines.

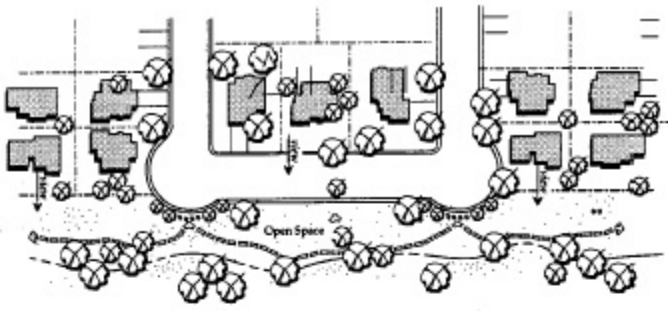
- Lots may front on all local residential streets interior to the neighborhoods.

- All homes on conventional lots are permitted to have a two car garage. Total garage width cannot exceed 60% of the building frontage width of the lot, or 20 feet, whichever is greater. Three car garages are permitted where the building frontage width dimension will allow.

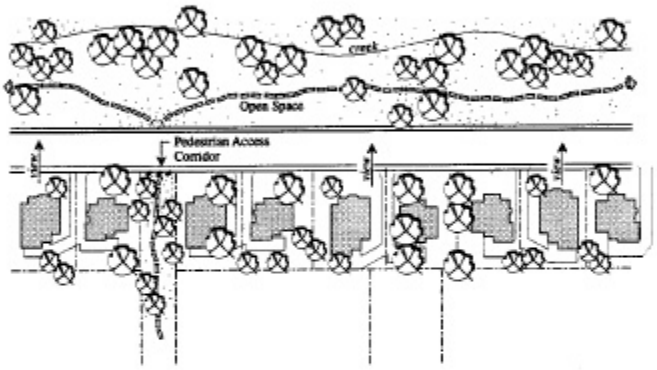
4.3.2.1 Vehicle Access and Circulation

- Vehicular entrances into neighborhoods should be provided at intervals of approximately 800-1,000 ft. to diffuse traffic flows. Neighborhood entrances should be encouraged along collector streets (Highland Drive, Central Park Drive) and minimized along arterial streets (Stanford Ranch Road, Pleasant Grove Blvd., and Fairway Drive).

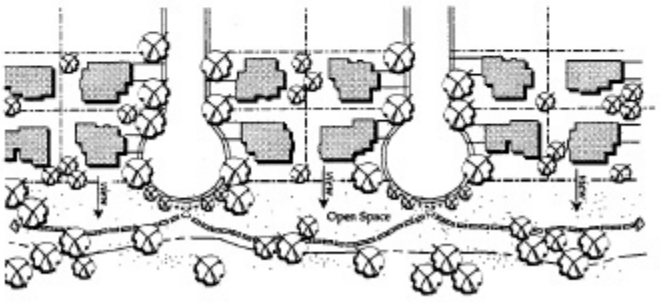
- Local residential street patterns within neighborhoods should discourage "short cutting" through neighborhoods.



Combination of Back up Lots and Street Frontage Adjacent to Open Space



Single Loaded Street Adjacent to Open Space



Cul-De-Sac Adjacent to Open Space

Figure A-18
Alternative Street Patterns Adjacent to Open Space

4.3.3 RS/DS Development Standards

The HRN Specific Plan designates the zoning for single family residential development as RS/DS. The DS overlay zone has been used to modify the development standards for the RS zone specified in the Zoning Ordinance Sections 19.10.030 and 19.10.040. A key element of the HRNSP residential neighborhoods is the inclusion of separated sidewalks with planter strips and street tree plantings. These elements are included to improve the streetscape environment. In recognition of the use of separated sidewalks, the HRNSP provides for additional flexibility in lot design and unit placement through amendments to the RS Development and Supplemental Design Standards.

The modification associated with the DS overlay are as follows:

- Adding to Section 19.10.030

- (7) Minimum Lot Width - 45 feet with the exception of cul-de-sac lots, elbow lots, and lots on curved streets which may have a minimum lot width of 45 feet measured at a point 20 feet from back of walk on a straight line tangent to the 20 foot setback line.

- Modifying Section 19.10.040

Supplemental design standards in the Residential Small Lot (RS) District in the HRN Specific Plan shall be as follows:

A. Residential Design Standards: In addition to the Residential Zone Development Standards listed above, the following supplemental design standards apply in all Residential Small Lot (RS) districts:

1. Front Yard Stagger: Two (2) feet between adjacent two story residential units, measured from the front yard setback.

2. Stagger for Third Car Garage: Two (2) feet between third car bay and two car garage.

3. Two Story Unit Mix: No more than three (3) two story units may be located adjacent to one another regardless of street frontage.

4. Separation Between Second Story Elements: A minimum of twenty (20) feet shall be provided between second story elements of adjacent two story dwellings where garages are not placed side-to-side.

B. Exceptions: The supplemental design standards as listed above may be modified, expanded or eliminated through the approval of a Design Review Permit for Residential Subdivision (DRRS), as provided for in Article V of this the Roseville Zoning Ordinance.

C. Expiration of Supplemental Design Standards Requirements: Supplemental design requirements do not apply to any residential dwelling unit that has received a final occupancy permit, unless a Design Review Permit for Residential Subdivision specifies a different (longer) term.

4.4 Land Use Compatibility Issues

There are two buffer issues along the northern boundary of the specific plan area. The first issue involves the underground fuel pipeline located in Rocklin which parallels the northern property lines of HRN residential Parcels 1A, 1B, 2, 5, 8, and 30, as well as the church/ school site planned on Parcel 61. To protect the pipeline from

inadvertent or accidental disturbance by project related construction activity, the following setback and fencing standards will apply:

- The minimum residential building setback (for habitable structures) is 50 feet from the edge of the pipeline easement. Accessory buildings and structures are permitted in the set back area subject to the standards of the Roseville Zoning Ordinance.

- A six foot high wood fence of an enhanced design (without pilasters) is required along the north boundary of Parcels 1A, 1B, 2, 5 and 8, linking, where appropriate, to arterial street masonry walls. Parcel 30 is not required to have fencing; but if fencing is used, it should be designed in a manner consistent with the fencing required for Parcels 1A, 1B, 2, 5 and 8.

  The second buffer issue is the adjacency of HRN residential Parcels 5 and 8 to commercially zoned, undeveloped property located in Rocklin. To ensure screening in addition to that provided by property line fencing, all Parcel 5 and Parcel 8 residential lots that back-up to or side-on to sites designated for commercial use are to have an on-site planting program completed prior to home sales. A minimum of two 15-gallon trees selected from the palette of trees listed for good screening characteristics in the HRN Landscape Design Guidelines, are to be planted on each lot parallel to the property line common to the commercially designated use.

APPENDIX B

Highland Reserve North Landscape Design Guidelines

1.0 INTRODUCTION

These Landscape Design Guidelines are a policy supplement to the Highland Reserve North Specific Plan and serve to coordinate and unify the major landscape improvements in the Plan Area. Minor modification to this document is permitted at a City Staff level in order to achieve comparable landscape objectives not expressly provided for herein. (See Section 8.4, Highland Reserve North Specific Plan.)

The HRN Landscape Design Guidelines are divided into the following sections:

2.0 Streetscapes
3.0 Watershed Open Space Standards
4.0 LDR and MDR Standards
5.0 Secondary Design Components - Attachment A.

Landscape design standards for plan area land use categories not specified above (e.g. commercial, office, and HDR) are regulated by the existing City of Roseville Community Design Guidelines. In the event the City Community Design Guidelines are inconsistent with the project-specific design standards contained herein or where the scope of the HRN design standards exceeds that of the Community Design Guidelines the provisions of the HRN Specific Plan shall be controlling. Landscape design for public/quasi public (P/QP) land uses within the HRN Specific Plan (Parcel 61) shall comply with the commercial design standards of the City Community Design Guidelines.

The Community Form and Design Guidelines (Appendix A to the Highland Reserve North Specific Plan) contains landscape related design standards for certain specialized plan areas. These design standards are not repeated in this chapter; however, many detailed landscaping standards are further described within this Appendix. The specialized areas include:

- The Village Square Complex (Parcels 40, 52 and 60)
- Commercial/Freeway Interface (Parcels 41, 42A/B, 45A/B, 46A/B/C, and 47A/B/C)
- Commercial/Watershed Open Space Interface (Parcels 43A/B and 71)

2.0 STREETSCAPES

This section establishes the general landscape concepts and geometrics for major streets (neighborhood residential streets are discussed in Section 4.2), details the use of primary landscape components (e.9., sidewalks, walls and fences, berms, and street furnishings), and describes the special areas that are appended to the landscape corridors.

The streetscape discussion is organized as follows:

1. Landscaped Corridors and Medians

   - Width and Locations
   - Designated Trees
   - Plant Material Container Size
   - Street Cross-sections
   - Primary Landscape Components

2. Special Areas

   - Entry Features
   - Signs
   - Corner Clips
   - Pedestrian Related Components

2.1 LANDSCAPE CORRIDORS & MEDIANS

2.1.1 Widths and Location

Landscape corridors are to be constructed along major and minor arterial streets (Stanford Ranch Road, Pleasant Grove Boulevard, Blue Oaks Boulevard, and Fairway Drive) and along collector streets (Central Park Drive and Highland Drive east of Pleasant Grove Blvd.) in accordance with Table B-1.

The Blue Oaks Boulevard landscape corridor for Parcel 42A is to be installed along the south

TABLE B-1
LANDSCAPE CORRIDOR WIDTHS

Street	Landscape Corridor Width *(Measured from back of ultimate curb.)*	Adjacent Land Use
Stanford Ranch Rd.	50′	Commercial and P/QP
	35′	Residential
	18′	Watershed Open Space
Pleasant Grove Blvd.	50′	Commercial adjacent to freeway
	35′	Residential
	30′	Commercial
Fairway Drive	40′	Residential (LDR & MDR)
	35′	Residential (HDR) and Parcel 44
	30′	Commercial
	18′	Central Park & Watershed Open Space
Highland Drive Blvd.)	30′	Commercial(east of Pleasant Grove
	25′	Residential
	15′	Central Park
Central Park Drive	25′	Residential
	15′	Central Park and School
Blue Oaks Blvd.	35′	Commercial

(Roseville) side of the Roseville/Rocklin city limits line to a width of 35 feet. As an alternative, the developer of Parcel 42A may transfer some or all of the landscape corridor improvement obligation to adjacent lands north of the city limits line provided 1) a minimum of 50 feet of total landscape corridor width is provided from behind the back of ultimate curb, and 2) landscaping in the City of Rocklin is done in a manner consistent with these Landscape Design Guidelines and compatible with the adjoining corridor landscaping along the Fairway Drive frontage.

Landscape corridors adjacent to the neighborhood school, Central Park and watershed open space parcels are configured to accommodate a greenway strip and a detached sidewalk. The requirement for detached sidewalk does not apply at bridges and culvert crossings in watershed open space parcels. Here, sidewalks may be constructed adjacent to the back of curb and the requirement for street trees is waived.

Landscape corridor width may be reduced for bus pullouts and shelters, turn and merge lanes, and similar variations of typical street geometrics, provided the reduced corridor width is not less than 25 feet on arterial and minor arterial streets and 20 feet on collector streets.

Landscaped medians are to be constructed in Stanford Ranch Road, Pleasant Grove Blvd., and Fairway Drive. (See Figure B-7)

Landscaped entry "island" medians (minimum width 12 feet; minimum length 100 feet) are to be constructed in Highland Drive and Central Park Drive at key entrance points into the residential areas of the HRN Specific Plan as follows: (See Figure B-8).

- Highland Drive at Stanford Ranch Road
- Highland Drive at Pleasant Grove Boulevard (both sides)
- Highland Drive (extended) at Fairway Drive
- Central Park Drive at Highland Drive

Landscape corridors are to be constructed by the developer of the adjacent parcel. Landscape corridors adjacent to all watershed open space parcels are to be constructed by the adjacent parcel developers at the time of individual parcel development. (Parcel developer responsibility is one-half of the adjoining open space corridor length on same side of the street except for Parcel 70 where the entire frontage is the responsibility of Parcel 61). Landscaping within medians on Stanford Ranch Road and Pleasant Grove Blvd. is to be installed by the developer. Back-bone median landscaping (trees and irrigation only) on Fairway Drive is also to be installed by the Developer. All landscape corridors adjacent to commercial, HDR, and P/QP parcels are maintained by the adjacent property owner. All other landscape corridors and all medians (as shown in Figure B-9) are maintained by the HRN Mello Roos Service District or other financing mechanism.

The minimum distance between median openings in Stanford Ranch Road, Pleasant Grove Blvd., and Fairway Drive is approximately 650 feet (as shown in Figure B-9), measured center-line of opening to center-line of opening, except that the median openings in Pleasant Grove Boulevard adjacent to Parcel 40 and in Fairway Drive adjacent to Parcels 47A/B are exempt from the spacing restriction and are to be established at the time of site review. The purpose of the median opening restriction is to increase the potential for median tree planting. Similarly, the final design of left-turn pockets in medians should incorporate the minimum stacking distance necessary to

address traffic expectations in order to maximize the number of median trees between openings.

Except at bridge crossings and at locations required for pedestrian access (such as intersections), sidewalks within landscape corridors are to be separated from the curb by a linear greenway strip. Table B-2 lists the sidewalk width and the corresponding minimum greenway strip width for each required landscape corridor.

Greenway strips along the Central Park adjacent and elementary school frontages should be landscaped with turf to complement the park open space setting. (No shrubs are required in the greenway strip.)

2.1.2 Designated Trees

Street trees planted within landscape corridor greenway strips are to be of the same species along each major street. Street trees are assigned to each major street per Figure B-1.

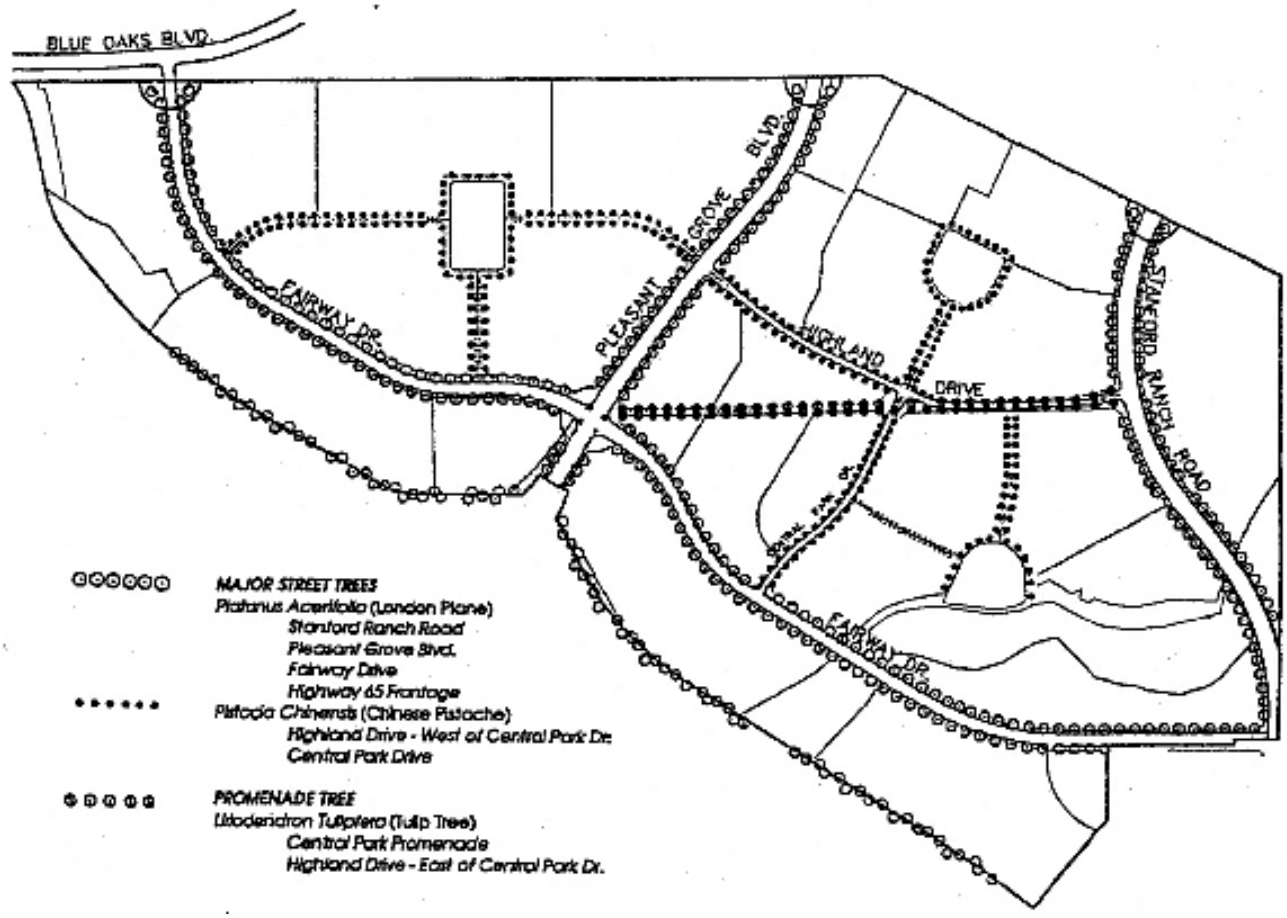
The Central Park Promenade is to be lined on each side with a colonnade of trees spaced approximately 40-50 feet apart. Promenade trees are to be of the same species, per Figure B- 1

A primary tree (specifically, Platanus acerifolia) is to be used within the landscape strip along the length of the Highway 65 frontage as a unifying element for the corridor landscape program.

TABLE B-2
SIDEWALK AND GREENWAY STRIP WIDTHS

Street	Sidewalk Width	Greenway Strip Width	
Highland Drive (north side)	5′	5′	
Highland Drive (south side)	5′	5′	adj. to residential
		10′	adj. to park/commercial
Central Park Drive (east side)	5′	5′	
Central Park Drive (west side)	5′	10′	
Fairway Drive	8′	10′	
Pleasant Grove Blvd.	8′	10′	
Stanford Ranch Road	8′	10′	adjacent to commercial and watershed open space; none required elsewhere, except that where grades permit, the sidewalk may be separated from the back-of-curb.

FIGURE B-1
KEY MAP- STREET TREE DESIGNATIONS FOR MAJOR STREETS



2.1.3 Plant Material Container Size

Plant material container sizes for landscape corridor and greenway strip planting areas are as follows:

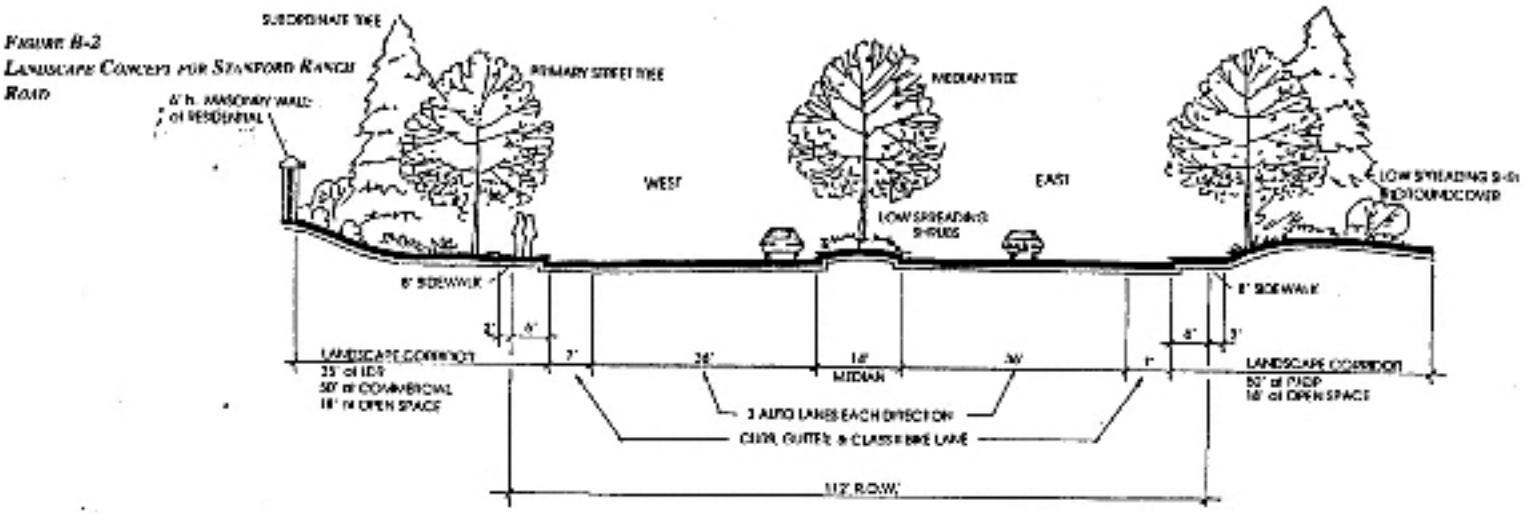
TABLE B-3
PLANT MATERIAL CONTAINER SIZE

Item	Container Size
Street trees	15 gallon or larger
Subordinate trees	5 gallon or larger
Accent trees	15 gallon or larger
Shrubs	1 gallon or larger

2.1.4. Street Cross-sections

Landscape corridor, median, and island median landscaping for major streets is to be installed in accordance with Figures B-2 through B-9.

FIGURE B-2
LANDSCAPE CONCEPT FOR STANFORD RANCH ROAD



STANFORD RANCH ROAD

Right-of-way: 112'

Landscape Corridor: 50' at Commercial and P/QP
35' at residential - (none at cul-de-sacs)
18' at Open Space

Pedestrian / Bicycle Path: 8' at back of curb. (see note in table 2.)
8' with 10' separation from back of curb at Commercial & Open Space.

Design Characteristics: Single row of street trees and secondary row of subordinate trees. Single row of street trees at Open Space.

Street Tree: *Platanus acerifolia* 'Bloodgood' (London Plane)
Accent - *Pyrus Calleryana* 'Aristocrat' (Aristocrat Pear). Spacing - 35' max. o.c.

Subordinate Tree: 70% evergreen and 30% deciduous - refer to list of recommended trees.
Spacing 20' - 40' o.c.

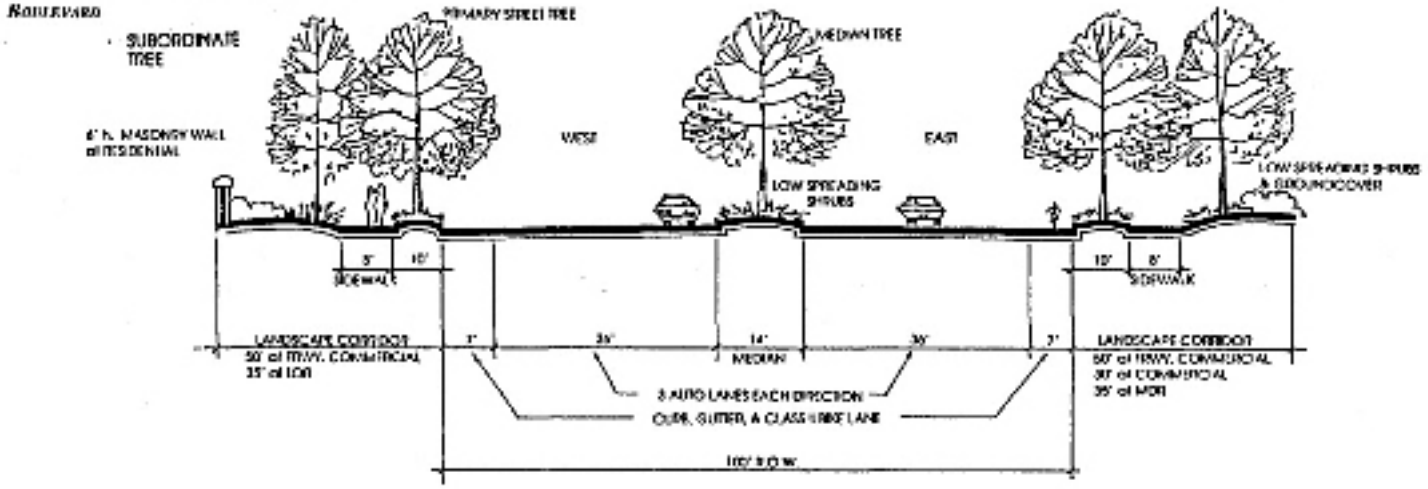
Shrubs: Medium (3'-6') delineate vehicular and pedestrian ways and provide screening and accent at pedestrian and vehicular entries.
High (6'-10') provide scale, and screening of fencing and soundwalls along residential areas - Refer to list of recommended shrubs.

Groundcover: Low water dependant varieties are desirable
Colorful accent covers as entry delineators - Refer to list of recommended groundcovers.

Soundwalls / Fences: Commercial & P/QP - none
Open Space - none
Single Family residential - minimum 6' high masonry soundwall

Medians: 14' wide - Median tree to match Street tree with low spreading shrubs and groundcovers. Accent trees to match those in corridor planting areas.

FIGURE B-3
LANDSCAPE CONCEPT FOR PLEASANT GROVE BOULEVARD



PLEASANT GROVE BOULEVARD

Right-of-way: 100'

Landscape Corridor: 35' along residential
30' along Commercial
50' at freeway commercial

Pedestrian / Bicycle Path: 8' with 10' separation from back of curb.

Design Characteristics: Double row of street trees at Commercial parcels. Street trees and subordinate trees at Residential

Street Tree: *Platanus acerifolia* 'Bloodgood' (London Plane) Accent - *Pyrus Calleryana* "Aristocrat" (Aristocrat Pear). Spacing - 35' max. o.c.

Subordinate Tree: 70% evergreen and 30% deciduous - refer to list of recommended trees Spacing 30' - 40' o.c.,

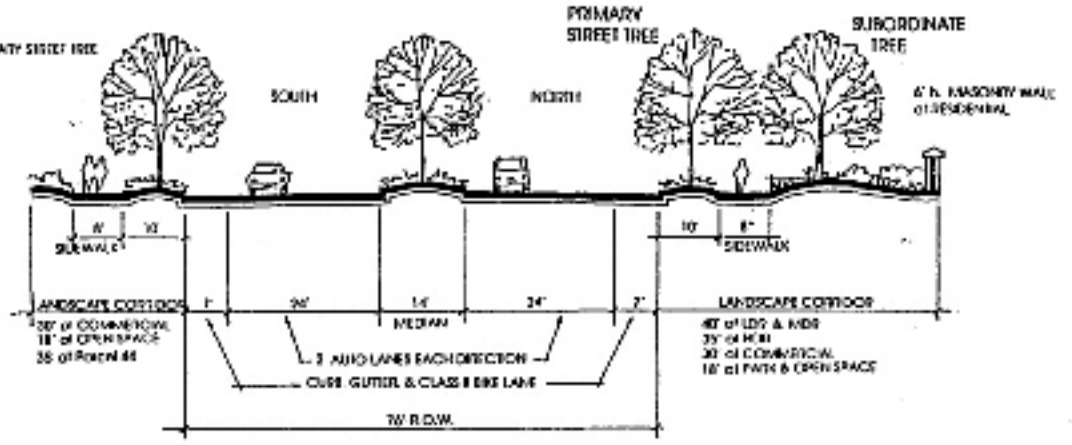
Shrubs: Medium (3'-6') : delineate vehicular and pedestrian ways and provide screening and accent at pedestrian and vehicular entries.
High (6'-10'): provide scale, and screening of soundwalls along residential areas only - refer to list of recommended shrubs

Groundcover: Low water dependant varieties are desirable Colorful accent covers as entry delineators - refer to list of recommended groundcovers

Soundwalls / Fences: Commercial & HDR - none
LDR residential - minimum 6' high masonry soundwall,

Medians: 14' wide - Median tree to match Street tree with low spreading shrubs and groundcovers. Accent trees to match those in corridor planting

FIGURE B-4
LANDSCAPE CONCEPT FOR FAIRWAY DRIVE



FAIRWAY DRIVE

Right-of-way: 76'

Landscape Corridor: 40' adjacent to LDR & MDR
35' adjacent to HDR & Parcel 44
30' adjacent to commercial
18' at Park & Open Space

Pedestrian / Bicycle Path: 8' with 10' separation from back of curb.

Design Characteristics: Single row of street trees at commercial parcels.
Single row of street trees and subordinate trees at residential areas.

Street Tree: *Plantanus acerifolia* 'Bloodgood' (London Plane)
Accent - *Pyrus Calleryana* "Aristocrat" (Aristocrat Pear). Spacing - 35' max. o.c.

Subordinate Tree: 70% evergreen and 30% deciduous -
Refer to list of recommended trees.
Spacing 30' - 40' o.c.

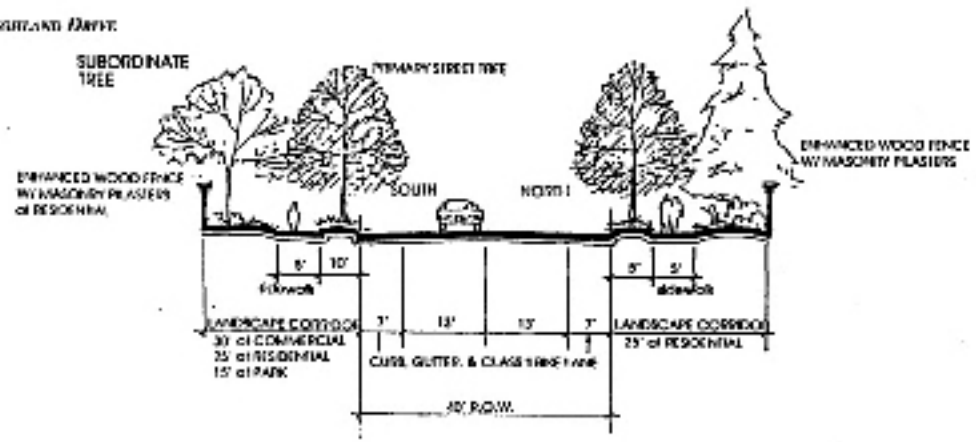
Shrubs: Medium (3'-6'): delineate vehicular and pedestrian ways and provide screening and accent at pedestrian and vehicular entries.
High (6'-10'): provide scale, and screening of fencing and soundwalls along residential areas -
Refer to list of recommended shrubs.

Groundcover: Low water dependant varieties are desirable
Colorful accent covers as entry delineators -
Refer to list of recommended groundcovers.

Soundwalls / Fences: Commercial & HDR - none
LDR & MDR residential - minimum 6' high masonry soundwall

Medians: 14' wide - Median tree to match Street tree with low spreading shrubs and groundcovers.
Accent trees to match those in corridor planting areas.

FIGURE B-5
LANDSCAPE CONCEPT FOR HIGHLAND DRIVE



HIGHLAND DRIVE (East of Pleasant Grove Blvd.)

Right-of-way: 80'

Landscape Corridor: 30' at Commercial
25' at Residential
15' at Park

Pedestrian / Bicycle Path: 5' with 5' separation at Residential,
5' with 10' separation at park and Commercial.

Design Characteristics: Single row of street trees at Park.
Single row of street trees and subordinate trees at residential and commercial areas.

Street Tree: *Pistacia Chinesis* (Chinese Pistache)-
West of Central Park Drive
Liriodendron Tulipifera (Tulip Tree)
East of Central Park Drive
25' o.c. spacing to match pedestrian promenade.

Subordinate Tree: Adjacent to residencial areas -
70% evergreen and 30% deciduous -
Refer to list of recommended trees

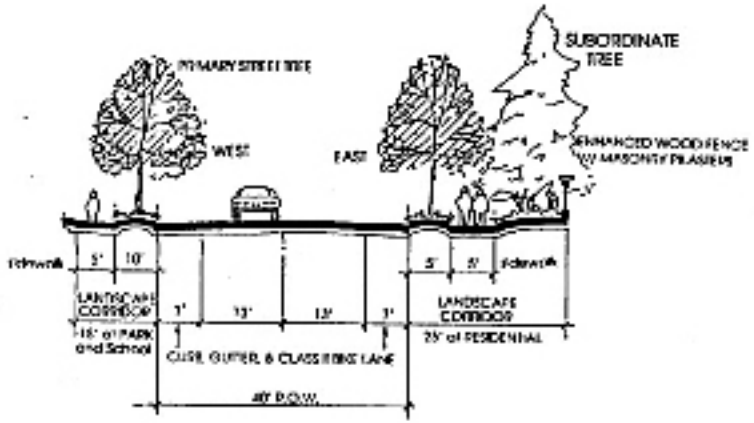
Shrubs: Medium (3'-6'): delineate vehicular and pedestrian ways and provide screening and accent at pedestrian and vehicular entries.
High (6'-10'): provide scale, and screening of fencing and soundwalls along residential areas -
Refer to list of recommended shrubs.

Groundcover: Low water dependant varieties are desirable
Colorful accent covers as entry delineators -
Refer to list of recommended groundcovers.

Soundwalls / Fences: Park, Commercial & HDR - none
LDR residential - minimum 6' high enhanced wood fence w/ masonry pilasters.

Medians: none

FIGURE B-6
LANDSCAPE CONCEPT FOR CENTRAL PARK DRIVE



CENTRAL PARK DRIVE

Right-of-way: 40'

Landscape Corridor: 25' at Residential
15' at Park and school

Pedestrian / Bicycle Path: 5' with 5' separation at residential
5' with 10' separation at School & Park

Design Characteristics: Single row of street trees at Park and School.
Single row of street trees and subordinate trees at residential areas.

Street Tree: *Pistacia Chinensis* (Chinese Pistache)
Accent - refer to list of recommended trees
30' max. o.c.

Subordinate Tree: Adjacent to residential areas -
70% evergreen and 30% deciduous -
refer to list of recommended trees

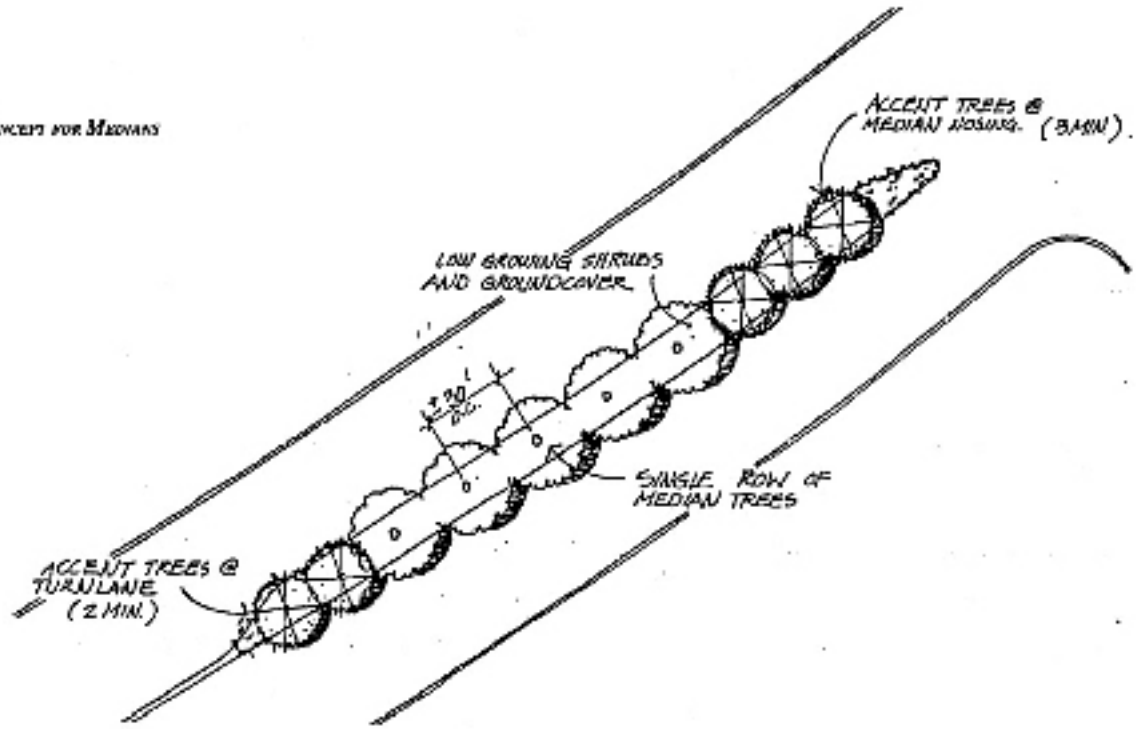
Shrubs: Medium (3'-6'): delineate vehicular and pedestrian ways and provide screening and accent at pedestrian and vehicular entries.
High (6'-10'): provide scale, and screening of fencing and soundwalls along residential areas - refer to list of recommended shrubs

Groundcover: Low water dependant varieties are desirable
Colorful accent covers as entry delineators -
refer to list of recommended groundcovers

Soundwalls / Fences: School & Park - none
Residential - minimum 6' high enhanced wood fence w/ masonry pilasters.

Medians: none

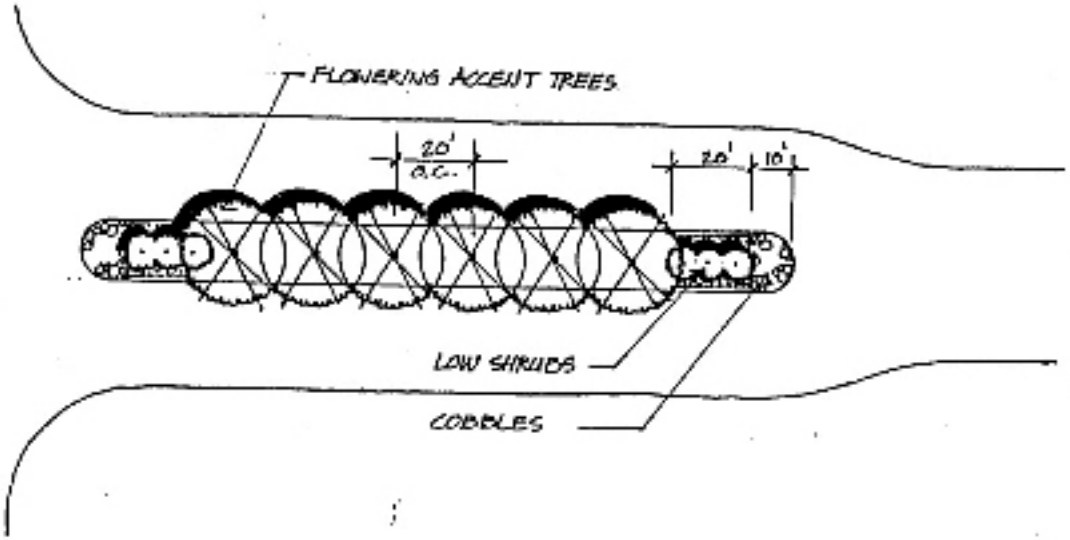
Figure B-7
Landscape Concepts for Medians



TYPICAL MEDIAN (Arterials & Minor Arterials)

Standard width:	14'	**Shrubs:**	Low growing shrubs and groundcovers not over 3 feet in height.
Design Characteristics:	Single row of median trees , 30 feet on center - refer to street sections for designated median tree	**Groundcover:**	Colorful accent covers as entry delineators - refer to list of recommended groundcovers
Accent Tree:	Minimum of three flowering accent trees at median nosing and minimum two accent trees at transition to turn-lanes, - refer to street sections	**Paving:**	All paving within the curbs is to be cemented , smooth river cobble.

FIGURE B-8
LANDSCAPE CONCEPT FOR ENTRY ISLAND MEDIANS



ENTRY ISLAND MEDIAN (Highland Dr., Central Park Dr., & Fairway)

Minimum width: 12'

Minimum length: 100'

Design Characteristics: Single row of flowering accent trees, 20 feet on center - refer to list of recommended trees.
low flowering shrubs for last 20 ± feet at each end
cobbles set in concrete at last 10 ± feet of nosing

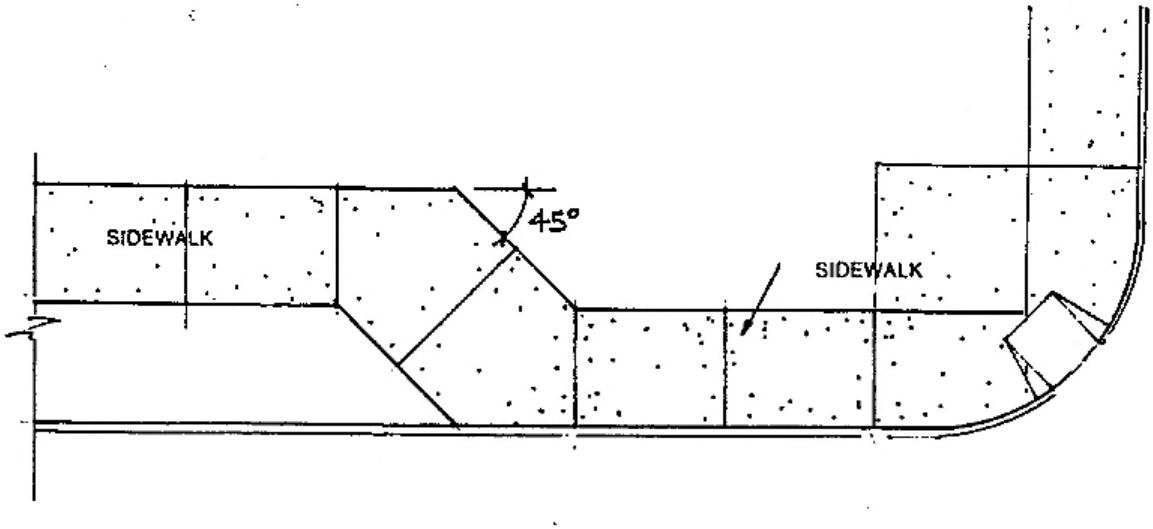
Shrubs: Low growing flowering shrubs and groundcover not over 3 feet in height.

Groundcover: Colorful accent covers as entry delineators - refer to list of recommended groundcovers

Paving: All paving within the curbs is to be cemented, smooth river cobble.

Figure B-9
Conceptual Median Break Location

FIGURE B-10
SIDEWALK CHANGE-OF-ALIGNMENT DETAIL



2.1.5 Primary Landscape Components

Primary HRN landscape components include sidewalks, masonry walls and wood fencing, earth berms, mounds and slopes, and street furnishings. (Secondary landscape components are listed in Attachment A.)

2.1.5.1 Sidewalks

Concrete sidewalks are to be used within all required landscape corridors. The required width of sidewalks and adjacent greenway strips is specified in Table B-2.

Within the HRN Specific Plan area, sidewalk alignment is to be essentially linear (as opposed to meandering), using a formal and geometric change-of-alignment design scheme. Change-of-alignment sidewalk geometry is generally used at street intersections and at street light locations.

2.1.5.2 Masonry Walls, Enhanced Wood Fences and Wrought Iron Style Fences

Masonry walls are to be constructed at the back of landscape corridors along arterial streets adjacent to LDR and MDR parcels. (The residential property line lies at the back of wall.)

Enhanced wood fences with spaced pilasters may be constructed in lieu of masonry walls along LDR and MDR parcels along Highland Drive and Central Park Drive.

Masonry walls and wood fences proposed for land uses other than LDR and MDR shall be constructed outside of the required landscape corridors.

Minimum masonry wall height along arterial streets (Stanford Ranch Road, Pleasant Grove Blvd., and Fairway Drive) is 6 feet. Minimum fence height along Highland Drive and Central Park Drive is also 6 feet.

Pilaster spacing on masonry walls and enhanced wood fences is to be approximately 60 feet. Pilaster design is to be consistent throughout the project, although pilaster dimensions may vary for architectural effect. Pilasters should be used at each side of neighborhood vehicular entrances and pedestrian paseos to visually define openings.

Masonry walls and enhanced wood fencing should be placed to not obstruct underground or above ground electric, telephone, cable, water or sewer line services or equipment.

Masonry walls and enhanced wood fences are to be of a uniform design, similar and complementary to walls and fences used in the NCRSP area south of SR 65, and consistent with Figures B-11 and B-12.

Pilasters are to be placed at the end of masonry walls to enhance wall aesthetics.

Masonry walls may be constructed of concrete masonry blocks, or prefabricated concrete panels. The concrete blocks should be gray in color, split face one side with the split face oriented toward the landscape corridor.

Enhanced wood fences are to be of redwood construction. All redwood is to be construction heart grade. Vertical slats are to overlap and are to be placed with the rough cut finish facing the landscape corridors. Fence panels shall be finish framed on both sides of the fence.

Figure B-11
Masonry Wall Detail

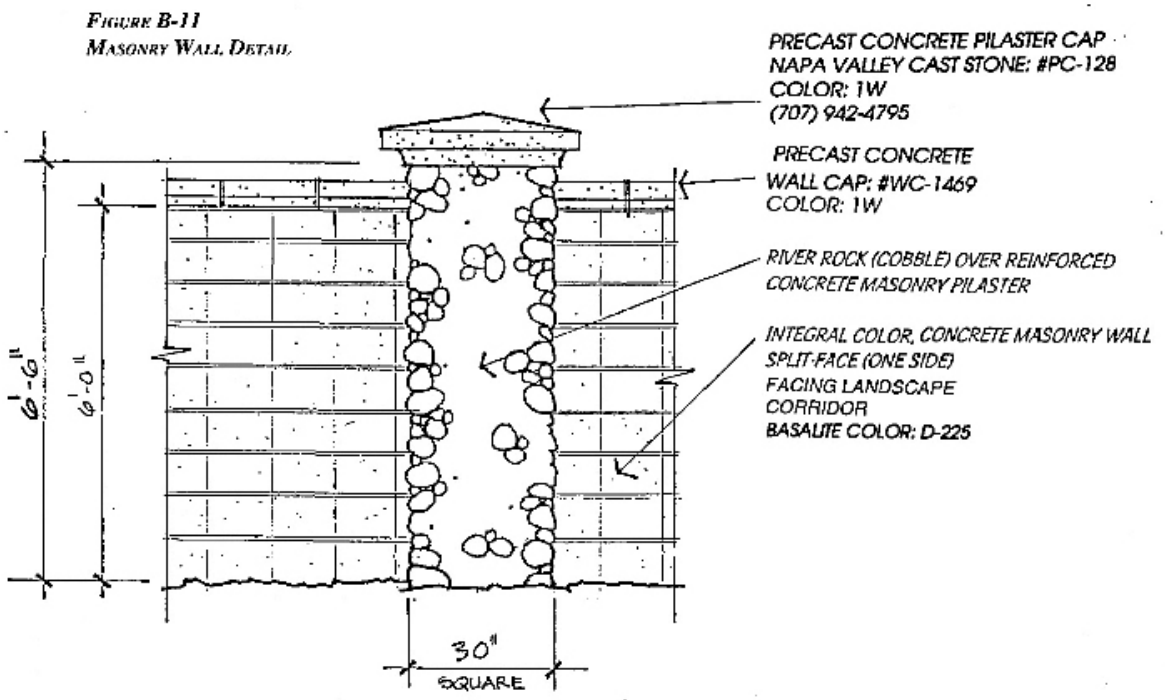
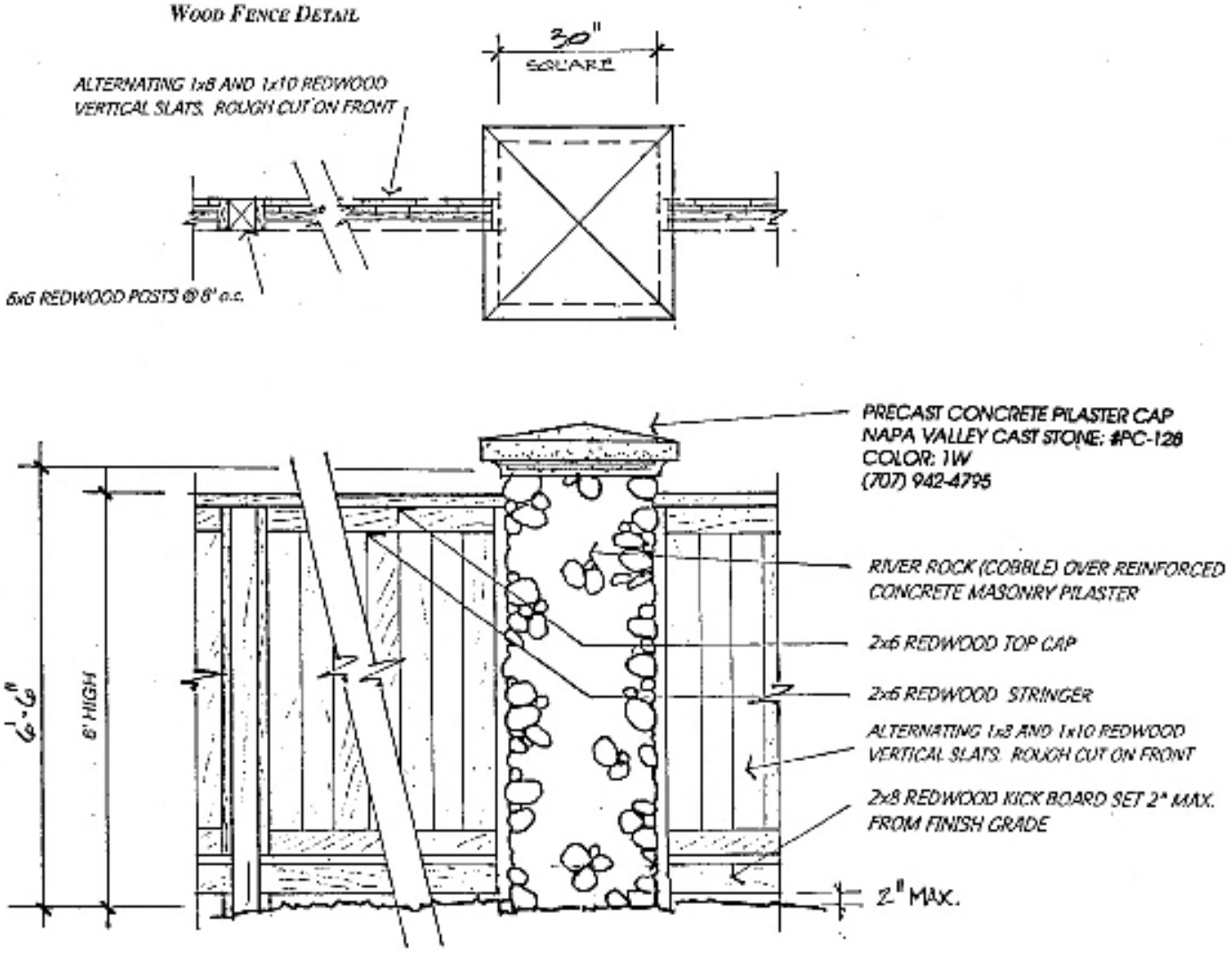


Figure B-12
Wood Fence Detail

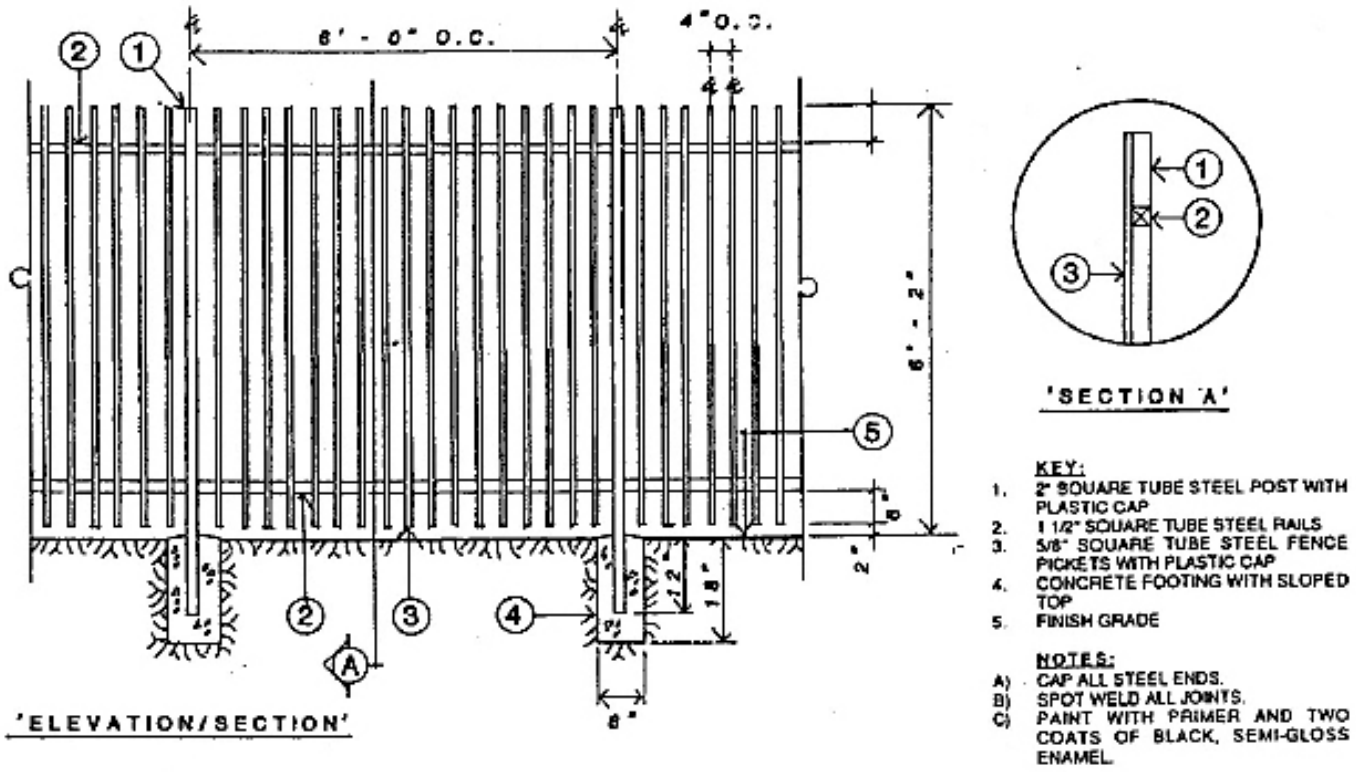


Enhanced wood fencing is to be oriented with the redwood stringers facing the landscape corridor.

Where lots back up to a local residential street, rear yard fencing along the street is to be an enhanced wood fence (or optional masonry wall) with pilasters. Landscape strips (minimum width of 10 feet) along the street side of such fencing are to be made part of the street right-of-way or set aside in a landscape easement to be maintained by the Mello Roos Service District or equivalent.

Wrought iron style fencing may be incorporated into pedestrian paseos along residential property lines abutting the paseo or as part of the chicane (See Figure B-22.) Wrought iron style fencing may also be used along the edges of watershed open space parcels, within landscape corridors to separate different functions, or at other miscellaneous locations within the HRN Specific Plan area (e.g., to restrict access of dirt bikes and motorized vehicles).

Figure B-13
Wrought Iron Style Fence Detail



Wrought iron style fencing used within the HRN Specific Plan area is to comply with Figure B-13 below, except that a uniform chicane fencing design may vary from Figure B-13 in order to achieve a desired architectural effect.

2.1.5.3 Earth Berms, Mounds and Slopes

Earth berms and mounds are permitted within landscape corridors.

Earth berm and mound slopes should not exceed 3:1 to assure soil stability, and should be configured to direct drainage towards the drainage collection system.

In areas of steep terrain, large slopes are permitted to encroach into the landscape corridor to reduce grading and maximize development area. Slopes within the landscape corridors should not exceed 3:1, (2:1 is allowed in very limited areas where site development is otherwise constrained) and a 2' wide level bench is required at the back of sidewalk.

Where slope areas lie within the landscape corridor, and especially along Stanford Ranch Road, adequate soil and slope preparation provisions shall be made to support plant material that will stabilize and cover the slope.

2.1.5.4 Street Furnishings

Street furnishings (including benches, trash receptacles, bollards, planters, bus shelters, trellises, entry signage and other similar amenities) are permitted within landscape corridors provided placement does not interfere with clear vision standards for street intersections.

The design of street furnishings should match or complement the design of surrounding elements including other furnishings, walls and fences, as well as building architecture.

Lighted features including but not limited to lighted bollards, lighted shelters, back-lighted planters, accent lighted wall surfaces and signs, are permitted provided light sources are low level and screened from adjacent streets, walkways, and homes.

2.2 SPECIAL AREAS

A number of special areas occur at points along the landscape corridors and consists of the following:

1. Entry Features
2. Signs
3. Corner Clips
4. Pedestrian Related Components

2.2.1 Entry Features

Entry features are to be provided in three forms: 1) city boundary markers, 2) main entrances and 3) minor entrances.

2.2.1.1 City Boundary Markers

City boundary markers consist of enhanced corridor landscaping and main entrance signage (optional) combined architecturally to establish a project related entrance into the City of Roseville. City boundary markers are to be installed by the adjacent parcel developer at the time landscape corridor improvements are constructed and are to be maintained by the Mello Roos Service District or other financing mechanism.

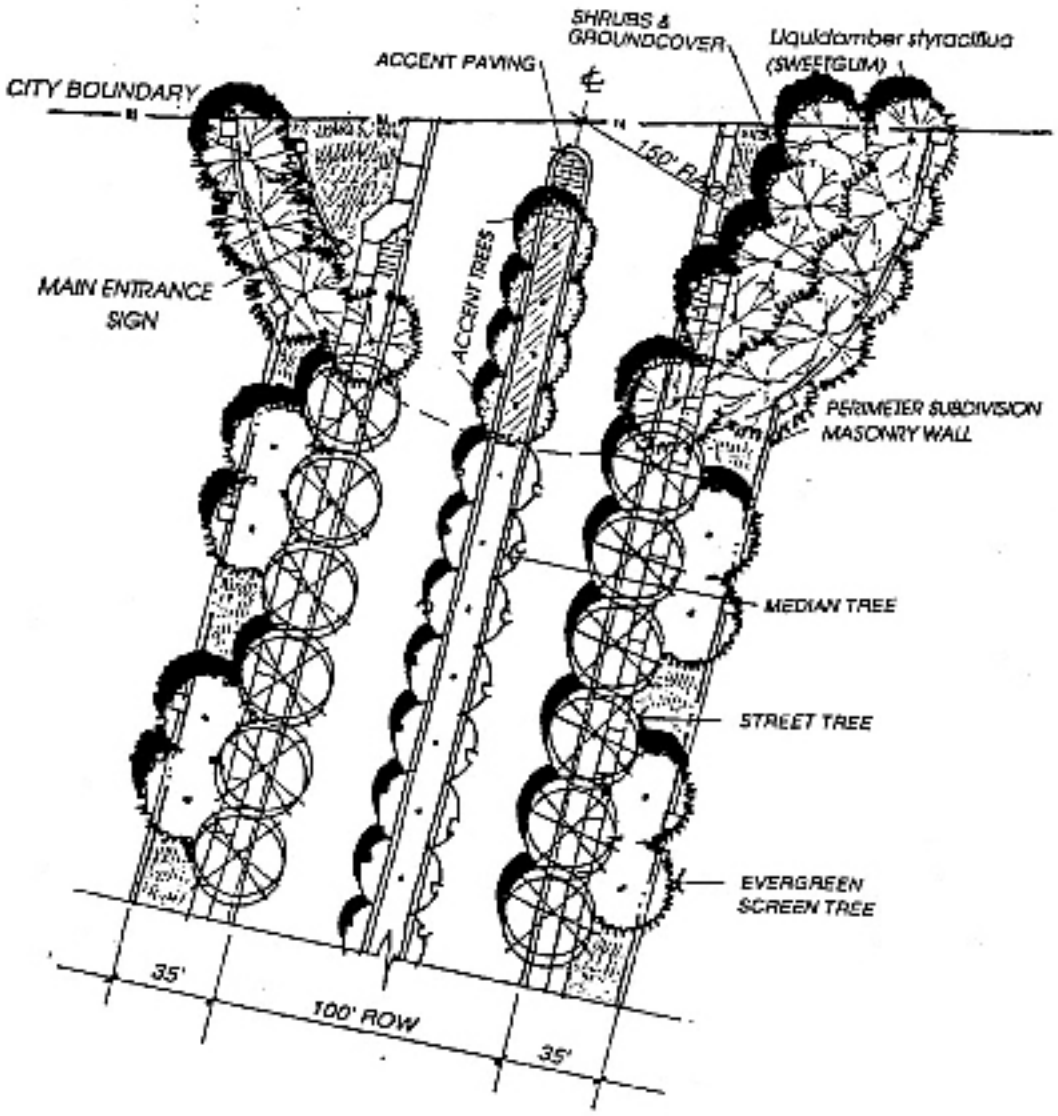
City boundary markers are to be provided on Stanford Ranch Road. Pleasant Grove Blvd. and Fairway Drive adjacent to the Rocklin city limits, as detailed in Figures B-14 and B-15.
All city boundary markers shall be of a consistent design. City boundary markers are to include street trees (tall conifer background trees for vertical scale and deciduous foreground trees selected for flowering or fall color habit), accent shrubs and groundcovers.

Within city boundary markers, sidewalks may be transitioned to the back of curb to match the planned monolithic sidewalk condition within the City of Rocklin.

2.2.1.2 Main Entrances

Main entrances are enlarged landscape areas appended to the landscape corridors at highly

FIGURE B-14
CITY BOUNDARY MARKER DETAIL

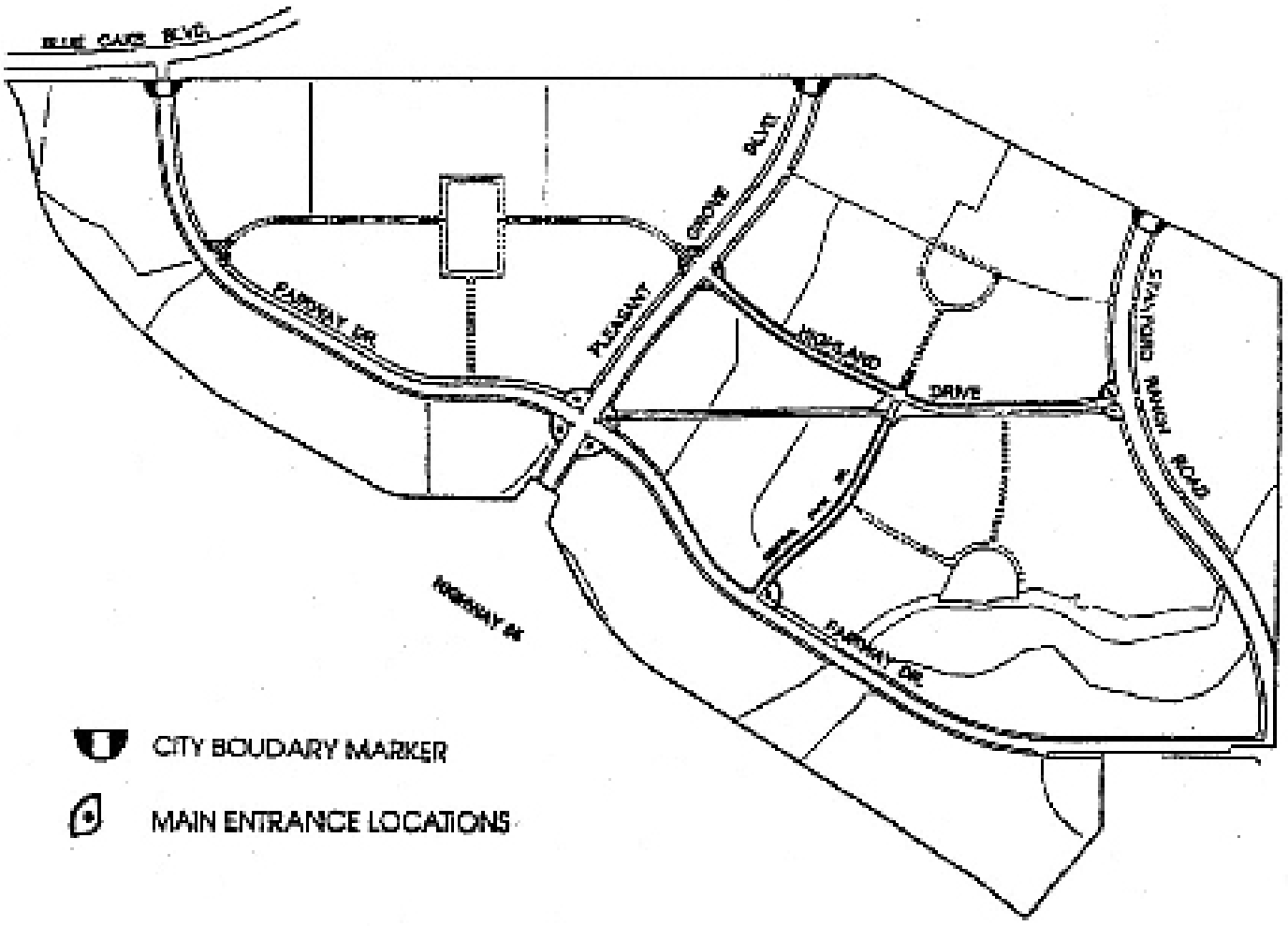


visible street intersection locations. Main entrances are free of buildings and contain enhanced landscape features and main entrance signs to accent and identify the Plan Area.

Main entrances to the HRN Specific Plan area are to be provided at the following locations:

- Highland Drive at Stanford Ranch Road
- Highland Drive at Pleasant Grove Boulevard
- Highland Drive (extended) at Pleasant Grove Boulevard and at Fairway Drive
- Central Park Drive at Fairway Drive (north-east corner only)
- Pleasant Grove Blvd./Fairway Drive intersection (all quadrants)

Figure B-15
Key Map - Main Entrance Locations



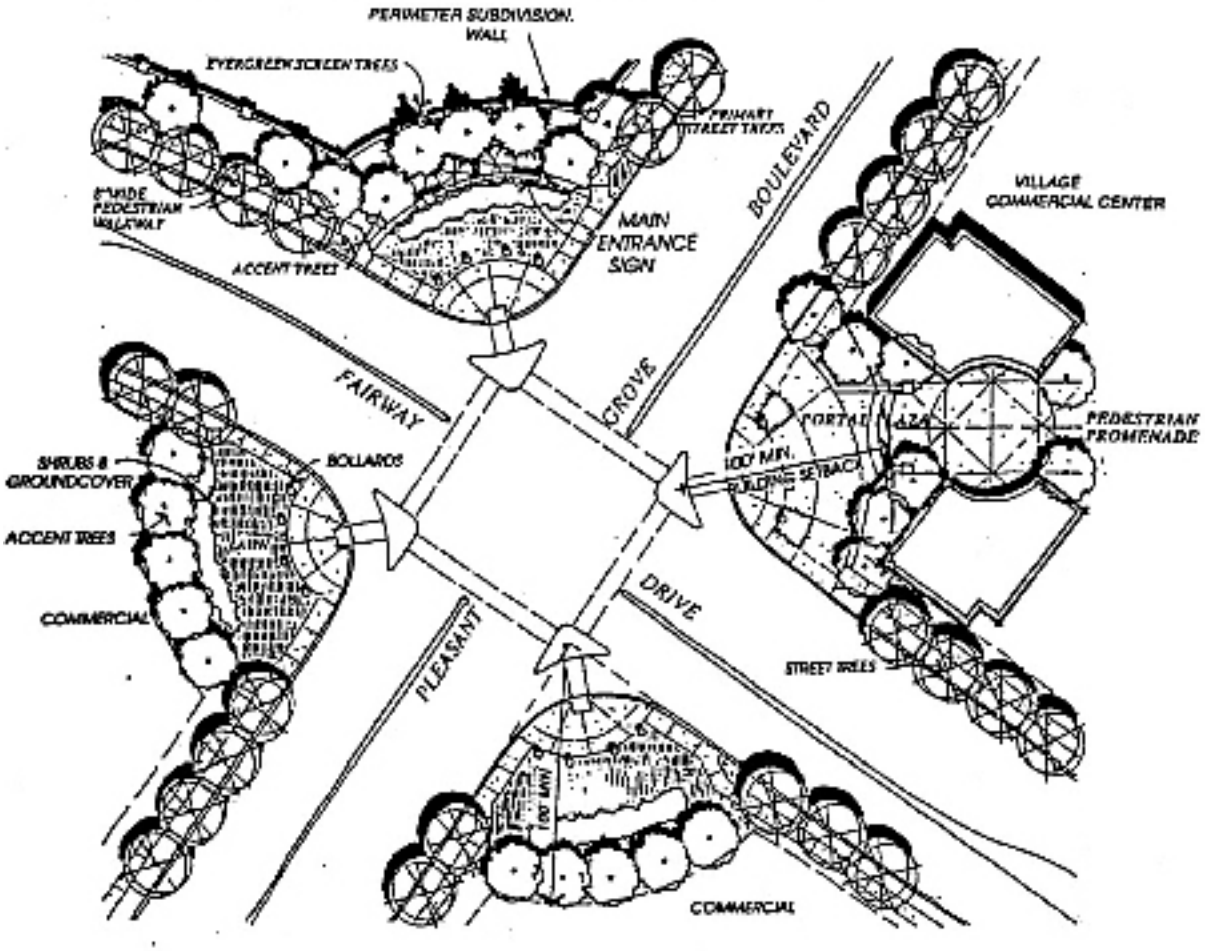
The main entrance located at the intersection of Pleasant Grove Blvd. and, Fairway Drive (illustrated as a circle area on the HRN Specific Plan land use map) consists of portions of the Portal Plaza on Parcel 40, and large corner landscape areas on the remaining quadrants of the intersection. (See Figure B-16) The minimum size of the quadrant areas is defined by a radius distance of 100 feet measured from the intersection of the extended curb lines of adjacent streets. (See the HRNSP Community Design Guidelines for Portal Plaza size requirements.)

All other main entrances are located within corner clip areas expanded to include the adjacent landscape corridor areas. (See Figure B-17)

Main entrances shall have a consistent appearance throughout the HRN Specific Plan are, utilizing common design elements and embellishments.

Main entrances are to be constructed by the developer of the subdivision in which they are located and are to be maintained by the Mello Roos Service District or equivalent.

Figure B-16
Main Entrance Detail, Pleasant Grove Boulevard and Fairway Drive



2.2.1.3 Minor Entrances

Minor entrances are to be provided at all locations where the streets within any residential neighborhood connect to perimeter arterial or major collector streets (except any location where a main entrance is already provided).

Minor entrances may be enlarged to include land area in addition to the required landscape corridor width.

Minor entrances should be of a consistent design throughout the HRN Specific Plan area, incorporating landscape elements used in main entrances.

Minor entrances are to be constructed by the developer of the subdivision in which they are located and maintained by the Mello Roos Service District or equivalent.

2.2.2 Signs

Two kinds of permanent project identification signs are expressly permitted within the HRN Specific Plan area: 1) main entrance signs, and 2) minor entrance signs. Generally, these signs are

FIGURE B-17
TYPICAL MAIN ENTRANCE DETAIL

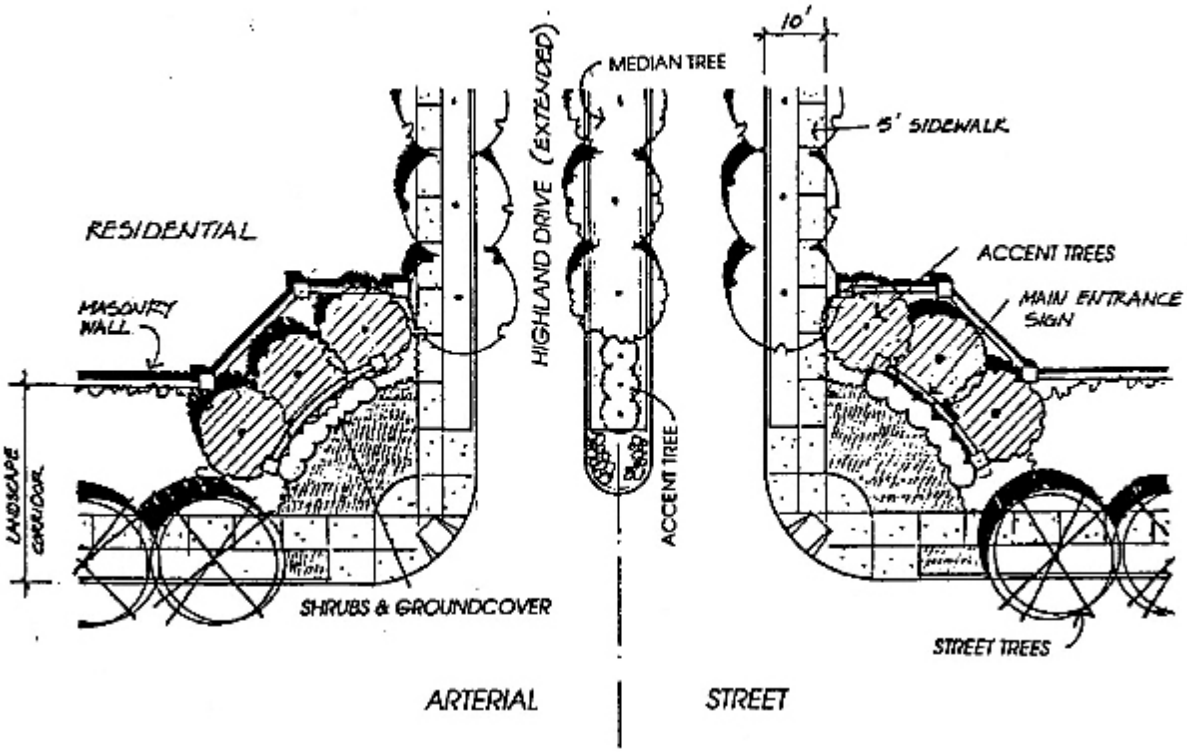


FIGURE B-18
TYPICAL MINOR ENTRANCE DETAIL

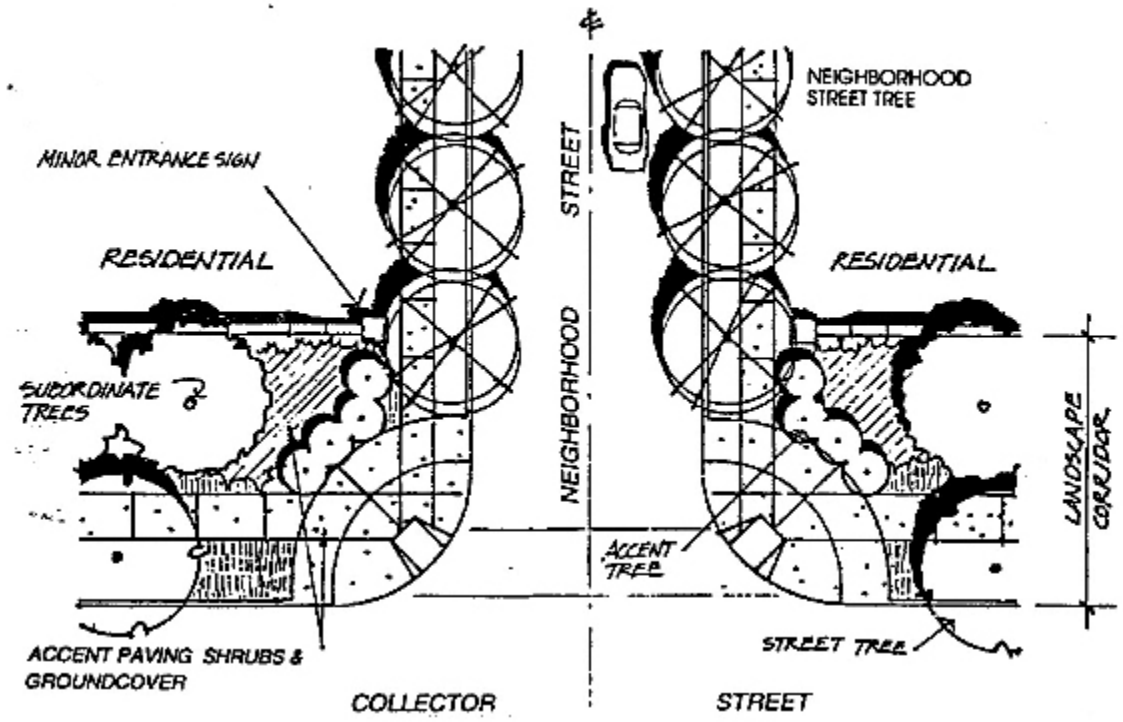
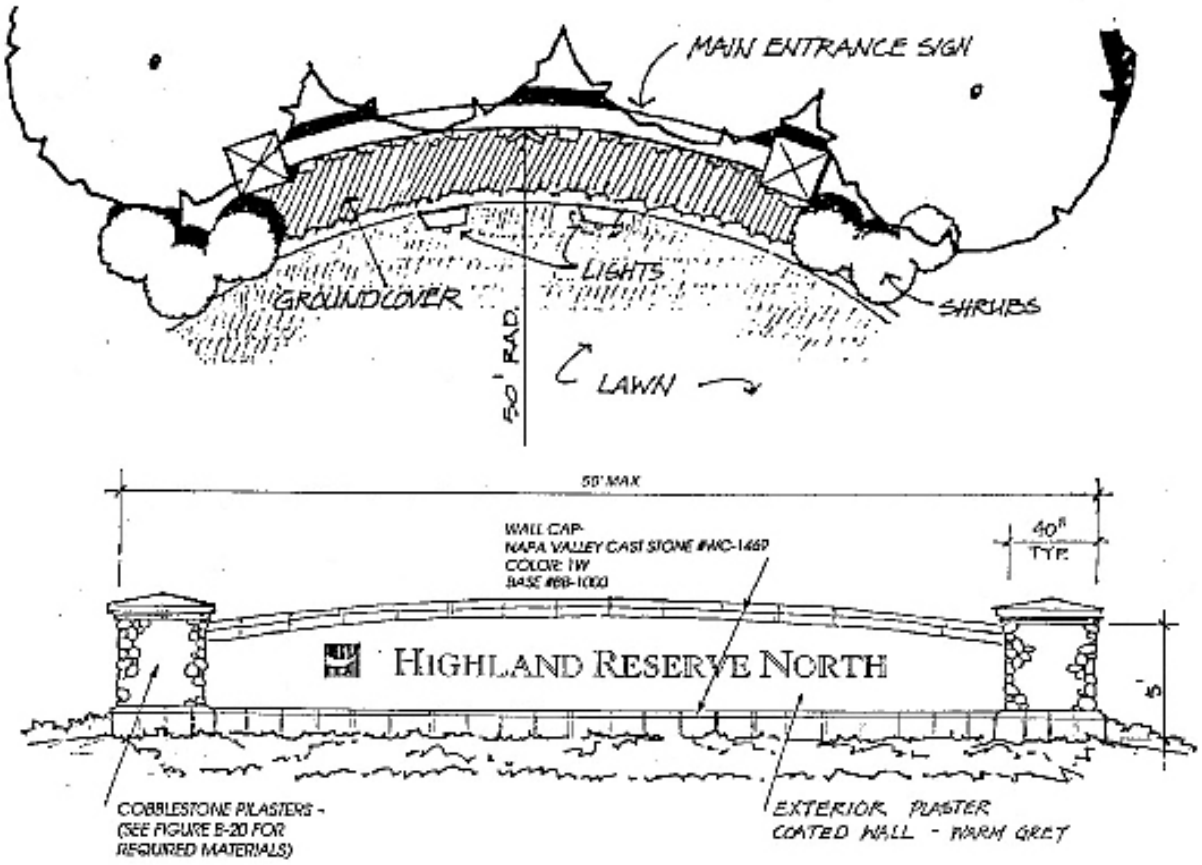


Figure B-19
Typical Main Entrance Sign Detail



located toward the back of landscape corridors, or within appended areas adjacent to landscape corridors.

Other signs, including those related to commercial, office, and multi-family use and all temporary construction, marketing, and sales signs (and the like) are regulated by the Roseville Sign Ordinance.

2.2.2.1 Main Entrance Signs

At developer discretion, one main entrance sign may be placed in each of the project main entrances (see Figure B-15) and within each city boundary marker. Each main entrance sign is to specify only the project name (e.g., "Highland Reserve North").

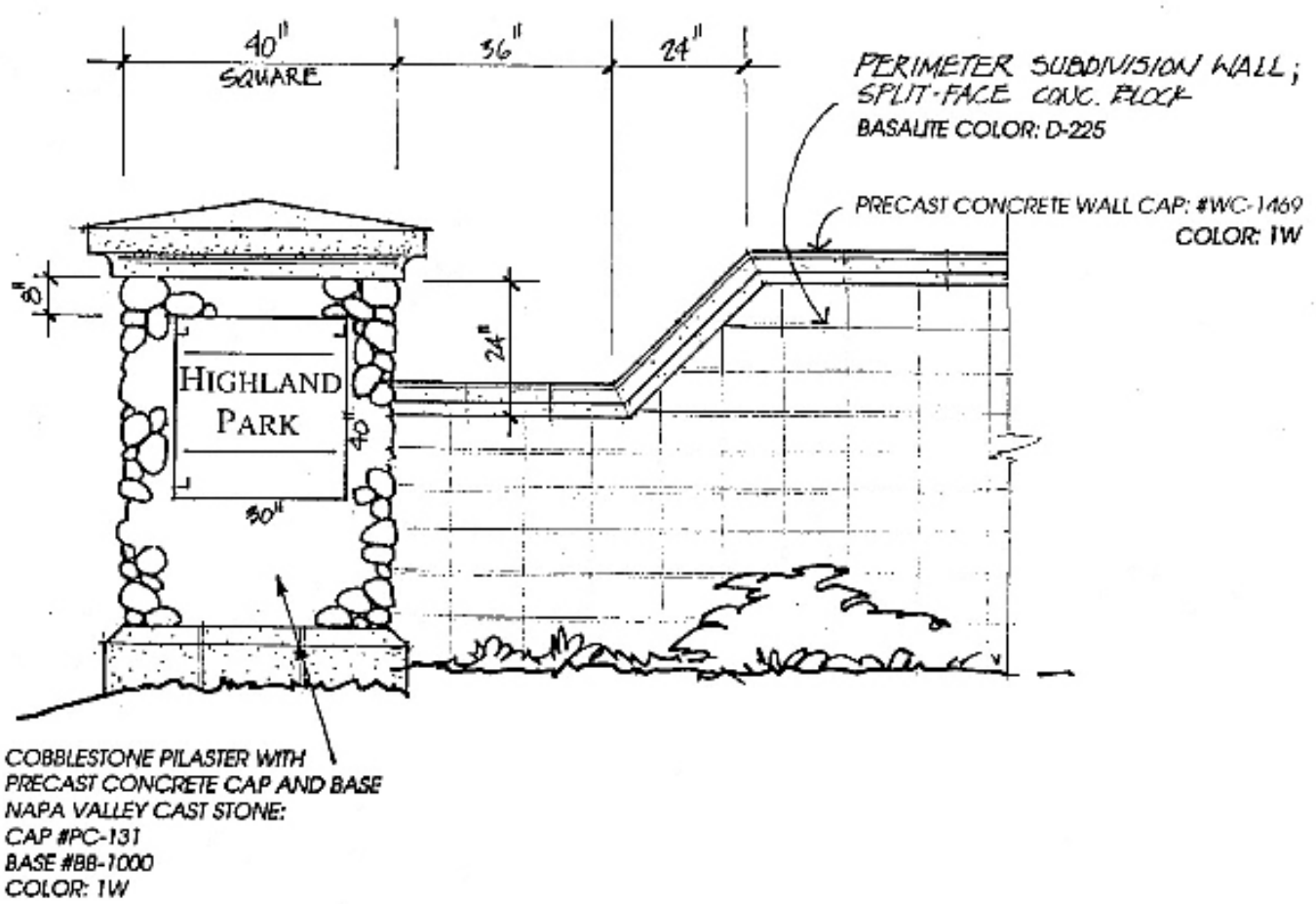
Main entrance signs may be freestanding or attached to a wall or planter and are limited to a total height of 5 feet and a total length of 50 feet.

Main entrance signs are to be placed at least 15 feet from the back of curb.

All main entrance signs are to be integrated into the overall entry design and positioned so as to not impede vehicular lines of sight at intersections.

All sign locations may be lighted; light sources are to be screened or shielded from vehicular traffic and nearby homes.

FIGURE B-20
MINOR ENTRANCE SIGN DETAIL



2.2.2.2 Minor Entrance Signs

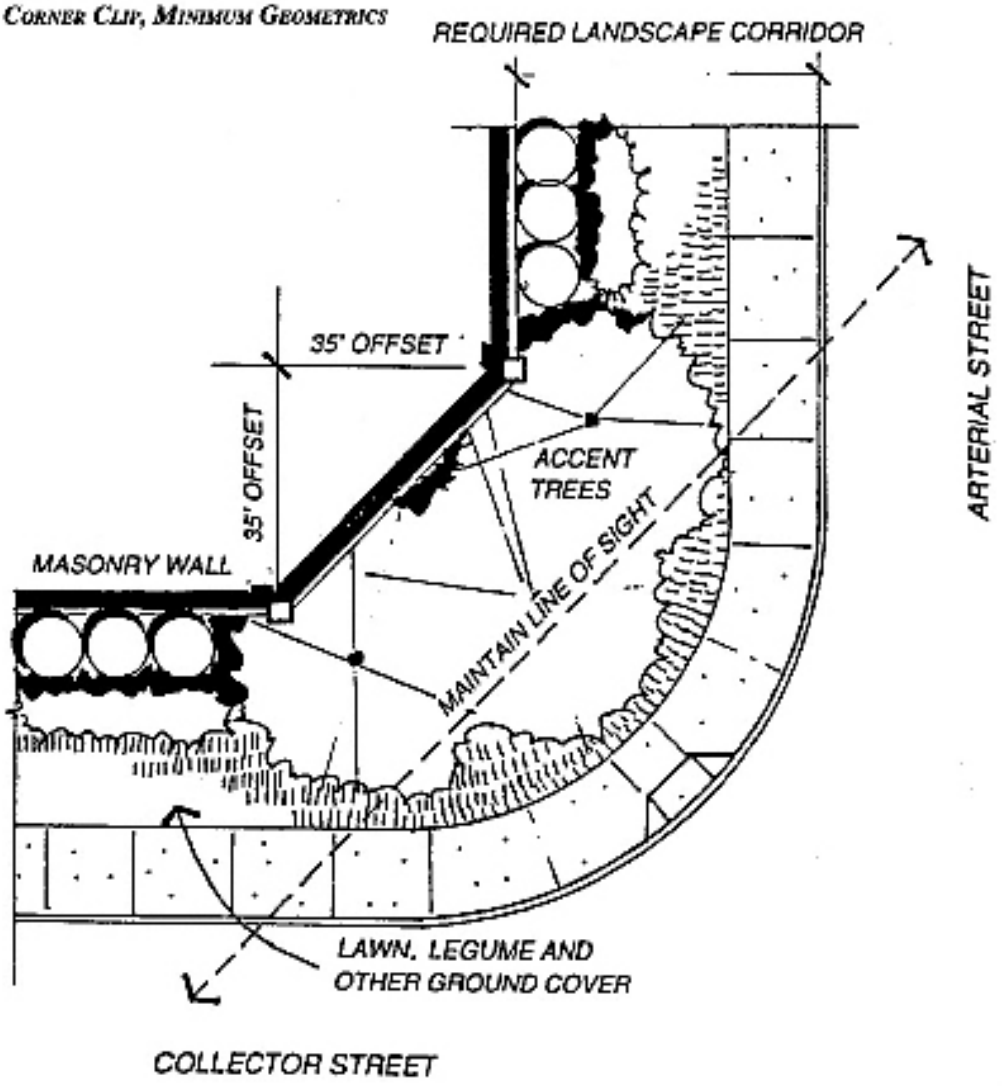
At developer discretion, entrance signs may be placed in all minor entrances along arterial or major collector streets, with one sign permitted on each side of the entry street.

Minor entrance signs are to be placed at least 15 feet from back of curb along arterial or collector streets.

Minor entrance signs are to be integrated into the minor entrance design, and must be affixed to a wall or planter. Minor entrance signs are to be compatible in design to main entrance signs, and may only specify the name of the interior subdivision or neighborhood. Maximum sign mounting height is 6 feet and maximum area of the face of each sign is 15 square feet.

All sign locations may be lighted; light sources are to be screened or shielded from vehicular traffic and nearby homes.

Figure B-21
Corner Clip, Minimum Geometrics



2.2.3 Corner Clips

Corner Clips (triangular landscape corridor enlargements at intersections) are to be provided at all intersections of arterial streets and collector streets.

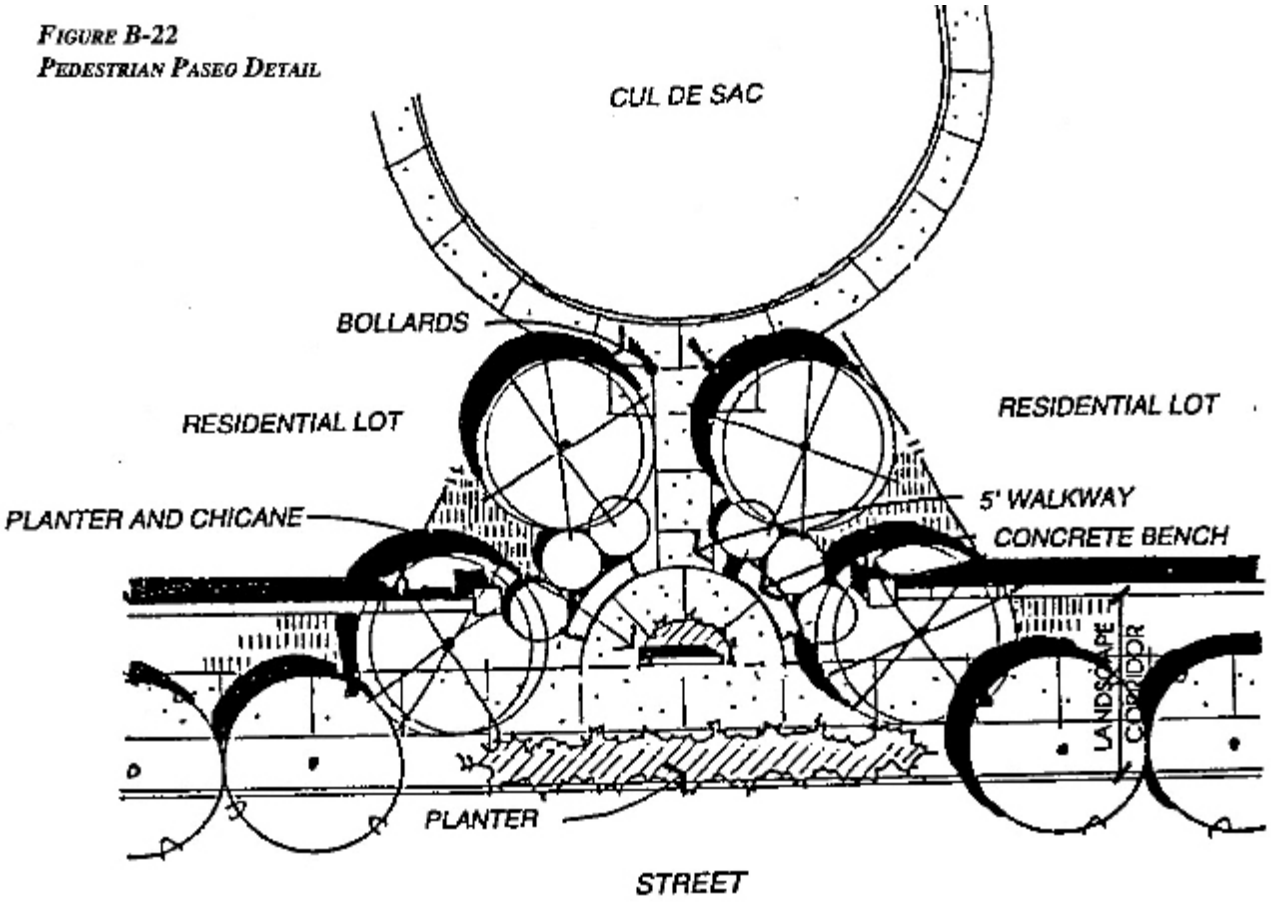
Minimum corner clip offset is 35 feet from the edge of the required landscape corridor. Non-triangular corner clips are permitted (i.e., curved, stepped, etc.) provided they do not encroach into the minimum offset area. (Corner clip dimensions at the Pleasant Grove Boulevard/Fairway Drive intersection are regulated by Figure B-16).

Corner clips are to be landscaped in a manner compatible with the adjacent landscape corridors. Required corner clip areas may be incorporated into entry areas.

Where fencing is provided at the rear of corner clips, the fencing is to be a masonry wall (with pilasters) to match or accent the masonry wall used elsewhere in the HRN Specific Plan area.

Corner clip area improvements are to be placed to allow adequate vehicular lines of sight at intersections.

FIGURE B-22
PEDESTRIAN PASEO DETAIL



2.2.4 Pedestrian Related Components

Special pedestrian components within or appended to the landscape corridors include 1) pedestrian paseos and 2) park interfaces.

2.2.4.1 Pedestrian Paseos

Pedestrian paseos are to be provided as necessary to establish a maximum spacing between pedestrian openings into each neighborhood of 1,000 feet along Fairway Drive, Highland Drive, or Central Park Drive. No paseos are required along either Stanford Ranch Road or Pleasant Grove Blvd. For the purpose of meeting this requirement, a street entrance counts as a pedestrian opening.

Paseos are to be of a consistent design through the HRN Specific Plan area incorporating landscape design elements used for main and minor entrances.

Minimum paseo opening width is 15 feet.

Minimum sidewalk width within a paseo is 5 feet. Paseo sidewalk design should include a chicane.

If fencing is to be constructed along a paseo route between subdivision lots, such fencing is to be open wrought iron style fencing, except that enhanced wood fencing may be used where needed to provide privacy for rear or side yards of adjacent homes.

Lighting within paseos is to be low key, placed or shielded so as not to impact nearby homes.

Figure B-23
Park Interface Locations

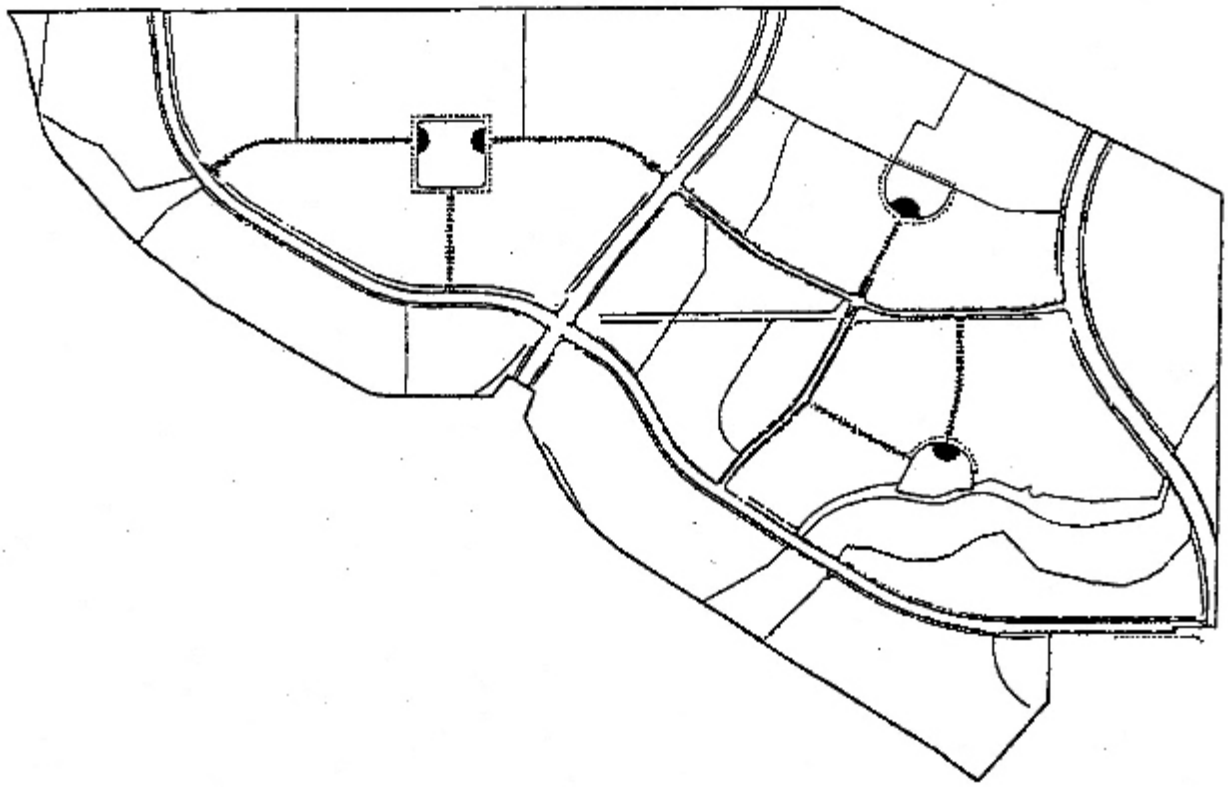
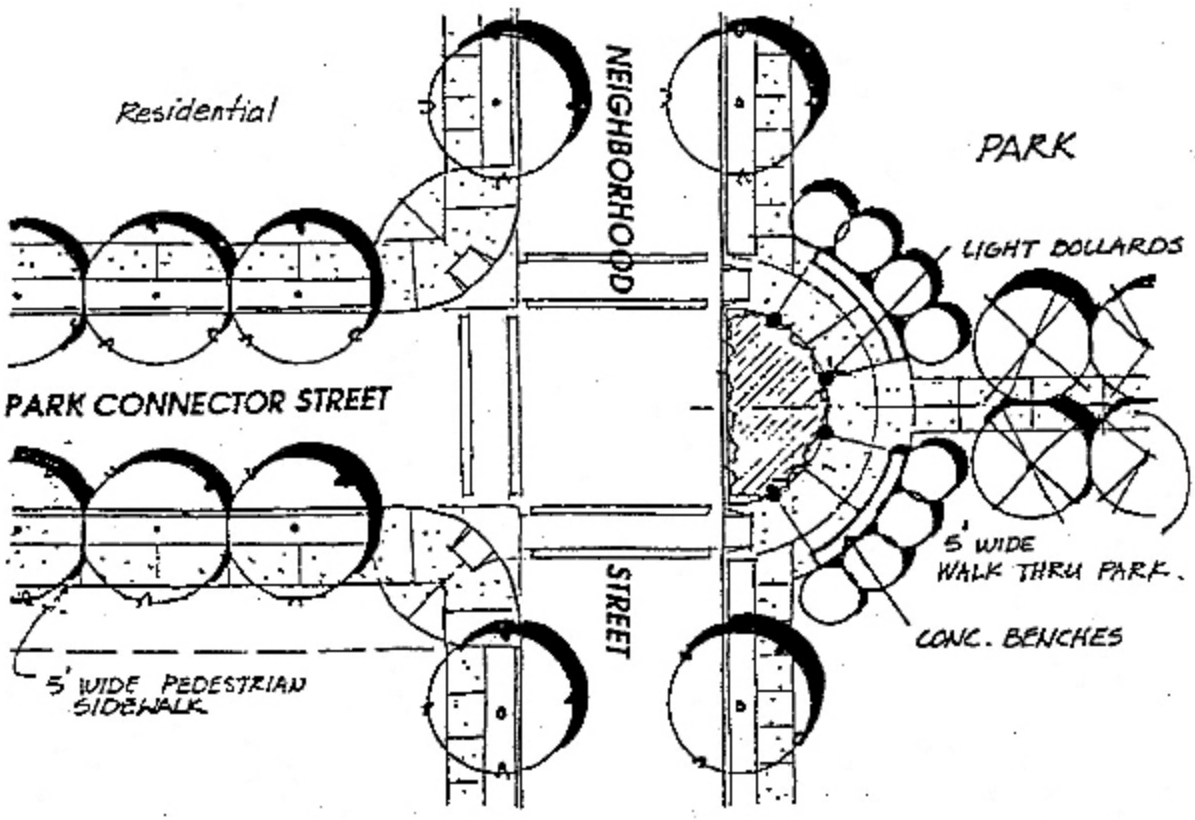


Figure B-24
Park Interface Detail



2.2.4.2 Park Interfaces

Park interfaces (points where park connector streets terminate at the neighborhood parks) are to be provided within each of the three neighborhood parks as shown on Figure B-23.

Park interfaces are to be landscaped to create a visual focus for the park connector street. The interface may incorporate features such as accent groundcovers, shrubs and trees, decorative bollards, benches or raised planters that act as benches, and special walkway design. (See Figure B-24)

Park interfaces are to be considered part of the park improvements.

3.0 WATERSHED OPEN SPACE STANDARDS

Watershed open space consists of four parcels situated along the Pleasant Grove Creek tributary channel (Parcels 70, 71, 72, and 73). Landscaping in the watershed is to remain predominately natural with new landscaping to be added only at edge areas along streets and adjacent to single family residential parcels. Design standards for watershed open space areas are organized as follows:

1. Street Tree Designations
2. Interface with Adjacent Uses
3. Other Landscape Concepts

3.1 Street Tree Designations

A single row of street tree planted 35-40 feet on center shall be planted in the 10 foot wide greenway strips along all street frontages. (Street trees are not required at culvert crossing locations where monolithic sidewalks are used.)

Street trees are to conform to the street tree designations for major streets specified in Figure B-1.

3.2 Interface With Adjacent Uses

Where LDR or MDR parcels abut watershed open space parcels, a mix of screen trees and ornamental trees are to be planted within a 15 foot wide easement adjacent to the outside edge of residential fencing. (No easement is required adjacent to an abutting street; edge landscaping is provided in these instances within the greenway strip.) Tree spacing within the easement is to be at 25-30 feet on center. These trees may be planted in adjacent slopes.

Easement trees planted adjacent to LDR or MDR lots are to be selected for drought tolerance and irrigated by a temporary irrigation system for the first three years following installation. Where non-residential parcels lie adjacent to watershed open space parcels, a landscape buffer is to be installed along the abutting edge of the non-open space parcel. The minimum buffer width is 10 feet for parking lots and drive isles, and 25 feet for buildings.

Fencing adjacent to watershed open space parcels is to be either a wrought iron style or enhanced wood fence (without pilasters). Open wrought iron style fencing is allowed along residential lots, except where solid fencing is needed to address concerns for privacy and screening.

Easement landscaping, buffer landscaping and all fencing is to be installed by the developer of the adjacent parcel.

Graded slopes (3:1 maximum, rounded and groomed) from adjacent parcels are allowed to extend into all watershed open space parcels provided such slopes are hydroseeded with

native or native compatible groundcover and also provided that such slopes do not encroach into preserved wetlands or 100 year flood plains.

3.3 Other Landscape Concepts

In landscape corridors abutting watershed open space parcels, greenway strip landscaping is to consist of only the designated street tees and a native or native compatible groundcover (no shrubs).

Supplemental trees may be planted within the watershed open space parcels, provided such tree plantings are allowed by the permitting agencies. Trees should be of a native species capable of being self-sustaining following installation with a one-year watering program.

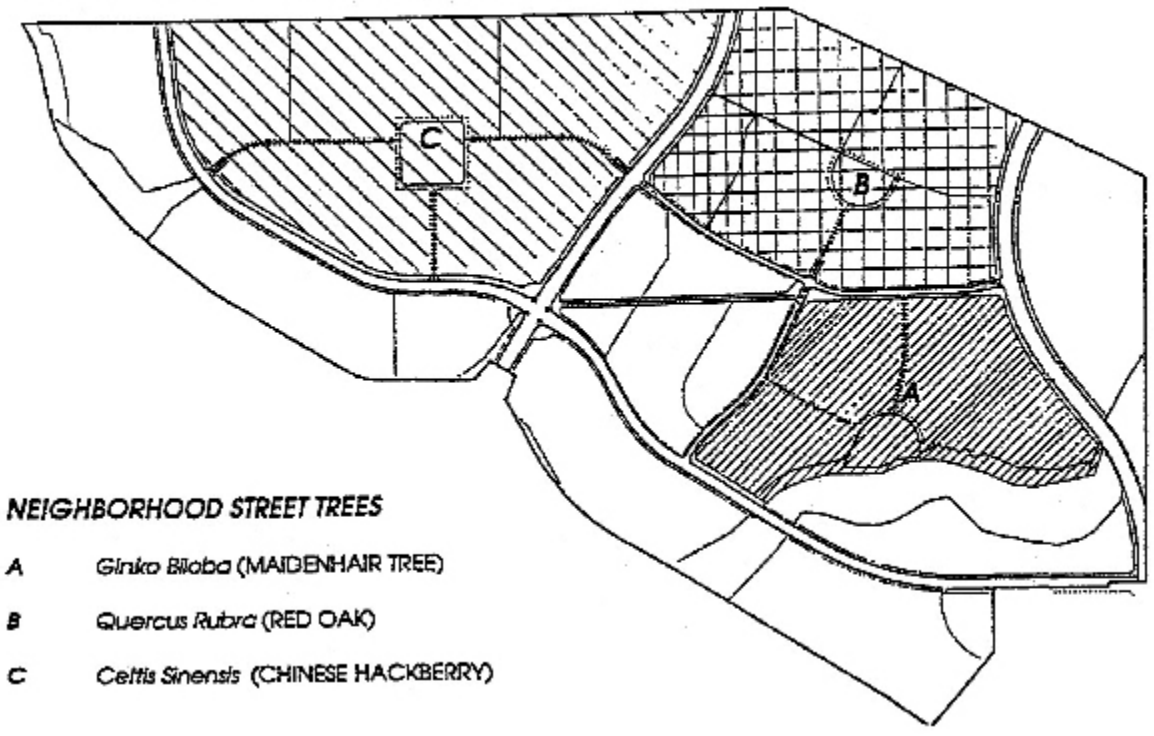
All watershed open space parcels and associated improvements are to be maintained by a commercial property owners association or equivalent financing mechanism.

4.0 LDR and MDR Standards

The LDR and MDR land uses make up the single family residential component of the three HRN Specific Plan area neighborhoods. The most notable element of the landscape program interior to the neighborhoods is the separated sidewalk and associated street tree planting program. Decisions for individual lot landscaping outside of the greenway strip (except for special areas like pedestrian access points or dedicated utility easements) rest with the home builder or homeowner. Design standards for neighborhoods are organized as follows:

1. Street Tree Designations
2. Sidewalks and Greenway Strips
3. Other Landscape Concepts

Figure B-25
Residential Neighborhood Street Tree Designation



4.1 Street Tree Designations

The same street tree is to be utilized throughout a neighborhood, although variation from neighborhood to neighborhood is allowed. Neighborhood street trees are to be selected per Figure B-25.

The street tree selected for each neighborhood park should match or compliment the street tree selected for the corresponding neighborhood.

Neighborhood street trees are to be planted within the greenway strip at a spacing not to exceed 40 feet on center, minimum one tree per lot. Where lots side-on to the street, street tree spacing is reduced to a minimum of 30 feet on center.

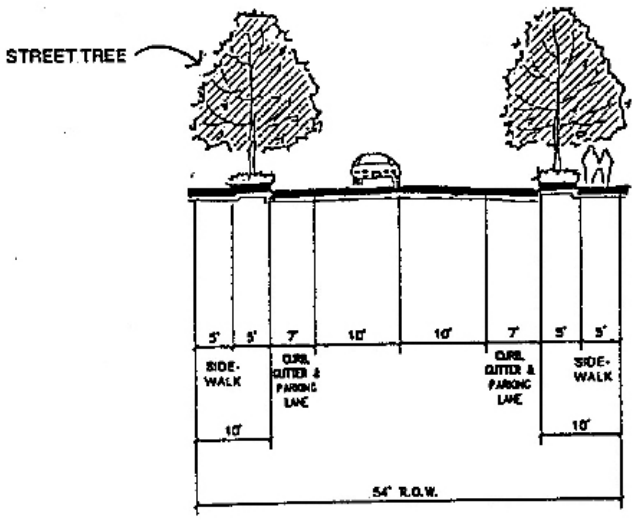
4.2 Sidewalks and Greenway Strips

Neighborhood street rights-of-way all contain 5' concrete sidewalks separated from the street by 5' greenway strips on both sides of the street. (See Figure B-26)

Along cul-de-sac and elbow frontages, the greenway strip is eliminated and the sidewalk is constructed with the curb as a monolithic feature. In both instances, the right-of-way line is located along the back of sidewalk. (See Figure B-27)

Street trees within the greenway strip are to be planted by the developer of the adjacent property and maintained by the adjacent homeowner. Groundcover is to be planted and maintained by the adjacent homeowner. (Turf is encouraged to be used as the greenway strip groundcover.)

Figure B-26
Typical Neighborhood Street Cross-section

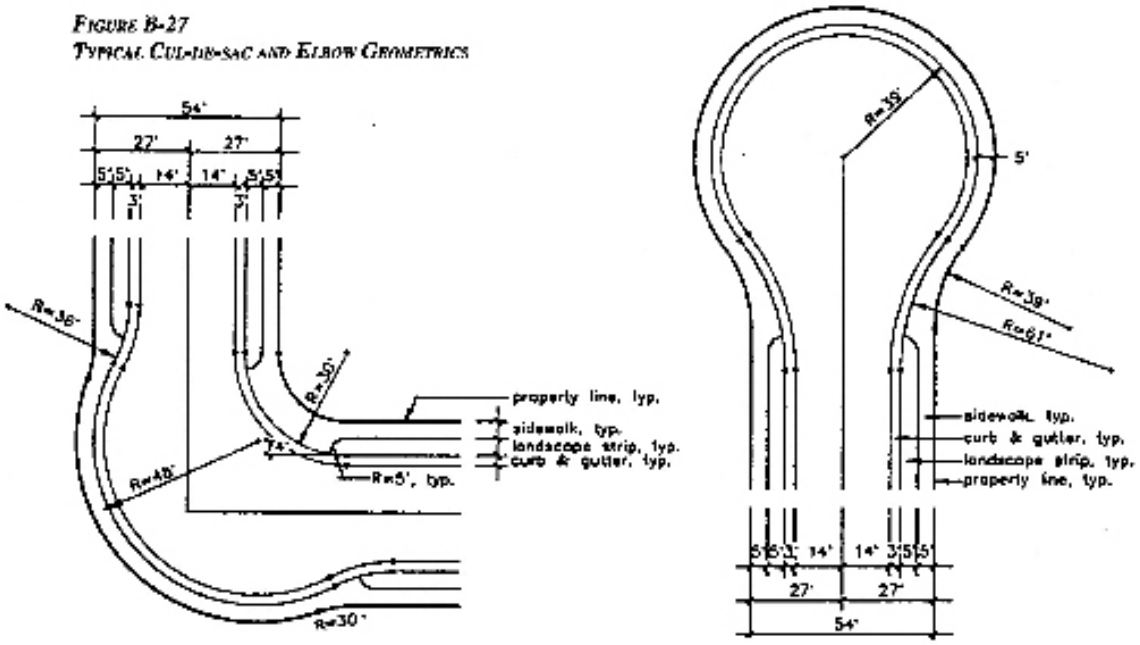


4.3 Other Landscape Concepts

Drainage and utility corridors are to be landscaped with groundcovers, shrubs, and trees (where the latter is permitted). Corridors dedicated to the City are to be landscaped by the developer of the subdivision and maintained by the Mello Roos Service District or equivalent.

A 6 foot high enhanced wood fence (without pilasters) is required along or near the north boundary of Parcels 1, 2, 5 and 8, linking where appropriate to landscape corridor masonry walls. This requirement for fencing is deleted in locations where property line masonry walls are already constructed on adjacent commercial parcels in Rocklin.

FIGURE B-27
TYPICAL CUL-DE-SAC AND ELBOW GEOMETRICS



5.0 ATTACHMENT A: SECONDARY DESIGN COMPONENTS

This subsection lists by category the secondary landscape design standards incorporated from the NCRSP as well as new design standards added to reflect the character of the HRN Specific Plan. (Also see Primary Landscape Components, Section 2.1.5).

Secondary design components are organized into the following categories:

1. Drought tolerance
2. Turf and groundcover
3. Mulch
4. Decorative rock
5. Irrigation
6. Street lighting
7. Bollards
8. Plant list
9. P.U.E. facilities
10. Sub-soil preparation
11. Import soil
12. Soil amendments
13. Planting and staking details

5.1 DROUGHT TOLERANCE

An important objective for the HRN Specific Plan area is resource conservation in landscape design; use of drought tolerant planting and water conserving irrigation systems is encouraged.

Plant material, irrigation system design, and landscape applications within the HRN Specific Plan area is to conform to the City of Roseville Water Conservation and Drought Mitigation Ordinance and the Water Efficient Landscape Ordinance.

5.2 TURF AND GROUNDCOVER

Turf provides a very strong visual element that lends vibrancy to the formal landscape program proposed within the plan area and also visually assists in linking landscape corridors to the centrally located Village Square complex.

Turf is the preferred groundcover in greenway strips between sidewalk and curb and should also be emphasized in other portions of required landscaped corridors. Turf is also encouraged to be used as the groundcover within the greenway strips along residential neighborhood streets.

Turf should be planted in the form of sod. In the event turf areas are hydroseeded, strict weed abatement measures are to be specified.

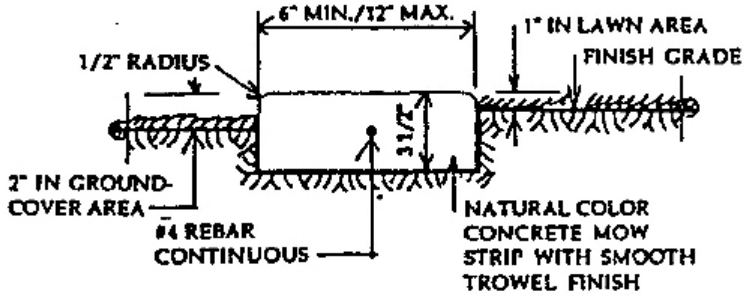
Install turf that requires low-water usage, such as tall fescue varieties.

Turf and groundcover areas should be defined with concrete mow strips. Concrete mow strips should be natural colored concrete with a smooth trowel finish. (See Figure B-28)

Turf may be installed in areas with slopes of 3:1 or less. Groundcover is to be installed on any steeper slope areas.

Groundcover shall be planted from 1 gallon containers, spaced 4 feet on center, or from flats, spaced 18 inches on center. Low-growing shrubs planted as groundcover may require further spacing.

FIGURE B-28
CONCRETE MOW STRIP DETAIL



NOTE: USE 1/2" FELT EXPANSION JOINT 20 FEET ON CENTER MAXIMUM AND AT EACH CHANGE OF DIRECTION

Drought-tolerant groundcover species are encouraged.

5.3 MULCH

Mulch shall be redwood, pine or fir bark, sized for fire resistance. Mulch shall be layered 2 inches over finish grade in shrub and groundcover areas.

5.4 DECORATIVE ROCK

Decorative river cobbles, 3-8 inches in diameter, are encouraged to be used as part of water-conserving landscapes.

Native or native-type boulders, 2-5 ft. in diameter or larger, may be placed within landscape corridors as accent landscape elements.

5.5 IRRIGATION

Spray irrigation systems may be used, designed according to the needs of planting areas. A combination of types of systems is permitted.

Low precipitation heads shall be used where possible.

Irrigation systems may also incorporate bubbler heads or drip lines (the latter must be approved by the Roseville Parks Department) for water-conserving reasons. (Turf and groundcover areas should not use these types of irrigation systems.) For areas requiring special treatment, such as slopes, bubbler and acceptable drip irrigation systems may be the most practical irrigation method.

Irrigation design shall provide head-to-head spray coverage to all areas to be irrigated, except where bubblers or acceptable drip lines are used.

Check valves are to be installed on all spray and bubbler heads as necessary to eliminate excess water damage, such as erosion, when the irrigation system is shut off.

Irrigation systems shall be electronic with multiple watering times, as specified by the Roseville Parks Department.

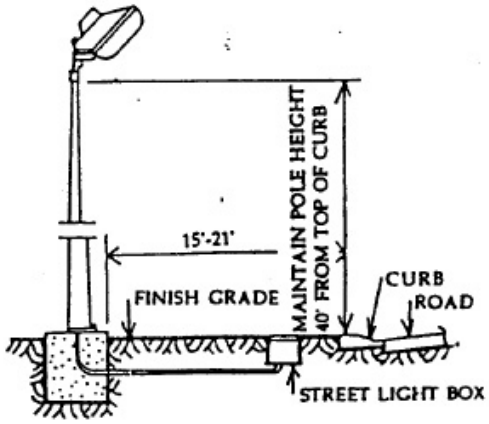
Developers must coordinate electric service points for irrigation controllers and landscape lighting with the Electric Department.

Backflow preventers in publicly maintained landscapes shall be located near the users connection at a distance practical for safety concerns. Where possible, backflow preventers shall be screened from obvious views for aesthetic reasons. Backflow preventers in privately maintained landscapes shall be located away from obvious views.

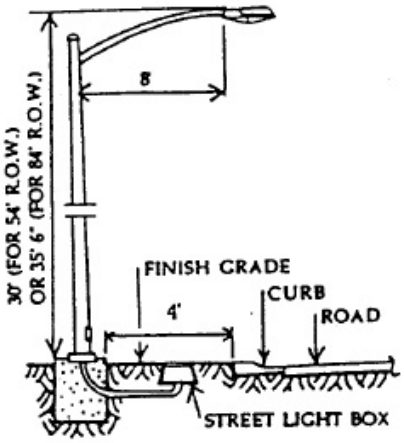
5.6 Street Lighting

Lighting shall be high pressure sodium vapor of two types: expressway luminaire and the streetlight standard.

Figure B-29
Street Light Standard Details

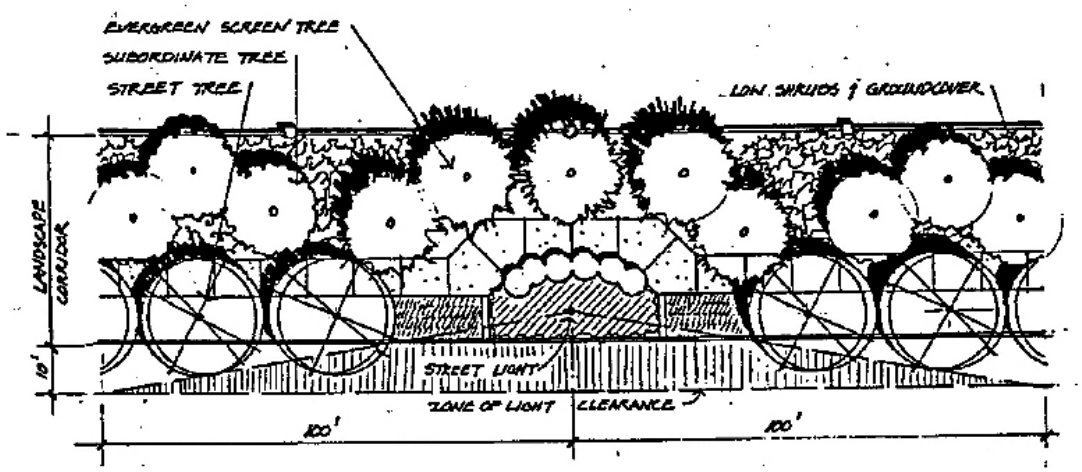


Type: Expressway Luminaire
Location: Along arterials (100' R.O.W.)
Spacing: 150' - 175' on center
Distance From Back of Curb: 15'-21' as specified



Type: Cobra Street Light Standard
Location: Along collectors and other streets (54'and 60' R.O.W.)
Spacing: 150' - 175' on center
Distance From Back of Curb: 4'

FIGURE B-30
ZONE OF LIGHT CLEARANCE AREA DETAIL



Planting shall be restricted within the zone of light for street lights in conformance with the following standards of the Electric Department:

a. "Zone of light" is defined as a triangular area with two points located at 100 feet from both sides of a lighting fixture (not the light post) and 10 feet out from the top back of curb and one point at the lighting fixture.
b. No planting of shrubs or trees which grow to a height greater than 4 feet at maturity are to be planted within the zone of light.
c. Trees planted outside of the clear area should have not more than 20% of their canopy encroach within the zone of light, based on the expected size of the trees at maturity.

5.7 BOLLARDS

Bollards should be precast out of natural or integral color concrete and circular in form. Finish should be sandblast or exposed aggregate, matching other site furnishings. Concrete bollards should be of a permanent design, placed to control vehicular traffic and pedestrian flow.

Bollards in pedestrian/bike paths leading to the school, park, or watershed open space sites shall conform to City standards. These bollards shall be removable steel post or approved replacement.

Lighted bollards should be similar in material and form to unlighted bollards, but may also be metal with baked on enamel finish. Lighted bollards should be selected for both resistance to vandalism and lighting characteristics. Lighting should not produce glare visible to pedestrians or motorists. Lighting should be high pressure sodium to match street lights.

FIGURE B-31
BOLLARD DETAIL

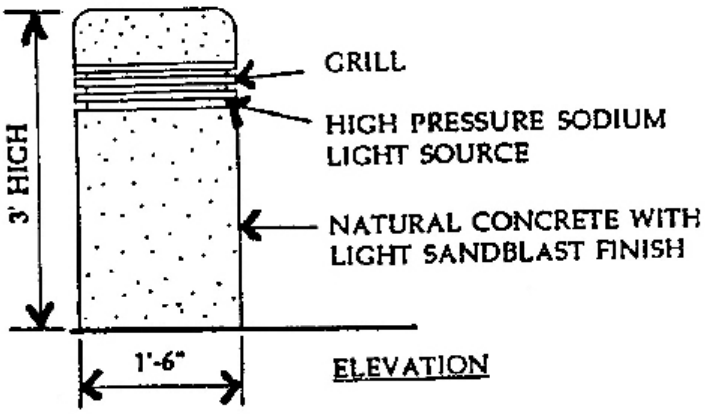
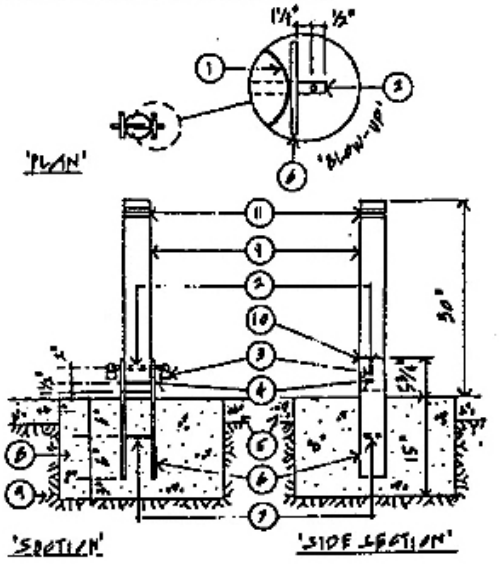


FIGURE B-32
COLLAPSIBLE STEEL POST BOLLARD DETAIL



LEGEND:

1. 11 GAUGE, 3 1/2" O.D. ROUND STEEL POST WITH CAPPED TOP & 3/4" HOLES FOR SWIVEL ROD AND 3/4" HOLES FOR LOCKING PIN. EASE ALL EDGES OF STEEL POST.
2. 5/8" DIA. x 7 1/4" LOCKING PIN WITH 3/4" HOLES ON BOTH ENDS FOR PADLOCK. EASE ALL EDGES OF LOCKING PIN. SEE "BLOW-UP" DRAWING.
3. PADLOCKS TO BE PROVIDED BY THE CITY OF ROSEVILLE AND THE APPROPRIATE AGENCY.
4. 5/8" DIA. STEEL SWIVEL ROD. FILET WELD 2" DIA.x1/8" STEEL WASHER TO BOTH ENDS.
5. CONCRETE PAVING/ASPHALT.
6. 3/8"x1'-5 3/4"x3 1/2" STEEL PLATE WITH 1" RADIUS CORNERS. EASE ALL EDGES.
7. 3/8" STEEL BRACE. FILET WELD BOTH SIDES TO BASE PLATES.
8. 2' ROUND CONCRETE FOOTING.
9. COMPACTED SUBGRADE.
10. 1" RADIUS CORNERS, TYP.
11. REFLECTIVE TAPE. REFER TO CITY PARK STANDARD.

NOTES:

1. ALL PIPES SHALL BE BLACK STEEL PIPE.
2. ALL JOINTS SHALL BE WELDED IN ACCORDANCE WITH CALIFORNIA STATE STANDARD SPECIFICATIONS FOR WELDING STRUCTURAL STEEL.
3. ALL PARTS (EXCEPT PADLOCKS) SHALL BE PAINTED WITH 2 COATS OF ZINC CHROMATE PRIMER & 2 COATS OF EXTERIOR ENAMEL. COLOR: YELLOW AS PER CITY STANDARD.
4. STRIPE BIKE PATH AS REQUIRED AS PER CAL TRANS STANDARDS. REFER TO "3.0 PEDESTRIAN/BICYCLE PATH."

5.8 PLANT LIST

The plants on the following pages are recommended for the HRN Specific Plan area. The plant list may be amended by landscape architects on a project-by-project basis to achieve a desired landscape effect provided adequate provisions are made to insure plant suitability.

Following are explanations for the columns appearing on the plan list:

Comments:

Miscellaneous comments pertaining to significant problems, maintenance considerations or other cultural factors.

Disease and Pest Problems:

Brief descriptions of significant insect or disease problems. Trees susceptible to recurring problems are likely to have high maintenance costs.

Minimum Required Soil Depth (SD):

The required soil depth to sustain healthy growth and structural stability. Intended as a guideline for plantings requiring import soils in shallow soil areas.

Relative Drought Tolerance:

Tree - A subjective rating of the species based upon relative drought tolerance. “5” indicates very high drought tolerance, while “1” indicates high water requirements. Most ornamental plants described as drought tolerant fall into the 3 or 4 category.

Shrub - Kc is the plant (technically “crop”) coefficient that refers to the estimated percentage of evapotranspiration (ETo) that a particular species needs to maintain minimum health. Depending on the plant type and relative tolerance to drought, Kc rates may range from 20% to 150% of ETo. For example, a plant species with a Kc of 0.1 is more drought tolerant than another species with an Kc of 0.8.

Salinity Tolerance (ST):

Waters high in salts may accumulate to levels intolerable to many plant species. For this reason, each plant listed has been subjectively rated for its salt tolerance, which offers a general understanding of a plants adaptability to high levels of salt. "+" indicates a relatively high tolerance level. "-" indicates a relatively low tolerance level. "?" indicates a questionable tolerance level due to conflicting data. A blank space indicates an unknown tolerance level. Other toxins, such as boron, chloride, and sodium, maybe present in the water supply and should also be considered in the plant selection.

Shallow or Invasive Roots:

Yes" indicates trees known to have shallow and/ or invasive roots. These trees often cause damage to nearby sidewalks, curbs or other structures, including drainage lines. Trees with shallow and/ or invasive roots planted 5' from concrete walks or within a 5' wide planting strip are to include root barriers.

Shape, Height and Spread:

Specific description of mature canopy silhouette and typical height and spread.

Smog Tolerance:

A rating of trees based upon tolerance to ozone as reported in Diseases of Trees and Shrubs by Sinclair, Lyon and Johnson. "?" indicates unknown tolerance. Symptoms appear on sensitive trees at average daytime concentrations of 0.05 ppm or when hourly concentrations exceed 0.1 ppm.

Stature:

Refers to the relative size of the tree selection. Generally trees growing over 40 feet are considered large species. A 30 to 40 foot height is regarded as medium stature and less than 30 foot is small.

Structure Characteristics:

Notes describing general branching characteristics:

Good - denotes no significant problems given proper pruning.

Poor- Trees with consistent problems difficult to correct.

Requires Training - Some species are capable of good structure, but require knowledgeable pruning to establish structure.

Variable - Indicates variability in the species and requires careful section.

Brittle - Trees are known to be subject to branch breakage.

Miscellaneous - Trees with special characteristics, such as pendulous habit or an open branch pattern.

Turf Suitability:

A general rating of a tree's ability to tolerate lawn conditions, assuming there is adequate sub-surface drainage.

5.9 P.U.E. FACILITIES

Landscaping plans shall conform with the City of Roseville Electric Department requirements for landscaping design.

TABLE B-4
PLANT LIST; EVERGREEN TREES AND DECIDUOUS TREES

Botanical Name	Stature	Shape, Height and Spread	Structure Characteristics	SD	Relative Drought Tolerance	Turf Suitability	ST	Smog Tolerance	Disease and Pest Problems	Shallow or Invasive Roots	Comments:
Evergreen Trees											
Calocedrus decurrens	Large	Pyramidal 60'/35'	Good	36"	4	*Poor	-	Tolerant	Subject to decline when drought stressed.	No	Allow sufficient room and soil volume to sustain long term growth.
Cedrus atlantica 'Glauca'	Large	Broad-pyramidal 60'/30'	Good	36"	4	Moderate		?	Few insect or disease problems.	No	Allow sufficient room for large stature.
Cedrus deodora	Large	Broad-pyramidal 80'/40'	Good	36"	4	Moderate		?	Few insect or disease problems.	No	Allow sufficient room for large stature.
Cinnamomum camphora	Large	Broad-global 50'/60'	Good	36"	3	Moderate	+	?	Occasionally anthracnose and Verticillium wilt are problems.	*Yes	Shallow rooting is primary problem.
Cupressus sempervirens	Medium	Columnar 30'/10'	Good	24"	4	Poor		?	Susceptible to Seridium canker if stressed.	No	More appropriate in narrow planting areas.
Laurus 'Saratoga'	Medium	Pyramidal 40'/25'	Good	24"	4	*Poor	-	?	Few insect or disease problems.	No	Relatively new introduction. Initial performance is good.
Magnolia grandiflora 'Majestic Beauty'	Large	Broad-pyramidal 50'/35'	Dense structure	36"	3	Moderate	-	Tolerant	Few insect or disease problems.	*Yes	Shallow rooting and leaf and flower litter are primary issues.
Magnolia grandiflora 'Russet'	Medium	Broad-pyramidal 40'/35'	Good	24"	3	Moderate	-	Tolerant	Few insect or disease problems.	*Yes	Shallow rooting and leaf and flower litter are primary issues.
Magnolia grandiflora 'Samuel Sommer'	Medium	Broad-pyramidal 40'/35'	Open branch structure	24"	3	Moderate	-	Tolerant	Few insect or disease problems.	*Yes	Shallow rooting and leaf and flower litter are primary issues.
Olea europaea	Medium	Rounded 30'/30'	Good	24"	5	Poor	?	?	Susceptible to root rot; verticillium wilt; and olive knot when stressed.	No	Will stress in poorly drained soils. Messy fruit. Fruitless varieties available.
Pinus canariensis	Large	Broad-pyramidal 60'/60'	Good	36"	4	*Poor		Moderate	Irregular pine scale, needle blights and gall rust can occur.	*Yes	One of the most reliable pine species in California though susceptible to problems when stressed.
Pinus halepensis	Medium	Broad-procumbent 40'/40'	Variable	24"	4	*Poor	?	?	Irregular pine scale, needle blights and gall rust can occur.	No	Variable forms and habits; can be procumbent. Mondell pine may be better alternative.
Pinus thunbergiana	Large	Broad-conical 60'/40'	Variable	36"	3	*Poor	+	Tolerant	Irregular pine scale, needle blights and gall rust can occur.	No	One of the most reliable pine species in California though susceptible to problems when stressed.
Podocarpus gracilior	Medium	Rounded 40' X 40'	Good	24"	4	*Poor	-	?	Few insect or disease problems.	No	Podocarpus gracilior has been used extensively as a street tree in recent years and is doing well.
Quercus agrifolia	Large	Broad-global 50'/60'	Good	36"	5	*Poor		?	Branch die-back (Diplodia), foliar insects, witches' broom, and acorn drip.	No	Messy and high maintenance trees in high use areas.
Quercus ilex	Large	Pyramidal 50'/40'	Good	36"	4	Moderate	-	Moderate	Few problems except when subjected to drought stress.	No	Acorn litter is primary problem.
Quercus virginiana	Large	Rounded 50'/50'	Good	36"	3	Good		Moderate	Occasional foliar insects and diseases.	No	This tree has been performing well in hot sites and in turf. Acorn litter.
Quercus wislizenii	Large	Rounded 50'/50'	Good	36"	5	*Poor		?	Foliar insects and diseases. Root diseases if over- irrigated.	No	Foliar insects and acorn litter are maintenance issues.
Rhus lancea	Medium	Broad-global 30'/25'	Requires training	24"	4	Moderate		?	Few insect or disease problems.	No	Reliable tree in most situations. Irregular branch structure.
Schinus molle	Medium	Broad-global 40'/40'	Good	24"	4	*Poor	+	?	Pepper tree psyllid is recurring problem.	*Yes	Pepper tree psyllid issue should be considered. Shallow rooted and messy.
Sequoia sempervirens	Large	Pyramidal 80'/35'	Good	36"	2	Good		Tolerant	Few problems with adequate drainage and regular irrigation.	No	Allow sufficient room and soil volume to sustain long term growth. Seeds are staining.
Umbellularia californica	Large	Ovoid 50'/40'	Good	36"	4	*Poor		?	Scale on drought stressed trees.	No	Durable tree with adequate drainage. Availability usually a problem.
Deciduous Trees											
Alnus cordata	Medium	Ovoid 40'/30'	Good	24"	2	Good		Tolerant	Cankers and borers on drought stressed trees.	No	Best alternative to Alnus rhombifolia. May still be susceptible to borers when stressed.
Celtis australis	Medium	Broad-global 40'/40'	Good	24"	3	Moderate		?	Few insect or disease problems.	No	A good choice for a street tree. Occasionally chlorotic in high pH soils.
Celtis sinensis	Medium	Broad-global 40'/35'	Good	24"	3	Moderate		?	Few insect or disease problems.	No	A good choice for a street tree. Occasionally chlorotic in high pH soils.
Gingko biloba 'Autumn Gold'	Large	Global 60'/50'	Good	36"	3	Moderate	-	Tolerant	Few insect or disease problems.	No	Reliable tree. Can be slow growing in poor sites.
Gleditisia triacanthos	Large	Ovoid 50'/50'	Requires training	36"	3	Moderate	?	Moderate	Honeylocust pod gall midge is primary problem.	No	Pod gall midge is serious problem.
Liquidambar styraciflua	Large	Pyramidal 60'/30'	Good	36"	2	Moderate	-	Moderate	Few insect or disease problems.	*Yes	Shallow rooting is primary issue.
Liriodendron tulipifera	Large	Pyramidal-global 60'/40'	Good	36"	2	Moderate		*Sensitive	Foliar insects and exudate drip are maintenance issues.	*Yes	Subject to chlorosis in high pH soils. Foliage is susceptible to damge from high winds.
Morus alba	Medium	Broad-global 40'/40'	*Poor- brittle	24"	2	Moderate		?	Foliar insects and borers if stressed.	No	Fast growth leading to brittle structural characteristics, heavy surface roots, and short life.
Nyssa sylvatica	Medium	Ovoid 40'/30'	Requires training	24"	2	Good		Tolerant	Foliar insects occasional problem.	No	This tree should perform well in Roseville.
Pistacia chinensis	Medium	Ovoid 45'/35'	Requires training	24"	4	Moderate	+	Moderate	Verticillium wilt occasionally a problem.	No	Generally a reliable street tree.
Platanus acerifolia 'Bloodgood'	Large	Round-global 60'/40'	Good	36"	3	Good	+	*Sensitive	Susceptible to mildew and scale.	No	Use section P. acer. 'Yarwood' for mildew resistance. Graft compatability problems reported.
Platanus acerifolia 'Yarwood'	Large	Round-global 60'/40'	Requires training	36"	3	Good	+	?	Foliar insects can occur. Resistant to mildew.	No	Check graft compatibility. Select trees for proper branch structure.

*Asterisk indicates intolerance to a specific environmental condition or situation on most cases.
(?) Question mark indicates unknown tolerance.

TABLE B-5
PLANT LIST; DECIDUOUS TREESAND ACCENT TREES

Botanical Name	Stature	Shape, Height and Spread	Structure Characteristics	SD	Relative Drought Tolerance	Turf Suitability	ST	Smog Tolerance	Disease and Pest Problems	Shallow or Invasive Roots	Comments
Deciduous Trees (continued)											
Pyrus calleryana 'Aristocrat'	Medium	Pyramidal 40'/30'	Good	24"	3	Moderate		Tolerant	Occasionally susceptible to fireblight.	No	This tree should perform well in Roseville.
Pyrus calleryana 'Bradford'	Medium	Ovoid 50'/30'	Good	24"	3	Moderate		Tolerant	Occasionally susceptible to fireblight.	No	Upsweeping branch structure. Resists wind damage.
Pyrus calleryana 'Capitol'	Medium	Fastigate 35'/15'	Good	24"	3	Moderate		Tolerant	Occasionally susceptible to fireblight.	No	Narrow habit with good structural charateristics.
Pyrus calleryana 'Redspire'	Medium	Pyramidal 35'/25'	Good	24"	3	Moderate		Tolerant	Occasionally susceptible to fireblight.	No	Narrow habit with good structural charateristics.
Quercus coccinea	Large	Broad-pyramidal 70'/60'	Good	36"	3	Good		Moderate	Occasional foliar insects.	No	Availability may be problem. Acorn litter.
Quercus douglasii	Large	Broad-global 50'/50'	Good	36"	5	*Poor		?	Branch die-back (Diplodia), foliar insects, and acorn drip.	No	Foliar insects and acorn litter are maintenance issues.
Quercus lobata	Large	Broad-global 50'/50'	Good	36"	4	*Poor	+	?	Foliar insects and acorn drip.	No	Foliar insects and acorn litter are maintenance issues.
Quercus palustris	Large	Pyramidal-global 60'/40'	Pendulous habit	36"	3	Good	-	Moderate	Occasional foliar insects and diseases.	No	Leaves hang on in winter. Acorn litter. Excellent lawn tree.
Quercus rubra	Large	Broad-pyramidal 70'/60'	Good	36"	3	Good	+	Moderate	Occasional foliar insects and diseases.	No	Requires good soil conditions. Acorn litter.
Sapium sebiferum	Medium	Round-global 35'/35'	Requires training	24"	2	Moderate		?	Branch dieback, bark sunscald, and foliar insects are occasional problems.	No	Limited plantings in Fresno are performing well.
Sophora japonica 'Regent'	Large	Round-global 50'/45'	Good	36"	3	Good	-	Tolerant	Occasionally foliar insects.	*Yes	Seed pods may be a problem
Tilia cordata 'Greenspire'	Medium	Pyramidal 40'/30'	Good	24"	2	Good		Tolerant	Foliar insects and honeydew drip.		May not tolerate hot winds. Foliar insects are maintenance issue.
Accent Trees											
Acer palmatum	Small	Round-global 20'/20'	Good	18"	2	Moderate		?	Verticillium wilt is primary disease.	No	Japanese maples will require afternoon shade.
Albizia julibrissin	Medium	Vase shaped 40'/50'	Requires training	24"	3	Moderate	+	?	Occasional vascular wilts and foliar insects.	No	Messy flower debris is a maintenance issue.
Cercis canadensis	Small	Round-global 30'/30'	Good	18"	3	Moderate		*Sensitive	Occasionally foliar insects a problem.	No	Heavy seed pod production may be maintenance issue.
Cornus florida	Small	Irregular to 20' high	Good	18"	2	Poor		Tolerant	Root/vascular diseases.	No	Needs good drainage. Requires shade.
Crataegus phaenopyrum	Small	Ovoid 25'/20'	Good	18"	3	Moderate		Tolerant	Some foliar and borer insect susceptibility.	No	Good, adaptable tree. Thorns and fruit may be an issue.
Enobotrya deflexa	Small	Broad-global 20'/20'	Good	18"	3	*Poor	-	?	Fungal leaf spot in winter.	No	Susceptibility to leaf spot is primary issue.
Koelreuteria panniculata	Small	Round-global 30'/30'	Requires training	18"	3	Moderate	-	Moderate	Few insect or disease problems.	No	Adaptable and reliable tree.
Lagerstroemia indica	Small	Round-global 25'/25'	Good	18"	3	*Poor	+	Moderate	Mildew prone. Use 'Indian Tribe' selections.	No	Use hybrid selections for greater mildew resistance (e.g. L. Tuskagee').
Magnolia grandiflora 'St. Mary'	Small	Round-global 25'/25'	Good	18"	3	Moderate	-	Moderate	Few insect or disease problems.	*Yes	For best performance requires deep soils and irrigation.
Magnolia kobus	Small	Ovoid 30'/20'	Good	18"	3	Moderate		Moderate	Occasional vascular diseases and foliar insects.	*Yes	Best in afternoon shade.
Magnolia stellata	Small	Broad-global 10'/20'	Good	18"	3	Moderate		Moderate	Occasional vascular diseases and foliar insects.	*Yes	Best in afternoon shade.
Malus 'Liset'	Small	Columnar-ovoid 15'/15'	Good	18"	2	Good		Moderate	Good disease resistance.	No	Disease resistant selection. Fruit may be a maintenance issue.
Malus 'Profusion'	Small	Round-global 20'/20'	Good	18"	2	Good		Moderate	Good disease resistance.	No	Disease resistant selection. Fruit may be a maintenance issue.
Malus 'Red Baron'	Small	Fastigate 18'/8'	Good	18"	2	Good		Moderate	Good disease resistance.	No	Disease resistant selection. Fruit may be a maintenance issue.
Malus 'Sentinel'	Small	Fastigate 20'/12'	Good	18"	2	Good		Moderate	Good disease resistance.	No	Disease resistant selection. Fruit may be a maintenance issue.
Malus floribunda	Small	Vase shaped 18'/25'	Good	18"	2	Good		Moderate	Good disease resistance.	No	Disease resistant selection. Fruit may be a maintenance issue.
Prunus cerasifera 'Krauter Vesuvius'	Small	Ovoid 20'/15'	Good	18"	3	Moderate		Moderate	Some foliar and borer insect susceptibility.	No	Foliage is susceptible to damge from high winds.
Pyrus kawakamii	Small	Round-global 25'/25'	Requires training	18"	3	Moderate	-	Moderate	Susceptible to fireblight and occasional foliar insects.	No	Susceptible to fireblight.

(*) Asterisk indicates intolerance to a specific environmental condition or situation in most cases.
(?) Question mark indicates unknown tolerance.

Botanical Name	Exposure Tolerance	SD	Akc (Crop Coefficient) Rating	ST	Comments
Large Stature Shrubs (>8')					
Arbutus unedo	full sun	18"	.3-.5		Coarse texture; red fruit.
Callistemon citrinus	full sun	18"	.3-.5		Red flowers in spring.
Camellia japonica	shade	18"	.8-1.2		Must have good drainage and proper exposure.
Cercis occidentalis	full sun	18"	.2-.4		Pink flowers in spring; seed pods.
Cotoneaster lacteus	full sun	18"	.3-.5		Red berries in fall; can reseed.
Euonymus fortunei	full sun	18"	.6-.8		Smaller varieties require less soil depth.
Euonymus japonica	full sun	18"	.6-.8	+	Smaller varieties require less soil depth.
Feijoa sellowiana	full sun	18"	.6-.8	-	Edible fruit produced; can be messy.
Heteromeles arbutifolia	full sun	18"	.3-.5	-	Red berries in fall; attractive to birds.
Ilex altaclarensis 'Wilsonii'	sun/shade	18"	.6-.8	-	Heavy producer of bright red berries.
Juniperus chinensis 'Torulosa'	full sun	18"	.5-.7	+	Irregular form.
Nerium oleander	full sun	18"	.2-.4	+	Dependable flower display in summer.
Osmanthus fragrans	pm shade	18"	.6-.8		Fragrant but subtle flowers; good screening shrub
Photinia fraseri	full sun	18"	.6-.8	-	Bright red foliage in spring.
Pittosporum tenuifolium	full sun	18"	.6-.8		Good fast screening shrub; fine textured.
Prunus caroliniana	full sun	18"	.6-.8		Medium textured screening shrub.
Rhamnus alaternus	full sun	18"	.6-.8		Susceptible to vascular diseases when stressed.
Rhodendron species	shade	18"	.8-1.2		Specify heat-tolerant varieties.
Spiraea species	full sun	18"	.7-.9		Provide generous quantity of flower display.
Viburnum japonicum	pm shade	18"	.8-1.0		Susceptible to aphid infestation.
Medium Stature Shrubs (4'-8')					
Abelia grandiflora	full sun	12"	.6-.8	?	Pink flowers in summer, fine textured.
Berberis thunbergii 'Atropurpurea'	full sun	12"	.6-.8	+	Deciduous shrub with dark red foliage.
Ceanothus 'Dark Star'	full sun	12"	.4-.6		Brilliant blue flower display in spring.
Chaenomeles hybrids	pm shade	12"	.6-.8		Deciduous shrubs; tolerant of poor drainage.
Choisya ternata	pm shade	12"	.6-.8	+	Susceptible to spider mites.
Cistus purpureus	pm shade	12"	.5-.7		Reddish-purple flowers; short-lived.
Coleonema pulchrum	pm shade	12"	.6-.8	+	Magenta pink flowers late winter; fine textured.
Eleagnus pungens	full sun	12"	.5-.7	+	Durable shrub; variegated forms available.
Escallonia fradesi	full sun	12"	.6-.8		Dark green foliage; pink flowers spring to fall.
Fatsia japonica	shade	12"	.8-1.0		Coarse textured shade plant.
Grevillea noelli	full sun	12"	.4-.6		Durable plant useful as bank cover; fine textured.
Juniperus chinensis 'Sea Green'	full sun	12"	.5-.7	+	Arching vase-like habit; dark green foliage.
Ligustrum japonica 'Texanum'	full sun	12"	.8-1.0	+	Medium textured shrub used often as hedge.
Mahonia aquifolium	shade	12"	.6-.8	-	Holly like foliage; yellow flowers; best in shade.
Myrtus communis 'Compacta'	pm shade	12"	.6-.8	+	Also available in variegated form; aromatic leaves.
Nandina domestica	pm shade	12"	.6-.8	-	Delicate form; red berries.
Phormium tenax	full sun	12"	.5-.7		Allow room for mature plant size.
Pittosporum tobira	full sun	12"	.6-.8	+	Spreading shrub with fragrant flowers.
Pittosporum tobira 'Variegata'	pm shade	12"	.6-.8	+	Variegated form; best in shade.
Rhamnus californica 'Eve Case'	full sun	12"	.4-.6		Durable spreading plant; berries come in 3 colors.
Raphiolepis indica 'Clara'	full sun	12"	.4-.6	+	Very durable shrub; white flowering in spring.
Ribes sanguinium	pm shade	12"	.8-1.0	+	Deciduous flowering shrub for shade areas.
Romneya coulteri	full sun	12"	.2-.4		Can be invasive; good for natural effect.
Viburnum tinus 'Spring Bouquet'	pm shade	12"	.8-1.0	?	White flowers late winter.
Westringia rosmarniformis	full sun	12"	.5-.7		Durable shrub, small white flowers, good bank cover
Xylosma congestum 'Compacta'	full sun	12"	.5-.7	+	Compact form, light green-yellow foliage, thorns
Small Stature Shrubs(<4') and Woody Groundcovers					
Abelia grandiflora 'Sherwoodi'	full sun	12"	.6-.8		Low spreading form of Abelia grandiflora.
Arctostaphylos uva-ursi 'Point Reyes'	full sun	12"	.5-.7		Fruit bright red or pink.
Azaleas (Shade varieties)	shade	12"	.8-1.2		Must have good drainage and proper exposure.
Azaleas (Southern indica varieties)	pm shade	12"	.8-1.2		Must have good drainage and proper exposure.
Baccharis pilularis 'Twin Peaks'	full sun	12"	.5-.7	+	Durable groundcover if moderately irrigated.
Berberis thunbergii 'Crimson Pygmy'	full sun	12"	.8-1.0		Dwarf form of Purple Barberry.
Buxus microphylla japonica	full sun	12"	.6-.8	+	Commonly used as small hedge.
Camellia sasanqua	pm shade	12"	.8-1.0		Various varieties available.
Ceanothus griseus horizontalis 'Yankee Point'	pm shade	12"	.6-.8		Spreading groundcover, requires good drainage
Ceanothus 'Joyce Coulter'	full sun	12"	4-.6		Good bank cover; spreads up to 15'.

Botanical Name	Exposure Tolerance	SD	Akc (Crop Coefficient) Rating	ST	Comments
Small Stature Shrubs(<4') and Woody Groundcovers, Con't.					
Cistus hybridus	pm shade	12"	.5-.7		Fragrant, white flowers; short-lived.
Coprosma kirkii	full sun	12"	.6-.8	+	Useful groundcover with irrigation, olive green color.
Correa 'Carmine Bells'	pm shade	12"	.6-.8		Pink fuchsia flowers, dark green foliage.
Cotoneaster dammeri 'Coral Beauty'	full sun	12"	.6-.8		Semi-deciduous in cold winters; heavy berry crop.
Cotoneaster horizontalis	full sun	12"	.6-.8	-	Interesting herringbone branch pattern; deciduous.
Escallonia 'Terri'	full sun	12"	.6-.8		Compact form of Escallonia, pink flowers.
Euryops viridis	full sun	12"	.4-.6		Bright yellow daisy flowers in winter and spring.
Genista lydia	full sun	12"	.4-.6		Dwarf broom with brilliant yellow flower display.
Ilex vomitoria 'Nana'	sun/shade	12"	.6-.8		Compact; can be sheared.
Juniperus chinensis procumbens 'Nana'	pm shade	12"	.4-.6	+	Prostrate form of Japanese juniper.
Juniperus sabina 'Broadmoor'	full sun	12"	.4-.6		Lacy dark green foliage.
Lavandula dentata	full sun	12"	.5-.7	+	Silver grey foliage; purple flowers for many months.
Mahonia aquifolium 'Compacta'	shade	12"	.6-.8		Compact form of Oregon grape; use in shade.
Nandina 'Harbor Dwarf'	pm shade	12"	.6-.8	-	Groundcover form of heavenly bamboo.
Pittosporum tobira 'Wheeleri'	pm shade	12"	.6-.8	+	Dense, compact habit; fragrant flowers.
Punica granatum 'Nana'	full sun	12"	.5-.7	-	Orange-red flowers; dry red fruit.
Pyracantha 'Santa Cruz'	full sun	12"	.6-.8	+	Spreading habit good for banks, bright red berries.
Raphiolepis indica 'Ballerina'	full sun	12"	.4-.6	+	Low growing; pink flowers spring; disease resistant
Raphiolepis indica 'Jack Evans'	full sun	12"	.4-.6	+	Purple tinged foliage, good display of pink flowers.
Ribes viburnifolium	shade	12"	.4-.6		Good, dry groundcover beneath native oaks.
Rosmarinus officinalis 'Lockwood de Forest'	full sun	12"	.4-.6	+	Blue flowers; durable groundcover; attracts bees
Salvia leucantha	full sun	12"	.5-.7		Flower spikes and compact form; winter deciduous.
Trachelospermum asiaticum	pm shade	12"	.8-1.0		Fragrant white flowers.
Trachelospermum jasminoides	pm shade	12"	.8-1.0	-	Useful as vine or groundcover, fragrant white flowers.
Herbaceous Groundcovers					
Fragaria chiloensis	pm shade	6"	.8-1.2		Red berries; requires good drainage.
Gazania species	full sun	6"	.5-.7	+	Use virus resistant strains (i.e. 'Mitsuwa Yellow').
Festuca ovina 'Glauca'	pm shade	6"	.8-1.0	-	Silvery-gray foliage.
Hedera helix	pm shade	6"	.8-1.0	+	Medium textured ivy for shade; may be aggressive.
Hedera helix 'Needlepoint'	shade	6"	.8-1.0	+	Fine textured; slow growing ivy; good for small areas.
Hypericum calycinum	full sun	6"	.6-.8		Bright yellow flowers in summer.
Trifolium fragiferum	full sun	12"	.6-.8		Difficult to control broad-leafed weeds.
Vinca minor	pm shade	6"	.6-.8		Fine textured, blue periwinkle flowers in spring.
Vines					
Clytostoma callistegioides	pm shade	12"	.6-.8		Lavendar flowers; needs support.
Distictis buccinatoria	full sun	12"	.8-1.0		Subject to damage in coldest winters; red flowers.
Ficus pumila	shade	6"	.6-.8		Attaches to walls with no support needed. May damage stucco surfaces.
Gelsemium sempervirens	full sun	12"	.6-.8		Evergreen; yellow flowers; may be used as groundcover
Jasminum polyanthum	pm shade	6"	.6-.8	-	Evergreen; fragrant white flowers.
Lonicera japonica 'Halliana'	full sun	6"	.6-.8	+	Useful as spreading bank cover; fragrant flowers.
Parthenocissus tricuspidata	pm shade	6"	.6-.8	+	Attaches to walls with no support needed. May damage stucco surfaces.
Rosa banksiae	full sun	12"	.5-.7	-	Evergreen; yellow or white flowers; also as ground-cover and good bankcover.
Solanum jasminoides	full sun	12"	.5-.7		Usually evergreen; white flowers; continual bloom
Wisteria sinensis	sun/shade	12"	.4-.6	+	Requires strong support.
Perennials					
Agapanthus africanus	full sun	6"	.5-.7		Evergreen perennial; bright blue clusters in spring and summer. Varieties with white flowers and dwarf forms available.
Dietes vegeta	full sun	6"	.6-.8		Stiff, pointed, upright foliage; white lily flowers.
Hemerocallis hybrids	full sun	6"	.8-1.0	+	Many colors and sizes available; most deciduous.
Kniphofia uvaria	full sun	6"	.4-.6		Evergreen perennial; available with orange or yellow flowers or dwarf sizes.
Phormium tenax (dwarf varieties)	full sun	6"	.5-.7	+	Evergreen perennial; dwarf varieties include 'Maori Sunrise' and 'Tom Thumb.'
Turf Selection					
Turf Type Tall Fescues	full sun	6"	.8-1.0	+	Use blend of 3 or more varieties.

5.10 Sub-Soil Preparation

Additional soil depth and adequate drainage may need to be provided for Mehrten soil areas by importing soil and by ripping the volcanic sub-soils. Drainage piping techniques for volcanic subsoil areas will vary by location. Site subsoil classifications and associated rough grading limitations are described as follows:

a. The Mehrten Volcanic Formation (Mudflow) is the hard-surfaced mudflow peculiar of the Plan Area. Of the three subsoil groups, this is the most difficult to excavate. This subsoil formation may be ripped into large chunks with a Cat D9 or D10 with a single tooth ripper, then broken down into smaller pieces and used as a gravel substitute. Difficulty of excavation may increase the expense and processing time for landscape preparation.

b. The Turlock Lake Formation is the most favorable for landscaping purposes of the subsoil groups that exist. This subsoil group is a composition of a heterogeneous assemblage of silt and sand interbedded with granite and metamorphic gravel. Ability to excavate should not be a problem and standard soil preparation over the Turlock Lake Formation should be adequate.

c. The Mehrten Conglomerate Formation consists of compacted layers of cobbles and boulders. This subsoil group will vary in the ability to be excavated due to degrees of cementation and weathering. Generally, the Mehrten Conglomerate should be rippable with a Cat D8, D9 or a similar-sized equipment.

Sub-surface drains are an alternative for providing drainage where ripping of the volcanic sub-soils is not practical or where additional drainage is necessary.

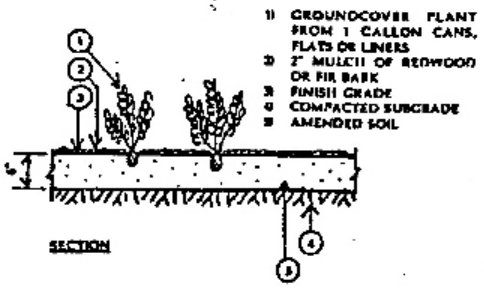
The amount of fill required for landscaping planting will depend upon the type of plants used and the amount of top soil available. The plant list includes a category for minimum required soil depth for each species. The landscape architect should use this information to provide sufficient soil depth for the plan selection and to prepare the soil as per the planting details. (See planting and staking details, Figures B-33, B-34 and B-35)

5.11 Import Soil

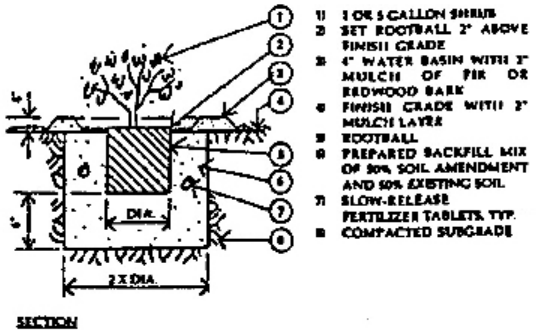
Import soils will be required where soil depth does not now meet landscaping needs. It is important that import soils characteristics are compatible with the existing native top soils. It will be necessary to ensure that fill soils be equal to or coarser in texture than the existing native soils. Water does not freely drain from fine textured soils into coarse textured soils. For this reason, most import soils will need to be of a sandy loam texture, unless placed below loam or clay loam soils.

Planting mounds also may be used to provide needed soil depth. This is an effective approach that limits the amount of required import fill. The use of planting mounds requires certain design considerations to ensure an adequate planting environment. The soil used for constructing mounds should be equivalent or coarser in texture than the existing native soil to permit drainage into the lower soils. Mounds may present special irrigation problems. Different solar exposures on opposite sides of the mound may require different irrigation solutions. Separate irrigating valving may be needed to allow efficient irrigation management.

FIGURE B-33
GROUNDCOVER AND SHRUB PLANTING DETAILS

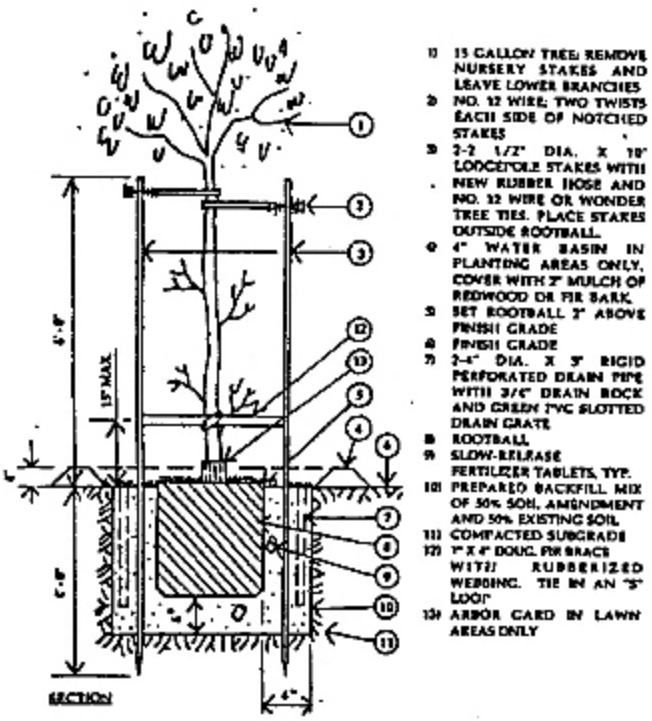


GROUNDCOVER PLANTING DETAIL

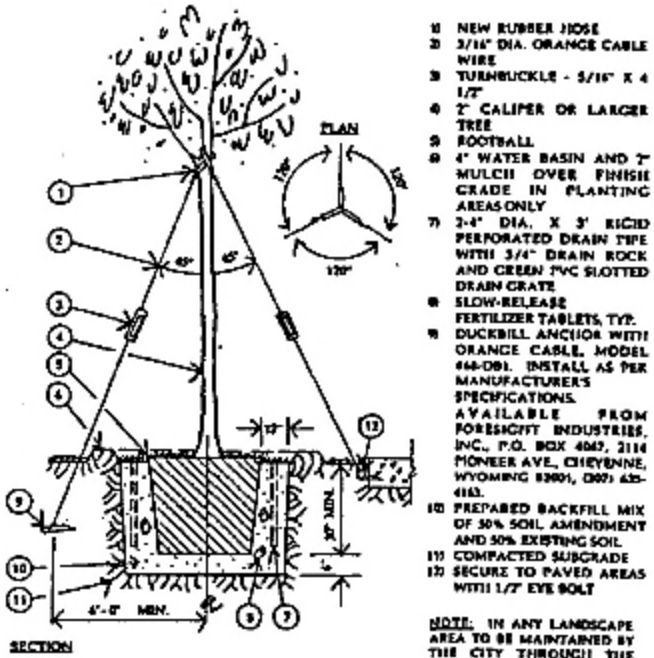


SHRUB PLANTING DETAIL

FIGURE B-34
TREE PLANTING AND STAKING DETAIL



15 GALLON TREE STAKING DETAIL



TREE GUYING DETAIL

NOTE: IN ANY LANDSCAPE AREA TO BE MAINTAINED BY THE CITY THROUGH THE LIGHTING AND LANDSCAPE DISTRICT, TREE GUYING WILL NOT BE ACCEPTED.

Import soil is to be specified as follows:

Texture:

Import soils shall be uniform and classified as a sandy loam texture.

Chemistry:

Import soils shall have a pH between 5.5 and 7.0. Salinity as measured by electrical conductivity (ECe) shall be no greater than 3.0 millimhos per centimeter. Sodium Adsorption Ratio (SAR) shall not exceed 6.0. Boron content shall be no greater than 1.0 parts per million.

Quality:

Import soils shall be free of weeds, pathogens, litter and debris. Contractor shall submit samples for review and testing to a qualified soils laboratory.

5.12 Soil Amendments

The following amendment recommendations are intended to address the average soil condition occurring in the Plan region. The landscape architect is encouraged to perform additional soil analyses to verify the appropriateness of the amendment procedures.

Liming:

The primary amendment requirement will be to raise soil pH through the incorporation of limestone, which will add calcium. Phosphorous also will become more available at higher pH levels.

The average liming requirements for these soils will be approximately 2 tons per acre or 100 lbs. of finely ground limestone per 1,000 square feet. The lime should be uniformly incorporated in the top 6 inches of soil. Soils should then be irrigated and allowed to dry several times prior to planting.

Organic Amendments:

The incorporation of organic amendments is recommended in turf and herbaceous groundcover areas and useful in areas where soils are highly compacted from grading or are clay loam sub-soils. The preferred organic amendment is nitrogen enhanced fir or redwood shavings or 1/2 inch minus bark. These coarser materials will have a greater longevity in the soils than a sawdust product.

Application rates for lawn areas will be 6 cubic yards per 1,000 square feet uniformly incorporated to a depth of 6 inches, or 8 cubic yards per 1,000 square feet incorporated to 8 inches. Rate should depend upon depth of effective incorporation.

Tree and shrub plantings should be widely cultivated to relieve compaction. If used, organic amendments should be incorporated in back fill mixes at a 1/3 by volume rate.

Planting Fertilizers:

Fertilizer incorporation of turf and herbaceous groundcover areas prior to planting includes the following fertilizers at rates per 1,000 square feet:

- 10 lbs. single super phosphate (0-20-0)
- 5 lbs. potassium sulfate (0-50-0)
- Optional: 10 lbs. 6-20-20 commercial granular fertilizer.

The lime organic amendments and fertilizers may be incorporated simultaneously.

After sodding, turf areas should be fertilized with calcium nitrate (15-0-0) at the rate of 12 lbs. per 1,000 square feet and then be thoroughly irrigated. If lawn areas are seeded apply 1/2 this rate of nitrogen fertilizer.

The back fill mixes for container planting should include 2 lbs. of 6-20-20 incorporated per cubic yard of backfill mix. After planting, 12 lbs. of calcium nitrate (15-0-0) should be applied per 1,000 square feet and the area thoroughly irrigated.

Maintenance Fertilizers and Amendments:

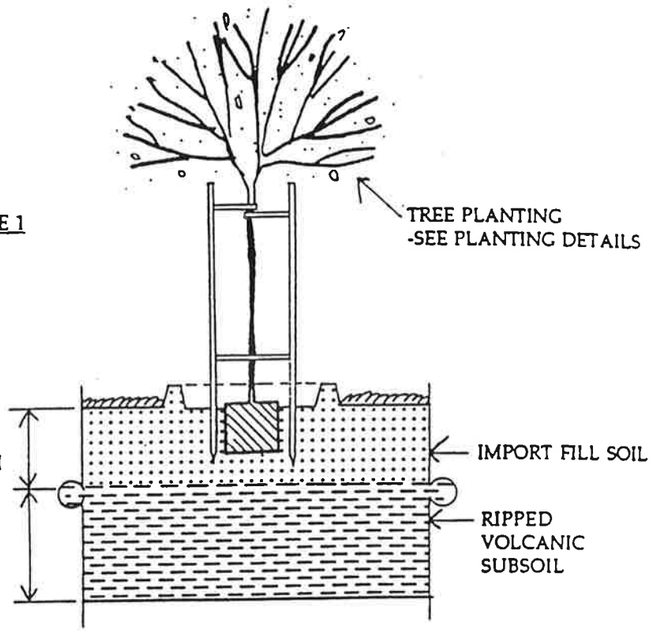
The use of slow release nitrogen fertilizers is recommended for a consistency of nutrient supply. However, slow release formulations tend to be acidic in reaction. For this reason, it is recommended that slow release formulations be used alternately with calcium nitrate to avoid acidification of soils. Soils can be checked periodically to monitor this approach. Additionally, pelletized forms of limestone can be applied for especially acidic soils.

5.13 Planting and Staking Details

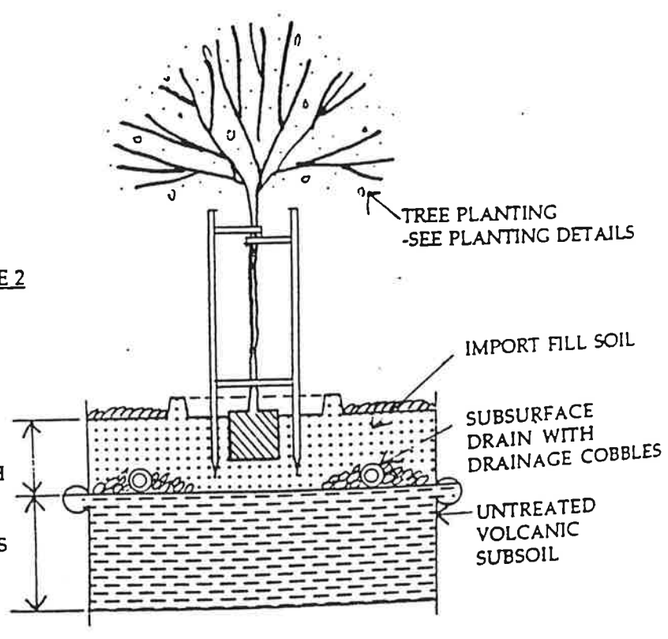
The following details serve as guidelines to successful plantings in the HRN Specific Plan area. In addition to the standard planting details, planting alternatives offer solutions to problematic conditions inherit within the area, particularly in the Mehrten volcanic formation subsoil areas.

FIGURE B-35
PLANTING AND STAKING DETAILS FOR MEHRTEN SOILS

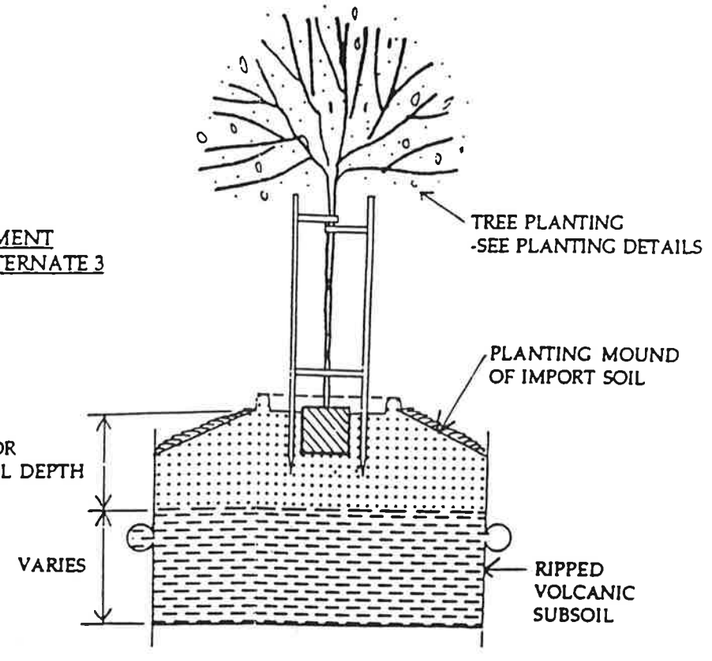
PLANTING SOIL TREATMENT
ON GROUP 2 SOILS - ALTERNATE 1



PLANTING SOIL TREATMENT
ON GROUP 2 SOILS - ALTERNATE 2



PLANTING SOIL TREATMENT
ON GROUP 2 SOILS - ALTERNATE 3



PLANTING SOIL TREATMENT
ON GROUP 2 SOILS - ALTERNATE 4