

Cordova Hills

Paseo Central
Neighborhood Trail

Neighborhood Trail

Paseo Central

Master Plan March 2013

Minor Amendment: June 2016

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Sacramento County

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March 2013

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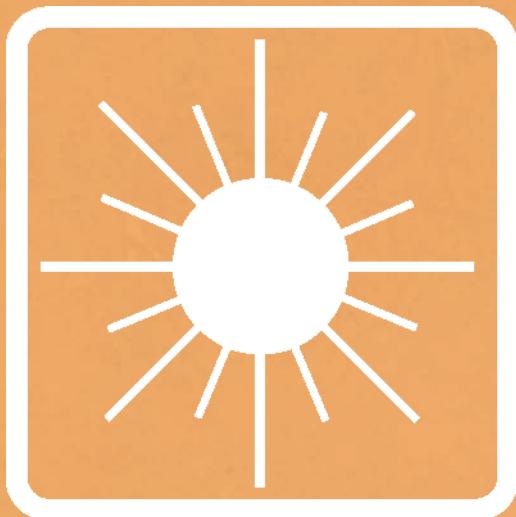
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Chapter 1

INTRODUCTION



INTRODUCTION

1.1 LOCATION

Cordova Hills is located on approximately 2,668.5 acres in southeastern Sacramento County. The project is entirely within the Urban Services Boundary (USB) with the exception of some small floodplain areas and 253.6 acres known as the bufferlands that will be utilized for agriculture compatible uses. Refer to Figure 1.1: Regional Location.

The Cordova Hills site is located adjacent to the eastern boundary of the City of Rancho Cordova, the approved Sunridge Specific Plan and the proposed Suncreek Specific Plan. Refer to Figure 1.2 Cordova Hills Location Map. Grant Line Road separates Cordova Hills from the Sunridge and Suncreek Specific Plans as the road provides frontage access to all three projects. The eastern side of Cordova Hills abuts Carson Creek; the northern boundary line of the property is Glory Lane, which is approximately 1/2 mile south of Douglas Road. The Kiefer Landfill and its associated bufferlands occur southwest of the project. A bufferland limited to agricultural compatible uses extends 2,000 feet from the landfill property boundary onto the adjacent lands including Cordova Hills. The University / College Campus Center western boundary abuts the bufferlands in Cordova Hills.

1.2 PROJECT CHARACTERISTICS

Cordova Hills is currently vacant. The elevation of the site ranges from approximately 130 feet to 270 feet with the highest elevation occurring at the University / College Campus Center site bluff and the lowest elevation occurring in the southern edge of the University / College Campus Center site.

The topography on the western third of the project is relatively flat, consisting of a plateau gently sloping toward Grant Line Road. The eastern edge of the plateau slopes down into the Paseo Central that traverses north to south in the center of the project.

The site elevation rises east of the central drainage where the ground begins to undulate into gently rolling hills to the eastern edge of Cordova Hills. The land then falls to the floodplain at Carson Creek. The hills within the project overlook the Deer Creek drainage and this low-lying area affords exceptional unimpeded views to the Crystal Range of the Sierra Nevada directly to the east.

Carson Creek and its associated floodplain define the project's eastern boundary. A 120 KV PG&E tower line traverses the eastern edge of the project in a north to south direction, adjacent and parallel to Carson Creek.

Biological resources in Cordova Hills include clustered wetland habitat supporting fairy shrimp and other species. The majority of these resources are located on the plateau in the western third of the project.

The remainder of the site is relatively free of wetland resources with the exception of a few small depressional features scattered along the Paseo Central. The project's approved wetland delineation report verified by the Army Corps of Engineers identifies approximately 89.1 total acres of waters of the U.S. within the project.

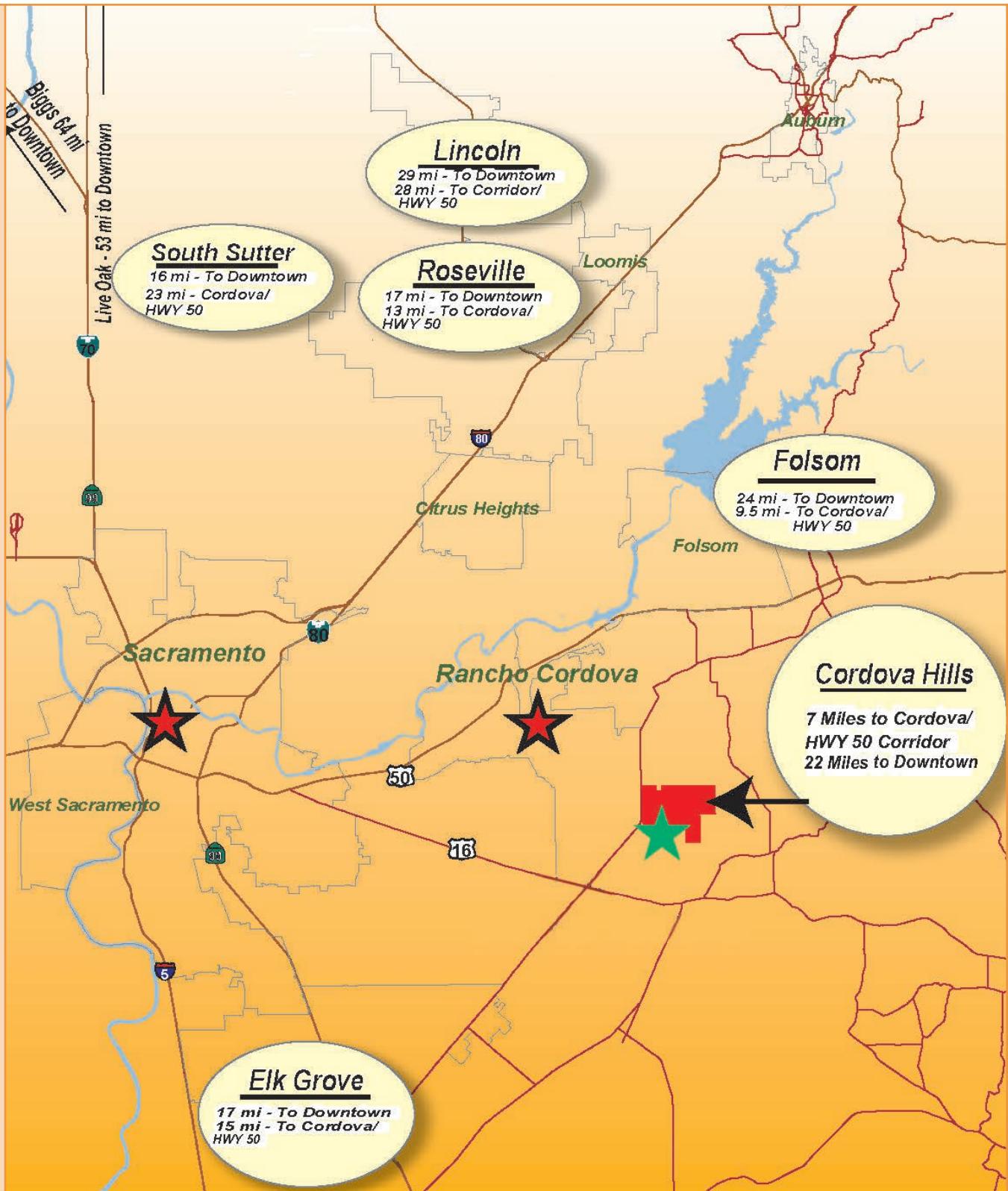


Figure 1.1: Regional Location

INTRODUCTION

1.3 PROJECT VISION

The best new master planned communities today capture our imagination through design. They offer a variety of housing alternatives, exciting new neighborhoods to raise families, convenient "main street" style shopping and entertainment, access to nearby open space and connection with nature. They provide the opportunity to experience multi-generation lifestyles, and the

means to learn to live less in the car. Cordova Hills is envisioned as such a place. Cordova Hills combines the best aspects of New Urbanism, New Ruralism, and innovative new master plan design concepts and technology to create Sacramento's finest new master planned community.

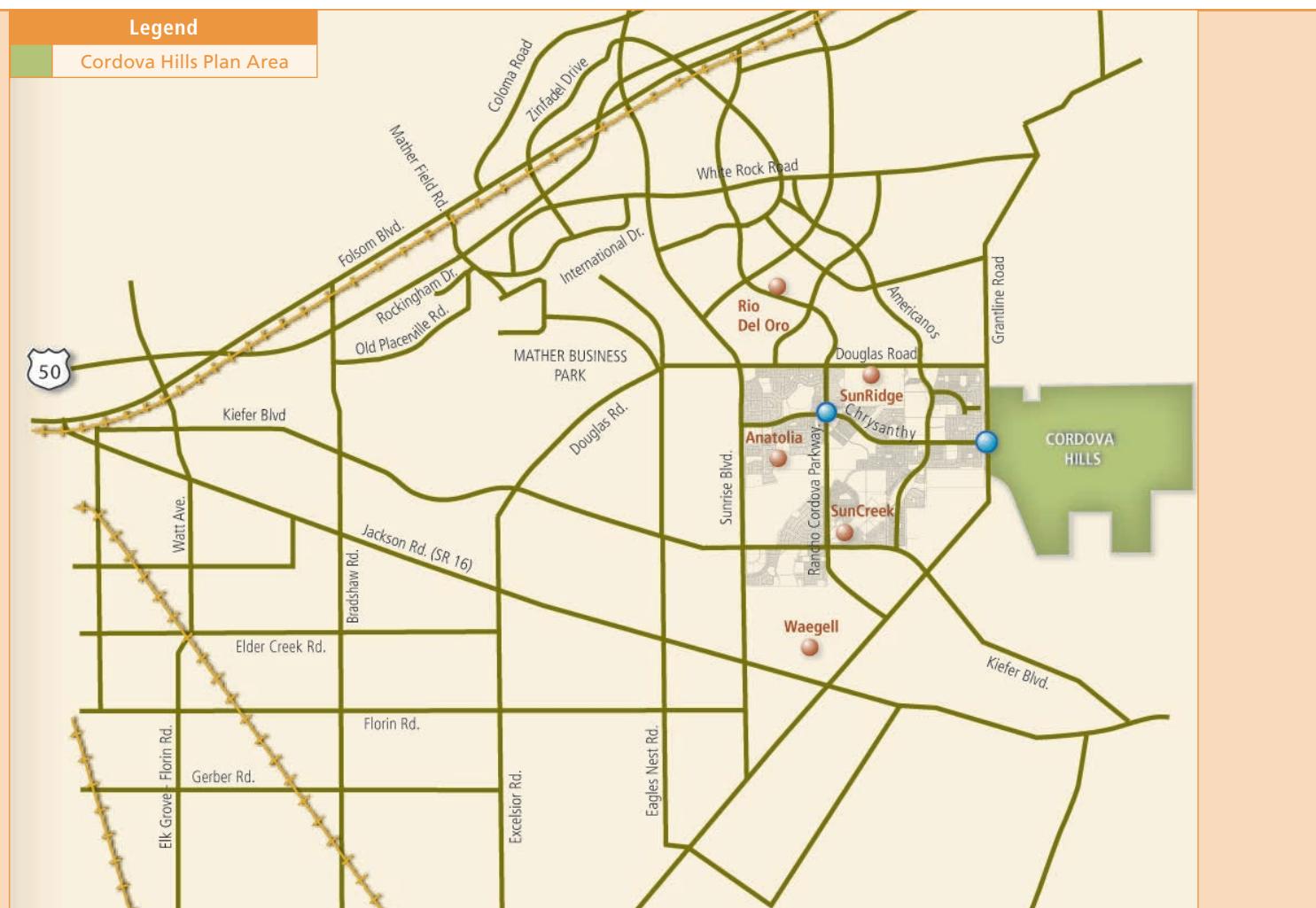


Figure 1.2: Cordova Hills Location Map



These aspects are expressed through the following visionary goals:

- Create a distinct, vibrant and sustainable community that contains a diverse, yet complementary, mix of land uses.
- Develop compact community nodes in strategic locations to support high quality civic amenities, encourage walking and biking, and utilize land efficiently.
- Protect and avoid natural resources.
- Provide a variety of transportation options, including roadways, bike trails, walking trails, NEV's, and public transportation.
- Create distinctive community nodes that create a sense of place and opportunities for social and recreational activity.
- Design the community with employment nodes, parks, schools, shopping and other daily needs close to housing.
- Provide a range of housing choices that could include:
 - Semi-rural
 - Traditional single-family homes
 - Condominiums / Townhomes
 - Apartments
 - Active adult / seniors
 - Mixed-use development

The Land Use Plan for Cordova Hills is illustrated on the following page. It responds to the visionary goals by creating a diverse and complicated mix of uses (Town Center, a range of residential, recreation/open space, University / College Campus Center) interconnected with a wide range of transportation choices (automobile, pedestrian / bike, NEV and public transit). Activity nodes are included in each Village, while valuable natural resources have been protected.



INTRODUCTION

Cordova Hills occupies a unique setting with openness and off-site views, on the urban fringe. A natural drainage corridor and avoided natural resources provide opportunities as Village separators and elements of the community open space identity. The community plan sets a new standard for design, lifestyle and stewardship of the land and resources.

The community will be socially and environmentally responsible and sustain itself over time, through natural resource conservation, energy efficient homes, use of solar energy, state of the art communication systems, fuel efficient vehicles, walkability, storm water management, and multi-modal transportation, among other features described in this document. Refer to Figure 1.3: Illustrative Land Use Plan.

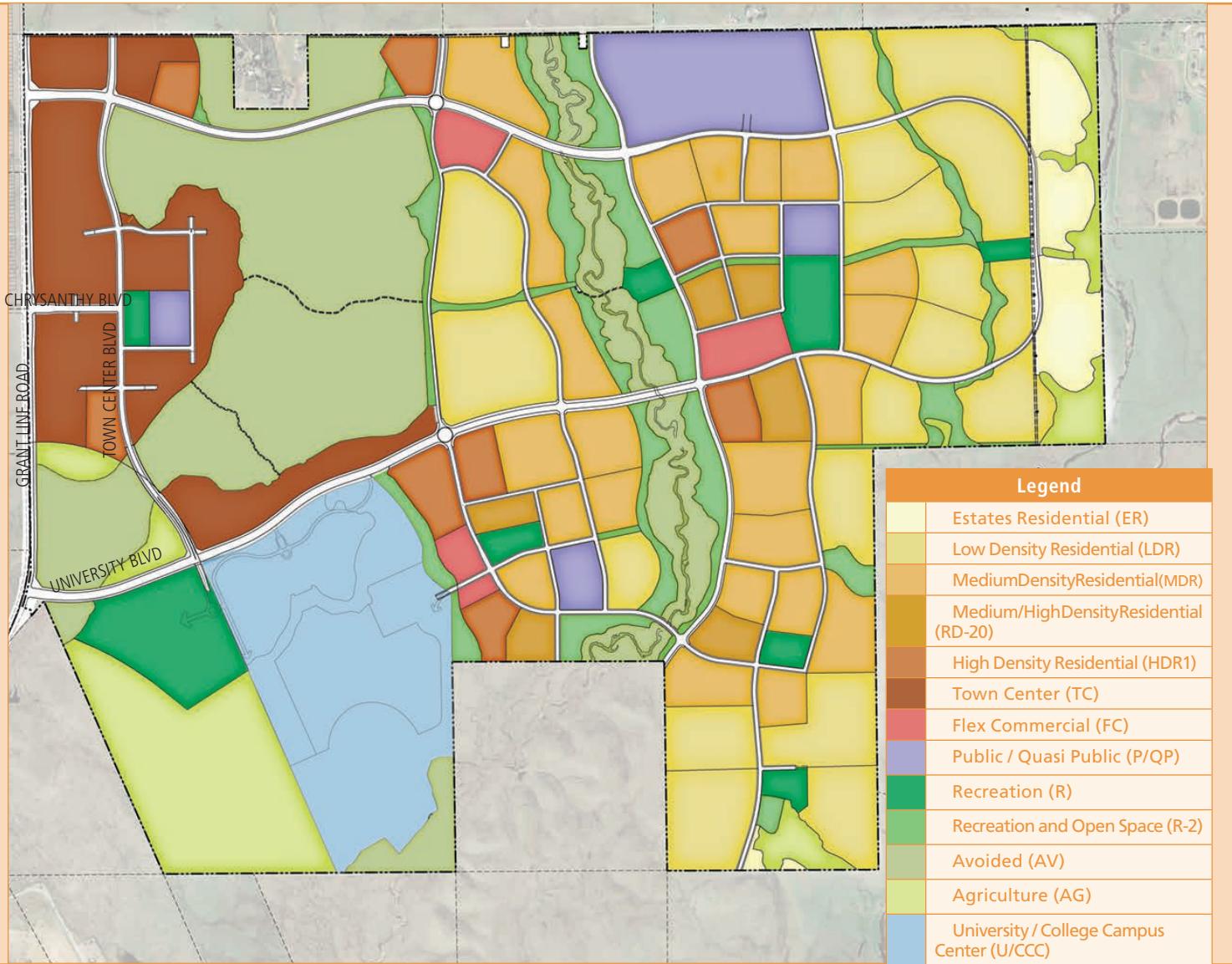


Figure 1.3: Illustrative Land Use Plan



1.4 PROJECT SUMMARY

Overall, Cordova Hills will include mixed uses consisting of residential, office, retail, University / College Campus Center, schools, parks, a vast trails network, and public uses.

The project includes a broad mix of residential uses from high density residential along the western edge of the project to low density residential along the eastern boundary approaching the Urban Services Boundary (USB). Cordova Hills also includes a significant Town Center commercial area adjacent to Grant Line Road. Just south east of the Town Center is the 246-acre University / College Campus Center.

1.4.1 Town Center

The Town Center Village includes five distinct "districts" that further define the overall Town Center character and uses. Each "district" includes a unique mix of urban uses and lifestyles. Guidelines

contained in Chapter 4 will permit land use within each "district" to respond to market demand for varied residential, commercial and office use. The five village districts are:

- Retail / Entertainment District
- Business Mixed-Use District
- Town Center North
- Town Center East
- Southern Gateway District

A major retail, office and entertainment "Town Center" will provide nearby and easily accessible urban amenities. Smaller shopping and dining Villages throughout Cordova Hills will create walkable nodes for shopping, visiting, and recreation. The Town Center will be a vibrant urban core that includes a diversity of shops, restaurants, offices, and services. The center will serve the community with a range of shopping, services, and entertainment that would provide all of life's daily needs.



Town Center Concept

INTRODUCTION

The center will be a landmark district that includes pedestrian scale streets and public plazas. Residents and visitors will enjoy exciting and welcoming people spaces to socialize, and recreate. Plazas and other public spaces will be interconnected with a network of pedestrian paseos, boulevards, and promenades. The location of this center relative to other existing and growing community areas in Rancho Cordova and beyond would also make this a regional hub for shopping, entertainment, recreation and leisure.

Within the urban district of Cordova Hills residents could live without a personal automobile quite comfortably and with ready access to diverse employment, shopping, entertainment, educational and recreation opportunities.

1.4.2 University / College Campus Center

Situated, in part, in the prominent highlands along the project's southwestern boundary, this new University / College Campus Center is designed to accommodate a 4-year higher educational institution. The University / College Campus Center will also include athletic facilities, student and faculty housing, and the potential inclusion of site specific ecological and interpretive facilities to maximize the proximity to Avoided Areas and other natural resources.

The proximity of the students and faculty to the Town Center provides a natural synergy that will support a diverse mix of shops, entertainment, and dining, as well as enrich the environment for arts and innovation. The campus will have access to the extensive trail and bicycling amenities of Cordova Hills. Students and faculty will be able to take advantage of these systems both for commuting and recreational purposes.

The University / College Campus Center is designed to ultimately serve approximately 4,300 undergraduate students and 1,700 graduate students for a total of approximately 6,000 students. The University / College Campus Center seeks to be primarily a residential campus, affording most of the students the opportunity to live on the campus itself.

The University / College Campus Center design will provide housing on campus for some of the faculty as well. It is expected that faculty from outside the region will come to Sacramento from time to time.

While primarily serving the students on campus, the University / College Campus Center recognizes the opportunity and need to also serve the region and those who can benefit from educational resources, social functions, athletic and performing arts venues. The University / College Campus Center vision is to be a great place of learning for the ages and a participating and vibrant member of the greater Sacramento region.

It is imperative that the planning, architecture and every aspect of the design of the physical plant be conducive and encourage thought and learning.

1.5 PLANNING BACKGROUND

In 1993 Sacramento County established the Urban Services Boundary ("USB") which delineates an urban growth boundary for the County. The County's intention in establishing the USB was to keep development within close proximity to existing services/infrastructure.



- In 2002, the County of Sacramento adopted the Sunridge Specific Plan (subsequently becoming a part of the newly incorporated City of Rancho Cordova) that is immediately west of Cordova Hills and abuts Grant Line Road. This plan is now substantially developed and there are currently homes and infrastructure less than one mile west of Cordova Hills. The intervening land includes approved development projects.
- On June 26, 2006, the City of Rancho Cordova adopted its first General Plan, identifying the East Planning Area as a future growth area in the City. Cordova Hills is located entirely within the East Planning Area.
- On May 30, 2007, the Sacramento County Board of Supervisors expanded the General Plan boundaries to include the area east of Grant Line Road, including the Cordova Hills property, as a future growth area.
- On April 28, 2008, the Cordova Hills project submitted an initial 404 permit application to the Army Corps of Engineers for the avoidance, and mitigation of various environmental resources on the property.
- On May 14, 2008, the Sacramento County Board of Supervisors voted to permit Cordova Hills to submit an application allowing the Cordova Hills project to begin planning the area with the County for future growth.
- On July 1, 2008, the Cordova Hills project team submitted a formal application to Sacramento County.
- On December 2, 2009 the Board of Supervisors voted to amend the application to include 251 acres in the bufferlands and to also receive and file the land plan for purposes of environmental review.
- On January 29, 2013 the Board of Supervisors voted to certify the Environmental Impact Report, adopt CEQA findings, and adopt the General Plan Amendments.

1.6 FACTORS THAT INFLUENCE THE MASTER PLAN

Cordova Hills encompasses a unique set of physical attributes. These factors strongly influence the type of community and the design that is proposed in this Master Plan. The Cordova Hills plan is compatible with the principles of the existing Sacramento County General Plan and will continue to be influenced by the existing General Plan, the General Plan Update.

1.6.1 SACOG Blueprint

Cordova Hills is compatible with the principles of the SACOG Blueprint and is designated as an area for urban development.

Environmental Resource Protection and the South County Habitat Conservation Plan (HCP)/Resource Avoidance

Cordova Hills complements Sacramento County efforts for an overall HCP in south Sacramento County. Cordova Hills can master plan for large-scale protection and mitigation of important resources. Single owner control of Cordova Hills facilitates implementation of comprehensive, on-site mitigation and protection of resources.

Lack of Hazardous Conditions

Development in Cordova Hills is not within any FEMA designated floodplain and is not within the overflight zone of any airport.

Non-Prime Agriculture

Cordova Hills does not include any prime agricultural lands or agricultural lands of statewide significance.

Relation to the Kiefer Landfill

Planning for Cordova Hills considers the current and future activity areas for the landfill and avoids any active use within 1,600 feet of its future operation. The land uses in Cordova Hills bufferlands are compatible with the uses identified in the Kiefer Landfill Buffer Lands Management Study.

INTRODUCTION

Urban Services Boundary-Fringe Model

Cordova Hills provides an opportunity to set a framework for interface with rural agricultural lands and open space beyond the USB by establishing low-density residential use at the edge of the plan area.

Ease of Implementing Public Facilities Financing Plans

The size and ownership of Cordova Hills will facilitate bonding capacity that will create more flexibility for creating needed infrastructure than fee districts only.

Consensus of Neighboring and Area Landowners

Cordova Hills is controlled by a small ownership entity and has the consensus of neighboring landowners to proceed with development.

Transportation Opportunities

Cordova Hills will connect to public transit via a local shuttle funded by the project that conveys riders to the RT light rail station at Mather/Mills. In addition, the project includes an internal shuttle system, a Neighborhood Electric Vehicle network, and a bicycle/pedestrian network linking all major nodes in the community

Regional Jobs Proximity

An adequate supply of housing affordable to employees is a significant factor in the location decision of large employers and, therefore, contributes to the economic development potential in the region. The Sacramento Area Council of Governments (SACOG) projects that Rancho Cordova and the Highway 50 corridor (including Folsom) will continue to grow as one of the key job centers in the Sacramento region.

1.7 THE MASTER PLAN TOOL

The Cordova Hills Master Plan provides the primary description of the proposed project. It is a companion to, and guides, the Cordova Hills Special Planning Area Ordinance that is the binding regulatory document of the Cordova Hills Special Planning Area (SPA). The Master Plan establishes a development framework for land use, affordable housing, resource avoidance, circulation, utilities and services, implementation and design. The County of Sacramento adopts and will administer the SPA and related documents consistent with the provisions of Article 6 Section 235-90 through 235-97 of the Sacramento County Zoning Code.

1.7.1 Cordova Hills SPA Ordinance Intent

It is the intent of the Board of Supervisors in adopting the Cordova Hills SPA Ordinance to master plan the subject property consistent with the policies of the County General Plan and recognize the uniqueness of the SPA for the opportunity it provides to master plan a new community containing a university/college campus site along the Grant Line Road corridor with a mix of uses that would otherwise not be available with conventional zoning. The identified land use districts are designed to take advantage of the unique location and topography of the SPA, as well as create attractive places in which to live, work, study and shop. In addition, the ordinance is intended to provide greater flexibility in permitted and conditionally permitted uses and in applicable development standards to promote a wide variety of housing types with increased average and flexible densities that are unavailable under



Alternative Vehicles



typical zoning. The SPA will ensure that the intensity, configuration and design of land uses within the SPA are supportive of high quality transit services, biking and pedestrian activity in order to make significant progress toward reducing traffic congestion, vehicles miles traveled, and air pollution, especially greenhouse gases, while providing diversity in the housing supply, local and regional shopping opportunities, a new site for a higher education facility, and preserving significant open space and wildlife habitat resources within the SPA consistent with habitat conservation planning efforts.

1.8 CIRCULATION DIVERSITY

Cordova Hills is designed to implement and combine several forms of circulation that will provide significant alternatives to conventional vehicle use for common, every day travel. The Cordova Hills community will be served by a multi-level, multi-modal transportation system.

The Town Center, located at the intersection of Chrysanthy Boulevard and Grant Line Road, would be a multi-modal transit hub that links the internal circulation system to the regional transit system. Links between the public transportation system

and the regional transportation would include an extension of the local shuttle bus along Chrysanthy Boulevard, west to its intersection with Rancho Cordova Parkway, and on toward Highway 50.

Well-planned road and trail networks will efficiently handle vehicular traffic, and will emphasize walkability and connectivity. Homes are planned to be not more than 1/4 mile from a trail, a school, a park, a recreation facility, or other open space. The community trail network that links them to approximately 74.7 miles of on-street and off-street class II bike lanes trails and paseos.

1.9 OPEN SPACE AND TRAILS

Approximately one-third of the Cordova Hills land area will remain in open space, including parks, natural open space, Avoided Areas, storm water detention basins, and trail corridors. Walking and bicycling trails are planned within the area's natural open spaces, which will connect to the regional trail systems. Neighborhood schools, parks, community centers, and other public amenities will all be integrated into the overall trail network.

The developed portions of Cordova Hills will be interwoven with extensive open space features, both Avoided Natural Resource Areas and readily accessible natural features. A large Avoided Area



Pedestrian Connectivity



Conceptual Entertainment Center

INTRODUCTION

adjacent to the Town Center, and a large wetland and drainage corridor (Paseo Central) in the center of the community provide extensive open space areas that will be landmark features along Carson Creek. The eastern edge of the community abuts permanent agricultural open space and an established floodplain. This adjacent open space allows for a regional connection to hiking and biking trails.

1.10 COMMUNITY CHARACTER AND DESIGN

Cordova Hills presents a rare opportunity to create a visionary new community integrating a major new University / College Campus Center on an exceptional site. The varied terrain of Cordova Hills provides dramatic open vistas to the Sierra Nevada Mountains, Sutter Buttes, Mount Diablo, and the Consumes River basin. Cordova Hills will be a carefully crafted blend of old and new, urban and rural characters. Cordova Hills will integrate old world and early California Character, innovative ideas in community planning and new and future technologies in communications, transportation, resource conservation, and sustainability. Cordova Hills is designed to harness the wind, sun, and new waste-to-energy resources will help power the living, working, playing, and educational components of Cordova Hills.

The Cordova Hills community will be notable for the distinctive design of the streets, buildings, and public places that create a distinct sense of place. Residents will find the community pleasantly memorable in the built and green environments. The community will seem well put together guided by a strong desire for the comfort, safety, and well-being of residents and visitors.



Live-Work Residential Unit



Unique Community Design



1.11 CORDOVA HILLS LIFESTYLE

1.11.1 Sustainable Community

Through careful design of the community, the transportation system, and dwellings, it will be possible for individuals to significantly reduce the "carbon footprint" in their daily lives compared to similar lifestyles in more conventional communities.

Cordova Hills has been designed as a mixed-use community that can be self sustaining, where most daily needs can be met within the community. These include shopping, recreation, entertainment, employment, and education. A high internal capture rate for vehicle trips related to these uses may result.

1.11.2 Live-Work

Separation of work and home life has been a dominant theme in urban development for generations. Long distance commutes between suburban residential tracts and distant work centers has been a common lifestyle for many. The need and desire to provide alternatives is apparent in the high cost of commuting in terms of time and dollars for the individual, but also the air quality, congestion, and high infrastructure cost for the entire community. Cordova Hills will enhance opportunities for living and working within the community by including office, research and development, entertainment, retail, and a major University / College Campus Center that will provide a substantial number of jobs, and by providing land use regulations that permit live/work residential use in many locations.



1.11.3 Health and Wellness

The Cordova Hills community design will encourage a wellness lifestyle by providing health, recreation and fitness facilities, and an extensive trails and pedestrian paseo network. The diverse uses in the community could include a Wellness Center that would provide medical offices, sports facilities, classrooms, and potentially a private hospital to support and encourage healthy lifestyles.

1.11.4 Life Long Learning and Skills Development

Life long learning is a growing interest among maturing adults. Whether developing a new interest or retraining for economic advancement, the continuing pursuit of knowledge is becoming increasingly important for many people. In addition to outreach community programs provided by the University / College Campus Center, the high school, middle school and elementary schools in Cordova Hills will provide places for continuing education in collaboration with the Elk Grove Unified School District.

Neighborhood schools are envisioned as a local resource, rather than simply a place for elementary education. Schools with adjacent parks may provide space for neighborhood meetings. Neighborhood parks and private recreation centers could also include a local clubhouse that provides space for recreation, social activities, and continued learning.

Skills development is a companion to lifelong learning that focuses more on the art and craft and trade skills. Cordova Hills would allow space for public and private facilities that teach a variety of skills and allow residents a place to pursue interests that they cannot pursue at home due to lack of space or lack of proper tools and equipment. The potential range of interests is virtually unlimited, but examples include hobby shops that accommodate metal work and welding, wood working, ceramics and glass making, boat building, aircraft kit building, and automobile restoration, among many others.

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1.12 MASTER PLAN RELATED DOCUMENTS

1.12.1 Environmental Review

Sacramento County is the lead agency in the preparation and certification of an Environmental Impact Report (EIR) pursuant to the California Environmental Quality Act. The EIR Cordova Hills (Control Number: 2008-GPB-SDP-ZOB-AHP-00142, State Clearinghouse Number: 2010062069) examines the environmental impacts of the proposed plan and identify changes in the environment that would result from implementation of the plan.

1.12.2 Current Land Use Designations

The entire project site is within Sacramento County and is currently designated in the County's General Plan as General Agriculture (80 acres). The project site is not within any current community Plans. The project area was included in the 2006 Rancho Cordova General Plan as a future growth area, which designated residential, mixed-use, parks/open space, and other potential future land uses. In addition, the same area has been included in the current update of the Sacramento County General Plan.

1.12.3 County Code Relationship

The Cordova Hills Master Plan includes development standards and design guidelines in Chapter 4, and street standards in Chapter 6 of this document and are adopted into the Cordova Hills Special Planning Area Ordinance (Sacramento County Zoning Code Title V, Chapter 8, Article XX) These regulations shall govern development, improvements, and construction within the Plan area. The Cordova Hills Master Plan development standards and design guidelines shall supersede other development standards and design guidelines adopted in Sacramento County. However, the Cordova Hills Master Plan development standards and design guidelines do not cover all aspects of standards and guidelines that apply in the County. Where the Cordova Hills Master Plan Development Standards

and Design Guidelines do not apply, the County-wide development standards and design guidelines shall apply. Examples of adopted development standards and design guidelines that contain all or portions of regulations that apply beyond the Cordova Hills Master Plan include but are not limited to;

- Interim Multifamily Design Guidelines (including Appendix B, Access Drive Guidelines),
- Commercial and Mixed-Use Community Design Guidelines,
- Title 22, Land Development Code,
- Improvement Standards and Construction Specifications.

Deviations from development standards and/or design guidelines contained in the Cordova Hills Master Plan or the County-wide requirements may be made with individual development applications. Applications for such deviations shall be subject to review by the County and action by the appropriate approval authority.

1.12.4 Williamson Act Contract Restrictions

Certain areas of Cordova Hills project are subject to the Williamson Act. Substantial portions of University Village and Creekside Village are subject to Williamson Land Conservation Agreement No. 72-AP-109, recorded in the Sacramento County Recorder's Office at Book 72 09 29 Page 2064 on February 29, 1972. Williamson Land Conservation Agreement No. 72-AP-109 applies to Assessor's Parcel Number 073-0040-14, which is comprised of four hundred eighty acres, as depicted in Figure 1.4. In conjunction with the entitlements for the Cordova Hills project, a notice of Non-renewal of Williamson Land Conservation Agreement No. 72-AP-109 was executed on February 23, 2007 and recorded in the Sacramento County Recorder's Office at Book 20070412 Page 0465 on April 12, 2007. Consistent with the Notice of Non-renewal, Williamson Land Conservation Agreement No. 72-AP-109 will expire on February 28, 2016.



The restricted portions of University Village and Creekside Village are currently zoned Agriculture-80 acres (AG-80), consistent with the terms of the Williamson Land Conservation Agreement No. 72-AP-109. Upon approval of the Cordova Hills project, the restricted land shall be rezoned from AG-80 to Special Planning Area (SPA) with an AG-80 designation. The uses and development standards associated with the SPA AG-80 designation shall be the same as the uses and development standards that are applicable to the AG-80 zone as provided for in the Sacramento County Zoning

Code and shall govern use of the restricted land until expiration of Williamson Land Conservation Agreement No. 72-AP-109. Once Williamson Land Conservation Agreement No. 72-AP-109 has expired, the designation of such land shall automatically change from the AG-80 designation to the SPA designations identified for University Village and Creekside Village contained herein.

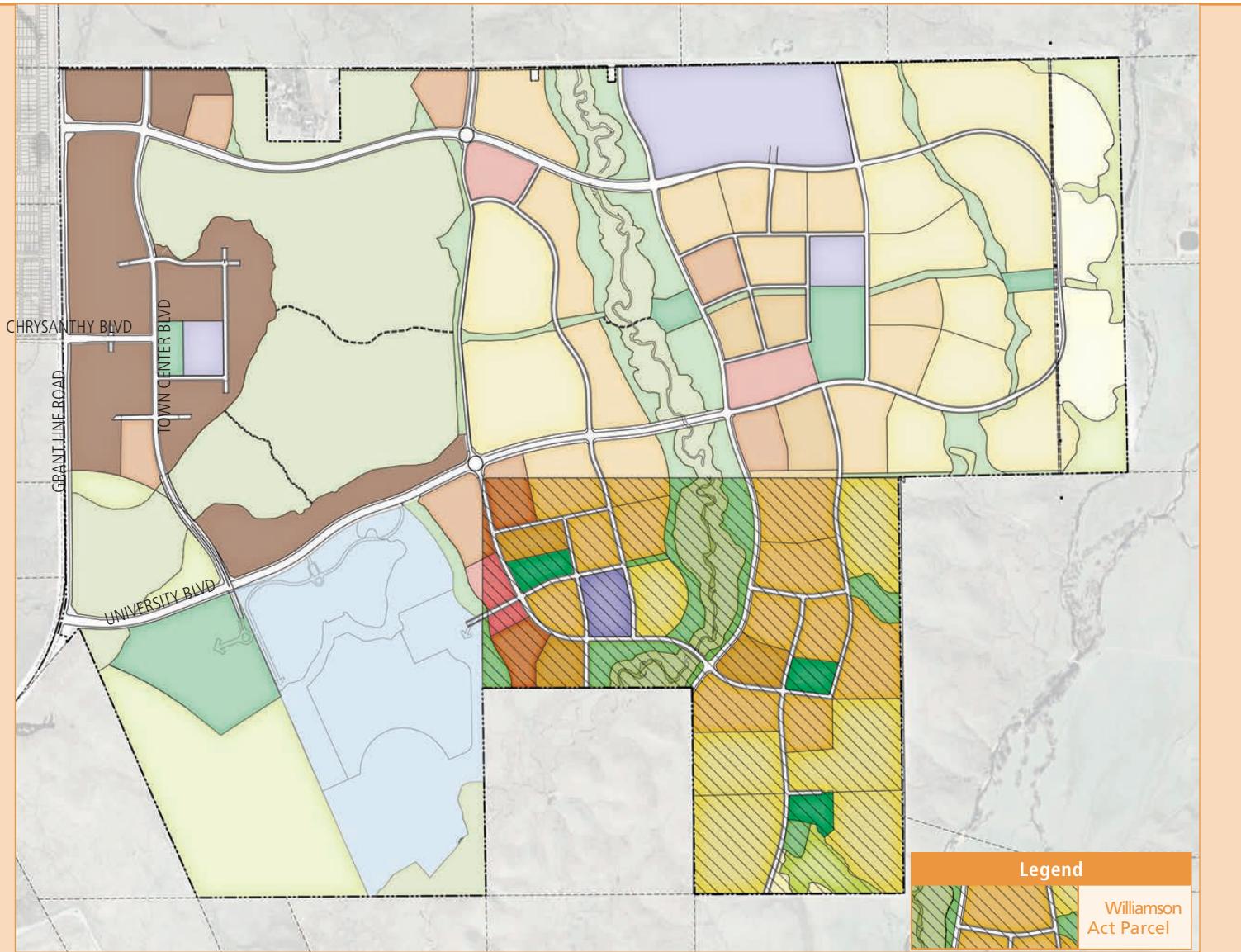


Figure 1.4: Williamson Act Parcel

Chapter 2

SUSTAINABILITY



SUSTAINABILITY

2.1 INTRODUCTION

The Cordova Hills community will be sustainable to the greatest extent possible, through the following:

- Conservation of water, energy, and materials
- Provision for renewable energy resources
- Design features that enhance individual health and well being

A strong building partnership and consensus among the Master Developer, Builders, residents and employees will create an innovative and powerful sustainable community.

Master planning measures have a substantial influence on "building green." Sustainable choices in land use, job / housing balance, vehicular and pedestrian circulation, solar access, open space, drainage, and landscape, will reduce demand on resources and energy use and create healthy environments without major impacts or cost. Sustainable development also includes Green Building practices for building construction that conserve resources, create efficient infrastructure systems, protect and enhance the quality of life, and strengthen the community's

economic base. Consequently, healthy communities are created that will sustain the first residents, as well as those that will follow.

Through innovation, conservation, and avoidance, Cordova Hills balances economic, social, and environmental values in our community. The Cordova Hills Master Plan addresses both the short-term and long-term effects of urbanization to ensure the project is truly sustainable over time.

2.1.1 Community Sustainability Opportunities

Sustainability involves conservation and prudent use of all resources required for human habitation and operation of a community. Air and water quality, conservation of potable water, energy use, the reduction of vehicle miles traveled and vehicle trips and available community resources are all part of the sustainability picture. Cordova Hills is designed with consideration of these factors and more to reduce the development impact and improve the long-term enjoyment of this site.

Cordova Hills is a mixed-use community with a high internal capture rate for many daily trips, with proximity to a major job center. Cordova Hills is approximately 5 miles from the second largest job market in the region where over 40,000 people commute to each day. Other sustainability opportunities discussed in subsequent chapters include University / College Campus Center Sustainability Program (Chapter 5), Pedestrian / Bike trails (Chapter 6), and NEV (Neighborhood Electric Vehicle) see (Chapter 6).

- At least 20% of the future residential energy needs will be provided through one or more of the following renewable sources:
 - Solar farm
 - Rooftop solar
 - District energy plant – methane gas from landfill
 - Enrollment in a SMUD green energy program
 - Other renewable energy sources



Main Drainage Corridor in Cordova Hills



2.2 SITE AND REGIONAL CONTEXT FOR SUSTAINABILITY

The opportunities for sustainable design are influenced by the following factors within Cordova Hills' regional context.

2.2.1 Floodplain Protection

Natural floodplains are avoided by not locating development within any floodplain or hazard zones, as defined by the Federal Emergency Management Agency. One hundred year floodplain areas within Cordova Hills will only be used as open space, detention basins, and other compatible uses.

2.2.2 Housing Jobs/Proximity

The mixed-use Cordova Hills community is 5 miles from the SACOG region's second largest job market. The Rancho Cordova area currently has 3 jobs to every 1 home. Additionally, there will be a University / College Campus Center with approximately 6,000 students at build out, on approximately 246 acres, which includes a mix of administrative, academic, recreation, hotel, and housing construction. This phased development will provide many jobs within the community. The majority of the students will live on campus so the University / College Campus Center will not be a commuter school.



Drought Tolerant Landscape

2.2.3 Agriculture Land Conservation

Cordova Hills is located on non-prime agriculture lands and contains no unique soils.

2.3 VEHICLE TRIP REDUCTIONS TO ENHANCE AIR QUALITY AND REDUCE CARBON EMISSIONS

To improve air quality and reduce CO₂ emissions in the Sacramento region, operational emissions from vehicle exhaust should be reduced. This can be done by reducing the number and length of vehicle trips generated in the community.

2.3.1 Reduce Trip Length and Number Through Community Design

Cordova Hills is composed of relatively small, well-defined residential neighborhoods, unified by larger Villages. Each Village includes schools, parks, and or is near a commercial mixed-use shopping center. Higher density residential uses are distributed along the proposed local transportation routes and close to commercial uses to facilitate walking to shuttle stops and local shopping. The availability of diverse employment, shopping, recreation, entertainment, and education destinations within the community reduces the need for residents to travel outside of the community, improving air quality.

The diversity of land uses within the community increases the capture rate of each vehicle trip, hence, reducing overall miles of each trip and reducing air quality impacts and CO₂ emissions. This design improves pedestrian and bicycle circulation access, and reduces the number and length of automobile trips.

2.3.2 Compact Development

Cordova Hills will have a net density of approximately ten dwelling units per acre of buildable land. This average density is compact compared to many other master planned communities in California.

SUSTAINABILITY

2.3.3 Public Transit

The Cordova Hills Master Plan includes a local transportation system through the community that connects to the light rail stations along the Highway 50 corridor. A multi-modal transit hub is conceptually located at the Town Center and will link the internal circulation system to the regional transit system.

Within Cordova Hills, the local shuttle system route will provide a simple, direct loop system connecting the higher density housing, commercial, and mixed-use areas. Approximately 94 percent of all homes in Cordova Hills will be located within one-half mile of a transit stop. The system is proposed to have 15 minute headways at peak hours.

2.3.4 Trails/Bicycle Trails

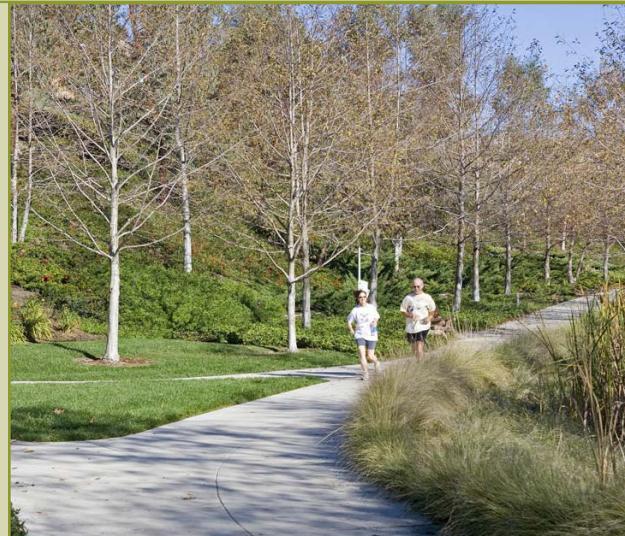
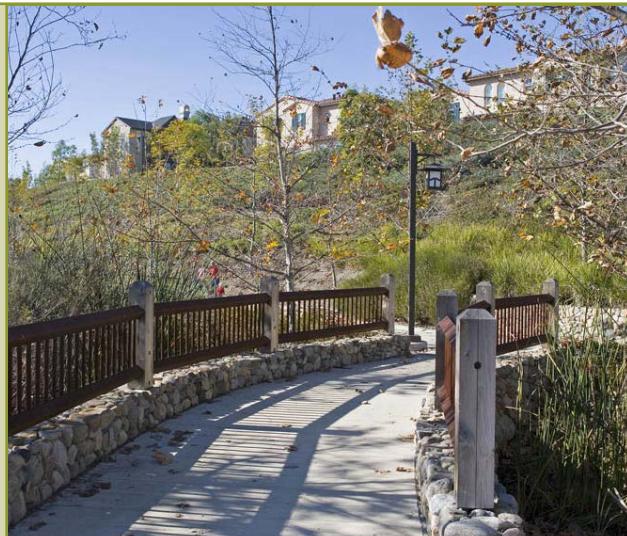
All land uses will be easily accessible through an extensive internal pedestrian/bike network totaling approximately 74.7 miles of on-street and off-street class II bike lanes, trails, and paseos, allowing for reduced use of the car. A total of approximately 42.3 miles of the overall 74.7 miles will consist of off-street community trails and paseos.

2.3.5 Bicycle Storage

The Greenhouse Gas (GHG) Plan (Appendix C) provides a list of additional GHG reduction strategies that may be utilized such as short-term facilities to be provided at a minimum ratio of one bike rack space per 20 vehicle spaces. Long-term facilities are to be provided at a minimum ratio of one long-term bicycle storage space per 20 employee parking spaces. Short-term facilities are located adjacent to destination(s); within 50' of all primary entrances unless it can be demonstrated that a greater distance is necessary for safety. Racks have a non-enclosed design that allows for the use of high-security U-shaped locks to lock the frame and one wheel to the rack.

Long-term facilities consist of one of the following: a bicycle locker, a locked room with short-term bicycle parking facilities and access limited to bicyclists only, or a standard rack in a location that is safe or staffed or monitored by video surveillance during standard operating hours.

Facilities are weather-protected and secure. Facilities are at the ground level and are free of access restrictions that could impede bicycle storage. Facilities comply with the California Department of Transportation "Pedestrian and Bicycle Facilities in California" technical reference document.



Conceptual Community Trail Examples



2.3.6 Neighborhood Electric Vehicles (NEVs)

Creation of a NEV compatible circulation system within Cordova Hills will further reduce dependency on the automobile. This circulation system will include special street sections, traffic calming, special parking standards, reduced parking footprints, walkable streets, integrated in an internally connected street network, Neighborhood Electric Vehicles (NEV), and community bicycles.

The Plan accommodates NEVs, and/or smaller cars powered by electric or electric-gas hybrid systems. NEVs accommodate up to four adults and a small cargo area. The vehicles typically operate on streets posted at speeds of 35 MPH or less. If speed limits are above 35 MPH, then dedicated NEV lanes will be provided. NEVs provide an alternative for short-range convenience trips that generate a large component of the vehicle emissions in the Sacramento region.

2.3.7 Enhanced Communication Modes

A community-wide broadband and intranet communication system will be provided to all homes. The intranet will include information on social, recreation, and civic events, and will facilitate active lifestyles that rely less on automobile travel to obtain community information. Cordova Hills will be seamlessly tied together as a community and with the rest of the world through modern intra and internet communications

2.4 WATER CONSERVATION

Outdoor irrigation typically represents the major demand for any community. Water conservation will be a fundamental consideration in all landscape designs in Cordova Hills. The landscape design will not only address the careful stewardship of water resources, but also create a memorable setting for community life. Cordova Hills will apply state-of-the-art water conservation practices in all areas of the landscape (for more information see Table 2.1: Water Measures). Reduction of water use in buildings and for landscape irrigation lowers the burden on municipal water supply and wastewater systems and may be implemented through the following:

- A well-selected plant palette that includes native plants with varying life cycles, non-invasive plants, drought tolerant species, and shaded hardscapes.
- Provision for on-site drainage detention, groundwater infiltration and recharge, and reduction of drainage flows off-site.
- Installation of highly efficient irrigation systems that reduce waste from runoff and over watering. All community-wide irrigation systems will use a smart irrigation controller to monitor local conditions in order to determine when water is needed.
- Installation of low-flow faucets, High Efficiency Toilets (HETs), and low-water use dishwashers, and efficient hot water distribution.

SUSTAINABILITY

Table 2.1: Water Conservation Measures

Measure Name	Measure Description
Water-efficient landscapes	All landscape will be selected from the Cordova Hills Master Plant Palette which includes the Plant Factor (PF) from the California Department of Water Resources Water Use Classifications of Landscape Species (WUCOLS). At a minimum, 40% of the vegetation will have a Low PF, 40% will have a Moderate PF, and 20% will have a High PF
Water-efficient irrigation	Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls.
Water efficient fixtures	All residences will meet the 2010 CGBSC Voluntary Standards or equivalent for toilet, showerhead, bathroom and kitchen faucets and provide an Energy Star residential standard dishwasher. All non-residential uses will meet the 2010 CGBSC Voluntary Standards for toilet, urinal, showerhead, bathroom and kitchen faucets, Energy Star top-loading clothes washer (except for restaurants).
Reduce Turf in Landscapes and Lawns	Limit turf to the greatest extent feasible.



2.5 STORMWATER MANAGEMENT

Water quality will be conserved and enhanced through the use of local water quality features such as vegetated swales, settling basins, and natural filters to clean surface runoff water before they reach the natural drainage channels.

These features will be incorporated in the pedestrian open space corridors, street medians and in dual use parks. Low Impact Design (LID) design principles will be incorporated to the greatest extent feasible and when soils conditions permit.

2.5.1 Stormwater Quality Management through LID

Low Impact Development (LID) emphasizes the conservation and use of available on-site natural resources to protect the environment – especially water. Small-scale LID projects dispersed throughout the watershed combine with point-of-discharge flood control and water quality treatment basins to manage post-development stormwater runoff and maintain or restore pre-development watershed conditions.

LID replaces the traditional development approach of conveying runoff through miles of costly pipes to acres of expansive detention ponds with an approach that mimics nature, using natural vegetation and small-scale treatment systems to retard, treat, evaporate, and infiltrate stormwater runoff close to where it originates. Reducing the amount of runoff at the source in the first place not only reduces the need for point-of-discharge facilities (detention and water quality basins), but reduces impacts on receiving waters carrying stormwater. Additionally, LID also reduces the effective imperviousness of development, increasing stormwater infiltration and thus helping to recharge groundwater resources.

Refer to Appendix B the Community Plant Palette, Specialty Landscape Areas Plant Palette (LID), for a comprehensive list of emergent plant species, grasses and shrubs/groundcovers to be used in LID vegetated swales.

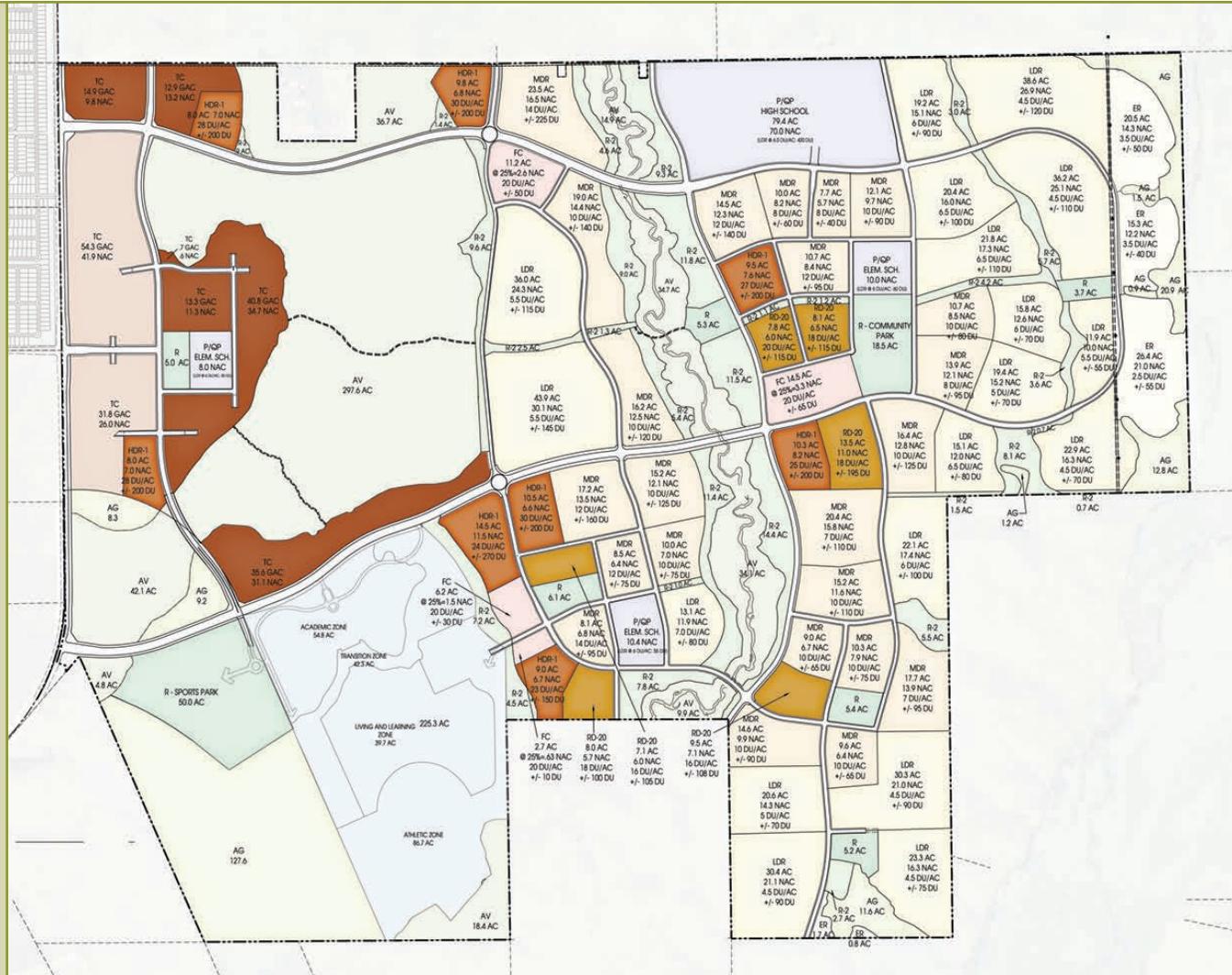
The placement of trees will be a key design consideration in the planting concept for planting swales throughout Cordova Hills. Trees, and all plant materials selected for LID swale use (refer to the Community Plant Palette, in Appendix B, for LID plant materials) have been carefully chosen based on tolerance for wetter soils, non-invasiveness, and natural appearance compatible with the drainage swale environment. Tree locations will generally be designed informally to avoid lower drainage areas and the bottom of the flow lines. Tree plantings will be focused on either side of the swale, on the higher elevations of the swale, in linear, informal fashion, to appear similar to a natural stream environment. No invasive species are allowed in the LID swales. Additionally, only appropriate non-invasive plant species have been selected for use along Avoided Area edges.

The LID toolbox provides for a variety of environmentally sound and cost-effective techniques including green infrastructure, conservation design, and sustainable stormwater management practices. New development will typically be able to maximize the benefit of advanced stormwater management through the implementation of a number of these tools in combination to replicate the pre-development hydrology of the site. Refer to Chapter 7, section 7.7.1 LID Measures, for a comprehensive list of potential LID techniques.

The Illustrations which follow in Figures 2.1 - 2.5: Conceptual LID Tool Box, depict examples of representative site and land use appropriate LID features that could be implemented throughout Cordova Hills.

The examples of LID features which follow are generally organized by land use (residential, employment, parks), to illustrate where in the Master Plan these features could occur. However, the utilization of these devices is not restricted by the land use plan illustrations provided. For example, the bioswales with native vegetation and curb breaks directing surface runoff into drainage swales on page 2-8 could occur in other areas within Cordova Hills, such as commercial and employment centers and parks.

SUSTAINABILITY



Bioswales with native vegetation capture storm-water from buildings and parking lots, retarding runoff, increasing infiltration, and treating for water quality prior to discharge.

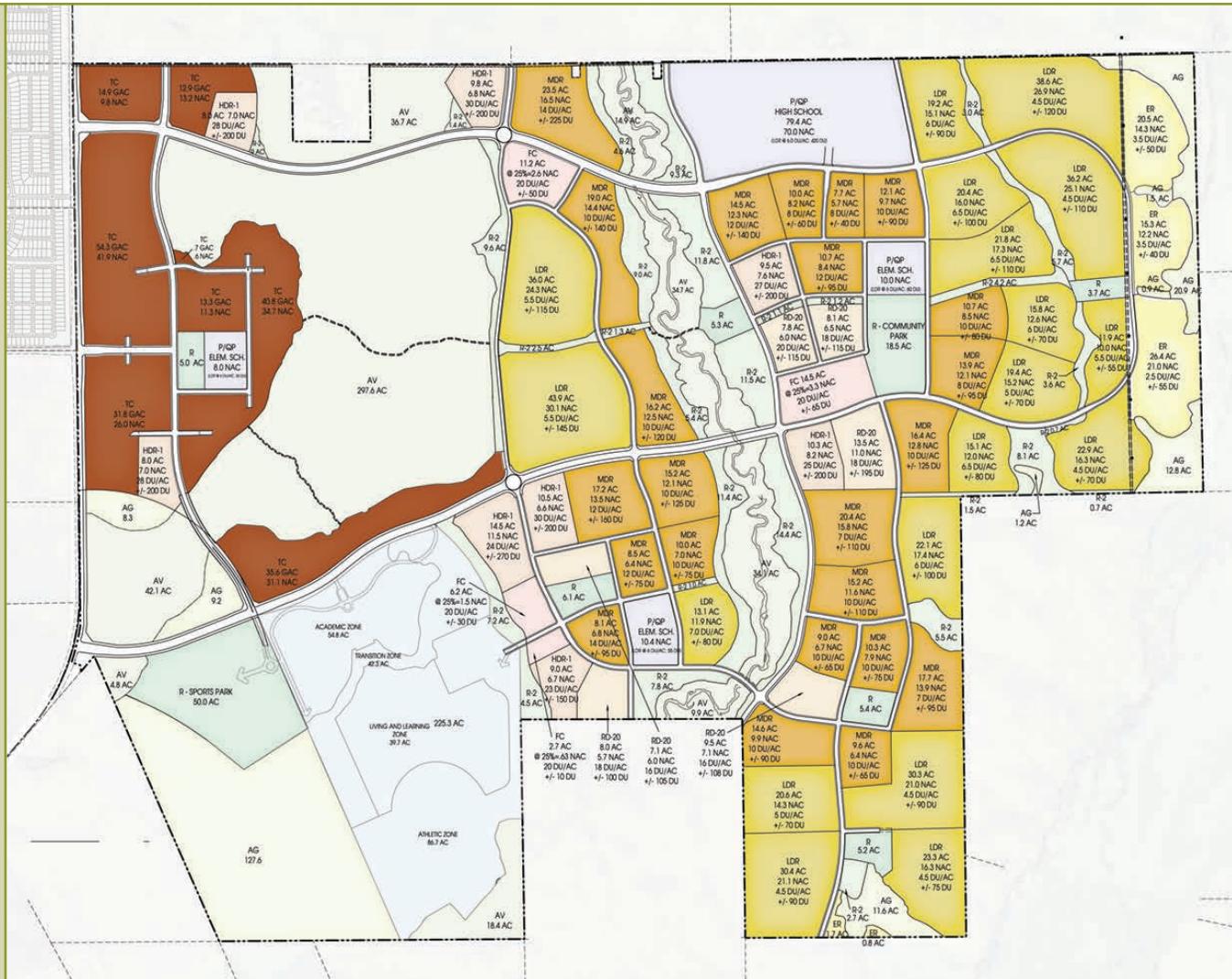


Native, drought tolerant vegetation, xeriscaping, mulching of vegetated surfaces, and preservation of existing terrain and drainage patterns help conserve resources and minimize impacts to the watershed.



Curb breaks direct surface runoff into drainage swales and rain gardens, helping reduce velocities and promoting infiltration and treatment of stormwater.

Figure 2.1: Conceptual LID Tool Box - Residential Areas



Trees, paseos with native vegetation, water conservation, xeriscaping, and pervious concrete walkways intercept stormwater at the source, allowing for an increased level of evaporation and infiltration, thereby lowering runoff volumes.



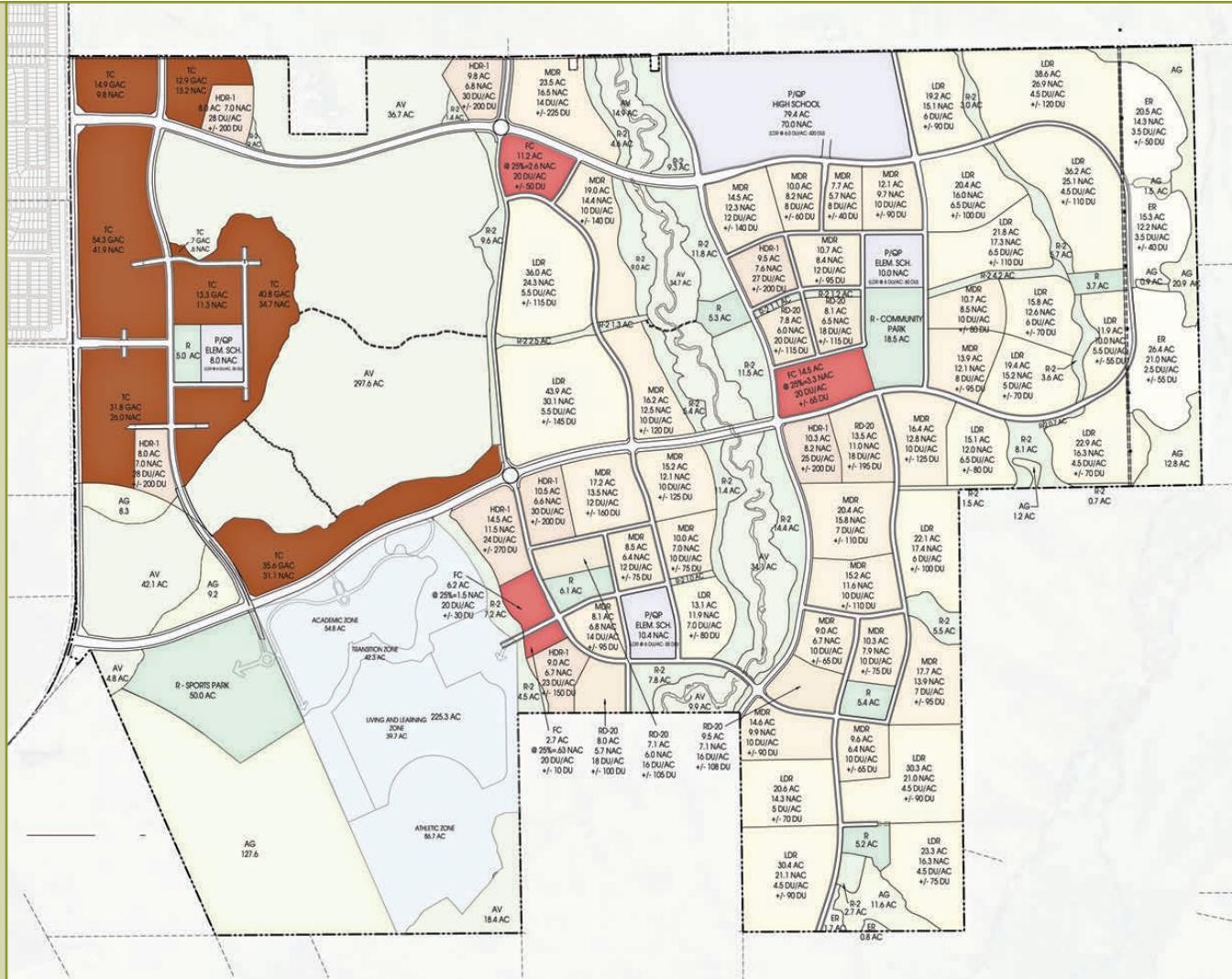
Disconnected roof drains allow runoff to be conveyed across landscaped areas into private rain gardens for treatment and infiltration.



Vegetated swales for water retention and conveyance capture lot and street runoff, allowing for infiltration and treatment prior to discharge.

Figure 2.2: Conceptual LID Tool Box - Residential Areas

SUSTAINABILITY



Vegetated and rock swales convey storm-water runoff in naturalized systems, promoting infiltration, water quality treatment, and retardation of runoff prior to discharge.

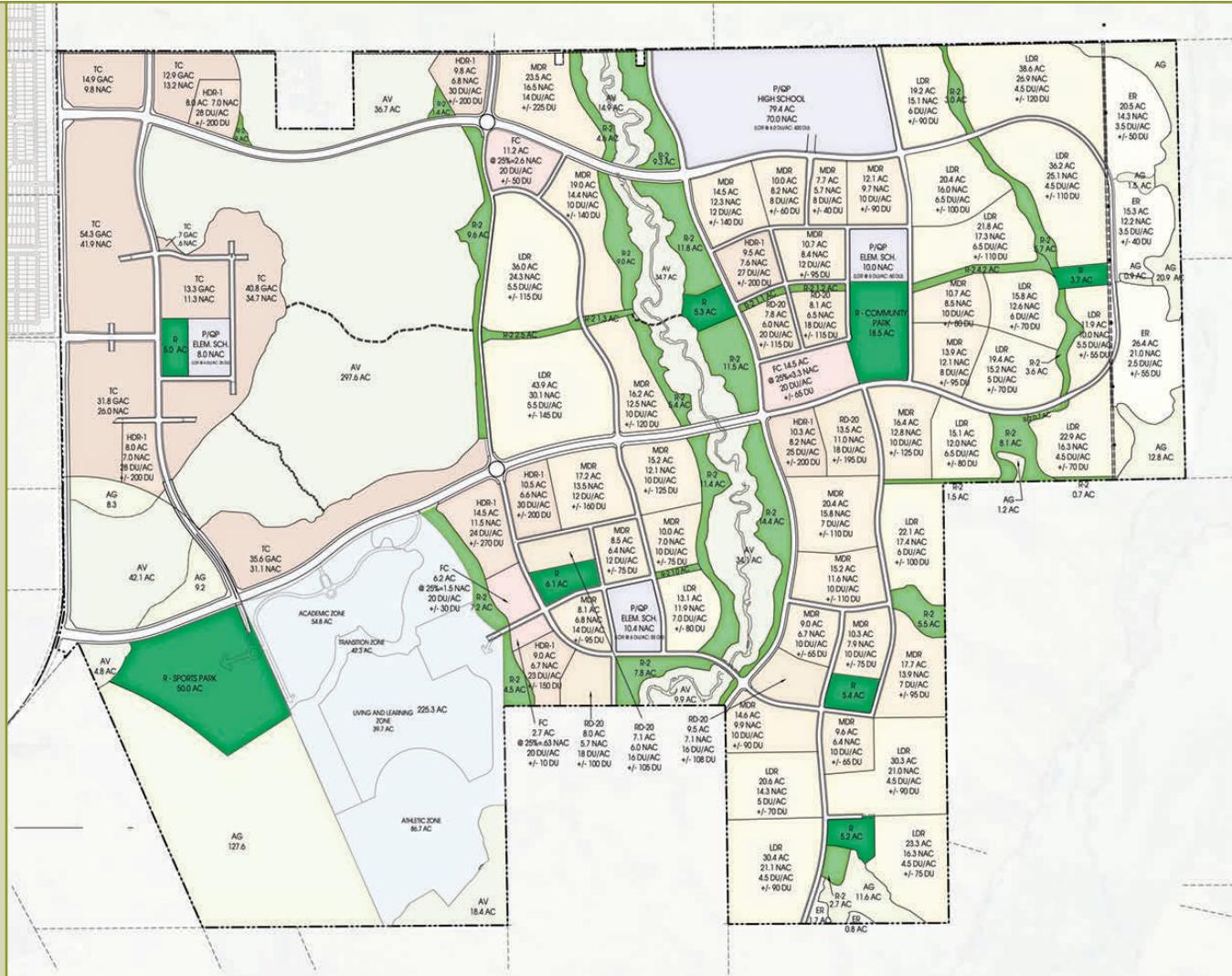


Bio-retention systems capture and treat stormwater runoff from impermeable surfaces, retarding the runoff in the process. Permeable pavements and pavers allow stormwater infiltration, reducing runoff.



Green roofs capture rainfall at the source promoting evaporation, treating for water quality and retarding stormwater runoff.

Figure 2.3: Conceptual LID Tool Box - Commercial and Employment Centers



Pervious surfaces enhance the character and aesthetics of active play areas. Native vegetation is drought tolerant, disease resistant and requires minimal maintenance, providing ecological benefit, increasing rain water infiltration and flow retardation.



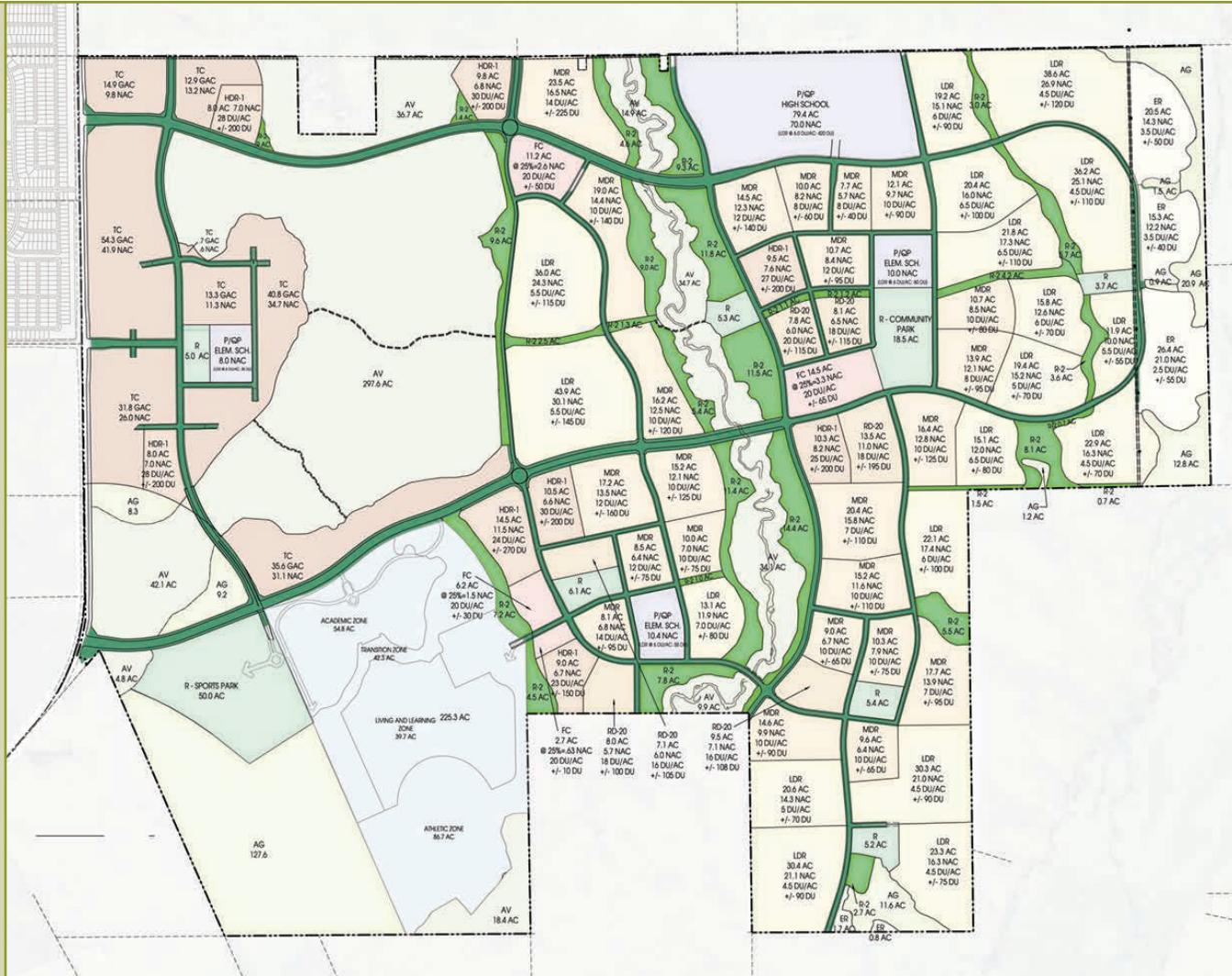
Densely vegetated bio-filtration swales convey stormwater runoff around active recreation areas, while at the same time providing stormwater quality treatment through plant uptake and sediment settlement, increased infiltration, and overall flow retardation.



Pervious walkway surfaces allow for increased stormwater infiltration, while natural low-maintenance vegetation is drought tolerant and disease resistant, providing water quality treatment and increased infiltration and evaporation.

Figure 2.4: Conceptual LID Tool Box - Parks

SUSTAINABILITY



Vegetated bioswales in street medians intercept stormwater runoff, removing pollutants, increasing evaporation, and retarding flows prior to discharge.



Lush vegetated swales with native vegetation and trees intercept runoff, allowing for increased evaporation and treatment to remove pollutants prior to discharge into natural waters; permeable walkways promote infiltration, thereby reducing runoff.



Bio-retention systems and rain gardens capture stormwater runoff from the public right-of-way and provide water quality treatment via vegetation and bacteria in the soil medium, before discharging to subdrains.

Figure 2.5: Conceptual LID Tool Box - Streets and Landscape Corridors



2.6 NATURAL RESOURCES AND OPEN SPACE

2.6.1 Access to Public Open Space

Access to public open spaces for community gatherings, health, and appreciation of the natural environment through trails, parks, natural preservation areas, courtyards, and public plazas will be provided. However, access to sensitive environmental areas set aside for avoidance will be limited according to activities defined in the Corps of Engineers wetland permit process.

2.6.2 Avoidance of Natural Resources

Many of the existing on-site natural resources, such as vernal pools, will be avoided through dedications, easements, and mitigation measures. With cooperation and approval from the appropriate agencies, the Avoided Areas may also be utilized by the University/College Campus Center and other educational institutions for education and research purposes.

2.6.3 Steep Slope Protection

Steep natural slopes will be avoided or graded to blend with the natural contours. All graded slopes will be landscaped with a mix of approved trees, spreading shrubs and/or groundcover (permanently planted or hydroseeded). Graded slopes with a gradient in excess of 3:1 are considered "steep", and will receive erosion control measures such as enhanced shrub/ground cover planting and hydroseeding, or a biodegradable erosion control netting, as a temporary measure for slope protection. Refer to the Community Plant Palette, Open Space Slope Shrubs and Common Open Space Slope Hydroseed Cover, in Appendix B.

2.7 EDUCATION

2.7.1 Sustainable Education

A sustainable education program will be developed and implemented by the Cordova Hills County Service Area.



Bioswale

SUSTAINABILITY

2.8 GREEN CONSTRUCTION

Cordova Hills aims at being as sustainable as practicable, but given the evolving nature of industry, regulatory standards and guidelines, technology, and cost parameters, it is unknown at present what will be acceptable sustainable practices for the build-out of Cordova Hills. However, Cordova Hills will exceed Title 24 as noted in the Greenhouse Gas Plan.

2.8.1 Indoor Environmental Quality

Improving indoor environmental quality through the incorporation of high quality and efficient combustion venting, moisture control, outdoor air ventilation, supply air distribution and filtering, contaminant control, low VOC paints, and garage pollutant protection will be encouraged.



2.8.2 Energy Efficiency in Buildings

The Cordova Hills plan seeks to reduce per capita energy consumption by promoting the use of advanced energy technology and energy conserving design and materials where feasible. Energy conservation techniques and materials will undoubtedly become more affordable and effective over the build-out of this plan. In addition to requiring 20% of future residential energy needs to be provided from renewable sources, all buildings will exceed the energy requirements of the currently adopted 2013 Title 24 requirements by 20% use energy efficient appliances, Energy Star roofs, tankless water heaters and low NO_x emission furnaces (defined as furnaces that emit no more than 40 nanograms of NO_x per joule). In addition electrical outlets shall be provided for all home appliances even if natural gas service is provided.

Further, home builders will adopt the feasible and cost-effective technologies to remain competitive in the marketplace as home buyers demand more efficient homes with lower annual operating costs. The design and construction of energy efficient buildings to reduce their carbon footprint may include the following:

- Incorporation of natural light and ventilation
- Energy efficient appliances
- Motion and occupant sensor lighting
- Efficient heating and air conditioning systems
- Energy efficient windows

2.8.3 Resource Conservation (Materials)

There are many effective building strategies that conserve natural resources while saving costs. Using durable and/or recycled products keep waste out of landfills. These strategies include the following:

- Effective design and use of materials
- Environmentally preferable building materials



2.8.4 Construction Waste Management

Construction waste may be diverted to recycling facilities within the adjacent landfill or other near by proposed recycling facilities. A temporary recycling processing area may be identified during construction of the community to facilitate construction waste reduction.

2.9 OTHER SUSTAINABILITY MEASURES

2.9.1 Local Food Production

Cordova Hills is designed to encourage local food production and contribute to fulfilling the SACOG Rural-Urban Connections Strategy by providing space for small scale agriculture and providing community agriculture support programs through the Cordova Hills County Service Area. (CHCSA). Space for a small agricultural operation modeled on Soil Born Farms is identified in the buffer area adjacent to the Sports Park. This will provide educational programs, a community garden, demonstration garden and food production and limited on-site processing within the community. In addition, all of the Recreation-2 (R-2) designated areas within Cordova Hills will provide space for small community gardens within seasonal flood plains and upland areas. Community gardens located throughout various neighborhoods

can also provide for local fresh food in the community. These could be operated by the Cordova Hills CSA, a private, non-profit organization, a HOA, or the Master HOA. Edible landscaping, such as olive groves and grape vineyards planted in the community's slopes/entrances or open space corridors may be harvested and sold at the Town Center. Farmers markets will be located in the Town Center park and in the Community Park. The farmers markets will be sponsored by the CHCSD and coordinated with regional farmers market programs.

2.9.2 Limit Outdoor Lighting

Limit the hours of operation of outdoor lighting by:

- 50% of the external luminaires must have fixture-integrated lighting controls that use motion sensors to reduce light levels by at least 50% after 15 minutes.
- All shared areas shall have automatic controls that turn off exterior lighting during daylight hours when not required.
- Light zones will be defined with specific uplight and light trespass requirements.



Community Garden

Chapter 3

LAND USE



LAND USE

3.1 INTRODUCTION

The Land Use Chapter is the cornerstone of the Master Plan. The Land Use Chapter defines the type, nature, and intensity of land use for Cordova Hills. The Land Use Chapter objectives and criteria work in conjunction with design standards and guidelines addressed in the Development Regulations and Design Guidelines, Chapter 4. Chapter 4 provides regulations and guidelines and criteria for neighborhood design, architecture and landscaping to ensure strong community character. The land uses identified in Chapter 3 are subject to the Williamson Act contract restrictions set forth in Section 1.12.4 on page 1-14. See Figure 1-4 for location of Williamson Act Parcel.

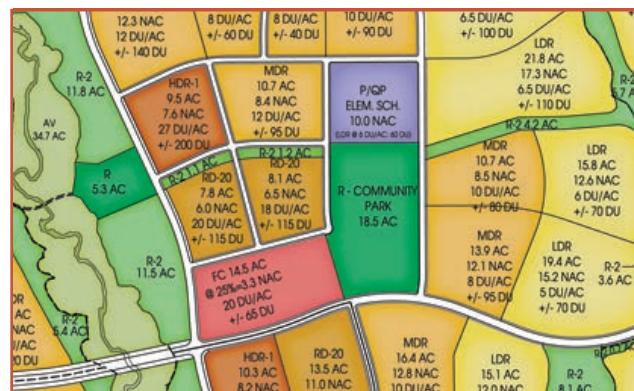
The Circulation Chapter is integrated with land use to define a safe and efficient circulation network that reduces the need for auto travel, reduces vehicle trip lengths, encourages alternative travel modes of transportation and encourages walking, bicycling, and public transit use. Cordova Hills represents a unique opportunity to create a truly great master planned community.

The new community will combine a Town Center with a major campus of higher learning for the University / College Campus Center, and a diversity of new homes, interwoven with extensive open space. The community will be inter-connected through an extensive system of transportation corridors and other open space linkages. An extensive amount of natural open space will be avoided throughout the community, including a series of Avoided Areas.

3.2 LAND USE PLAN VISION AND GROWTH PRINCIPLES

3.2.1 Overview

Cordova Hills is envisioned as a community that embraces the rich natural resources of the site. Open Space avoidance and thoughtful community design will create a series of interconnected Villages and neighborhoods.



Interconnected Neighborhoods

These Villages and neighborhoods will be anchored by high quality community facilities. These facilities will contain retail, and town center opportunities as well as parks and community support amenities. Careful attention to the human scale through comprehensive design will distinguish Cordova Hills as a community and a regional destination. The key features of the Cordova Hills Land Use Plan include:

- Town Center: A diverse mix of retail/commercial, service, higher density residential, civic and flex uses.
- Refer to Figure 3.1: Village Concept Map, which illustrates the location and name of all Villages in Cordova Hills
- The University / College Campus Center will be an integral and exciting component of Cordova Hills. The University / College Campus Center will ultimately have 6,000 students. The campus will have access to the broad open space trail and bicycling amenities of Cordova Hills so that students and faculty can readily take advantage of these systems both for commute and recreational purposes.



- University Village: Adjacent to the University / College Campus Center to provide student and/or faculty housing, and “walkable” amenities for the campus and community.
- Six Villages in Cordova Hills allowing a maximum total of 8,000 dwelling units.
- Public uses: Parks, schools, and civic facilities.
- Open Space and trail system: Integrated community-wide, with drainage course preservation and Avoided Areas.
- Circulation is carefully integrated with land use to define a safe and efficient circulation network that reduces the need for auto travel, reduces vehicle trip lengths, encourages alternative travel modes of transportation and encourages walking, bicycling, and public transit use.

3.2.2 Response to the General Plan Smart Growth Principles

Cordova Hills is a mixed-use, mixed-density residential development that incorporates the principles of the SACOG Blueprint Plan, and Sacramento County policies for growth within the long established Urban Services Boundary. The Cordova Hills Master Plan incorporates the following Smart Growth principles established in the County General Plan Land Use Element.

3.2.2.1 Transportation Choices

The Cordova Hills Master Plan is designed to accommodate a range of transportation choices including neighborhood electric vehicles (NEV) personal vehicles, buses, and shuttles. The hierarchy of streets is designed to safely accommodate a range of transportation choices. A network of off-street trails will connect residential, commercial, office, community/civic and open space internally, and to areas surrounding Cordova Hills, to encourage walking and cycling.

3.2.2.2 Housing Choices

The Cordova Hills Master Plan provides a range of housing choices that will meet the needs of a diverse range of households, lifestyles, and income levels. The Plan includes housing types ranging from high-density town center living with apartments and townhomes to large executive homes, and includes active adult housing.

Living choices to accommodate multi-generational community lifestyles will be incorporated into attached and detached housing. Workforce, affordable housing, and on- and off-campus University / College Campus Center housing will also be provided in various planning areas.



Housing Diversity

3.2.2.3 Integrated (Mixed) Land Uses

The Cordova Hills Master Plan provides mixed-use centers strategically located to serve a cluster of neighborhoods. Mixed-uses would include retail, service, civic, medical services, recreational, office, live-work, and higher density residential.

LAND USE

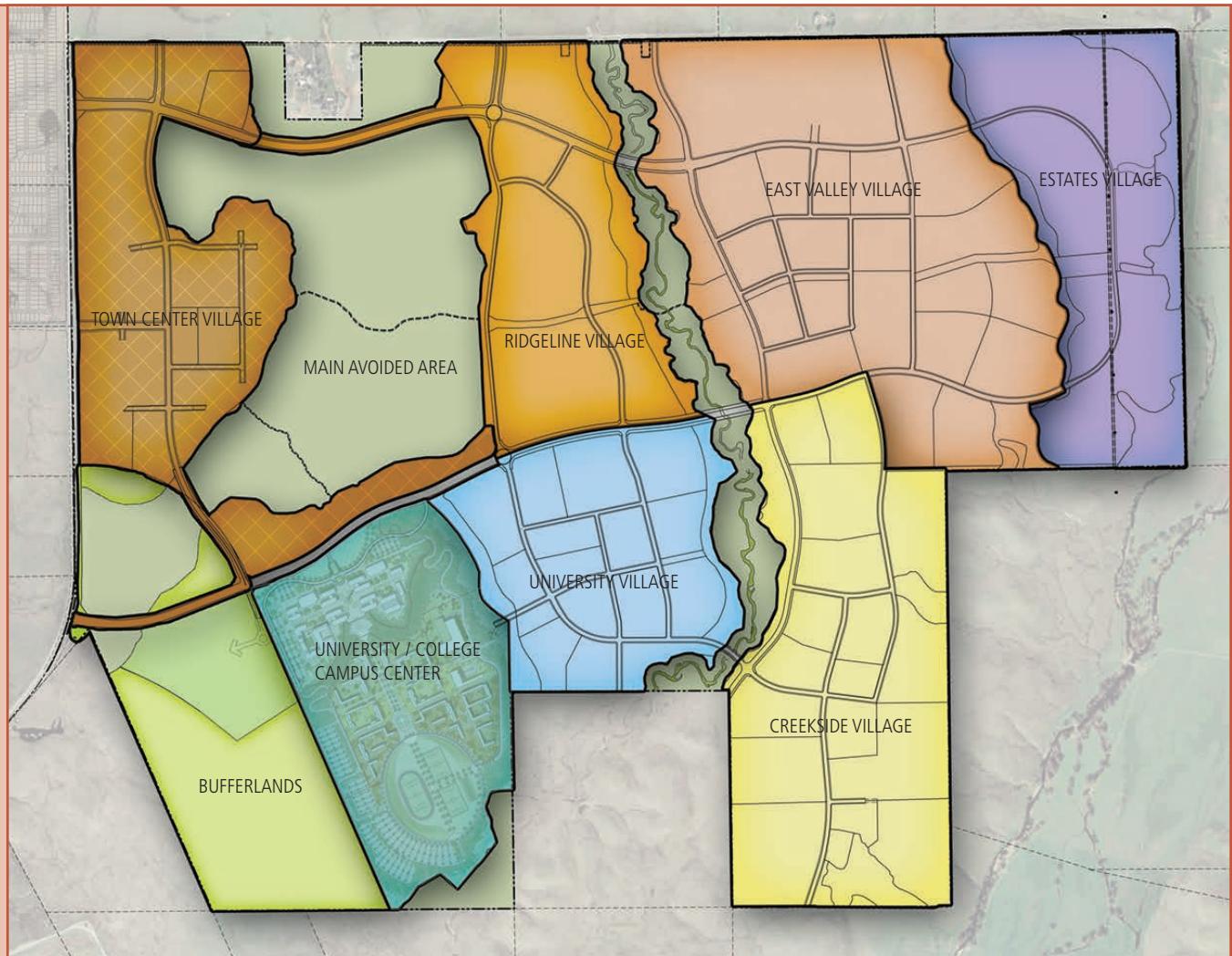


Figure 3.1: Village Concept Map



3.2.2.4 Compact Urban Development

The Cordova Hills Master Plan is divided into Villages and small, compact neighborhoods, often separated by permanent open space. Villages range from 130 to approximately 250 acres. Each of the smaller residential neighborhoods will be approximately 3-10 acres, depending on product type, topography and open space adjacency.

Neighborhoods will typically be clustered around Village activity nodes such as parks, schools, neighborhood commercial, and community recreation facilities. This locates public amenities within a short walk of most residents.



Village Activity Nodes

3.2.2.5 Walkable Neighborhoods

Streets are designed as livable, pedestrian friendly spaces with living spaces facing the street. Neighborhood streets are designed for slower speeds with pedestrian crossings at key locations and with landscape enhancements.

For example, the Community Trail will total approximately three (3) miles in length and link the proposed Laguna Creek and Deer Creek trail systems to the west and east, respectively. It will also link off street trails and enhanced local street sidewalks that connect neighborhoods to community parks, open space, and natural resource areas.



Walkable Neighborhoods

3.2.2.6 Avoidance/integration of Natural Resources with Urban Land Uses

Key natural resources amenities within Cordova Hills will be buffered from adjacent urban uses with carefully designed edge treatments and features, including natural open space, trails, drainage corridors, fencing, and roadways. Refer to Chapter 7, Natural Resources for additional information on the open space and resource Avoidance Areas.



Careful Edge Treatment

LAND USE

3.3 LAND USE OBJECTIVES

The Cordova Hills Master Plan provides a unique opportunity to develop a community that fulfills key land use objectives distinctive to this site. The scale of the community, the opportunity to design in concert with a major institution of higher learning, and a moderately sloping topographic and natural setting all combine to promote the following land use objectives:

- Provide a diverse supply of housing types and densities to ensure a variety of lifestyles, ages, and incomes can be housed and to bring a better balance of jobs to housing in the area.
- Integrate residential and supporting land uses in a compact urban environment to improve livability and to reduce urban sprawl.
- Establish more livable and sustainable neighborhoods where residents can walk to commercial services and recreational amenities.
- Create an environmentally sustainable community that is energy efficient, conserves water, and is responsive to the natural setting surrounding it.
- Create convenient retail shopping and commercial service opportunities so that residents are able to meet some of their shopping needs locally.
- Create streets that are safe for pedestrians and bicyclists.
- Avoid and integrate natural resources into development.
- Transition to lower density and intensity development toward more topographically diverse portions of Cordova Hills adjacent to the Urban Services Boundary.

3.4 LAND USE PLAN SETTING

3.4.1 Site Characteristics

Cordova Hills is currently undeveloped land with poor agricultural soils. The area was historically used for dry land farming and grazing on spring grasses.



Cordova Hills Site

3.4.2 Topography, Drainage Corridors, and Wetlands

The upper reaches of Laguna Creek and tributaries to Deer Creek transect Cordova Hills and provide major open space features. These open space corridors provide a special opportunity for continuously linked bike and pedestrian trails with a major open space amenity. The terrain includes a generally flat plateau on the western third of the project. This plateau generally drains west and south toward Grant Line Road, but falls sharply to the east and south into a well defined drainage corridor, called the Paseo Central.

The central portion of Cordova Hills includes a north south drainage called the Paseo Central which is flanked by the bluff on the west and several small hills to the east that punctuates a series of small drainage valleys. In the eastern third of the site a well-defined north-south ridge falls away to Carson Creek, on the eastern edge of the project. The south quadrant and the east portions of Cordova Hills include small hills that offer views and home site opportunities that are unique in Sacramento County.

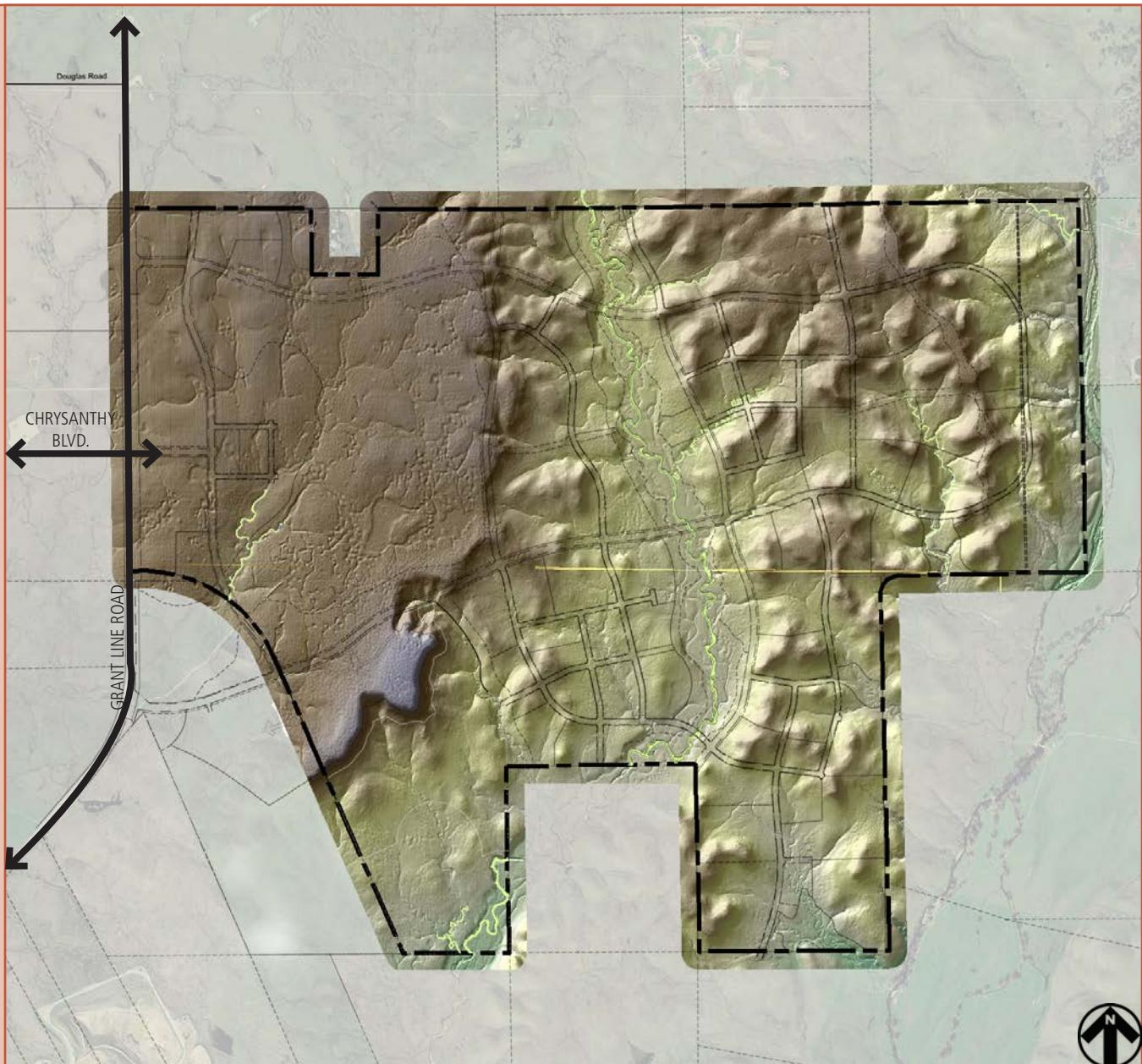


Figure 3.2: Existing Topography

LAND USE

A prominent north-south oriented ridgeline extends for over a mile in the eastern portion of the site. It will represent a boundary between the Villages of East Valley and the Estates. The ridge will be a recontoured linear open space park including a trail that extends adjacent to the ridge that will connect with the local trail system. This will create an excellent opportunity for unique entry ways between the two adjacent Villages.

Adjacent neighborhoods on either side of the ridge will be designed to preserve views of the natural open space. Figure 3.2 Existing Topography, illustrates the existing topographic conditions of Cordova Hills. Portions of Cordova Hills with flatter terrain provide an opportunity for more intensive land uses, such as the Town Center.

Avoidance of the primary north-south drainage corridor in its natural state will create a major open space and recreation amenity that defines the edges of the Villages along this feature. The drainage will be the focus of a major open space corridor that includes a pedestrian and bike trail linking the entire community to this signature feature. Refer to Parks and Open Space, section 3.8 of this Chapter and the trails discussion in Chapter 6, Circulation (see sub-section 6.11 for further description of this feature).

3.4.3 Viewsheds

The Cordova Hills site affords distant views to the Sierra Nevada, the Coast Range and Sutter Buttes from many locations in the site, but most prominently from higher elevations at the University / College Campus Center, Ridgeline Village, University Villages, and the ridgeline between the East Valley and The Estates Villages. Ridge tops and higher elevations in the central and southern portions of Cordova Hills provide view opportunities from public parks, community roadways, open space corridors, trails, homes, and the University / College Campus Centers. The uninterrupted view to the east dominated by Mt. Ralston and Pyramid Peak in the Crystal Range of the Sierra Nevada provide memorable views.

The off-site viewshed corridors illustrated in Figure 3.3: Viewshed Plan, are an important feature of Cordova Hills.



1

View Toward the Crystal Range



2

View Toward Carson Creek

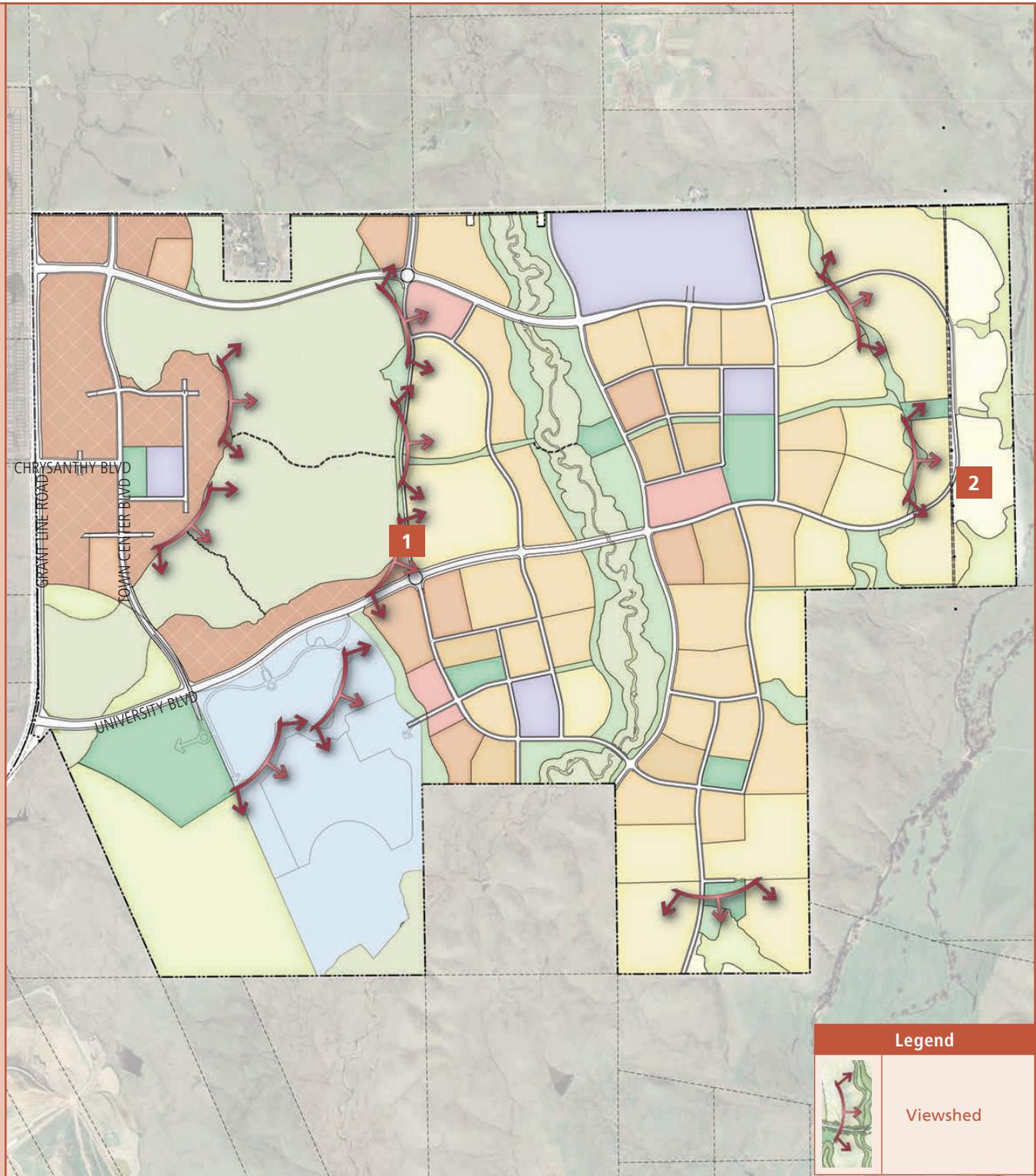


Figure 3.3: Viewshed Plan

LAND USE

3.4.4 Avoidance Areas

Much of the on-site wetlands resources will be avoided. The location and size of these open space areas significantly influences the shape and size of Villages by restricting local circulation routes. Development is prohibited within wetland avoidance areas and the uses adjacent to them will be controlled to avoid directly impacting the resources, as described in Chapter 7, Natural Resources.

Preserving the environmentally richer concentrations of wetlands and protecting the viability of the adjacent watershed ensures the long-term viability of the wetland resources. The main Avoided Area atop the western plateau provides a natural, open backdrop to the Town Center, and establishes a balance between man-made and natural environments. Additionally, it enhances the entry experience to the University / College Campus Center along the northern edge of University Boulevard, and provides a major Village boundary.



Conceptual Paseo Central

3.4.5 Vegetation

Annual grasslands are interspersed with seasonal wetlands and drainages typical of eastern Sacramento County. The dominant vegetation species include mostly non-native annual grasses and forbs. Native tree species do not exist on the site, except for a few riparian species (cottonwood and willow) trees along Carson Creek near the eastern boundary of the site.

3.4.6 Major Public Facilities

A major electric utility transmission line traverses Cordova Hills in a north-south direction, approximately one-quarter mile west of Carson Creek. The line is located on steel towers that may partially screen the view to the Sierra from some areas along the adjacent ridge.

3.4.7 Adjacent Uses

Adjacent lands surrounding Cordova Hills are currently undeveloped. Single-family residential neighborhoods are planned and approved in adjacent areas directly on the west side of Grant Line Road.

3.4.7.1 Landfill

The Cordova Hills community has been designed with consideration for the adjacent Kiefer Regional Landfill, along the southwest boundary of the site. A 2,000 foot transition area "bufferlands" from the edge of the landfill property has been established by Sacramento County to prohibit any conflicting uses.

The current Sacramento County land use zone on this buffer area is Agriculture, which allows a solar farm, regional park, trails, an arboretum, methane gas electricity power plant, or sustainable energy facilities and similar non-intensive, non-residential uses and the major arterial and infrastructure proposed in the Cordova Hills circulation plan.



3.4.8 Access Point and Traffic/ Transportation Network

Three primary access points from Grant Line Road to Cordova Hills are proposed. The primary access to the Cordova Hills Town Center will be the easterly extension of Chrysanthy Road across Grant Line Road. This will be the community front door into the Town Center. Two other access points from Grant Line Road, one each north and south of Chrysanthy Road, will provide additional of access to the community to the east.

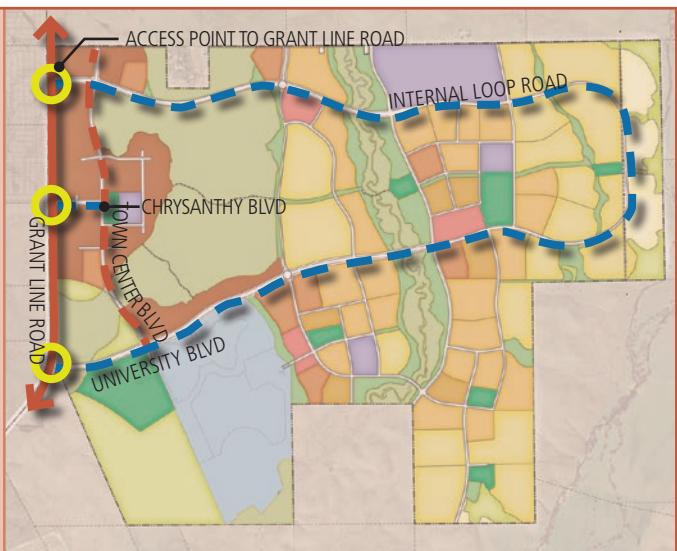


Figure 3.4: Cordova Hills Access Points and Transportation Network

The extension of the two arterial access points eastward into the project will form an internal loop to access the University / College Campus Center and University Village, Creekside, the Estates, East Valley, and Ridgeline Villages. The loop alignment is constrained to narrow corridors within the Main Avoided Area east of the Town Center. The internal roadway network for Cordova Hills generally avoids steep slopes and creek crossings to reduce environmental impacts and site development costs.

3.5 LAND USE CONCEPT

The Land Use Concept sets the maximum level of development yield and intensity. The land use organization, and development standards, which follow, are consistent with Figure 3.5: Illustrative Land Use Plan. The Land Use Concept for Cordova Hills is based on the Vision and Growth Principles (set forth in section 3.2 of this Chapter) adapted to the natural setting of the project site.

3.5.1 Land Use Pattern and Organization

Cordova Hills will be made up of six distinct Villages in addition to the University / College Campus Center and bufferlands. Each Village will include a mix of residential types, and where appropriate, retail and services centers, parks, and schools. The Village forms are defined by natural features that convey a distinct character and open space accessibility to each Village (refer to Figure 3.1 for Cordova Hills Village Location).

The overall Cordova Hills community applies a transition of project density from west to east. On the west the community abuts Grant Line Road, which is a major County thoroughfare and a viable regional connector route.

High intensity land uses that can be more readily served by public transportation and high capacity roadways are appropriate for the western portion of the community. These include regional and local retail, town center, local services, regional entertainment, transit center, offices and high-density residential uses.

In the center of the community the residential density will transition to market rate and active adult housing oriented to the Paseo Central. The east side of the community would be allocated to lower density, larger residential lots that can take advantage of the exceptional views to the mountains, and are more appropriate for the terrain and proximity to the Urban Services Boundary.

LAND USE

Neighborhoods

Neighborhoods are the vital “building blocks” of the community and are predominantly residential, comprised primarily of a wide range of single-family homes (attached and detached) and may also include multi-family dwelling units. Neighborhoods typically are broken up by builder parcels, allowing for a mix of housing types in each neighborhood. Neighborhoods will typically exhibit the following features and characteristics.



Concept Lotting for Flatter and Higher Density Areas

- Diversity in housing choices in range of lot and home sizes, design, diversity in housing products, cost and lifestyles is important to the social fabric and economic viability of neighborhoods.
- Each cluster of neighborhoods will include a neighborhood center that is a “place” for neighbors to gather (e.g., school, park, community center, neighborhood commercial services and eating establishments).
- Neighborhoods will be compact and walkable in design, scaled at approximately 3-10 acres. The residential population of the neighborhood will be approximately 75-250 residents. The small scale of neighborhoods allows residents to walk almost anywhere in the neighborhood.
- Neighborhoods will be generally developed on a modified grid/curvilinear pedestrian friendly street system with short blocks for ease of mobility. Major streets will not bisect neighborhoods, thereby eliminating cross traffic conflicts. However, neighborhood streets do establish a hierarchy of larger to smaller streets that helps residents and visitors understand where they are in any given neighborhood.



Concept Lotting for areas with Topography and Lower Density Areas



Villages

A "Village" is a cluster of approximately eight to ten residential neighborhoods, which generally encompasses approximately 130 - 250 acres in size. A Village would have a residential population of between 2,000 and 2,500 residents, and between 600 and 800 homes.

Cordova Hills is envisioned as a series of six "Villages" and one University / College Campus Center, each with an individual architectural and landscape character and a separate set of "placemaking" principles for community character, land use and housing mix, recreation, infrastructure, and open space. Each Village will have a distinct amenity package and identity. Figure 3.1: Village Concept Map illustrates the location of the Cordova Hills Villages. A summary of these Villages is included as follows.

3.6 VILLAGE CONCEPT

3.6.1 Landform Defines the Village

Cordova Hills is designed to minimize the environmental impacts on ecologically sensitive areas, while providing developable terrain for the various Village areas and roadways. Existing land characteristics, such as flat or hilly terrain, help determine the locations for various types of urban forms and densities. For example, an area that has flatter or level grades is more suitable for a higher density neighborhood and retail with grid-pattern streets. See concept plotting on page 3-12.

An area having steeper natural grade would be better suited for low-density neighborhoods with curvilinear streets that conform to the existing topography. Each Village in Cordova Hills will be designed and graded as separate entities consistent with their individual site-specific conditions. Not only will this help minimize the impact on surrounding areas, but it will also promote community character and identity.

Table 3.1: Total Development Summary

Village	Commercial SF	HDR 2 30 - 40 DU/AC	HDR 1 23 - 30 DU/AC	RD20 20 DU/AC	MDR 7 - 15 DU/AC	LDR 4 - 7 DU/ AC	ER 1 - 7 DU/AC	FC	Total Units
Town Center	966,779	150	400	150	760	290	0	0	1,750
Ridgeline	92,000	0	200	0	485	260	0	50	995
University Village	88,860	0	620	205	530	80	0	40	1,475
East Valley	111,200	0	200	230	725	520	0	65	1,740
Creekside	0	0	200	303	610	425	2	0	1,540
Estates	0	0	0	0	0	355	145	0	500
FRO Overlay	90,580	0	0	0	0	0		0	0
TOTALS	1,349,419	150	1,620	888	3,110	1,930	147	155	8,000

Note: Total University / College Campus Center Dorm Rooms are 1,010

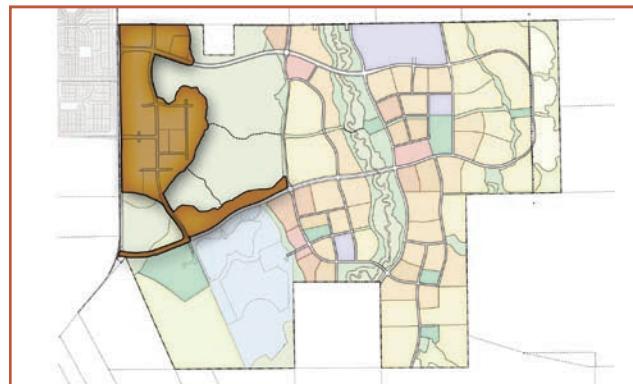
Note: University / College Campus Center Business Conference Center has 100 units that accommodate one person per room

LAND USE

Town Center Village

Directly adjacent to Grant Line Road, the topography in this area is generally flat and lacking prominent features. This area is ideal for the Town Center and high-density neighborhoods that are envisioned to surround the Town Center's commercial core. This area will be a true mixed-use Village with approximately 966,000 sq. ft. of commercial uses and approximately 1,750 residential units. The Capital Southeast Connector could become a regional transportation corridor that will support the Town Center as a shopping and entertainment center for the southeast Sacramento County region.

The Town Center will include shops, offices, lifestyle retail services, and restaurants. A traditional "Main Street," or Town Center Boulevard, will include a shopping and retail "corridor," with an urban style streetscene. Higher end retail frontage will be "pulled forward" toward the street. Higher density



Village Location Map

housing will surround a neighborhood park, or Town Green, and an urban style two-story elementary school all within walking distance. With a diverse mix of day and night uses in this urban core, the Town Center will become the heart of the Cordova Hills community.



Town Center



Ridgeline Village

The Ridgeline Village area is situated on a prominent down slope just below the ridge crest of the central bluff that falls eastward toward the Paseo Central. A mix of low to medium-low density residential housing types is envisioned for this area. Therefore, builder pads of different sizes will be utilized in a step-down terrace formation. This method takes advantage of the natural slope, while maximizing the views onto the valley below. Two main pedestrian routes will connect the vernal pool Avoided Area to the Paseo Central.

The Ridgeline Village will include a neighborhood retail center and will be surrounded to the east and west by open space Avoided Areas, providing a distinctive Village edge. The Ridgeline Village is envisioned as a transitional district between the Main Avoided Area to the west and East Valley district to the east.



Village Location Map

With commanding views to the east, this hillside neighborhood is a good location for mixed housing products, potentially including age-targeted housing.

The rendering below illustrates a conceptual design for a pedestrian and automobile crossing of the Paseo Central, connecting Ridgeline Village with East Valley.



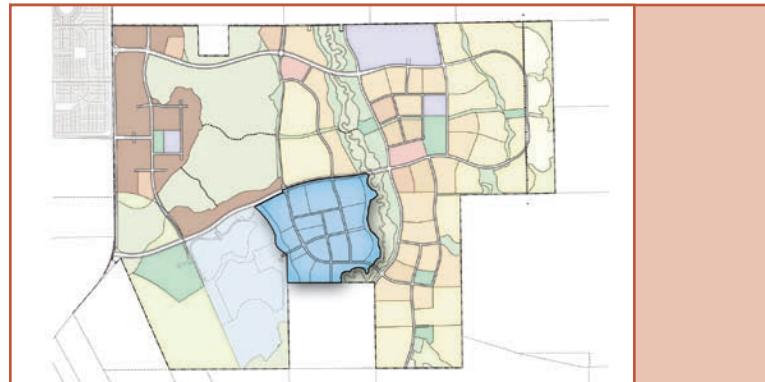
Conceptual Bridge Over the Paseo Central

LAND USE

University Village

The University Village lies east of the University / College Campus Center. Adjacent and connected to the campus center by a pedestrian scaled mixed-use street, this Village will provide housing for students and staff, and local support for the adjacent retail. This Village is bounded by a bluff edge and open space corridor to the west and the Paseo Central to the east. It features traditional neighborhood design character with a neighborhood park as the focal point.

This Village will be an active retail and residential area and will house most of the off-campus residences, an elementary school, and a shopping and dining district oriented to the campus center. The natural grade in this area falls generally southward and eastward towards the central drainage corridor. The grading concept would be compatible with the proposed medium-high density residential neighborhoods that



Village Location Map

are envisioned for this Village. The development of University Village is subject to the Williamson Act contract restrictions set forth in Section 1.12.4 on page 1-14. See Figure 1-4 for location of Williamson Act Parcel.



Conceptual University Village Mixed-Use Center



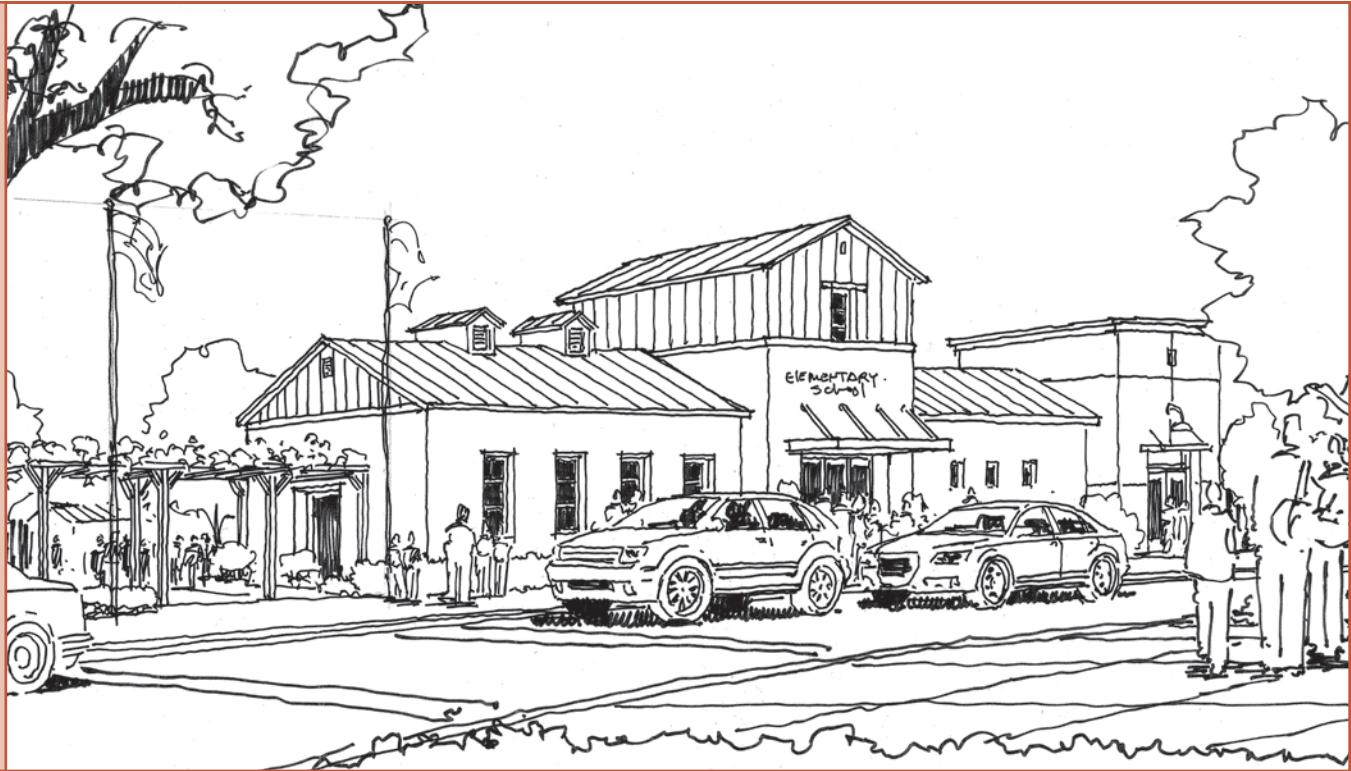
East Valley

The East Valley Village will consist of an approximate 14.5-acre neighborhood serving retail center with an adjacent 18.5-acre community park as the Village's core.

The East Valley Village will be a family oriented Village with a school, retail and park as a focal point. It is one of the largest Villages in Cordova Hills, and will feature local retail and services to serve the Village and surrounding neighborhoods. Trails and open space extending through the East Valley Village will connect to the Paseo Central along its west boundary. The ridgeline feature extending north to south forms the eastern boundary of the Village.



Village Location Map



Elementary School

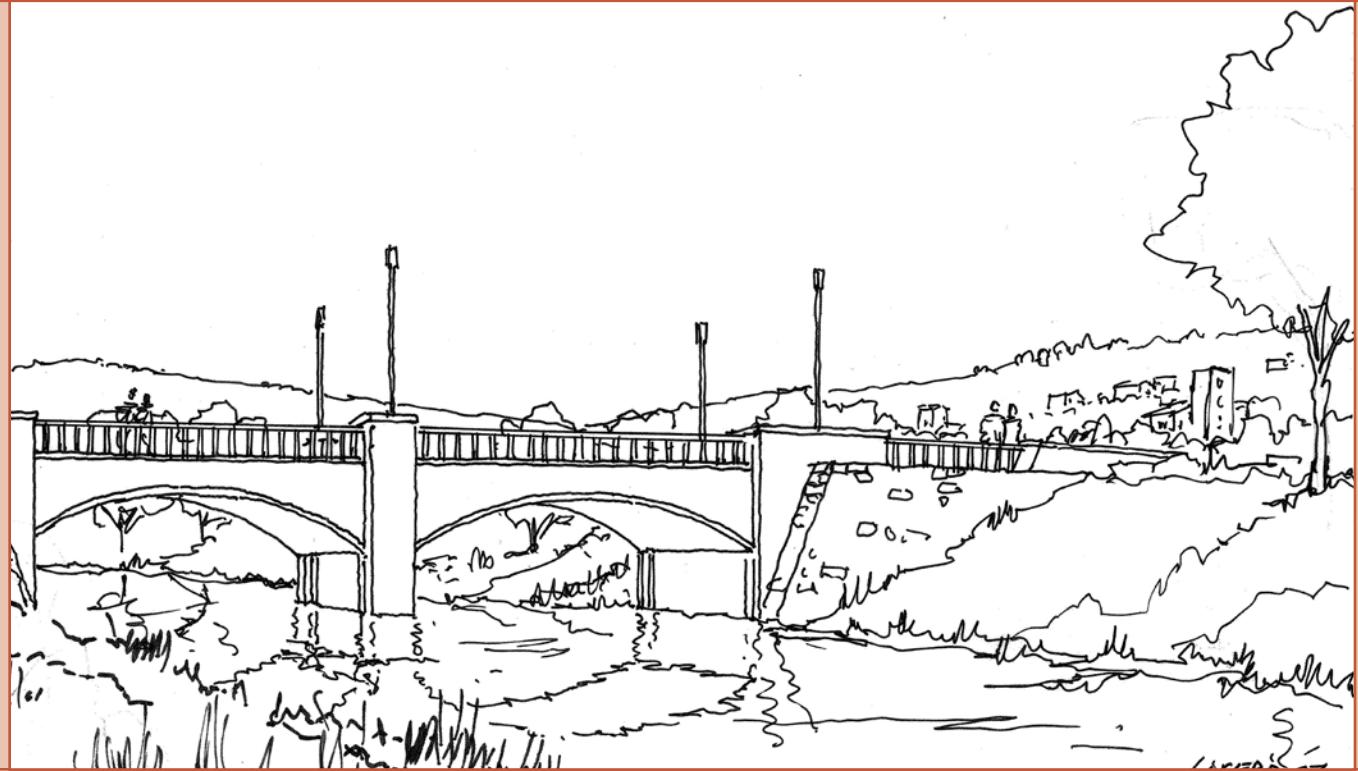
LAND USE

Creekside Village

Creekside Village will contain two neighborhood parks of at least 5 acres each in size and mixed residential densities. The Creekside Village is envisioned as a quiet, move-up community with open space to the east, south and west. Mid-density housing in a variety of configurations and styles will help to preserve the rolling landform in the Creekside Village. The development of Creekside Village is subject to the Williamson Act contract restrictions set forth in Section 1.12.4 on page 1-14. See Figure 1-4 for location of Williamson Act Parcel.



Village Location Map



Conceptual Bridge



Estates Village

The Estates Village abuts the Urban Services Boundary. This Village is envisioned to have the lowest residential density housing consisting primarily of large lots to respect the transition to the Urban Services Boundary. A ridgeline feature that separates the Estates from the East Valley Village will be recontoured. This ridge will serve as an open space separation, and a natural gateway to the Estates. Residences will enjoy an open space view of the Deer Creek Hills drainage to the east and the distant Sierra Nevada.

A relaxed, "country-side" neighborhood will be created in the Estates Village with low residential densities, a more informal, rural street character, and a focus on the open, rural character of the surrounding open space. This Village, as well as many of the other Villages, includes a designated location for a central recreation area. Carson Creek borders it to the east, with interconnected open space as a common character feature.



Village Location Map



Conceptual Estates Street Scene

LAND USE

The Bufferlands

The bufferlands lies west of the University / College Campus Center and includes the sports park. Other potential uses permitted within its AG designation include a solar farm, District Energy Plant, Corporation Yard, Park and Ride Lot, Natural Resource Avoided Area, Agriculture, Community Gardens, Sewer Pump Station, and Water Tanks.

The sports park is planned directly west of the University / College Campus Center and conceptually includes sports fields, courts, picnic and playground areas, and parking.



Village Location Map

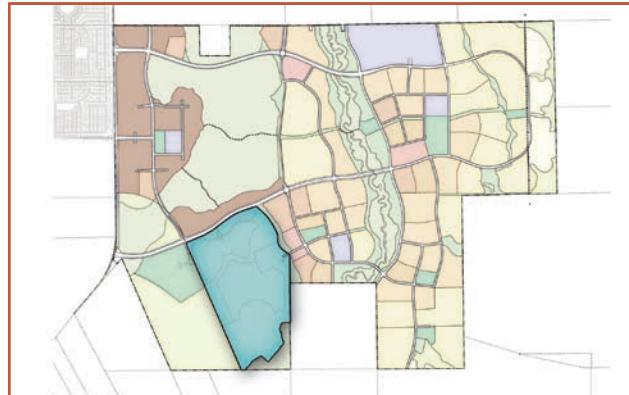


Example of a Solar Farm



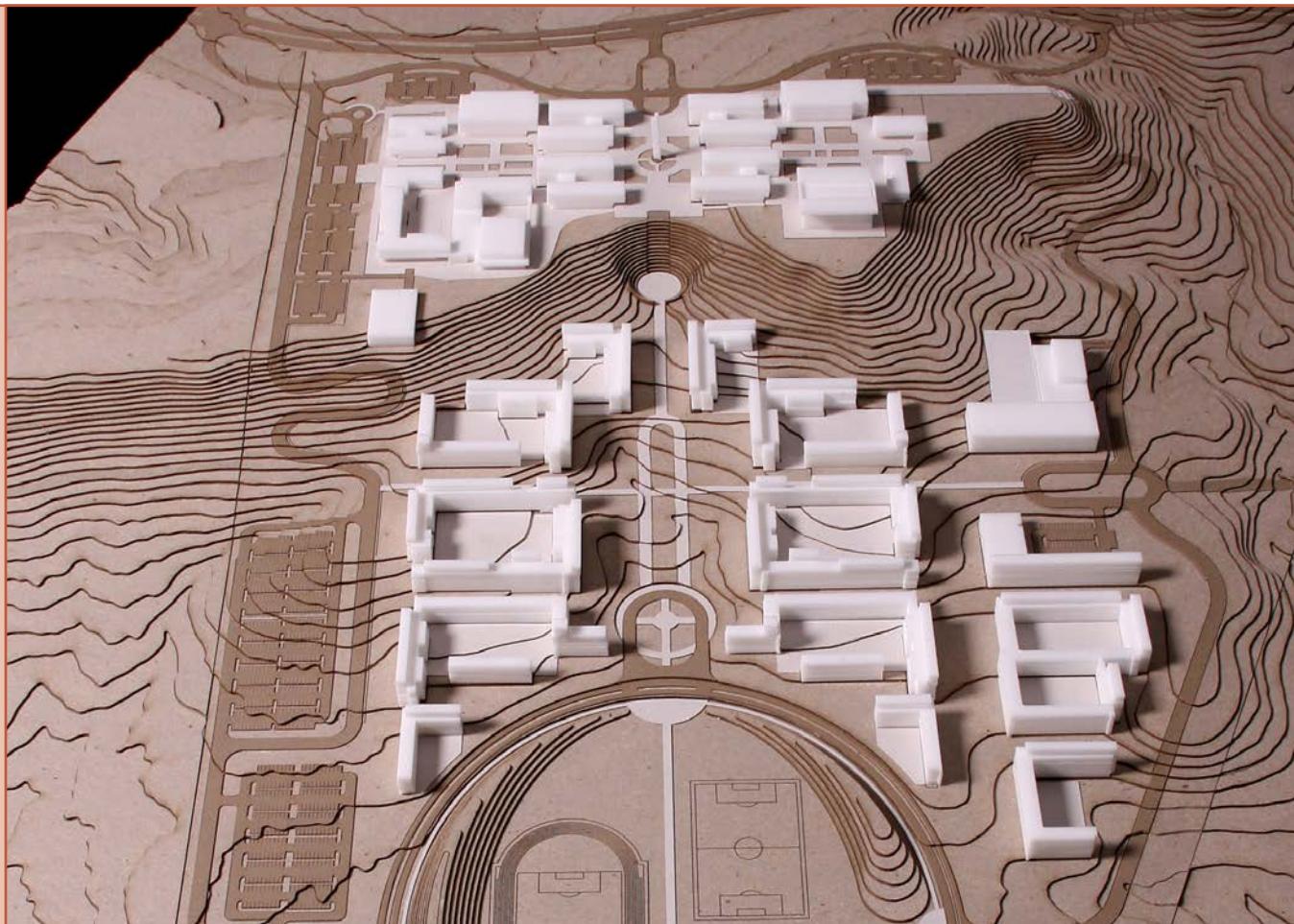
The University / College Campus Center

Located on a plateau overlooking the valleys of Cordova Hills, the University / College Campus Center is envisioned to be a higher learning “campus for the centuries.” The University/College Campus Center will occupy 246 acres and is a significant component of Cordova Hills. The University/College Campus Center is designed to accommodate a single institution, or a conglomerate of smaller institutions all within a coordinating framework of administration, services and common facilities that will encompass a broad range of disciplines from the arts and sciences to business, law, engineering, arts and medicine. The campus includes, various classrooms and lecture halls, special facilities such as laboratories, libraries, a place of worship, or a



Village Location Map

performing arts center, student union, student and faculty housing, a sports complex, gardens and open space. More information on the University/College Campus Center can be found in Chapter 5.



Model Illustrating the Conceptual Building Massing of the University/College Campus Center

LAND USE

3.7 LAND USE PLAN

Figure 3.5: Illustrative Land Use Plan, summarizes the distribution of land uses for Cordova Hills. The Illustrative Land Use Plan portrays the overall pattern and intensity of land use, and circulation network that serves the proposed uses. The figure illustrates at a conceptual level the Village level organization, open space hierarchy, and the trail system and community connectivity. The key features of the Cordova Hills Land Use Plan include:

- A maximum allowable square footage of approximately 1.35 million S.F. Commercial / Office use in Cordova Hills. The FRO or Flex Residential Overlay, would permit; Retail and work centers, live work dwellings, children and senior day care centers in specified LDR, MDR, and HDR designations, as an overlay in these residential designations. The maximum allowable square footage of FRO designation is 90,000 s.f.
- The 183-acre Town Center District.
- The 240 gross-acre University/College Campus Center.
- The 205 gross-acre University Village adjacent to the University/College Campus Center.

- The remaining Villages; Ridgeline, East Valley, Creekside and the Estates are primarily residential Villages in the eastern and northern portions of Cordova Hills, which include approximately 1,232 gross acres.
- Public uses including schools, and civic facilities, including approximately 107 acres.
- An open space and trail system, integrated community-wide, with creek avoidance and wetland habitat avoidance including approximately 850 acres, not including parks.
- The total active park acreage for all Villages is approximately 104 acres.

3.7.1 Maximum Specific Development Plan Yield

Cordova Hills consists of approximately 2,666.8 acres in six Villages, and University/College Campus Center and the bufferlands. The Cordova Hills Master Plan may yield up to a maximum of 8,000 dwelling units as summarized in Table 3.1. The maximum developable acres is illustrated in the Land Use Plan and summarized in Table 3.2: Proposed Land Use Summary.

Table 3.2: Proposed Land Use Summary

Land Use	Gross Acreage	% of Gross Acres
Land Use Acreage Summary		
For-Sale Land Use		
Residential	978.5	36.7%
Flex Commercial	40.8	1.5%
Town Center	178.4	6.7%
Sub Total	1197.7	44.9%
Community Land Use		
Public / Quasi Public	110.7	4.2%
Recreation	105.7	4.0%
Recreation 2	121.5	4.6%
Roadways/ Misc Open Space	175.0	6.6%
Sub Total	512.9	19.2%
Additional Land Use		
University/College Campus Center	222.9	8.4%
Agricultural	128.0	4.8%
Avoided Area	605.3	22.7%
Subtotal	956.2	35.9%
Total Project	2666.8	100%

LAND USE

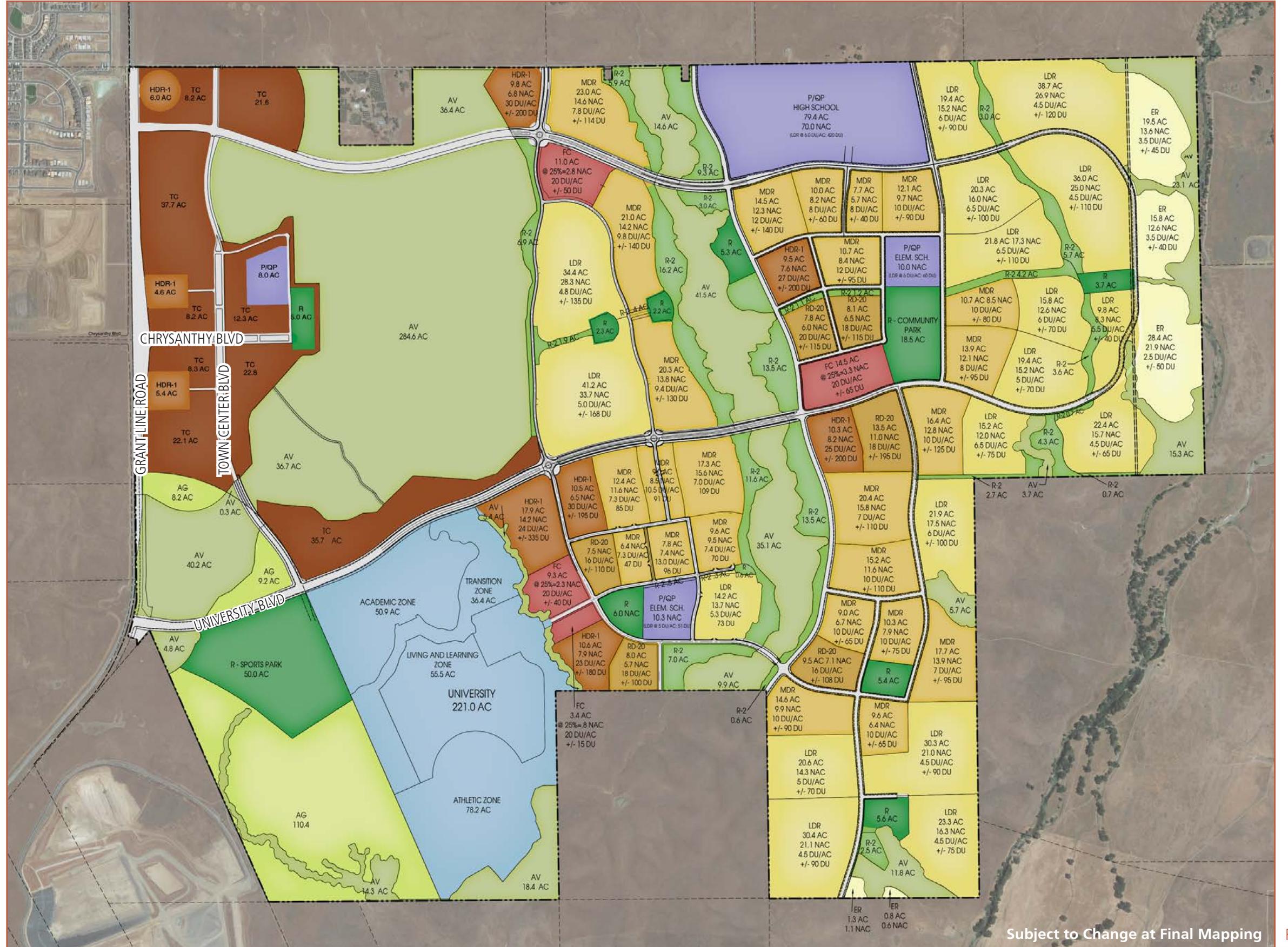


Figure 3.5: Illustrative Land Use Plan

Residential Density Ranges	
Residential Type	Residential Density Per Acre
Estate Residential	1-4 du/acre
Low Density Residential	4-7 du/acre
Medium Density Residential	7-15 du/acre
RD-20	20 du/acre
High Density Residential 1	20-30 du/acre
High Density Residential 2	30-40 du/acre

Legend	
	Estates Residential (ER)
	Low Density Residential (LDR)
	Medium Density Residential (MDR)
	Medium / High Density Residential (RD-20)
	High Density Residential (HDR1 & HDR2)
	Town Center (TC)
	Flex Commercial (FC)
	Public / Quasi Public (P/QP)
	Recreation (R)
	Recreation and Open Space (R-2)
	Avoided Area (AV)
	Agriculture (AG)
	University/College Campus Center (U/CCC)



3.7.2 AFFORDABLE HOUSING & DENSITY BONUS

Chapter 22.35 of the Sacramento County Code requires development projects to provide for an affordable housing component. An Affordable Housing Plan has been prepared for the Cordova Hills project and includes a strategy for providing 15% of the total housing units as affordable housing. This Affordable Housing Plan is adopted separately from the Master Plan and should be consulted for information on the affordable housing strategy. Amendments to the affordable housing plan will only require amendments to the Cordova Hills Master Plan when related changes to the SPA land use plan are also needed.

The Master Plan shows the maximum number of residential units at each of the six HDR-1 affordable housing sites as 200 residential units totaling 1,200 residential units. The Affordable Housing Plan (AHP) defines the total number of units needed to comply with the AHP at 1,044 units. The total remaining 156 units may be built on the HDR-1 sites (as market rate or affordable) or may be applied to other areas under the density transfer provisions of this Plan.

Table 3.3: Proposed Density Bonus Allocation

Land Use Type	Base Units	Density Bonus Units	Total Units	Percentage of Land Use Type
MDR 7 - 15	2483	627	3110	20.2%
LDR 4 - 7	1544	386	1930	20.0%
ER 1 - 7	116	31	147	21.1%
Totals	4143	1044	5187	

Section 22.35.090 of the Affordable Housing Ordinance allows for incentives, including density bonus, for building affordable housing. The Cordova Hills Affordable Housing Plan includes a density bonus within the MDR, LDR, and ER land use designations. The density bonus is shown in Table 3.3.

The density bonus units shown on Table 3.3 are applied equally across the three land use designations as a simple percentage of the total allocated units. A specific number of density bonus units should not be considered to apply to each Village or neighborhood/ parcel within a Village. The base units and density bonus units shown on Table 3.3 are defined only for purposes of implementing the Affordable Housing Ordinance. The total units shown on Table 3.1 and other tables should be used for implementation of this Plan. Density bonus units shown on Table 3.3 provide an affordable housing incentive pursuant to Section 22.35.090 (A)(1) of the County Code. Density bonuses proposed pursuant to Section 22.35.090(B), allowing densities up to 30 du/ac for affordable projects, shall be proposed with individual project applications.

LAND USE

3.8 PARKS AND OPEN SPACE

The proposed project includes a mix of parks, open space, recreation, and non-vehicular circulation amenities, including a sports park, community park, neighborhood parks, pocket parks, linear parks, detention basin parks, open space slope and park, utility easements, drainage corridors, Avoided Areas,

and a lengthy trail network. Approximately thirty five (35%) of Cordova Hills is devoted to various park and open space amenities. Refer to Figure 3.6: Parks and Open Space Plan.

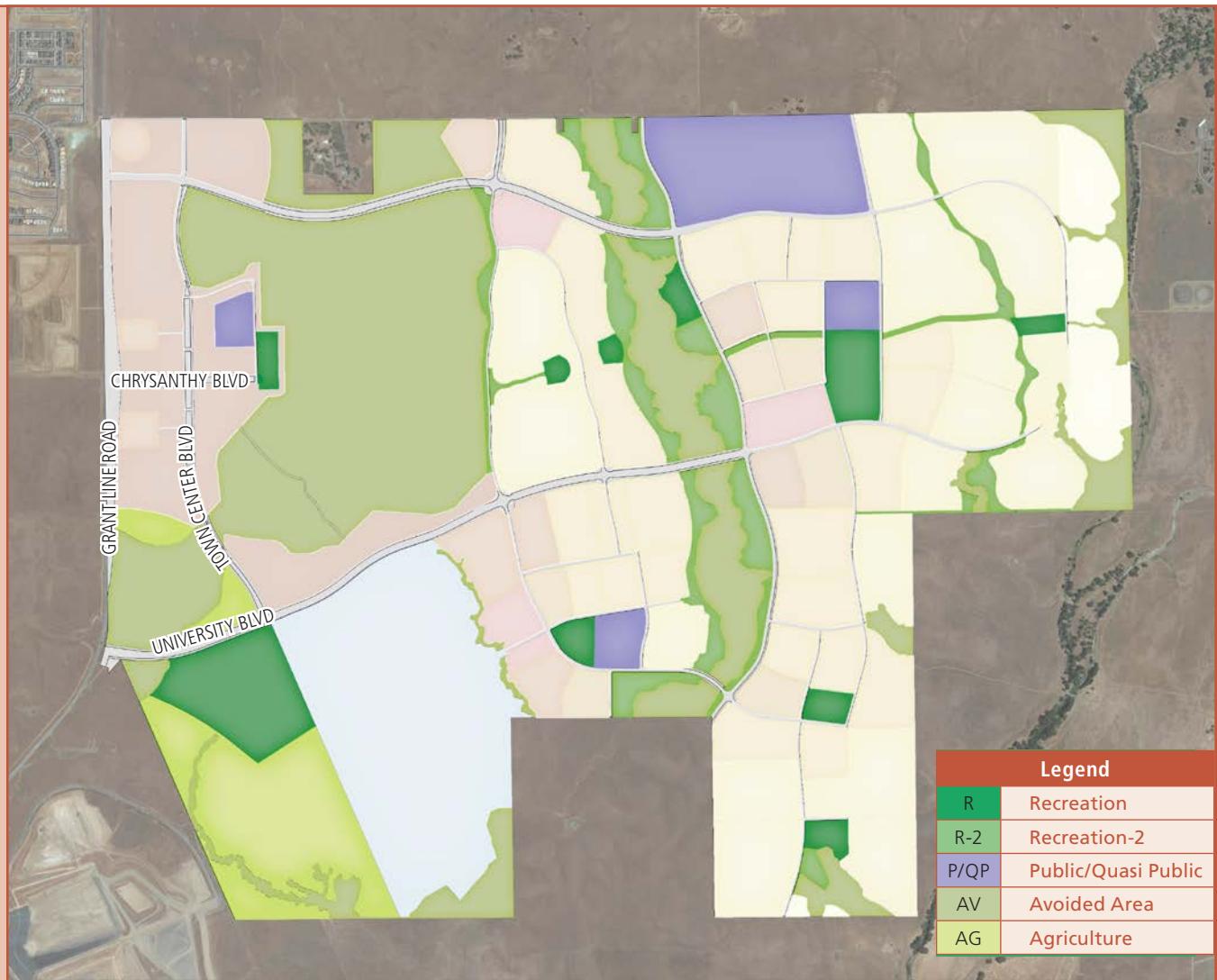


Figure 3.6: Parks and Open Space Plan



3.8.1 Parks and Open Space Vision

The placement and size of parks reflects the community needs for active and passive recreation, the proximity to users, and the terrain and drainage features that define the community form. The Parks and Open Space Vision includes:

- Parks will provide a safe and comfortable public realm which are aesthetically pleasing and vibrant places to gather.
- Neighborhood parks will provide a centrally located primary design feature for many neighborhoods.

Six neighborhood parks are distributed through the project, two are adjacent to school sites. In addition to the neighborhood parks, the schools will have sports fields.

3.8.2 Parkland Credits

The County General Plan requires 5 acres of parkland per 1,000 residents. With an average of 2.75 residents per household, the approximately 8,000 dwelling units in Cordova Hills will generate an estimated population of approximately 21,379 residents. This population will create a need for a total of 106.9 acres of designated parkland within the Cordova Hills community, in addition to the Avoided Areas and other non-credited open space/parks. Table 3.4: Parks and Open Space Summary summarizes proposed facilities and acreages, and credited acreage.

Table 3.5: Cordova Hills Master Plan Park and Open Space Credits summarizes the park areas and parkland credits allocated throughout Cordova Hills.



Neighborhood Park

LAND USE

Table 3.4: Parks and Open Space Summary

Type of Park	Acreage	Village
Sports Park	50	Bufferlands
Neighborhood Park	5	Town Center
Neighborhood Park	2.3	Ridgeline
Neighborhood Park	2.2	Ridgeline
Neighborhood Park	6.0	University Village
Neighborhood Park	0.6	University Village
Neighborhood Park	5.6	Creekside
Neighborhood Park	5.4	Creekside
Neighborhood Park	5.3	East Valley
Neighborhood Park	3.7	Estates
Community Park	18.5	East Valley
Full Credited Park Acreage	104.6	
R-2 (Paseos/Basins)	120.3	Entire Project
*Note partial credit for R-2 areas will exceed Quimby requirement		
Total Population	21,379	
Quimby Requirement 5 per 1,000	106.9	

However, the project also includes 120.3 acres of permanent, but not preserved, open spaces. That includes trails, informal play areas, picnic areas, paseos and basins; which are identified as recreation 2 (R-2) areas. Further engineering analysis will define in detail how much of the 120.3 acres can actually be used for parks and trails. The 120.3 acres will provide sufficient area to create a minimum of 2.3 acres of active park that will fulfill the total Quimby parkland dedication requirement

Table 3.5: Cordova Hills Park and Open Space Credits

Park Type	Acreage	Credit Ratio	Credited Acreage
CREDITED Open Space			
Recreation	104.6	1 : 1	99.1
TOTAL	104.6	1 : 1	99.1
PARTIAL - CREDITED Open Space			
Recreation -2	120.3	* Note: partial credit for R-2 areas will exceed Quimby requirement	
NON - CREDITED Open Space			
Avoided Area	601.8	0:0	---
Agriculture	127.8	0:0	---
TOTAL	729.6	0:0	---
GRAND TOTAL CORDOVA HILLS PARKS AND OPEN SPACE: 954.5 ACRES			



3.8.3 Park Categories

The Cordova Hills community includes numerous parks that range in size and provide a diverse opportunity for recreation. Strong interconnectivity between these strategically located parks supports joint use and community activity.

Table 3.6: Cordova Hills Public Recreation Categories, Description, and Conceptual Programming summarizes the characteristics of the park categories and open space that will occur in Cordova Hills.

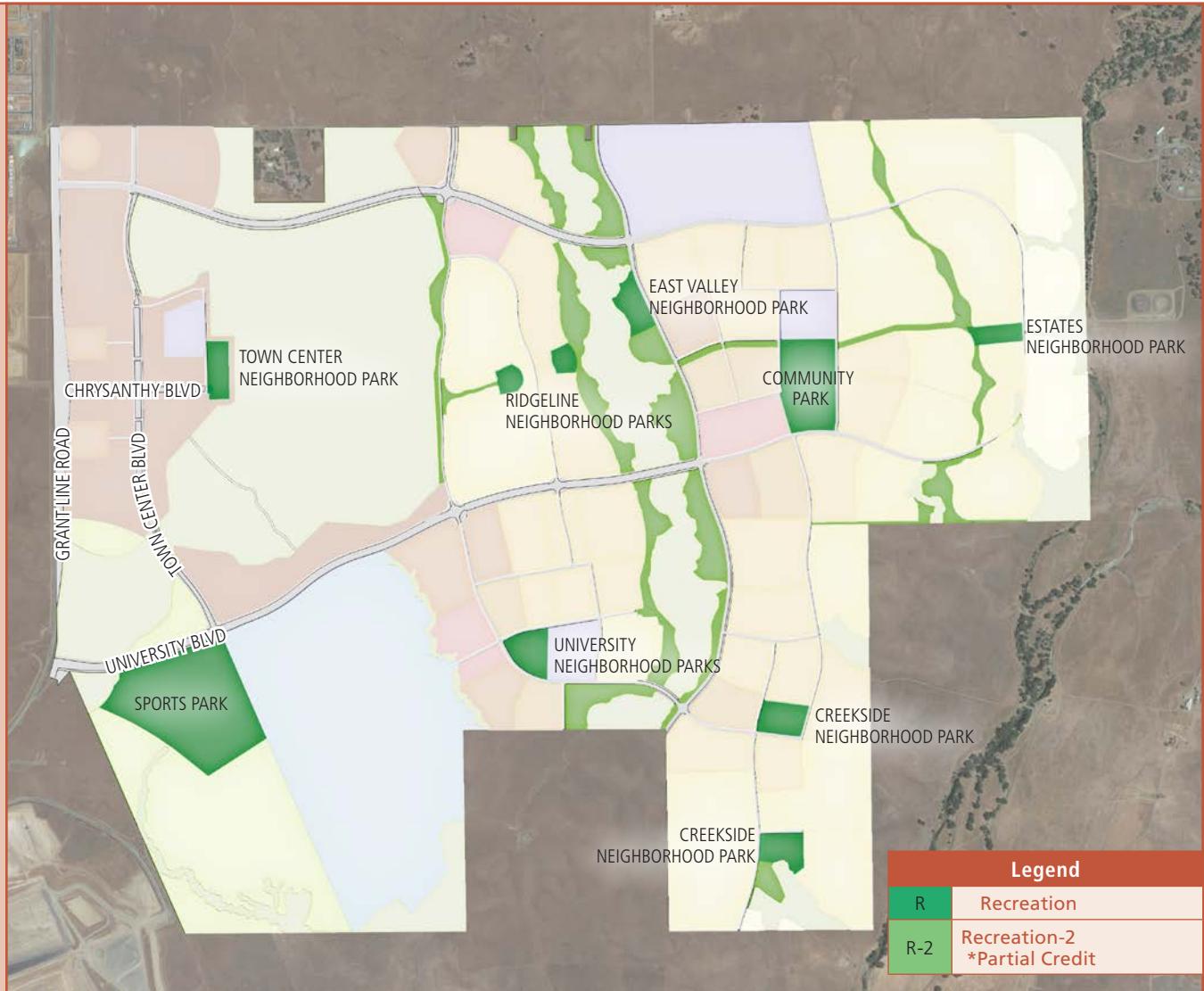


Figure 3.7: Parks Credit Plan

LAND USE

Table 3.6: Cordova Hills Public Recreation Categories, Description, and Conceptual Programming

Note: Field lighting is not provided at any park except the Sports Park, and possibly the Community Park.





Community Park

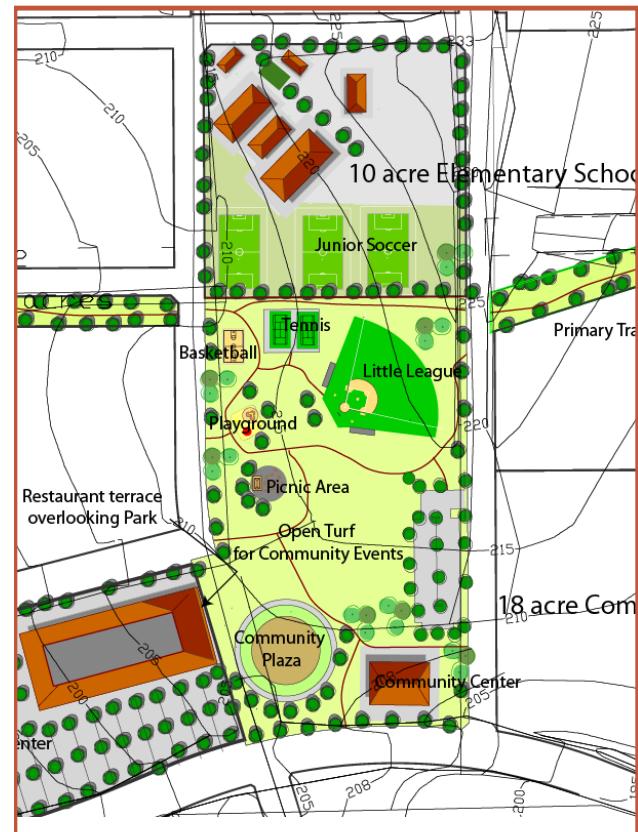
The Cordova Hills community includes one community park. This park is adjacent to a proposed elementary school site in East Valley and provides joint use opportunities. The community park is 18.5 acres. Facilities that may be provided include active play fields for organized sports such as baseball and soccer, sports courts, pedestrian and bicycle trails, an outdoor group gathering facility, seating and picnic areas, and other amenities. Turf areas will be restricted to those that have a definitive purpose. It is anticipated that only the community park and Sports park will be lighted.

Neighborhood Parks

Six (6) neighborhood park sites are distributed throughout the community. These sites range in size from 3.7 to 6.1 acres. Neighborhood parks include a variety of facilities that accommodate local recreational needs. Parks may include soccer and softball fields, hardcourts, restrooms, playgrounds, tot lots, picnic areas and a community center that acts as a neighborhood meeting room. The neighborhood parks create nodes of activity within the residential neighborhoods.

Linear Park

Linear parkways consist of wide, open space corridors within and between the Village neighborhoods. These landscape corridors range in width from a minimum of 50 feet to approximately 100 feet. They contain landscaping and a multi-use trail that will provide linkages through neighborhoods to parks, schools and commercial areas. These linear parks act as an extension of the major natural open space areas. With the inclusion of the linear park, Cordova Hills is able to provide an uninterrupted multi-use trail throughout the community. In addition to this trail, these parks contain other informal recreation activities such as picnic tables and seating areas. Linear parks are to remain visible and in most instances will be adjacent to a single loaded street or other open area on a minimum of one side of the street.



Conceptual Layout of a Community Park



Conceptual Layout of a Neighborhood Park

Note: The park concepts noted in exhibits above and to the right are conceptual layouts of how the parks can be programmed. The exact programming of these parks will be determined at the small lot tentative map stage.

LAND USE

Sports Park

The sports park is planned directly west of the University/College Campus Center and conceptually includes baseball fields and concession area, regulation soccer fields, basketball courts, picnic and playgrounds areas, and parking associated with these uses. A common service road extends from University Boulevard and provides access to both the Sports Park and University/College Campus Center.

The Sports Park parking lot will serve dual purposes for park activities and as a park and ride. Activities for the Sports Park typically take place in the evenings and weekends. Park and Rides are typically utilized during business hours during the week so there will be limited overlap between the two uses.

The proposed Sports Park is in the Bufferlands, outside of the USB. Its future development requires water and sewer service which will be provided by municipal water and septic systems.

Town Center Park

The Town Center Park will provide the community "commons" for visitors and residents for this master planned community. Adjacent buildings will front on the park. Park green spaces will be formal in nature and will serve as the "front door" to the community. Residential and retail uses will surround this open space, framing the Town Center Park or "Town Green" that provides a place for civic and community events, street fairs, or a farmer's market.

Pocket Park

Pocket parks or Village greens may be located in the heart of residential neighborhoods. They serve as the focal community space and create an identity and sense of place within the neighborhoods.



Conceptual Layout of a Sports Park



These less formal landscaped spaces range from 0.25 to 1 acre and will be open and large enough to accommodate a variety of passive and informal active uses, including tot lots. These spaces will also provide an opportunity for community gardens. Pocket parks do not receive credit towards the park dedication requirement but do provide an additional recreational amenity within the community. No pocket parks are identified in this Master Plan. It is left to the homebuilder(s) in each neighborhood if they desire to incorporate pocket parks in addition to other parks and open space amenities identified in this Master Plan.

Open Space

The Cordova Hills community includes a broad system of public and private open space encompassing significant environmental resources such as drainages, grasslands and slopes. This open space provides a substantial amenity that will be avoided or enhanced to continue the natural stormwater pattern, provide for bio-filtration, provide passive recreation opportunities and allow for a visual separation between Villages. Pedestrian and bicycle trails are included in the natural open space outside the limits of the avoidance boundaries. Other amenities incorporated in the natural open space include rest stops, benches, overlooks and habitat avoidance interpretive signage.

The open space areas within Cordova Hills are illustrated in Figure 3.6: Parks and Open Space Plan. Further discussion of the Natural Open Space of Cordova Hills can be found in Chapter 7, Natural Resources.

Adjacent Open Space

Cordova Hills is located within the Urban Services Boundary and abuts lands owned by others also in the USB. The County General Plan and the City of Rancho Cordova indicate the potential for future urbanization within the USB. It is not possible for the Cordova Hills Master Plan and SPA to identify land use on adjacent land owners and it is not the intent of this plan to identify, encourage or induce future development beyond the boundary of Cordova Hills. Nonetheless, sound planning requires acknowledgement of the General Plan as applied to adjacent lands.

In those instances where the planned urban areas in Cordova Hills abuts lands that are within the Urban Service Boundary consideration is given in the land use plan to provide for future connectivity of local roads and pedestrian ways. The land use pattern in these areas of Cordova Hills combines open space areas and urbanization at the project boundary in a manner that allows open space connections, but also provides for logical connections of neighborhoods to provide a strong sense of community within the villages defined in the Cordova Hills master plan and any adjacent future development within the Urban Services Boundary.

Chapter 4

DEVELOPMENT REGULATIONS AND DESIGN GUIDELINES



DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

This Chapter combines definitive land use regulations with flexible design guidelines. The need for innovation in all aspects of development requires a flexible approach to land use regulation which responds to the site conditions. To meet this need, the Cordova Hills land use will be regulated with a mix of Sacramento County conventional zoning standards and modified development regulations that are tailored to Cordova Hills. The development regulations and design guidelines contained in Chapter 4 are subject to the Williamson Act contract restrictions set forth in Section 1.12.4 on page 1-14. See Figure 1-4 for location of Williamson Act Parcel.

This Chapter establishes the regulatory framework for administering the development over time. For each of the designated land use categories this plan establishes the intent and purpose of the designation, the permitted uses, and the fundamental development regulations such as minimum parcel size, setbacks, height limits, and other basic standards that define the allowed development envelope.

The basic standards are augmented by design guidelines that expand upon and articulate the development vision for Cordova Hills. These guidelines include architectural, site planning, streetscape, and landscape considerations for general classes of development, including residential neighborhoods, Village centers, and the Town Center.

The design guidelines which follow will provide qualitative standards and ideas for the design of the community, and establish a level of character that will set Cordova Hills apart. These guidelines will establish the "look" and "feel" of residential neighborhoods, shopping streets, recreation amenities and open space, and the overall appearance of the community. They are compatible with the regional climate and seasonal change in Sacramento County.

These guidelines allow flexibility for architects, landscape architects, developers, builders, and others involved in the design of community elements. Variation and customization within the

context of the guidelines is encouraged in order to achieve individually distinctive neighborhoods and Villages, recreational amenities, and neighborhood and regional serving retail and services. Through collaboration between the master developer, the builder(s), and the County, Cordova Hills will be an example of high quality community design.

The relatively more restrictive land use regulations that are applied to individual land use designations, and the more flexible design guidelines that are applied broadly to a variety of land use classifications are combined to guide the form of the community, not just land use.

4.1 PURPOSE AND OBJECTIVES

The overall purpose of the Cordova Hills Development Regulations and Design Guidelines is to create a unique master-planned community integrating good site planning techniques with well-defined architecture and landscaping in great neighborhoods.

4.1.1 Community Design Objectives

The design objectives for Cordova Hills are as follows:

- Provide the County of Sacramento and the Cordova Hills community with the assurances that the community will be developed in accordance with a certain design quality, character, and safety as set forth in this document.
- Adapt the community design features to minimize disturbance to key environmental features.
- Create individuality and community identity through the implementation of an Early California design theme and a variety of indigenous architectural styles with a common design character. The common thread of landscape, hardscape, fences/walls, lighting, signage, and monuments will blend and harmonize with the surrounding rural environment.
- Plan for attractive public spaces, parks, trails and open spaces.



- Create neighborhood parks as key focal points for each neighborhood, for social and recreation activities.
- Integrate development areas with open space in a manner that provides a natural transition between the two elements.

4.2 IMPLEMENTATION OF THE DEVELOPMENT REGULATIONS AND DESIGN GUIDELINES

4.2.1 General Plan and Zoning Consistency

State planning law requires the Zoning Code to be consistent with the General Plan. Each General Plan land use category must have one or more corresponding zone district, and the development standards and land use regulations contained in the Zoning Code must reflect the policy statements in the Land Use Element. The processes and regulations for implementing and administering the Cordova Hills Master Plan are described in detail in Chapter 9.

The County General Plan may be somewhat broad in its discussion of permitted land uses and development intensities, zoning provisions must identify specific regulations so that property owners and developers can determine how particular properties can be used and developed.

This Master Plan summarizes the essential development standards for each land use category; however, the existing Zoning Ordinance contains substantially greater detail regarding certain development standards that apply throughout the County. Parking area standards are an example of development standards that need not be repeated in the regulations unless a unique standard is appropriate.

4.2.2 Community-wide Transfer of Dwelling Unit Allocation

There are six Villages within Cordova Hills: Town Center, Ridgeline, University Village, Creekside, East Valley, and Estates. If a Village is developed with

less than the maximum number of units allowed then the “unused” development potential may be transferred to another Village within Cordova Hills. In no case shall transfers result in:

- The cumulative average daily vehicle trips (CADT) or maximum number of dwelling units exceeding the Village’s planned maximums by more than 10%. Any transfer of development that exceeds these maximums will require a Master Plan Amendment. Transfer of residential units from one Village to another shall never result in exceeding the maximum total number of dwelling units or maximum total commercial floor area approved in the Master Plan. If a Village receives an increase in dwelling units or floor area, another Village or combination of Villages, must have an equal reduction in dwelling units or floor area.
- Significant alteration of the basic character of the planned development in the receiving Village.

4.2.3 Air Quality

- All individual development projects shall implement Sacramento Metropolitan Air Quality Management District rules and mitigation pertinent to construction related-ozone precursor emissions, as defined by the most current version of the Sacramento Metropolitan Air Quality Management District Guide to Air Quality Assessment.
- Buffers shall be established on a project-by-project basis and incorporated during permit or project review to provide for buffer separations between sensitive land uses and sources of air pollution odor. The California Air Resources Board’s “Air Quality and Land Use Handbook: A Community Health Perspective,” or more current document, shall be utilized when establishing these buffers. Sensitive uses include schools, daycare facilities, congregate care facilities, hospitals, or other places of long-term residency for people (this includes both single and multiple-family). The buffers shall be applied to source of air pollution or odor, and shall be established based either on proximity to

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

existing sensitive uses or proximity to the property boundary of land designated for sensitive uses. Buffers current at the time of the establishment of this SPA indicate that sensitive uses should be:

- At least 500 feet from auto body repair services.
- At least 50 feet from existing gasoline dispensing stations with an annual throughput of less than 3.6 million gallons and 300 feet from existing gasoline dispensing stations with an annual throughput at or above 3.6 million gallons.
- At least 300 feet from existing land uses that use methylene chloride or other solvents identified as a TAC, including furniture manufacturing and repair services.

4.2.3 Covenants Conditions and Restrictions

In addition to the standards and guidelines established in this Master Plan, the project development will be guided by development covenants, conditions and restrictions (CC&Rs) administered by the master developer and subsequent Home Owners Association (HOA). The CC&Rs will be recorded concurrent with recordation of the final subdivision map to provide more specific criteria of allowable and prohibited architectural elements.

4.3 LAND USE DESIGNATIONS AND PERMITTED USES

The Cordova Hills Land Use Master Plan identifies sixteen land use classifications. These classifications have some features common to the Sacramento County Zone Ordinance classifications, but each land use designation in Cordova Hills is a distinct designation that is fully described in the Cordova Hills Master Plan.

Table 4.1 provides a preliminary summary of the proposed Land Use Classifications and the general list of permitted uses defined in the Master Plan.

Each designation category allows a range of permitted land uses that, in some instances, overlap with other land use designations. The intent is to provide a blending, rather than a distinct separation, of uses and activities.

Specific uses that are not included in Table 4.1, Summary of Land Use Designations and Permitted Uses, may be added through a Minor Master Plan Amendment as defined in Chapter 9, Section 9.2.2.2.

4.3.1 Residential Product Types and Categories

The Cordova Hills Plan includes a notable diversity in residential types, styles and configurations. Indeed, housing diversity is one of the hallmarks of this plan.

Single-family residential uses include the majority of uses in Cordova Hills, but even in this single broad category there is a substantial variety of types, densities, prices and styles. Conventional front-loaded homes and alley-loaded homes, which front on green courts or local streets, are allowed in all land use categories and neighborhoods. A variety of single-family floor plans, square footages and architectural designs are envisioned.

Multi-family townhomes/flats (for rent or for sale), apartments and duplexes are allowed in the MDR, RD20, HDR1 and HDR2 land use designations. The townhome and apartment uses will have immediate access to internal collector streets, minimizing traffic impacts on surrounding lower density residential neighborhoods. Multifamily buildings will either front on local or collector streets or court yards, and often take access from rear alleys.

Live/work opportunities are included in single family detached, multi-family townhomes and flats fronting on the central, locations such as neighborhood parks and the Town Center.



Table 4.1: Summary of Land Use Designations and Permitted Uses

Land Use Designations		Permitted Uses
(AG)	Agriculture	Agriculture. Sports Park, Solar Farm, District Energy Plant, Corporation Yard, Park and Ride Lot, Transit Parking Facility, Fueling Station, Roads, Storm Water and Storm Quality Basins, Community Gardens, Avoided Areas, Sewer Pump Station and Line, Water Tanks and Similar Utilities
(AG-80)	Agriculture	Interim designation that permits land uses consistent with AG-80 found in Sacramento County's Zoning Code. See section 1.12.4 regarding interim designation.
(P/QP)	Public/Quasi Public	Churches, Schools, Parks, Public Utilities, Libraries, Fire Stations, Community Gardens, Flood Control and Storm Water Quality Treatment Facilities
(R)	Recreation	Parks, Recreation Centers, Community Centers, Concessions, Minor Retail, Coffee Shop, Paseos, Open Space, Flood Control and Storm Water Quality Treatment Facilities
(R2)	Recreation and Open Space	Parks, Recreation Centers*, Community Gardens, Community Centers*, Concessions*, Minor Retail*, Coffee Shop*, Paseos, Open Space, Flood Control and Storm Water Quality Treatment Facilities
(AV)	Avoided Areas	Resource Avoidance, Trails, Outdoor Classroom, Interpretive Signage
(ER)	Estates Residential (1 to 4 du/acre)	Single Family Dwellings, Schools, Parks, Private Community Centers, Gardens, Landmark Features, Private Schools, Public Utilities, Flood Control and Storm Water Quality Treatment Facilities
(LDR)	Low Density Residential (4 to 7 du/acre)	Single Family Dwellings, Duplex and Halfplex Dwellings, Churches, Schools, Parks, Public and Private Community Centers, Gardens, Landmark Features, Private Schools, Public Utilities, Libraries, Fire Stations, Police Stations, Flood Control and Storm Water Quality Treatment Facilities
(MDR)	Medium Density Residential (7 to 15 du/acre)	Small and Medium Lot Single Family Dwellings, Greencourt, Motorcourt, Duplexes, Halfplexes, Townhomes, Live/Work Dwellings, Neighborhood Work Centers, Children and Senior Day Care Centers, Churches, Schools, Parks, Public and Private Community Centers, Gardens, Landmark Features Private Schools, Public Utilities, Libraries, Fire Stations, Police Stations, Flood Control and Storm Water Quality Treatment Facilities
(RD20)	Medium/High Density Residential (20 du/acre)	Same as MDR
(HDR1)	High Density Residential (20 to 30 du/acre)	Townhomes, Apartments, Live/Work Dwellings, Neighborhood Work Centers, Children and Senior Day Care Centers, Recreation Centers, Churches, Schools, Parks, Private Schools, Public Utilities, Libraries, Fire Stations, Flood Control and Storm Water Quality Treatment Facilities
(HDR2)	(30 to 40 du/acre)	Same as HDR 1
Land Use Designations		Permitted Uses
(FRO)	Flex Residential Overlay	Flex Residential Overlay applies to LDR, MDR, RD20, and HDR uses as indicated on the FRO Map. All uses allowed in the underlying land use designations, plus Retail and Work Centers, Live / Work Dwellings, Children and Senior Day Care Centers
(FC)	Flex Commercial	Please refer to the following description of permitted and prohibited uses.
(CMU)	Commercial Mixed-use	Hospital (100 bed maximum) Please refer to the following description of permitted and prohibited uses.
(FO)	Flex Office	Please refer to the following description of permitted uses.
(TC)	Town Center	TC permits all uses allowed in the other land use designations, except FRO and the Estates. Please refer to the following description.

* USES NOT ALLOWED IN THE PASEO CENTRAL AREA

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4.3.1.1 Estates Residential (ER)

The Estate Residential category includes single family detached lots with the lowest density and largest lot size in Cordova Hills. Lot sizes range from approximately 11,000 s.f. to one-acre lots. This category is primarily located to the east of the electrical transmission lines and provides for sweeping views to the east on lots which could accommodate custom or estate development.



Estates Residential

4.3.1.2 Low Density Residential (LDR)

The Low Density Residential category includes single-family detached homes. The Low Density Residential category includes dwelling units in configurations up to 7 dwelling units per net acre (exclusive of open space and adjacent collector streets). The density range allows substantial flexibility in selecting dwelling unit types and parcel configurations to suit particular site conditions and housing needs.



Low Density Residential

4.3.1.3 Medium Density Residential (MDR)

The Medium Density Residential category will provide a mix of housing types up to 15 dwelling units per net acre, with intensities ranging from compact single family residential clusters to multi-family garden apartments, townhomes and condominiums, and is generally characterized by small lot single-family detached, single-family attached (e.g., townhomes, condominiums, brownstones), and small apartment complexes.

This density range allows substantial flexibility in selecting dwelling unit types and parcel configurations to suit particular site conditions and housing needs.



Medium Density Residential

4.3.1.4 RD20

The RD20 residential category specifically provides the locations and the appropriate development standards to accommodate affordable housing in Cordova Hills. This category includes multi-family residential apartments and townhomes, with parking provided in surface lots adjacent to the structures.



4.3.1.5 High Density Residential (HDR1 & HDR2)

High density residential is the most urban residential category. This designation will typically be used for larger multi-family housing complexes, including apartments and condominiums. High density residential may also include vertical mixed-use projects. Parking for these facilities is usually provided in surface lots or structures located in or around the complex. The high density residential use will be located adjacent to a mixed-use neighborhood center, and allows residential density up to 40 dwelling units per net acre.



High Density Residential

4.3.2 Product Matrix

Figure 4.1: Housing Product Matrix, provides a quick reference and summary of all proposed housing types, approximate square footages and densities for Cordova Hills. These are subject to the Development Standards in Table 4.6, Detached Development Standards in Table 4.7, Attached/Multi-Family Development Standard in Table 4.8 which follow. Non-Residential Standards are included in Table 4.9 Non-Residential Development Standards.

Included with the Development Standards are illustrative examples of residential housing product types included in the standards, such as various single-family detached, alley loaded detached, greencourt,

motor court, townhomes and apartments. These are samples of housing products expected to be implemented in Cordova Hills, and illustrated in perspective renderings with sample plot plans.

4.3.3 Non-Residential and Mixed-Use Categories

4.3.3.1 Flex Commercial (FC)

The FC classification permits retail, services and work center uses that serve the surrounding neighborhood. Table 4.2 lists the allowed uses in the FC classification.

Prohibited Uses

Uses that are prohibited in the FC designation include, but are not limited to, the following:

- Truck and utility trailer sales, lease
- Ambulance service
- Cold storage, frozen food locker
- Parking lot or garage as primary use
- Mini-storage
- Taxidermist
- Towing service
- Pawn shop
- Camper shell sales or service
- RV and boat storage
- Recycling centers
- Adult entertainment establishments

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PRODUCT	SPECIFICS	CONCEPTUAL PRODUCT IMAGES		
1 - 4 D U / A C	Single Family Detached Lot Size: 60 x 100+ Average House SF: 2,000 - 4,000			
4 - 7 D U / A C	Single Family Detached Lot Size: 50' x 80' - 50' x 100' Average House SF: 1,750 - 2,000			
7 - 11 D U / A C	Single Family Detached Lot Size: 45' x 80' Average House SF: 1,500 - 2,500 Parking: 2 Cars per unit Single Family Detached Small Lot Lot Size: 40' x 75' Average House SF: 1,200 - 1,700 Parking: 2 Cars per unit Single Family Detached Cluster Lot Size: 35' x 60' Average House SF: 1,500 - 1,800 Parking: 2 Cars per unit			
13 - 20 D U / A C	Single Family Attached Duplex Number of Stories: 2 - 3 Average House SF: 2,000 Parking: 2 Car direct access garage Single Family Attached Town Number of Stories: 2 - 3 Average House SF: 1,600 - 2,600 Parking: 2 Car direct access garages			
20 - 30 D U / A C	Single Family Attached Cluster Number of Stories: 2 - 3 Average House SF: 850 - 1,400 Parking: 1 - 2 Car direct access garages Live Work Townhomes Number of Stories: 3 Average House SF: 1,900 Parking: 2 Car direct access. Tandem and conventional Multi-Family Cluster Townhomes Number of Stories: 2 - 3 Average House SF: 1,350 Parking: 2 Car direct access			
30 - 40 D U / A C	Multi-Family For Rent Number of Stories: 2 - 3 Average House SF: 450 - 1,200 Parking: 1.7 Spaces per Unit Number of Available Plans: 6-8			

Figure 4.1: Housing Product Matrix



Table 4.2: Non-Residential Permitted Uses.

Permitted Uses	FC	CMU	FO
General Merchandise	X	X	
Business Services	X	X	X
Personal Services	X	X	X
Food Services	X	X	X
Neighborhood-Serving Food, Drug, or Liquor Sales	X	X	
Children and Senior Care Centers	X	X	
Parks and Recreation Centers	X	X	X
Churches	X	X	
Schools	X		
Libraries	X	X	
Fire and Police Stations	X	X	X
Gasoline Stations	1	X	
Gasoline Stations with Accessory		X	
Auto Repair	1		
Auto Sales- Motorcycle, Alternative Vehicle, and Moped Only	1	1	
Neighborhood Vehicle and Auto Rental	1	1	
Business or Professional Office	X		X
Insurance Office	X		
Bank / Financial Institution	X	X	X
Medical or Dental Office	X	X	X
Laboratory and Research	X	X	X
Office Support Services	X	X	X
Computer-Related Services	X	X	X
Public Utilities and Stormwater Facilities	X		
Hardware Stores	X	X	
Educational Services	X	X	X
Civic	X	X	
Entertainment	X	X	
Hospitality	X	X	
Primary=Use Parking Lot or Garage		X	
Recycling Centers		X	
Residential (not to exceed 25% of net area)	X	X	X
Farmers' Markets	X	X	X

X: Permitted 1: Requires a Use Permit

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4.3.3.2 Flex Office (FO)

The FO designation is intended for professional office, research and development, flex office, and appropriate related uses, including high density residential, located in a campus-like setting. Table 4.2 lists the allowed uses in the FO classification

4.3.3.3 Commercial Mixed-Use

The Commercial Mixed Use (CMU) designation applies to the Town Center. The CMU land use designation consists of two distinct subareas. North of Chrysanthy Boulevard the Town Center will be an intensive mix of regional oriented retail, services, and entertainment. South of Chrysanthy Blvd., the CMU will provide more locally oriented shopping and employment opportunities. All CMU designations will allow up to 25 percent of the net developable land area to be developed as high density residential in horizontal or vertical integrated configurations.



Conceptual Commercial Mixed-use Example

Table 4.3: Maximum Commercial Sq. Ft.

Maximum Commercial Sq. Ft.
Ridgeline: 92,000 sq. ft.
University Village: 88,860 sq. ft.
East Valley: 111,200 sq. ft.
Town Center: 966,779 sq. ft.
FRO*: 90,580 sq. ft.
Total Project Sq. Ft.: 1,349,419 sq. ft.

*Assumes 10% FRO Build Out

4.3.3.4 Flex Residential Overlay

The Flex Residential Overlay (FRO) allows certain non-residential uses in LDR, MDR, RD-20, and HRD-1 designations, as indicated on Figure 3.5 Illustrative Land Use Plan Figure 3.5 Illustrative Land Use Plan. The intent is to allow all the underlying uses in the residential designations in addition to retail, work centers, live/work dwellings, shopkeeper units, Children and Senior Care Centers. These FRO uses are compatible with residential uses in the stated land use designations. Flex Residential Overlay uses shall be located along major collector roadways and at major collector intersections throughout Cordova Hills. Refer to Figure 4.2 and Table 4.3 for FRO locations and maximum square footage.

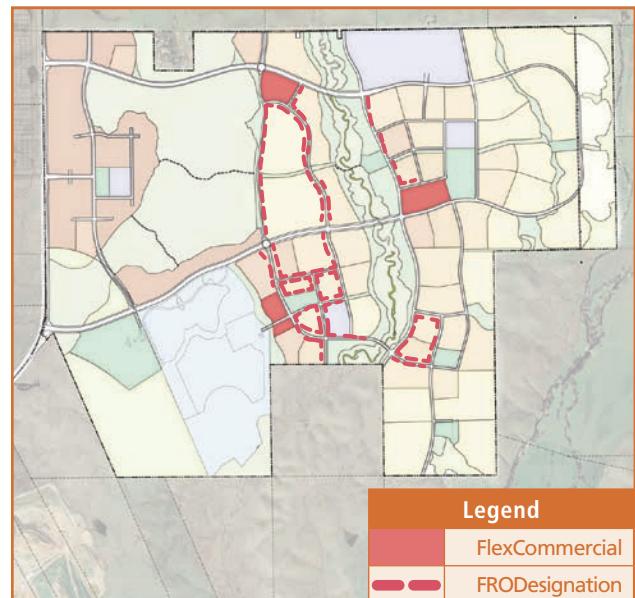


Figure 4.2: FRO Location Map



Flex Commercial

The residential component of any Commercial Mixed-Use development may provide dwellings at densities of approximately 15 to 25 units per acre, or higher. The residential component shall be considered to be that portion of a site or plan area allocated exclusively to residential use, net of any commercial or office use.

The Cordova Hills Plan includes various potential Commercial Mixed-Use sites. Each is ideally located along a major street and could be a transit oriented development served by bus, a local shuttle or all three. The sites are adjacent to high density residential and are served by the pedestrian and bike trail network that connects the sites to the surrounding neighborhoods. Each of the sites has within it or nearby a small neighborhood scale park. These parks will add a visual amenity and focal point with leisure activities that will complement the retail and service businesses and the residential components of the center.

4.3.3.4 Town Center Village

The Town Center Village will be a vibrant regional mixed use center situated on 220 gross acres located along Grantline Road and north of the University / College Campus Center. The Village will integrate retail and office uses with a variety of residential home types in response to the market demand. The Town Center shall be a dynamic urban environment. The specific list of uses permitted in the Town Center Village is summarized in the Development Regulations for each of the uses incorporated in this Village.

Within the Town Center Village the intent is to allow flexibility in the development regulations that govern phasing and placement of uses. The Town Center Village incorporates permitted uses in the High Density Residential 1 & 2, Medium Density Residential, RD20 Residential, Low Density Residential, Flex Office, Flex Commercial and



Figure 4.3: Town Center

Commercial Mixed Use designations. The village development standard combines these permitted uses under a set of specific design principles and standards that will guide development to ensure an active community core.

The ultimate development pattern will be responsive to market forces and emerging visions in community design. The overall development form will reflect the primary characteristics of the location: higher intensity uses will aggregate along the Grantline Road frontage and less intensive residential and supporting uses will be organized as distinctive neighborhoods adjacent to the large Avoided Area.

The Town Center Village includes five distinct "districts" that further define the intended character, locations and applications of the proposed uses (see Figure 4.4 for the location of each district). Each district will provide a mix of unique land-uses and neighborhood patterning with intrinsic qualities that define the character and uses therein. The Development Regulations established in the Cordova Hills Master Plan will provide specific rules and guidelines that allow the land use within each

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district to change from residential to commercial and office or from commercial and office to residential; and to adjust the permitted residential density within each district.

All land uses within each of the individual districts will comply with the Cordova Hills land use classifications in this chapter. Further detail and actual location will be further developed through the development process between Cordova Hills and the County. The districts are illustrated in the following exhibit and depict the unique setting of each.

The five districts defined in the Cordova Hills Town Center Village are:

- Retail / Entertainment District
- Business Mixed Use District
- Town Center North
- Town Center East
- Southern Gateway District

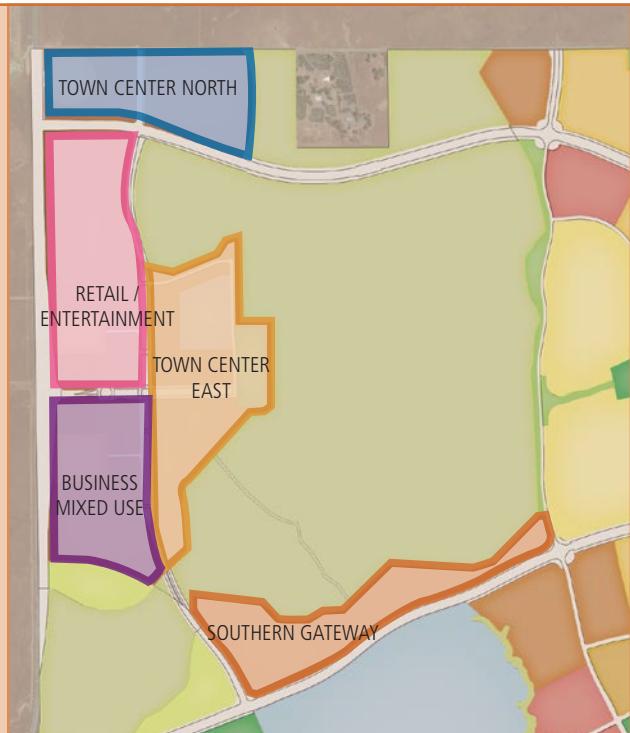


Figure 4.4: Town Center Districts

Retail / Entertainment District

Located along the eastern side of Grant Line Road north of Chrysanthy Boulevard and south of the northern access point/road, the Retail/ Entertainment District will serve as the primary activity center for the western portion of Cordova Hills. Complementing the University / College Campus Center, the district will provide lifestyle entertainment, dining, retail and hospitality. A strong emphasis on pedestrian friendly design and diverse shopping will provide a distinctive experience for future visitors.

The proximity to Chrysanthy Boulevard, North Access Road, and Grantline Road presents an opportunity to provide public transit to this district and thereby to design this as a Transit Oriented Development with heavy emphasis on pedestrian networks oriented to the shops, dining and similar uses envisioned here.

Business Mixed Use District

Located along the eastern side of Grant Line Road and south of Chrysanthy Boulevard, the Business Mixed Use District will provide local serving retail and a live/work neighborhood. Retail along with office and mixed use opportunities will create a district where future residents can work and play within close proximity to their homes. Located near the University / College Campus Center, this district could provide a unique employment center with support retail and residential.

Town Center North District

The most northern district within the Town Center Village will be a blend of residential and mixed-use opportunities. This district will be relatively self-contained with a mix of residential housing supported by shopping, entertainment and recreation. With the majority of the intended land uses being residential, this district will provide a broad array of housing opportunities.



Town Center East District

The East District will offer diverse housing types and mixed use opportunities. Surrounded on three sides by Avoided Areas, the East District is naturally a compact, walkable neighborhood well defined by edges and a central park feature. The surrounding open space will create a distinct character in the Town Center East District.

Southern Gateway District

Just north of the University / College Campus Center, the Southern Gateway district provides a unique setting in Cordova Hills. Southern Gateway is a relatively narrow neighborhood located along University Boulevard, but bordering on the large, passive open space Avoided Areas. Linkages to the open space and the University / College Campus Center will allow this district to be a transition of land uses. This district will be a blend of residential uses and intensities that transitions from the energized retail / entertainment core to the quiet neighborhoods on the east. This neighborhood provides opportunities for mixed-use live work/ office associated with the University / College Campus Center and a variety of housing types in the mid and higher density ranges.

Town Center Maximum Development Potential

The ultimate development in the Town Center Village will depend on the mix of uses ultimately delivered by market forces and development interests. If the Town Center ultimately develops as a primary regional commercial and employment center then the land available for dwelling units in the Town Center could be reduced. If, on the other hand the commercial and office uses develop only to the scale necessary for local services and shopping then the land available for residential use could be greater. The Town Center land use designation is intended to provide flexibility to accommodate a range of responses to the market place. Therefore a precise number of dwelling units and square footage of

non-residential uses is not established in this Master Plan. Nonetheless, it is necessary to establish a target or assumption of the maximum development potential in order to evaluate the project. Table 4.4 provides a summary of maximum square footage for each district.

Table 4.4: Town Center District Summary of Maximum Commercial Sq. Ft.

Town Center Village Districts	Maximum Commercial Sq. Ft.
TC - North	59,991
TC - Retail/Entertainment	392,911
TC - Business Mixed Use	281,398
TC - East	112,123
TC - Southern Gateway	120,356
Total TC Max. Commercial Sq. Ft.	966,779

For environmental impact analysis the Town Center Village will set a maximum of 1,750 total dwelling units. The maximum floor area of commercial and office uses included in the Town Center Village is summarized in the following table.

Table 4.5: Town Center Summary of Commercial and Office Use

Land Use	Max FAR*	Max SF
CMU	3.00	656,379
FO	4.00	310,400
Total		966,779

*FLOOR AREA RATIO

The Town Center will contain active park area, and may also include urban pocket parks, paseos, trails, public plazas and other recreational facilities.

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4.3.4 Public/Quasi-Public and Open Space Categories

4.3.4.1 Public/Quasi-Public

The Public/Quasi-Public (P/QP) category includes a variety of public and other land uses. Possible uses include civic buildings, schools, religious institutions, hospitals, and others.

All Public/Quasi-Public and Open Spaces (R and R-2) uses including schools and parks shall have an underlying land use classification of Low Density Residential. This allows flexibility in the location and shape of schools and park sites within the land plan. The approval of a school or park site is subject to adjustment in the respective Villages at the time of the tentative map approval to accommodate their needs. The underlying Low Density Residential use would apply in the event that the respective district determines that a proposed school and/or park site is not needed, or must be adjusted in size or configuration.



Conceptual Park

4.3.4.2 Recreation (R) and Recreation and Open Space (R-2)

Land within the Recreation (R) and Recreation and Open Space (R-2) categories would be used for both active and passive recreational activities, such as parks, open space corridors, and trails. Parks may include commercial recreational facilities that are principally oriented toward outdoor uses. Typically, common open space lands may be held in either public or private ownership. Land within this category may also be used for detention basins, creek ways, and other passive uses when located next to active recreational uses. Open spaces may be multi-purpose, such as a soccer field that serves as a detention basin. Not permitted in R-2 Paseo Central Area: Recreation Centers, Community Centers, Concessions, Minor Retail, and Coffee Shops. These uses are permitted in all other R-2 areas

4.3.5 Natural Resources and Avoided Areas

The Cordova Hills Land Plan provides substantial Avoided Areas dedicated to protecting species habitat. Compatible adjacent land uses and infrastructure will contribute to the successful avoidance of this natural resource area. Chapter 7, Natural Resources, describes the use and management of the avoided areas in the Cordova Hills community.

4.4 DEVELOPMENT STANDARDS

The following Standards and Regulations implement the planning and design concepts for this Master Plan. These standards and regulations are consistent with the land use goals and objectives of the County of Sacramento General Plan.

The Development Standards include illustrative examples of residential housing product types included in the standards, such as various single-family detached, alley loaded detached, greencourt, motor court, townhomes and apartments. These are samples of housing products expected to be implemented in Cordova Hills, and illustrated in perspective renderings with sample plot plans.



4.4.1 Summary of Land Use Development Standards

Table 4.6: Summary of Development Standards indicates corresponding Master Plan land use, minimum setbacks, open space, and maximum height. Maximum allowable development on individual parcels of land is governed by these measures of density or intensity.

Table 4.6: Summary of Development Standards

Master Plan Land Use Designation	ER	LDR	MDR	RD-20	HDR	TC	P/QP
Permitted Housing Types	Detached ¹	Detached ¹	Detached ¹ / Attached ²	Attached ²	Attached ²	Attached/ Detached ²	N/A
	Large-Lot	Medium Lot Small Lot Duplex Halfplex	Medium Lot, Small Lot, Duplex, Halfplex, Alley-loaded, Green Court, Motor Court, Townhomes, Apartments	Townhomes, Apartments	Townhomes Apartments Live/Work	Townhomes Apartments Live/Work	Townhomes Apartments Live/Work, Alley Loaded, Green Court, Motorcourt Non-residential ³
Lot size per Unit (sq. ft.)	6,000	4,000	2,275	n/a	n/a	n/a	n/a
Maximum Density	1-4 du/ac	4-7 du/ac	7-15 du/ac	20 du/ac	20-40 du/ac	20-40 du/ac	n/a
Lot Width	50	45	25	n/a	n/a	n/a	n/a
Front Yard Setback to Living Space ⁴	15	12	5	10	10	0/ 0/6	n/a
Front Yard Setback to Garage Door ⁴	20	19	5	5	5	5	n/a
Side Yard Setback (One Side) ⁴	5	5	4	5	0/4	0	n/a
Side Yard Setback Adjacent to LDR ⁴	n/a	n/a	n/a	5	5	10	n/a
Side Yard Setback (Both Sides Together) ⁴	10	10	8	10	0/8	n/a	n/a
Side Yard Adjacent to Street ⁴	10	10	5	10	10	4	n/a
Rear Yard Setback ⁴	20	20	3	12	10	0	n/a
Rear Yard Setback if 6' Covered Front Porch is Provided ⁴	20	20	15	10	10	0	n/a
Rear Yard Setback Adjacent to LDR ⁴	n/a	n/a	12	15	15	20	20
Landscape Area Adjacent to LDR ⁴	n/a	n/a	n/a	10	10	10	10
Open Space Per Dwelling Unit (sq. ft.)	n/a	n/a	n/a	150	150	n/a	n/a
Maximum Building Height Adj. to LDR	n/a	n/a	n/a	3 stories or 12' w/in 10'	3 stories or 12' w/in 10'	3 stories or 12' w/in 10'	2 stories or 24' w/in 60'
Maximum Building Height	2 stories or 35'	2 stories or 35'	3 stories or 40'	4 stories or 50'	4 stories or 50'	5 stories	5 stories

NOTE: MINIMUM REQUIREMENT IN FEET UNLESS OTHERWISE DESIGNATED.

1. REFER TO TABLE 4.7 FOR DETACHED RESIDENTIAL DETAILED MINIMUM DEVELOPMENT STANDARDS

2. REFER TO TABLE 4.8 FOR ATTACHED RESIDENTIAL DETAILED MINIMUM DEVELOPMENT STANDARDS

3. REFER TO TABLE 4.9 FOR NON-RESIDENTIAL DETAILED MINIMUM DEVELOPMENT STANDARDS

4. SETBACKS MEASURED FROM ROW

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Table 4.7: Detached Residential Development Standards

BUILDING TYPE/ PRODUCT	Single Family Detached ¹					
	Large Lot	Medium Lot	Small Lot	Alley Loaded	Green Court Clusters	Motorcourt Cluster
Description	Typ. 6,000-8,000 SF Lots	Typ. 4,000-6,000 SF Lots	Typ. 3,000-4,000 SF Lots	Typ. 2,100-6,000 SF Lots	Typ. 2,100-6,000 SF Lots	Typ. 2,100-6,000 SF Lots
Permitted Land Uses	ER	LDR, MDR	MDR	MDR	MDR	MDR
Lot Size (s.f.)	6,000 s.f.	4,000 s.f.	3,000 s.f.	2,100 s.f.	n/a	n/a
Lot Width	50'	45'	45'	35'	25'	25'
Lot Depth	90'	80'	80'	60'	n/a	n/a
Cul/Knuckle Frontage	30'	30'	30'	30'	n/a	n/a
MAX BUILDING COVERAGE	50%	60%	60%	65%	65%	65%
MAX DENSITY (GROSS)	6 du/ac	8 du/ac	8 du/ac	14 du/ac	14 du/ac	14 du/ac
SETBACKS ²						
Front						
Living Space	15'	12'	12'	10'	6'	5'
Garage	20'	18'	18'	n/a	5'	5'
Swing-in Garage/Porch ²	10'	10'	10'	6'	6'	5'
Backup for Swing-in	24'	24'	24'	n/a	n/a	n/a
Side						
Interior ³	5'/5	5'/5'	5'/5'	0'/4'	0'/4'	0'/4'
Corner	10'	10'	10'	10'	10'	5'
Rear						
Living Space	20'	15'	15'	3'	3'	3'
Attached Garage	5'	4'	4'	4'	4'	4'
Accessory ⁴						
To any property line	5'	5'	5'	5'	5'	5'
MAX. HEIGHT ⁵	35'	3 stories or 40'	3 stories or 40'	-	-	-
MAX. STORIES	2	3	3	3	3	3
PARKING						
OVERALL/DU	2.0	2.0	2.0	2.0	2.0	2.0
GARAGE/DU	2	2	2	2	2	2
GUEST/DU	.0	.0	.0	.0	.0	.0

NOTE: MINIMUM REQUIREMENT IN FEET UNLESS OTHERWISE DESIGNATED.

1. SETBACKS MEASURED FROM ROW, NOT INCLUDING PROJECTIONS.

2. MIN. PORCH DEPTH: 6'.

3. 'Z' LOT, ZERO LOT LINE WITH RECIPROCAL EASEMENT PRODUCT AREA ALLOWED.

4. MAX. HEIGHT OF AN ACCESSORY STRUCTURE IS 16'.

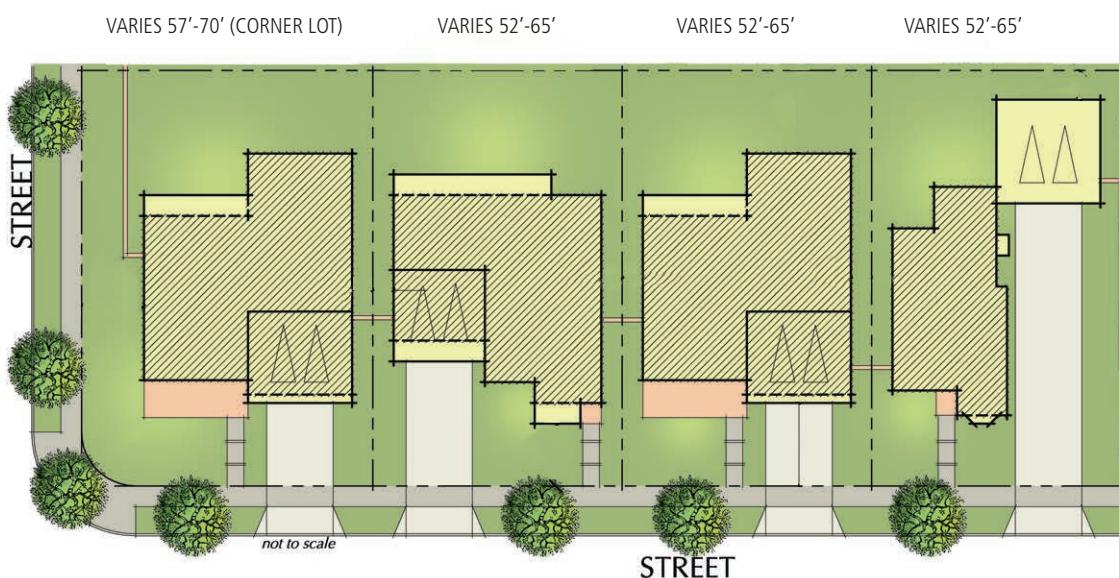
5. A THIRD STORY ELEMENT IS ALLOWED WITH A MAXIMUM BLDG. HEIGHT OF 38'.



Single Family Large Lot Conventional (TYP. 6,000 S.F. to 8,000 S.F.)



Streetscene Perspective



Typical Plotting Diagram

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

Single Family Medium Lot Conventional (TYP. 4,000 S.F. to 6,000 S.F.)





Single Family Small Lot Conventional (TYP. 3,000 S.F. to 4,000 S.F.)



Streetscene Perspective



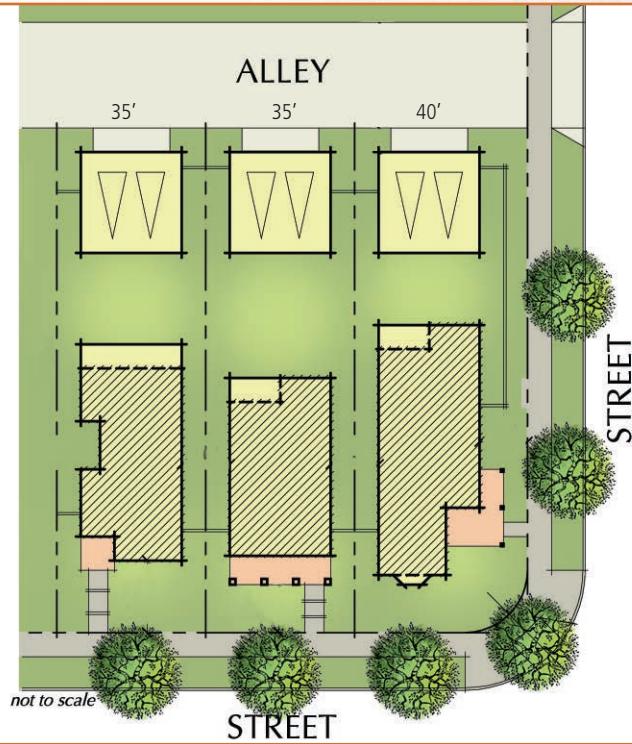
Typical Plotting Diagram

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

Single Family Alley Loaded



Streetscene Perspective



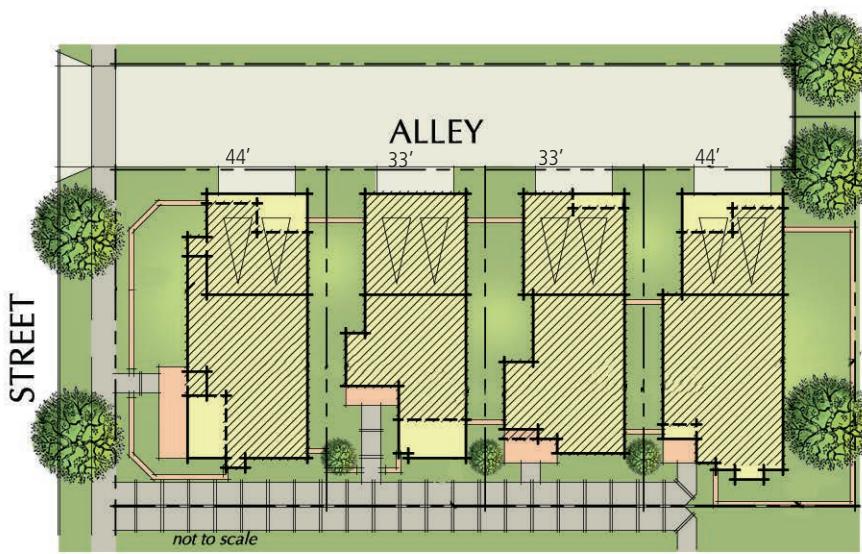
Typical Plotting Diagram



Single Family Green Court Cluster



Streetscene Perspective



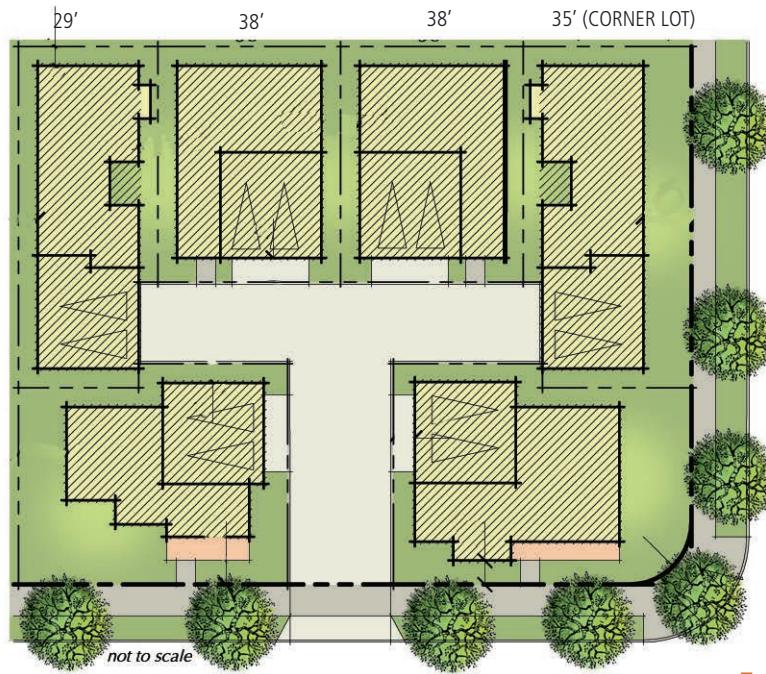
Typical Plotting Diagram

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

Single Family Motor Court Cluster



Streetscene Perspective



Typical Plotting Diagram



Table 4.8: Attached/Multi-Family Residential Development Standards

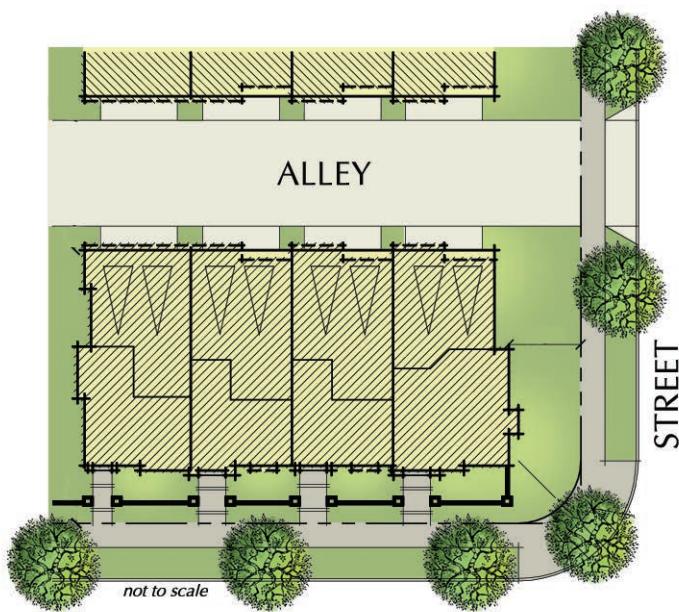
MULTI-FAMILY ATTACHED		
BUILDING TYPE/PRODUCT	Apartments	Townhomes
PERMITTED USES	1. Multi-Family Homes (for rent) 2. Live/Work	1. Multi-Family Homes 2. Live/Work
Applicable Land Uses	RD-20, HDR, TC	RD-20, HDR, TC
Lot Size (s.f.)	n/a	n/a
Lot Width	n/a	n/a
MAX DENSITY	40 du/ac	40 du/ac
SETBACKS ⁵		
Front ¹		
Living Space	10'	10'
Garage	5' or 18'	5' or 18'
Side		
Interior or end	0'/4'	0'/4'
Corner on street	10'	10'
Rear		
Living Space	10'	10'
Attached Garage	4'	4'
MAX. HEIGHT	50'	50'v
MAX. STORIES	5	5
PARKING ^{2, 6}		
Studio	1	1
One Bedroom	1.5	1.5
Two + Bedrooms	2	2
Guest	0.5	0.5
Within 1/4 Mile of Transit Stop		
Studio & One Bedroom	1	1
Two + Bedrooms	1.5	1.5
Guest	.25	.25
Inside garage dimension-single (min.)	10' x 20'	10' x 20'
Inside garage dimension-double (min.)	20' x 20'	20' x 20'
Unenclosed stall dimension (min.)	9' x 19'	9' x 19'
SEPARATION ³		
Side to Side	10'	10'
All other separations	20'	20'
OPEN SPACE ⁴		
Private		
Common	150 s.f.	150 s.f.
FLOOR AREA (S.F.)	600 s.f./du	900 s.f./du
NOTE: MINIMUM REQUIREMENT IN FEET UNLESS OTHERWISE DESIGNATED.		
1. FOR MULTI-FAMILY BUILDINGS, FRONT YARD SETBACKS TO A STRAIGHT-IN GARAGE MUST BE EITHER A MAXIMUM OF 5' OR BE A MINIMUM OF 20' MEASURED FROM THE RIGHT OF WAY. IF ROLL-UP GARAGE DOORS ARE INSTALLED, THE 20' SETBACK MAY BE REDUCED DOWN TO A MINIMUM OF 18'.		
2. PARKING RATIOS FOR SENIORS APARTMENTS IS 1.5/DU OVERALL, INCLUDING GUEST PARKING.		
3. A MINIMUM DIMENSION OF 26' CLEAR MUST BE MAINTAINED BETWEEN FACING SECOND STORY ELEVATIONS IN ALLEYS.		
4. PRIVATE OPEN SPACE CALCULATION IS DETERMINED BASED ON INDIVIDUAL PRODUCT DESIGN, COMMON SPACE AND ADJACENT OPEN SPACE AMENITIES.		
5. SETBACKS MEASURED FROM ROW		
6. TRANSIT STOP REFERS TO STOPS ALONG A LIGHT RAIL LINE, BUS RAPID TRANSIT LINE, OR OTHER TRUNK LINE PROVIDING HIGH FREQUENCY BUS SERVICE WITH 20 MINUTE OR BETTER HEADWAYS, WHICH IS IN EXISTING SERVICE, OR UNDER CONSTRUCTION.		

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

Multi Family Row Townhomes



Streetscene Perspective



Typical Plotting Diagram



Table 4.9: Non-Residential Development Standards

	Town Center	Flex-Commercial
Building Type/ Product	Commercial/retail/office/civic/flex/ medical (conventional)	Commercial/retail/office/ residential (vertical mixed-use)
Permitted Uses	Commercial/retail/office/civic/ medical/ high density residential	Commercial/retail/office/ residential (vertical mixed-use)
Min. Lot Size	1,000 s.f.	1,000 s.f.
Max. Height	4 stories over 1 story	4 stories over 1 story
Min. Stories	2	2
Max. Stories	5	5
Setbacks ³		
Front (street)	0'	10'
Side (street)	0'	10'
Rear	0'	0'
Building Separation	Determined by UBC	Determined by UBC
Parking	Refer to Town Center Parking Standards, Sub-Section	Refer to Town Center Parking Standards, Sub-Section

1. NOT INCLUDING PROJECTIONS.

2. MIN. BUILDING SEPARATION BETWEEN COMMERCIAL/RETAIL USES AND STAND ALONE MULTI-FAMILY RESIDENTIAL SHALL BE 10'.

3. SETBACKS MEASURED FROM ROW

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

4.5 SCHOOL STANDARDS

For all schools within Cordova Hills, liquor sales are precluded 600 feet from any school site. Specifically, the California Alcoholic Beverage Control (ABC) Department is specifically authorized to refuse issuance, other than renewal or ownership transfer, or any retail licence for premises located within the immediate vicinity of churches, schools, hospitals and non-profit youth facilities, including, but not limited to facilities serving Girl Scouts, Boy Scouts or Camp Fire Girls.

Refer to Section 23789 of the ABC Control Act for more detail on this statute.

4.6 PARKING STANDARDS FOR NEV'S

Parking for NEVs in existing communities has typically been in standard or compact automobile parking stalls. NEVs will continue to be permitted to utilize automobile parking stalls, but smaller parking spaces scaled to fit NEVs will be permitted on a direct replacement for required parking spaces in multi-family residential, commercial, and office uses.

4.6.1 Access to Parking

Parking for NEVs in any commercial, office and multi-family residential uses shall be directly accessible from a street that allows the operation of NEVs.

Parking for NEVs shall be in a preferred location near the building entry or near a primary walkway that leads directly to the building entry.

NEV parking spaces shall be at least seven feet in width and 9 feet in length, and shall be clearly marked "NEIGHBORHOOD ELECTRIC VEHICLES ONLY," or "NEV."

4.6.2 Parking Requirements for Multi-family Residential, Commercial and Office

NEV parking spaces may replace standard parking spaces at a ratio of one to one. The smaller NEV spaces reduce the area required for parking. The design of parking areas should allow the flexibility to convert standard parking areas to NEV parking, or NEV parking to standard parking depending on the demand for NEVs and the changes in vehicle size that are likely to occur over the life of this project.

NEV spaces shall be clustered near the entries of destination buildings.

Where an entire section of the parking lot is restricted to NEV parking with an angle of 90 degrees, the aisle width may be reduced from the standard 25 feet to 15 feet. Such compact sections should be located so as to minimize the distance from the parking lot section to the appropriate building or activity.

4.6.3 Charging Stations

Electric vehicle charging stations shall be conveniently located for use by business patrons. Charging stations for NEVs shall provide 110 volt outlets.

4.6.4 Home Charging and Parking Standards

Most NEVs will be recharged with a 110 volt outlet and will be recharged at the home location, whether a single family residence or multi-family residence. Each single family dwelling unit shall provide a 110 volt outlet in the garage or in a parking space near the dwelling unit suitable for recharging an electric vehicle.



4.7 DEVELOPMENT STANDARDS IN AGRICULTURAL BUFFERLANDS:

The specific development of a solar farm, corporation maintenance yard, and district energy electricity plant are broadly defined in location in Figure 4.5. Such uses are permitted in the Agriculture designated lands by the Cordova Hills Special Planning Area (SPA) master plan without a conditional use permit so long as the performance standards below are met. Based on similar projects in Sacramento County the following potentially significant issues may be addressed in conditions for approval of any improvement plans and/or building permit.

- Agricultural Land Use Compatibility
- Visual Intrusion
- Access/Traffic/Circulation
- Air Quality
- Drainage/Flooding/Storm Water Runoff
- Public Service
- Biological Resource
- Cultural Resources
- Community Outreach
- Adequate supply of water

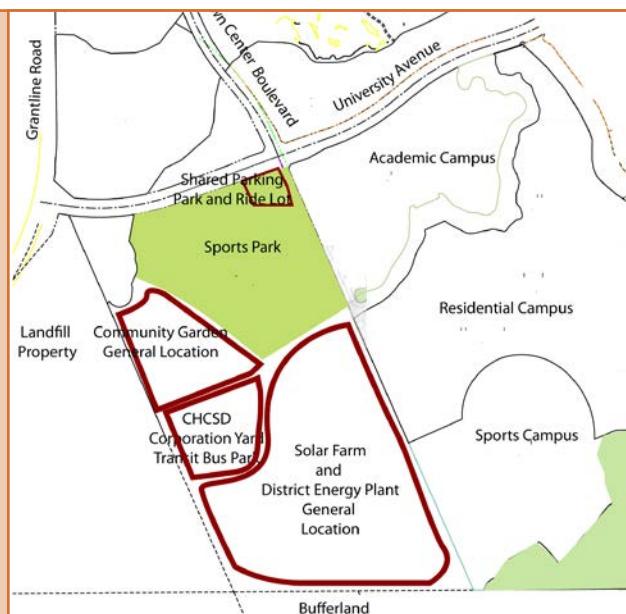


Figure 4.5: Approximate Location of Uses in the Bufferlands

4.7.1 Recommended Conditions:

Any approval of improvement plans and/or building permits of a solar farm, corporation yard, and district energy electricity plant shall at minimum be subject to the following conditions:

- The final development plans shall be in substantial compliance with the Cordova Hills Special Plan Area Ordinance.
- This action does not relieve the applicant of the obligation to comply with all ordinances, statutes, regulations and procedures. Any required subsequent procedural actions shall take place within 36 months of the date on which the permit became effective or this action shall automatically be null and void.
- Obtain approval of grading plan and/or improvement plan, prior to commencement of grading or any construction activity.
- The applicant shall be subject to any inconvenience or discomfort resulting from accepted farming activities pursuant to provisions of the County's right-to-farm ordinance.
- In conjunction with the issuance of building permits, final development plans shall be reviewed by the Planning Department during the plan check process to assure compliance with all ordinance requirements and the following:
 - Plant native, drought-tolerant landscaping (i.e.: trees, shrubs, or climbing vines) along the perimeter of each facility so that an approximately 25-foot wide landscaped area is provided for a thick visual screen, per Sacramento County Zoning Code Section 320-05(a). Where no existing vegetation is present, small trees of various species that are drought-tolerant shall be planted approximately every 50 feet. The species of the landscaping shall not include any species on the State's invasive and noxious plant list and that could cause harm to agricultural crops/livestock or wildlife.

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- The parcel shall be maintained clear of combustible vegetation.
- Approved fire hydrants capable of providing the required fire flow for the protection of any and all structures shall be located along the route of the fire apparatus access roadway. The required fire hydrants shall be installed and operational prior to any construction or on-site storage of combustible materials.
- Provide access roadways with all weather driving surfaces of not less than 20 feet of unobstructed width, 13 feet, 6 inches of vertical clearance and turning radii of 25 feet inside and 50 feet outside dimension. The access roadways shall be capable of supporting the imposed loading of fire apparatus and shall extend to within 150 feet of all portions of the exterior walls of the first story of any proposed building.
- If applicable, all required roadways, street signs, addresses, water mains, fire hydrants, and fire flows shall be provided prior to the existence of any combustible construction or storage. The slope of access roadways shall not exceed 10% for asphalt and 5% for concrete. The roadways shall be constructed to a 20-foot minimum width of three (3) inches AC over six (6) inches AB with good drainage.
- Required fire alarm systems shall be connected to a UL listed central station approved by the Sacramento County Regional Communications Center.
- The installation of on-site or off-site fire protection equipment including fire hydrants and water mains shall meet the standards of the Sacramento Metropolitan Fire Department and the water purveyor having jurisdiction.
- The installation of roadway gates, addresses, landscaping, pipe bollards, fuel tanks, masonry sound walls, tree wells, and/or all other traffic calming devices is subject to standards outlined by the Sacramento Metropolitan Fire Department. All proposed traffic-mitigation plans shall be submitted to the Sacramento Metropolitan Fire Department for review and approval prior to installation.
- The on-site 12-foot access road shall consist of a minimum 4 inches aggregate base.
- Provide drainage easements and install facilities pursuant to the Sacramento County Floodplain Management Ordinance, Sacramento County Water Agency Code, and Sacramento County Improvement Standards, including any fee required by the Sacramento County Water Agency Code. Label the private drainage system on the improvement plans and provide a copy of an approved and executed private maintenance covenant to the Sacramento County Department of Water Resources.
- If the total area of the developed or redeveloped impervious surfaces (building rooftop, flat work, and parking areas) equals or exceeds 1.0 acres, incorporate permanent stormwater quality treatment measures in conformance with applicable County ordinances and standards, and state and federal law. (See Dalia Fadl at 916-874-1321 for stormwater treatment options).
- Secure approval of civil engineered grading plans from the LD&SIR Section of the Municipal Services Agency.
- Minimum pad/floor elevations will be required pursuant to the Sacramento County Floodplain Management Ordinance. All structures and equipment that could be damaged by floodwaters will be set at least 1.5 feet above the floodplain.
- There will be no net loss of storage for any fill placed within the 100-year floodplain without in-kind excavation.
- Flood resistant materials shall be used below the 100-year floodplain.
- Fencing in the floodplain shall be open style allowing the passage of water.
- Any parcels that are created within the Bufferlands shall maintain sufficient lot areas, lot widths, and setbacks to meet the area needs of the land use within the particular parcel and meet the recommended conditions described in this section.



4.7.2 Corporation Yard Specific Conditions:

- Visual screening of the corporation yard, can be in the form of, vinyl coated chain link (green or brown), and native, drought tolerant landscaping. Screening measures shall be a minimum of six feet tall and taller screening may be required to obscure equipment and stored materials from view when viewed at a ground plane equal to or less than 6 feet above the ground plane of the equipment or stored materials.
- Light, dry materials such as sand, dirt, wood chips, bark and similar landscape materials shall be stored in such a manner that they are not displaced and scattered by wind. This may be achieved by permanent covering on storage areas, the design of storage bins to block wind, and/or fitting temporary covers to the bins.
- All odoriferous materials such as finished compost, fertilizers, soil amendments and manures used for landscaping shall be stored in a manner such that the odor is not detectable at the boundary of the facility.
- All yard and building light shall be shielded to prevent light spillage into adjacent areas, including but not limited to the University / College Campus Center residential area.
- Auto and truck access doors to service bays, tire shops, machine shops or other areas where machinery is operated shall not be oriented toward a residential use unless the noise level at the adjacent residential use property line would not exceed the County noise level standard. Noise levels may be mitigated through various methods including, but not limited to, sound baffles around equipment and sound walls.
- Fuel storage areas shall comply with State laws.
- The corporation yard shall be subject to Design Review and approval prior to issuance of a building permit.

4.7.3 Solar Farm Specific Conditions:

- While proposed project is on-site, all solar panels and associated equipment shall be maintained and in operating condition as necessary. Reclamation of the site shall be completed within six months of the ceasing of operations.
- All open and non-landscaped portions of the proposed solar farm facility shall be maintained in good condition, free from weeds, dust, trash, and debris.
- If any existing irrigation well is going to remain for future use and the well has not been used or will not be used for more than one year, an inactivation well permit must be obtained from Sacramento County Environmental Management Department (EMD). Currently, there is no cost for this permit.
- Provide EMD with written permission from the landowner, to conduct an abandon well survey on the property. Currently, there is no cost for this survey.
- The proposed project will be screened from the view shed of Grantline Road and the adjacent University / College Campus Center residential and sports facilities with vinyl coated fencing and native, drought tolerant landscaping.
- The emergency disconnect switch in the AC Switchyard shall be labeled EMERGENCY DISCONNECT in minimum 3-inch contrasting letters.
- All food-related trash items such as wrapper, cans, bottles, and food scraps shall be disposed of in closed containers and removed at least once a week from the construction/project site.
- The proposed solar farm facility shall be maintained and operated in accordance with all State and County health regulations.
- Prior to the issuance of a building permit, the applicant shall provide to the County Planning Department a Decommissioning Plan, which shall include, at a minimum, a detailed plan for decommissioning and deconstruction of the solar farm facility and for restoration of the site (collectively referred to as "decommissioning").

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The Decommissioning Plan shall be developed and approved to the satisfaction of the Planning Director. The Decommissioning Plan shall include, but shall not be limited to, provisions to address and implement the following requirements:

- Removal of solar panel structures and all appurtenant above ground equipment.
- If applicable, removal of overhead poles and above ground electricity lines on-site within the project area.
- If applicable, removal of permanent above ground transmission lines and poles located in the public right-of-way would be required if determined not to be usable to any other applicable public or private utility, otherwise such permanent above ground transmission lines and poles shall be allowed to remain.
- If applicable, removal of on-site substation, if project-owned. If a public or private utility assumes ownership of the substation, the substation may remain on-site to be used as part of the utility service to the project area.
- Restoration of disturbed soil and revegetation of the site to its preconstruction condition, as determined from the Initial Study on this project, with native vegetation similar to plants in the surrounding vicinity.
- Restoration or reclamation of project roads to their pre-construction condition unless the land owner elects to retain the improved roads for access throughout the land owner's property.
- Prior to issuance of any building permits, the applicant shall provide performance and financial assurance guarantees in an amount sufficient to ensure the performance of the approved Decommissioning Plan. The performance and financial assurance guarantees shall be provided and approved to the satisfaction of the Planning Director. The applicant shall be solely responsible

for the costs and expenses associated with decommissioning and in the event that the performance and financial assistance guarantees are not sufficient to fully compensate the County for the cost and expense of such decommissioning, the applicant shall compensate the County for any shortfall. The performance and financial assurance guarantees shall be subject to the following additional conditions:

- The performance and financial assurance guarantees shall be detailed to the satisfaction of the Planning Director in the approved Decommissioning Plan, and that plan shall explain the amounts and schedule for the provision of the performance and financial assurance guarantees.
- Any funds not utilized in connection with decommissioning by the County will be returned to the applicant.
- The performance and financial assurance guarantees may be comprised of but not limited to one or more of the following to the satisfaction of the Planning Director:
 - An irrevocable letter of credit; or
 - A trust fund or escrow established and maintained in accordance with the approved financial assurances and practices to guarantee that decommissioning will be completed in accordance with the approved Decommissioning Plan.

4.7.4 District Energy Plant Specific Conditions:

The district energy plant shall be subject to Design Review and approval prior to issuance of a building permit.

4.7.5 Community Garden Specific Conditions:

The community garden maintenance shall be the responsibility of the Cordova Hills County Service Area.



4.8 DESIGN GUIDELINES INSPIRATION AND INFLUENCES

4.8.1 Site Setting

The eastern Sacramento County region offers distant views of the Sierra, rolling prairie grass land, open space, and the American River and Consumes River Basin. Buildings and common areas, parks and open space corridors can be oriented to provide exceptional views that create a strong sense of place for Cordova Hills.

4.8.2 Climate

The Sacramento region enjoys a Mediterranean climate where the sun shines approximately 300 plus days per year and the average summer high temperature is 92 degrees. The concept of indoor/outdoor living, embracing views, courtyard living, and creating a strong relationship to nature are important concepts which directly apply to all building types in Cordova Hills.



Local Crate Label

4.8.3 Historic Setting

Respect for elements of the past combined with new community design concepts and guiding principles can enhance “placemaking” and new community character. Historic references can lend richness and “roots” to the plan.

The modern history of much of the east Sacramento County region extends back to the earliest Spanish settlement in northern California. Land to the west

of Cordova Hills along Grant Line Road were part of early Mexican Land Grants that established the rule of the Mexican government long before the settlement by Sutter and the subsequent discovery of gold at Coloma.

The south side of the American River was the route for many significant chapters in the history of the Sacramento region and the entire nation. Historic routes of the Pony Express, the Sacramento Valley Railroad, and the haul roads that supplied the gold mining camps in the Sierra Nevada and the Comstock silver mining in Virginia City followed ancient Indian trails through this area.

Fertile soils along the south bank of the American River provided a narrow corridor for agricultural crops including fruit and olive orchards, wheat fields, and wine variety grapes. Natomas Vineyard, well known for its “Flaming Tokay” grapes and Cordova Winery operated in the region along the railroad line.

Vegetables and truck farms grew up in the area around Mills and Perkins about ten miles to the west of Cordova Hills. Many farmers prospered with the railroad bringing transportation to the agriculture in the region. The Natomas Land Company built an extensive irrigation system that delivered water from the American River near the present city of Folsom to the vineyards, orchards and farms for many miles on the south side of the river.



Mills Station 1920s

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

4.8.4 Early California Design Theme

The site setting, climate, and historical context inspire the use of Early California architecture and landscapes as a fundamental design theme for Cordova Hills. The theme will guide design of buildings, public spaces and landscaping through



Early Mission

application of key design principles. The Early California theme is intended as a touchstone for design, not as a rigid template of forms and materials in which all development mimics historic buildings. The buildings, spaces and landscapes of Cordova Hills will be modern interpretations of the theme that incorporate new technologies and environmental concerns.



Water Feature

4.8.5 Expressions of the Design Theme

The Early California theme will be expressed in Cordova Hills in many ways:

- The University / College Campus Center and other public spaces in the Town Center and Village Centers will include dominant elements such as a landmark tower and central plaza that are reminiscent of early California settlements.
- Open views to the Sierra and surrounding rolling grasslands will be provided and protected at trail heads and viewpoints in the parks and plazas.
- Echoes of the styles of the early missions and settlements are reflected in the public and private buildings, park and recreation structures, and new homes.
- Ranch style buildings with wide verandas, and simple forms and materials will influence new home design in Cordova Hills.
- Building forms and materials that respond to the warm temperatures will be reflected in a strong indoor/outdoor relationship of homes, active use of patios, courtyards, and plazas. These features will be included in recreation buildings, retail and civic places, and new homes on larger lots in Cordova Hills.



California Sycamore



- Water as a focal point and element of tranquility will be a prominent feature in public spaces, plazas, retail and commercial places, private homes, recreation amenities, and the University / College Campus Center entry and site plan.
- Drought tolerant “grasslands” are a component of the landscape palette for Cordova Hills, reflecting the dry, native character of the surrounding area.
- Native and native compatible planting will dominate the landscape environment in Cordova Hills, in entries, edges, parks, recreation locations, avoided drainage and trail corridors, and home sites.
- Olive groves, fruit orchards and grape vineyards will be included in community open space, Village “edges,” entries, focal points, urban plazas, and buffers to provide reminders of the local agricultural heritage. Such landscape elements are envisioned as sustainable crops, residential amenity, or community enterprise.
- Sycamores, Willows, native Oaks, Olives and other compatible trees will be the key thematic tree species throughout the project. Shading by trees will provide cover and cooling as relief from the local warm, Mediterranean climate.
- No fruit bearing Olives will be used near paving but exclusively in the “orchard” effect show areas. *Salix lasiolepis* (Arroyo Willow) is proposed.

4.9 ARCHITECTURE CORE CRITERIA

The design character of the Villages, neighborhoods and Town Center inspired by Early California includes the following:

- Simplified massing with deep set openings in walls
- Bell tower or campanario (wall of bells)
- Generous use of arches and arcades, offering shade
- Solid proportions of pillar, arch and wall
- Look of “permanence” and shelter
- Simplicity of building materials, including plaster and stone
- Interior gardens, patios, courts, and orchards
- Use of water as a focal point, feature, with seating
- Tile roofs, rough timber under structure
- Ornamental detailing around doors and windows



Campanario

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

4.10 RESIDENTIAL NEIGHBORHOOD DESIGN

4.10.1 Garage Treatments

The home and front yard, rather than the garage, must be the primary emphasis of the front elevation of new homes. Garages should not be forward of building architecture for any single family builder parcel. Minimize the impact of garages facing the street by techniques such as varying garage-door patterns and utilization of deep-recessed door techniques, varying colors, splitting one large door into two (2) single doors or using alternative garage configurations, such as corner garages and detached or deep-recess garages.

A combination of the following techniques should be implemented in each builder parcel:

Garage Wall-Plane Furr-out

"Furr-out" (extend out) the garage wall plane 8" to 12" for front loaded street facing garages when the garage door is at the minimum setback. With other garage configurations, a range of 6" to 8" is recommended.



Garage-Wall-Plane Furr-out

Screened Garage Door Elements

Install devices such as attached trellises beneath garage roof fascias and above garage-door header trims, or build detached trellises in front of the garage, spanning the driveway.

Porte-Cochère

A porte-cochère is encouraged with a recessed garage plan because it creates an additional screened parking space and an occasional outdoor private space.



Porte-Cochere

Three-car Garage Treatment

No street-facing, three (3) car garages will be allowed without additional garage treatments.



Conceptual Additional Garage Treatment



Garage Plotting Offsets

When houses are “reverse-plotted” (garages on two lots with a common property line and the garages are directly adjacent to each other) provide an additional two-foot (2') offset.

Estate Homes

Garage treatments will be highly articulated with deep setbacks, staggered directions, deep furr-outs, and separating masses.



Deep Setbacks

4.10.2 Garage Configurations

Varied garage placement is a fundamental design principle to encourage development of great neighborhoods. A variety of garage placements, de-emphasizing the garage door and placing greater importance on home architecture is the broad goal of this sub-section.

A minimum of 30% of all front-loaded single family homes in each Village and neighborhood should include an alternate garage treatment, as defined in the following garage configuration sketches.

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

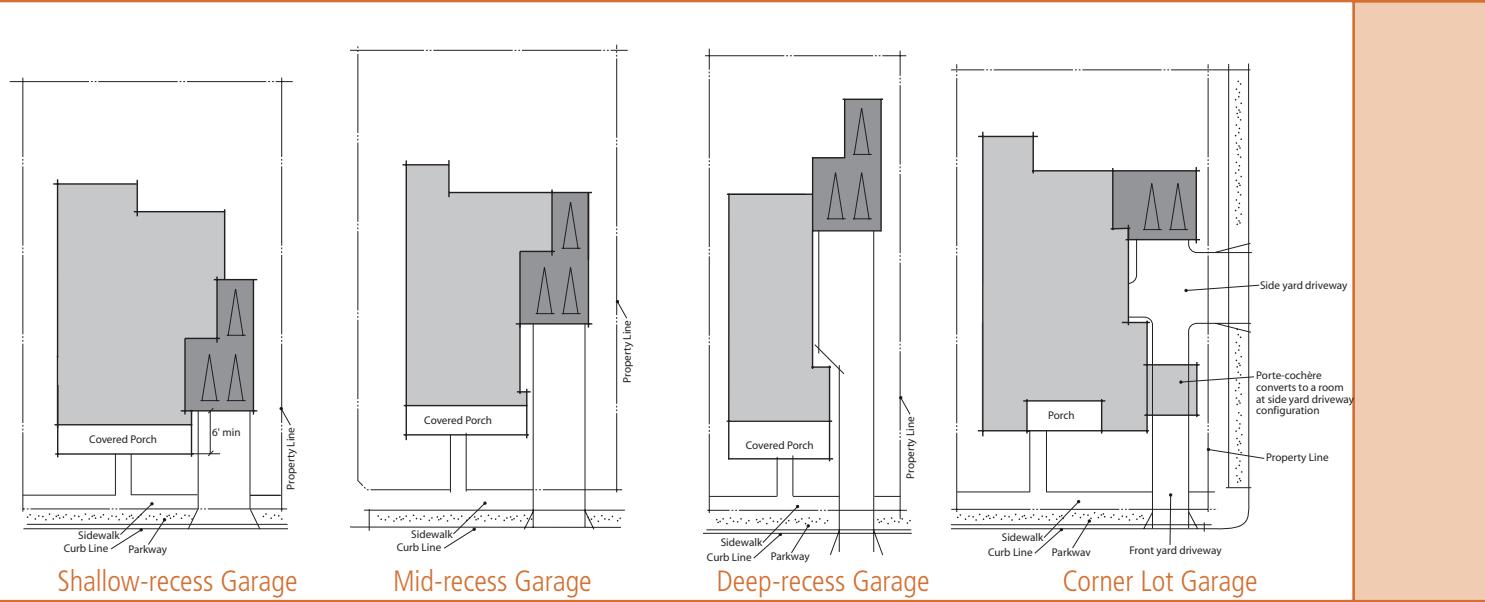


Figure 4.6: Garage Configurations

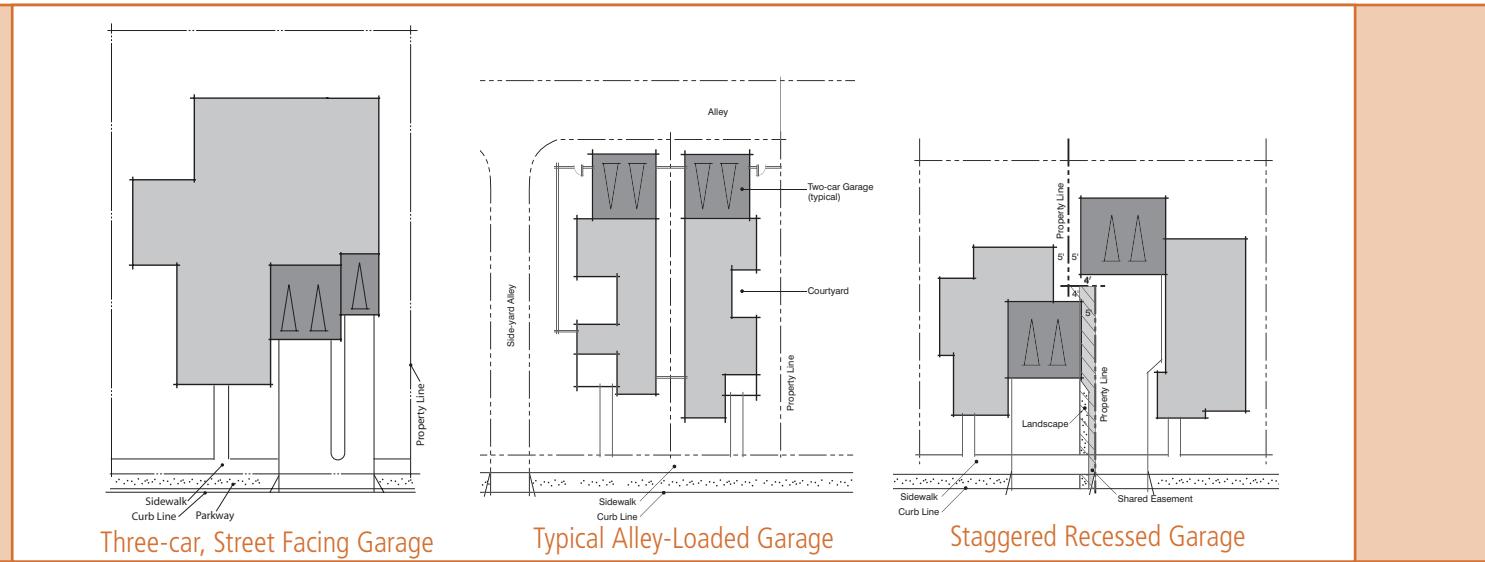


Figure 4.7: Garage Configurations



Shallow-recess Garages

When garages are less than 25' behind the front property line, no garage face may be less than six feet (6') behind the living space or full porch (porch depth minimum is 6'-0").

Mid-recess Garages

Create plans that place the garage at varied locations on the home site. Mid-recessed garages have strong emphasis on the living space of the home, with flexibility in exact depth of the garage from the front of the street

Deep-recess Garages

Set the garage back to the rear of the lot. Garages may be attached or detached. This achieves more living space toward the street and creates additional usable side yard outdoor space.

Corner-Lot Garages

When grades allow, it is strongly recommended that a floor plan layout be designed to work as a corner-plotted plan as well as an interior plotted plan. As an interior-plotted plan, the garage is accessed from the front yard of the home; as a corner-lot plotted home,

the driveway is configured to access the garage from the side yard. The floor plan does not change, but rather the driveway access does.

Three-car, Street-facing Garages

When a plan includes a three (3) car garage, the third car bay should be offset five feet (5'). Additionally, furr-out (extend out) garage face wall at all three bays at least 12". Three (3) individual garage door bays are preferred over two (2). The length of the front garage wall face should not exceed 50% of the entire front façade of the home.

Typical Alley loaded Garage Configuration

This treatment completely de-emphasizes the garage by placing it in a rear alley and features forward facing architecture.

Staggered Recessed Garages (Typical Shared Easement Plotting)

The "two-pack" plotting concept staggers garages in twos. One is forward and the second is back, in a deeper recessed position. Only one (1) garage is visible along the street scene, and building massing is varied.



Figure 4.8: Varied Setback Configurations

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

4.10.3 Setbacks

To provide more interesting neighborhood street scenes, variable front-yard setbacks are required and variable side yard setbacks are encouraged. This includes:

- Varied yard setbacks along streets.
- Variable lot width programs are encouraged.
- “Reverse plan” plotting along streets (“flipping” of footprint to reduce repetition of garage placement and consolidating living space massing).
- Corner lot criteria: see Architectural Massing which follows for more information.
- Enhanced corner side yard setbacks.

Figure 4.8: Varied Setback Configuration illustrates how implementing various massing and setback techniques creates a varied and interesting street scene.



Streetscene with Varied Massing/ Setbacks

4.10.4 Architectural Massing

Corner Home Site Treatment

Homes that occupy the corner lot on a residential street require an enhanced elevation on the corner facing side yard.



Corner Treatment

Roof Forms

Rows of homes seen from a distance or along arterial roads are perceived visually by their contrast against the skyline or background where the dominant visual impression is of the shape of the building and roof line. Site plans for builder parcels and neighborhoods should articulate the rear elevation and roof plane of highly visible elevations to minimize the visual impact of repetitious flat planes, similar building silhouettes and similar ridge heights.

Builders are strongly encouraged to develop floor plans that are responsive to both architectural style objectives as well as energy efficient building objectives. These two objectives can be satisfied by creating simple floor plan forms which minimize jogs and avoid unnecessary complicated massing solutions.



Third-story Elements

Third-story elements can be designed to occur at the rear of the project, or interior, away from public views, or staggered with two-story massing to create variety. The photograph below illustrates varied two- and three-story element massing. Two-story massing can occur along the street scene, reinforcing a "two-story residential" character.



Third-Story Elements

4.11.5 Streetscape Massing & Plotting

The following key massing and plotting concepts create pedestrian-friendly streetscapes:

- Special architectural enhancements that describe the neighborhood design character must be provided at exposed street corners and other important focal points.
- Front doors and living-room windows should orient toward, and be visible from, the street.
- The architectural style chosen for each home or building must be compatible with its massing in order to avoid making the style seem applied or superficial.
- Embellished elevations with upgraded materials, details, massing, etc. are required at areas of the building that face a public area or public view such as a street or park. This applies to all elevations.



Streetscene: Single Family Alley

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

4.10.6 Plans and Styles

The following architectural style and plan requirements must be met for each builder parcel neighborhood in order to achieve varied and interesting street scenes:

- Minimum of three (3) plans (4 preferred)
- Minimum of three (3) elevations per plan using a minimum of two (2) styles. If only two (2) are selected, they must be significantly different in appearance
- Minimum of four (4) different color schemes per elevation
- Minimum of four (4) different architectural styles per neighborhood.
- Every neighborhood will be comprised of a variety of architectural styles. Builders will select from the palette of architectural styles provided in Section 4.11, Residential Architectural Styles.

4.10.7 Colors & Materials

The colors and materials used in Master Plan neighborhoods must reflect a general contextual theme of harmony with the surrounding neighborhood character.

Criteria

A variety of natural-looking materials and colors must provide the diversity required for visual interest, while unifying the homes with their settings.

- The architectural color palette selection should provide a variety of color schemes while still maintaining a common theme or unifying concept.
- Each elevation should have a minimum of three (3) colors (four (4) is preferred). For example, one (1) body color, one (1) trim color and two (2) accent colors.
- Individual color schemes should be appropriate to the architectural styles with a harmonious selection of accent materials, roof profiles and colors.
- Each builder parcel should have a minimum of three (3) different roofing profiles and colors, unless the residential building type prohibits this design.
- No adjacent single-family detached home may have the same color scheme. Color palettes that reflect traditional architectural themes are the basis for successful modern interpretations.



Streetscene: Greencourt



4.11 RESIDENTIAL ARCHITECTURAL STYLES

The western home and hacienda styles reflect the Early California theme that can be adapted to any of the residential Villages in Cordova Hills. Cliff May, a Southern California architect who pioneered the California Ranch style in the 1930s wrote: "The early Californians had the right idea. They built for the seclusion and comfort of their families, for the enjoyment of relaxation in their homes..." May combined the western home and Hispanic hacienda styles in new designs. Livability rather than facade were keys to his designs.



Cliff May Home

4.11.1 Residential Architectural Principles

The following architectural core criteria assist in developing architectural styles that are consistent with the Early California community character, economically feasible for the builder, as well as aesthetically appealing to the home buyer and wide market area.

- Architecture "forward" toward the street, activating the street scene. The home, not the garage, remains the primary emphasis of the front elevation.
- A variety of compatible architectural styles will ensure a degree of individuality in all Villages and neighborhoods.
- Architecture must be enhanced where highly visible from public areas.
- Detailing must remain true to the style.
- Color must be used to reinforce the architectural style.
- Roof forms play a major role in defining the architectural style.
- Varied garage placement.
- Varied roof pitches create the impression of custom homes.
- Authenticity: The design criteria within these guidelines is offered to prevent "false front" architecture. The massing and detail character of the architectural styles must be as authentic to the selected styles as possible. The master developer-designated styles shall be attractive and compatible with each other, while meeting the demands of modern, merchant-built homes and commercial/retail development.

The following narratives and illustrations provide typical examples of styles appropriate to Cordova Hills.

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

WESTERN RANCH



Conceptual Street Scene

4.11.2 Western Ranch

The Western Ranch style is evocative of the rural lifestyle of the American West. Rooted in the early California Spanish Colonial architecture throughout the region, Western Ranch style also has heavy influence from Craftsman and Prairie styles from the movement westward.

The modern interpretation of the Western Ranch was inspired by the simplicity of traditional adobe rancheros and rustic bungalows of the valleys, and fashioned after Cliff May's homes.

The Western style can be expressed in two forms, the Ranch house and the Hacienda house. Western Hacienda is primarily a one-story home with courtyard configuration. Western Ranch can be expressed as a one story linear or "L"- shape plan sometimes with a second story.

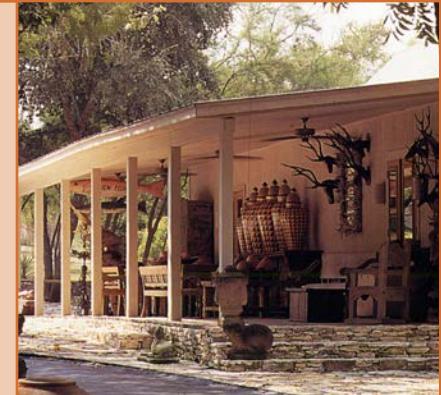
Wide floor to ceiling window walls provide sunlight and cross ventilation. Sliding glass doors leading to landscaped courtyards visually eliminate the boundary between house and garden, expanding the scale and functions of indoor and outdoor spaces. Post and beam construction with wide roof expanses and simple detailing gave the Western Ranch house a modern aesthetic and appeal.



Historic Example



Contemporary Interpretation



Style Detail

Element	Minimum Requirements	Encouraged Enhancements
Form	<ul style="list-style-type: none"> Simple, rectangular or "L"- or "U"- shaped plan forms with strong horizontal emphasis 	<ul style="list-style-type: none"> One-story or one-story dominated homes
Roof	<ul style="list-style-type: none"> Main front-to-back or side-to-side gable roof, with intersecting gables <ul style="list-style-type: none"> Roof pitch 4:12 to 5.5:12 18" to 30" overhang at eaves and rakes Laminated shingle or flat concrete shake profile 	<ul style="list-style-type: none"> Mud and tile boosts
Architectural Elements	<ul style="list-style-type: none"> Wood posts Ornate or simple post caps with simple base trim 	<ul style="list-style-type: none"> Exposed wood or simulated wood with re-sawn texture beams Simulated wood with re-sawn wood texture rafter tails <ul style="list-style-type: none"> Porches Oriented around courtyards or patios
Walls	<ul style="list-style-type: none"> Stucco: 16/20 finish Board and batten or cementitious fiber board siding 	<ul style="list-style-type: none"> Stone veneer
Windows	<ul style="list-style-type: none"> Vertically proportioned windows with divided-lights 	
Doors	<ul style="list-style-type: none"> Plank-style entry doors 	<ul style="list-style-type: none"> Glass panes or sidelights Carriage-style or plank-style, wood-grain-patterned garage door with complementary hardware trim
Details	<ul style="list-style-type: none"> Ranch-inspired wrought iron Western-inspired exterior lighting Plank shutters 	<ul style="list-style-type: none"> Painted galvanized iron. Louvers in gable ends
Colors	<ul style="list-style-type: none"> Field: Wide range of light to dark earth tones Trim: Off whites, light or dark tones in contrast to field color Accent: Light or dark tones in contrast to field color 	

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

AMERICAN FARM



Conceptual Street Scene

4.11.3 American Farm

The American Farmhouse represents a practical and picturesque country house. Its beginnings are traced to both Colonial styles from New England, and later the Midwest. This style represents the craft and character of American's history and immigration across the Plains to the west. As the American frontier moved westward, the American Farmhouse style evolved according to availability of materials and technological advancements.

American Farm style is based upon the need for well-crafted homes that were built to last, had basic comforts, and were both practical and pleasant in design. Because the homes tended to grow with the expanding family, various outcropping and wing-like additions are indicative of this style. This style evokes an earlier time, with a simpler, land-connected lifestyle.



Historic Example



Contemporary Interpretation



Style Detail

Element	Minimum Requirements	Encouraged Enhancements
Form	<ul style="list-style-type: none"> Simple rectangular shaped plan form 	
Roof	<ul style="list-style-type: none"> Front to back main gable roof with one or two intersecting gable roofs <ul style="list-style-type: none"> Roof pitch 6:12 to 12:12 12"- 16" overhang at eaves Laminated shingle or flat concrete tiles 	<ul style="list-style-type: none"> 12" overhangs with open eaves
Architectural Elements	<ul style="list-style-type: none"> Deep porch with edge railings Smooth-finished exterior wood elements 	<ul style="list-style-type: none"> Wrap-around porch
Walls	<ul style="list-style-type: none"> Stucco: 20/30 finish Wood siding or smooth cementitious fiberboard siding and soffit materials <ul style="list-style-type: none"> Brick, refined Horizontal and vertical siding 	<ul style="list-style-type: none"> All four sides - wrapped horizontal siding elements
Windows	<ul style="list-style-type: none"> Vertically proportioned windows with divided-lights 	<ul style="list-style-type: none"> Divided-lights in top half of window only Bay windows
Doors	<ul style="list-style-type: none"> Raised panel-style entry door Articulated entry door assembly detail 	<ul style="list-style-type: none"> Sidelights at entry door Dormer windows
Details	<ul style="list-style-type: none"> Wood pot shelves and louvered attic vents Shutters or dormer windows 	<ul style="list-style-type: none"> Carriage-style or plank-style, wood grain patterned garage door with complementary hardware trim
Colors	<ul style="list-style-type: none"> Field: Pale blues, yellows, whites or dark field colors Trim: Shades in contrast to field color, normally white or very light color Accent: White or dark color accents 	

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

CRAFTSMAN



Conceptual Street Scene

4.11.4 Craftsman

The Craftsman style was inspired by the English Arts and Crafts Movement of the late 19th century. Of the utmost importance was that all exterior and interior elements received both tasteful and "artful" attention. The movement influenced numerous California architects such as Greene and Greene, and Bernard Maybeck. The resulting Craftsman style responded with extensive built-in elements and by treating details such as windows or ceilings as if they were furniture. The overall affect was the creation of a natural, warm and livable home.

The style is further characterized by the rustic texture of the building materials, broad overhangs with exposed rafter tails at the eaves and trellises over the porches. This unique predominant look promoted hand crafted quality; thus the name Craftsman.

Covered porches extend the living area outdoors so that the indoor and outdoor environment flows together as one, reminding us of our connection to nature.



Historic Example



Contemporary Interpretation



Style Detail

Element	Minimum Requirements	Encouraged Enhancements
Form	• Simple boxed massing with vertical and horizontal breaks	
Roof	• Basic side-to-side gable roof with cross gables <ul style="list-style-type: none"> • Roof pitch of 4:12 to 5:12 • Laminated shingle or flat concrete tiles 	<ul style="list-style-type: none"> • 16"- 36" overhang at rakes and eaves • Exposed rafters, false decorative beams or decorative wood braces
Architectural Elements	• Entry porches with heavy square columns or posts on stone or brick piers	<ul style="list-style-type: none"> • Raised front porch
Walls	<ul style="list-style-type: none"> • Stucco: • Wood siding or smooth cementitious fiberboard siding and soffit materials • Stone based accents 	<ul style="list-style-type: none"> • Shingle siding used as accent • Half timbering in gables and porches
Windows	• Vertically proportioned windows with divided-lights	<ul style="list-style-type: none"> • Single hung windows • Layered wood trim
Doors	<ul style="list-style-type: none"> • Raised panel-style entry door • Window panes in entry door 	<ul style="list-style-type: none"> • sidelights at entry door • Carriage-style or plank-style, wood grain patterned garage door with complementary hardware trim
Details	<ul style="list-style-type: none"> • Stone and brick base accents • Balconies articulated with wood detailing 	<ul style="list-style-type: none"> • Blended stone or rusticated brick • Heavy rusticated metal accessories
Colors		<ul style="list-style-type: none"> • Field: Light to mid earth tone colors • Trim: Contrasting, dark accents on trim and shutters • Accent: Deep earth tones

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

COLONIAL MONTEREY



Conceptual Street Scene

4.11.5 Colonial Monterey

The Colonial Monterey style combines Spanish Colonial construction methods with a basic two-story New England Colonial home. Prior to this innovation in Monterey, all Spanish Colonial houses were of single-story construction. Beginning in the mid-eighteen twenties, architects turned to the architecture of early California for inspiration and focused in the Monterey area. First built by Thomas Larkin in 1835, this style introduced two-story residential construction and shingle roofs to California.

The Monterey style fulfills the need for a more restrained, simpler home with appreciation for the simplicity of mass and detail. Popularized by the use of simple building forms, these roofs feature gables or hips with broad overhangs and exposed rafter tails. Shutters, balconies, verandas, cantilevered decks, and porches are integral to the character of this style. Traditionally, the first- and second-stories have distinctly different materials, siding above with a stucco and brick veneer base below.



Historic Example



Contemporary Interpretation



Style Detail

Element	Minimum Requirements	Encouraged Enhancements
Form	<ul style="list-style-type: none"> Simple rectangular plan form and roof design Symmetrical horizontal massing with vertical elements Cantilevered second story 	
Roof	<ul style="list-style-type: none"> Main front to back gable roof at 4:12 to 7:12 with pitch roof break over balcony at 3.5:12 to 4.5:12 <ul style="list-style-type: none"> Parapets allowed on attached product Laminated shingle or flat concrete tile Tight to 24" overhangs at eaves and 0" to 12" overhangs at rakes 	
Architectural Elements	<ul style="list-style-type: none"> Cantilevered balcony covered with wood columns Smooth textured wood trim or simulated wood trim with smooth texture 	<ul style="list-style-type: none"> Second-story bay window with corbel supports Porch sheltered by cantilevered second-story balcony
Walls	<ul style="list-style-type: none"> Stucco: 20/30 finish Board and batten siding, smooth wood siding or smooth cementitious fiberboard siding 	<ul style="list-style-type: none"> Siding accent, lap or shingle profile on all front facing gable ends Brick, refined or rusticated Field stone
Windows	<ul style="list-style-type: none"> Vertically proportioned windows with divided-lights Symmetrically ordered and stacked windows and openings 	<ul style="list-style-type: none"> Bay windows
Doors	<ul style="list-style-type: none"> Raised panel-style entry door All doors shall have Colonial-inspired trim surrounds 	<ul style="list-style-type: none"> Refined, articulated entry door assembly detail Wood or style-inspired, wrought iron entry gate doors shall accent main entry door
Details	<ul style="list-style-type: none"> Wood or brick colonial style column caps and bases Shaped wood corbels and beams Colonial-inspired wood balcony railings Louvered shutters 	<ul style="list-style-type: none"> Brick or slump stone sill trim Wrought iron details Natural finish, painted or rusticated wood elements Fountain or water feature
Colors		<ul style="list-style-type: none"> Field: White or light tones stucco Trim: White or dark brown, balconies Accent: Dark accents on doors and shutters

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

SPANISH ECLECTIC



Conceptual Street Scene

4.11.6 Spanish Eclectic

Spanish Eclectic is an adaptation of Mission Revival enriched with additional Latin American details and elements. The style attained widespread popularity after its use in the Panama-California Exposition of 1915. By drawing upon a catalogue of styles, including the adobe and colonial buildings of Monterey, rural forms of Andalusia, and southwest Hopi and Pueblo Indian abodes, the Spanish Eclectic style is unified by the use of arches, courtyards, form and mass, plain wall surfaces, and tile roofs.

Key features of this style were adapted to the Northern California locale. The rural and western character infused the style through more rustic detailing and connection with the outdoors through courtyards, large windows, and very simple articulated and detailed front elevations.

Courtyards played a dominant role in the origins of this style. The center of daily activity, these outdoor rooms were surrounded by deep, covered verandas, provided spaces for food preparation and relief from the heat. Fountains, landscaping, colorful potted plants and tiles created a garden atmosphere immediately adjacent to the home.



Historic Example



Contemporary Interpretation



Style Detail

Element	Minimum Requirements	Encouraged Enhancements
Form	<ul style="list-style-type: none"> Simple rectangular or courtyard plan forms Symmetrical horizontal massing with vertical elements 	
Roof	<ul style="list-style-type: none"> Shallow roof pitches 3.5:12 to 5:12 <ul style="list-style-type: none"> Main front to back gable roof Parapets allowed on attached products <ul style="list-style-type: none"> Concrete "S" tile or barrel tile 6" to 24" overhangs at eaves Tight to 12" overhangs at rakes 	<ul style="list-style-type: none"> Primarily shed roof forms on the 1st floor; secondary gables on the 2nd floor
Architectural Elements	<ul style="list-style-type: none"> Slump stone, rubble stone or stone veneer wrapped rectangular columns Wood or simulated wood head and sill trim 	<ul style="list-style-type: none"> Wood columns (cross section 8"x 8" minimum) Porch, 6'-8" depth, sheltered under shed roof in conjunction with front entry
Walls	<ul style="list-style-type: none"> Stucco: 16/20 finish Rubble stone, field stone, or sack finish slump stone veneer 	<ul style="list-style-type: none"> Brick, rusticated Courtyard walls of split face, slump block, rusticated brick with heavy stucco finish or rubble stone
Windows	<ul style="list-style-type: none"> Vertically proportioned windows with divided-lights 	<ul style="list-style-type: none"> Recessed windows
Doors	<ul style="list-style-type: none"> Plank-style entry doors, also appropriate at courtyard entry 	<ul style="list-style-type: none"> Wood or style-inspired, wrought iron entry gate doors to accent main entry door Carriage-style or plank-style, wood grain patterned garage door with complementary hardware trim
Details	<ul style="list-style-type: none"> Rustic Ranch- or Western-inspired detail fixtures and iron hardware Pre-cast stone head and/or sill trim 	<ul style="list-style-type: none"> Plank shutters on featured windows
Colors		<ul style="list-style-type: none"> Field: White toned Trim: Dark brown trims Accent: Jewel tones of red, green, or blue

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

PROVENCE



Conceptual Street Scene

4.11.7 Provence

The Provence style represents simple farmhouses and cottages in the rural hillsides and Villages within the Provence region of France. The character of the Provence house comes from these warm, sun-washed farmhouses and the fortress-like structures of the area. A single tower, serving as a lookout point, often arose from a tight patchwork of russet-tiled roofs. The building form and mass originated out of simple design that evolved organically over time.

The informality of rural settlement building types has been adapted in the similar Mediterranean climate of California to create an informal, rustic character building style blending naturally with the land.

The character of this style is a delightful blend of color and textures, all in harmony with nature.

Buildings have a palette of bright, beautiful colors. Doors and windows are recessed. Wooden shutters were painted with cool colors and often kept closed, for an eclectic, yet cohesive look.

The courtyards and private gardens play an important role in providing a functional sanctuary for residents. Fountains, shade trees, landscaping, and colorful potted plants provide a comfortable place where families can gather.

Forged iron and hand-hewn wood details reflect the character of the architecture.



Historic Example



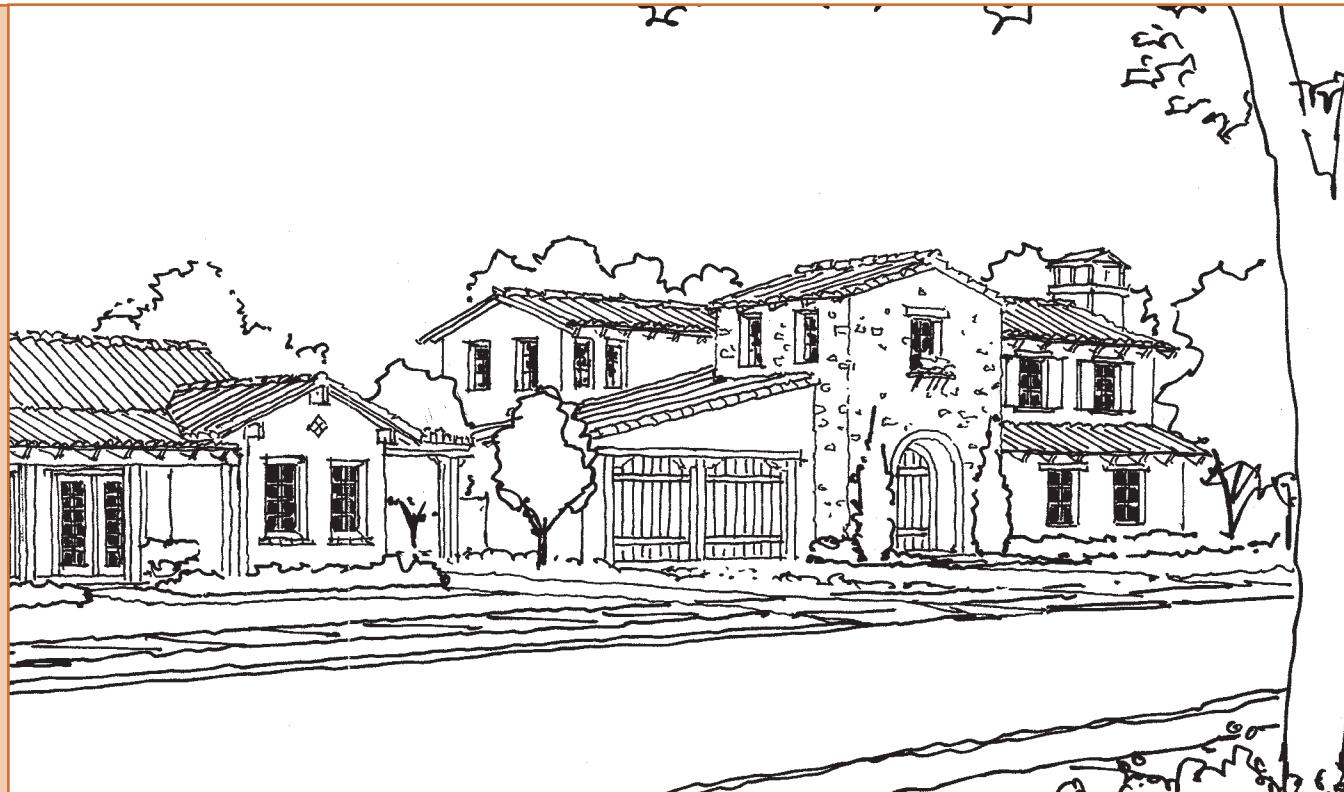
Contemporary Interpretation



Style Detail

Element	Minimum Requirements	Encouraged Enhancements
Form	<ul style="list-style-type: none"> Simple, rectangular plan forms and roof designs Asymmetrical, horizontal massing with vertical elements 	<ul style="list-style-type: none"> Tower elements square or rectangular, where present, shall be integrated into the building form
Roof	<ul style="list-style-type: none"> Shallow roof pitches 4:12 to 5.5:12 Main front to back gable with secondary shed and hip forms Concrete "S", barrel, or flat concrete tile <ul style="list-style-type: none"> 12" to 24" overhang at eaves Tight to 12" overhang at rakes 	<ul style="list-style-type: none"> Heavy timber exposed rafter tails with decorative end cuts at loggias and colonnades Genoise cornice detail
Architectural Elements	<ul style="list-style-type: none"> Columns, rectangular or round Rusticated columns of stone or stone veneer with simple cap and base details Flat openings or segmented arches on colonnades or porches 	<ul style="list-style-type: none"> Porch covered by shed roof Courtyards
Walls	<ul style="list-style-type: none"> Stucco: 16/20 finish Rubble stone or stone veneer wall planes 	
Windows	<ul style="list-style-type: none"> Vertically proportioned windows with divided light 	<ul style="list-style-type: none"> Asymmetrically ordered windows and openings
Doors	<ul style="list-style-type: none"> Plank-style entry doors with rusticated hardware 	<ul style="list-style-type: none"> Segmented stone or stone veneer arches, or heavy timber lintels to frame doorway Carriage-style or plank-style, wood-grain-patterned garage door with complementary hardware trim
Details	<ul style="list-style-type: none"> Simple wrought iron Juliet balcony French inspired lighting fixtures and rustic hardware 	<ul style="list-style-type: none"> Iron elements Plank shutters Natural finish, painted or rusticated wood details Brick, stone or stone veneer bead and/or sill trim
Colors	<ul style="list-style-type: none"> Field: Medium, saturated earth tones Trim: White tones or light shades complementary to field color Accent: Light or dark shades in contrast with field color 	

TUSCAN RUSTIC



Conceptual Street Scene

4.11.8 Tuscan Rustic

The appeal of the Tuscan style ties with informality and rustic character, expressed in warm colors, textures, materials and simple massing. Traditional Villages were built atop the highest hills, while others were nestled deep in valleys. Each Village was dominated by substantial towers, an essential part of the Village fortification at the time.

Coming from a primarily agricultural region, these homes reflect the character of the farmhouse estate and use material and colors of the surrounding land. Their appeal lies in the informal, rustic character. The Tuscany region has a pleasing and extremely diverse landscape, ranging from the snowy peaks of the Apennine Mountains, to the green hills of Chianti and to the beaches on the Tyrrhenian Coast.

The primary building form includes simplicity in mass and form, squared tower elements, and enhanced articulation and detail or windows, porches, and doorways. Low pitched roofs with deep overhangs help to cool the home in the warm summer months, while a natural appearance using warm, earthy colors, stacked stones, and rusticated details allow for the building to blend in with the natural surroundings.



Historic Example



Contemporary Interpretation



Style Detail

Element	Minimum Requirements	Encouraged Enhancements
Form	<ul style="list-style-type: none"> Simple, rectangular plan forms and roof design Asymmetrical, horizontal massing with vertical elements 	<ul style="list-style-type: none"> Tower elements square, rectangular, or turrets, where present, shall be integrated into main body of house
Roof	<ul style="list-style-type: none"> Shallow roof pitches 3.5:12 to 4:12 Main front-to-back gable roof, secondary shed and hip forms Parapets allowed on attached product Concrete "S", barrel or Roman pan tiles Roof eave and rake overhangs between 18" to 24" deep 	<ul style="list-style-type: none"> Heavy timber exposed rafter tails with decorative end cuts High point of shed roof terminates into an exterior wall
Architectural Elements	<ul style="list-style-type: none"> Rusticated stucco, stone or brick columns <ul style="list-style-type: none"> Rectangular columns Round columns, Tuscan style capitals and bases 	<ul style="list-style-type: none"> Rustic stone archways Exposed wood or simulated wood with re-sawn texture beams Porch covered by shed roof Courtyards
Walls	<ul style="list-style-type: none"> Stucco: 16/20 finish Stone or stone veneer wall planes 	<ul style="list-style-type: none"> Brick, refined or rusticated
Windows	<ul style="list-style-type: none"> Vertically proportioned windows with divided lights 	<ul style="list-style-type: none"> Small, proportioned tower window openings Wrought iron grilles on windows
Doors	<ul style="list-style-type: none"> Plank-style entry doors Entry doors framed with re-sawn wood trim or stucco-wrapped, high density foam trim with smooth trowel finish or contrasting stone/ brick veneer 	<ul style="list-style-type: none"> Wood or style-inspired, wrought iron entry gate doors to accent main entry door Carriage-style or plank-style, wood-grain-patterned garage door with complementary hardware trim <ul style="list-style-type: none"> Rustic hardware details
Details	<ul style="list-style-type: none"> Decorative wood or simulated wood exposed rafter tails, re-sawn wood texture 	<ul style="list-style-type: none"> Iron elements Plank shutters Brick sill trim Rustic hardware details
Colors	<ul style="list-style-type: none"> Field: Medium, saturated earth tones Trim: White tones or light shades complementary to field color Accent: Light or dark shades in contrast to field color 	

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

4.12 ATTACHED AND MULTI-FAMILY HOMES ARCHITECTURAL STYLES

It is the intent for all architecture in Cordova Hills to achieve a high level of quality in function and visual appearance, assure variety and compatibility in architectural character and to enhance the community's overall value. The desire is to promote these qualities in conjunction with landscape and planning by using traditional styles combined with modern technology and architectural innovation to provide a pleasant, livable community.

4.12.1 General Architectural Considerations and Community Site Planning

Attached and multi-family home builder parcels are much like small Villages, or communities. Each parcel must be designed for compatibility within itself, using a blend of building types, compatible architectural styles and a tastefully balanced palette of colors and materials. A Neighborhood Color Palette will be established to ensure color and material consistency. A variety of housing types can be provided within the attached and multi-family product array.

The following general concepts should be considered when planning for and designing attached and multi-family housing.

- Wherever possible locate multi-family housing adjacent to or near shopping, public facilities, neighborhood parks, and open space and transportation hubs, enhancing pedestrian connectivity.
- Design and site buildings and entries with a strong physical relationship to public areas and streets.
- Emphasize pedestrian access and connections to public sidewalks, trails and open space systems when preparing site plans.
- Keep parking internal to the project and not along streets, except for guest parking.
- Solid walls/fences at the project periphery are to be set back five (5') feet or more behind the front façade, and are to be minimized as much as possible. They are to be used only for sound attenuation, privacy, or security.

4.12.1.1 Site Plan Criteria for Multi-Family, Green Court, Auto Court, and Cluster Homes

The following additional criteria regarding Plotting, Massing, Plans and Styles and Garages, apply to the following attached, multi-family individual building plan types:



Streetscene: Varied Massing



Townhomes and Flats, Duplexes, Triples, and Condominiums

- Plotting—Project a “street friendly” front door image and direct access to the street front. Articulation of end unit elevations is encouraged to achieve four sided articulation.
- Massing—Provide front porches where style appropriate and when possible for stepped massing.
 - Vary setbacks on building elements/façades.
 - Vary roof pitches and directions.
- Plans and Styles—Provide:
 - At least two (2) building types per builder parcel.
 - A minimum of two (2) individual unit plans per building.
 - At least three (3) different, yet compatible color schemes for each builder parcel.

Green Court Cluster

- Plotting—Project a front door image and access to the green court space.
- Place access/garages at alleys.
- Massing—Provide porches or covered entries for stepped massing and transition to public spaces.
 - Vary setbacks on the building.
 - Vary roof pitches and directions.
- Plans and Styles—Provide one (1) or more styles per building cluster.
- Garages—Provide rear-accessed garages for alley loaded green court units.
- Refer to Figure 4-9: Multi-Family Plotting and Massing.



Figure 4.9: Multi Family Plotting and Massing

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

Auto Court Clusters

- Plotting—Project a front door image and access to the street front or auto court depending on building layout.
- Massing—Provide porches or balconies at front, side or rear where style appropriate and when possible for stepped massing.
 - Vary setbacks on the building.
 - Vary roof pitches and directions.
 - Recess garage doors a minimum of twelve (12") inches from face of garage.
- Plans and Styles—Provide at least two (2) different elevations per building.
 - Provide one (1) or more styles per building cluster.
- Garages—Vary plans, placing garages at different locations relative to the auto court. Avoid a straight lineup of garage doors adjacent to one another. Refer to the following section regarding garages and parking for further requirements for all attached and multi-family builder parcels.



Auto Court

4.12.2 Parking

Street front image and pedestrian access should be the focus of the multi-family buildings adjacent to primary streets. Each project will incorporate interior oriented parking solutions and use the following design techniques to enhance the architecture of the street scene:

- Where parking areas are visible from public streets, these areas should be screened from view with landscape or architectural solutions.

- Distribute resident parking on-site to provide close proximity to individual units.
- Group unassigned or guest parking in evenly distributed locations.

4.12.3 Trash Enclosures

- Trash enclosures for all multi-family projects must be compatible with the overall design character of the project, be easily accessible, and provide adequate space for all trash and recyclable materials.
- Enclosures must be provided to accommodate the numbers and types of trash containers as required by the disposal company. These enclosures must be positioned in a centrally convenient area for residents. Minimize the impact on adjacent residences and other developments by keeping enclosures away from the edges of the community and highly visible locations.
- Trash enclosures must be substantially constructed in style and wall finish that is consistent with the overall architectural character of the development.
- All trash enclosures must be equipped with complementary gates of durable construction, hinged to self-supporting steel posts and a steel trellis or other covered structure overhead.
- Lighted access is required at each enclosure.
- Trash enclosures shall be enclosed or covered where feasible.



Trash Enclosure



4.12.4 Architectural Style Selection for Multi-Family Buildings

One key to the success of Cordova Hills is the selected architectural vocabulary and theme. Individual builders must select one or more of the following architectural styles from those illustrated in the architectural "Styles" section of this document and as listed below for each attached or multi-family neighborhood.

- Santa Barbara Spanish
- Tuscan Refined
- Western Hacienda

Note: general criteria from the architectural style section of this document apply to single-family detached as well as multi-family attached products.

4.12.4.1 Building Massing

Attached and multi-family buildings should achieve a varied building mass through varied articulation, massing, and creative floor plan arrangement. The following criteria should be followed to the greatest extent possible:

- Minimize blank, singular planes oriented toward public views. Provide some architectural elements on all sides of the building.



Multi-Family Massing

- Consider intended architectural styles in conjunction with the development of building plans, massing forms, elements, details, and color.
- Design buildings to define outdoor spaces, with floor plans that have a logical and functional relationship between indoor and outdoor spaces.

4.12.4.2 Entries

Entries must create a positive initial impression, locate and frame the doorway, act as an interface between public and private spaces and further identify individual unit entries.

- Wherever possible, site plans should orient the front door and provide access toward the public street or entry courtyard.
- Incorporate appropriate roof elements, columns, feature windows and/or architectural forms in the entry statement to emphasize the building character and the location of individual doorways.
- If front entry location is not immediately obvious due to the building configuration, direct and draw the observer to it with added lighting and landscape elements.

4.12.4.3 Windows

Windows play an important role in the exterior architectural character of multi-family buildings and can contribute to energy efficiency when strategically located.

- Within the appropriate style requirements, group and coordinate windows with other design elements to create a composition and sense of order.
- Where appropriate to style and window form, the use of multi-paned windows is encouraged.
- Use appropriate scale and proportion typical of the style in window design to strengthen the elevation style.

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

4.12.4.4 Balconies

Balconies are useful in breaking up large wall planes, offsetting floors, creating visual interest and adding human scale to the building. They provide outdoor living areas and elevated open space.

- Balconies may be covered or open. They may be either recessed into the mass of the building or serve as a projecting element, and must meet fire code requirements.
- Design balconies as an integral element of the building with details, eaves, supports, and railings in keeping with the architectural style and other elements of the building's design.
- Avoid designing plans with balconies that occur side by side.



Balconies

4.12.4.5 Garages

Attached or detached garages included in apartment projects shall reflect the overall project design and minimize their visibility. To achieve this, these structures must incorporate the following:

- Utilize the same architectural style, massing elements, wall materials and finish, design details and colors as the residential dwelling units.
- Utilize similar or compatible roof forms.
- End wall conditions that are visually prominent from the street should receive special architectural attention.
- The relationship of the garage face to the building may be projecting, flush or recessed, provided that it is compatible with the mass and style of the building.
- Provide sectional garage doors with automatic door openers. Garage door windows are encouraged, but not required.

4.12.4.6 Carports

- Carports must be compatible with the style, color and materials of the primary buildings.
- The number of continuous carport parking spaces cannot exceed ten (10) without inclusion of a landscaped planter or break in the carport structure.
- Landscape islands and sidewalks must be provided between parking spaces or carports to avoid continuous, uninterrupted paving.



4.12.4.7 Community Recreation and Common Facilities

Each attached home builder parcel must include common recreation facilities appropriate to the project.

- Common recreation facilities must be key character elements.
- All architectural and community elements, such as street furnishings, benches, lighting standards and trash receptacles, must be consistent with the overall architectural character for the neighborhood.
- Clubhouse and other common buildings should exhibit four sided architecture.
- Colors, massing, roof pitch and materials must be compatible with residential buildings or exemplify project themes.



Community Facility



Community Recreation Center

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

4.13 TOWN CENTER

The Town Center lies at the primary community gateway at the intersection of Chrysanthy Boulevard and Grant Line Road. It is envisioned as the community focal point or “place maker” in Cordova Hills, for social activity, day/night living, commercial activity, entertainment and civic use, and community identity. The Town Center will include nighttime activities, restaurants, entertainment, retail, urban plazas, and mixed-use residential or office uses adjacent to retail. Vertical mixed-use design may evolve over time.

4.13.1 Design Character

Key design character guidelines for the Town Center include:

- The proposed character of the Town Center is consistent with that of traditional town architecture and planning. Buildings will have a consistency of form, use of materials, and an appropriate treatment of ornamental detailing.

- Buildings serving a civic function may be highlighted with a greater level of architectural detail and style than commercial or general office uses in order to call attention to their community function.
- A consistent and harmonious set of building forms are proposed. Building types and urban forms should provide a pleasing rhythm to the street and block patterns.
- The Town Center is organized on a strong pedestrian circulation system linking the Town Center and adjacent neighborhoods. All streets with mixed-use structures will have sidewalks with the combination of a six (6')- to eight (8')-foot setback and a ten (10')-foot to eighteen (18')-foot pedestrian zone. This will afford comfortable and safe pedestrian use.



Town Center Illustrative Concept



4.13.1.1 Building Form and Façade

Key building form and façade design guidelines include:

- Town Center buildings must be designed with a strong recognizable base, body and crowning element. The choice of materials for each of these elements is to reflect an appropriate representation of its function and theme.



Varied Building Facade

- Building forms and facades may be broken into short vertical sections that are representative of the historical character of eclectic California downtown buildings. A variation of building heights, parapets, flat and pitched roofs, and building materials is encouraged to provide greater visual diversity and authenticity.
- Composition of building facades must reflect an understanding of traditional buildings.



Varied Massing and Materials

4.13.1.2 Building Materials Allowed

The following building materials are allowed for exterior wall construction:

- Brick
- Stone – natural and custom
- Wood
- Limestone or pre-cast concrete for window and door details
- Stucco or cement plaster
- Standing seam metal
- Exterior insulation finishing system
- Granite
- Marble
- Any other proposed materials that meet the established level of quality as approved in Design Review.

Prohibited Building Materials

The following building materials are not permitted for use in exterior wall construction:

- Plywood
- Vinyl or aluminum siding
- Plastic siding
- Corrugated or reflective metal panels or roofs.

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

4.13.1.3 Massing

Massing of buildings must reflect the physical force of load bearing where appropriate. This is intended to instill a sense of quality and the perception that the Town Center will last for generations.

4.13.1.4 Openings

Design guidelines for building openings along the street include:

- The proportion of openings should reflect solid load bearing structures wherever possible. Long, unsupported spans are to be avoided unless the design of the span is treated as if an arch, lintel, corbel, or other architectural device traditionally used for such function.
- Long, horizontal expanses of windows are to be avoided, while smaller windows and details are encouraged to create a varied and interesting street scene.
- Solid to void ratios must be carefully considered so as to be consistent with traditional themes. Depending on the material, fewer voids may be appropriate, as in the case of solid masonry structures while longer spans and more openings may be visually acceptable in structures made of wood.

4.13.1.5 Storefronts

Unique storefront designs are encouraged through the creative use of signage, entry motifs and varied color palettes. Components of a typical storefront include the entry door, display windows, transom windows, storefront columns, awnings, vertical support walls, decorative lintels, second and third floor windows that are spaced and proportioned to the façade with decorative trim, sills and hoodmolds; and finally a decorative cornice on a parapet or pitched roof.



4.13.1.6 Residential Units

Residential uses are permitted to be located above the first floor of any mixed-use building. Live/work units may include residential dwelling on the ground floor.

4.13.1.7 Open Space

The Town Center parks and other plazas that may be incorporated in the commercial and office uses are considered an integral component of the mixed-use/activity area.

4.13.1.8 Pedestrian Allé

A pedestrian connection or passageway from the front of the building to the rear parking is required for approximately every 300' feet of frontage. The allé may be sheltered or open or partly covered as in the case of an arbor or landscaped arbor.



Sidewalk Cafe



4.13.1.9 Sidewalk Cafés and Outdoor Dining Space

Sidewalk cafés should create exciting outdoor spaces in the Town Center. Outdoor cafés must provide for a minimum of six (6') feet of sidewalk in addition to the seating area.

4.13.1.10 Arcades

Building arcades should extend a minimum of eight feet (8') beyond the building face.

The minimum height of a building arcade is approximately ten feet (10').



4.13.1.11 Parking

One goal of the Town Center is to maximize the legibility of "Town Center" buildings through their orientation to the street. On-street parking is encouraged and large parking lots are sited behind the main building mass. In this position, the large parking fields become secondary visual elements, yet are functionally sized to accommodate the projected parking needs of the structure(s).

4.13.2 Architectural Criteria & Styles

4.13.2.1 Architectural Style

The essential architectural criteria within the Town Center will create a unique and interesting town core that is pedestrian oriented. Buildings must be of the highest quality materials, design and construction to achieve successful, enduring businesses and multifamily developments within the Town Center.

These Guidelines, along with the previous site planning criteria, allow for diversity in design and should promote individuality, while ensuring the architectural integrity of the Town Center as a whole.

Design themes that clearly reflect the character of the region include Spanish Eclectic, Spanish Traditional, and Traditional Brick Storefront. Building architecture must be a distinctive design that does not incorporate standardized franchise architecture. Standardized franchise architecture is not permitted.

4.13.2.2 Corner Buildings

Since multiple sides of the corner Town Center buildings will be street-facing, all street-facing sides of corner buildings will be treated like the storefront façade.

4.13.2.3 Side and Rear Building Face Articulation

All sides of a building within the Town Center must be articulated. The rear and sides of a building do not have to be as articulated as the front/customer entrance, but solid, unarticulated building walls are not permitted. The rear and sides of the building must have the same exterior materials as the street front.

4.13.2.4 Architectural Features

Architectural features such as domes, turrets, towers, cupolas, building entry volume or ornamental portions of a parapet walls are allowed. Building entries must be pedestrian, not monumental, in scale.

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

4.14 LANDSCAPE DESIGN GUIDELINES

4.14.1 Landscape Vision

The landscape character for Cordova Hills will reinforce and amplify the land plan, circulation network, trails and open space with landscape design which is regionally appropriate for the eastern grasslands of Sacramento; use of Oaks and native / drought tolerant plant species, creation of outdoor spaces capitalizing on the warm climate and agricultural heritage, and establishing an Early California design theme will create this character.

This vision can be furthered defined as follows:

- Community “sense of place”: the landscape will blend “town like” and “natural” elements to create community “place.” Edge treatments and view orientation will blend the Town Center with vast adjacent open space as a natural extension of the Core Area. The Paseo Central both divides and unites Cordova Hills as the primary natural community open space element.
- Public Realm: Community parks of varying scale will promote civic integration, all aspects of recreation, public health and enjoyment of the outdoors. Gardens, plazas, and courts will provide identifiable neighborhood locations for peace and quiet, reflection. Public roadway corridors will be planted with tree massings to provide shade



Natural Elements

seasonal color and community “scale.” The extensive off-street and on-street trail network will offer a varied and continuous linear experience in nature, welcoming and safe, linking known destinations with community homes.

- Community Entries: The “front door” to Cordova Hills will reflect a plan that balances the natural and built environment. The northern entries off Grant Line will be directly into mixed-use/ retail environment, with a bold landscape and monumentation reflecting the land use; the southern gateway features natural, open space and a major Sports Park with tailored grass fields and a park-line setting.



“Naturalized” Plant Palette

- Early California Design Character: The best aspects of early California character will be reflected in the plantings, paving, monumentation and streetscape of Cordova Hills, including the architectural heritage (use of Olives, grapes), rustic rock outcroppings with informal grasses (at entries/focal points), decomposed granite/earth tones (paving, trails), and native trees of great character (Oak, Willow, Poplar, Maple) in parks, streetscapes, edges.



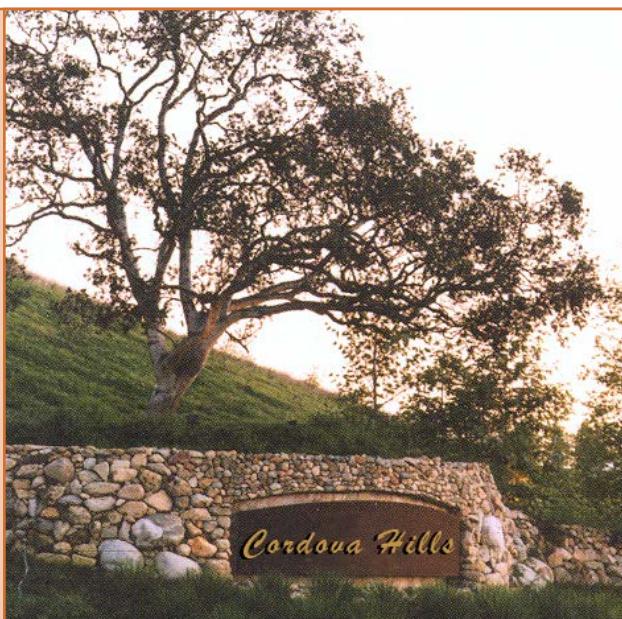
- Sustainability: Cordova Hills landscape will consistently incorporate water conservation measures in plant selection, irrigation, and extensive LID measures in streetscapes, open space and parks.

4.14.2 Landscape Planning Principles

Balancing significant natural resources with the built environment will require responsive and creative landscape design. These include:

- Provide linkages to regional open space. Link Cordova Hills street and trail system to the adjacent surrounding regional trail network, connecting to Deer Creek, Laguna Creek, and the American River Parkway.
- Provide a diverse range of Open Space: An array of parks and open spaces will be programmed that address regional, County, Village and neighborhood recreational needs. The various scales of these parks will enhance Village and neighborhood identity and provide diverse passive and active recreation experiences.
- Ensure that Cordova Hills will comply with current County Codes and Ordinances concerning water conservation measures related to landscape and improvement standards.

- Provide landscape design and plant materials which create long term sustainability including drought tolerant non-invasive "naturalized" plant materials which are associated with the grassland, vernal pool, and drainage corridor environmental settings in Cordova Hills.
- Utilize landscape materials and design to provide community identity. The unique design qualities of each park/open space are intended to create a distinct identity for each Village or neighborhood space (configuration, scale, program).
- Integrate storm water and open space systems. The Cordova Hills storm water management program will be designed and landscaped in a manner consistent with the overall open space system and design character.
- Water conservation will help define the social commitment of the community. This includes careful use of water for landscaping, irrigation, site design, maintenance practices, and low water use plant material.
- Apply sustainable landscaping strategies, such as Low Impact Development (LID), to the greatest extent possible. For further discussion on sustainable measures for Cordova Hills, refer to Chapter 2, Sustainability.



Village Entry



Rustic Colors

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

4.14.2.1 Early California Community Character

The landscaping character for Cordova Hills will be reminiscent of Early California, a theme that is compatible with the rural open spaces and agricultural heritage of the local area. This character will be consistently reflected in the entry monuments, natural and manicured landscape edge treatments, open space, adjacent land buffers, slopes and streetscapes.

The Early California physical design palette generally includes:

- Native stone (volcanic, cobble, granite).
- Perennial native grasses.
- Sculptural tree forms (Sycamore, Oak, and Cottonwood).
- Earth textures (decomposed granite).
- Informality and natural feeling.
- Rustic, "flat" colors with a matte finish on man-made objects.
- Minimal use of "flash" colors in man-made objects.
- Minimal use of water except in key "oases" areas, courtyards, focal points.
- Seasonal color in plant material.
- Olive groves and grape vineyards at high visual impact areas and key intersections.

4.14.3 Landscape Zones

The landscape plan for Cordova Hills defines distinct landscape zones as shown in Figure 4.10: Landscape Zones. Each zone will incorporate distinctive landscape characteristics and planting design in a coordinated manner. The landscape zones that are most important to the establishment of the community's visual landscape character are adjacent to the avoided lands, hillsides, streetscape and the edges of the Villages.

4.14.4 Planting Design Principles and Plant Palette

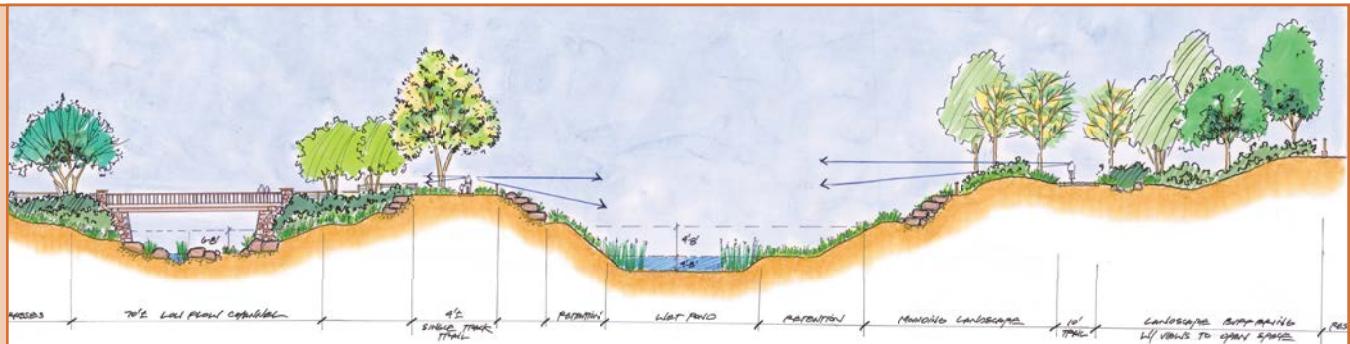
A Community Plant Palette is established for each zone in the Appendix B: Community Plant Palette. The Plant Palette reflects the following core principles.

- Plant selection is based on topography, proximity to open space and biological avoidance areas.
- Plantings shall be simple, and easy to maintain and incorporates many drought tolerant plant materials.
- Provide a mix of plant material sizes in informal planting schemes.
- The plant palette should include both long and short-lived plant materials. The plant palette should include combination of plant materials with a lifespan that endures several generations.
- Space trees and shrubs with consideration for their ultimate size.
- Use native plants where adaptable, available and compatible.
- Use a plant palette consistent with the Early California theme.
- Use plants that are climate adapted.
- No turf will be used on slopes greater than 4:1.

4.14.5 Paseo Central

The north/south Paseo Central will provide a linear open space suitable for passive recreation activities such as hiking and bicycling outside of the wetland avoided area. A visual demarcation will define the avoided boundary of the drainage course and keep human interaction limited to the adjacent trail and rest areas. Potential uses within the Paseo Central consist of but are not limited to, recreation, trails, dog parks, picnic areas, and detention basins

Plant material native to the drainage course will supplement the existing vegetation to create a pleasing aesthetic experience and to enhance its visual significance. Graded areas will be re-vegetated with native and native compatible noninvasive species, per



Conceptual Paseo Central Section

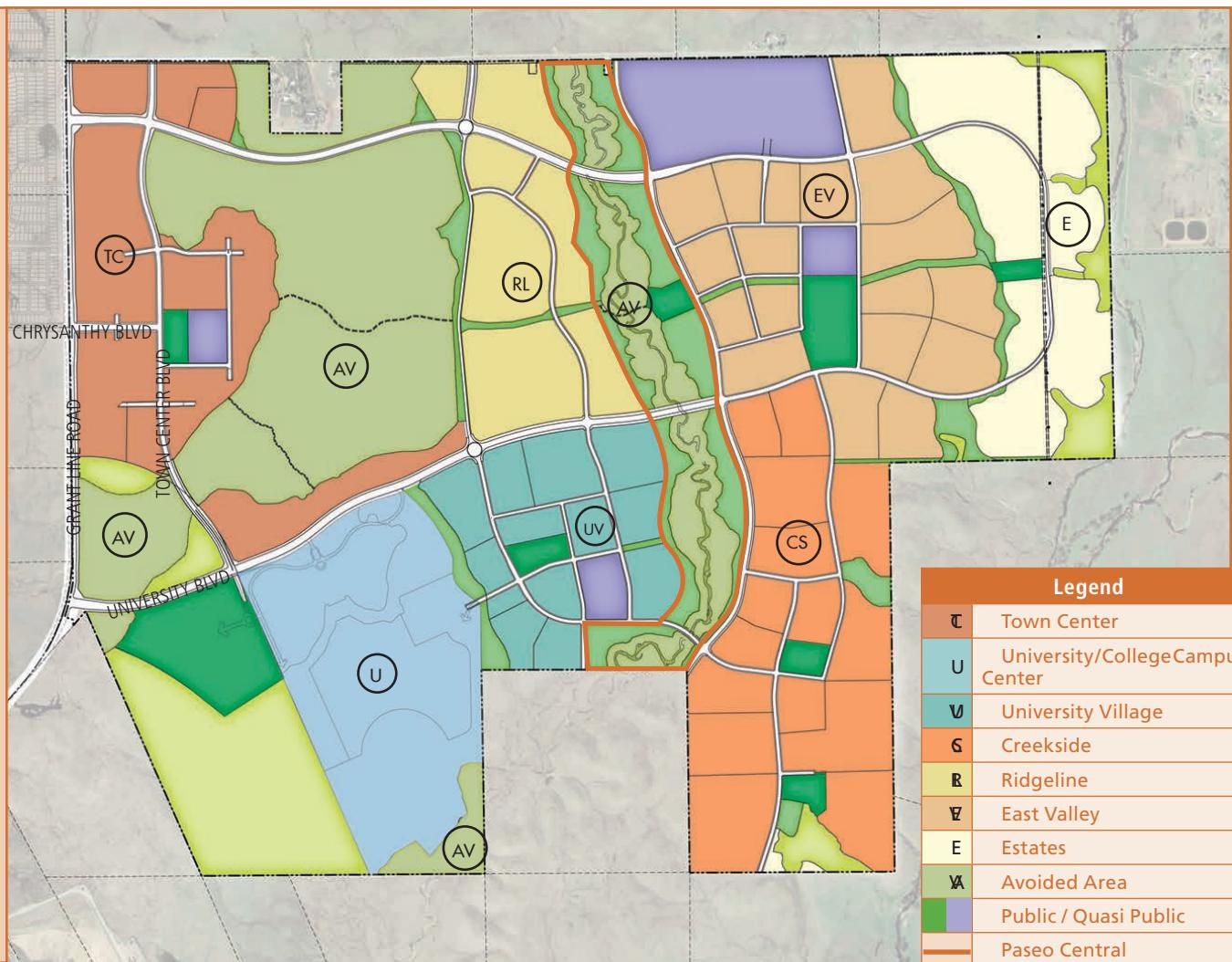


Figure 4.10: Landscape Zones

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

the Community Plant Palette, located in Appendix B. Temporary irrigation will be provided until plant establishment. Trails will be elevated above the 10-year storm event floodplain.

4.14.6 Biological Avoidance Areas

Located in basins, along the avoided edge condition areas, and open space areas, new, native vegetation and vegetated bioswales will enhance the character, water quality and habitat value of the overall community. A vegetated swale will intercept surface water run-off between the landscaped areas and the Avoided Area boundary. All plantings should be irregular in their arrangement and distributed so as to recreate a natural setting as much as possible.

The planting of native, compatible trees and shrub species will be applied to transition areas where urban and landscaped elements transition to the avoided areas. Irrigation will be provided until such time as the established plants are self-sustaining.

The Community Plant Palette, found in Appendix B, describes the type of plantings allowed in the Biological Avoided Edge Condition Areas. Section 7.6, Edge Conditions describes the required setbacks, landscape concepts, fencing and other features designed to protect natural resources along the Avoided Area boundaries.

4.14.7 Residential Landscapes

The residential landscape or private zone landscape includes the area outside the streetscape, open space and parks. The private zone provides the most flexibility in terms of planting design and is intended to serve as the usable outdoor space associated with residences.

Although the landscape for the private zone can be more ornamental in nature, the homeowner is encouraged to use plant materials that are compatible with the streetscape zone and adjacent open space and park designations. Homeowners

are also encouraged and may actually be required to limit turf areas to defined areas extending from the residence or front patio. Residential properties with landscapes over 2500 s.f. shall comply with the County Water Conserving Landscape Ordinance. Water conserving irrigation methods such as drip or micro sprays are encouraged. Guidelines or requirements for compatible plant materials, limitations on turf use, and water conserving irrigation techniques will be provided by the applicable Homeowners Association or Builder.



Residential Street Scene

4.14.8 Landscape Maintenance Standards

The following are generalized standards for overall community landscape maintenance. The maintenance standards will be further defined and detailed in builder design manuals and Neighborhood/Village Covenants, Conditions, and Restrictions (CC&Rs).

- Maintain all landscape material, including trees, shrubs groundcovers and grasses in a healthy condition at all times.
- Remove damaged, dead or diseased plant material promptly and replace it with plants that match the original design intent in terms of size, location and variety.
- Remove overgrown, oversized or hazardous plant materials when they cannot be pruned to a safe condition or threaten public health, safety or welfare.
- Prepare and show maintenance specifications on landscape plans, describing the irrigation, pruning, weeding, fertilizer, applications and other pertinent maintenance criteria for all landscape areas.



4.15 STREETSCAPES

The streetscapes in the Cordova Hills community will be consistent with the landscape design vision for the, Village edges and gateways entries. All streets will be landscaped with a combination of water conserving trees, shrubs, groundcovers and ornamental grasses as appropriate. Cordova Hills encourages the use of permeable paving where appropriate. No trees will be planted in the bottom of LID swales and low drainage spots.

4.15.1 Roadways

Town Center Boulevard

A 10' wide sidewalk, accented with street furniture, will be utilized along this key Boulevard. Street trees will be planted in tree wells with a minimum size of six feet square. Tree grates set flush with the pavement will maximize the use of the sidewalk areas, allowing pedestrians to move freely. In addition to large scale tree canopies spaced 25' to 35' on center, the street scene will include pedestrian-scaled lighting, sized and located to coordinate with the street trees.

Special paving treatments, such as architectural concrete and precast pavers will be used at key intersections and pedestrian crossings at high traffic areas. In coordination with building facades, trellised outdoor seating areas, canopies and market umbrellas provide shade, as well pedestrian scale and comfort.

Neighborhood Collector and Street

The landscape treatment will include broad canopy trees in 8'-10' wide parkways which will create a canopy over the roadway. Spacing will be regular at maximum thirty (30') feet on center. These trees will provide a strong definition of the street edge and a clear separation of pedestrians from vehicular traffic. Parkways will include Low Impact



Conceptual Streetscape and Edge

Design (LID) features where feasible and will include water conserving, low shrubs, groundcovers and ornamental grasses.

Rural Street

The Estates Village streetscape is the most rural in character in Cordova Hills. The design intent is to blend with the naturalized landscape and Cordova Hills estate home character. This area will use a simplified planting palette, compatible with the Early California landscape character and natural terrain. A layering of native grasses, low groundcovers and shrubs that have mounding forms will extend to the parcel line. No turf grass will be allowed.

Lane

Lanes or alleyways are proposed to provide rear vehicular loading and service areas. Lanes will have a four-foot landscape edge to be planted with small patio trees and shrubs to soften the harshness of the travel lanes and adjacent architectural facades.

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

4.15.1.1 Street Landscape Materials

Primary Street Trees

Primary street trees are located closest to the street to provide each roadway with scale and form. Spacing will be 25' to 40' on-center depending on the species and planted in a formal or informal arrangement, depending on the nature of the adjacent land use. Plant material will be selected to become drought tolerant when established.

Secondary Street Trees

Secondary street trees are used to add contrast and background to the primary street tree. Secondary trees can also be used to provide color and accent at points of interest along the streetscape. Planted in an informal fashion, the trees will be distinctive in form and color but complementary to the form of the primary street tree. Spacing will be irregular at 30' on-center maximum and drought tolerant when established.

Shrubs

Shrubs are used in landscape easements and medians to soften the ground plane and visually link all landscape materials. Large massings of singular type shrubs will be selected according to maturity size, color, texture and seasonal interest. Low growing shrubs will be used in combination with groundcovers and grasses in the medians, parkways and behind sidewalks. Shrubs will be selected for their drought tolerant characteristics.

Groundcovers and ornamental grasses

Groundcover species and grasses, including park turf will be low water usage types and after establishment will be drought tolerant. Choose park turf that uses 50% less water than traditional turf, has reduced maintenance needs, and is not a seeded variety.

4.15.2 Landscape Monuments

Entrance features are intended to provide a defining element that reinforces the overall design theme and vision for Cordova Hills. There are three types of entrance features proposed for Cordova Hills, as follows.

Community Gateways, Village Entries, and smaller Neighborhood entrance features: All are located in landscape corridors along arterial or collector roads. All entrances include use of a massing of trees, background tree, low fieldstone planter walls, flowering shrubs and signage.

Figure 4.11: Gateway and Entry Monuments Map illustrates planned locations for entry monuments in Cordova Hills, as follows.

4.15.2.1 Gateway Entry

Entry gateways will create a sense of place and identity for Cordova Hills and the multiple Villages that announce to visitors that they have arrived at a major destination. The gateways will establish community design through a large massing of singular plantings, low stone planter walls, an iconic piece of architecture, signage and logo for identification, street lighting, and hardscape and landscape treatments. The major gateways also provide an opportunity to integrate public art.



Drought Tolerant Ground Covers



4.15.2.2 Village Entry

The Village entries are enlarged landscape areas with special paving located at key intersections along arterial and collector streets. They will be the signature element within each Village and will set the individual landscape theme. The features may differ in each Village, but the overall appearance of each feature will be complementary to one another throughout the community. Entry walls are characterized by plaster with accent stone, raised metal Village signage and logos. Significant stands of evergreen and deciduous trees will be used as a naturalized massing. In these locations specimen quality trees, such as Olives, Valley or Blue Oaks, chosen for their unique characteristics, will be integrated into the entry theme.

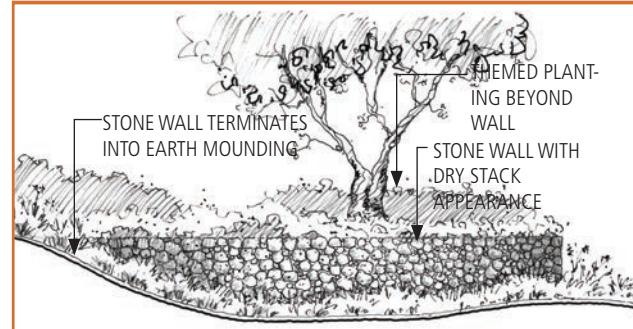


Neighborhood Entry

4.15.2.3 Neighborhood Entry

Neighborhood entries are located throughout each Village street network to further define and reinforce their respective themes. These features are smaller in scale than the Village entries but utilize the same landscape design concepts to reinforce the streetscape theme of each neighborhood.

Materials of the sign wall will reflect the design of the respective neighborhood. Project entries are located at the primary access point to the neighborhood. Signage will be mounted on the neighborhood wall or in the entrance median. The landscape treatment reinforces the theme of the neighborhood streetscape and will be compatible with the architectural/marketing styles of each builder.



Low Community Stone Theme Wall

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

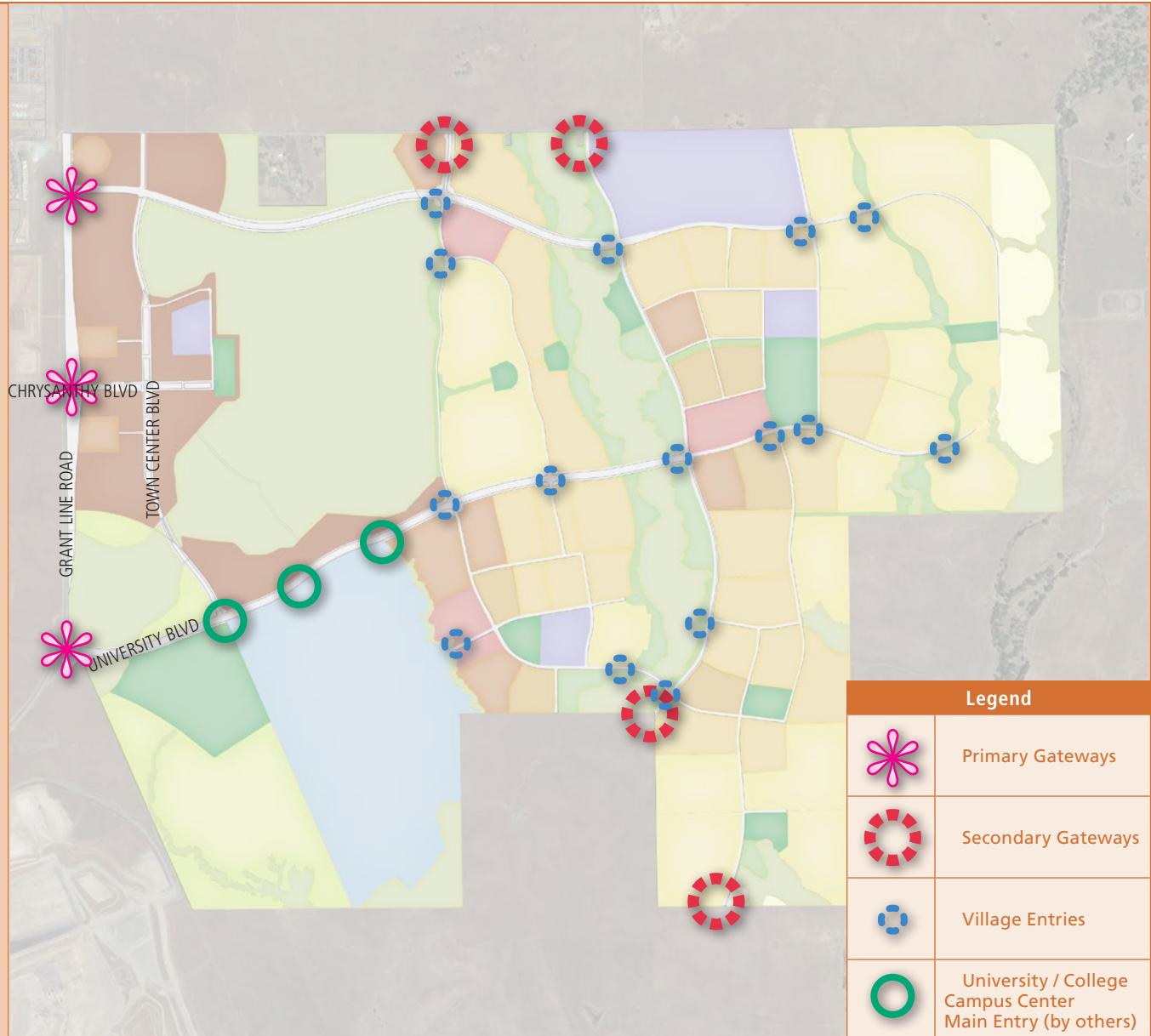


Figure 4.11: Gateway and Entry Monumentation Map



4.15.3 Walls and Fences

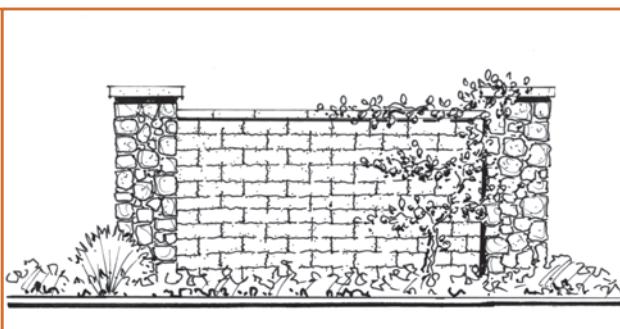
Walls and fences provide screening between uses, enhance community entries, provide sound attenuation, define the edges of streetscapes and provide privacy and security for private property. The material and designs of the walls and fencing vary throughout the community, depending on the location and visibility from the public domain.

The use of walls and physical barriers within the public realm (view shed) will be minimized. Walls will only be constructed where necessary, for sound attenuation, primary screening or monumentation. Residential neighborhoods should appear to have an open character and high visibility. Community open space, public corridors, Avoided edges and community recreation spaces will be designed as open to the community and not closed and separated by walls.

Where wall separation is required, perimeter walls will receive green landscape treatments (vines or shrub screening) to minimize the impact of the solid walls. This practice creates "green walls."

4.15.3.1 Low Community Stone Theme Wall

Low community fieldstone theme walls, and or berms, are located at major street intersections and Village entries and are reminiscent of the Early California use of hand stacked stone as a means to delineate use areas. Low stone planter walls with masses of olive trees and shrubs reinforce the community design vision with its rural appearance and interconnection to the land forms. The stone wall heights will not exceed four feet (4').



Enhanced Community Privacy Wall

4.15.3.2 Enhanced Community Privacy Wall

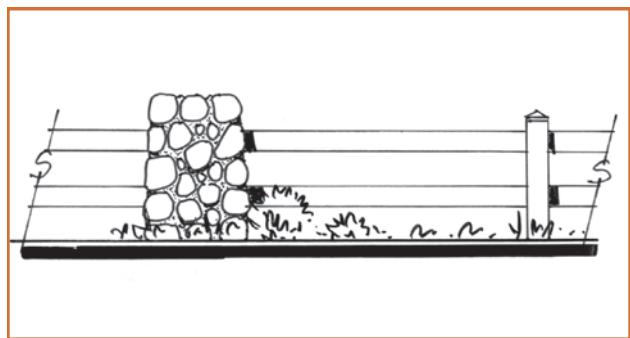
Enhanced community privacy walls will be located in areas of high visibility from public streets requires a high quality "architectural" appearance. This wall type incorporates decorative pilasters, textured face and wall caps. Wall heights will not exceed six feet (6'). The overall height may be increased where needed by combining walls and earth mounding.

4.15.3.3 Standard Masonry Wall

Standard masonry walls will be used as barriers and screens between different land uses. They will have a textured face and pilasters in proportion to the height and mass of the wall. This type of wall will be used in locations that are less visible from the public streets. Wall heights will not exceed six feet (6'). The overall height may be increased where needed by combining walls and earth mounding.

4.15.3.4 Split Rail Fence

Split rail fencing is intended to provide an open, informal barrier at developed edges adjacent to open space and parks. Open fences will also be used to separate different functions within landscape open space corridors. Open fence height will not exceed four feet (4'), and can be simulated, composite, or natural wood.



Split Rail Fence

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

4.15.3.5 View Fence

View fences between residential and open space areas will be constructed of a low masonry knee wall and open metal. The fence will not exceed six feet (6') in height

4.15.3.6 Post and Cable Fencing

Post and cable fencing (or wood split rail or metal fencing) will be constructed at the interface between public trail corridor and Avoided Areas. The post and cable fencing will not exceed four feet (4') in height and is intended to provide an informal security measure and barrier.

4.15.4 Public Art and Street Furniture

Public art can enhance the landscape and provide focus within public spaces. Public art can help create an identity and character for both individual uses and Villages, and the Cordova Hills community. Public art brings livability and beauty to shared spaces where people live, work, visit and recreate.

Public art will be encouraged within Cordova Hills. Timeless, environmental or functional pieces such as a fountain and street furniture will be encouraged. Public art will be located in key community gathering places in the Town Center, University / College Campus Center and at the neighborhood level in commercial and institutional uses, and in the recreation facilities.



Public Art



Street Furniture



Post and cable Fencing



A consistent and well-designed palette of street furniture will be utilized within the Cordova Hills community. The intent is to provide a unified, functional and visually appealing array of elements including pedestrian and vehicular street lights, transit shelters, kiosks, tree grates and guards, benches and trash receptacles. All of these elements will be consistent with and will enhance the landscape theme of the community.

Some custom features may include:

- Special or unique color employed throughout the community.
- Specific materials that reinforce a continuity or visually cohesive quality.
- Incorporation of a Cordova Hills logo and uniform lettering/font style, where appropriate, for community level signage, identification and directional graphics.

4.15.5 Exterior Lighting

Exterior lighting includes street lighting, building and landscape accent lighting, and sign illumination.

The Cordova Hills objectives for exterior lighting include the following:

- To contribute to the safe and efficient use of all public and private areas in Cordova Hills.
- To increase personal and property security.
- To complement and reinforce the architectural and landscape character of all public and private spaces.
- To contribute to the ease of way finding through the development.
- To meet all applicable public and environmental standards, including energy conservation.
- To provide a consistent quality of lighting throughout the community.

- To avoid adverse impacts such as excessive glare and light spill.
- All lights shall point down or be a shielded up-light.
- To reinforce the identity of each component of Cordova Hills, including private and public space improvements.
- Fixtures, light standards and all exposed accessories should be harmonious with the building design and the visual environment.

Three basic principles for lighting include:

- Streetlights should provide a safe and desirable level of illumination for both motorists and pedestrians without intruding into residential areas.
- Lighting fixtures should relate to the human scale especially in pedestrian areas.
- Lighting and lighting fixtures should complement the design and character of the environment in which they are placed.
- All street lighting will conform to County standards and an approved theme lighting program.

General Standards

- Consider energy conservation in nighttime lighting plans. Plans for the design and operation of lighting and illumination should be developed consistent with the latest technical and operational energy conservation concepts.
- All exterior lighting shall be maintained on a regular basis to an "as-new" standard to assure that all lighting fixtures, bulbs and elements are in good working order.
- All stop lights in Cordova Hills shall meet Sacramento County LED standards.
- All lighting applications subject to the 2008 Building Efficiency Standards Section 147, shall use fixtures approved by the International Dark Sky Association.

DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

4.15.5.1 Street Lighting Standards

Street lighting shall be designed to fit the level of lighting required for vehicular, pedestrian and bicyclist safety and to establish a distinctive hierarchy relating to the importance and scale of the street.

Lighting Along Major Streets

Major thoroughfares such as University Boulevard and North Loop Boulevard from Grantline Road to Paseo Central shall be lighted with tall masts located to provide interconnected pools of light along the travel lanes and adjacent sidewalks and pedestrian and bike paths. Lighting shall be shielded to avoid light spillage into the open space Avoidance Areas near the street.



Lighting Along Special Pedestrian Oriented Streets

Town Center Boulevard, Chrysanthy Boulevard, Paseo Central Boulevard, and the main street through University Village shall have lighting that provides a generally continuous pool of lighting at the pedestrian level along the sidewalk. Light poles may include both pedestrian scale and vehicular scale light fixtures. The lighting shall be designed to provide a bright, attractive space for people and should contribute to the character of the street through distinctive lighting masts and fixtures.

Pedestrian lighting may be attached to the buildings along sidewalks. Such lighting must be of a consistent design that matches all other fixtures along the street and shall be mounted a minimum of 12 feet above the sidewalk level. This lighting condition is not addressed in County Service Area 1 (CSA-1), as most buildings occur outside of the road right-of-way. These lights may have to be maintained by the building owner or the CHCSA.

Lighting Along Residential Streets

Residential streets are intended to be relatively darker than the major and special pedestrian oriented streets. Street lights shall be located at intersections and the entry to any paseo, but the spacing of street lights may allow for separation between pools of light. All street lights shall be shielded to avoid light spillage into residences.

Character of Lighting Fixtures

The specific lighting fixtures that will be used in Cordova Hills will be selected as part of the detailed streetscape plan for specific developments concurrent with the approval of final maps. The purpose of this section is to establish the general criteria for street lighting throughout the Cordova Hills community. Selection of lighting fixtures that conform to these criteria will result in a common theme for all lighting, whether on major streets or in private parking areas.



The key features for street, pedestrian and parking area lighting in Cordova Hills include the following:

- All lighting fixtures shall have a downward facing form with a conical or rounded top that prohibits light from escaping skyward.
- Acorn style fixtures are prohibited.
- All lighting fixtures shall have a curvilinear form rather than a square or rectangular box shape.
- Lighting fixtures shall be supported by an arm that extends from the mast, pole, or building façade.
- The supporting arm shall be curvilinear and supported by a brace that is also curvilinear. The supporting arm shall be simple and elegant in form and not ornate.
- Masts and poles should be simple in form without excessive ornamentation.

- All masts, poles, supporting arms and fixtures shall be finished in non-gloss black or a dark color. Generally, the color of all elements should be subdued so as to blend into the streetscape. An exception may be allowed in the Town Center core area and in the University Village where alternate colors that correspond to a specific color scheme may be applied to create a special location effect.
- Banners may be applied to street lighting masts if part of an overall design theme incorporated in the streetscape plan.
- The mounting hardware shall be breakaway and designed into the standards so that in high winds the banners will detach and not damage the poles, and the banners are installed and maintained by other than County personnel

Lighting Service Level Standards

There are two service standards in CSA-1, enhanced and decorative. Cordova Hills will select design standard options from the decorative standards defined by CSA-1 throughout the project. CSA-1 will consider an alternative standard if the builder desires another standard. However, CSA-1 must receive a sample of the product so that they can test for durability before it is accepted.

Glass globes are preferred within CSA-1. Plastic globe covers get vandalized and broken much more often than glass globes.

4.15.5.2 Safety Design

Cordova Hills will implement, to the greatest extent feasible, concepts and strategies for Crime Prevention Through Environmental Design (CPTED) and traditional crime prevention organizational and mechanical methods of target hardening. The CPTED concept promotes the idea of the proper design and effective use of the built environment, which can lead to the reduction of crime and improvement in the quality of life.



DEVELOPMENT REGULATIONS & DESIGN GUIDELINES

CPTED concepts involve four overlapping strategies; Natural Surveillance, Territorial Reinforcement, Natural Access Control and Target Hardening, defined as follows:

- Natural Surveillance- A design concept intended to allow intruders and offenders to be easily viewable to people passing a property and those using the property.
- Territorial Reinforcement- A strategy to create and/or extend the property's sphere of influence, which is the perception that someone is in control of the area. This strategy distinguishes private space from public space by using landscaping, pavement design, signage and fences.
- Natural Access Control- this strategy is intended to decrease the opportunity for crime by denying access to a crime target and increasing the perception of risk to the offender
- Target hardening- this strategy enhances the physical security of a crime target through the use of locks, hardware, door and window types, security alarms and other traditional crime prevention methods.

Landscaping

- Landscaping is encouraged to be of the type and situated in locations to maximize observation while providing the desired degree of aesthetics. Defensible/Security type planting (bougainvillea, cactus, etc) are encouraged along fences and property lines and under vulnerable windows.
- All entrances to parking areas shall be posted with appropriate signs per 22658(a) CVC, to assist in removing vehicles at the property owner's/ manager's request.
- All retail/commercial and multi-housing parking lots and/or driveways shall be posted with appropriate signs per CPC 602 K SCC 9.80.010, to prohibit trespassing.

Fencing /Access Control

- Vertical wrought-iron fencing material shall be used, where feasible, for all fences between private lots and open space, parks, right-of-ways or other public space. This will allow visibility and encourage residents and patrons to view activities, in those areas. In addition, this will render those areas less attractive to loiterers/ offenders who wish to use those areas for criminal or mischievous purposes.

Lighting

- There shall be on-street lighting to allow for adequate visibility by residents, patrons, students, law enforcement/security and passersby during hours of darkness (refer to subsection 4.15.5, Exterior Lighting)
- All lighting fixtures shall be of the type and kind to minimize breakage and other vandalism.
- Parking areas, roadways and driveways shall be illuminated with high intensity discharge lighting with sufficient wattage to provide adequate illumination in order to provide a safe, secure environment for persons, property, and vehicles on-site. Such lighting is encouraged to be equipped with vandal-resistant covers and photocell control. A lighting level of .25 to .50 foot-candles, maintained at ground level, shall be required for the different sites in general; entry intersections shall be .50 or greater.

Home Addressing

- A unit number shall be displayed in a prominent location on the front side of all residential units in such a position that the number is easily visible to approaching emergency vehicles during daylight as well as hours of darkness.
- The numerals shall be no less than six (6) inches in height and shall be of a contrasting color to the background to which they are attached.

UNIVERSITY/ COLLEGE CAMPUS CENTER

Chapter 5



UNIVERSITY/ COLLEGE CAMPUS CENTER

5.1 BACKGROUND

The University/College Campus Center is envisioned as a unique opportunity to create a center of higher learning for the Sacramento region. The existing and projected population in this region supports the demand for over 700,000 higher education seats nationally in the coming years with a concentration of those in northern California.

The University/College Campus Center is a unique approach to fulfilling a portion of that need by providing a site planned as an integral element of a comprehensive, sustainable master plan development. The Campus Center is designed to accommodate a single, large institution in the traditional model of a major university. The Campus Center is also designed to accommodate an aggregation of smaller institutions nested together in the Oxford model. Major facilities such as a main library, student lounge, health care, field house and sports fields, and dormitories and student services would be available to all colleges within the campus. Individual institutions could provide classrooms, faculty offices, and special facilities, such as libraries and laboratories to meet the needs of their particular academic focus. The following description of the

University/College Campus Center was developed by the noted architecture firm, Holabird and Root, an internationally recognized specialist in academic master plans and architecture. The conceptual design is adaptable to a variety of institutional configurations that will accommodate a single institution, or a cluster of smaller, integrated institutions. This flexible approach to developing higher learning institutions reflects not only economic challenges to academia at all levels, but also the opportunities for integrating diverse, formerly segregated areas of study into more collaborative, productive study programs.

5.2 INTRODUCTION

The conceptual plan for the University/College Campus Center would have the academic and administrative core of the University located on a plateau overlooking the Deer Creek Drainage and the Sierra Nevada to the east. When completed, the University/College Campus Center will have a total enrollment of over 6,000 full time students the plan envisions major colleges such as Business, Engineering, Law, Arts & Sciences and Medicine. The campus will have a traditional layout with campus quad and an iconic Carillon Tower on top of the dramatic bluffs overlooking the valley below.



Conceptual University/College Campus Center Rendering

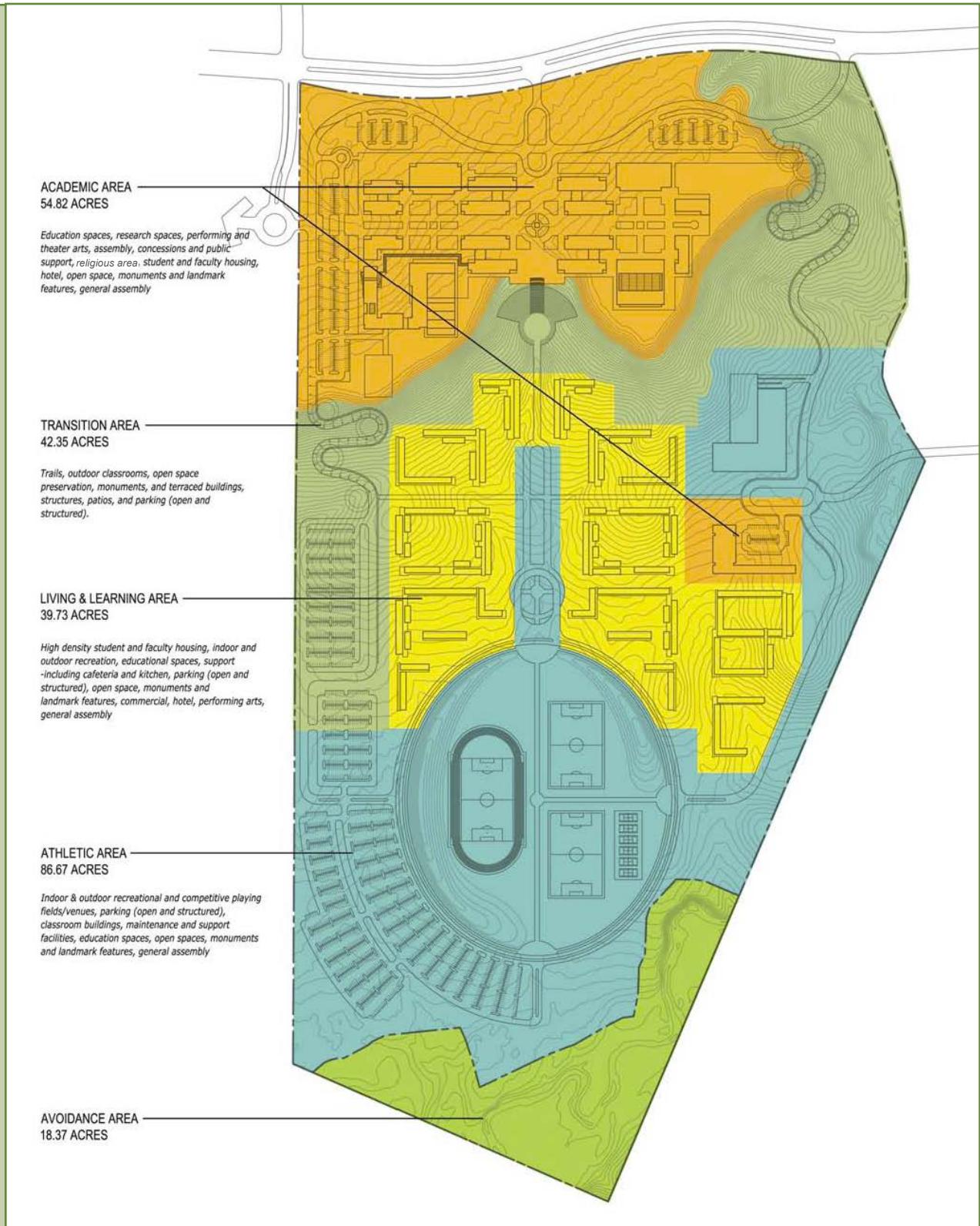


Figure 5.1: University/College Campus Center Land Plan

UNIVERSITY/ COLLEGE CAMPUS CENTER

The campus will include academic buildings, student housing for both undergraduate and graduate students as well as faculty housing, sports facility, performing arts center, and administration buildings.

The University/College Campus Center site is divided by a major bluff that extends east to west and creates an upper and lower campus as illustrated in Figure 5.1. The upper campus will be comprised mainly of the core academic buildings and the first phase of student housing. The lower campus will be constructed as the University/College Campus Center expands the growing student enrollment requires additional dormitories and athletic facilities, including ball fields, tennis courts, basketball courts, a large athletic complex, as well as a soccer stadium. An ornamental landscaped stair system will connect the upper and lower campuses together with a large water feature at the bottom of the stair. The campus layout will embrace the natural features of the site and emphasize the natural beauty that makes the site so special with both the physical beauty and the views across the valley.

The architectural style of the University/College Campus Center will respect historical California Mission style, while incorporating and blending modern themes and efficiencies in design and function. Sustainable design will be a hallmark of the campus plan and buildings. There will be extensive walking paths and landscaping in traditional campus configurations. The University/College Campus Center will include an 18.4-acre Avoided Area along the southern border of the Campus lands embracing the stewardship of these resources. A conference center with limited lodging will be a part of the campus.

Figure 5.1: Conceptual University/College Campus Center Land Plan provides a detailed illustration.

The campus design promotes connections with the community by utilizing a shared infrastructure (i.e. roadway system; parkway system; and a mixed-use business district). Figure 5.2 illustrates the Major Campus Roads at (build-out) and campus paths, walking, biking, and hiking paths.

The University/College Campus Center is organized around the concept of districts and landmarks. Districts are mainly comprised of major programmatic functions: academic, athletic, and residential. There are multiple landmarks within a district. The landmarks are visually aligned within and among each of the districts, creating smaller spaces and way-finding visual corridors.

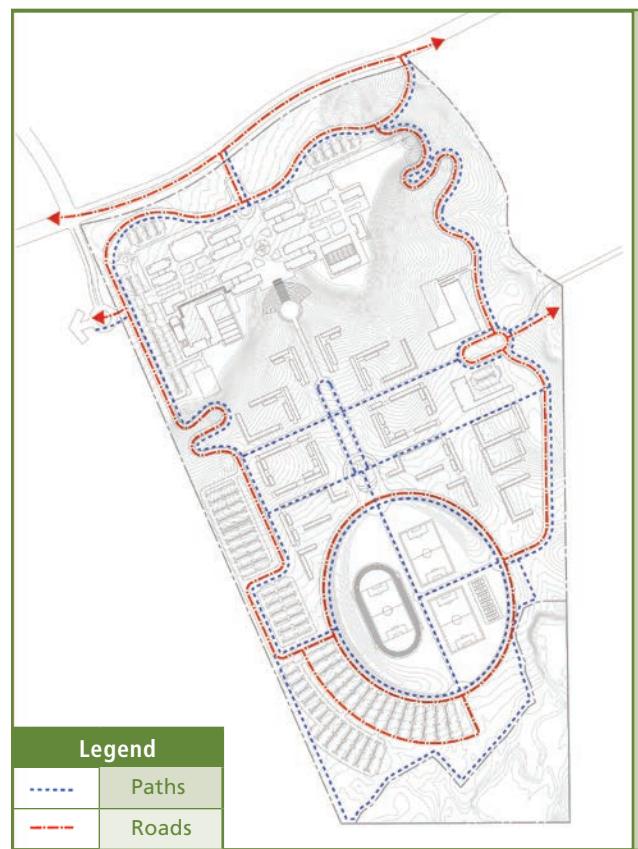


Figure 5.2: Major Campus Roads and Paths



5.3 SUSTAINABLE INITIATIVES & LONG-TERM GOALS

The University/College Campus Center masterplan is designed to minimize impacts on existing topography, to control erosion, to conserve existing habitat, and to preserve view corridors. Landscape design and site planning will feature indigenous, non-invasive species and the architecture will highlight local and regional building materials and climate-responsive techniques such as solar shading, daylight harvesting, natural ventilation, and the use of thermal mass.

5.3.1 Water Conservation

Water conservation will be integral to the design of the campus. Green roofs, cisterns, greywater systems, and efficient fixtures will be investigated and implemented where feasible in order to maximize the use of all water on site. Watersheds will remain intact, and on-site management of storm water through the use of minimal impact, pervious parking, roads and walkways in combination with green roofs and planted swales will ensure the hydrology of the site remains in balance as the campus grows.

5.3.2 Building, Heating, and Cooling

Arcades, open atria, covered walkways and exterior stairs all decrease the load on buildings' heating and cooling systems while providing shade and maintaining a visual connection to the outdoors.

The design of the buildings themselves will include the investigation of daylighting strategies and wind-driven and stack-driven natural ventilation. These technologies will be implemented where feasible. Shading will be designed to allow cool daylight harvesting in the summer and passive solar heating in the winter. Energy efficiency and material reuse and conservation will be integral to the design and construction of each building. Where possible,



Conceptual Amphitheater

circulation spaces will be exterior, shaded, and unconditioned, with visual access to courtyards and cooling gardens providing both physical and psychological cooling effects. It is intended that the buildings will be LEED certified.

Progress toward reduced energy goals, start with energy conservation. With that in mind, designs will minimize energy demand through thermal efficiency, daylighting, and passive heating/cooling. District heating and cooling will improve system efficiencies, and large-scale implementation of energy-saving measures such as solar hot water (especially in the Student Life area) and heat recovery ventilation systems (especially in once-through buildings such as science labs) will be investigated and implemented where feasible in order to reduce energy demand.

On-site generation of energy will come primarily from solar photovoltaic panels, with the possibility of some wind generation. Nearby, large-scale generation of power from solar, biomass, and methane cogeneration will be investigated, as will other partnerships with regional utilities interested in developing renewable energy.

UNIVERSITY/ COLLEGE CAMPUS CENTER

5.3.3 Transportation and Parking

The campus transportation and maintenance fleet is expected to be comprised mainly of alternate fuel vehicles. This will significantly reduce the emissions produced in vehicular travel and campus operations. The campus will also consider a program where their used cooking oil is converted into bio-diesel fuel for use within their own fleet.

On-campus parking is placed around the campus periphery, providing the number of spaces necessary to support campus uses while allowing the center of campus to remain devoted to pedestrian use. The majority of parking spaces will be located along the western edge of campus, between campus buildings and the dedicated buffer land to the west. Additional parking is provided near the front of campus and at the interface between the Residential Life area and the Cordova Hills University Village. Parking will be aggressively landscaped and shaded or placed in compact structures to mitigate heat islands. Porous paving will further reduce heat island effects and promote infiltration of storm water.

To reduce parking needs and foster a greater sense of community among new students, University/College Campus Center policy may be to prohibit freshman students from keeping cars on campus. Assuming an even distribution of students among the four undergraduate classes, a University/College Campus Center policy prohibiting freshman from bringing cars to school could reduce the need for parking by approximately, 538 spaces.

Further, a policy limiting sale of parking permits to 33% (rather than 50%) of the remaining undergraduate students (sophomores, juniors and seniors) would further reduce the parking requirement by approximately 538 spaces.

The Cordova Hills plan for University Village, immediately adjacent to campus, will provide affordable, appropriate housing for many of the University/College Campus Center graduate students. The residential area will provide parking for graduate

students' cars at their homes, and a Student-University/College Campus Center agreement will require students to walk to campus. Assuming 50% of graduate students live in this area, an additional 425 spaces could be removed from the campus.

A residential campus, like the University/College Campus Center, is a 24-hour facility. While much of the school's instruction takes place during the daytime hours, most of the student-life functions of the campus occur in the evening and night time. The athletic center, student union, library and residential buildings will all be more active in the evening and night hours than during the day. For this reason, the student life and support staff of the school will use time-restricted parking passes, specific to their shifts. Based on daily occupancy profile assumptions, the maximum number of faculty and staff on campus at any given time would be approximately 1,016. If parking is provided for each of these employees at one space per employee, this represents a reduction in parking of about 933 spaces, from 2,036 to 1,103 spaces.

Shared vehicle programs, like ZipCar, state that an effective implementation of one car in their system removes 15 personal cars from the road. Assuming a sustained growth of one additional ZipCar per year on the University/College Campus Center, at the 30 year Final Phase, a fleet of 30 ZipCars would reduce the campus parking requirement by 450 spaces.

Assuming all of the suggested parking restrictions, incentives, considerations and programs are put into place, the final phase parking requirement for the University/College Campus Center would be approximately 2,153 spaces. While the implementation of all these strategies may not occur exactly as predicted, the final parking number does align with current sustainable trends, in terms of reducing the harmful environmental effects of both the parking lots themselves (storm water management, urban heat-island effect), and the increased automobile usage they promote (fossil fuel depletion, CO₂ and other harmful emissions).



Table 5.1, University/College Campus Center Population, Parking and Area Summary, follows and provides a statistical summary of phased build-out of the University/College Campus Center, accounting for employees and students and required parking.

5.3.4 Landfill Buffer

Where the University/College Campus Center is within 2,000 feet of the Kiefer landfill, a minimum 25-foot wide landscaping area shall be provided. This landscaping area shall include a dense mix of trees and shrubs to screen uses from the landfill. Acceptable tree species include those expected to reach minimum heights of 40 feet.

5.4 BUILDING HEIGHTS

The academic buildings currently planned for placement on the mesa will range from four to six stories tall with a 14-foot finished floor to finished floor height. The greater heights on the mesa are reserved for the Carillon tower at an estimated 150 feet. Below the mesa, buildings will also range between four to six stories tall with a floor to floor height of 12 feet. A principle of the masterplan design is that no building below the mesa can exceed the grade line of the mesa. This is in order to preserve open views from the mesa. Overall, with the exception of the Carillon, no building will exceed 100 feet in height.

5.5 UNIVERSITY/COLLEGE CAMPUS CENTER DWELLING UNITS

5.5.1 Student Population and Housing Suites

The Total Student Population at build-out is as follows

- Total Students at build out: 6,000 (4,300 undergraduates and 1,700 graduates)
- 90% undergraduates will live on campus: 3,870
- 10% of graduate students will live on campus: 170
- Total students living on campus: 4,040

- 4 students per dorm suite: 1,010 total dorm suites
- All freshman and sophomores will live in Suite A
- Juniors will live in Suite A and Suite B
- Seniors and graduate students will all be in suite B

Table 5.1: University/College Campus Center Population, Parking, Area Summary

University/College Campus Center Population, Parking, Area Summary		
	PHASE I	PHASE FINAL
Students		
Undergraduate Students	500	4,300
Graduate Students	100	1,700
Total Students	600	6,000
Employees		
<i>Academic/Administrative Employees</i>		
Academic Administration	12	27
F.T.E. Faculty	33	400
Faculty Support	13	130
Central Administration	41	94
Student Services Administration	13	34
Academic/Administrative Employees	112	685
<i>Student Life/Services Employees</i>		
Cafeteria & Student Union Employees	36	420
Main Library Employees	5	59
Athletic, Fitness & Wellness Center Employees	5	113
Main Interdenominational Center Employees	3	24
Theater & Arts Employees	0	104
Physical Plant Employees	40	470
Housing Employees	6	51
Retail, Lodging & Conference Employees	0	110
Student Life/Services Employees	95	1,351
Total Employees	207	2,036
MAXIMUM UNIVERSITY POPULATION	807	8,036
TOTAL GROSS SQUARE FOOTAGE OF BUILDINGS	344,000	1,870,000

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5.5.2 Academic Faculty & Staff (Academic Administration, Central Administration, and Student Services)

Staff living on campus will reside primarily in the dormitories or stay temporarily in the business conference center. Some faculty may stay on a temporary basis in the dorm rooms or business conference center. In addition to the dorm rooms and business conference center, there may be a limited amount of permanent housing on campus for faculty.

5.5.3 Campus Hotel

The business conference center within the University/College Campus Center is a 100 room hotel/conference center that will accommodate short-term visits to the campus. The 100 units will accommodate one person per room.

5.5.4 University/College Campus Center Population, Parking and Area Summary

Table 5.1 summarizes both Phase 1 and total University/College Campus Center population (undergraduate and graduate), employees (academic and administrative) and student services.

5.5.5 University/College Campus Center Phasing

The phasing of development will occur over a period of several years and cannot be predicted with precision in this Master Plan. The phasing of development will be influenced by whether the Campus Center is ultimately used by a single large institution, or a clustering of smaller institutions. Nonetheless, it is instructive to provide a conceptual phasing plan for each of 4 distinct periods. The specific floor areas and buildings and uses identified in the following phases are conceptual and not intended as specific building use entitlements.

Figures 5.3 through 5.6 illustrate the conceptual phasing for the The phasing of development will be influenced by whether the Campus Center is ultimately used by a single large institution, or a clustering of smaller institutions. The initial phase would include construction of the Welcome Center, Student Union and Recreation Center, Administration Center, General Academic Buildings, the Arts and Sciences Building, and the campus hotel.

Phase Two would add Professional Program buildings, including the Performing Arts, and Interdenominational Center, and housing.

Phase Three would include additional Professional Program Buildings, including the Main Lecture Hall, Arts and Sciences, Executive Training Center, Physical Plant and additional Final Phase Housing.

Full Phase Four, would include new construction of Medial/Nursing, Engineering, Business Education and Law Buildings and Final Phase Housing.

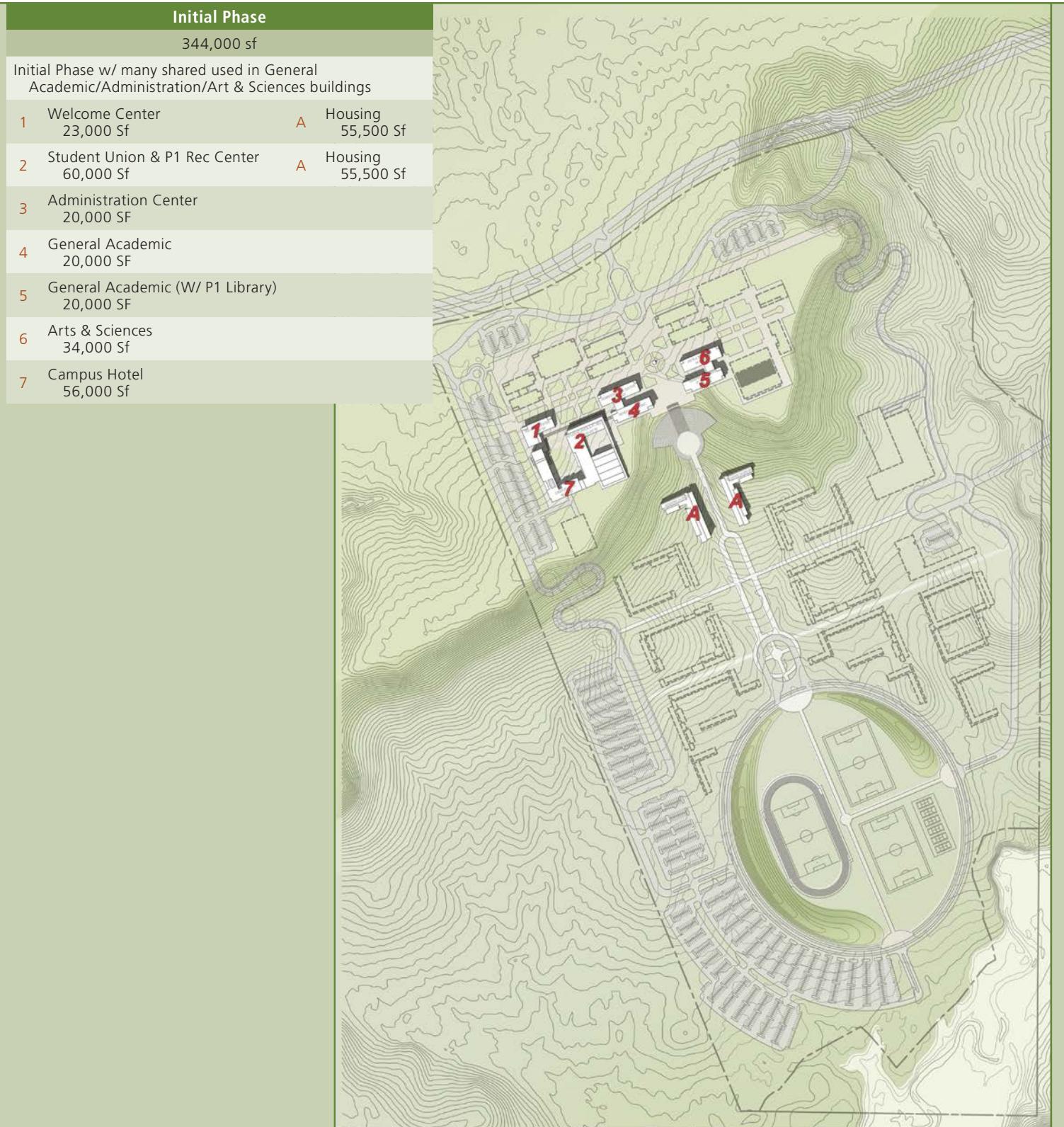


Figure 5.3: Conceptual University/College Campus Center Phase One

UNIVERSITY/ COLLEGE CAMPUS CENTER

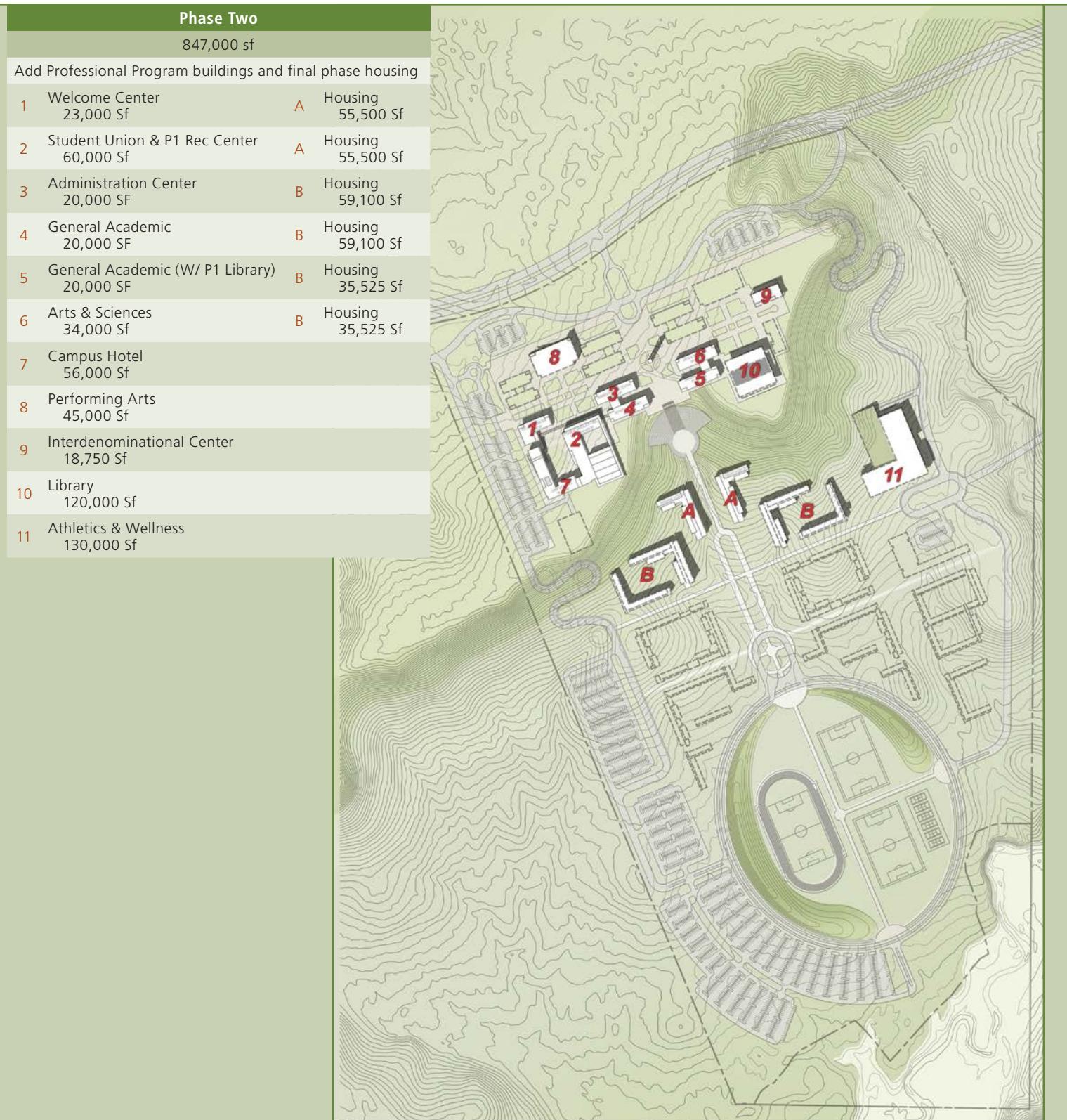


Figure 5.4: Conceptual University/College Campus Center Phase Two



Phase Three		
1,244,100 sf		
Add Professional Program buildings and final phase housing		
1	Welcome Center 23,000 Sf	A Housing 55,500 Sf
2	Student Union & P1 Rec Center 60,000 Sf	A Housing 55,500 Sf
3	Administration Center 20,000 SF	B Housing 59,100 Sf
4	General Academic 20,000 SF	B Housing 59,100 Sf
5	General Academic (W/ P1 Library) 20,000 SF	B Housing 35,525 Sf
6	Arts & Sciences 34,000 Sf	B Housing 35,525 Sf
7	Campus Hotel 56,000 Sf	C Housing 53,150 Sf
8	Performing Arts 45,000 Sf	C Housing 53,150 Sf
9	Interdenominational Center 18,750 Sf	F Housing 47,000 Sf
10	Library 120,000 Sf	
11	Athletics & Wellness 130,000 Sf	
12	Main Lecture Hall 48,000 Sf	
13	Arts & Sciences 34,000 Sf	
14	Arts & Sciences 34,000 Sf	
15	Executive Training Center 97,800 Sf	
16	Physical Plant 30,000 SF	

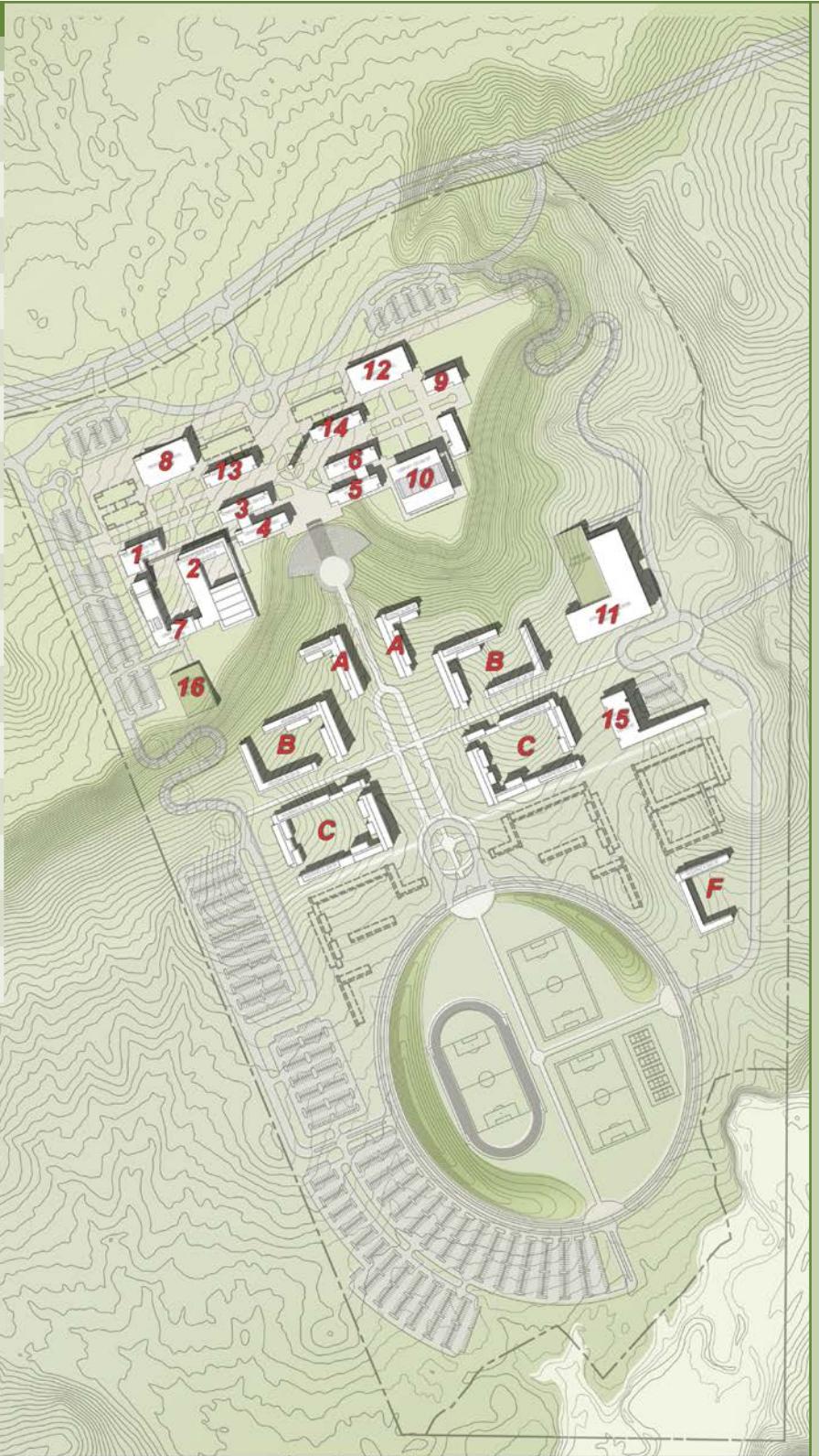


Figure 5.5: Conceptual University/College Campus Center Phase Three

UNIVERSITY/ COLLEGE CAMPUS CENTER

Full Phase Four		
1,870,000 sf		
Add Professional Program buildings and final phase housing		
1 Welcome Center 23,000 Sf	A	Housing 55,500 Sf
2 Student Union & P1 Rec Center 60,000 Sf	A	Housing 55,500 Sf
3 Administration Center 20,000 SF	B	Housing 59,100 Sf
4 General Academic 20,000 SF	B	Housing 59,100 Sf
5 General Academic (W/ P1 Library) 20,000 SF	B	Housing 35,525 Sf
6 Arts & Sciences 34,000 Sf	B	Housing 35,525 Sf
7 Campus Hotel 56,000 Sf	C	Housing 53,150 Sf
8 Performing Arts 45,000 Sf	C	Housing 53,150 Sf
9 Interdenominational Center 18,750 Sf	C	Housing 62,300 Sf
10 Library 120,000 Sf	C	Housing 62,300 Sf
11 Athletics & Wellness 130,000 Sf	D	Housing 79,000 Sf
12 Main Lecture Hall 48,000 Sf	D	Housing 79,000 Sf
13 Arts & Sciences 34,000 Sf	D	Housing 17,000 Sf
14 Arts & Sciences 34,000 Sf	D	Housing 17,000 Sf
15 Executive Training Center 97,800 Sf	D	Housing 26,000 Sf
16 Physical Plant 30,000 SF	D	Housing 26,000 Sf
17 Medicine & Nursing 41,100 SF	E	Housing 117,350 Sf
18 Engineering 30,300 SF	F	Housing 47,000 Sf
19 Business 33,450		
20 Education 18,300 SF		
21 Law 16,800 SF		



Figure 5.6: Conceptual University/College Campus Center Phase Four



Table 5.2: Phase Final-Built Area by Use Type

Phase Final- Built Area			
	PROGRAM	GROSS AREA	
PHASE ONE	General Academic	54,000	gross sf
	Administration & Support	20,000	gross sf
	Cafeteria & Student Union	60,000	gross sf
	Undergraduate Housing	111,00	gross sf
	SUBTOTAL	245,00	gross sf
OPTION	Welcome Center	23,000	gross sf
	Campus Hotel	56,000	gross sf
	Academic and P1Library	20,000	gross sf
	SUBTOTAL	99,000	gross sf
PHASE FINAL	Theater & Arts		
	Main Interdenominational Center		
	Athletic/Recreation		
	Library		
	College of Business		
	College of Engineering		
	College of Law		
	Main Lecture Hall		
	College of Education		
	College of Arts & Sciences		
	College of Medicine & Nursing		
	Facilities & Maintenance		
	Main Cafeteria		
	Student Union Center		
	Undergraduate Housing		
	Graduate Housing		
	Faculty & Staff Housing		
	Stadium		
	On-Campus Retail, Lodging, Conference Center		
	SUBTOTAL	1,526,000	gross sf
	TOTAL	1,870,000	gross sf

Table 5.2, Final Phase Built Area, follows the four phasing maps and provides a breakdown of gross built area for Phase 1, the final phase, and an option for a sub-phase to include Athletic/Recreation, Faculties and Library Buildings.

5.5.6 University/College Campus Center Residential Building Prototype

Figure 5.7, University/College Campus Center Prototype, illustrates a housing prototype block footprint which would adapt to a variety of configurations illustrated on the site plan. The footprint includes two conceptual suite types, A and B. Suite A includes 2 bedrooms and Suite B includes 4 bedrooms.

UNIVERSITY/ COLLEGE CAMPUS CENTER

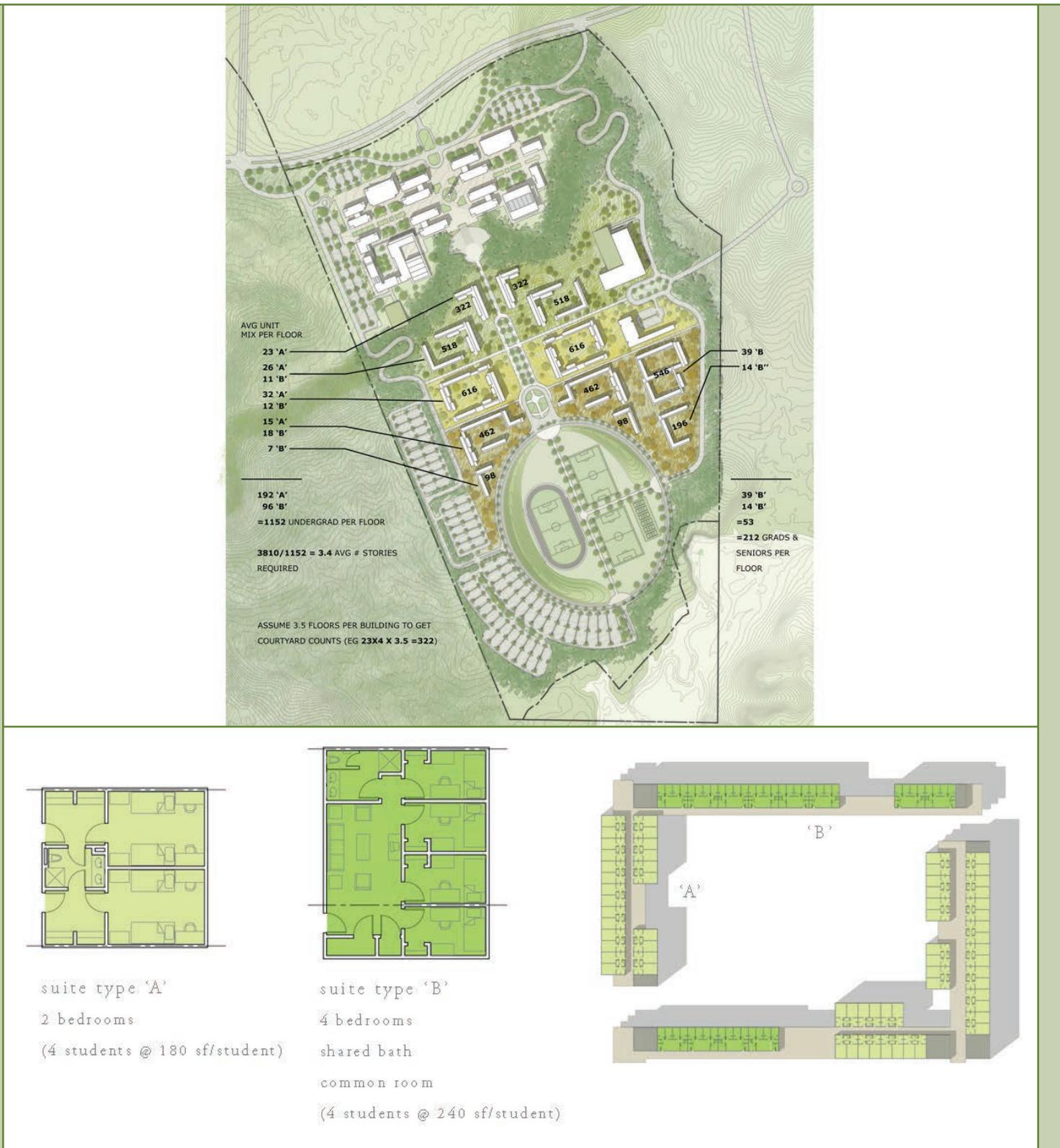
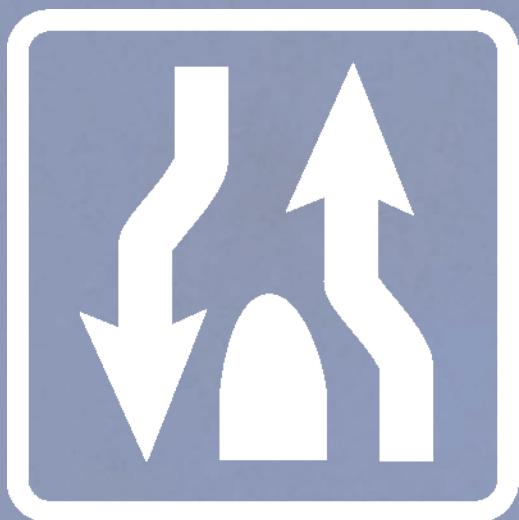


Figure 5.7: University/College Campus Center Prototype

CIRCULATION

Chapter 6



CIRCULATION

The Circulation Chapter describes the planned roadway network, transit facilities and services, and bicycle and pedestrian facilities for Cordova Hills. These facilities are critical components of the Master Plan that affect the community quality of life and character of the plan, as well as public safety, energy costs, timing and phasing of improvements, and air quality.

6.1 CIRCULATION PLAN VISION

Dramatic shifts in the global economy and community demographics all indicate that the conventional circulation networks and approaches developed over the last 70 years will not serve us well in the emerging future. There is a need for new approaches to moving people and goods about within the community and region.

Cordova Hills provides a unique opportunity to advance fresh thinking on community "mobility" and design and implement a new circulation system that responds to the demands of a new era. The circulation system will need to address lifestyle and work environment changes, the increasing costs of fuel, the on-going concerns for air quality, and changes in shopping, socializing, health, and recreation habits. Cordova Hills will respond to evolving regulatory requirements for Greenhouse Gas reduction (GHG), the need for smaller and fuel efficient neighborhood electric vehicles (NEV), and internal capture of commercial/business related trips. This will be accomplished in the strategically placed and vibrant Town Center and University / College Campus Center, and the extensive, integrated, intervillage and neighborhood network that links all components of the plan with pedestrian, bike and alternative vehicle circulation.

Cordova Hills will be developed during a time of change. New technologies in transportation and communications will influence the choices individuals make in selecting their daily means of mobility. It is assumed that fuel will be an increasingly costly resource for individuals and businesses in deciding

their mode of transportation and whether it is necessary to travel at all. The circulation system is designed to mitigate the possibility that increased travel costs will result in demands for more efficient transportation systems and for communities designed to facilitate and enhance alternatives to automobile use in the resident's daily lives.

The challenge for new community plans is to accommodate conventional automobile travel while setting the stage for a gradual transition to an alternative system. Automobiles will continue to be a primary mode of transportation, but new communities must be planned to also facilitate and encourage the use of transportation alternatives.

Alternatives for a broad range of travel modes are designed into the Cordova Hills community, including neighborhood electric vehicles (NEVs), public transportation, walking and bicycling. They are intended to reduce the need for reliance on private automobiles as the sole mode of personal transportation in the future. The smaller "Village scale" vehicle routes are interconnected with larger, regional vehicle routes. The smaller vehicles are referred to as Neighborhood Electric Vehicles (NEVs) in this plan. One of the key factors influencing the circulation plan is the University/ College Campus Center, a special use that will support alternative approaches to transportation. The planned student body of 6,000 total students, as well as faculty, campus visitors, and administrative and support personnel will enhance the opportunities for public transit and pedestrian and bike travel in the community. As with many major universities, the traffic will tend to emphasize non-vehicular travel in the vicinity of campus. Combined with the integrated transit and pedestrian and bicycle network opportunities in the Town Center, Cordova Hills is envisioned to become a distinctly pedestrian, bicycle, and transit oriented community.



6.2 CIRCULATION PLAN PRINCIPLES

The Cordova Hills circulation plan combines many integrated and varied transportation modes. All are important aspects of the plan and fulfill the following principles, which are "balanced" to address the evolving needs of a changing society.

6.2.1 Community Character

The internal roadways and pedestrian/bikeway networks are among the most visible elements connecting the overall community. The Streetscape Plan established in Chapter 4, Development Regulations and Design Guidelines, includes the Town Center Boulevard, University / College Campus Center streets, community arterials, collectors, local neighborhood streets, and the pedestrian/bikeway corridors which are signature features that help define the overall community character of Cordova Hills.

From an aesthetic/visual standpoint, the landscape character of the circulation system of Cordova Hills roads and trails will generally reflect an early California theme, at key intersections, parkways and focal points. This will manifest in a predominantly drought tolerant landscape, with the use of native trees, shrubs, grasses, and selective use of low stone walls as "rustic materials." Shaded roadways, pedestrian paseos, sheltered rest areas, and limited, focused use of water will be hallmarks of for Cordova Hills circulation system.

6.2.2 Safety and Efficiency

All components of the circulation system must provide safe and efficient circulation. Safety requires adequate lane capacity and intersections for vehicle movement but also requires pedestrian friendly streets, intersections, and parkways, that minimize potential vehicle and pedestrian/bicyclist conflicts.

Mode		Service Radius	Trip Attraction
Pedestrian / Bicycle		<ul style="list-style-type: none">• 1/2 to 3 Mile Radius• Village Wide	<ul style="list-style-type: none">• Village Center• School• Village Residential• Park/Open Space/Recreation
Neighborhood Electric Vehicle (NEV)			
Private Auto		<ul style="list-style-type: none">• No Radius Limit• On / Off Site Area	<ul style="list-style-type: none">• Special Destination• Special Purpose• Weekly Shopping• Regional Employment Centers
Transit System		<ul style="list-style-type: none">• 10-15 Mile Radius• In and Off Site	<ul style="list-style-type: none">• Regional Employment Center• Regional Shopping• Light Rail System

Figure 6.1: Traffic Mode Alternatives

CIRCULATION

6.2.3 Integration of Land Use and Circulation

The Cordova Hills plan reflects the strong relationship between land use and transportation. Specifically, the plan seeks to enhance the potential use of public transportation and facilitate pedestrian and bicycle transportation by careful placement of higher intensity land uses relative to logical, connected transportation routes. Relatively short travel encourages walking, bicycling, or NEV use. Transit routes adjacent to higher density residential uses and major trip destinations significantly increase the use of transit as an alternative to private automobiles.

The circulation plan also avoids, where feasible, wetland resources that will be set aside in open space avoided areas. The primary roadway system has been carefully designed to provide necessary traffic circulation while minimizing impacts on the avoided areas and the number of roads crossing the linear drainage corridors.

The primary daily trip destinations such as schools, parks, jobs, shopping and commercial services have been located such that trips can be consolidated and the overall number of trips reduced.

6.2.4 Direct Routes and Connectivity

A convenient, reasonably direct, safe, and attractive route to primary destinations is an important feature promoting pedestrian and bicycle travel. Pedestrian and bicycle routes will be separated from traffic, where feasible, in addition to provision for safe road crossings.

6.2.5 Contribution to Sustainability

The varied combination of transportation modes included in this plan will contribute to the overall sustainability of the Cordova Hills community over time. Minimized use of automobiles will help reduce energy demand and greenhouse gas emissions. Careful design of the road network creates less pavement area, resulting in reduced heat gain and conservation of materials. The circulation plan also includes use of drought tolerant and low maintenance plant species, inclusion of low impact development (LID) drainage features, safe and efficient trails, potential reduction in road improvement costs, and reduction of impermeable surfaces compared to conventional development.

On-site rock resources available during construction may be utilized as crushed rock base for roadways, low stone retaining walls, where feasible, and trench bedding materials.

6.3 CIRCULATION PLAN GOALS AND POLICIES

The following section sets forth Goals and Policies for mobility, roadways, bicycle and pedestrian facilities, and an integrated community-wide transportation system.

GOAL 1:

Provide mobility for current and future residents and visitors of Sacramento County through “complete streets” and a balanced and interconnected transportation system which includes all modes of travel - transit, automobile, alternative vehicle technology, pedestrian and bicycling.



Policies:

- I-1. Promote complete, pedestrian friendly streets with access to a diversity of safe and efficient travel modes for all new land uses within Cordova Hills.
- I-2. Promote continued mobility for individuals whose access to automobile transportation is limited by age, illness, income, desire, or disability.
- I-3. Interconnect travel modes to form an integrated, coordinated and balanced multi-modal transportation system, planned and developed consistent with the land uses to be served.
- I-4. Provide multiple transportation choices to link housing, recreational, employment, commercial, educational, and social services.
- 1-5. Establish a comprehensive roadway network based on a modified grid system, where topography allows.
- 1-6. Develop a road system that is easily navigated and sensible to visitors through land use organization, a clear road hierarchy, road naming systems, and similar features.
- 1-7. Properly design local roads through local residential neighborhoods for connectivity and slower speeds.
- 1-8. Increase the number and convenience of transit opportunities within Cordova Hills by coordinating land use and potential public transit routes and transit hubs.
- 1-9. Provide mixed-use development to enhance trip capture within Cordova Hills.

GOAL 2:

Provide a balanced and integrated roadway system that maximizes the mobility of people and goods in a safe and efficient manner.

Policies:

- 2-1. Plan and construct transportation facilities as delineated on the Street Master Plan of this document. Transportation facilities shall be consistent with the County of Sacramento General Plan Circulation Element (Amended November 9, 2011), with the Sacramento County Municipal Services Agency Improvement Standards and Construction Specifications, and supplemented by the California Department of Transportation (Caltrans) design standards. Cordova Hills design standards deviate from the adopted County Improvement Standards and Construction Specifications in circumstances where local conditions warrant special treatment and results in more efficient mobility and public safety.
- 2-2. Collaborate with regional transportation planning agencies and neighboring jurisdictions to provide cross jurisdictional mobility.

GOAL 3:

Provide safe, continuous, efficient, integrated, and accessible bicycle and pedestrian systems that encourages the use of the bicycle and walking as viable transportation modes and as a form of recreation and exercise.

Policies

- 3-1. Promote the development of a comprehensive, safe, convenient and accessible bicycle and pedestrian system that serves and connects Cordova Hill's employment, commercial, recreational, educational, social services, housing and other transportation modes.
- 3-2. Construct and maintain bikeways and multi-use trails to minimize conflicts between bicyclists, pedestrians, and motorists.

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3-3. Collaborate with neighboring jurisdictions and regional agencies to coordinate planning and development of the County's bikeways, pedestrian facilities and multiuse trails with those of neighboring jurisdictions, and to support a regional bicycle and pedestrian network.

3-4. Pursue all available sources of funding for the development, improvement, and maintenance of bikeways, pedestrian facilities and multi-use trails, and to support bicycle and pedestrian safety, education, encouragement and enforcement programs.

3-5. Design major trails and significant public spaces to take advantage of scenic vistas.

6.4 CIRCULATION SETTING

The circulation network in Cordova Hills is influenced by the surrounding road network, planned road improvements, and public transit opportunities.

6.4.1 Related Circulation Plans and Programs

The Cordova Hills Street Master Plan is an integral part of several planning activities throughout the Sacramento region. These planning activities set the regional framework for circulation planning within the Cordova Hills Master Plan.

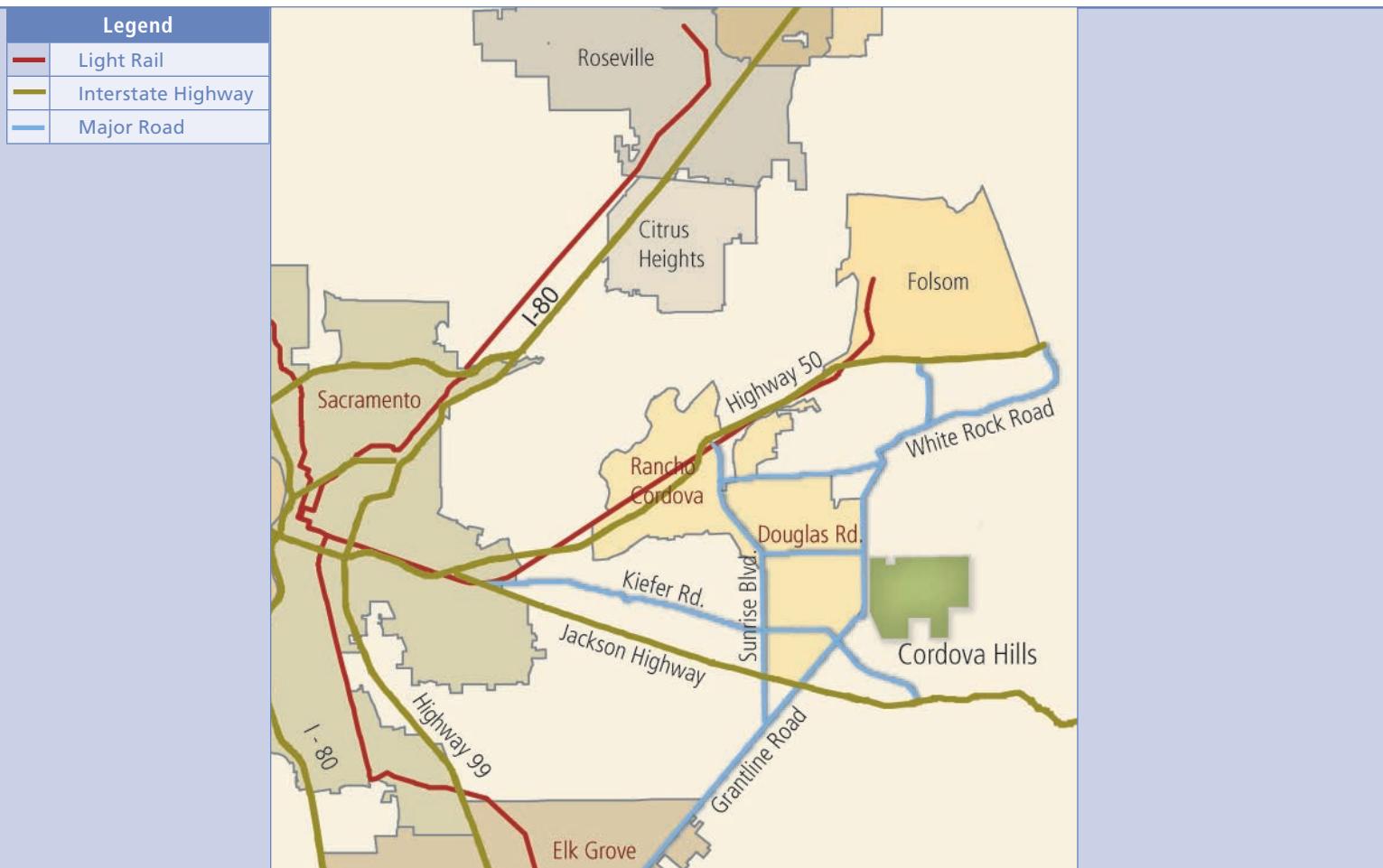


Figure 6.2: Existing and Planned Regional Circulation in the Vicinity of Cordova Hills



6.4.2 The Regional Metropolitan Transportation Plan 2035 (MTP)

The MTP is a long-range plan for transportation improvements in the greater six-county Sacramento region. The MTP includes major transportation improvements that will affect the traffic capacity of routes serving Cordova Hills.

6.4.3 The Capital South East Connector

The Capital South East Connector is a proposed 35-mile roadway spanning from Interstate 5 south of Elk Grove, to US 50 in El Dorado County, just east of El Dorado Hills. The Connector will link the cities of Elk Grove, Rancho Cordova, Folsom, and communities in El Dorado and Sacramento County.

While still in the planning stages, the Capital South East Connector Joint Powers Authority (JPA) has selected Grant Line Road as the preferred route. The Connector is currently designed to be a four lane expressway with limited access. The main purpose of the Connector is to alleviate traffic congestion on Highway 50, Interstate 5 and State Route 99. This will allow drivers to bypass downtown Sacramento, thereby reducing the distance traveled and helping minimize travel delays.

The Connector may be constructed to an expressway standard that would limit the number and location of signalized intersections permitted. Cordova Hills is planned to have three access points along Grant Line Road. Each access point will be spaced adequately at no less than a ½ mile apart. All three access points with Grant Line Road within Cordova Hills would initially be constructed as signalized, at grade intersections, but could be ultimately developed as grade separated intersections or with a special design that could be implemented by the Connector JPA.

6.4.4 The Highway 50 Corridor Mobility Partnership

Highway 50 Corridor landowners have partnered with local, regional and state government representatives in a collaborative effort to improve the mobility and provide new transportation choices in the Highway 50 Corridor.

Participating jurisdictions currently consist of the County of Sacramento, County of El Dorado, City of Folsom, and the City of Rancho Cordova. Landowners participating in the Coalition consist of GenCorp, Elliott Homes, AKT, and Carpenter Ranch. Coordinating agencies involved in the Coalition consist of Caltrans, Sacramento Area Council of Government (SACOG), and Sacramento Regional Transit (RT).

The 50 Mobility Coalition is currently developing a coordinated transportation plan - including phasing, funding and implementation strategies that will reduce congestion and improve mobility in the Corridor. As part of the transportation plan, the Coalition has identified roadway transportation improvements that will significantly improve the mobility in the Corridor.

The Coalition has obtained approximately 22 million dollars for roadway expansion and improvements to White Rock Rd, which was one of the identified

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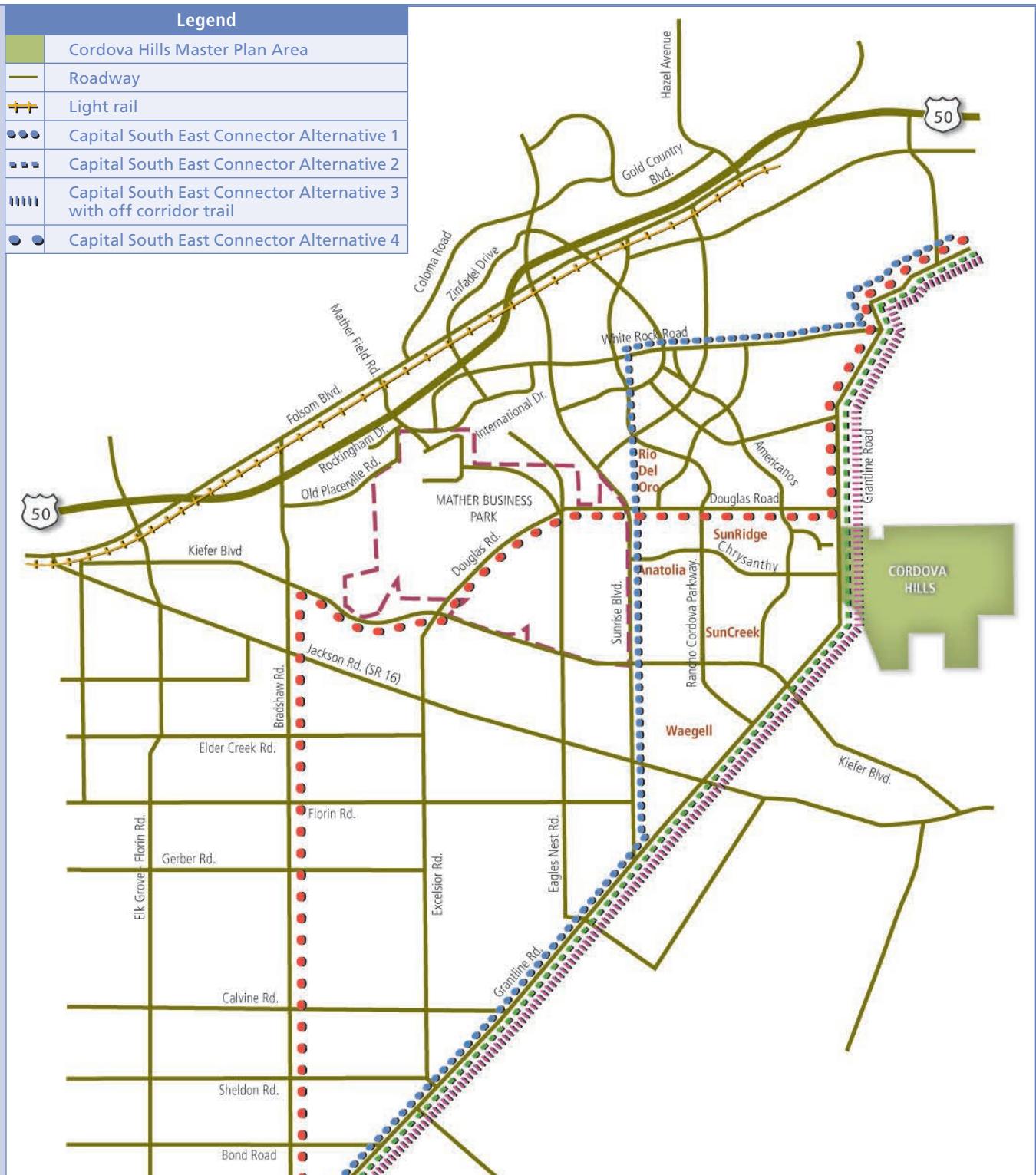


Figure 6.3: Local Area Circulation



roadway improvements. The Coalition is also currently in the process of developing a regional fee for these identified roadway improvements. The goal is for the fee to be adopted by each participating jurisdiction. The fee proceeds will then be used to pay for approximately 40% of the identified roadway improvements costs. Having 40% of the improvement costs come from new development will provide leverage in obtaining public funding for the remaining improvement costs needed. The fee will be based on new development's fair share of each improvement - calculated by estimating the percent use of each improvement by trips from each of the fee districts. If the fee is adopted by Sacramento County, Cordova Hills will be subject to the fee based on its fair share and residing fee district.

This effort, the first private/public partnership of its kind in the Sacramento region, is designed to proactively and comprehensively address the Highway 50 Corridor's current and growing congestion problem rather than developing incremental improvements in a reactive, piecemeal fashion.

6.4.5 Existing and Planned Roads

Cordova Hills is located in an area served by existing and planned major roads. Existing and planned arterial streets in or near the project include Grant Line Road, Rancho Cordova Parkway, Chrysanthy Boulevard, Douglas Road, Americanos Boulevard, Hwy 16 "Jackson Highway," Hwy 50, and Kiefer Boulevard.

6.5 CORDOVA HILLS STREET MASTER PLAN

The Cordova Hills Street Master Plan integrates a variety of streets configured to provide an adequate level of service for the planned land use densities and traffic loads.

6.5.1 Hierarchy of Streets

Major thoroughfares and arterials serve the commercial, business-professional, multi-family residential uses and the University / College Campus Center on the west edge of the plan. These roads transition to smaller collector roads and residential streets in the eastern portion of the plan.

The following subsections describe the characteristics and typical cross sections for the street classifications utilized in Cordova Hills. Some proposed street sections in the proposed plan do not adhere to County standards. They have been refined in order to achieve greater walkability and pedestrian friendly streets, traffic calming measures, reduction in "heat island" effect, and character of the community. These street sections are tailored to meet the specific design objectives and physical site constraints of the project. These streets will be approved as special conditions as part of this Master Plan. Different street widths may be proposed and approved if the objective of the proposed right-of-way is consistent with the goals of the Sacramento County General Plan Circulation Element. Table 6.1: Cordova Hills Road Summary, includes the proposed standards for all streets and landscape corridors.

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6.5.2 Thoroughfares and Arterial Streets

Cordova Hills will include a diversity of arterial street types. Thoroughfares will provide primary access from Grant Line Road. These boulevards will extend eastward and transition to arterial roads as traffic is dispersed into the Town Center, University / College Campus Center, University Village, and Ridgeline Village.

Town Center Boulevard is a “signature” street that differs from the typical arterial streets. This street will provide 1-2 travel lane(s) in each direction. In addition, there will be on-street parking to serve the high density residential, retail, and office uses clustered in the Town Center.

To promote connectivity in Cordova Hills during the design of the arterial intersections, the developer shall:

- Evaluate and, where feasible, incorporate design features that enhance the safety of bicyclists, pedestrians, NEV operators, and drivers at arterial street intersections such as described in, but not limited to the National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guidelines.

Figure 6.4: Street Master Plan, illustrates the primary street network in Cordova Hills.

Table 6.1: Cordova Hills Road Summary summarizes the street standards applied in the project.

6.5.3 Collector Streets

Collector streets are the primary internal circulation network within Villages that connect the local residential streets to the arterial streets. The Cordova Hills Plan utilizes a variety of collector streets, and relies on a series of local residential streets to disperse traffic and provide multiple routes for pedestrians and bicyclists.

6.5.4 Residential Streets

Cordova Hills will include minor residential street classifications. The typical residential street with detached sidewalks will be most common throughout all residential Villages.

The low density estate residential areas in the east portion of the plan will have a semi-rural character with narrower streets with sidewalks located at the back of curb, if utilized at all.

6.5.5 Street Sections

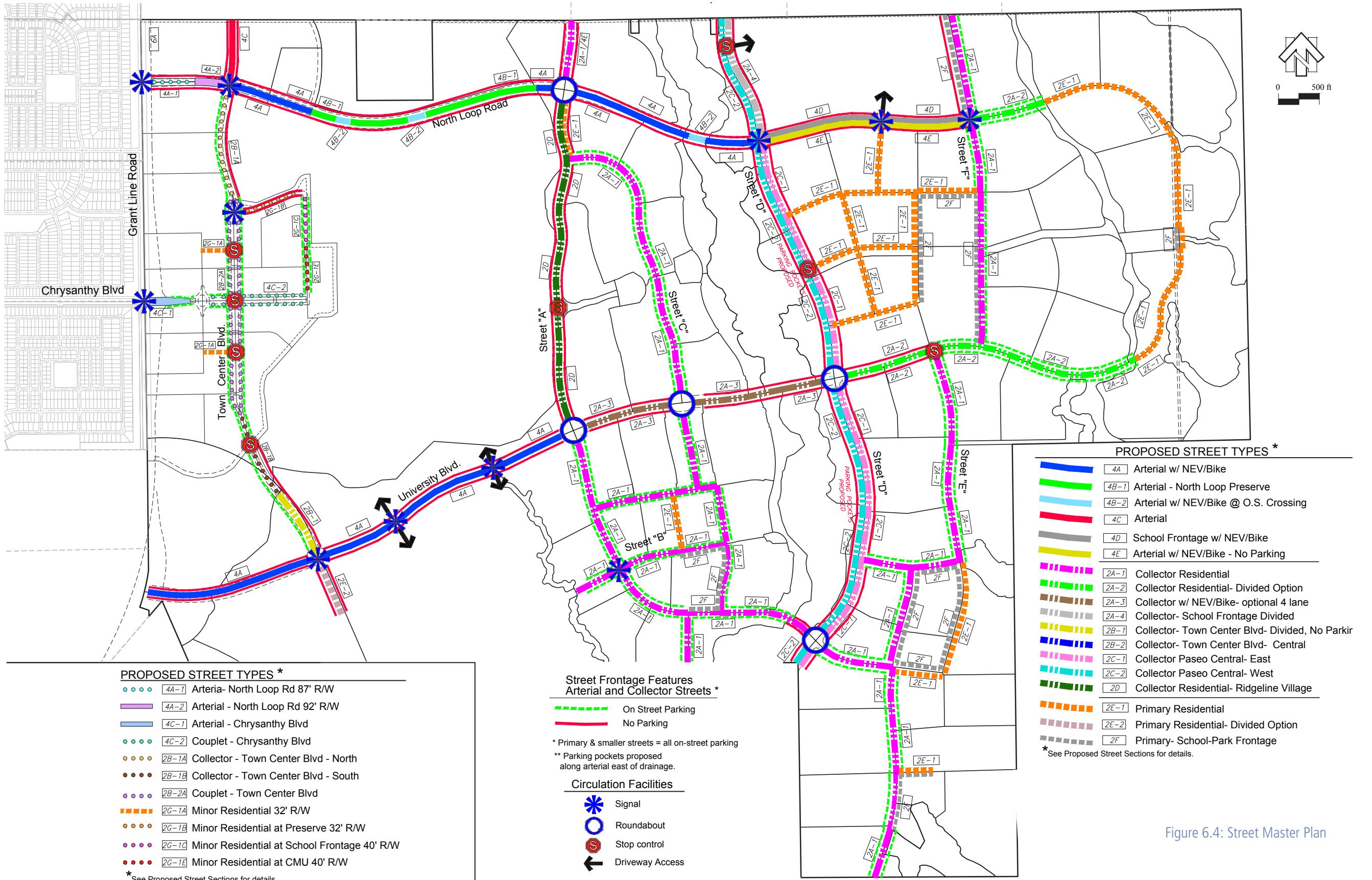
Table 6.1: Cordova Hills Road Summary contains dimensions and features of the street sections applied to the Plan Area. Appendix A illustrates the street sections applied to the Plan Area. These street sections shall be used in the design of individual development projects within the Master Plan. Deviations from these standards may be made due to site constraints, unique housing type or other considerations. Any proposed deviations should be submitted with individual development projects and reviewed by County staff.

Street Sections shown in Appendix A include required Public Utility & Public Facility (PUPF) easements along road right-of-way. Development standards in Chapter 4 of this Plan show some front yard and corner side yard setbacks that are less than the width of PUPF easements shown in the street sections. In cases where an individual development project proposes yard setbacks that are less than the width of PUPF easements shown in these street sections, a request for reduced PUPF width shall be included with application for tentative subdivision map or development plan review.

6.5.6 Alleys

With respect to alleys, there are a number of access drive types including true alleys, stub alleys, motor court isles, drive isles, and shared

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Table 6.1: Cordova Hills Road Summary*

KEY	DESCRIPTION	TRAVEL LANES	SHARED NEV/BIKE LANE	SPEED LIMIT (7)	NEV COMPACT	MEDIAN IN ROW	CLASS 2 BIKE LANE	TRAIL/PATH/SIDEWALK	ON-STREET PARKING	LID IN PLNTR.	HALF STREET WIDTH	HALF LDSCP/PUPFE	TOTAL ROW SECTION (4)
4A	North Loop Road	4	Yes	45 Mph	Yes	30'	No	10'	No	No	46.5'	28'	93' Full
4A-1	North Loop Road 87' Row	5 (Incl. Turn Lanes)	No	45 Mph	No	17'	Yes, 5'	10'	No	No	41' / 46'	28'	87' Full
4A-2	North Loop Road 92' Row	4	No	45 Mph	No	30'	Yes, 5'	10'	No	No	46'	28'	92' Full
4B-1	Arterial- North Loop Preserve	4	yes, 8'	45	yes	16'	NEV/bike	10'	no	no	42.5'	21'	85' full
4B-2	Arterial w/ NEV/bike @ OS Crossing	4	yes, 8'	45	yes	16'	NEV/bike	8'	no	no	51.5'	no	103' full
4C	Chrysanthy Boulevard 4-Lane Arterial	4	No	45 Mph	No	14'	Yes, 5'	10'	No	10'	38'	28'	76' Full
4C-1	Chrysanthy Boulevard 93' Row (5)	7 (Incl. Turn Lanes)	No	45 Mph	No	2'	Yes, 5'	10'	No	10'	52' / 41'	25'	93' Full
4C-2	Chrysanthy Boulevard 2-Lane Couplet (5)	1 (One-Way Travel)	No	35 Mph (2)	No	No (74.5' Parkblock)	Yes, 6'	10'	Yes	8'	N/A	25'	28' (One-Way Travel)
4E	Arterial- w/ NEV/bike- no parking	4	yes, 8'	45	yes	14'	NEV/bike	6'	no	9'	41'	23'	82' full
2A-1	Collector Residential	2	no	35 ⁽²⁾	yes	no	yes, 5'	6'	yes	8'	24'	24'	48' full
2A-2	Collector Residential-Divided Option	2	no	35 ⁽²⁾	yes	12'	yes, 5'	6'	yes	8'	30'	24'	60' full
2A-3	Collector w/ NEV/bike- optional 4 lane	2	yes, 8'	45	yes	24'	NEV/bike	10'	no	8'	46.5'	28'	93' full
2A-4	Collector- School Frontage Divided	2	no	35 ⁽²⁾	yes	22'	yes, 5'	6' & 8'	no	8'	31'	24' & 26'	62' full
2B-1	Town Center Boulevard Collector	2	No	35 Mph (2)	Yes	14'	Yes, 5'	10'	No	8'	27'	28'	54' Full
2B-1A	Town Center Boulevard North	2	No	35 Mph	Yes	9'	Yes, 5'	5' / 10'	Yes (One Side)	7' / 8'	29.5' / 24.5'	25' / 28'	54' Full
2B-1B	Town Center Boulevard South	2	No	35 Mph	Yes	9'	Yes, 5'	10'	Yes (One Side)	8'	29.5' / 24.5'	25' / 28'	54' Full
2B-2	Town Center Boulevard Collector (Central)	2	No	35 Mph (2)	Yes	14'	Yes, 5'	10'	Yes	No	31'	16'	62' Full
2B-2A	Town Center Boulevard Couplet (5)	1 (One-Way Travel)	No	35 Mph	Yes	No (78.5' Parkblock)	Yes, 6'	10'	Yes	8'	N/A	25'	28' (One-Way Travel)
2C-1	Collector- Paseo Central- East	2	no	35 ⁽²⁾	yes	14'	yes, 6'	6'	no	9'	28'	23'	28' half
2C-2	Collector- Paseo Central- West	2	no	35 ⁽²⁾	yes	14'	yes, 6'	10'	pockets	swale	28'	13'	28' half
2D	Collector - Ridgeline Village	2	no	35 ⁽²⁾	yes	no	yes, 5' & 6'	10'	no	10'	17.5' / 19'	10' & 13'	36.5' full



KEY	DESCRIPTION	TRAVEL LANES	SHARED NEV/BIKE LANE	SPEED LIMIT (7)	NEV COMPACT	MEDIAN IN ROW	CLASS 2 BIKE LANE	TRAIL/PATH/SIDEWALK	ON-STREET PARKING	LID IN PLNTR.	HALF STREET WIDTH	HALF LDSCP/PUPFE	TOTAL ROW SECTION (4)
2E-1	Primary Residential	2	No	30 Mph	Yes	No	No	5'	Yes	8'	19'	23'	38' Full
2E-2	Primary Residential-Divided Option	2	no	30	yes	12'	no	5'	yes	8'	25'	23'	50' full
2E-1A	Primary Residential 38' Row	2	No	25 Mph	Yes	No	No	5'	Yes	7'	19'	18'	38' Full
2E-1B	Collector Street 48' Row (6th St. @ School /Commercial)	2	No	25 Mph	Yes	No	Yes, 5'	12' W/6' Square Tree Wells / 5'	Yes	6' Square Tree Wells / 7'	24'	18' / 25'	48' Full
2E-1C	Collector Street 48' Row (6th St. @ Residential/ Commercial)	2	No	25 Mph	Yes	No	Yes, 5'	5'	Yes	7'	24'	18' / 25'	48' Full
2E-1D	Primary Residential Street 38' Row (C Street)	2	No	25 Mph	Yes	No	No	5' / 10' @ School Frontage	Yes	7'	19'	18' / 23'	38' Full
2TC-1	TC Main Street-Parallel Parking	2	no	25	yes	optional	no	10'	parallel	no	23'	16'	46' full
2TC-2	Tc Main Street-Diagonal Parking	2	No	25 Mph	Yes	Optional	No	10'	Diagonal	No	36'	16'	72' Full
2TC-2A	60 Degree Angled Parking Street (B St. @ Mixed-Use Commercial)	2	No	25 Mph	Yes	No	No	12' W/ Tree 6' Square Wells	Yes, Angled	No	32'	12'	64' Full
2F	Primary @ School/ Park Frontage	2	no	25	yes	no	yes, 5'	8' (3)	yes	no	24'	21'	24' half
2G-1	Minor Residential Street 32' Row (Detached Walk)	2	No	25 Mph	Yes	No	No	5'	Yes	8'	16'	23'	32' Full
2G-1A	Minor Residential Street 32' Row (Detached Walk)	2	No	25 Mph	Yes	No	No	5'	Yes	7'	16'	18'	32' Full
2G-1B	Minor Residential Street 32' Row (Detached Walk, @ Preserve)	2	No	25 Mph	Yes	No	No	5' / 10' @ Preserve	Yes	7' / 10'	16'	18' / 25' @ Preserve	32' Full
2G-1C	Minor Residential Street 40' Row (@ East School Frontage)	2	No	25 Mph	Yes	No	No	12' W/ Square Tree Wells' / 10'@ Preserve	Yes	7' / 10'	20'	18' / 25' @ Preserve	40' Full
2G-1D	Minor Residential Street 35' Row (@ HDR Frontage)	2	No	25 Mph	Yes	No	No	5'	Yes	7'	16' / 19' @ HDR	18'	35' Full
2G-1E	Minor Residential Street 40' Row (@ Lots D & F Frontage)	2	No	25 Mph	Yes	No	No	5' / 10'@ Preserve	Yes	7' / 10'	20'	18' / 25' @ Preserve	40' Full
2G-2	Minor Residential-Attached Walk	2	no	25	yes	no	no	5'	yes	no	16'	18'	32' full
2H	Minor Residential-Estates Village	2	no	25	yes	no	no	no	no	8'	24'	13'	48' full
A-1	Alley Option #1	2	No	15 Mph	No	No	No	No	No	No	12'	4'	24' Full
A-1A	Private Alley (6)	1 (Two-Way Shared Lane)	No	15 Mph	No	No	No	No	No	No	6'	30' Full	20' Full
A-1B	Public Frontage Alley (6)	2	No	15 Mph	No	No	No	No	No	No	10'	25' Full	20' Full

Notes: * See Actual Street Sections For More Information.

(1) Reduced To 6' Bike Only, West Of Town Center Boulevard.

(2) Posted Speed Reduced From 40 To 35 Mph To Allow On-Street Nev.

(3) 6' Walk Along Park Frontage.

(4) Full Or Half Section Width Shown In Land Use Plan

(5) Reduced Street Curb Radius.

(6) Modified Flare At Street Intersection.

(7) Nev's Allowed In Shared Travel Lanes On All Streets With Max. 35 Mph Speed Limit.

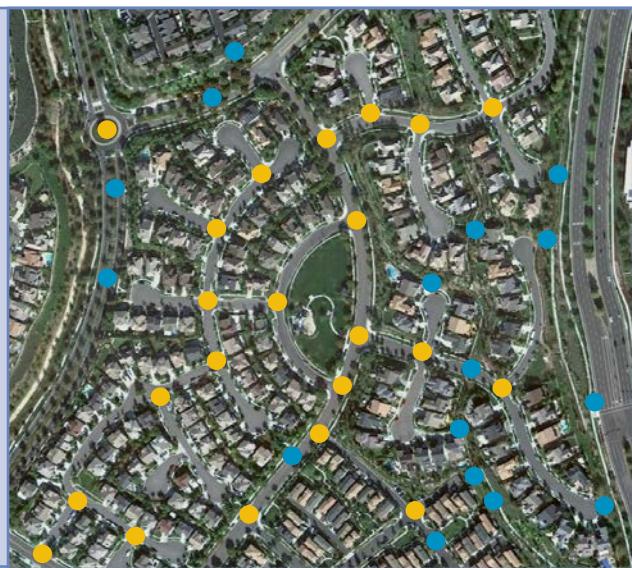
CIRCULATION

driveways. Width, materials, and facilities within a private access drive will vary depending on the housing type, needed underground utilities, and site design. Individual development projects within the Plan area will need to include proposals for private access drives with each development application. Sacramento County has prepared a series of draft access drive section guidelines including possible underground wet and dry utilities. These guidelines should be considered in projects proposing private access drives.

Several residential product types throughout Cordova Hills including alley loaded, courtyard, and motorcourt configurations will utilize a rear alley for garage access, rather than a conventional, "front loaded," local residential street.

6.5.7 Connectivity

Cordova Hills is intended to include a high degree of connectivity. Connectivity is a measurement of the vehicular, pedestrian and bicycle connections



Connectivity Example

Legend	
●	Pedestrian Connection
●	Vehicular Connection

and directness of the road or trail. A well-connected network will have many short links, numerous vehicular or pedestrian route intersections and few dead-ends; the more intersections, the greater the connectivity. The connectivity index for Cordova Hills neighborhoods is 140 intersections (pedestrian or vehicular) per square mile except where topography precludes connections and in the Estate Village. This criteria is based on USGBC's LEED for Neighborhood Development requirements.

All development will be designed to minimize barriers to pedestrian access and interconnectivity. Passages shall be provided through physical barriers such as walls, berms, landscaping and slopes between residential and non-residential uses that would impede bicycle or pedestrian circulation. All development will be required to connect to the planned bicycle routes.

Barriers to pedestrian access between neighborhoods shall be minimized. All community pedestrian paths and bikeways will connect to the commercial and mixed-use areas within Cordova Hills. In all cases, commercial uses shall provide a walkway from the adjacent parking area and from the bikeway to the primary façade of the main building.

6.6 TRAFFIC CALMING MEASURES

Collector and residential streets will include traffic calming devices to slow traffic and discourage "cut-through," non-resident traffic in neighborhoods. Some of these measures provide shorter crossing distances at intersections, thereby enhancing the pedestrian experience and encouraging people to walk for many routine daily errands and recreation.



6.6.1 Traffic Circles and Roundabouts

Traffic circles and roundabouts may be located at selected intersections of arterial, collector, and primary residential streets and may include multi-lane designs. The specific design of these features will vary depending on the local street configurations and therefore the design will be included in the tentative subdivision map and final map for the affected subdivision. Refer to Figure 6.5.

6.6.2 Intersection Bulb-outs and Lane Width Restrictions

Bulb-outs and lane width restrictions may be used at residential street intersections to slow traffic within neighborhoods. The location and specific design of these features will be addressed in the Tentative Subdivision Map and Final Map for the affected neighborhood. Such features are not mandatory

and will be included at the discretion of the project applicant with the approval of the Director of County Transportation. Refer to Figure 6.6.

6.6.3 Other Traffic Calming Measures

Other measures, such as center islands, diverters, median barriers, speed humps and tables may potentially be used in Cordova Hills; however, such measures are to be included as part of an overall traffic control strategy integrated in the small lot Tentative Map rather than remedial solutions to mitigate poor street design at a later date. Refer to Table 6.2, Traffic Calming Devices and Techniques, which illustrates a comprehensive range of traffic calming devices, including traffic circles and traffic bulbs, previously discussed, that can be implemented at the time of small lot Tentative Map.



Figure 6.5: Typical Traffic Circle



Figure 6.6: Typical Traffic Bulb

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Table 6.2: Traffic Calming Devices and Techniques

Devices and Techniques	Descriptions	Pictures
Bike Lanes	A portion of a roadway which has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists.	
Bulbouts Neckdowns Chokers	Curb extensions at intersections that reduce curb-to-curb roadway travel lane widths.	
Center Islands	Raised islands located along the centerline of a roadway that narrow the width at that location.	
Chicanes Lateral Shifts	Curb extensions that alternate from one side of the roadway to the other, forming s-shaped curves.	
Closures (Cul-de-sacs)	Barriers placed across roadways to completely close through vehicle traffic.	
Diverters	Barriers placed diagonally across an intersection, blocking certain movements.	
Education	Instructions given to the residents on safe on-street vehicle travel.	
Forced Turn Lanes	Raised islands located on approaches to an intersection that block certain movements.	



Table 6.2: Traffic Calming Devices and Techniques (Continued)

Median Barriers	Raised islands located along the centerline of a roadway and continuing through an intersection to block cross traffic.	
Police Enforcement	Involve employing the services of law enforcement agencies to impose the local safe vehicle laws, including those for posted speeds and traffic signal/signs.	
Realigned Intersections	Changes in alignments that convert T-intersections with straight approaches into curving roadways meeting at right angles.	
Roundabouts	Barriers placed in the middle of an intersection, directing all traffic in the same direction.	
Speed Humps	Rounded raised pavement devices placed across roadways to slow and/or discourage traffic	
Speed Tables Textured Pavement Raised Crossings	Flat-topped speed humps often constructed with a brick or other textured material to slow traffic	
Traffic Circles	Barriers placed in the middle of an intersection, directing all traffic in the same direction. Usually larger than roundabouts.	

From

 U.S. Department of Transportation
Federal Highway Administration

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6.7 NEIGHBORHOOD ELECTRIC VEHICLE (NEV) INTRODUCTION

Neighborhood Electric Vehicles (NEVs) offer short range (typically up to 40 miles between charges) and low speed (25 to 35 mph) transportation that is well suited to local community trips for shopping, socializing, recreation, and many other common errands that make up the majority of daily activities outside the home.



Conceptual Alternative Vehicle

6.7.1 NEV Project Concept

A fundamental guiding principle for Cordova Hills is the application of practical, diverse technologies that conserve and manage resources over time. The Cordova Hills community will develop over a period when new technologies for transportation, energy conservation, and communication will become available. The Cordova Hills proponents intend that the community design be flexible to apply new technologies as they become proven, and thereby accelerate the adoption of technologies. For example, the innovative arterial street network can accommodate NEVs and bicycles as well as automobiles.

NEVs will primarily be privately owned vehicles and individual households will make the decision to acquire and use a NEV. NEVs may be provided by the operator of other programs such as ride-sharing or short term rentals.

The NEV program involves providing a setting in which the use of an NEV is a logical, economical choice for residents. The plan will provide suitable roads and intersections, dedicated parking and charging stations at destination land uses to enable residents to use NEVs, but the plan does not include a program to provide NEVs to individuals. The Cordova Hills NEV program emphasizes infrastructure design and land use.

6.7.2 Summary of Benefits

The use of NEVs will create the following benefits to the community compared to use of conventional automobiles for the same trips.

- Reduced use of and reliance on oil for transportation.
- Reduced green house gas emissions.
- Reduced air pollution precursors.
- Reduced parking area requirements at destinations and at multi-family residential uses.
- Reduced lane width could result in lower costs for roads; both initial construction and long term maintenance.
- Increased and dispersed energy storage capacity in the batteries of individual vehicles.
- Ability to charge batteries at night and throughout the day, thereby moderating peak energy loads.
- Ability to charge from dispersed, low power energy sources, such as photo voltaic arrays and hydrogen fuel cells.



- Quieter streets that require less use of sound walls to protect residential areas, and are generally more pleasant.

The use of NEVs includes the following benefits to individuals and households:

- Lower purchase cost will reduce overall household expenses, leaving more discretionary income for housing, food, education and other household needs.
- Lower operating cost per mile.
- Lower speed, limited range vehicles have lower insurance costs.
- Fewer mechanical systems that result in lower repair and replacement costs.
- Quiet operation.
- Easily charged at home with standard 110-volt outlet.
- NEV transportation will provide continued mobility and independence to aging or disabled drivers, allowing them to access local community businesses, medical centers, and visit friends.

6.7.3 Plan Area Site Conditions

The use of NEVs in Cordova Hills is influenced by the site conditions and proposed land use. The key factors are summarized as follows.

6.7.3.1 Scale of the Community

Cordova Hills is a favorable size to support extensive use of NEVs. At approximately three miles from west to east and north to south, the project site is large enough to include most land uses that support daily needs for shopping, entertainment, recreation, housing, significant employment opportunities, and diverse housing opportunities. Yet, the scale of the community is small enough to allow residents to drive from one end to the other in a convenient time.

6.7.3.2 Convenient Location of Shopping and Services

Cordova Hills will include a Town Center Village that provides the major shopping, entertainment and employment district for the community. Located at the west edge of the community adjacent to Grant Line Road, the Town Center will be a hub for all transportation, including future transit opportunities along Grant Line Road and to the west along Chrysanthy Boulevard. NEVs will be able to travel to and within the Town Center on roads posted at 35 mph or less, or along roads with dedicated NEV lanes incorporated in the cross section. Parking areas scaled to NEVs will be conveniently located at major destinations in the Town Center, including a transit hub as described in Chapter 4.

Cordova Hills also includes three neighborhood commercial Village centers: University Village, East Valley Village, and Ridgeline Village. Each of these Village centers will include a mix of shopping, services, entertainment, and employment opportunities. The character of each Village center will vary from the others depending on the mix of residential uses around them. The University Village, for example, will tend to provide smaller shops, informal dining, and services catering to the University / College Campus Center population.

All of the Village centers are within approximately one-quarter to one-half mile walk of the neighborhood market area and are easily accessible from the surrounding street grid. Refer to sub-section 6.11.1: Residential Proximity to Shopping, Schools, Transit, and Parks. They will provide parking dedicated to NEVs close to the primary destination to encourage NEV use. Parking credit ratio for NEV parking stalls to regular parking stalls is 1:1.

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6.7.3.4 University / College Campus Center

The University / College Campus Center will create an unusual opportunity for use of NEVs within the campus as well as to the Town Center and University Village. The Campus Center will also be an attractive destination for residents attending classes and events on campus.

The Campus Center will also generate demand for ridesharing and/or short term car rental programs such as ZipCar and Zimride, discussed in Section 5.3.3, and 6.8.1. Such programs could use a variety of vehicle types, but NEVs would provide a suitable alternative.

6.7.3.5 Terrain

The Cordova Hills site is hilly and will include streets with grades between 3 and 5 percent. In older golf course communities where golf carts have been the primary alternative to automobiles use the relatively lower ability of battery powered vehicles to climb hills has resulted in greater use of gas powered vehicles. However, some NEV models are successfully operated in the streets of San Francisco. Some newer models of NEV advertise the ability to climb 30% slopes which would be a challenge for most conventional automobiles. (Verdek-EV 2010)

6.7.4 Key Issues for NEV Use in the Cordova Hills Community

Cordova Hills will be developed during a time of change. New technologies in transportation and communications will influence the choices individuals make in selecting their daily means of transportation.

The challenge for new community plans is to accommodate conventional automobile travel while setting the stage for transitioning to an alternative system. Automobiles will continue to be a primary mode of transportation, but new communities must be planned to also facilitate and encourage the use of transportation alternatives.

As electric vehicles improve in both speed and range, the difference between a NEV limited to 25 miles per hour and a fully capable electric car will diminish. At some point the NEV could be replaced by another class of electric (or other powered) vehicle that is not limited to certain speeds. Consequently, one of the key design challenges for Cordova Hills is to design a road network that will enable NEV travel throughout the community, and then to transition at some uncertain time in the future to another street configuration that may involve more or fewer lanes suited to low speed, lighter vehicles, or to no limitations on any lanes.

6.7.5 Cordova Hills NEV Route System

Cordova Hills is designed specifically to accommodate NEV operation throughout the community's road network. NEV operation will occur entirely on streets. No off-street routes are provided other than driveways on private lands.

6.7.5.1 Master Routing Plan

The Cordova Hills street system is a modified grid that connects all portions of the community to the Town Center via two main east-west corridors. A grid of collector streets extends out from these corridors to the north and south and fills in the center of the community. Within these collectors a finer grid of local streets will connect homes to the parks, schools, local Village commercial centers, larger collector streets, and pedestrian / bicycle network.



Figure 6.7: Master NEV Routing Plan, illustrates the NEV network for operation and highlights the street segments that include a dedicated NEV lane. NEV operation is also allowed on local residential streets not illustrated in this figure.

6.7.5.2 Streets

Most streets in Cordova Hills will allow the use of NEVs with the exception of those segments of that are west of Town Center Boulevard. The local street system in Cordova Hills is designed to accommodate both alternative vehicles and conventional cars. The routes of local residential streets are relatively direct and provide good connectivity from residences to community facilities and commercial areas.

All streets in Cordova Hills, except those identified as arterial streets in the NEV Routes Master Plan (Figure 6.7) are designed for 35 mph maximum speed, and allow use of NEVs. Those arterial street sections that operate at higher than 35 mph will include a dedicated lane to allow NEVs to operate in all areas of the community.

6.7.5.3 Bike and NEV Lanes

NEV, bicycle, and pedestrian facilities will interface on the minor residential, primary residential, and collector streets within the Cordova Hills. These include Sections 4A, 4B, 4D, 4E, and 2A-3. These streets will be designated with appropriate signage alerting residents to the shared use function of the street and/or separated NEV lanes where necessary.

Bicycles will be allowed to use the NEV lanes on arterial streets, but a separate multi-use trail will be located in the corridor adjacent to the street where a dedicated NEV lane is included.

6.7.5.4 Signs and Pavement Markings

Signs indicating that Cordova Hills is a community where NEVs are common may be placed along streets entering the Plan Area.

Placement of a NEV lane symbol sign will be located at the beginning of each designated NEV lane on arterial streets, at all major changes in direction, at the far side of collector street intersections, and at a maximum of one-half mile intervals. The sign should utilize the NEV symbol.

Placement of the combination NEV/bike lane sign will be located on NEV lanes where a Class II Bike Lane is also provided. The sign should utilize the NEV symbol.

6.7.5.5 Traffic Calming Measures

Traffic calming measures will ensure that all roads, except the arterial streets operate at maximum speeds of 35 mph, thereby facilitating the use of NEVs. Speed bumps, humps and tables may be used in Cordova Hills; however, such measures are to be included as part of an overall traffic control strategy integrated in the Tentative Subdivision Map rather than remedial solutions to mitigate poor street design at a later date. Refer to Section 6.6 of this Chapter for more detail on the proposed traffic calming measures.

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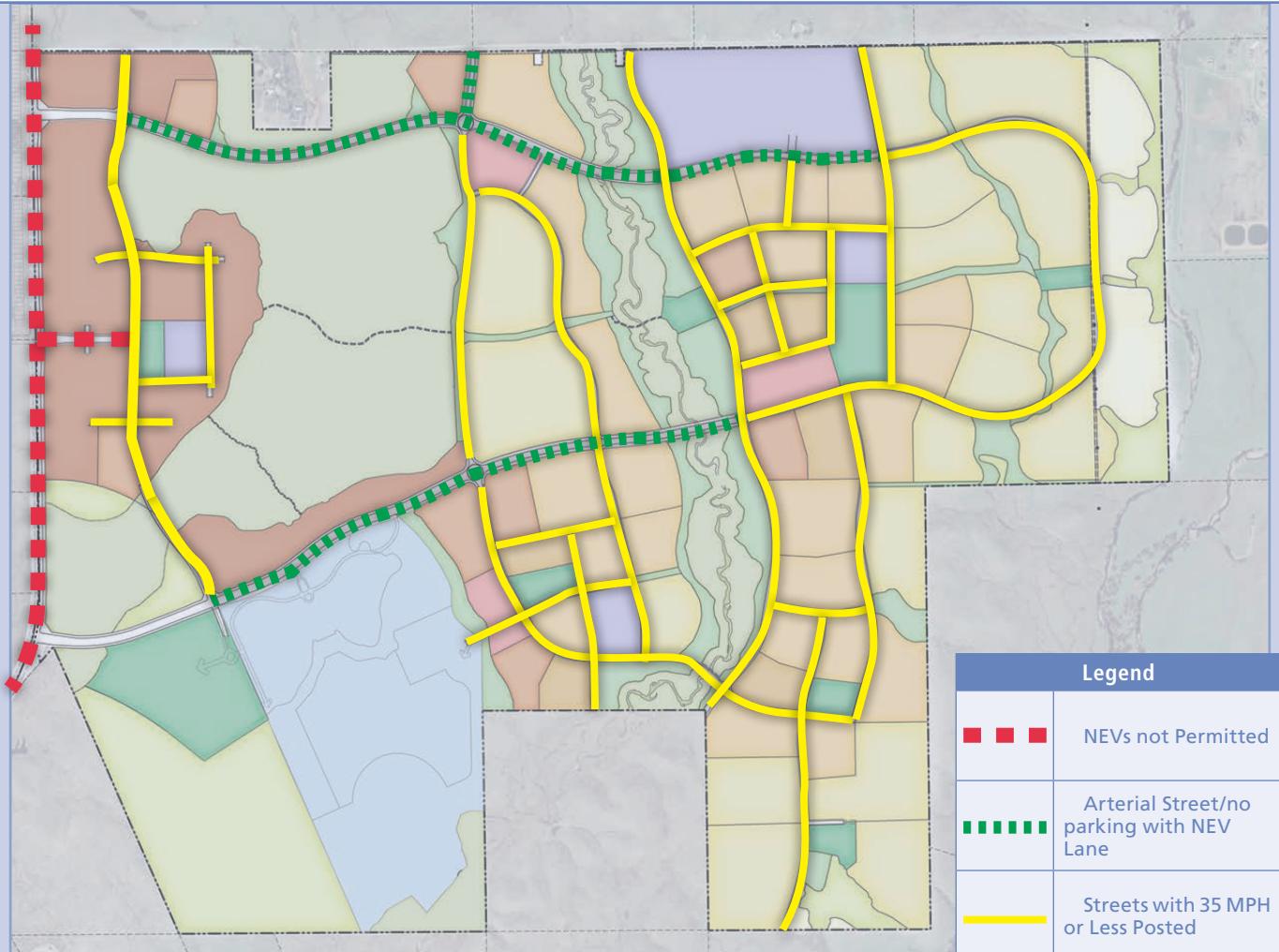


Figure 6.7: Master NEV Routing Plan



6.8 NEV COORDINATION WITH OTHER TRANSPORTATION MODES

NEVs may be a component of car sharing/ ridesharing programs and may be coordinated with public transit stations. Please refer to the Cordova Hills Transit Plan, Section 6.12.

6.8.1 Car Sharing Opportunities

The short range, low speed characteristics of NEVs are particularly well suited to ride sharing and short term rental programs designed to serve well defined areas, such as a master planned community. The following are programs that could be implemented by the community through a CHCSA or Transit Management Association, non-profit organizations, private for-profit enterprises, or any combination of these.

6.8.1.1 Short Term Rental

Short term rental programs involve dispersing a fleet of vehicles in small groups around a community. Individuals who subscribe to the program pay a fee for access to the vehicles and can take a vehicle at any of the locations and leave the vehicle at another, thereby eliminating the need to return the vehicle to the original location. Subscribers can eliminate the need for a personal vehicle for short-range trips within the community.

Such programs have been successful on college campuses and in urban communities throughout the country. "ZipCar" is the most prominent example.

In a community such as Cordova Hills the use of NEVs in a "ZipCar" like program would offer the advantage of small vehicles that can be distributed in several convenient locations. The small size would make it easier to locate a small distribution lot in a number of places. Charging stations at the distribution locations would enable periodic recharging throughout the day.

6.8.1.2 Ride Sharing Programs

Ride sharing programs could also make use of NEVs, either as private vehicles, or in a short term rental program as described above. At the simplest level, ride sharing would occur as it always has: friends, co-workers, or neighbors informally sharing a vehicle to a common destination. The availability of new communications technology combined with GPS tracking ability and the NEVs in a short term rental program opens a new potential for vehicle sharing on a much broader scale, particularly in a college community. Zimride, a ridesharing program on many University and college campuses, is a Facebook application to find one-time rides or create a carpool with fellow Facebook users.

With a subscriber short term rental program as described above, individual subscribers could identify the locations of available vehicles via a GPS locator, plan a trip, and reserve a vehicle for a specific time. Using a program on one of the smart phone applications such as "Zimride," the person could then publish a notice of a rideshare opportunity to a select list of subscribers and thereby share the expense of the trip. There are obvious issues of safety and security in broadcasting one's location and time of travel, as well as inviting others to join in the ride, but presumably these can be managed by controlling the distribution of the message and by monitoring the interaction among users.

In addition to sharing NEVs for short trips, the NEVs can also serve as "station cars" to take people to a park-and-ride lot where they would transfer to a car pool for a commute to a distant job center, shopping, recreation, or cultural event.

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6.8.2 Coordination with Public Transit Opportunities

NEVs are particularly well suited to function as station cars for those who use public transit. The advantages of NEVs include:

- The small vehicles can be parked in compact areas near a transit station.
- Charging facilities can be provided at the stations to charge the vehicles while parked.
- The travel distance of 3 to 4 miles to a transit station or park-and-ride lot is well within the travel range of NEVs.

NEVs would be a logical vehicle for one or two persons to drive to a transit hub in the planned Town Center Village, where a transit connection would convey them to the light rail station at Mather Field Road or Sunrise Boulevard, or to a station along the City of Rancho Cordova's Signature Route on Rancho Cordova Parkway.

6.9 STREETSCAPE LANDSCAPING

The landscaping concept for medians and corridors along arterial roadways will typically feature informal tree and shrub massing grouped in compatible plant communities and include special low impact development (LID) features as illustrated in Figures 6.8(a) and 6.8(b).

Plant communities will transition from a more traditional streetscape planting scheme in the landscape corridors adjacent to the development parcels to a lower profile planting palette with more grasses adjacent to open space.

Streetscape design will include unique, low impact development (LID) drainage features in the street section while incorporating low, dry-stacked boulder walls to support larger plant material in the LID, as illustrated in Figures 6.8(a) and 6.8(b). The portion of the four lane major arterial adjacent to the University/College Campus Center will have a unique LID feature and landscape treatment providing a visual transition to the adjacent open space to the north and the Campus Center to the south.

All streetscape landscaping design along roadways and at intersections shall conform with County Standards for sight line and stopping distance requirements and the height restriction requirements for plant materials along the street and in parkways.

For more information about streetscapes see Section 4.15

6.10 EMERGENCY RESPONSE ROUTES

The major street routes in Cordova Hills are generally constrained by natural open space areas that act as a barrier to connectivity. Thus, the routes for emergency response are more constrained than they might otherwise be in a master planned community of this size and configuration. However, major streets in Cordova Hills are aligned in a modified grid such that all portions of the project are typically not more than one half (1/2) mile from a major street. Interior streets, including collector streets and primary residential streets provide relatively direct emergency access to the center of each neighborhood.

Open space areas are directly accessible in most instances from a public street that abuts the open space.

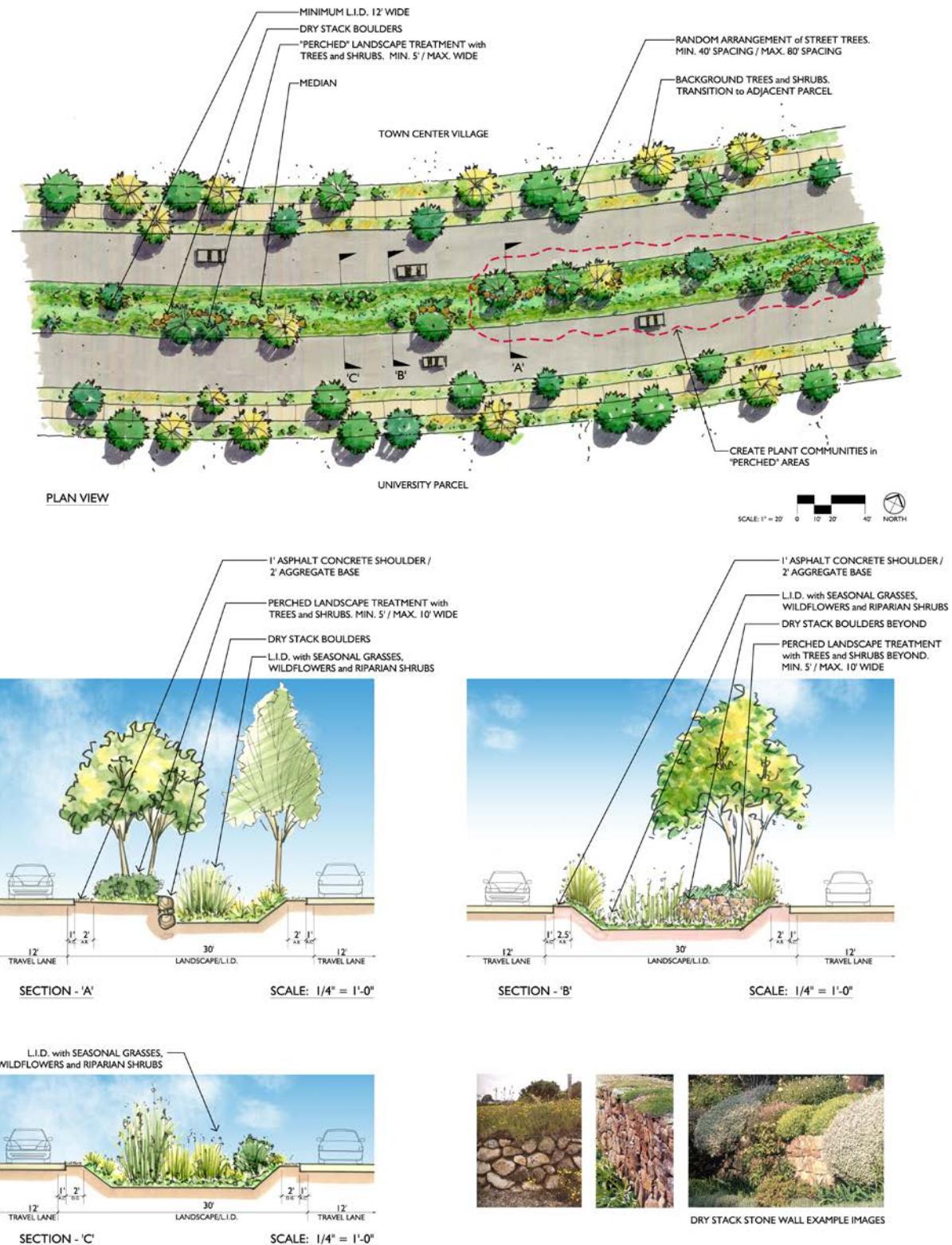


Figure 6.8 (a): Streetscape Concepts for Street Sections 4A-1, 6B-1 and 6B-2

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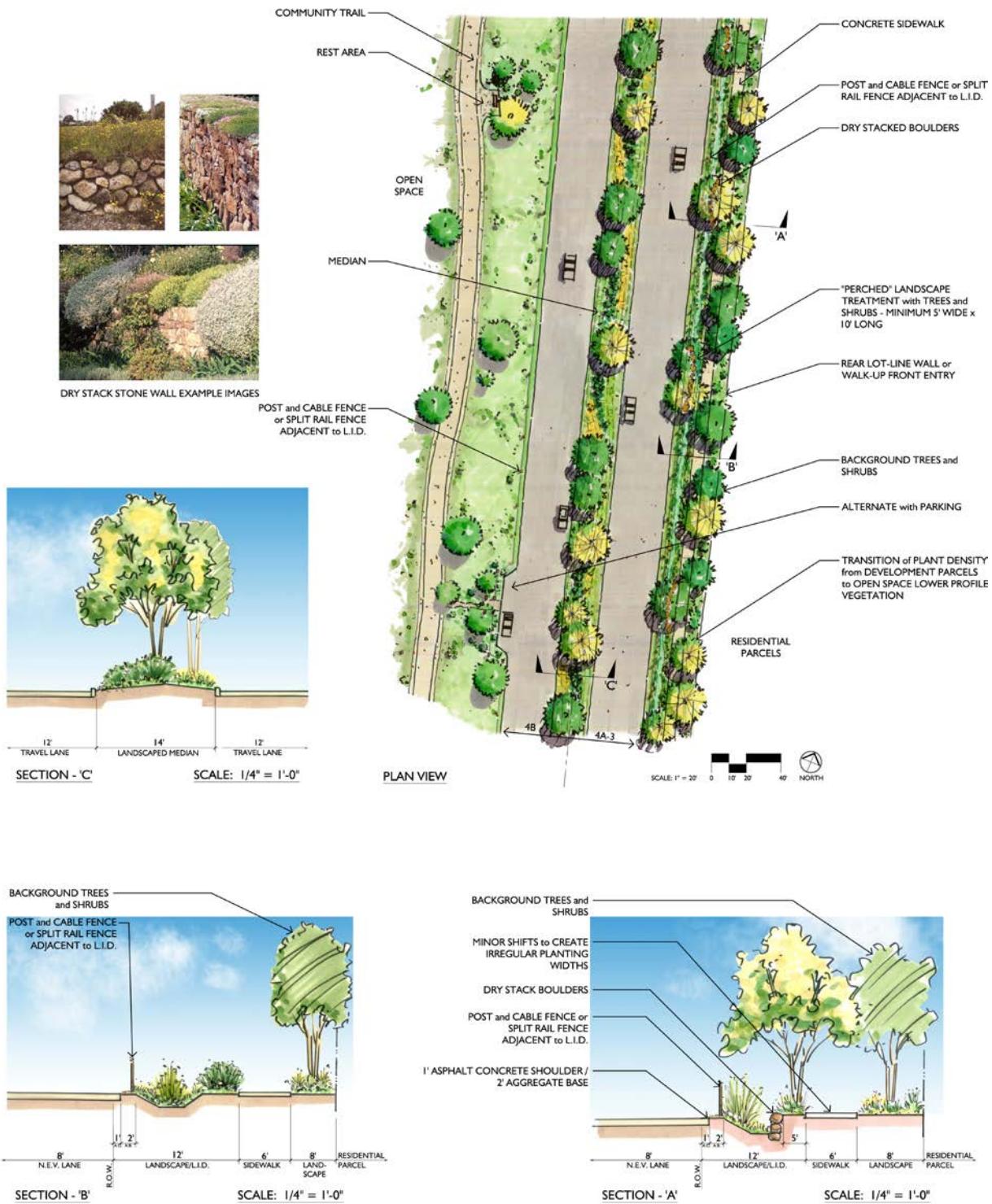


Figure 6.8 (b): Streetscape Concepts for Street Sections 4B and 4A-3



6.11 PEDESTRIAN AND BIKE TRAILS AND PASEOS

Cordova Hills will create an extensive, integrated system of non-vehicular circulation consisting of sidewalks, pedestrian and bicycle trails, and neighborhood paseos. This network will provide multiple routes for diverse, convenient, and interesting connections between all parts of the community, including the residential neighborhoods, commercial centers, schools, and recreational destinations. Figure 6.10 Master Bike and Pedestrian Trail Circulation System, illustrates the linkages throughout the community.

The University / College Campus Center will be a pedestrian and bike friendly component of the Cordova Hills community. Trails within the campus will connect to the community wide trail network and to the regional trail network to provide access for the students, faculty and staff to the retail, entertainment, and services in the Town Center, and to the extensive open space areas near the campus.

The trail network serves three primary functions. First, the network provides ample, convenient opportunities for residents to get out and bicycle or walk throughout the community for recreation and exercise. The network is designed to provide a multitude of interconnected loops so that residents can choose from a variety of routes of different lengths and destinations.

Second, the network is designed to provide safe, convenient and reasonably direct routes from neighborhoods to the primary destinations within the community, the shopping and entertainment centers, and the schools, parks, and Village centers. By providing a convenient alternative it is intended that residents will opt for walking or bicycling rather than using a vehicle for a portion of their daily trips.

Third, portions of the trail network will serve as a significant link in a future regional trail system, linking to the proposed Laguna Creek trail system to the Deer Creek Trail systems.

6.11.1 Residential Proximity to Shopping, Schools, Transit and Parks

In addition to creation of an integrated, extensive pedestrian trail network for Cordova Hills, a key goal of the land plan was to locate key services and community focal points within close proximity of all homes, accessible by pedestrian trail.

Table 6.3 Proximity to Services, summarizes the number of homes in Cordova Hills within a $\frac{1}{4}$ to $\frac{1}{2}$ mile radius of parks, transit, schools and shopping. It clearly indicates a very high percentage of homes in the community within a short walking distance of these services.

Figures 6.9a through 6.9d illustrate the high percentage of community homes in Cordova Hills that will be located with a $\frac{1}{4}$ to $\frac{1}{2}$ mile walk of key community services.

Table 6.3: Proximity to Services

Land Use Category	Total Units	Proximity	Percentage Homes within Proximity
Parks/Paseos/Recreation	8,000	1/4 mile	100%
Transit	7,540	1/2 mile	94%
Schools	6,985	1/2 mile	87%
Shopping	6,720	1/2 mile	84%

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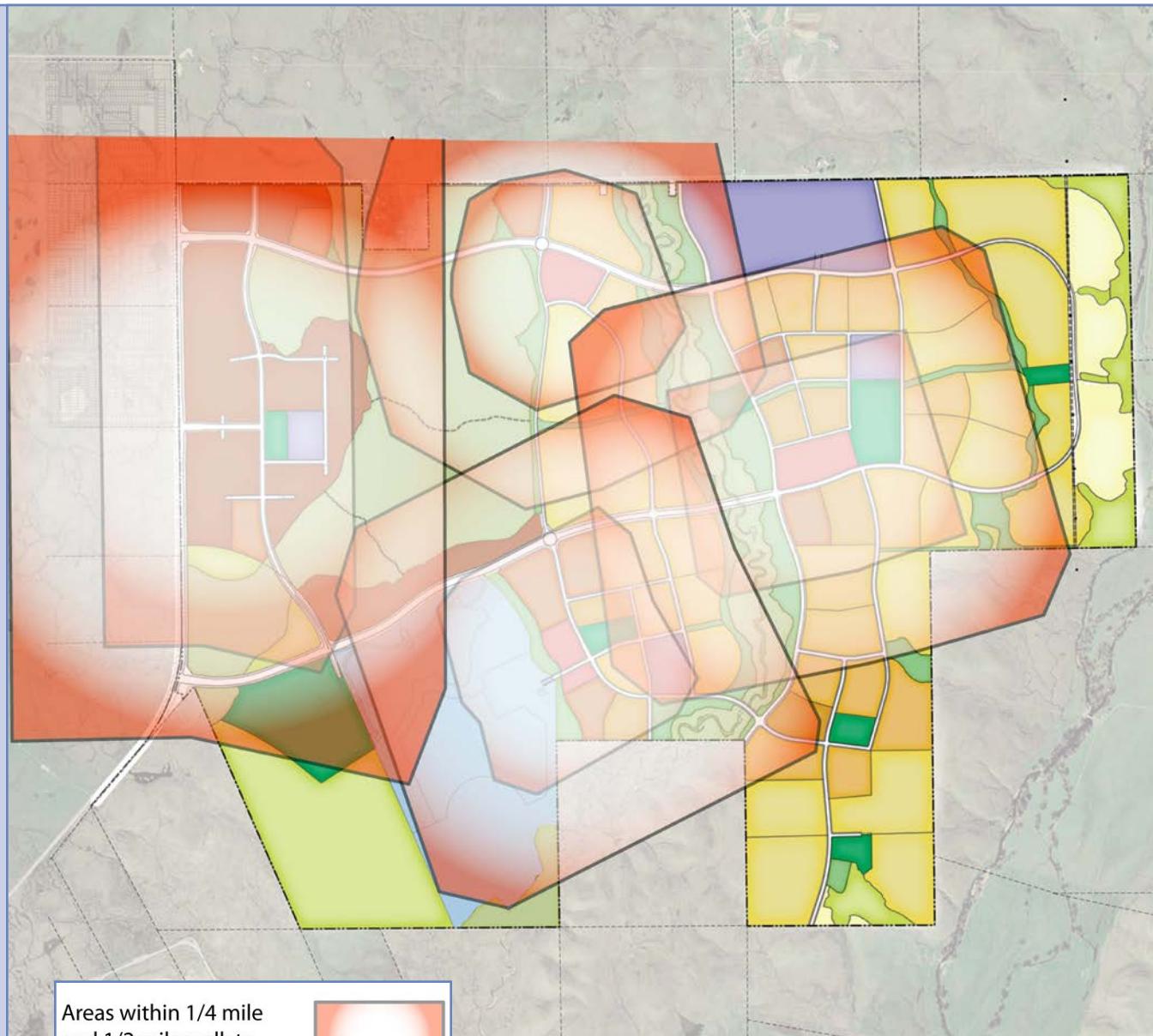


Figure 6.9 a: Proximity to Retail / Entertainment

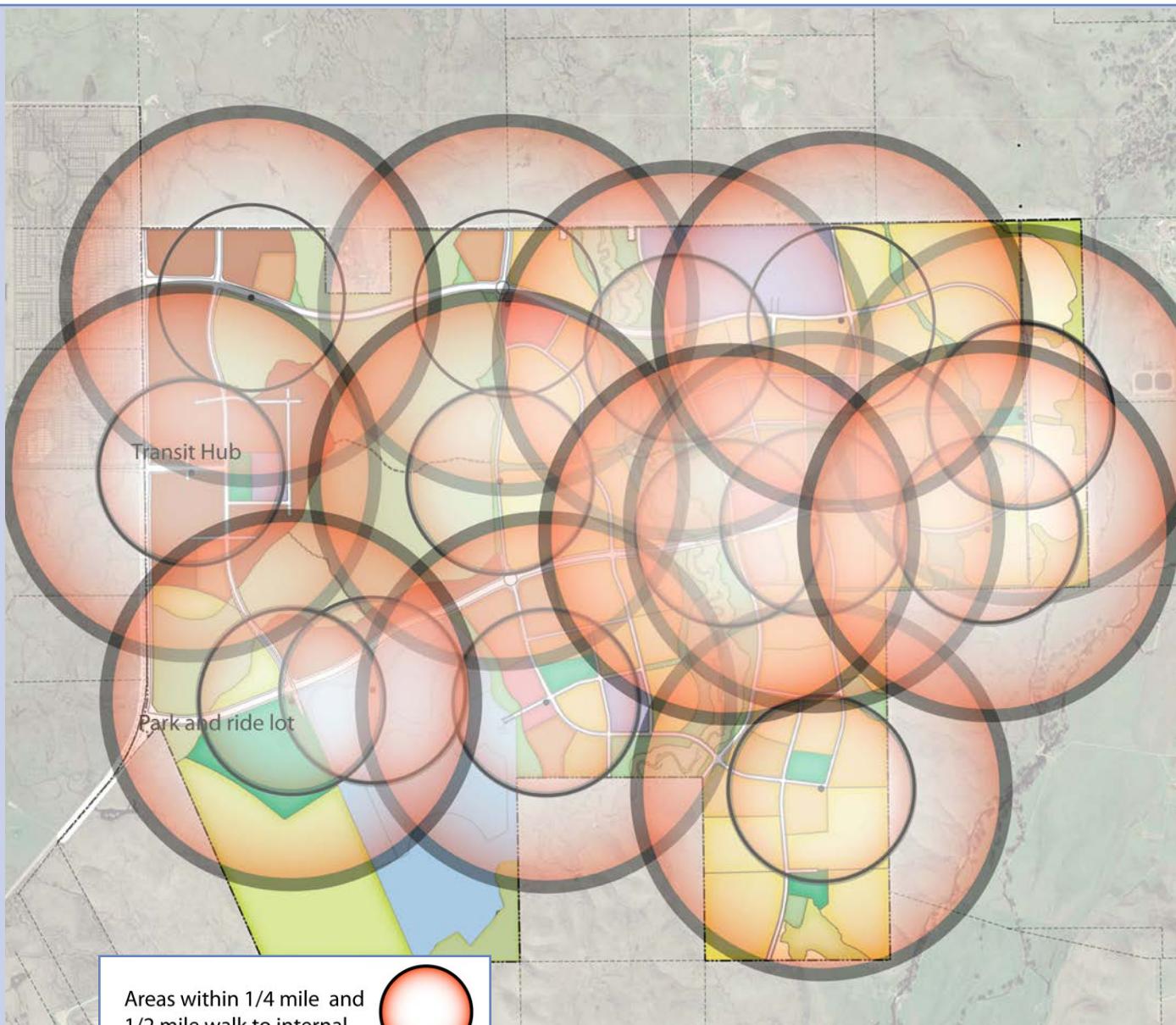
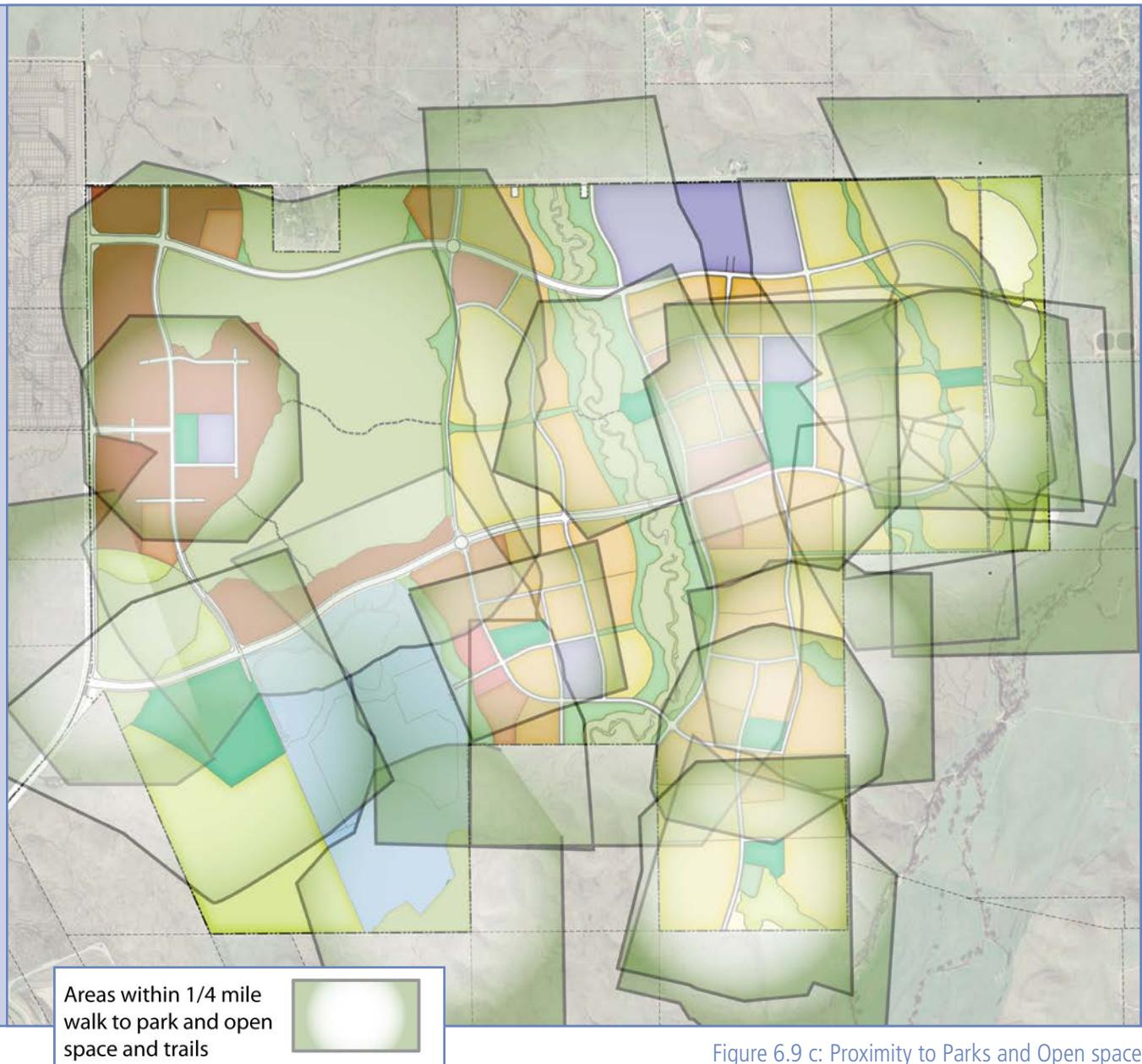


Figure 6.9 b: Proximity to Transit

NOTE: 94% OF HOMES ARE WITHIN A 1/2 MILE OF THE INTERNAL SHUTTLE ROUTE

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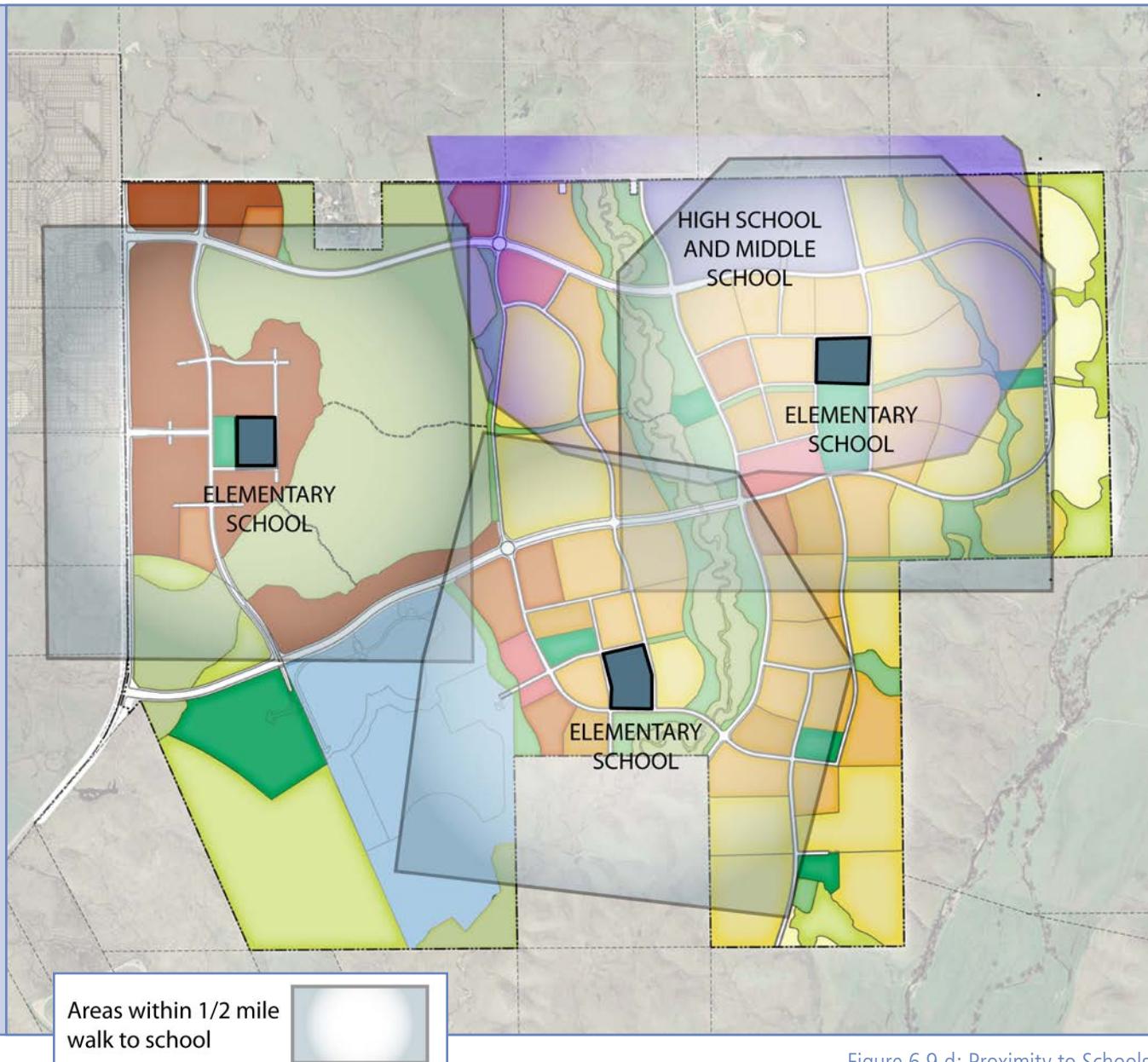


Figure 6.9 d: Proximity to Schools

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6.11.2 Internal Pedestrian and Bike Trail Network

The community pedestrian and bike network will consist of formal sidewalks along streets in various widths and configurations, a Class II bike trail system, 10' multi use trails and, a secondary bike and pedestrian paseo system. The edges of open space areas are directly accessible at the perimeter of the avoided areas. A resident will not have to walk more than approximately 1/4 mile on a street sidewalk to reach a segment of the trail network/recreational opportunity.

The Cordova Hills Trail network includes:

- A total of 74.7 miles of on and off-street Class II bike lanes, trails and paseos consisting of:
 - 27.6 miles of on-street Class II Village and community bicycle trails.
 - 22.3 Miles of Off-Street Trails (Refer to Figure 6.11 a and b: 10' Multi-Use Trails).
 - 4.8 Miles of University / College Campus Center Trails.
 - One (1) pedestrian bridge, one (1) pedestrian underpass (conceptual), and three (3) vehicular bridges with a trail underpass .
 - 20 miles of Paseos (estimated and exact quantities/locations will be determined at small lot tentative map design).

At convenient intervals, all trails will include stopping places that provide shade, seating and a visual focal point, such as a small landscaped area, water feature, or interpretive signage. In some instances the stopping place would be specifically located to provide a view to hilltop landmarks scattered throughout the community, to the distant mountains, or to other visual points of interest.

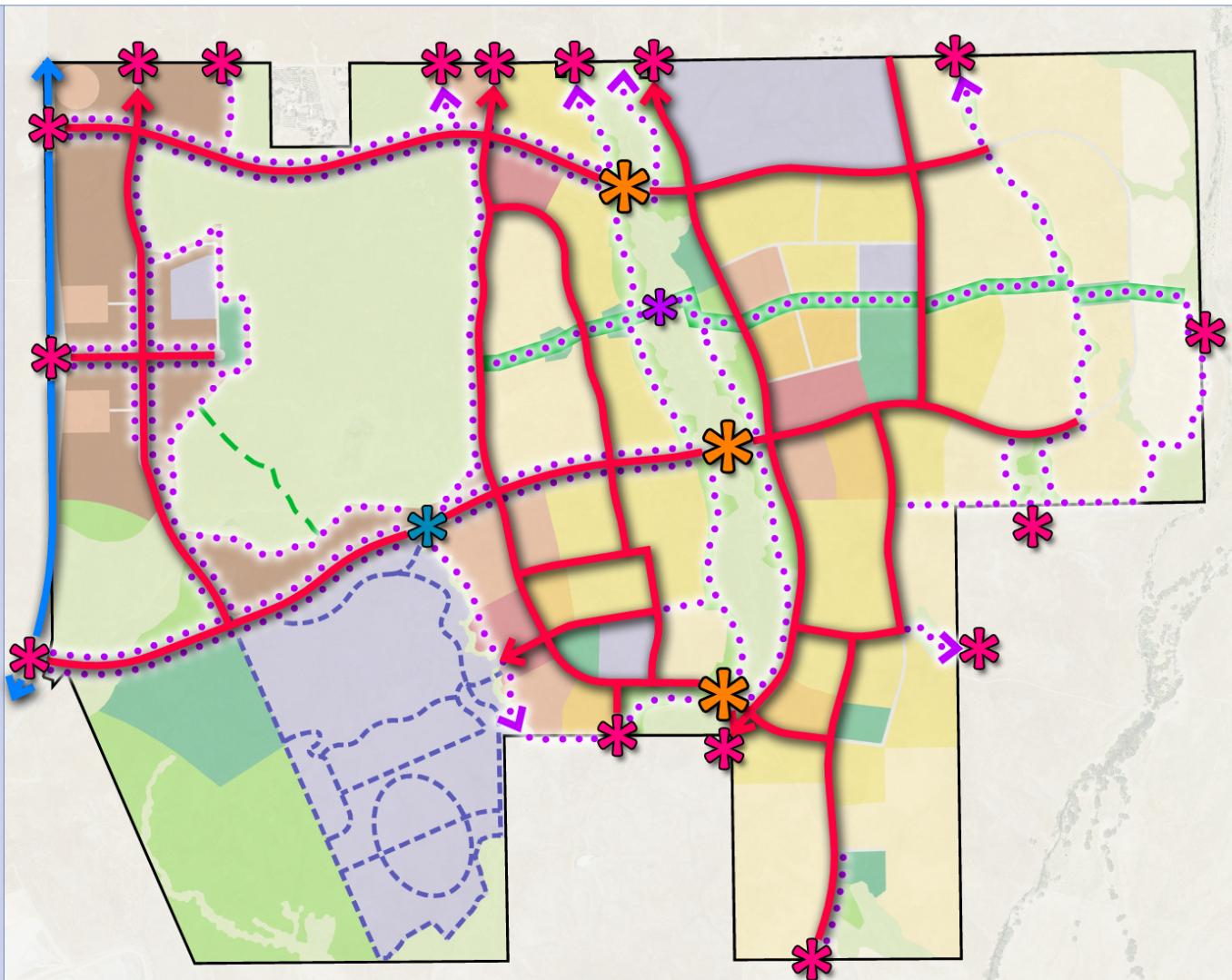
The entire trail network will be signed to indicate the location along a primary route, the distance to the next major destination, and interpretive description of the primary view, where appropriate.



6.11.2.1 East/West Community Trail

A major component of the Cordova Hills trail network is the east/west Community Trail which extends 3 miles from the Estates area at the eastern edge of Cordova Hills to the Town Center at the western edge of the community. Park and open space "destinations" are integrated within the east/west alignment. (Refer to Figure 6.10: Trails Plan) Beginning in the east, the Community Trail extends westward through primarily low density residential to the Community Park in East Valley. This link will intersect the north / south ridgeline trail west of the estates. The trail experience will be more passive in nature, with adjacency to landscaped slopes and residential side yards.

From the Community Park, the trail will extend westward to another 5.3-acre neighborhood park destination atop the east bank of the Paseo Central. This trail segment is more linear in nature, reflecting the medium and higher density housing adjacent to the north and south edges of the trail. From the neighborhood park, a pedestrian bridge extends west over the Paseo Central to the west bank of the creek, to another trail segment extending west to the Main Avoided Area. This trail segment will interface with low and medium density areas.



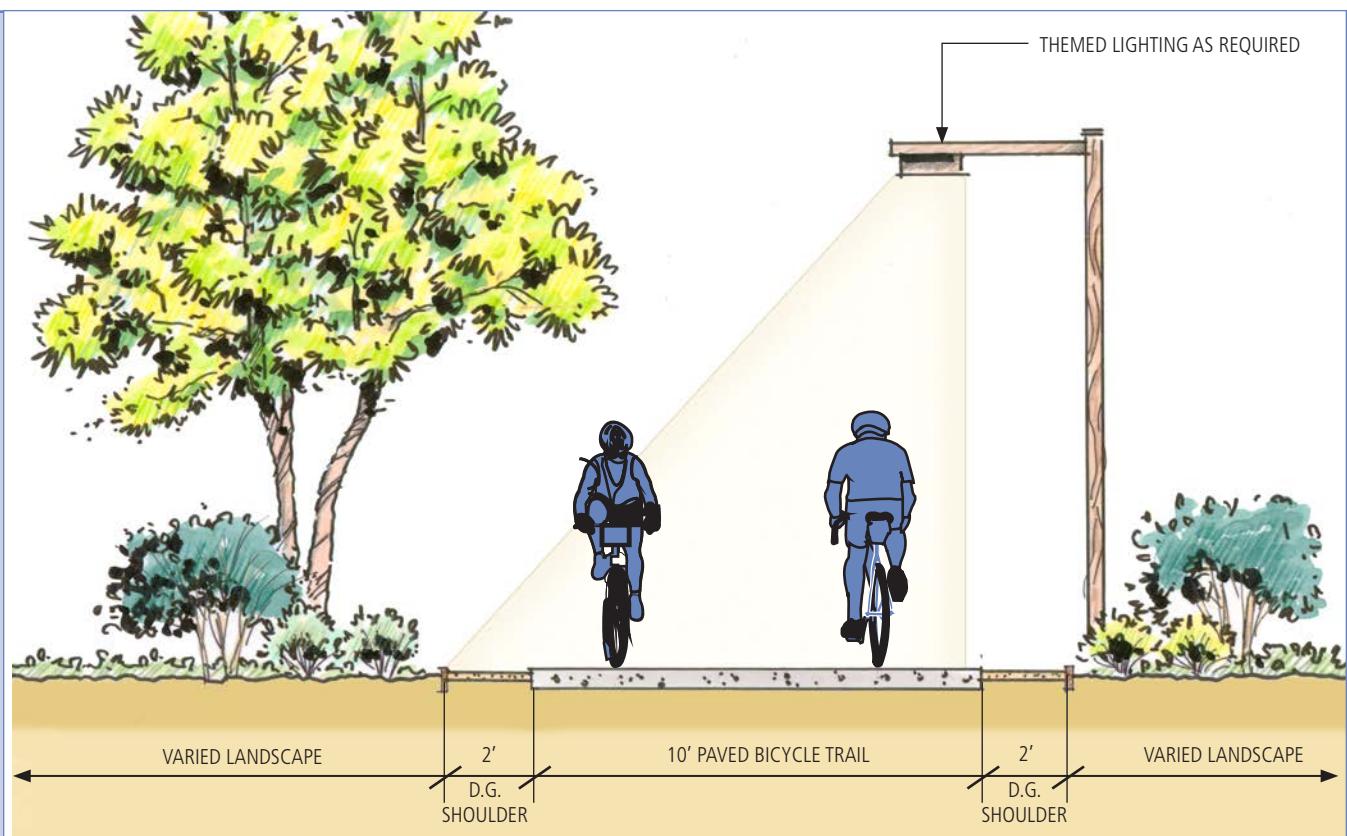
Legend

	Proposed Regional Trail (by others)
	Class II Bicycle Lane (On-Street) (Approx. 28 Miles)
	Off Street 10' Multi-Use Trail (Approximately 23 Miles)
	10' Multi-Use Trails Through Main Avoided Area (On Grade) (Approx. 0.4 miles) Note: See resource Chapter for avoidance trail cross section
	University / College Campus Center (Approximately 4.8 Miles)

Figure 6.10: Trail Plan

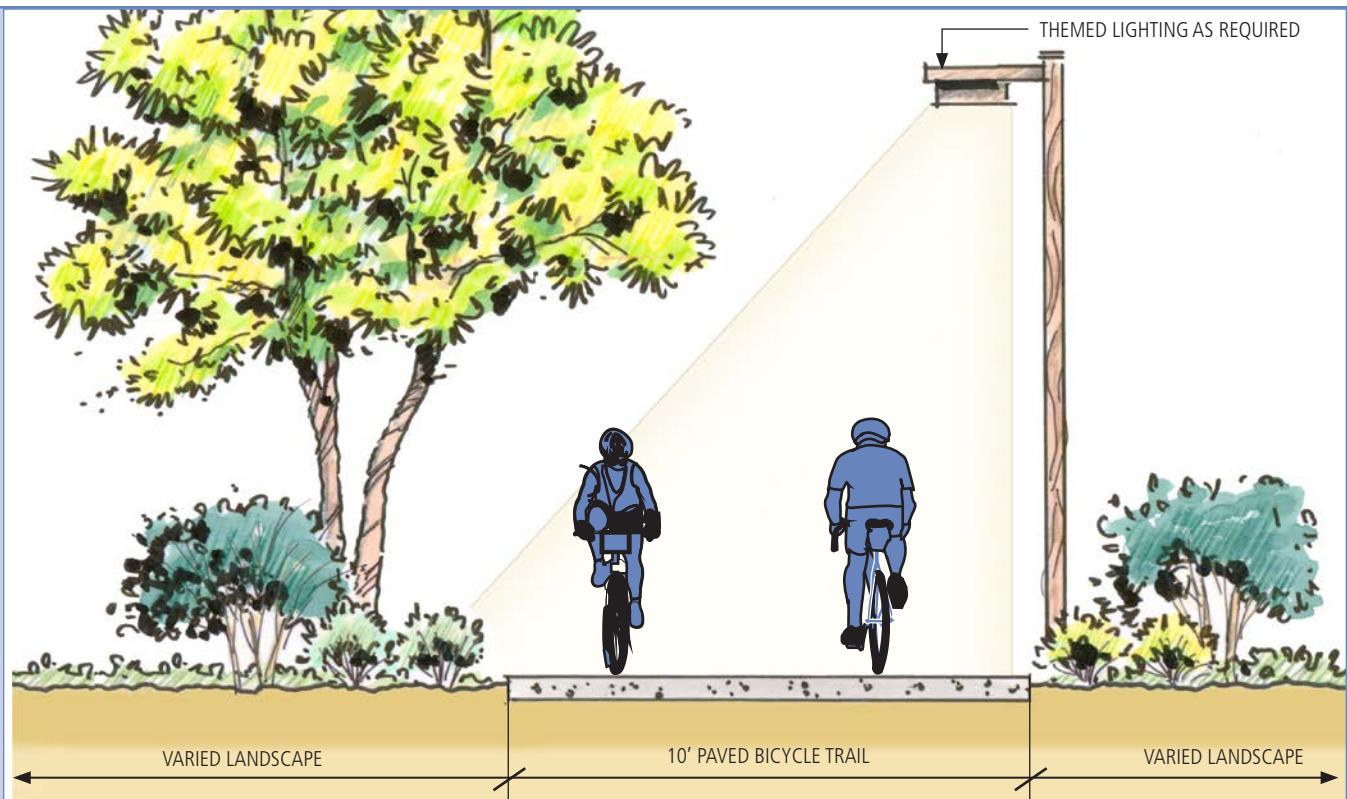
	East West Community Trail
	Pedestrian / Bicycle Bridge
	Pedestrian Underpass
	Potential Future Connection to Existing and Future Off-Site Trails
	Vehicular Bridge with Trail Underpass

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NOTE: OCCURS ADJACENT TO OPEN SPACE AND NON-FORMAL LANDSCAPING

Figure 6.11 a: 10' Multi-Use Trail



NOTE: OCCURS ADJACENT TO FORMAL LANDSCAPING

Figure 6.11 b: Multi-Use Trail (no D.G. shoulders)



Beginning on the east side of the Main Avoided Area, a special Community Trail segment will extend over the Main Avoided Area westward to the Town Center. Refer to Figures 7.3 a-k. This portion of the overall trail will have the longest uninterrupted experience of the vernal pool resource. From the western terminus of this trail segment, another pedestrian trail will lead westward through the Town Center to the Town Center Park and Elementary school.

6.11.2.1 Safe Routes to School

The local street and pedestrian network in Cordova Hills is designed to facilitate walking to school from home. The schools are adjacent to collector, primary residential, or local streets that provide a safe, direct, and convenient route to school. Major street crossings will be avoided as much as possible.

6.11.2.2 Sidewalks and Bikeways Adjacent to Commercial Uses

The community pedestrian trails will connect to all of the commercial and mixed-use areas within Cordova Hills. In all cases the commercial use will provide a walkway from the adjacent parking area and from the bikeway to the primary facade of the main building.

6.11.2.3 Pedestrian Trails and Bikeways in and Adjacent to Open Space Corridors

Within Cordova Hills the trail network will consist of a 10' Multi-Use trails, paseos, and on-street designated bike lanes.

6.11.2.4 Regional Trail Linkages

Cordova Hills is well located to provide a major connection and enhancement to the regional trail system that will connect to the American River Bike Trail at Lake Natomas and a future trail along Deer Creek to the Cosumnes River.

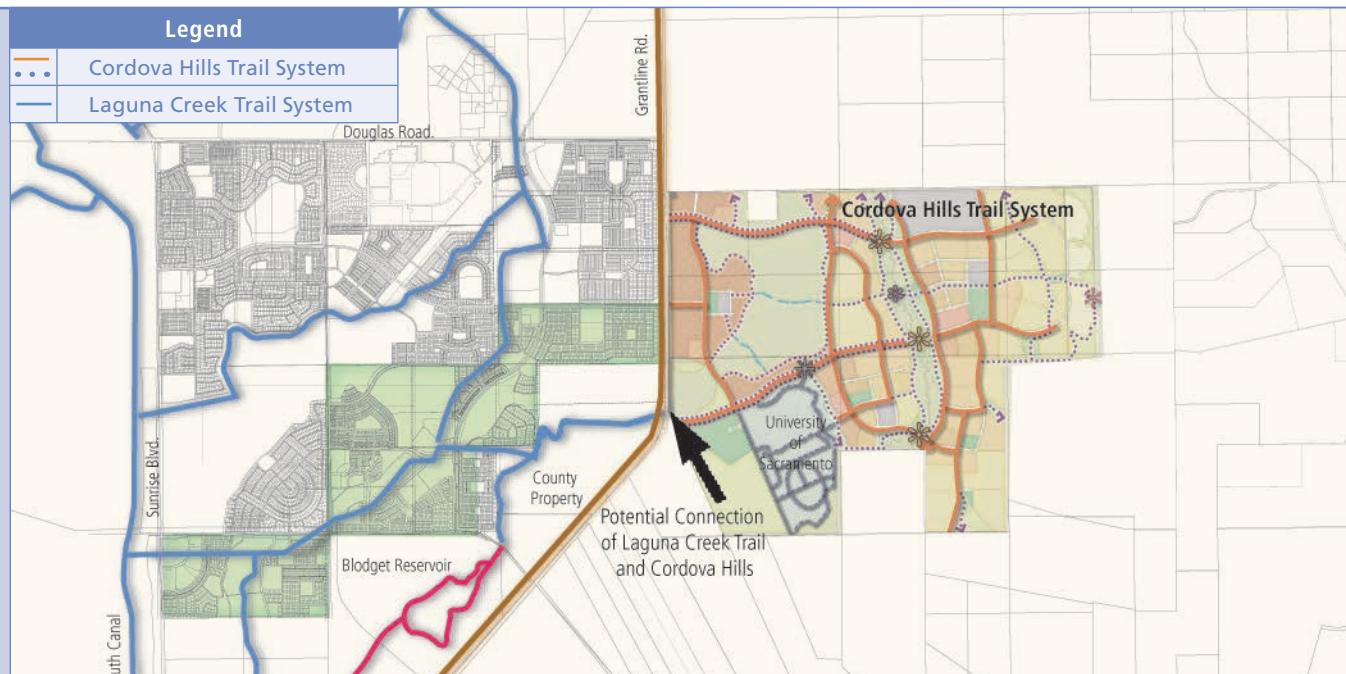


Figure 6.12: Potential Links to Conceptual Regional Bike Trail System

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The trail network would connect across Grant Line Road to the Upper Laguna Creek Trail System. A branch of this trail would extend southwest along the Laguna Creek system to Stone Lake along the Sacramento River. A second branch would extend west and connect to a bike trail along a tributary to Laguna Creek and would connect to the Folsom South Canal Bike Trail near Kiefer Road. This trail extends and connects to the American River Bike Trail.

6.11.3 Paseos

Paseos include a variety of small pedestrian and bike routes not located adjacent to streets, and are a major component of the pedestrian and bike connectivity throughout the plan as discussed in Section 6.5.7 of this chapter.

The local street system is designed to give dominance to local paseos and major pedestrian trails. In neighborhood design the priority is given to pedestrian and bike circulation rather than vehicles. Consequently, the new urbanist approach to pedestrian circulation that relies primarily on local streets is supplanted by a system that emphasizes pedestrian routes over streets. As illustrated in the Conceptual Pedestrian Paseo Linkage graphic this means that streets will give way to pedestrian routes. Paseos will be dispersed throughout the Villages providing connections between the neighborhoods and the 10-foot multi-use trails found in linear parks, natural open space, drainage ways, or linear detention and water quality swales.

Paseos may also be connected to parks, schools and commercial areas and a major component of the pedestrian and bikeway connectivity through the plan addressed in Section 6.5.7. Paseos should provide reasonably direct connections that link all commercial uses, schools, and neighborhoods and 10-foot multi-use trails and paseos. Paseos should be reasonably direct and provide the shortest practical distance between destinations.

The Paseos are not defined at this point in time and will be determined during the design of small lot tentative maps. It is estimated there will be 20 miles of paseos throughout Cordova Hills.

Based on a connectivity standard of 140 intersections noted previously in this chapter, it is estimated there will be approximately 20 miles of paseos. The design criteria for paseos include the following:

- Paseos shall be designed in concert with the street network to ensure pedestrian and bike connectivity.
- Paseos shall be provided in at least 90% of the cul-de-sacs to connect to adjacent streets, and trails.
- Paseos are encouraged to be 20 feet wide with 6 to 8 feet of paving and 12 to 14 feet of landscaping.
- Where walls are required along arterial and collector streets, a paseo connection shall be provided to allow relatively direct routes between the adjacent neighborhood or destination and the street.
- Paseos design will depend on location, gradient, cross slope, nearby land uses, and primary destination for a particular route. Design details will be established at the Tentative Maps process.



Conceptual Pedestrian Paseo Linkage



- Paseos should be generally visible from nearby street and homes along the route.
- Paseos shall include trees for shading where practical and be landscaped in a manner consistent with the adjacent use.

6.11.4 Trail/Paseo Lighting Guide

The entire internal trail network in Cordova Hills will be lighted, to enhance, security and public safety. Lighting levels will vary depending on local trail use, site conditions, and adjacencies, and any potential land use impacts (i.e. adjacent residential or commercial use). Conceptual trail lighting for the trail network will generally consist of the following:

- Class II (on-street bicycle lanes): Lanes will be lighted with arterial, collector or local street lighting systems, per the applicable street design standards.
- Off-Street Multi-Use Trail – Lighting will be provided for public safety at trail intersections, entrances to facilities or major use areas, parks/recreation. Some “spill over” of light from adjacent uses can be anticipated, to add to the overall lighting effect.
- Paseos: Lighting will be provided for public safety at paseo intersections, entrances to facilities or major use areas, parks/recreation. Some “spill over” of light from adjacent uses can be anticipated, to add to the overall lighting effect.

In general, security lighting in off-street trails will be low-level in design, in keeping with the desired, overall passive open space aesthetics and character. Trail lighting within or adjacent to Avoided Areas shall be designed and maintained consistent with the requirements of the applicable environmental agency and South Sacramento Habitat Conservation Plan (SSHCP).

6.12 TRANSIT PLAN

Cordova Hills proposes including a local transit shuttle system consisting of two distinct, but coordinated routes. An internal route will operate around a loop within Cordova Hills. An external loop will provide a connection to the Mather/Mills LRT station. The loops can operate independently with a transfer hub in the Cordova Hills Town Center, but the routes are coordinated so that they can operate as a single continuous route with no transfer required.

The planned system would feed to Sacramento Regional Transit (RT) system, but would not be part of RT. The Cordova Hills system would be operated by a service operator under contract to the CHCSA. The CHCSA would also provide TMA services or contract with another TMA for management of the shuttle system. The internal services may include a range of rideshare initiatives, travel demand management methods, and alternative mode promotional activities undertaken by the Cordova Hills TMA.

The transit system described in this section reflects the full development of Cordova Hills. However, the shuttle system will begin with limited services that may involve only an external shuttle to the Mather/Mills LRT station. The Cordova Hills County Service Area Board of Directors and General Manager of the transit system for Cordova Hills will assess the appropriate extent of phase 1 and subsequent phases of the transit routes; timing will be based on funding and current ridership. This transit plan is a guide for the CHCSA to follow. As the community grows the transit plan envisions that the internal shuttle system will be expanded to an internal loop system. The internal loop will expand with community along the primary street system, a modified grid form that allows flexibility for routing to serve the greatest number of potential riders.

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The key to the system is to coordinate with the Mather Mills LRT station. Trains there operate on 15 minute headways and the east bound and west bound train departures are only one minute apart, so it is easy to coordinate a single bus at the station for both in-bound and out-bound passengers. Dowling and Associates, Inc. calculates the planning time (the time allowed for a complete circuit) of both the external loop and the internal loop at 45 minutes. This provides a great deal of flexibility with routing and schedules to match the LRT schedule. One scenario is that a bus leaves the Town Center in the morning in time to catch the 7:04 LRT. It then returns to the Town Center and either goes back to the LRT or does a single loop through the community, and then goes back to the LRT. Because

each complete circuit takes 90 minutes, a single bus can be at the LRT three times in 3 hours. Three buses would provide 15 minute headways on the external loop.

The transit system is planned to operate 365 days per year with a full schedule on weekdays, and a reduced schedule on weekends and holidays. The internal loop would operate on a 30 minute headway at all times per day, rather than a 15 minute headway that occurs during peak hours on normal weekdays. The external loop operates 365 days per year, but on weekends and holidays would only provide a single bus on a 45 minute headway at all times per day, rather than a 15 minute headway that occurs during peak hours on normal weekdays.

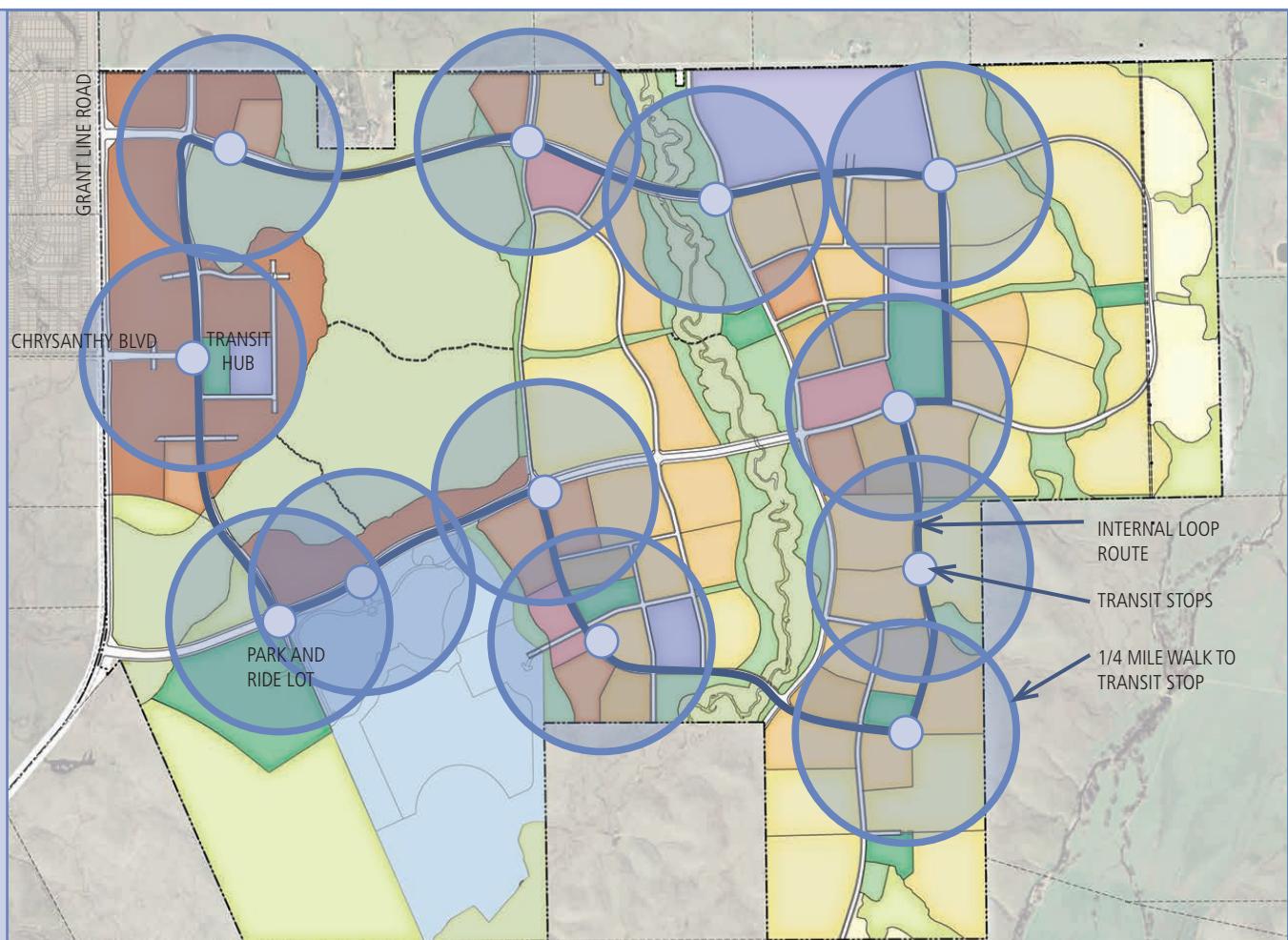


Figure 6.13: Internal Transit Shuttle Route



6.12.1 Summary of Operations

The operation for both the internal loop and the external loop at full build out of the community and the first phase only is summarized in Table: 6.4. The summary includes the total vehicle hours of operations per day and the total hours of operation under peak and non-peak hours and at full build out and Phase 1 only.

6.12.2 Internal shuttle

Headways would be 15 minutes during peak hours and 30 minutes during all other times of the day. Walk access distances to transit stops will be designed in the location of primary roads, pedestrian ways and the location of major destinations and housing areas to achieve $\frac{1}{4}$ mile distance at maximum. Transit service will provide "timed transfers" or continuous loops to minimize the need for transfer between the internal shuttle and external connection to the LRT station. The recommended service characteristics for local service are shown in Table 6.4.

The plan assumes two 3 hour peak periods; in the morning (6:30 to 9:30) and in the afternoon (3:30 to 6:30). The system would operate from 6:00 AM to 9:00 PM every day (starting with an internal loop first). Three hour blocks for peak hour will be very

Table 6.4: Proposed Service & Operating Characteristics for the Internal Transit Shuttle

Hours of operation	6 AM - 9 PM
Days of operation	Everyday
Peak Frequency	15 minutes
Off Peak Frequency	30 minutes
Percent of Residents within $\frac{1}{4}$ Mile	75%
Average Speed (including stops)	10 miles per hour
Distance (miles)	6.1
Cycle time (min)	37
Planning time (min)	45
Target Headway (min)	15
Vehicles Required	6

Dowling 2010

efficient because the basic route time is 45 minutes for both the internal and external loops (four loop increments per peak hour block).

The route for local service would consist of a loop which would connect the Town Center Village with the medium to high density residential development in each of the Villages, as well as the high school/ middle school, the commercial centers, the Community Park, the University / College Campus Center, the Sports Park and park and ride lot. The route can operate in either a clockwise or counter-clockwise direction that would begin at the planned transit center located on Chrysanthy Boulevard. From Chrysanthy Boulevard, the route moving in a counter-clockwise direction would continue south along Town Center Boulevard toward the park-and ride-lot and then head east onto University Boulevard running past high and medium density residential, then south into University Village, then head into Creekside Village, then head north where it would connect with North Access Loop, and finally back to the transit center. As the community develops Ridgeline, East Valley, Creekside and University Villages buses would initially run in a single direction. As the population and ridership increases buses would be added to run in both directions on the loop. The distance of this route is approximately 6.1 miles.

Three buses going in one direction would provide 15 minute headways and a rider could transfer to the external buses at the Town Center, or the same bus could just continue on the route to the LRT. In this scenario there would be no need to transfer and the buses internally would travel only in one direction. The direction of travel on the internal loop is not that significant because the distances from the Town Center are not great, which ever direction you go, so the time loss from boarding along the "wrong" end of the route is not that great a penalty. Furthermore, the distance from north to south in the main body of the community is not great, so a rider could justify

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walking across to the nearest stop if time was an issue. Initially, the internal loop would begin at the Town Center and go clockwise around the route. At the earliest part of the route any passengers from north of Chrysanthy Blvd. could easily walk to the Town Center and catch the bus as it leaves the community. The population along the first (North Loop) part of the route is relatively low because of the large Avoided Area. Population generally increases moving in a clockwise direction and would be greatest near University Village, the University / College Campus Center, and the park and ride at the Sports Park, so for those passengers the ride time would not be much longer than the external leg of the trip. In the afternoon the route would run counter-clockwise, to drop off the largest number of passengers first.

The bus stops along the route would be spaced at $\frac{1}{4}$ to $\frac{1}{2}$ mile intervals and at all major cross streets. Each bus/van stop would have a covered shelter and benches.

The operating characteristics for the route are shown in Table 6.4. Cycle time refers to the time needed for a bus or a van to complete a one-direction run on the loop. The assumed average run time is 10 mph including stops. Actual run times will depend on the number of passengers boarding and alighting at each stop. Planning time includes cycle time plus a buffer for breaks, etc. rounded up to the next headway. Table 6.4 indicates that 6 buses would be required to achieve a 15 minute headway if the single internal loop route operates in both directions concurrently. As discussed elsewhere in this plan, the peak hour buses could operate in a single direction only on the internal loop, in which case only three buses would be required during peak hour operations.

Note: This service level is appropriate for build out of the community. Less intense service may be appropriate in the earlier years of community development.

The planning time divided by the target headway and multiplied by the number of directions operated on the loop (one direction initially, or two-way), gives the number of buses or vans required.

6.12.3 External Link to LRT and Bus Routes

Initially, Cordova Hills will be approximately 7 miles from the nearest fixed route, regularly scheduled transit service. A shuttle service between the Cordova Hills Transit Center and the Mather/Mills Station on the RT Gold Line light rail line provide a linkage to those services from Cordova Hills. The external link would be the initial service in Cordova Hills and would serve the Town Center Village and the University / College Campus Center. The area of this first phase is small enough that the initial transit system can serve both of these core areas by a simple extension of the external route. As the Cordova Hills community grows to the east beyond the main Avoided Area the internal loop system described above will be initiated.

As Rancho Cordova and the surrounding areas develop and transit service is extended out towards Cordova Hills, the need for the shuttle will change and potentially diminish. The establishment of Grant Line Road as the Southeast Connector may bring high speed, high quality transit service literally to the front door step of the Cordova Hills community.

Table 6.5: Proposed Service & Operating Characteristics for the External Transit Shuttle

Hours of operation	6 AM - 7 PM
Days of operation	Weekdays
Peak Frequency	15 minutes
Off Peak Frequency	60 minutes
Scheduling	Timed transfers with LRT & RT service at Mather Field Road Station
Average Speed (including stops)	30 miles per hour
Distance (miles)	17.3
Cycle time (min)	35
Planning time (min)	45
Target Headway (min)	15
Vehicles Required	3

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Contemplated External Transit Service Criteria

Headways should be 15 minutes during peak hours and 60 minutes during all other times of the day (see Table 6.5).

Most customers that will be using this service will be peak period commuters. Therefore, during non-peak hours the demand will be lower and headways are extended to 45 minutes. People using this service during non-peak hours are likely to be "lifeline" customers versus elective riders. The non-peak period headway could be shortened if there is more demand from local residences.

The service should deliver passengers directly to the major employer or the transit station where they will be transferring to other services. The off-site service should be scheduled so that "timed transfers" with the LRT Gold Line occur at the Mather/Mills station.

Speed is crucial for longer distance shuttle services, such as those recommended between Cordova Hills and the Mather Field Road LRT station. Thus it is recommended that a target speed for the service of 30 mph be set, including intermediate stops.

Recommended External Shuttle Route

One route for external service is recommended and the service is designed for residents and employees of Cordova Hills. In general the bus route would take residents between Cordova Hills, major employment areas, and the Mather Field light rail station. The route would depart the planned transit center located on Chrysanthy Boulevard, head west on Chrysanthy Boulevard, north on Rancho Cordova Parkway, west on Douglas Road, northwest on Mather Boulevard, north on Whitehead Street where it becomes Mather Field Road, and a final stop at the

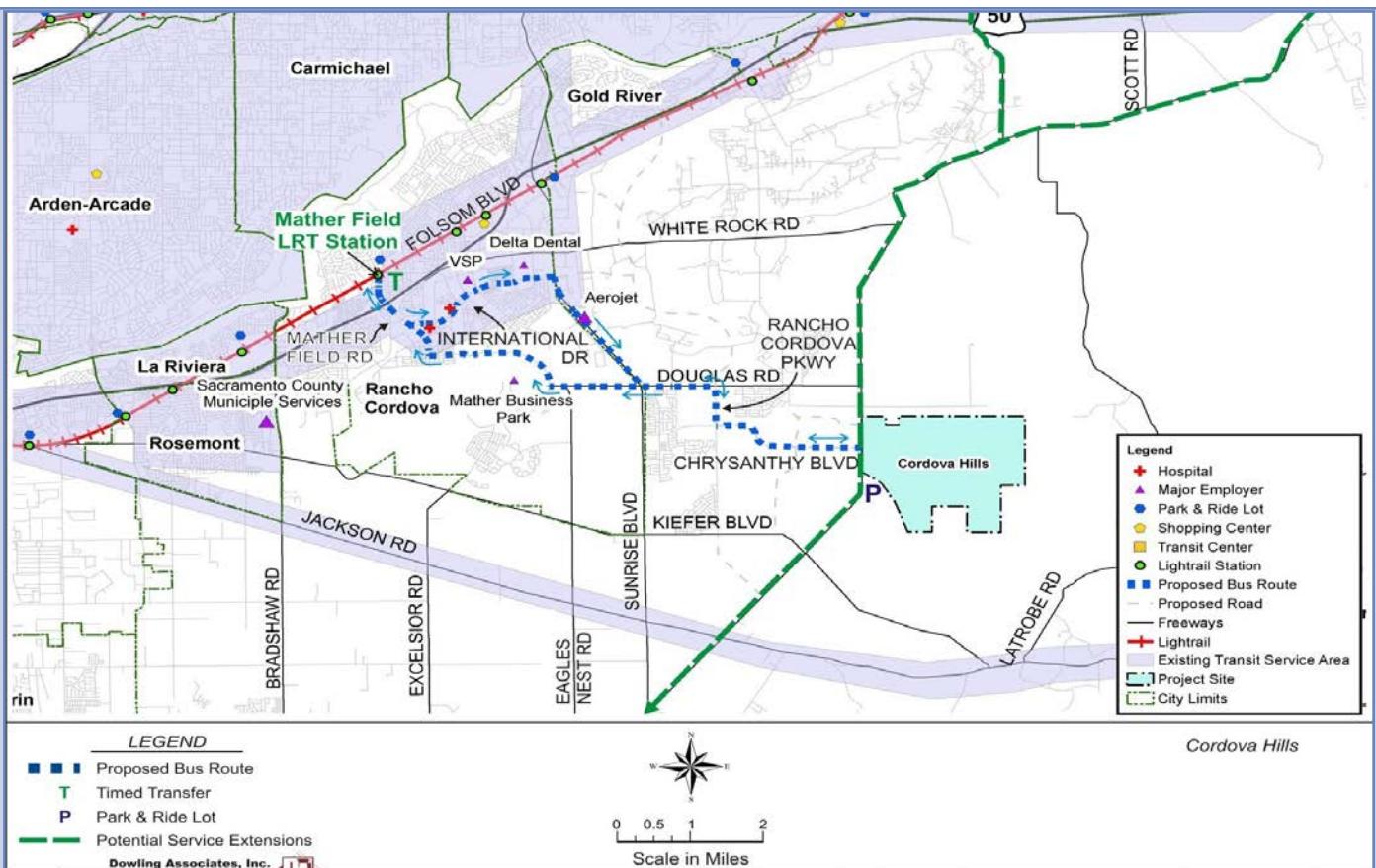


Figure 6.14: External Transit Shuttle Route

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Mather/Mills light rail station. This would be a “timed transfer” such that the bus schedule would be in coordination with the Gold Line light rail schedule. On the return trip the route would continue from the Mather Field light rail station and head south on Mather Field Road, east on International Drive, south on Sunrise Boulevard, east on Douglas Road, south on Rancho Cordova Parkway, and then east on Chrysanthy Boulevard. The distance of this route is approximately 17.3 miles.

This route would operate similar to a Bus Rapid Transit (BRT) route. There could be approximately two or three stops in addition to the stop at the Mather/Mills light rail station. These stops would be on the return leg of the external loop and would serve employment centers and health service centers, as well as commercial centers distributed along the return route. These stops would be coordinated with and approved by Sacramento Regional Transit, to avoid any duplication of service or conflicts.

The operation of the Cordova Hills shuttle, including access to and operations within the Mather/Mills LRT station, is subject to approval by Sacramento Regional Transit.

The assumed average speed of 30 mph includes stops. Actual run times will depend on the number of passengers boarding and alighting at each stop. Planning time includes cycle time plus a buffer for breaks, etc. rounded up to the next headway. The planning time divided by the target headway, gives the number of buses or vans required.

6.12.4 Implementation and Operations of the Transit Shuttle

The Cordova Hills transit will be a service provided by the proposed Cordova Hills County Service Area (CHCSA). This service area will provide a range of services including parks and recreation, landscape maintenance, and others in addition to providing transit and serving as the Transportation Management Authority for the community. The Cordova Hills Local Services District will provide funding for the shuttle system through a special tax and student transit pass fees. The district will contract with a transit operator for the buses and drivers. The district will own and maintain the transit shelters and signage, and routing information in real time through a community communications network.

6.12.5 Buses and Parking

In the early years, the routes might be operated with smaller vans. As marketing efforts take off, the frequency of service and hours of operation can be increased. Larger vans or buses may be contracted as the popularity of the service increases.

The Cordova Hills Cordova Hills County Service Area (CHCSA) will provide overnight parking for the shuttle bus fleet. Ultimately, the bus parking will be located at the Service District Corporation Yard which is planned in the bufferlands, adjacent to the Regional Landfill. This corporation yard will also serve the park and landscape maintenance functions of the service area. Until the corporation yard is available, buses may be parked overnight on an interim basis at the Town Center commercial area and/or the park and ride facility in the Sports Park area.



6.12.6 Bus System Design Standards

Bus turnouts, shelters, stop locations, signage and lighting, and Transit Centers shall comply with Sections 3 through 13 inclusive in the Regional Transit Design Guidelines for Bus and Light Rail Facilities, January 2005.

6.12.7 Access to Regional Transit Facilities

The Cordova Hills CSA transit system is designed to directly connect to the RT Mather/ Mills Transit Station. The CHCSA will request permission from Regional Transit to access the station with the transit system buses and will comply with design standards and operational standards prescribed by RT.

6.12.8 Promotion of the Transit Service

The Cordova Hills County Service Area TMA will promote the transit center that will be located on Chrysanthy Boulevard.

Promotion will consist of making residents, employees, students, and visitors to Cordova Hills aware of the transit services available at the transit center. This information may be provided through the TMA website, flyers distributed to employers and the University / College Campus Center, mailers to residents, and kiosks located in the transit center, the Campus Center, and surrounding commercial center.

There will be pedestrian friendly transit parking within the transit center that is co-located in the commercial area. The transit center will accommodate all modes of transportation such as public and private transit operators, bicyclists, and taxis, etc.

6.12.9 Resident and Employee Access to the Shuttle Service

All residents of the community and employees at businesses in the community would have a pass that allows them to ride without paying a fare box. People outside the community could buy a pass from the CSA (on-line, at an office, or at a kiosk similar to RT's). Passes distributed to employees will contribute to air quality enhancement through trip reduction to the community and reduction of vehicle miles traveled (VMT) in the region.

6.12.10 Student Transportation

Buses used to transport students at or below 12th grade must meet very specific state requirements for vehicle equipment, markings, permitting, licensing, inspection, and operation (see California Vehicle Code, Division 1, Section 545 for definition of school bus and other sections in the CVC for school bus specific requirements). There are a few specific exceptions. If the Cordova Hills CSA were to transport elementary, middle, and high school students directly, the CHCSA and the operator of its service would have to meet several additional state licensing and permitting requirements.

NATURAL RESOURCES

Chapter 7



NATURAL RESOURCES

7.1 PURPOSE

The Natural Resources Chapter identifies the ways in which the Cordova Hills Master Plan will avoid, maintain, and enhance natural resources on-site. Cordova Hills has set aside substantial areas of permanent open space to avoid natural resources, provide basins for storm water management and water quality enhancement features, and create informal recreation and trails.

7.2 NATURAL RESOURCE OBJECTIVES

A key concept of the Cordova Hills community includes the avoidance and management of open space areas and the proper interaction between urban areas and Avoided Areas. This will be achieved through:

- Avoiding wildlife and wetlands areas.
- Ensuring compatibility and mutual benefit, to the maximum extent feasible, between mitigation Avoided Areas and urban development.
- Reducing the impacts of new development on the use of water resources.
- Maintain continuous connections between mitigation Avoided Areas providing habitat corridors that allow species migration and minimize habitat and species isolation.

7.3 SETTING

Cordova Hills includes gently rolling grassland crossed by shallow natural drainages. Various wetland types, including vernal pools, are found in concentrated clusters, generally in the western third of Cordova Hills. Cordova Hills also includes drainage corridors that contain seasonal wetlands and swales. These generally flow in a north to south direction and are located in the eastern two thirds of the project. The Paseo Central and the high concentration of vernal pools will be avoided as open space in perpetuity.

7.3.1 Natural Resource Avoidance Areas

The Master Plan establishes three distinct resource Avoided Areas located throughout the project. These include the Main Avoided Area (includes bufferlands), University / College Campus Center Avoided Area, and Paseo Central corridor avoidance. Figure 7.1: Natural Resource Avoided Areas, illustrates the location of these Avoided Areas.



Cordova Hills

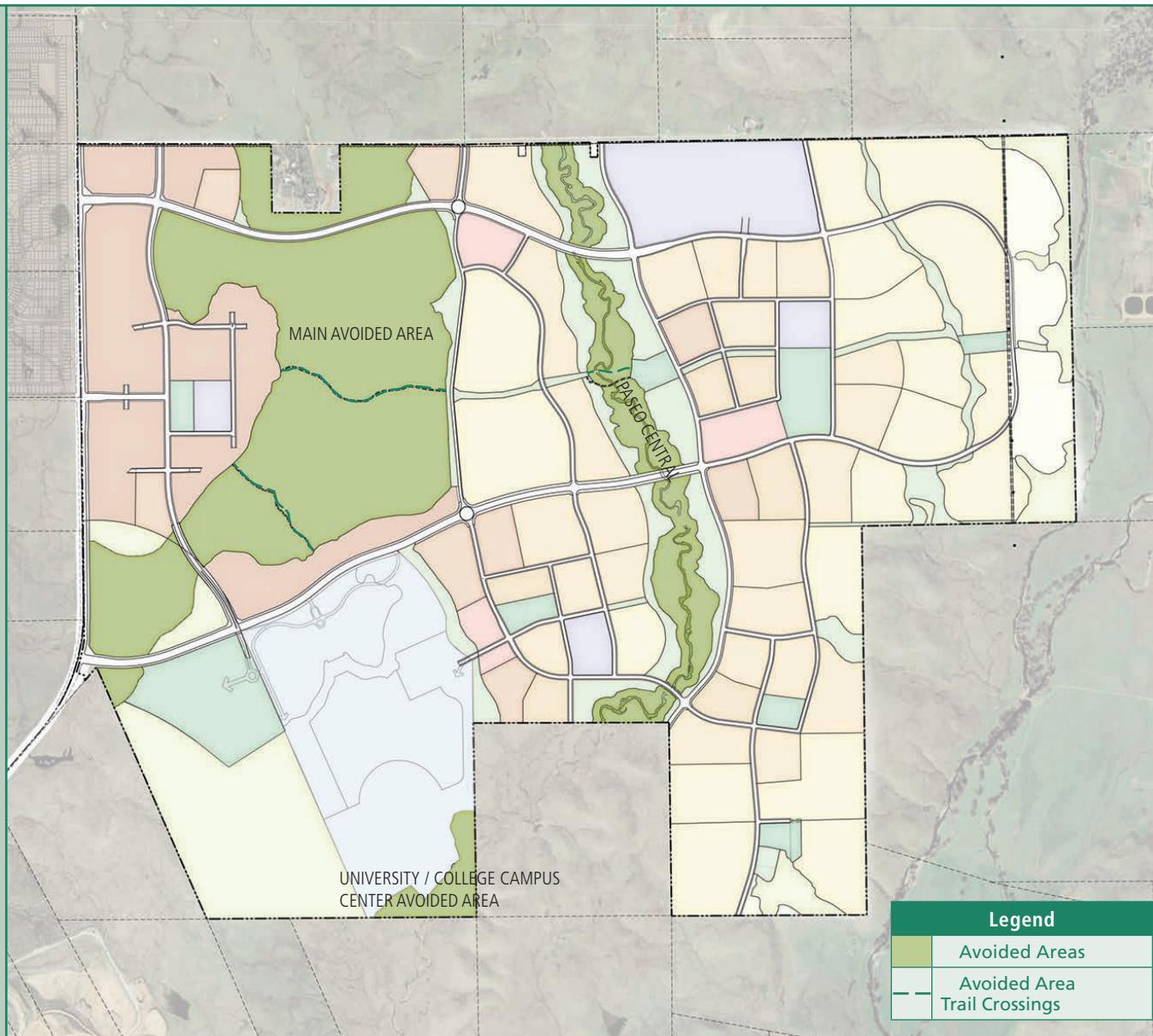


Figure 7.1: Natural Resource Avoided Areas

NATURAL RESOURCES

7.4 NATURAL RESOURCE AVOIDANCE PRINCIPLES

In order to ensure the protection and maintenance of the Avoided Areas in the Cordova Hills Plan, the following eight principles will be part of the management plan for Cordova Hills:

- Principle 1: Maintain the overall hydrologic integrity of the Avoided Areas so as to ensure that there will not be a net loss of functions and values in the avoided areas as a result of adjacent development. This includes minimizing changes to the distribution, frequency and duration of ordinary flows, including restricting summer nuisance flows.
- Principle 2: Maintain corridors and large areas for wildlife and the propagation of flora. Establish interconnected conservation areas that are managed in perpetuity and tie into existing local and regional planning efforts. Provide for meaningful conservation of sensitive plant habitats for species integrity and long-term survival.
- Principle 3: In ordinary high flows, manage storm water flows by incorporating Low Impact Development (LID) standards which will minimize changes to the existing flow regime and to maintain or improve existing water quality in the Avoided Areas. This includes minimizing changes to the baseline flows in the receiving waters to the extent practicable, and not allowing untreated discharges to occur to the aquatic resources in the Avoided Areas.
- Principle 4: Use elevated roads, arched culvert crossings and other practices for transportation corridors that must traverse Avoided Areas to the extent that is practicable, to minimize direct and indirect impacts to aquatic resources in the Avoided Areas, and to avoid significant impacts to the functions and values of the Avoided Areas.
- Principle 5: Use conservation design elements to minimize the effect of adjacent development on the Avoided Areas by constructing, to the extent practicable, single loaded roads, where housing directly abuts Avoided Areas; design roadside landscaping to drain (surface and subsurface) toward urban features and not towards the Avoided Areas, and orient houses so that the front living area faces the Avoided Area. Fences should be low and not restrict visibility into the Avoided Area. Within the development area, impervious surfaces would be minimized to the extent practicable. Stormwater/ water runoff plans would be designed to use BMPs and LID, such as vegetated swales, infiltration trenches, and constructed wetland filter strips to treat storm water and water runoff from the development areas when feasible and soil conditions permit.
- Principle 6: Locate compatible land uses next to avoided areas. The preferred land uses adjacent to the Avoided Areas are parks, hiking trails, detention basins, single loaded roads, and other forms of open space. Trails and bike paths to provide circulation within a development area would generally be located outside the Avoided Areas, and are only permitted to cross the Avoided Area in three (3) locations, and will be constructed in a manner that prevents adverse impacts to the functions and values of the Avoided Areas. Refer to Figure 7-1 for locations of these crossings.



- Principle 7: Mow-only firebreaks may be located at the outer edges of Avoided Areas.
- Principle 8: Implement mitigation measures (avoidance, minimization, and compensation) that adequately offset direct impacts to aquatic resources and listed species. In general, establishing the Avoided Areas is considered a regional measure to achieve impact avoidance and minimization.

7.5 RESOURCE MANAGEMENT

7.5.1 Paseo Central

The primary drainage corridor (Paseo Central) that bisects the center of the community will remain in a generally natural condition and provide a form of linear open space suitable for passive recreation activities such as hiking and bicycling to take place on the outer edge of the avoided edge. Native plant materials on the outer edge of the drainage course, will supplement the existing vegetation to create a pleasing recreational experience and to enhance its visual amenity.

7.5.2 Hillsides

Hillsides consist of natural or man-made slope areas that serve as transitions between the Villages and adjacent open space areas. Because these slopes are visually prominent, the landscaping will require that this zone blends effectively with the landscaping of the surrounding terrain. The landscape treatment will be similar to the adjacent streetscape zone or where appropriate, the adjacent open space landscaping. The hillside zone provides an opportunity to introduce stands of oak woodlands and other native groundcovers, shrubs, and trees. Hillsides may also be planted as olive groves, vineyards, or other cultivated perennial fields, such as lavender.

7.5.3 Villages

Each Village will have its own distinctive plant palette of related species which is visually compatible based on form, pattern, texture and color. The choice of material is based on factors such as architectural product type, elevation, proximity to open space, slopes, canyons and ridgelines. The predominant species will provide a lifespan that endures several generations.

The selection of plant material promotes walkability and pedestrian activity. Tree lined streets and parkways vary in width and provide a shade canopy during the warm seasons and create a more natural setting. Parkways will be rural in character and "open" in appearance. Informal groupings of large scale trees with drought tolerant shrubs, groundcovers and ornamental grasses will be reminiscent of the community's rural nature.

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7.5.4 Groves & Vineyards

The use of olive groves and grape vineyards with compatible massings of singular species shrubs at high visual impact common areas and major community entries will create an image reminiscent of past historical agriculture in the region. As a significant landscape "feature" the olives and grapes will create a significant first impression and important sense of arrival.



Orchard Style Planting



Vineyard

7.6 EDGE CONDITIONS

This section describes the treatment of physical edge conditions surrounding the Main Avoided Area, Paseo Central, and the University / College Campus Center Avoided Area. The design of these edge treatments involves grading, drainage, trail alignments, landscape treatments and fencing, and building orientation. The design of the various edge conditions (Sections A-J) reflects careful consideration for the long-term avoidance of the wetlands resource and assurance that the impacts of urban development (drainage, pedestrian or bike intrusion) surrounding the Avoided Area will be reduced to a minimum. Conditions in Sections A-J are illustrated in cross-section format and located in plan view on Exhibit 7.2: Edge Conditions Location Plan.

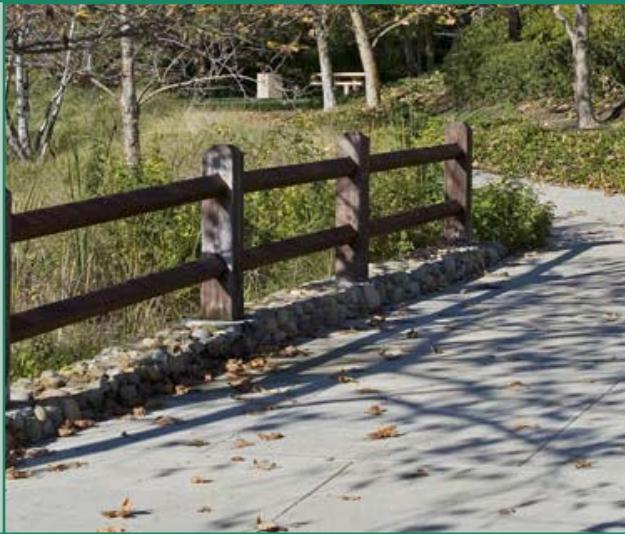
7.6.1 Avoided Area Edge Condition Summary

Cordova Hills designed to minimize potential indirect impacts to the on-site Avoided Area. All of the edge conditions include a landscaped area, trail, and swale that creates an hydrological barrier from urban runoff and the Avoided Area (as illustrated in figure 7.3k). This landscaped area would be located outside of the Avoided Area boundary, and serve as an additional buffer, decreasing "edge effects" on wildlife and habitat in the Avoided Area. In addition, the trees would provide nesting habitat and foraging perches for birds.



A native plant palette has been developed for the landscaping around the Avoided Areas. Refer to the Community Plant Palette, Appendix B, Natural Resource Area Edge Conditions (Natives), in section B.1.9, for a comprehensive list of native trees, shrubs and hydroseed plant materials, to be utilized throughout the edge condition surrounding the Avoided Areas. Planting native vegetation in these areas reduces the potential of non-native vegetation spreading into the Avoided Area, and, as the native plant palette is comprised primarily of drought-tolerant species, less irrigation would be necessary after plant establishment. The benefits of decreased irrigation in this area are two-fold; water would be conserved, and the likelihood of irrigation running off into the Avoided Areas is minimized.

The trail that follows the landscaped area would provide recreational opportunities for users, and allow for the enjoyment of the Avoided Areas without adverse impacts. Furthermore, the trail would encourage frequent visitation along the edges of the Avoided Area, which, together with the landscaped area, would also discourage the dumping of trash into the Avoided Area. In addition, educational signs



Split Rail Fencing

would be installed at regular intervals along the trail. This would provide educational opportunities for trail users to learn about the benefits of the Avoided Area, would enhance the community's pride in the area, and increase residents desire to retain and protect it. It is anticipated that the University / College Campus Center will utilize the Avoided Area as an ecological study area in conjunction with its educational curriculum.

A small swale would be constructed along the avoided side of the landscaping to intercept minor irrigation and stormwater runoff from landscaping, and any additional stormwater runoff from adjacent roads and trails that wouldn't otherwise be captured and diverted to LIDs and/or water quality treatment and detention basins. This would decrease hydrologic impacts to the Avoided Areas.



Swale with Multi-Use Trail

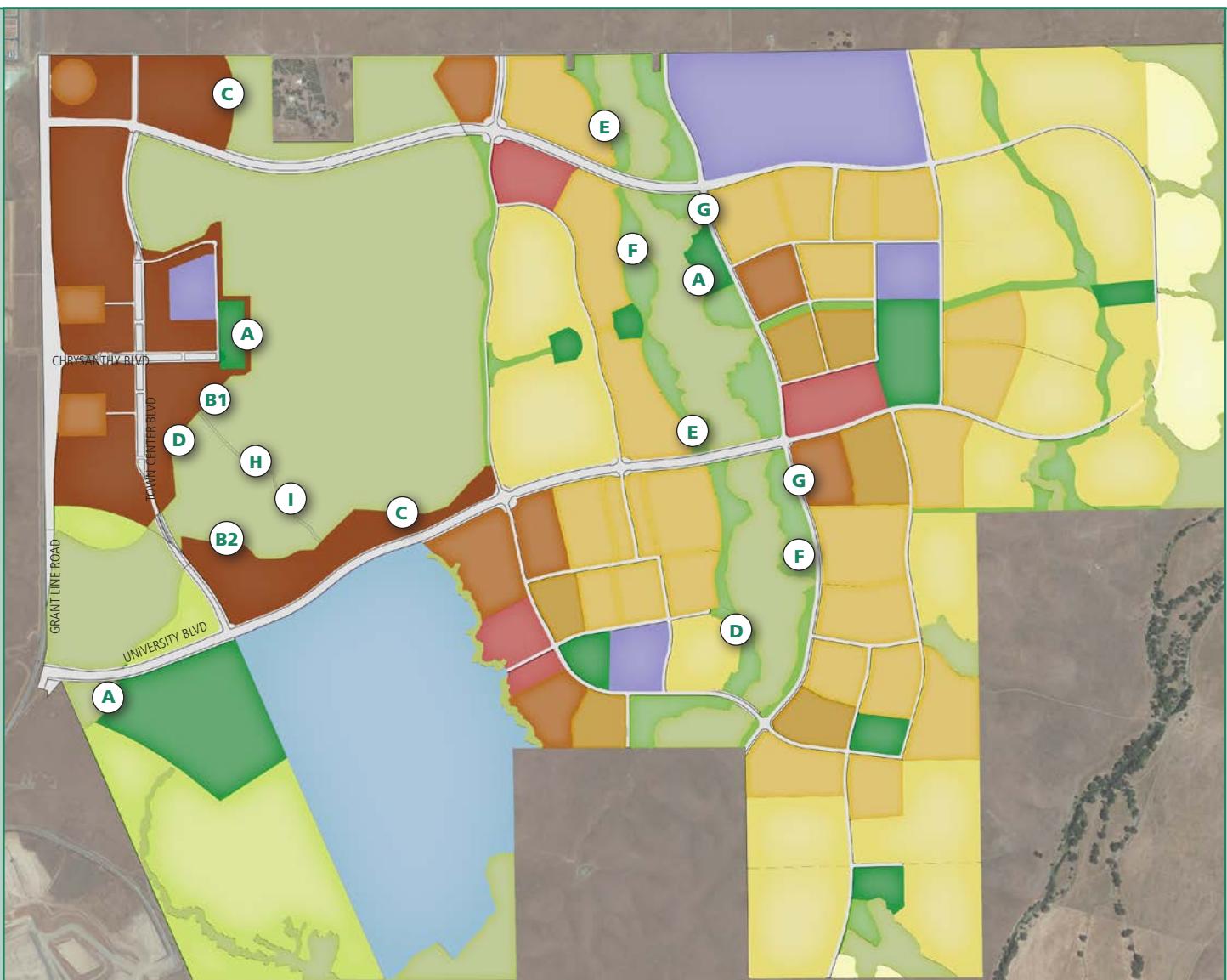
NATURAL RESOURCES

The post and cable or split rail fencing along the Avoided Area boundary would allow an unrestricted view of the Avoided Area, prevent vehicular access, and would clearly indicate the Avoided Area boundary. A grazing fence inside of the post and cable fencing would allow grazing within the Avoided Area, which is widely considered to be beneficial to the continued integrity of avoided vernal pool grasslands. Rear lot view fences (in most locations) for residences that benefit from views of the Avoided Area would provide a demarcation to prevent residential landscaping and gardens from encroaching into the Avoided Area. Providing an open view of the Avoided Area to residents would discourage vandalism in the Avoided Area. Finally, public roadways would separate the landscape buffer from residential development where practical, which would provide a privacy buffer for residents.

The Avoided Areas abut a variety of conditions throughout the plan. Specific conditions are described in the following subsections, but the following points apply to all edges conditions.

- All of the edge conditions include a landscaped area that separates the developed area from the Avoided Area. This landscaped area (outside the Avoided Area limits) serves as a buffer, decreasing “edge effects” on wildlife in the Avoided Area. In addition, the trees provide nesting habitat and foraging perches for birds.

- The trail that follows the landscaped area provides recreational opportunities for residents, and allows enjoyment of the Avoided Area without adverse impacts.
- Furthermore, the trail encourages frequent visitation along the edges of the Avoided Area, which, together with the landscaped area, discourages dumping of trash into the Avoided Area.
- Swales act as a hydrological barrier precluding urban runoff from entering the Avoided Area.
- View fences behind residences that are adjacent to the Avoided Area allow residents to enjoy the Avoided Area, while preventing residential landscaping and gardens from encroaching into the Avoided Area.
- Privacy walls along the sides of residences adjacent to the Avoided Area protect the privacy of residents from passers-by on the trails.



Legend	
A	Park
B1	Mixed-Use
B2	Mixed-Use Common Space
C	Residential Side-On
D	Residential Front-On

E	Residential Back-On
F	Detention Basin
G	Neighborhood Street / Arterial
H	Community Trail Through Main Avoided Area (at Grade)
I	Community Trail over Hydrological Connections and Wetland Swales (non-vernal pools) - (elevated)
J	Community Trail Bridge at Central Drainage Course

Figure 7.2: Edge Conditions Location Plan

NOTE: LETTERED MARKER LOCATIONS INDICATE POTENTIAL LOCATIONS IN A GENERALIZED MANNER.

NATURAL RESOURCES

7.6.2 Edge Condition A: Park

This Edge Condition provides a generous "park" like transition zone between the Park and the Avoided Area. It includes a meandering like trail, a landscaped drainage swale, bermed buffer and

turf play areas, farthest from the Avoided Area. A split rail or post and cable fence will be provided, at the edge of the Avoided Area, at its boundary with the Park.

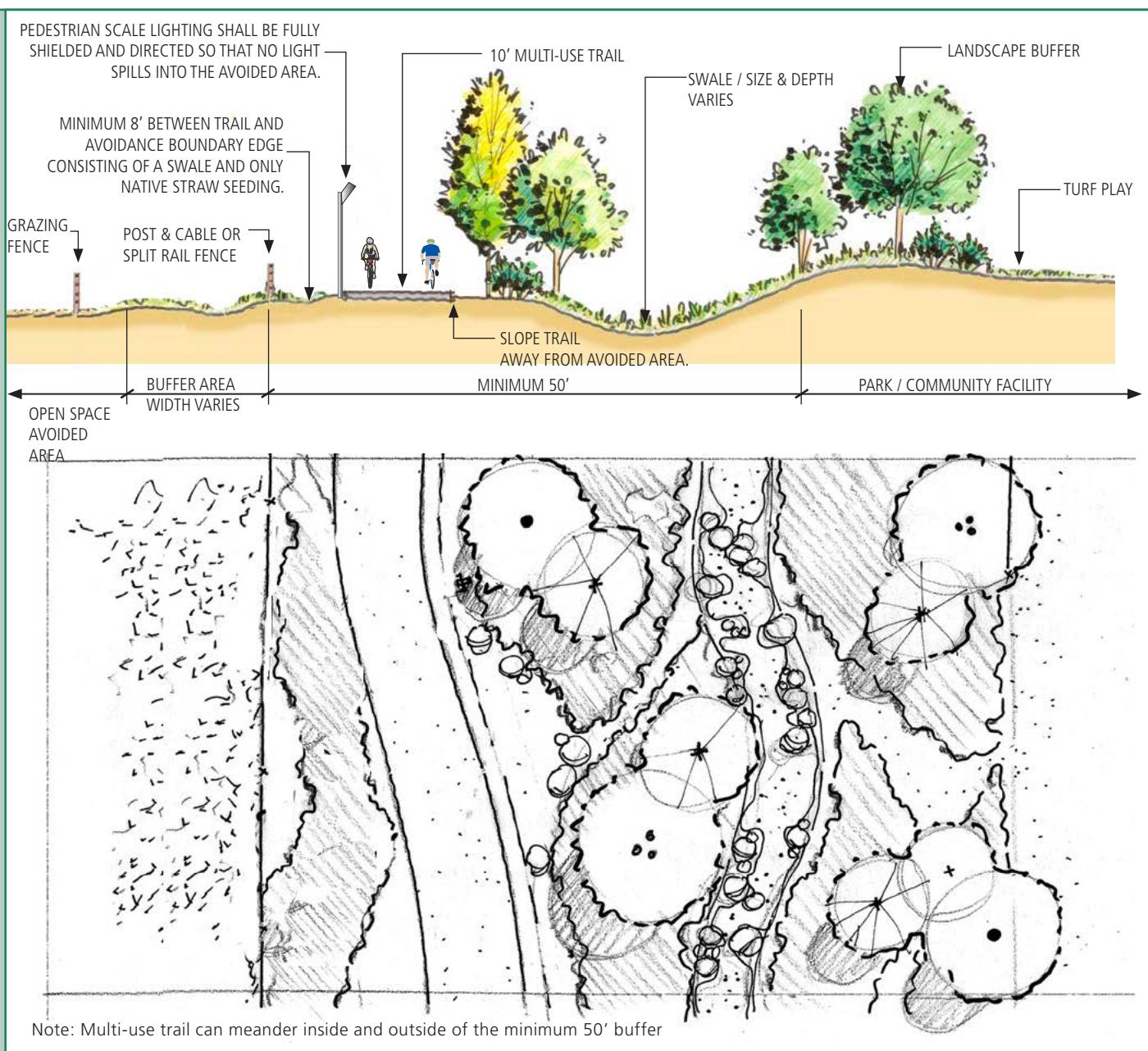


Figure 7.3(a): Edge Condition 'A' Sports Park



7.6.3 Edge Condition B-1: Retail/ Mixed-use

Condition B provides a bike trail and adjacent drainage swale, similar to Condition A, in a narrower configuration, as well as a roadway and adjacent mixed-use/ retail development, farther to the west. Public views from the retail sites may be

provided, depending on the scale of the buildings. Perimeter split rail fencing will also be provided. All open space areas outside the Avoided Area will be permanently landscaped.

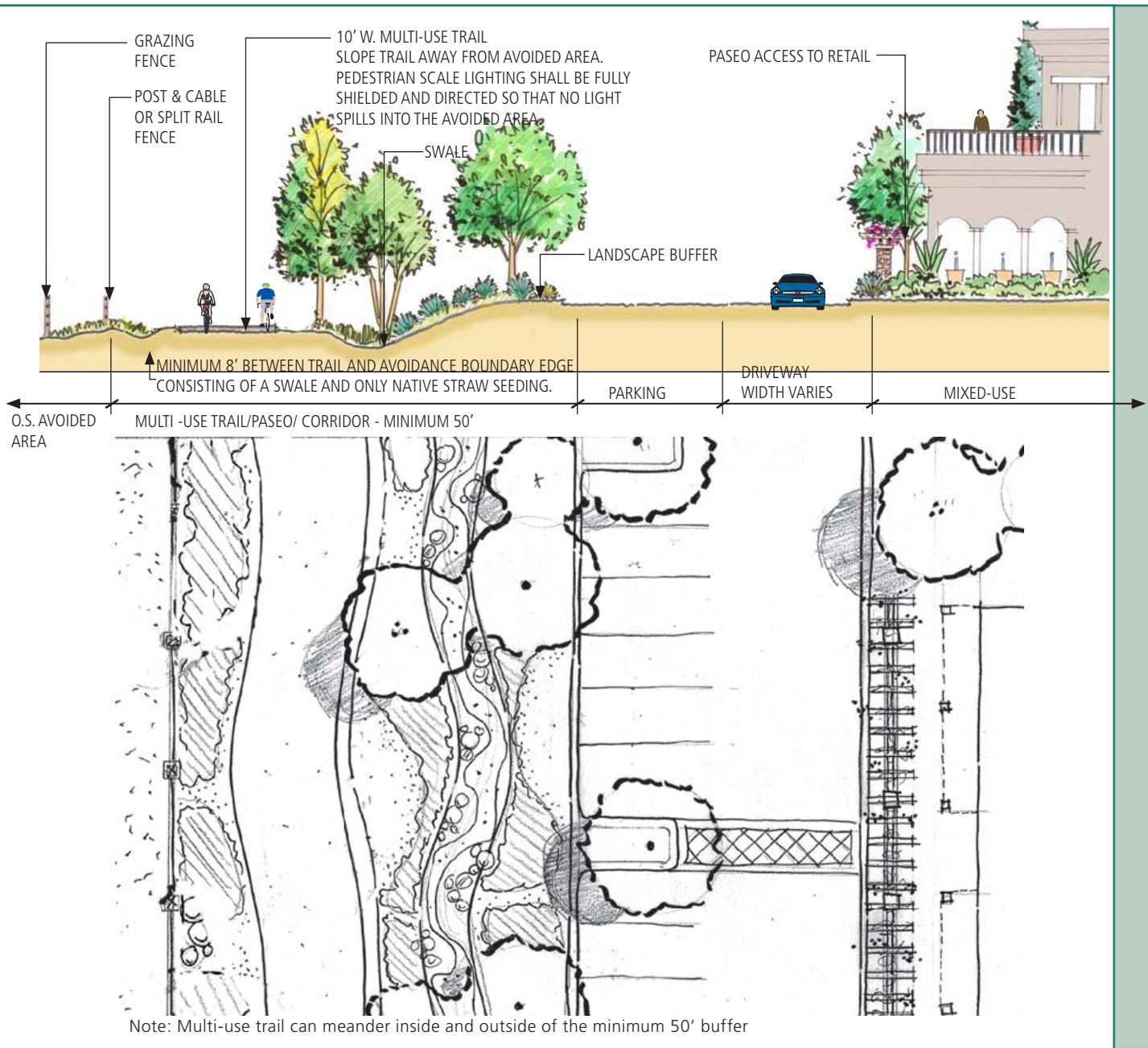


Figure 7.3(b): Edge Condition 'B'-1 - Retail Mixed-use

NATURAL RESOURCES

7.6.4 Edge Condition B-2: Retail / Mixed-use Common Space

Condition B-2 is similar to B-1 with retail / mixed-use adjacent to the Trail Corridor, except that the driveway and parking are eliminated and replaced with outdoor common space. The Trail Corridor is

below grade in relation to the retail / mixed-use, and connected with an adjacent slope. Only one swale is included in the section.

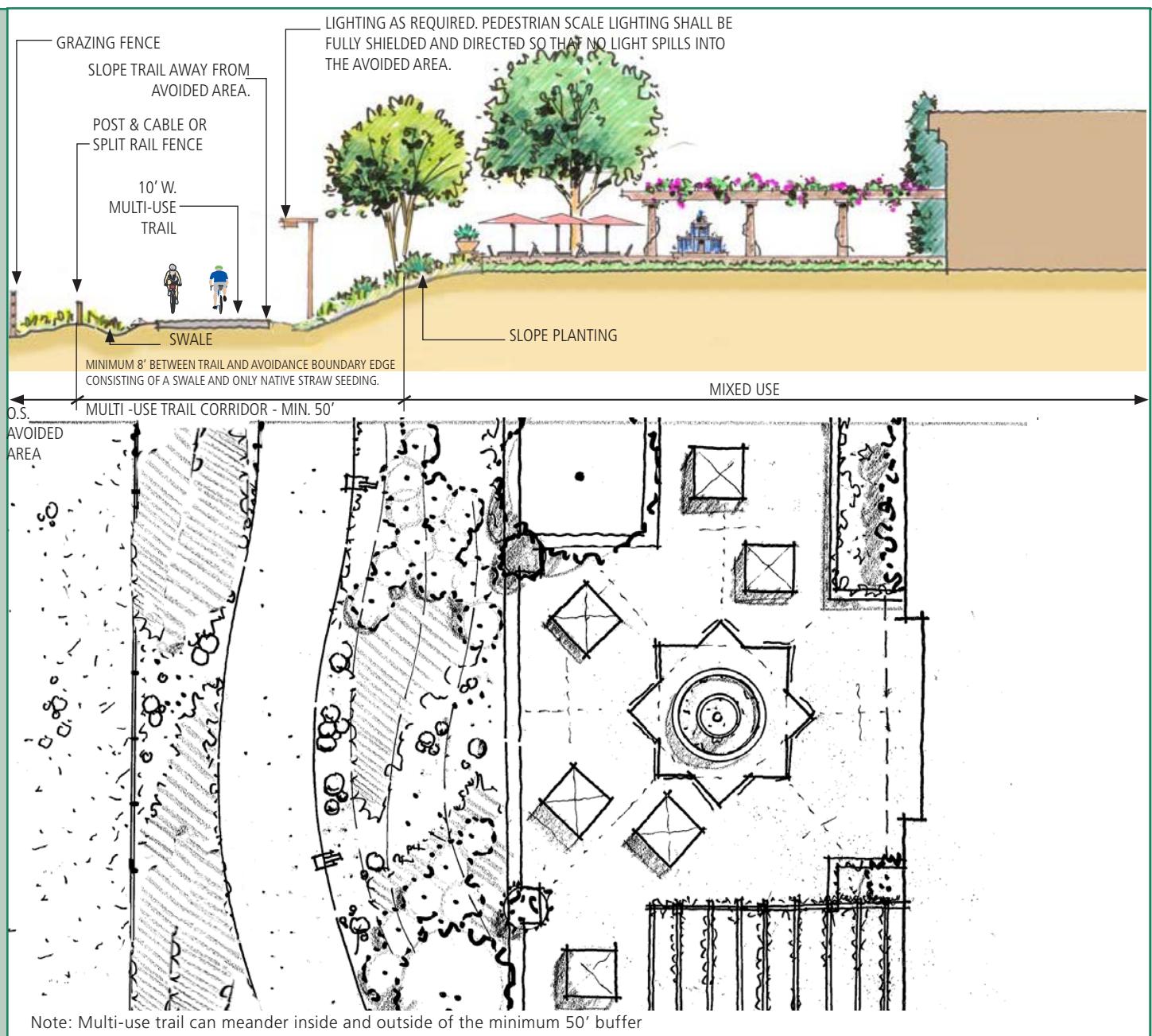


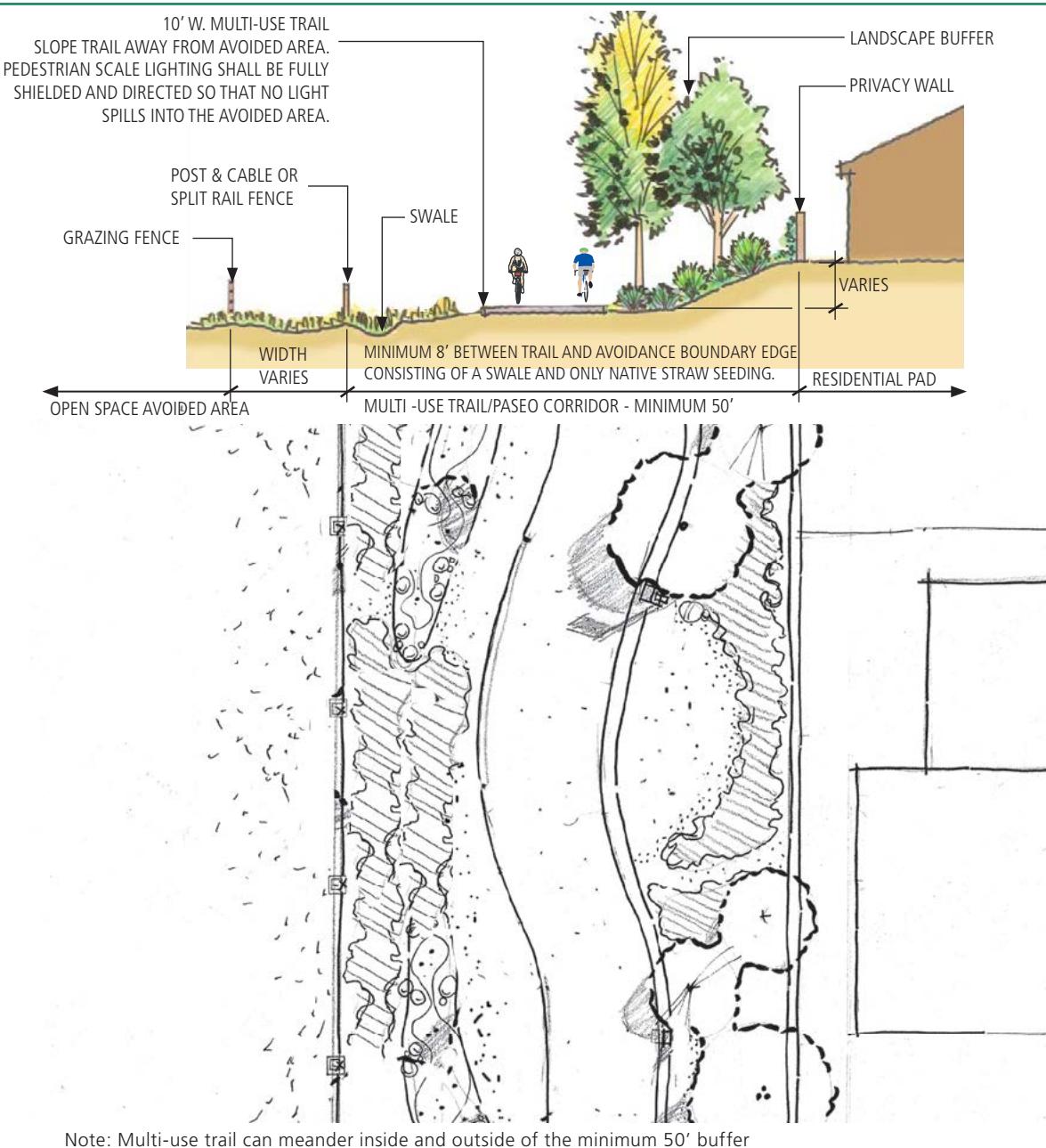
Figure 7.3(c): Edge Condition 'B'-2 - Retail Mixed-use



7.6.5 Edge Condition C: Residential Side-On

Condition C occurs next to the Avoided Area and provides a small drainage swale adjacent to the split rail fence, typically meandering bike trail, sloped landscaping with a primary wall at the top slope,

and the residential lot with a "side-on" condition. The width of the trail corridor varies, in Condition C, and in all edge conditions.



Note: Multi-use trail can meander inside and outside of the minimum 50' buffer

Figure 7.3(d): Edge Condition 'C' Residential Side On

NATURAL RESOURCES

7.6.6 Edge Condition D: Residential Front On

This is the only edge condition where homes face the Avoided Areas. Homes take access off of a typical neighborhood street, with landscaped parkway and continuous pedestrian sidewalk. A drainage swale, meandering trail and adjacent parkway as a bermed

buffer separating the trail and street section, are planned between the neighborhood street and Avoided Area. The public realm expands beyond the street section, over the parkway and trail corridor up to the edge of the Avoided Area and split rail fence.

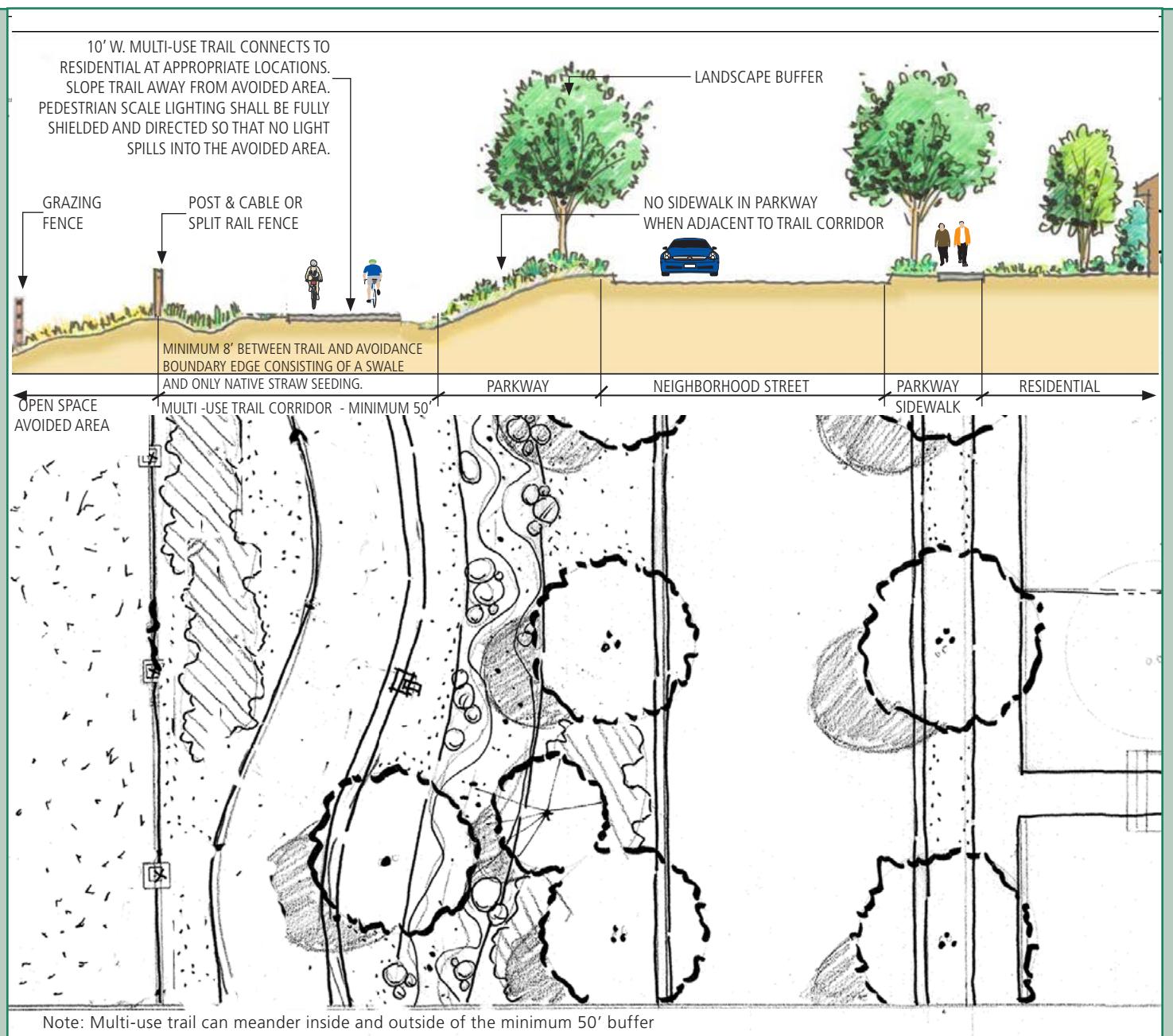


Figure 7.3(e): Edge Condition 'D' Residential Front On



7.6.7 Edge Condition E: Residential Back-On

In this condition, homes back on to the Avoided Area. A view fence and sloped landscape buffer screen the back yards from the public trail corridor, which is typically below grade from the home site

pad elevation. A post and cable and grazing fences lie beyond the trail corridor, where the grazing fence defines the Avoided Area boundary.

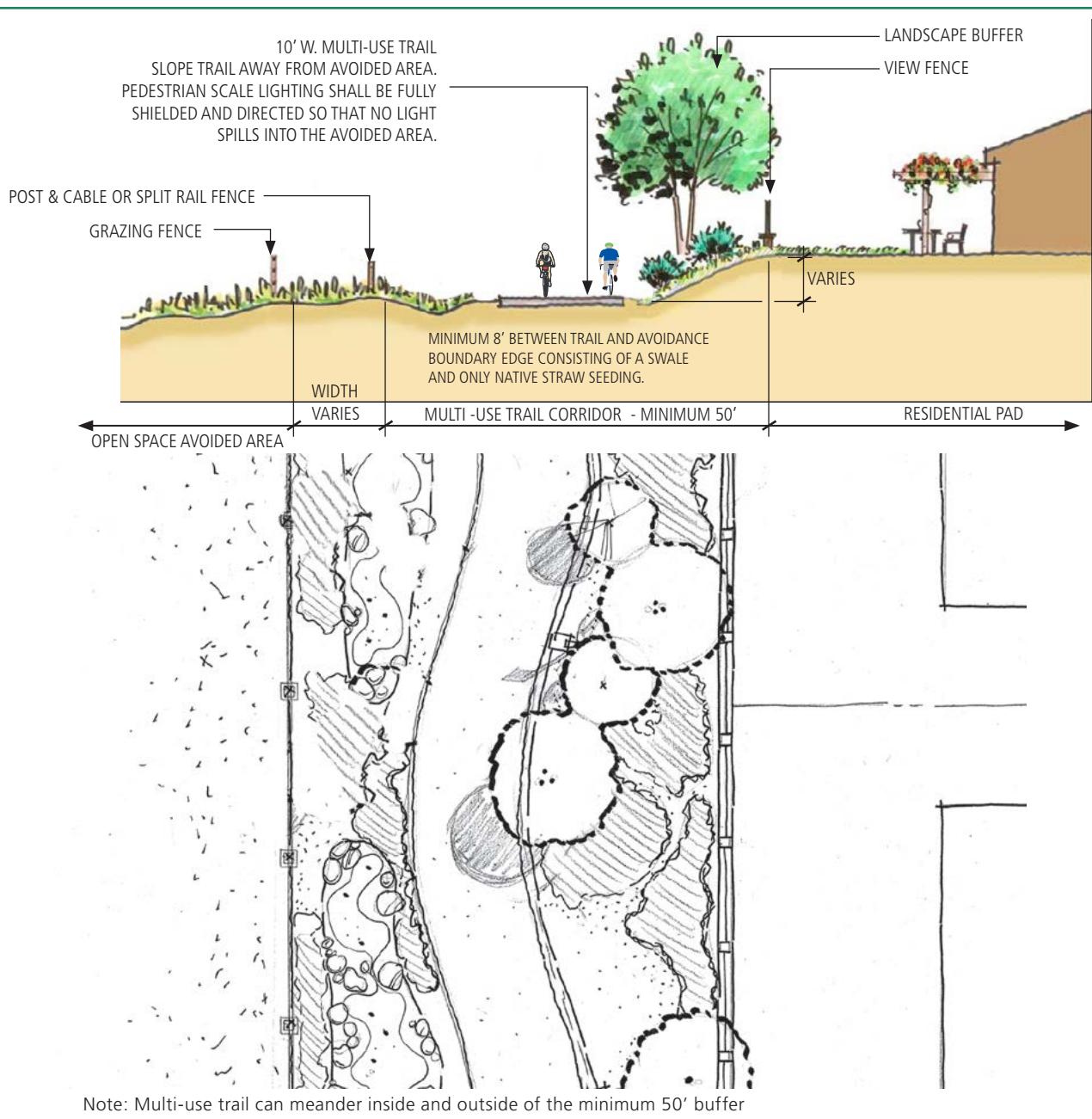


Figure 7.3(f): Edge Condition 'E' Residential Back On

NATURAL RESOURCES

7.6.8 Edge Condition F: Detention Basin

Condition F is the least urbanized of all the eight edge conditions. A detention pond and adjacent landscaping, with varying width, occurs directly adjacent to the security fence and Avoided Areas.

On the opposite side, the meandering trail, drainage swale and open space landscaping are planned to complete this "green edge" transition area.

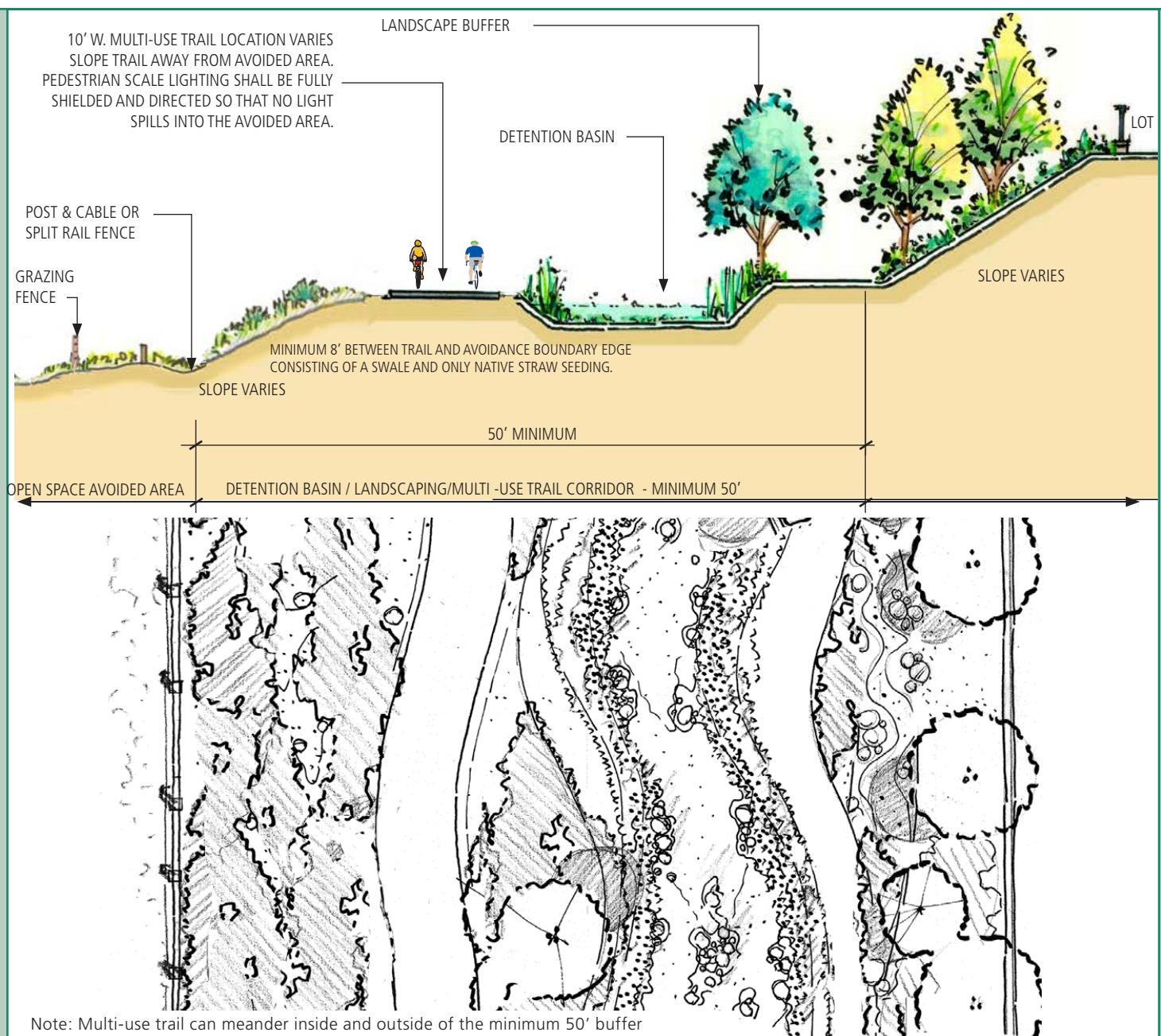


Figure 7.3(g): Edge Condition 'F' Detention Basin



7.6.9 Edge Condition G: Neighborhood Street / Arterial

This condition occurs where a public street and adjacent parkway/sidewalk occur significantly above grade in relation to the community trail corridor. A

sloped landscape buffer of variable slope separates the roadway and the trail corridor. Fencing defines the trail corridor and Avoided Area edge.

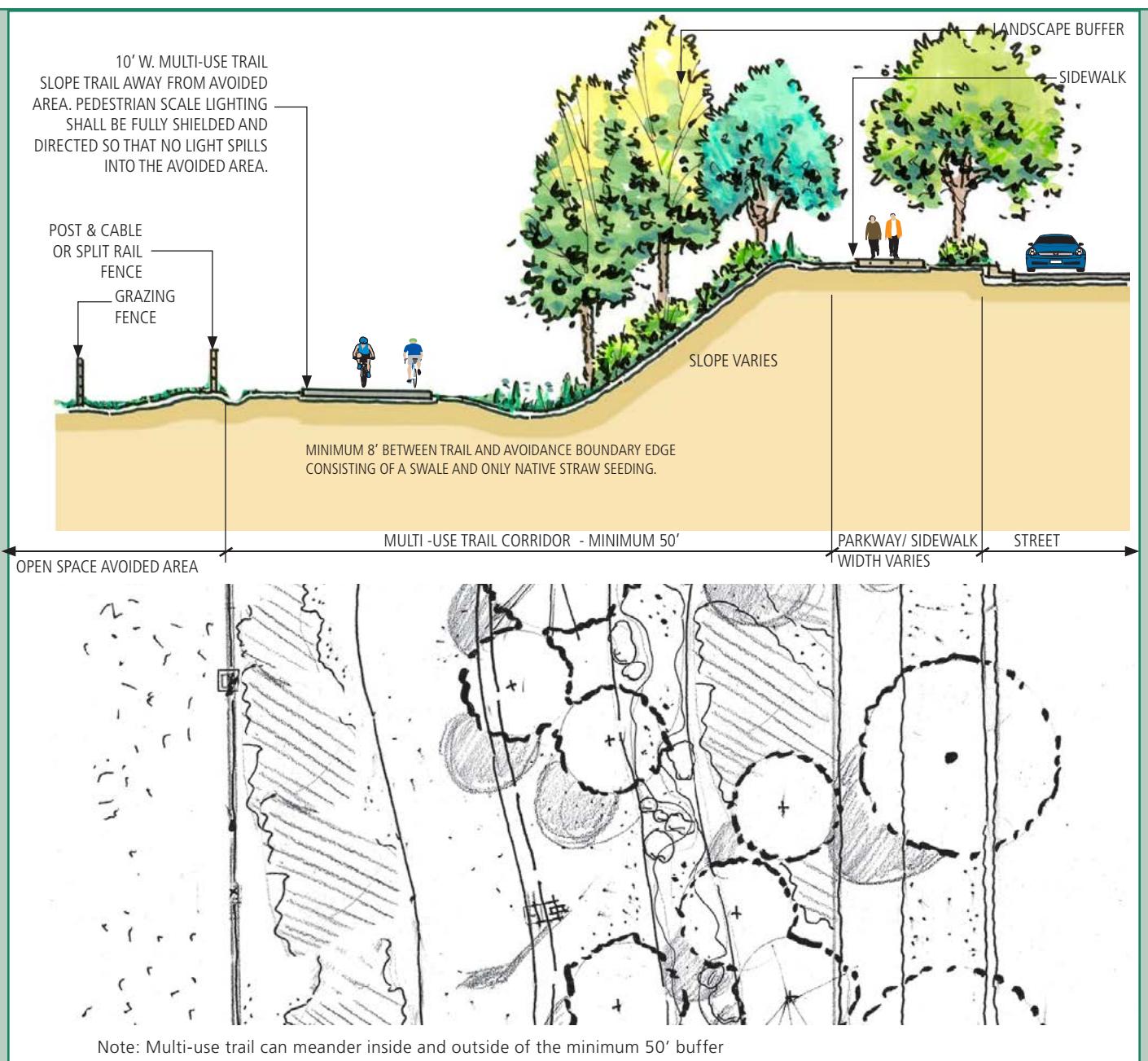


Figure 7.3(h): Edge Condition 'G' Neighborhood Street / Arterial

NATURAL RESOURCES

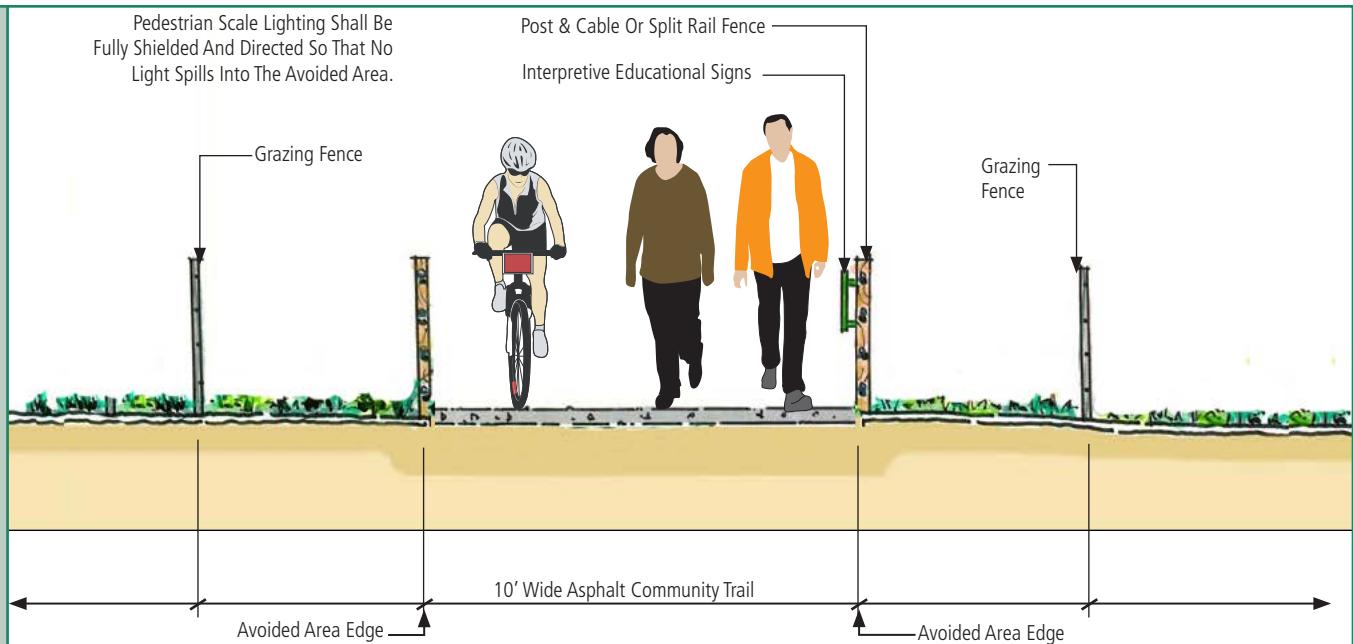


Figure 7.3(i): Edge Condition H: Community Trail Through Main Avoided Area (at grade)

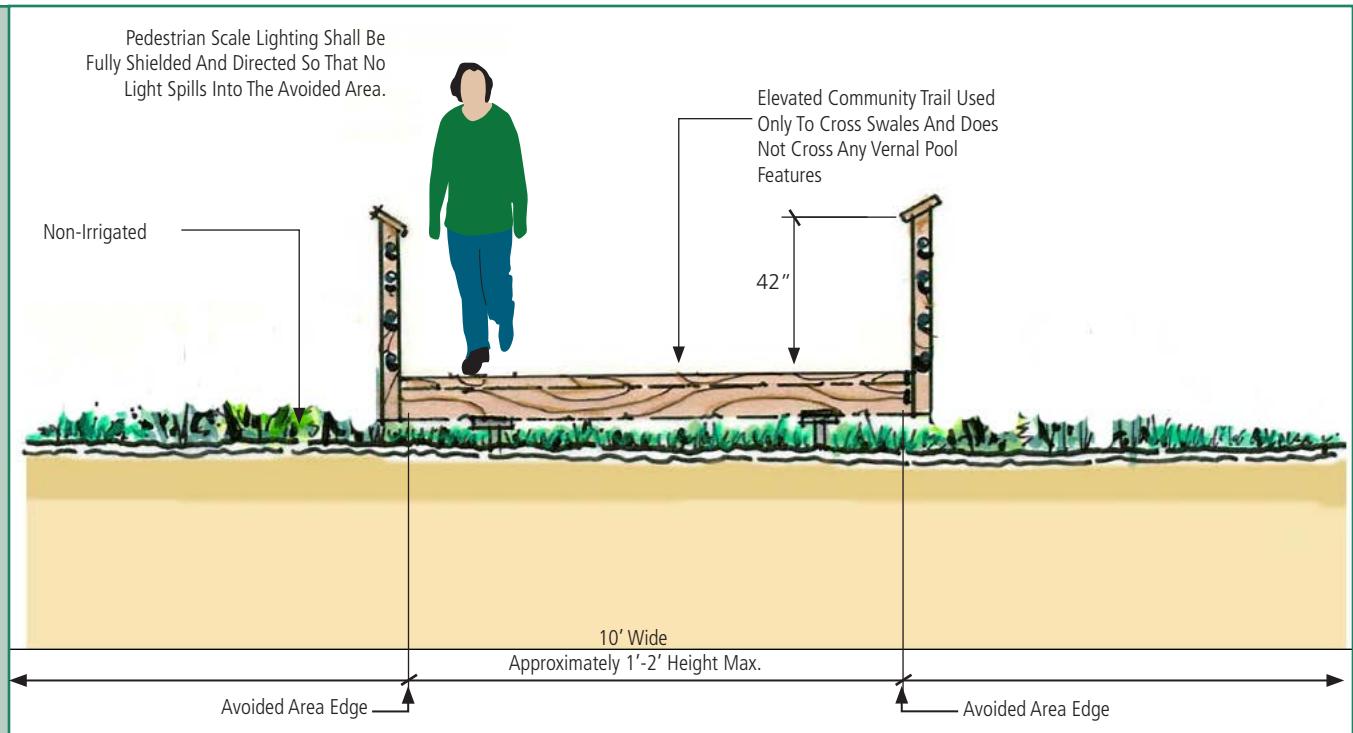


Figure 7.3(j): Edge Condition I: Community Trail Over Hydrological Connections (elevated)



7.6.10 Edge Condition H: Community Trail Through Main Avoided Area (at grade)

This condition includes pedestrian and bike crossing of the Main Avoided Area at grade, via a 10-foot wide paved asphalt community trail. Grazing fences and post and cable fences are included on either side of the trail.

7.6.11 Edge Condition I: Community Trail Over Hydrological Connections (elevated)

This special condition occurs where the community trail passes through the Avoided Area over hydrological connections which are not vernal pool resources. A 10-foot wide wooden walkway and 42" high fencing on either side of the walkway are elevated 1 to 2 feet (max) in height only when the trail crosses a swale.

7.6.12 Edge Condition J: Community Trail Bridge at Paseo Central

Where the community trail crosses the north / south Paseo Central, a 10-foot wide wooden bridge, will be elevated over the undisturbed drainage course, will be employed. "Flow over" asphalt trail sections will connect the wooden bridge with higher elevations adjacent to the top of the watershed during 100-year storm events.

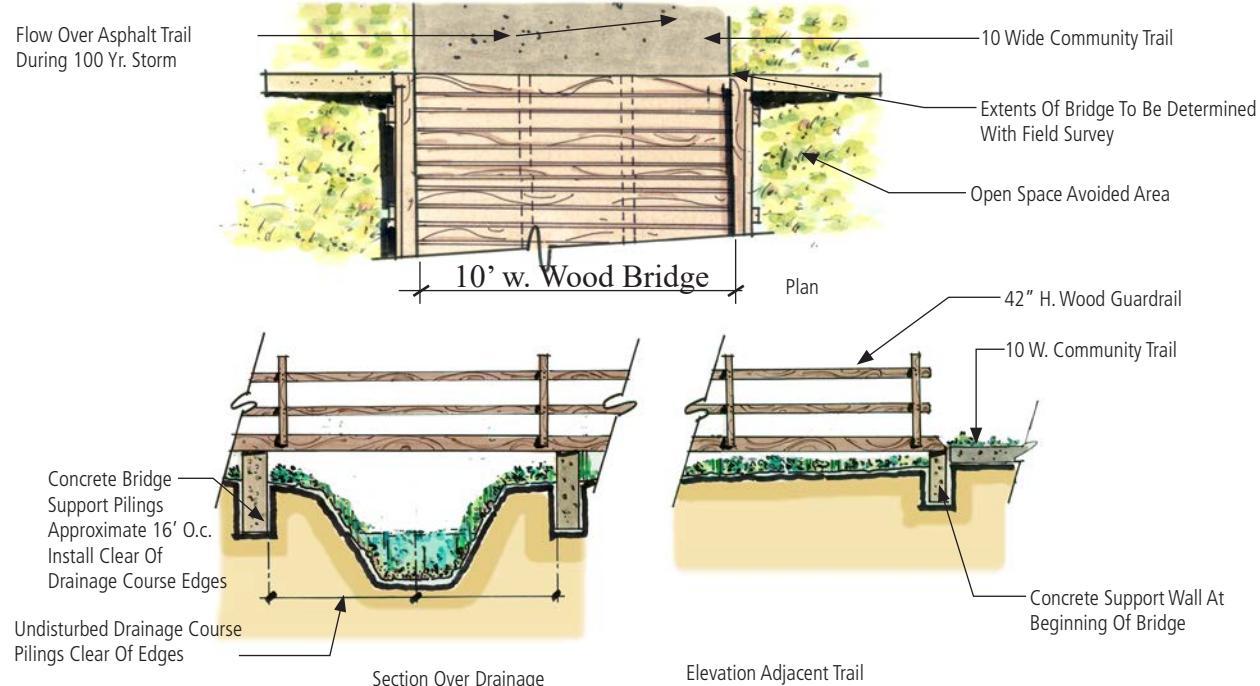


Figure 7.3(k): Edge Condition 'J' Detention Basin Community Trail Bridge at Paseo Central

NATURAL RESOURCES

7.7 WATER QUALITY PROTECTION AND ENHANCEMENT

Storm waters and other drainage will be carried in sub-surface pipes and swales toward the detention basins and water quality facilities throughout Cordova Hills. The primary design principle is to not concentrate drainage to a singular discharge location, but to disperse the drainage to multiple points of discharge along the edges of the habitat avoidance areas, where they will be temporarily stored and treated in combination water quality treatment/detention basins, before being released into the natural drainages. No water will be released from developed areas into the main habitat Avoided Area. All treated discharges will be released into drainageways, basins, and the Paseo Central.

Water quality treatment facilities will typically be integrated with the detention basins, but may also be designed and located as independent facilities throughout the development area. Each water quality treatment feature will be unique to reflect the water volumes, terrain, and specific conditions at each site. In general, these facilities may incorporate settling basins and biological filters, such as vegetated swales located at the outlet of the facility. All facilities that discharge water to the drainages shall be designed to avoid concentrations of water flow that would cause soil erosion and shall be directed so that water does not flow over a bike or pedestrian trail, or vernal pools and seasonal wetlands.

Within the development areas of the project the Environmental Protection Agency (EPA) requirements for construction activities and new uses pursuant to the National Pollutant and Discharge Elimination System (NPDES) will include the use of Best Management Practices (BMP) to prevent pollutant run-off during a storm occurrence. The BMPs available for use on project sites during construction

activities to decrease storm water discharge include both non-structural and structural measures. The non-structural measures include grading controls and "housekeeping" techniques.

Typical grading controls involve timing, staging, setbacks and buffers, and restrictions on open areas. Housekeeping techniques involve limitations on material storage and disposal, soil stabilization of all roads and entrances, dust control, and mandatory site cleanup. Design of the drainage systems in Cordova Hills will specifically consider the appropriateness of the following measures:

- LID Measures (Refer to Chapter 2: Sustainability and Chapter 4, Section 4.14, Landscaping Design Guidelines for more detailed description of the development standards that will apply.)
- Storm water retention or detention structures.
- Infiltration of run-off on-site; oil/water separation.
- Use of open vegetated swales and natural depressions.
- Porous pavement or a combination of these practices.
- Disconnected Drainage Systems.

The project will place erosion control and velocity dissipation devices at all detention or retention structures and along the length of any outfall structure as necessary, to eliminate erosion into and within water courses. This includes the construction of Flow Control Devices at the outlet of all detention basins to properly manage potential hydromodifications of existing drainages to be maintained. Furthermore, the project will utilize management practices consistent with all local post construction storm water management requirements, policies, and guidelines.



7.7.1 LID Measures

Where applicable, LID Techniques may include:

- Preservation of the natural hydrology;
- Stormwater management at the source (close to where rain falls);
- Avoidance of natural drainage features and patterns, where possible;
- Retention of existing vegetation, especially when native and when practicable;
- Creation of a hydrologically rough landscape to slow down stormwater runoff;
- Integration of stormwater controls into development design as amenities though a multi-disciplinary design approach at the initial phases of a project;
- Reduction of impervious surfaces;
- Pervious concrete;
- Porous asphalt;
- Permeable pavers;
- Rain Gardens;
- Bio-retention systems;
- Bioswales;
- Landscaping with drought tolerant plants;
- Water conservation and xeriscaping;
- Mulching of landscaped areas;
- Compost amended soils;
- Enhancement of disturbed soils to increase their storage and infiltration potential;
- Green roofs;
- Rain barrels and cisterns;
- LID education of homeowners and maintenance staff.

A typical example of how LID will be incorporated into Community Street design for Cordova Hills is the plan view and street sections of University Blvd; included in Chapter 6.

Refer to the Community Plant Palette, Appendix B, Specialty Landscape Areas (LID), for a comprehensive list of emergent plant species, grasses, shrubs and groundcovers, to be utilized in LID vegetated swales.

Cordova Hills is not currently seeking small-lot entitlements; therefore, final development project layouts are not known at this time. As such, the quantifiable benefits of actual BMP's and LID features specific to land use and site layout have not been considered in the analysis of point-of-discharge detention and water quality basins required to fully mitigate the development impacts of this project on receiving waters. It is projected that these benefits will be calculated and accounted for prior to actual design of the downstream detention and water quality treatment basins. By presenting the various tools available in the LID tool box to a future developer, this LID tool box sets the groundwork for innovative and site-appropriate stormwater treatment methods that may satisfy current and emerging governmental requirements at the local, State, and Federal level. LID measures will become a requirement of municipal NPDES discharge permits issued by the State Regional Water Quality Control Boards throughout the State, as they already have in the San Francisco Bay, Los Angeles, and San Diego regions.



Permeable Paving Example

NATURAL RESOURCES

7.7.2 Water Conservation

The Cordova Hills Specific Plan will promote water conservation within existing and future urban uses in the following manner.

- Promoting water conservation efforts through education.
- Installing low-flow appliances and fixtures in all new development.
- Utilizing irrigation systems that reduce water consumption, such as drip irrigation and/or gray-water systems.
- Installing drought-tolerant vegetation and use of water-efficient irrigation systems in landscaped public areas.
- An ET-based ‘smart’ irrigation controller system will be incorporated in major sprinkler systems throughout the plan. ‘Smart’ irrigation systems monitor soil and climate conditions and only turn on when water is needed.
- Cordova Hills will comply with applicable County landscape codes and ordinances, as well as local water purveyor water conservation measures.

7.8 URBAN FOREST

Cordova Hills will create a sense of community through planting of high-quality trees in appropriate locations to improve overall landscaping quality and sustainability in all areas visible to the public. The urban forest would include all trees in private yards, landscaping in the parking areas and around buildings in the non-residential uses, street trees, park trees, and natural landscaping in open space areas. A maintenance manual will be created for the Cordova Hills CSA (refer to the CHCSA discussion in Chapter 9) responsible for maintenance.

A potential community solar farm will allow more trees to be planted and better flexibility on the locations of plantings compared to areas with solar roof panels. Rooftop solar units typically constrain the orientation of residential lots and limits the size and location of trees. The community solar farm will allow more trees to be planted and will not limit the planting potential within yards.

7.9 SOILS RESOURCES

Protection of the soil resources in Cordova Hills relates primarily to minimizing soil erosion during construction activities and protection of existing and created slopes from erosion after construction is completed. Implementation of Best Management Practices (BMPs) during and after construction would mitigate any potential issues to the greatest extent practicable.



7.10 MATERIALS CONSERVATION

The Cordova Hills site may provide aggregate materials suitable for construction of road beds and other improvements within the project area. Use of these materials will contribute to energy conservation, air quality protection, reduction of greenhouse gases, and off-site truck traffic by eliminating or reducing the need for importing aggregate construction materials.

Screening, crushing and sizing of on-site aggregate-grade rock deposits encountered while conducting activities related to on-site excavation, earthmoving, construction of structures, landscaping, compaction, fills, road cuts and embankments shall be performed with the intent of utilizing to the fullest extent feasible the on-site aggregate-grade rock deposits while construction activity is ongoing. The operations of the processing and sorting of grading materials will only take place within the project and no exporting of the materials off-site will be permitted.

Best Management Practices such as berms, watering and blanketing shall be used to protect and minimize effects from the operations that could lead to water degradation, air pollution, adverse impacts to aquatic or wildlife habitat, flooding, and erosion. All work will be performed in conformance and consistent with the requirements of the County General Plan, County Codes, and County-approved Grading Plans to address noise, dust and water quality control impacts.

If required to make use of on site materials, a suitable rock/aggregate processing site will be located within the areas of intended development. The processing site will separate the excavated rock materials from the soil, crush the rock, and divide the resulting aggregate into sizes and stockpiles appropriate for use during the construction of the project at the Cordova Hills site.

The tools and or machinery used for screening and crushing shall be those typically used for crushing, screening, conveying, loading and transporting of aggregate.

Such activities shall be permitted as a temporary ancillary use in all development areas of the Cordova Hills Master Plan.

INFRASTRUCTURE

Chapter 8



INFRASTRUCTURE AND SERVICES

8.1 PURPOSE AND OBJECTIVES

This Chapter describes the level and type of public services, facilities and systems that will serve Cordova Hills. The Cordova Hills Master Plan will require extensions of public infrastructure (sewer, water, drainage and dry utilities) and expansion of public services. Public services include fire and police protection, public schools, library, animal protection services, and park and recreation services.

The infrastructure, facilities, and services objectives addressed in this Chapter include:

- Ensure adequate financing for infrastructure improvements and community services.
- Establish a comprehensive infrastructure system to meet the needs of residents, employees, and visitors.
- Manage new development areas to ensure that water, sewer, and drainage systems are constructed in advance of residential occupancy.
- Ensure coordination with water, sewer, and utility service providers to reduce incidences of service interruption, improve the quality and sustainability of services, and reduce per-unit costs.

- Minimize visual impact impediments to utility extensions.
- Provide services to meet the needs of local residents.
- Create park and open space facilities that will provide active and passive recreation for all residents and visitors to Cordova Hills.
- Minimal water and sewer services will be required outside the USB. Well water will not be used for any portion of the project including the bufferlands. It will all be serviced by surface water. Septic will only service the bufferlands and the rest of the project will be serviced by sewer lines leading to the regional treatment plan. Cordova Hills, as part of the Master Plan entitlement effort, does not propose amending the USB.

8.2 ORGANIZATION OF CORDOVA HILLS SERVICES

Many of the public services and infrastructure maintenance required for the Cordova Hills community will continue to be provided by existing service agencies that provide such services elsewhere in the County. Among these are road maintenance, sewer collection and treatment, domestic water supply, storm water management, fire protection, sheriff, library and schools, and others. However, Cordova Hills has the opportunity to take a distinctly different approach for other public services that will not be provided by existing service agencies. This occurs for two reasons.



First, the urban services that overlie many other areas of the county do not exist in the plan area. For example, Cordova Hills is not currently served by a park district other than the County Regional Parks Department through County Service Area 4B. The County focuses on regional park facilities and does not typically provide local community and neighborhood parks. Thus, there is an opportunity to form a district or other agency form for the purpose of providing parks.

Second, the Cordova Hills community is envisioned as a highly sustainable development in which water, soil, air, and habitat are carefully managed as integral components of the urban development. A single service entity with a focus on integrated resource management would be better organized to address complex environmental and community issues than an overlay of single purpose districts. Cordova Hills provides the unusual, if not unique opportunity to provide comprehensive community services through a single service provider. The proposed concept for public service in Cordova Hills is a single service agency with a broad mandate for operating the community based systems, rather than a multitude of small, single purpose agencies. Among the services envisioned for this entity are the merging of park and open space management, green waste recycling management, street landscaping maintenance. In addition, the entity will provide services designed to reduce use of automobiles in the community, such as local transit,

ride sharing and other Transportation Management services, and intra-community communications. Not all services would be performed by this one entity, but will create synergies and efficiencies that cannot be done with established single purpose entities consolidating certain services under one umbrella.

Table 8.1 provides a brief listing of potential programs and services that may be included in the Cordova Hills CSA and may be serviced by traditional service providers.

INFRASTRUCTURE AND SERVICES

Table 8.1: Cordova Hills Service Providers

CORDOVA HILLS SERVICES THAT WILL REMAIN WITH TRADITIONAL PROVIDERS			
Division	Activity	Current/Traditional Service Provider	Future Service Provider for Cordova Hills
Sanitary Sewer			
	Sewer conveyance and treatment	SRCS for interceptors collection and treatment. SASD for trunk and local connections	SRCS for interceptors conveyance and treatment. SASD for trunk and local collection
Fire			
	Fire protection	Sacramento Metropolitan Fire	Sacramento Metropolitan Fire
	Provide wildfire prevention program in concert with open space management	Sacramento Metro Fire and Cal Fire/CDF	Sacramento Metro Fire and Cal Fire/CDF
Police			
	Safety protection	Sacramento County Sheriff's Department	Sacramento County Sheriff's Department
Library			
	Library services	Sacramento Public Library Authority	Sacramento Public Library Authority
Electricity			
	Electricity	SMUD	SMUD
Gas			
	Natural Gas	PG&E	PG&E
Transportation			
	Maintain local/public roads and NEV lanes within public ROW (except medians)	SAC County DOT	SAC County DOT within ROW consisting of paved section, curb and gutter (except medians)
	All hardscape concrete areas of medians (Does not including landscaping or LID features)	SAC County DOT	SAC County DOT
	Own and maintain bike and pedestrian trails/paseos	SAC County DOT when part of ROW; outside a local district	CHCSA Does not include sidewalks and only includes Cordova Hills pedestrian bike multi-use trails/paseos outside of ROW.



Drainage			
	Funding for the construction of major drainage facilities.	Zone 11a	Zone 11a for phase 1 and supplemental fees or developer obligation for phases 2 and 3
	Own and maintain flood control and water quality systems (detention basins, drainage channels, drop inlets and drainage pipes)	County SCWA Zone 12	County SCWA Zone 12
	Long-range planning and engineering studies of flood control, water resources development, water supply management and water conservation.	County SCWA Zone 13	County SCWA Zone 13
Lighting and Safety			
	Street lights and safety lighting	CSA 1	CSA 1
Domestic Water Management			
	Provide retail, metered water service	County - SCWA	County - SCWA
	Provide educational outreach programs for water conservation	County - SCWA	County - SCWA
	Operate exterior water conservation programs (residential and commercial)	County - SCWA	County - SCWA
	Provide water conservation audits (residential and commercial)	County - SCWA	County - SCWA
	Enforce water conserving landscape design standards (residential and commercial properties)	County code enforcement & SCWA	County code enforcement & SCWA
Streetscape Maintenance			
	Vandalism and graffiti abatement	County if within public ROW. All part of LLD or HOA	County for within public ROW. CHCSA will provide vandalism and graffiti abatement in all other public areas.

INFRASTRUCTURE AND SERVICES

CORDOVA HILLS SERVICES PERFORMED PRIVATELY OR BY THE COMMUNITY CHCSA			
Transportation			
	Own and maintain bike and pedestrian trails/paseos outside of public ROW	SAC County DOT when part of ROW; outside a local district	CHCSA
	Operate transit system for community	RT	CHCSA
	Own and maintain transit stops, shelters, and transit maintenance facilities.	RT	CHCSA
	Own and maintain ridesharing facilities	RT	CHCSA
	Transportation Management Association (TMA) and Transportation Demand Management (TDM)	3rd Party	CHCSA
Greenscape and Surface Water Management			
	Maintain LID swales in medians, shoulders, and other public areas	LLD	CHCSA
Open Space Management			
	Provide third-party resource management or contract for management services for the preserves established under the 404 permit	Currently no service provider. 3rd party	Contract with SSHCP or third party
	Operate and maintain all public area open space	Currently no service provider. 3rd party	Contract with SSHCP or third party
Domestic Water Management			
	Operate water efficient irrigation systems in all public ROW and District facilities	Lighting and Landscaping District (LLD)	CHCSA
Recreation and Parks			
	Own and maintain parks, special facilities, linear parks, and R-2 open space areas	CSA-4b	CHCSA
	Provide community pools	CSA-4b	CHCSA and Elk Grove School District
	Provide recreation programs	CSA-4b	CHCSA
	Provide extension programs (gardening, etc.)	CSA-4b	CHCSA
	Operate community gardens program	CSA-4b	CHCSA
	Operate farmers market program	CSA-4b	CHCSA
	Operate and maintain safety lighting in all parks and public areas outside of street ROW	CSA-1 Safety and Street lights	CHCSA
Community Communication			
	Community intranet, posters, fliers, bulletins regarding events, transit, other....	N/A	CHCSA



Landscape and Streetscape Maintenance

A-1	Landscape corridor lot - without wall	Lighting and Landscaping District (LLD)	CHCSA
A-2	Landscape corridor lot - with wall	Lighting and Landscaping District (LLD)	CHCSA
B-1	ROW to back of walk - Commercial frontage	Privately Maintained	Privately Maintained
B-2	ROW to back of walk - Densities MDR and above (apts., condos, HOA)	Privately Maintained	Privately Maintained
C	ROW to back of walk - LDR (single family frontage backbone and intract)*	Privately Maintained	CHCSA for Sidewalks (both attached and detached) and Privately maintained landscaped planter strip (if it occurs next to detached sidewalk).
D	ROW to back of walk - School or park frontage	Privately Maintained	Privately Maintained
E	Row to back of walk - R-2 open space frontage	Lighting and Landscaping District (LLD)	CHCSA
F	Medians - both wide and narrow	Sacramento County DOT	CHCSA for all a landscaping/LID areas and Sacramento County DOT for paved concrete areas
	Supplemental streetscape maintenance	N/A	Above and beyond County standards. CHCSA will provide supplemental street sweeping and litter control within and along streetscapes.
	Maintain gateways, water features, and other landscaping areas outside of public ROW	County if within public ROW. All part of LLD or HOA	CHCSA
	Vandalism and Graffiti abatement	County if within public ROW. All part of LLD or HOA	County for within public ROW. CHCSA will provide vandalism and graffiti abatement in all other public areas.

*Note: Attached sidewalk is poured monolithically with the curb (ie no gap between county ROW at back of curb and CHCSA sidewalk).

Detached sidewalk is separated from the curb by a landscape planter strip (consisting of Privately maintained grass and trees).

INFRASTRUCTURE AND SERVICES

8.3 WATER

Cordova Hills is located within the Zone 40 service area of the Sacramento County Water Agency (SCWA) and will ultimately be served by a conjunctive use water system. A large-diameter water transmission main, the North Service Area (NSA) pipeline will be extended from the Vineyard Surface Treatment Plant currently under construction in central Sacramento County. The new surface water treatment plant will divert water from the Sacramento River water through the Freeport Regional Water project, a joint project between East Bay Municipal Utility District and SCWA to deliver surface water to customers within SCWA's service area and the East Bay.

On-site transmission mains will be connected to an extension of the County's existing transmission system in the Sunrise Douglas area. A large water storage tank will be located just to the north of Cordova Hills and a backbone transmission system will distribute water throughout Cordova Hills. Due to the varying elevations of the project, several booster pumps as well as pressure reducing stations will be required to maintain system pressures to Zone 40 standards throughout the project.

Generally, the on-site transmission system will consist of 16-inch to 24-inch mains extending through the project. A grid of 8-inch to 12-inch distribution mains will extend from the transmission system to serve local Villages and neighborhoods.

Water infrastructure will be phased with development to meet end user demands as well as operational criteria of the system. Refer to Figure 8.1: Cordova Hills Water Systems Map.

8.3.1 Off-site Water Infrastructure

Cordova Hills will also require the construction of certain off-site infrastructure necessary to serve the needs of the project. The EIR will include an examination of the environmental impacts of providing that infrastructure, which is expected to include the following:

Environmental Review documents for the North Service Area pipeline from the Vineyard treatment plant to the planned storage tank south of Mather Lake and adjacent to and east of Eagles Nest Road is complete. This water pipeline will then be extended from the storage tank to existing water lines in the developments of Anatolia and the remainder of the Sunridge Specific Plan. A 42" water line already exists along Douglas Road up to the North Douglas development along Douglas Road. A new transmission line will need to be extended from the existing 42-inch approximately three-quarters of a mile to a tank site located at Cordova Hills. This pipeline will traverse along the frontages of other approved projects in the Sunridge Specific Plan. Extension of this 42-inch transmission main to the planned storage tank(s) in Cordova Hills will provide for the primary feed to meet demands in Cordova Hills.

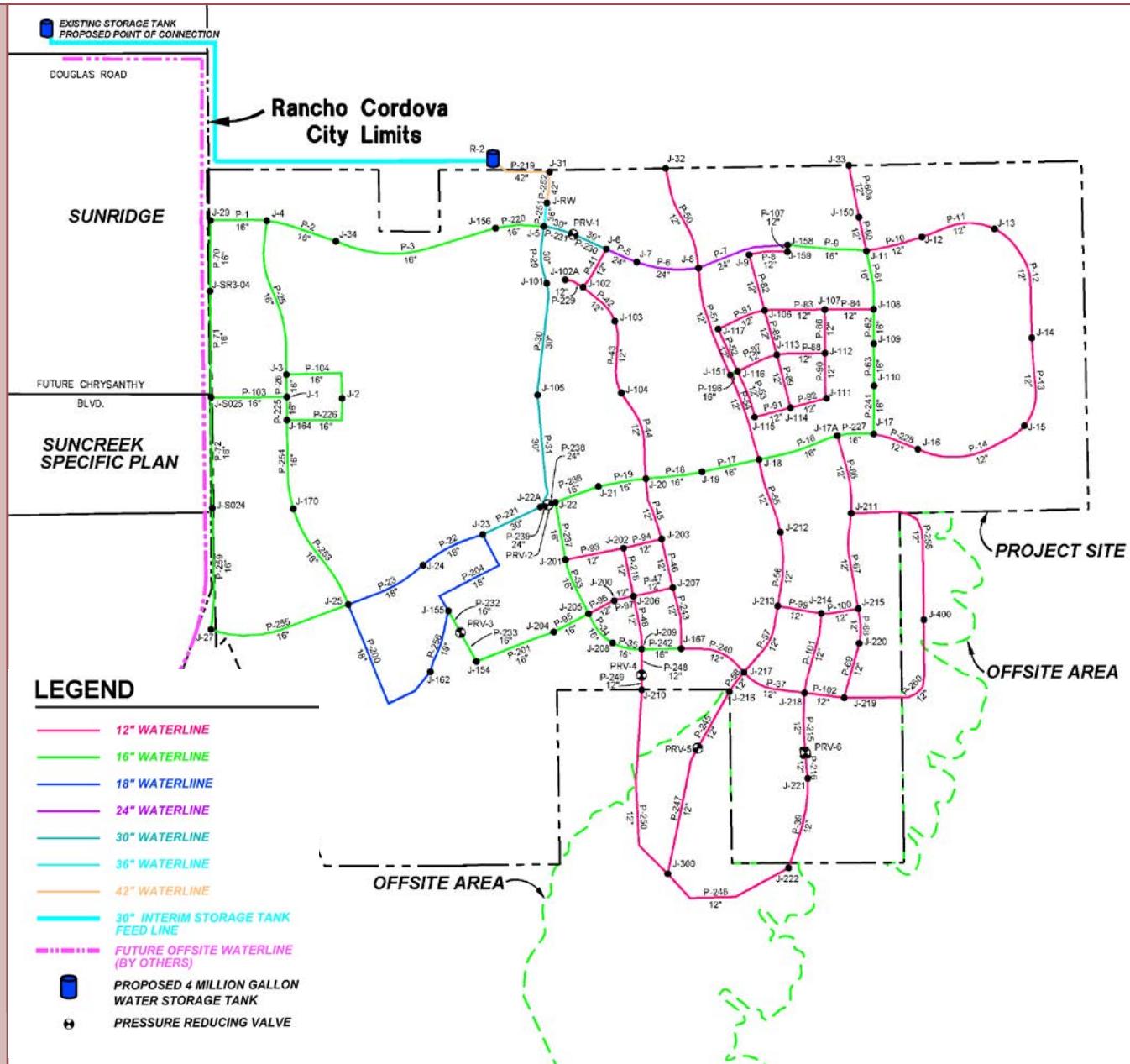


Figure 8.1: Cordova Hills Water System Map

INFRASTRUCTURE AND SERVICES

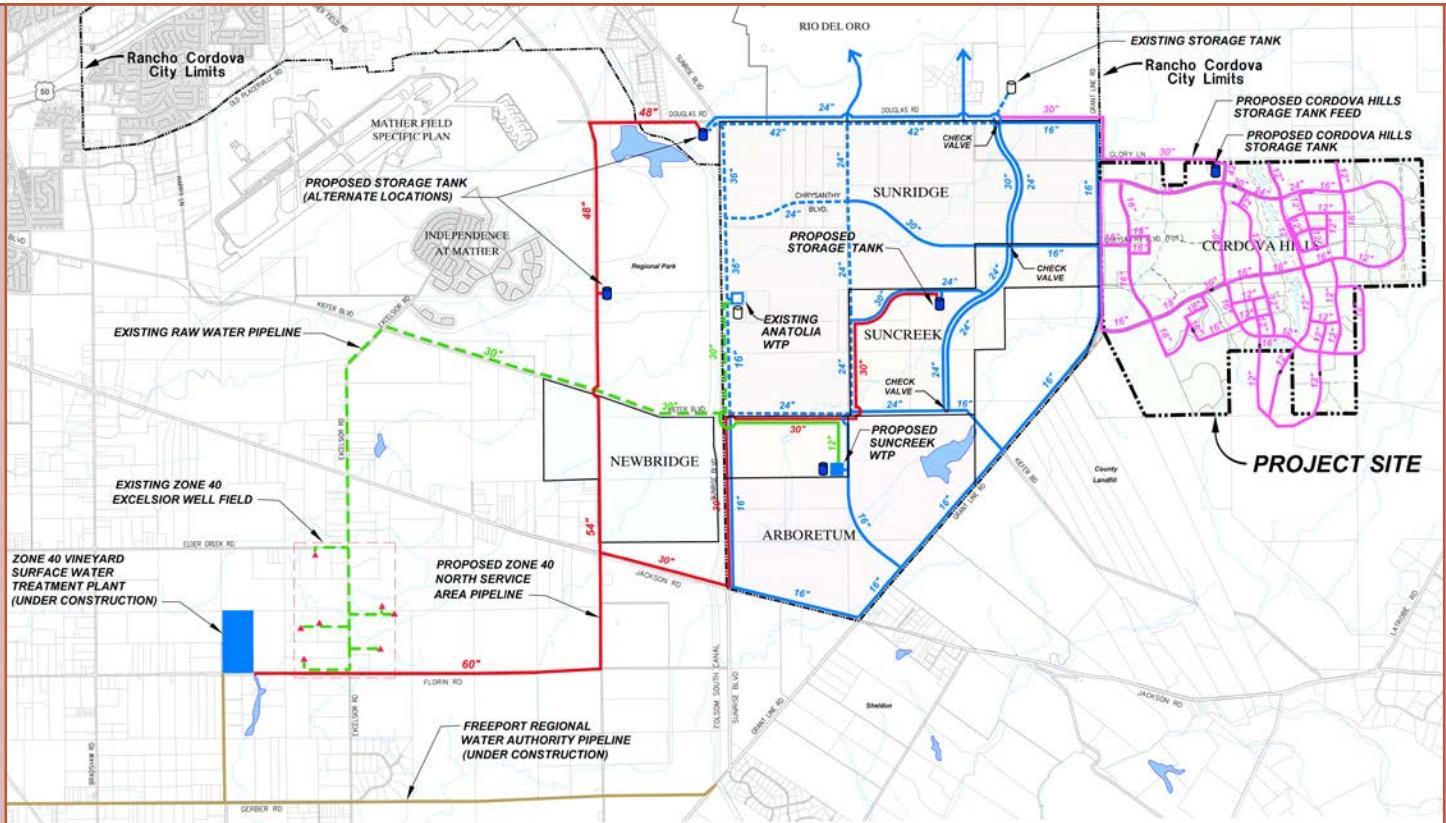


Figure 8.2: Regional Water Concept

Legend	
	Proposed offsite water transmission pipeline
	Proposed North Area Service (NSA) pipeline
	Proposed onsite water transmission pipeline
	Proposed raw surface water pipeline (FRWA)
	Proposed raw ground water pipeline
	Existing water transmission pipeline
	Existing raw ground water pipeline



8.4 SANITARY SEWER

In January 2012, Sacramento Area Sewer District's (SASD's) Board of Directors approved an SASD Sewer System Capacity Plan 2010 Update which outlines the District's most current mid-range and long-term plan for sewer service to the Cordova Hills area. Sacramento Regional County Sanitation District (SRCSD) is in the process of finalizing its own Interceptor Sequencing Study that will aid SRCSD in planning and implementing regional conveyance projects based on SASD's local collection plans. SRCSD's regional Interceptor facilities will convey sewage from local trunk sewers to the Sacramento Regional Wastewater Treatment Plant (SRWTP) located near the Sacramento River in Elk Grove. Cordova Hills is located outside of the SASD and SRCSD service areas and will thus need to be annexed into both of these service areas through LAFCO in order to receive sewer service. Once annexed, the required onsite and offsite local collection and trunk conveyance facilities will be constructed in order to receive service. SRCSD constructs the regional interceptor facilities. Based on the most current planning documents, Cordova Hills will ultimately be served by the SRCSD Douglas Interceptor (DI). This is consistent with the most current SASD and SRCSD planning documents (SASD and SRCSD East Rancho Mid-Range Plans and SASD System Capacity Plan).

Figure 8.3 shows the proposed infrastructure plan. Trunk sewer lines typically carry a flow between 1 million gallons a day (MGD) and 10 MGD, whereas local sewer collection facilities carry a flow less than 1 MGD. The backbone sewer infrastructure plan does not include any local collection facilities that will generally be constructed as part of individual small-lot subdivision improvements. Facilities include the following improvements:

- Gravity trunk sewer lines ranging from 12 to 30 inches in diameter.
- Two on-site SASD pump stations.
- On-site force mains and their appurtenances.
- Off-site interim force main extensions and their appurtenances.

8.4.1 Phasing

Cordova Hills ultimately will be served by the SRCSD Douglas Interceptor facility. Prior to the extension of this interceptor to the vicinity of the Project, Cordova Hills will pump its wastewater to the existing Aerojet-Sunrise Douglas trunk sewer located in Douglas Road approximately 3,700 feet northwest of Cordova Hills on an interim basis.

Phase 1 proposes to tie into the existing AJ Sunrise Douglas (ASD) trunk sewer and send the flows to the existing Chrysanthy Pump Station. Phase 1 includes the initial phase of an SASD pump station and the gravity lines and force mains necessary to connect to the ASD Trunk sewer in Douglas Road. As noted in the Sewer Master Plan, however, "if capacity at POC-1 [ASD Trunk] is available at the time of connection, and discharges from other developments within the East Rancho Cordova area have increased, additional improvements to the Chrysanthy Pump Station may be needed.

Upgrading the on-site SASD pump station to a greater capacity, constructing additional gravity lines, and potentially constructing additional offsite facilities ahead of extension of the Douglas Interceptor will be required to support remaining phases.

Installation of sewer improvements will be determined by the phasing of development projects to be served by sewer facilities. Individual projects will be required to complete sewer facility improvements as conditions of project approval.

INFRASTRUCTURE AND SERVICES

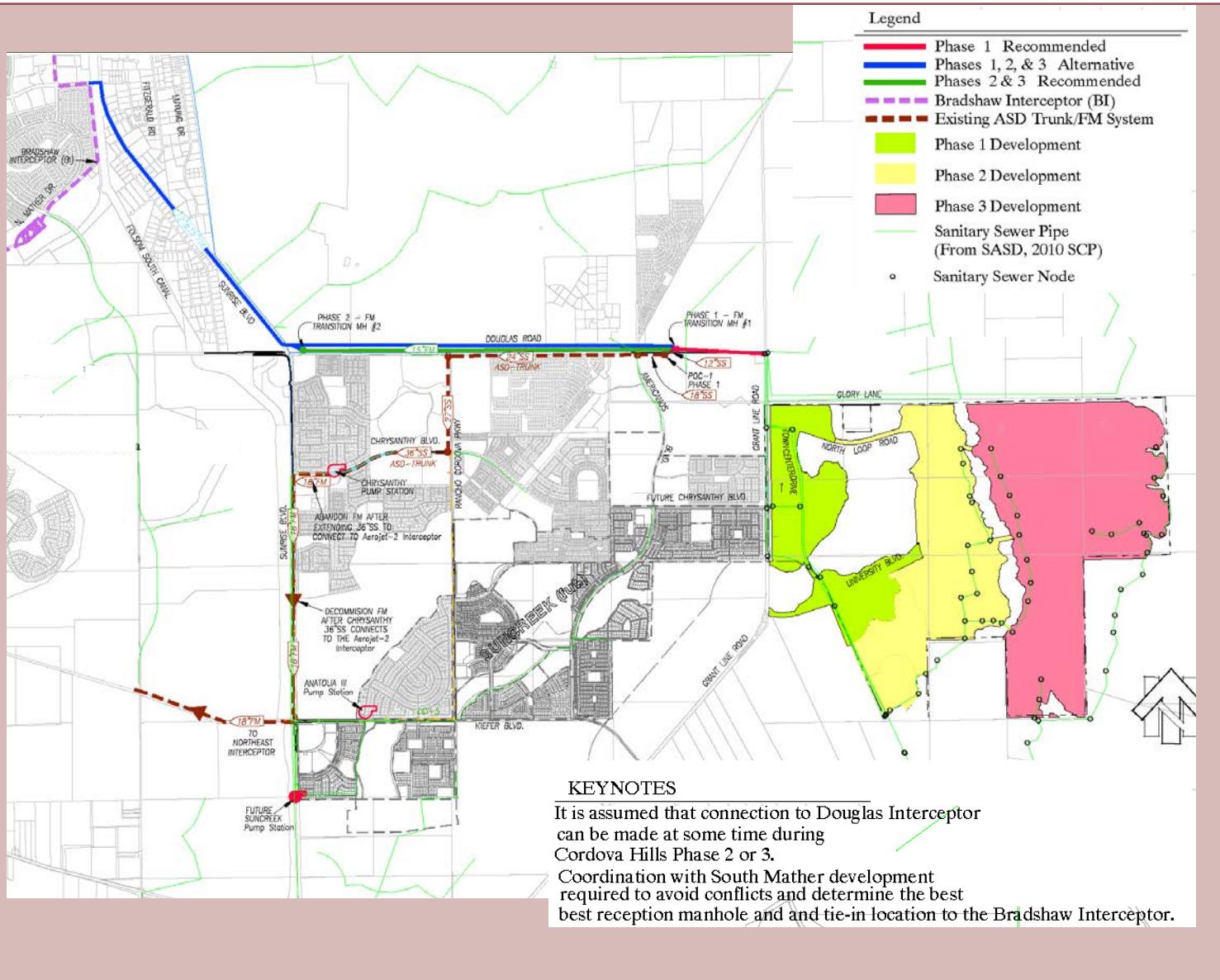


Figure 8.3: Regional Waste Water System

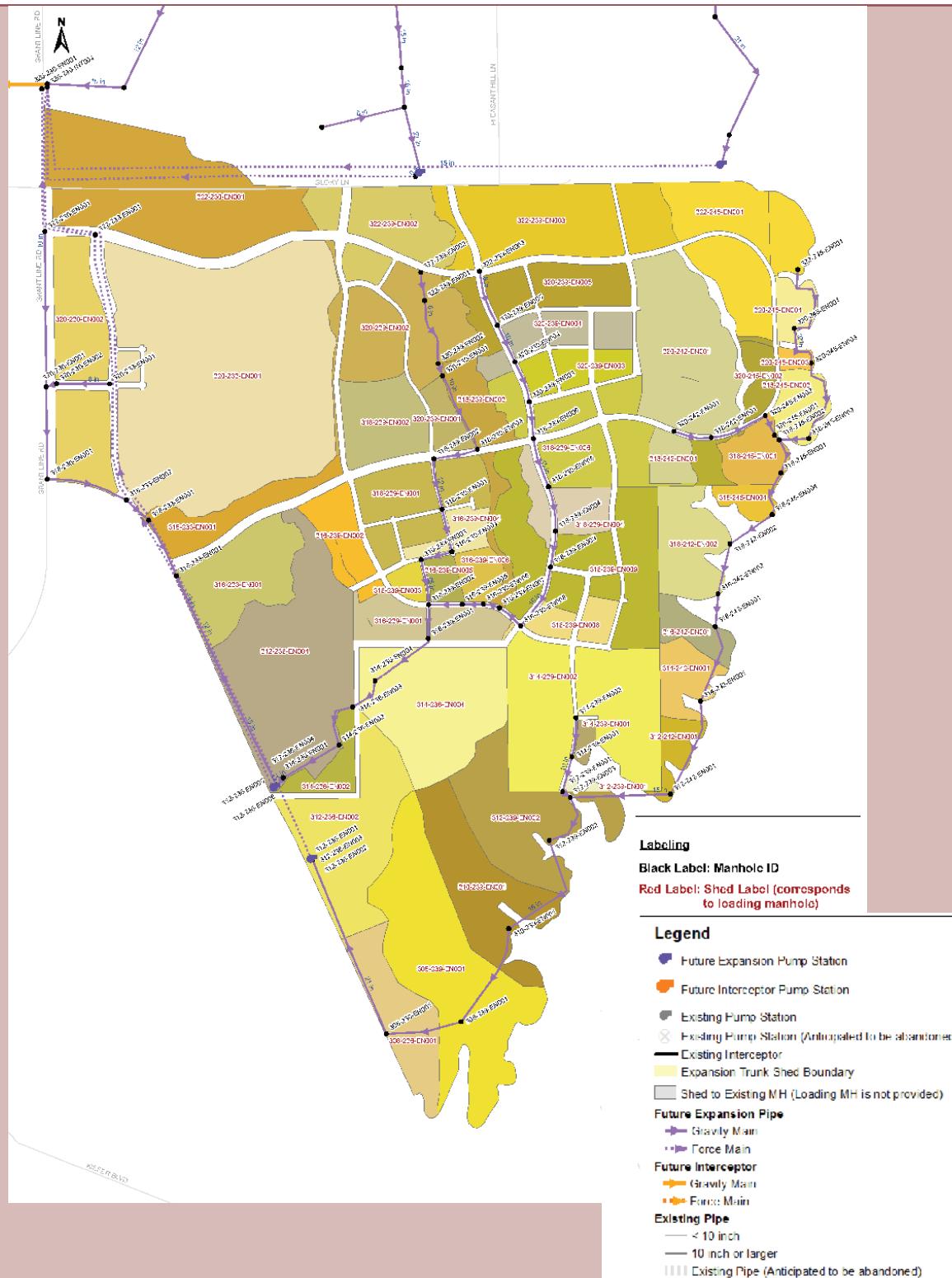


Figure 8.4: Cordova Hills Waste Water System

INFRASTRUCTURE AND SERVICES

8.5 STORM DRAINAGE

Cordova Hills is within two major creek systems. The western portions of the project includes intermittent drainages tributary to the headwaters of Laguna Creek, whereas much of the eastern portion of the area drains into Carson Creek, a tributary to Deer Creek and ultimately the Consumes River.

The existing open space in the project will provide the majority of the storm water storage capacity in the natural (pre-development) condition. County drainage policies stipulate that peak storm water flows and stages (measured at the edge of the project) after development of the project (post development) shall not exceed pre-development peak flows and stages.

Peak runoff volumes would increase in the project as a result of increased impervious surfaces associated with the planned development.

Planned storm water management facilities within the project will mitigate for increases in storm runoff and impacts to storm water quality created by development of the project. Areas outside of the project will be required to mitigate their own impacts.

Impacts to storm water quality will be mitigated through a combination of at-the-source treatment via Low Impact Development (LID) measures and water quality treatment basins at the point of discharge to regulated waters.



View of the Typical Drainage Corridors that Traverse Cordova Hills

8.5.1 Detention Basins

Detention basins are a key component of a comprehensive storm water management and water quality system that extends throughout the developed portions of Cordova Hills. In addition to the basins, the system includes underground pipe conveyances and all of the surface components of the storm water detention system (including inlets, filters, maintenance access, and outfall structures).

This system also includes several LID components that have localized detention and water quality benefits. These include detention in parking areas and the streets, paseos, and pedestrian corridors that include vegetated swales and small basins. Water quality and detention features will be integrated with parking areas and site landscaping where feasible and soils permit. Please refer to Chapters 2 and 4 for additional detail on the surface water management systems and the landscape design features they include.

The storm water detention and water quality features throughout Cordova Hills are designed as an integrated management system. Implementation of LID measures throughout Cordova Hills will help reduce overall development impacts on the quality of storm water runoff from the project.

The basins will be designed to provide water quality treatment for urban run-off before such water enters the jurisdictional avoidance areas. Storm water and urban nuisance run-off water will be detained in multi-purpose water quality treatment basins prior to release to the open space drainage corridor. Bio-filtration will typically involve marshy areas and grass swales that trap pollutants. The detention/water quality basins may incorporate permanent wet basins in the design.



Legend	
	Major Shed Boundaries (developed condition)
	Sub-Shed Boundaries
	Schematic Basin Layout (typ.)

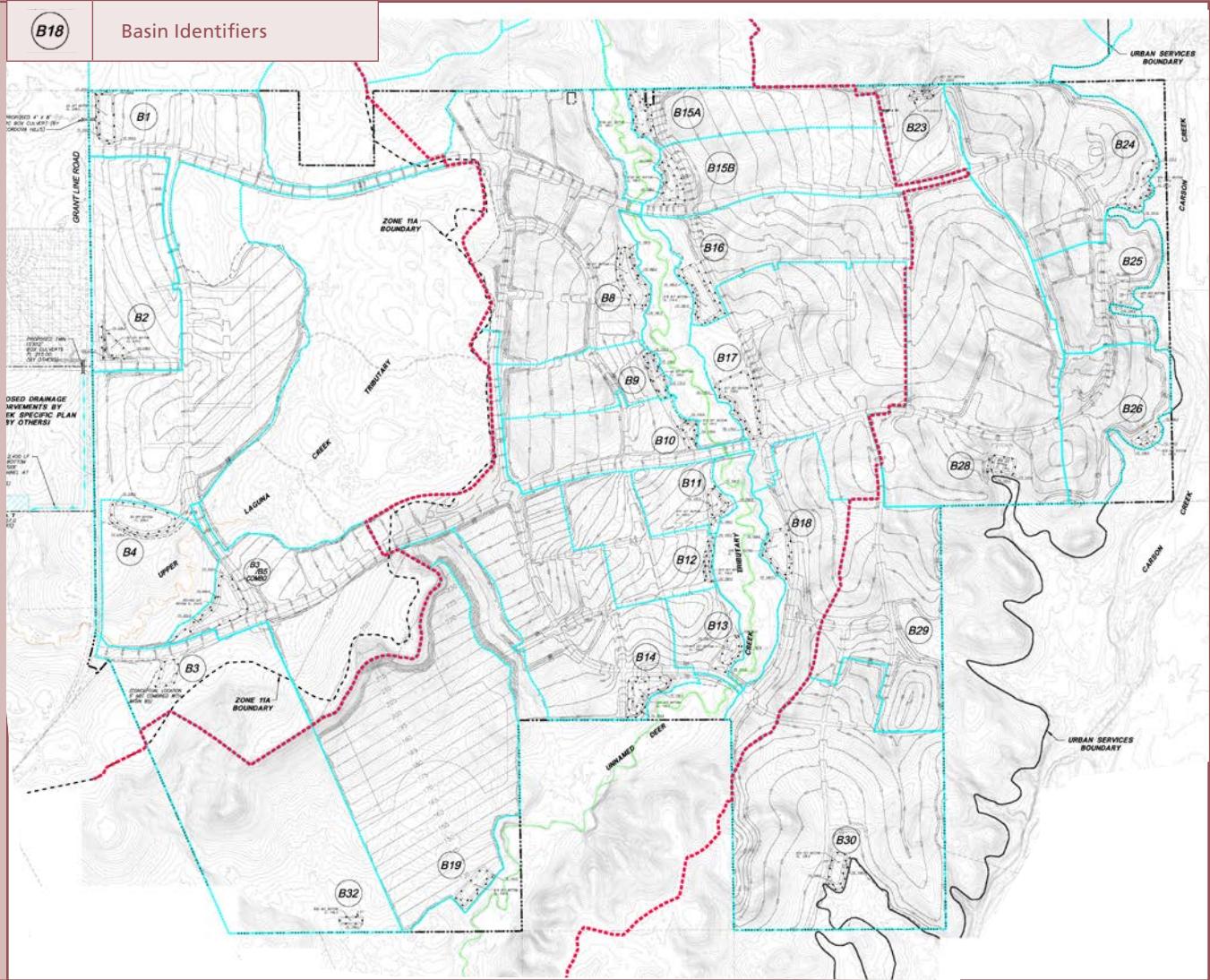


Figure 8.5: Cordova Hills Storm Water Management Plan

INFRASTRUCTURE AND SERVICES

Although storm water management and water quality improvement are the primary functions, the detention facilities will also provide an aesthetic and informal recreation function. The basins will be designed as an integral element of the avoided area buffer amenities that also include naturalized landscaping and a bike and pedestrian trail system. Small recreation amenities, including picnic tables and benches may be located near detention basins at the edge of the open space. All improvements must occur and be located outside of the avoidance areas.



Detention Basin

The detention basins will be designed as visual amenities that include naturalized landscaping, such as willow and native oaks, as well as native companion plant groundcovers and shrubs. With consideration for maintenance requirements for the basin's primary functions of storm water management and water quality enhancement, the design may allow for placement of boulders or other naturally occurring features that would enhance the aesthetics of the facility. The banks of the basins will be designed and graded such that public safety fencing will not be required in most cases.

The pedestrian paseos and other open space features designed into medium and high density residential uses, as well as Village Commercial and Commercial Mixed-use areas may include storm water detention

and water quality facilities. Such LID facilities would include small basins and swales that are an integral part of the landscaping and are interconnected with the overall storm water management system. They may also include structural BMP's to facilitate water quality treatment.

Some basins may be located adjacent to and at the lower end of parks located throughout Cordova Hills, but the actual basin area will not be considered for park area credit. They also may be located in floodplains. In these instances the basins may include a portion that only floods on rare occasions and will thus appear as an extension of the park. The basin will serve as a water quality enhancement feature that treats pollutants coming from the park turf and parking areas. By agreement with the Sacramento County Parks Department, the basins may include park recreation areas such as turf practice fields, informal play and other minimally improved areas specifically designed for multiple use purposes.



Detention Basin with Fencing

Multiple distributed detention facilities allow for phased development of Cordova Hills. Basins can be designed and constructed to accommodate the storm flow from small developing sub-areas.

Final design of each detention basin will occur as individual neighborhoods are developed and the need for mitigation of flows arises.



8.6 ROADWAYS

The on-site Road Network is described in Chapter 6, Circulation. The off-site roadways required for this project will be identified in the traffic impact analysis within the EIR. While the extent of off-site roadway improvements has not yet been determined, this project description includes this off-site facility by general reference. The project description shall include this information as it becomes available.

8.7 POLICE

Sacramento County's Sheriff's Department currently provides law enforcement service to Cordova Hills. The Sheriff's Department will continue to provide services to the area.

8.8 PARKS AND RECREATION

Cordova Hills is located entirely within County Service District 4B, a park district governed and administered by Sacramento County. CSA 4B currently provides minimal park and recreation services to the Cordova Hills project area. It is currently being explored if parks and recreation within Cordova Hills will be managed by the CHCSA as described in this Chapter.

The park plan for Cordova Hills includes a combination of large sports facilities, a community park and several neighborhood parks as described in Chapter 3, Land Use. In addition to the formal parks there is an extensive network of open space areas that weave through the residential neighborhoods and along the edge of the major resource avoidance open space areas.

Sports Park is a 50-acre complex located near the University / College Campus Center at the west side of Cordova Hills. This site will include soccer fields, baseball and softball fields, extensive picnic areas and parking among other amenities. The Sports Park is envisioned as a primary community resource

that will serve much of the active sports needs, particularly for league and tournament play.

Community Park is located adjacent to the commercial center in East Valley Village near the geographic center of the community. The Community Park encompasses 18.5 acres and will abut the commercial site to provide an opportunity for a restaurant to be located overlooking the park. The park will be distinctly urban in character and will include a community center, a Village green for a farmers market and large community events, playgrounds and picnic areas, and splash fountain in addition to open turf and play fields.

Where the Sports Park is within 2,000 feet of the Kiefer landfill, a minimum 25-foot wide landscaping area shall be provided. This landscaping area shall include a dense mix of trees and shrubs to screen the uses from the landfill. Acceptable tree species include those expected to reach minimum heights of 40 feet.

Neighborhood parks will encompass five or six acres, and will include open turf for soccer, picnic facilities and a playground. But each of the six neighborhood parks will have a distinct character that fits with the surrounding neighborhood. For example the Town Center Park will be more urban in character with a larger percentage of hardscape for public events and a small splash fountain in addition to the conventional turf. The park in University Village will have open turf but will also have a plaza and play ground area associated with the Village center use across the street. The parks in East Valley will typically be more sports oriented and designed for family play areas. Some parks will be coordinated with the adjacent school to provide supplement recreation activity areas.

INFRASTRUCTURE AND SERVICES

8.9 SCHOOLS

Cordova Hills is within the Elk Grove Unified School District. In order to accommodate new students, the district will need to construct three (3) elementary schools and a combined high school and middle school campus. All schools will be linked by components of the pedestrian and bikeway trails network.

The high school/middle school is located on a flat site of approximately 80 acres with excellent access from North Loop Road. Paseo Central, the primary north south open space corridor runs along the west side of the campus and will provide a direct link to the major trails network.

The three elementary schools are located near the centers of three Villages, Town Center, University / College Campus Center, and East Valley. In each of Villages the school is located near a neighborhood park which can augment the recreation facilities at the school. The schools are also located where they can be easily accessible by pedestrians. A one-half mile walking radius around each elementary school encompasses nearly 85% of the entire population of Cordova Hills.

Elementary school site sizes can be adjusted in size and configuration at the small lot subdivision level. Elementary schools in University/College Campus and East Valley are anticipated to be approximately 10 acres in size. The Town Center elementary school size may vary from 7 to 10 acres depending on educational programming, site design, and use of 2-story structures. Also, there may be joint use facilities of parks and schools that may warrant a smaller school footprint. A smaller school site in Town Center will be pursued if possible. However a 10-acre size may be needed if the above strategy is not practicable. The Town Center elementary would ultimately serve the elementary education needs of students in the Town Center, but could be used to serve portions of other villages during phased development of Cordova Hills.

The current Student Generation Rate for Elk Grove Unified School District is summarized in Table 8.2: Summary of Cordova Hills School Facility Requirements.

The projected student enrollment is approximately 2,547 elementary students; 750 middle school students; and 1,416 high school students.

The Master Plan includes three elementary schools, and a middle / high school located to serve individual neighborhoods.

Elk Grove Student Generation Rates			
	K-6	7 to 8	9 to 12
Single Family	0.3763	0.1127	0.2101
Multi-Family	0.2684	0.0736	0.1333
Condominiums	0.0697	0.0202	0.0652



Table 8.2: Summary of Cordova Hills School Facility Requirements

TOWN CENTER		Land Use Type	Acres ⁽¹⁾	Units	Yield	Student	Yield	Student	Yield	Student	TOTALS
					K-6	7 - 8	9 - 12				
	HDR1		150	0.0697	10.5	0.0202	3.0	0.0652	9.8	23.3	
	HDR2		400	0.2684	107.4	0.0736	29.4	0.1333	53.3	190.1	
	RD20		150	0.2684	40.3	0.0736	11.0	0.1333	20.0	71.3	
	MDR		760	0.3763	286.0	0.1127	85.7	0.2101	159.7	531.3	
	LDR		290	0.3763	109.1	0.1127	32.7	0.2101	60.9	202.7	
Town Center Total		204.3	1750		553.2		161.8		303.7	1018.7	
				School size	850		1200		2200		
				School Needed	0.65		0.13		0.14		

RIDGELINE		Land Use Type	Acres ⁽¹⁾	Units	Yield	Student	Yield	Student	Yield	Student	TOTALS
					K-6	7 - 8	9 - 12				
	HDR1		9.8	200	0.2684	53.7	0.0736	14.7	0.1333	26.7	95.1
	MDR		58.7	485	0.3763	182.5	0.1127	54.7	0.2101	101.9	339.1
	LDR		79.0	260	0.3763	97.8	0.1127	29.3	0.2101	54.6	181.8
	FC		11.2	50	0.3763	18.8	0.1127	5.6	0.2101	10.5	35.0
Ridgeline Total		158.7	995		352.8		104.3		193.7	650.8	
				School size	850		1200		2200		
				School Needed	0.42		0.09		0.09		

UNIVERSITY VILLAGE		Land Use Type	Acres ⁽¹⁾	Units	Yield	Student	Yield	Student	Yield	Student	TOTALS
					K-6	7 - 8	9 - 12				
	HDR1		34.0	620	0.2684	166.4	0.0736	45.6	0.1333	82.6	294.7
	RD20		15.1	205	0.0697	14.3	0.0202	4.1	0.0652	13.4	31.8
	MDR		59.0	530	0.3763	199.4	0.1127	59.7	0.2101	111.4	370.5
	LDR		13.1	90	0.3763	33.9	0.1127	10.1	0.2101	18.9	62.9
	FC		8.9	40	0.3763	15.1	0.1127	4.5	0.2101	8.4	28.0
University Village Total		130.1	1485		429.1		124.2		234.7	787.9	
				School size	850		1200		2200		
				School Needed	0.50		0.10		0.11		

EAST VALLEY		Land Use Type	Acres ⁽¹⁾	Units	Yield	Student	Yield	Student	Yield	Student	TOTALS
					K-6	7 - 8	9 - 12				
	HDR1		9.5	200	0.2684	53.7	0.0736	14.7	0.1333	26.7	95.1
	RD20		15.9	230	0.0697	16.0	0.0202	4.6	0.0652	15.0	35.7
	MDR		96.0	725	0.3763	272.8	0.1127	81.7	0.2101	152.3	506.8
	LDR		111.7	520	0.3763	195.7	0.1127	58.6	0.2101	109.3	363.5
	FC		14.5	65	0.3763	24.5	0.1127	7.3	0.2101	13.7	45.4
East Valley Total		247.6	1740		562.7		167.0		316.9	1046.6	
				School size	850		1200		2200		
				School Needed	0.66		0.14		0.14		

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CREEKSIDER		Yield		Student		Yield		Student		TOTALS	
Land Use Type	Acres ⁽¹⁾	Units	K-6	7 - 8		9 - 12					
HDR1	10.3	200	0.2684	53.7	0.0736	14.7	0.1333	26.7	95.1		
RD20	23.0	305	0.0697	21.3	0.0202	6.2	0.0652	19.9	47.3		
MDR	96.8	580	0.3763	218.3	0.1127	65.4	0.2101	121.9	405.5		
LDR	126.7	445	0.3763	167.5	0.1127	50.2	0.2101	93.5	311.1		
ER	2.5	5	0.3763	1.9	0.1127	0.6	0.2101	1.1	3.5		
Creekside Total	259.3	1530		462.5		137.0		262.9	862.4		
			School size	850		1200		2200			
			School Needed	0.54		0.11		0.12			

ESTATES		Yield		Student		Yield		Student		TOTALS	
Land Use Type	Acres ⁽¹⁾	Units	K-6	7 - 8		9 - 12					
LDR	109.6	350	0.3763	131.7	0.1127	39.4	0.2101	73.5	244.7		
ER	62.2	145	0.3763	54.6	0.1127	16.3	0.2101	30.5	101.4		
Estates Total	171.8	495		186.3		55.8		104.0	346.1		
			School size	850		1200		2200			
			School Needed	0.22		0.05		0.05			

	Schools	Students	Schools	Students	Schools	Students
	K-6		7 - 8		9 - 12	
Total	3.00	2,547	0.6	750	0.6	1,416

Notes:

(1) Areas exclude major roadways shown on land use plan.



8.10 LIBRARY

The Sacramento Public Library Authority is the fourth largest library system in California serving the public in the City and County of Sacramento as well as the cities of Citrus Heights, Elk Grove, Galt, Isleton and Rancho Cordova. The Sacramento Public Library operates 28 libraries, which includes a Central Library in downtown Sacramento. More than 600,000 residents have a library card and over 7 items are circulated annually.

A branch library is planned within the Town Center to serve the Cordova Hills community as well as residents in the surrounding area. The branch library may be phased in over time by locating first in a leased space in a commercial setting and ultimately locating in a permanent facility. The library will serve as a center of public activity and will be located adjacent to a public space such as a plaza and near shops, restaurants and entertainment venues in the Town Center.

8.11 FIRE

The Sacramento Metropolitan Fire District is the service provider for the area and will continue to provide services once the community has developed. The Sacramento Metropolitan Fire District has indicated that development within Cordova Hills area will increase the need for fire protection, including additional staffing, vehicles and equipment, and 1-2 new fire stations to be located within the project.

8.12 ELECTRICITY

SMUD is the current service provider for the area and will remain as the service provided once the project develops. SMUD has indicated that the energy demand for Cordova Hills will require 1 to 2 neighborhood substations. These substation would be served from an overhead 69kV system that would likely loop from Grant Line Road. The electrical distribution will be an underground 12kV system installed based on SMUD's standard Residential Rule 15, and the Commercial Rule 16 requirements.

8.13 NATURAL GAS

Pacific Gas and Electric Company (P.G.&E.) is the current service provider for the area and will remain as the service provider once the project develops. PG&E has indicated a pipeline extension to serve the Cordova Hills area will come from the Sunridge Specific Plan and a new regulator station will be needed in order to adequately provide service at full build-out.

Chapter 9

IMPLEMENTATION



IMPLEMENTATION

9.1 PURPOSE

The purpose of the Implementation Chapter is to ensure that development will progress in a comprehensive and coordinated manner that is responsive to changing circumstances and market conditions. Implementation and administration of the Cordova Hills Master Plan includes the review and processing of individual development projects within Cordova Hills, the anticipated phasing of the development and methods of financing of the required public improvements.

9.2 CORDOVA HILLS MASTER PLAN ADMINISTRATION

9.2.1 Authority

The County of Sacramento will administer the Master Plan and related documents consistent with the provisions of Article 8, Sections 65450 through 65457 of Title 7 Planning and Land Use Law, California Government Code. Specific procedures for adoption and administration of the Master Plan may be developed in the context of a Zoning Ordinance adopted by the County of Sacramento. The Cordova Hills Special Planning Area (SPA) will incorporate the Master Plan, including Design Guidelines and Development Standards. The Cordova Hills Master Plan shall be implemented consistent with the Master Plan goals, policies and standards in combination with applicable County rules, regulations and policies.

9.2.2 Master Plan Amendments

The Cordova Hills Master Plan is intended to be flexible to respond to changing conditions and expectations during the course of its implementation. During the long-term build-out of Cordova Hills, amendments to the adopted Master Plan may be necessary to respond to changing circumstances or to adapt some design guidelines or standards to special conditions on a particular site. To address this intent, the Cordova Hills Master Plan provides for both minor and major Master Plan Amendments.

9.2.2.1 Scope of Amendment

Any proposed amendments to the Master Plan can include, but are not limited to changing land use designations, design criteria, development standards or policies. Amendments to this adopted Master Plan shall be categorized by the Planning Director as either a Major Amendment or a Minor Amendment.

The Planning Director shall determine the consistency of the application with the General Plan and the Master Plan and determine whether the application constitutes a request for a Major or Minor Amendment as defined below.

All amendments to the Cordova Hills Master Plan with the potential to result in a change in ozone precursor emissions shall include an analysis which quantifies, to the extent practicable, the effect of the proposed amendment on ozone precursor emissions. The amendment shall not increase total ozone precursor emissions above what was considered in the AQMP for the entire Cordova Hills project and shall achieve the original 35% reduction in total overall project emissions. If the amendment would require a change in the AQMP to meet that requirement, then the proponent of the amendment shall consult with SMAQMD on the revised analysis and shall prepare a revised AQMP for approval by the County, in consultation with SMAQMD.



All amendments to the Master Plan with the potential to change the SPA-wide GHG emissions shall include an analysis which quantifies, to the extent practicable, the effect of the Amendment on SPA-wide greenhouse gas emissions. The Amendment shall not increase SPA-wide greenhouse gas emissions above an average 5.80 metric tons per capita (including emissions from building energy usage and vehicles). If the Master Plan amendment would require a change in the approved GHG Reduction Plan in order to meet the 5.80 MT CO₂e threshold, then the proponent of the amendment shall consult with the SMAQMD on the revised analysis and shall prepare a revised GHG Reduction Plan for approval by the County, in consultation with SMAQMD.

9.2.2.2 Minor Amendments

An amendment shall be defined as Minor if determined by the Planning Director to be in substantial conformance with:

- The overall intent of the Cordova Hills Master Plan
- The Community Design Guidelines established in this Master Plan
- The County of Sacramento General Plan
- The Environmental Impact Report for the SPA and Master Plan

Examples of Minor Amendments include, but are not limited to:

- The addition of new or updated information that does not substantively change the Master Plan.
- Minor adjustments to land use boundaries and street alignments where the general land use pattern is maintained.
- Minor adjustments to drainage alignments that do not substantially alter land use or circulation concepts of the Master Plan.
- Variation in development standards, if such variations do not substantively change the

character of the Master Plan.

- Changes to the provision for public infrastructure and facilities that do not impact the level of service provided or affect the development capacity in Cordova Hills.
- Changes to phasing boundaries that do not impact infrastructure sizing, financing districts or the provision for adequate services to associated development.
- Modifications to the Design Guidelines, such as revisions to design treatments or changes in specified plant materials, if the Planning Director determines that such changes achieve the original design intent.
- The amended land use must be consistent with the goals, policies and requirements of the County of Sacramento General Plan, and the Cordova Hills Master Plan.
- The amended land use does not result in significant modification to conditions of the approved tentative map, rezone agreement or applicable permits.
- The amended land use does not impact any Community Facilities District, or any other benefit assessment facilities financing arrangement unless such documents are amended to correspond to the proposed density adjustments.

IMPLEMENTATION

9.2.2.3 Major Amendments

Major Amendments shall be defined as any Amendment not deemed to be a Minor Amendment.

Examples include:

- A new type of land use not specifically discussed in this Master Plan is introduced.
- Significant changes to the distribution of land uses, minor density adjustments or other changes affecting land use are proposed which may substantially affect the Master Plan.
- Changes to design guidelines and/or development standards, which, if adopted, would substantially change the physical character of Cordova Hills as envisioned by the Master Plan, as determined by the Planning Director.
- Changes to the approved Phasing Plan are proposed which significantly increase or alter the area boundaries or units allocated by the proposed phasing schedule.
- Any change proposed to the Master Plan which could significantly increase environmental impacts identified in the Environmental Impact Report for the SPA and the Master Plan, as determined by the Sacramento County Environmental Coordinator, or other changes determined to be significant by the Planning Director.

9.2.2.4 Approval of Amendments

Any application deemed to be a Minor Amendment may be approved by the Planning Director. Any decision of the Planning Director may be appealed to the Planning Commission. The Planning Director, in his or her sole discretion, may refer an application for a Minor Amendment to the Planning Commission for consideration. The determination of the Planning Commission is appealable to the Board of Supervisors. Any application for a Major Amendment may be approved by the Board of Supervisors following a recommendation by the Planning Commission. Any approved Major or Minor

Amendment, including any amended Exhibits, shall apply as amended, without any need to amend the SPA Ordinance.

9.2.3 Williamson Act

Implementation of the Cordova Hills Master Plan is subject to the Williamson Act contract restrictions set forth in Section 1.12.4 on page 1-14. See Figure 1-4 for location of Williamson Act Parcel.

9.3 PROJECT PHASING

Phasing and construction of the project is anticipated to begin along Grant Line Road along with the University / College Campus Center. The project will then build-out in an easterly direction. However, market conditions and infrastructure phasing may dictate alternative build-out scenarios. Figure 9.1 illustrates the primary phases of the project development.

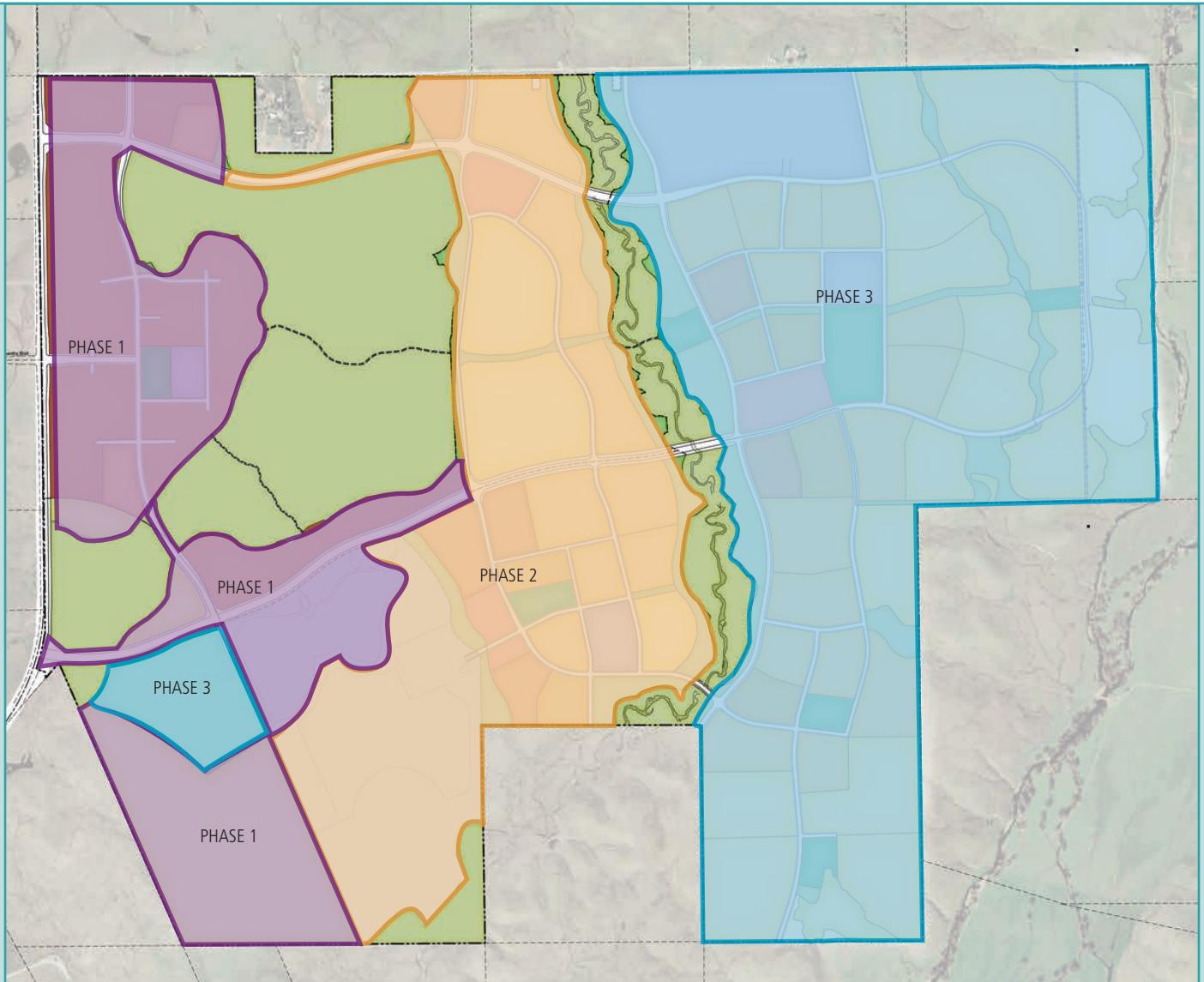


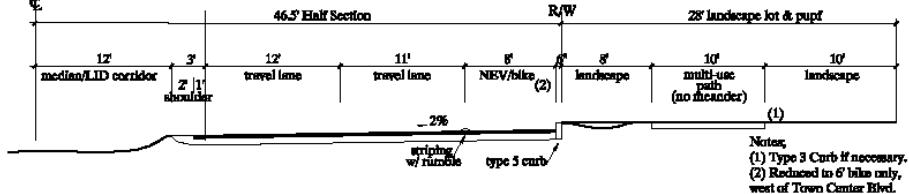
Figure 9.1: Phasing Plan

APPENDIX A

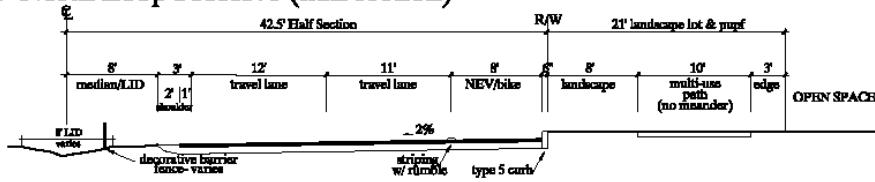
APPENDIX A

4A - Arterial w/ NEV/Bike (half section)

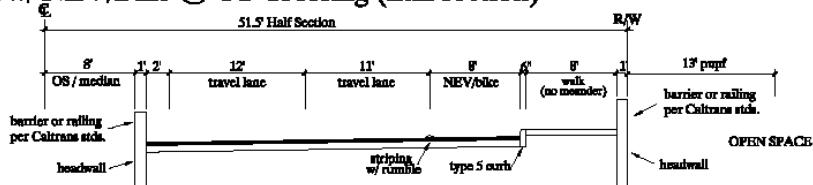
4-LANE



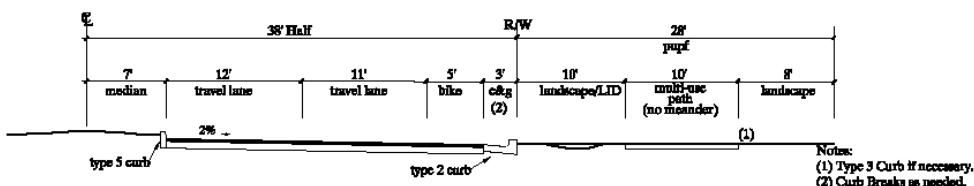
4B-1 - Arterial - North Loop Preserve (half section)



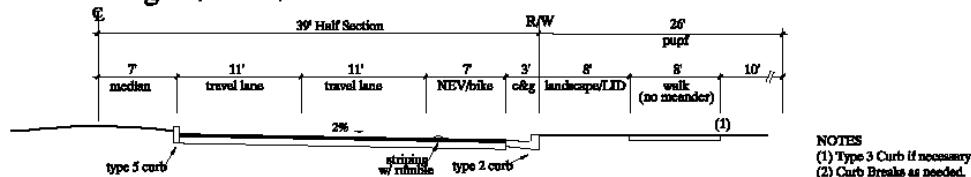
4B-2 - Arterial w/ NEV/Bike @ OS Crossing (half section)



4C - Arterial- half section

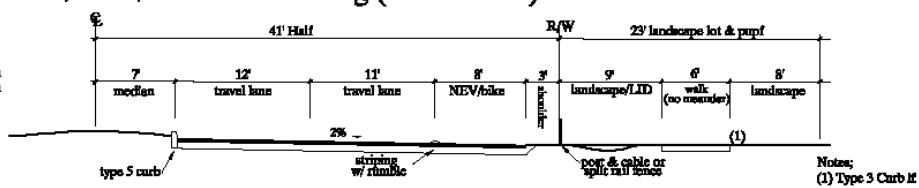


4D - School Frontage w/ NEV/Bike



4E - Arterial w/NEV/Bike - No Parking (half section)

Note:
This section used as
possible 4-lane expansion
of 2-lane 'A' Street north
of North Loop Road.



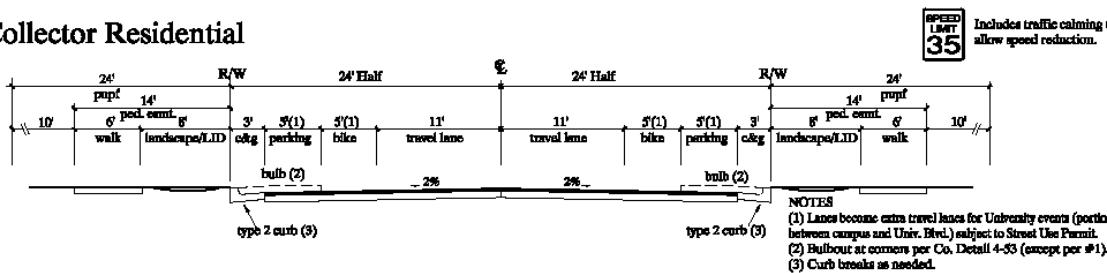
0 5 10 ft

Figure A.1: Street Sections (4A, 4B-1, 4B-2, 4C, 4D, and 4E)

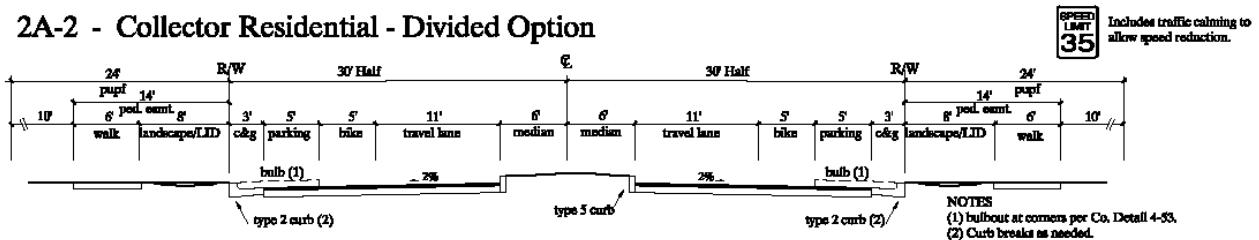


2A-1 - Collector Residential

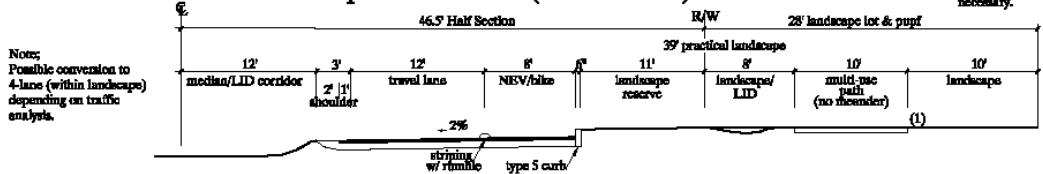
2-LANE



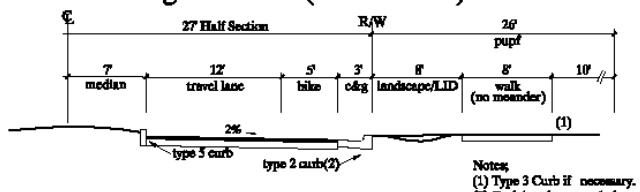
2A-2 - Collector Residential - Divided Option



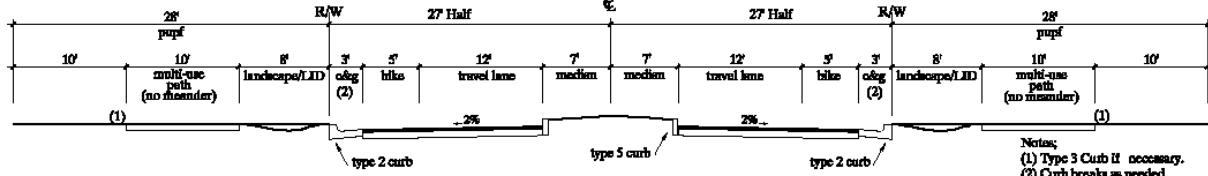
2A-3 Collector w/NEV/Bike- optional 4 lane (half section)



2A-4 Collector- School Frontage Divided (half section)



2B-1 - Collector Town Center Blvd- Divided, No Parking



2B-2 - Collector- Town Center Blvd- Central (half section)

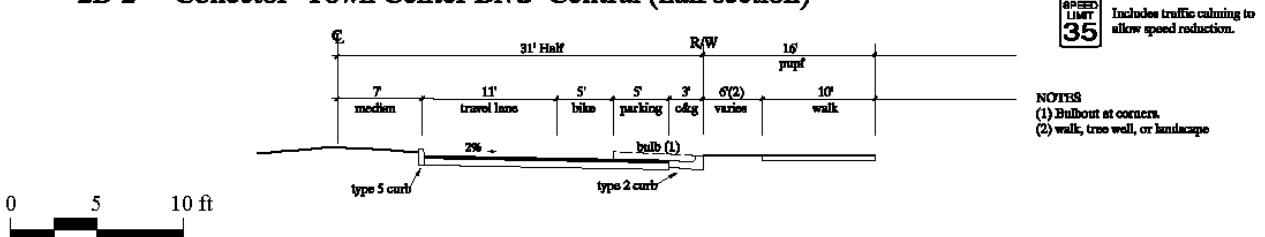


Figure A.2: Street Sections (2A-1, 2A-2, 2A-3, 2A-4, 2B-1, and 2B-2)

APPENDIX A

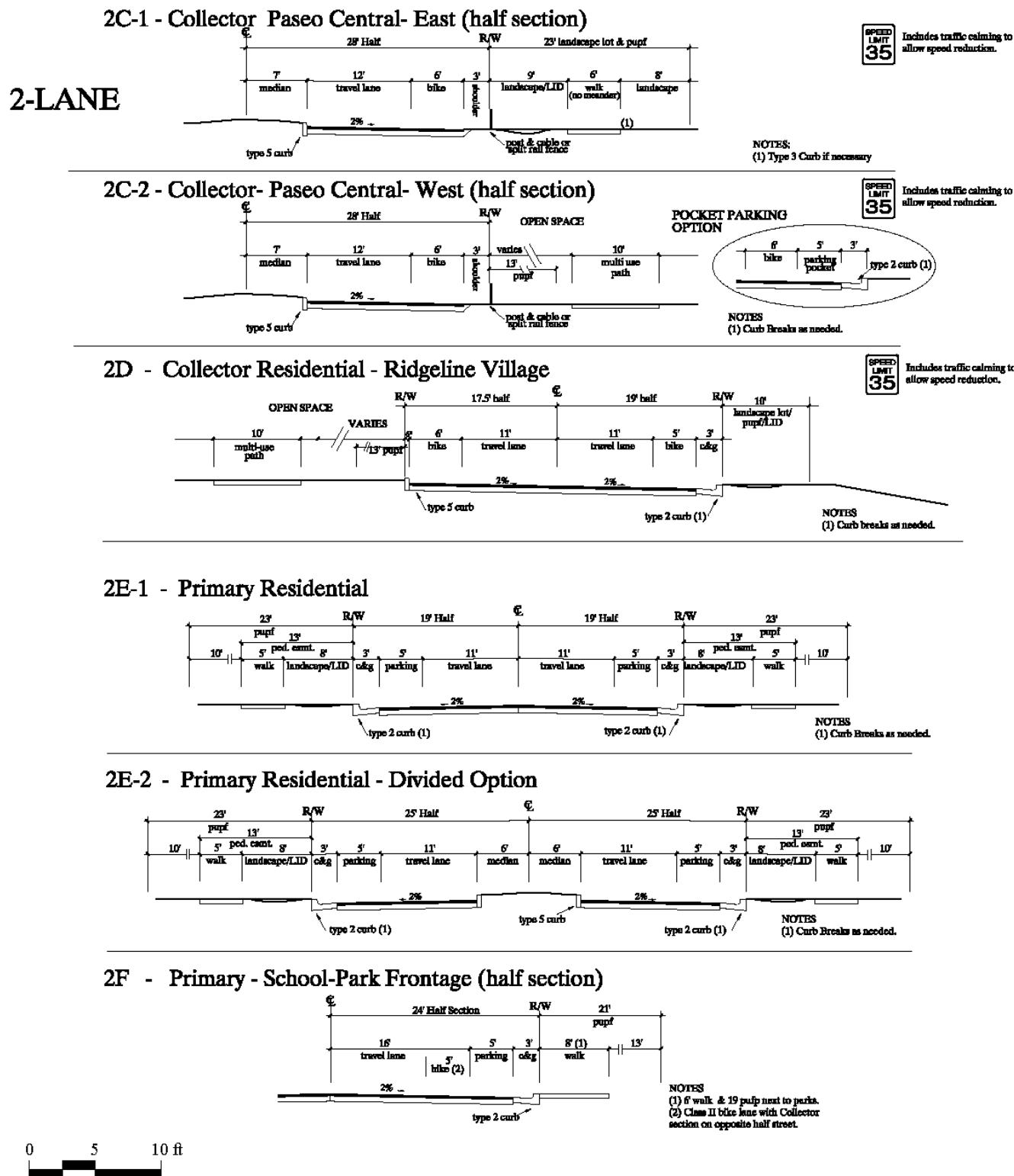
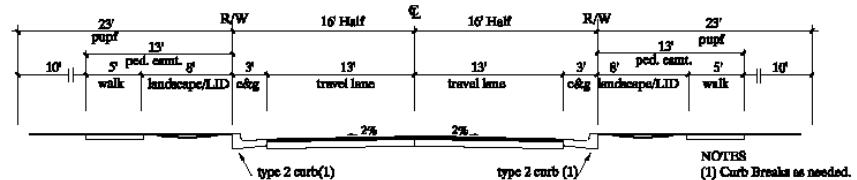


Figure A.3: Street Sections (2C-1, 2C-2, 2D, 2E-1, 2E-2, and 2F)

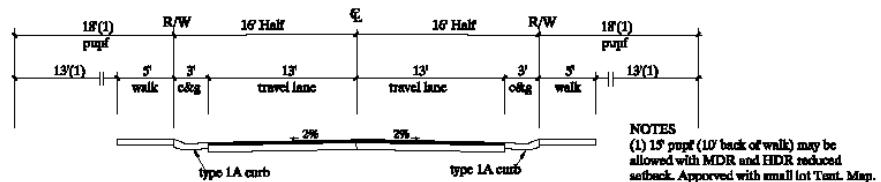


2G-1 - Minor Residential - Detached Walk

2-LANE



2G-2 - Minor Residential - Attached Walk



2H - Minor Residential - Estates Village (private)

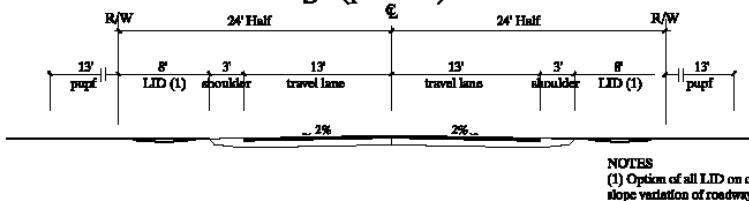
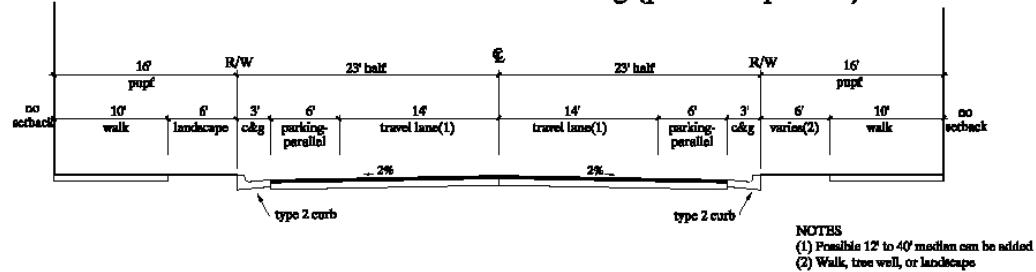


Figure A.4: Street Sections (2G-1, 2G-2, and 2H)

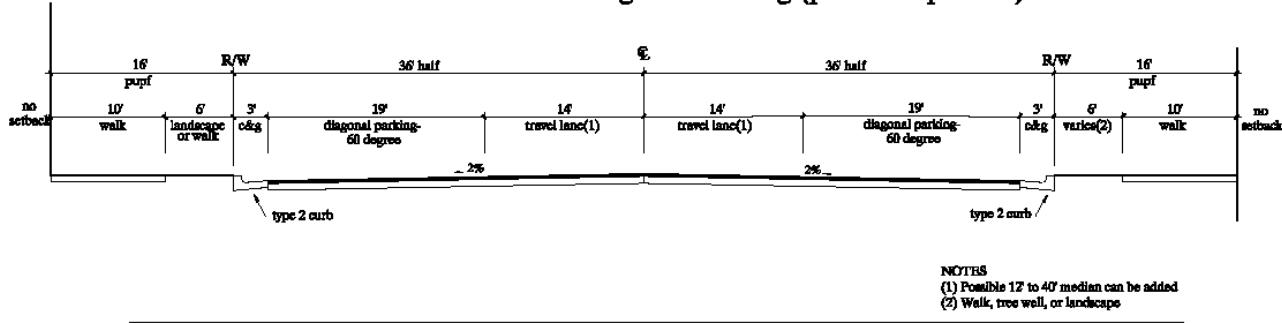
APPENDIX A

SPECIAL SECTIONS

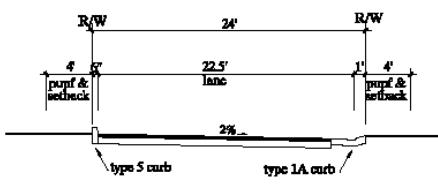
2TC-1 -- Town Center Main Street- Parallel Parking (public or private)



2TC-2 -- Town Center Main Street- Diagonal Parking (public or private)



A-1 - Alley/Access Drive, Option #1 (private)



NOTE:
 This is one of many possible
 alley/access drive sections. Other
 alley/access drive sections may be
 proposed with individual
 development applications.

Terms and Abbreviations:

- bike = Class 2 striped bike lane
- c&g = curb and gutter
- IOD = Irrevocable Offer of Dedication
- LID = Low Impact Development features
- ped. esmt. = pedestrian easement
- pupf = public utility and public facility easement
- walk = concrete sidewalk per county stds.
-  = posted speed less than usual to allow NEV inside travel lanes.



Figure A.5: Street Sections (2TC-1, 2TC-2 and A-1)

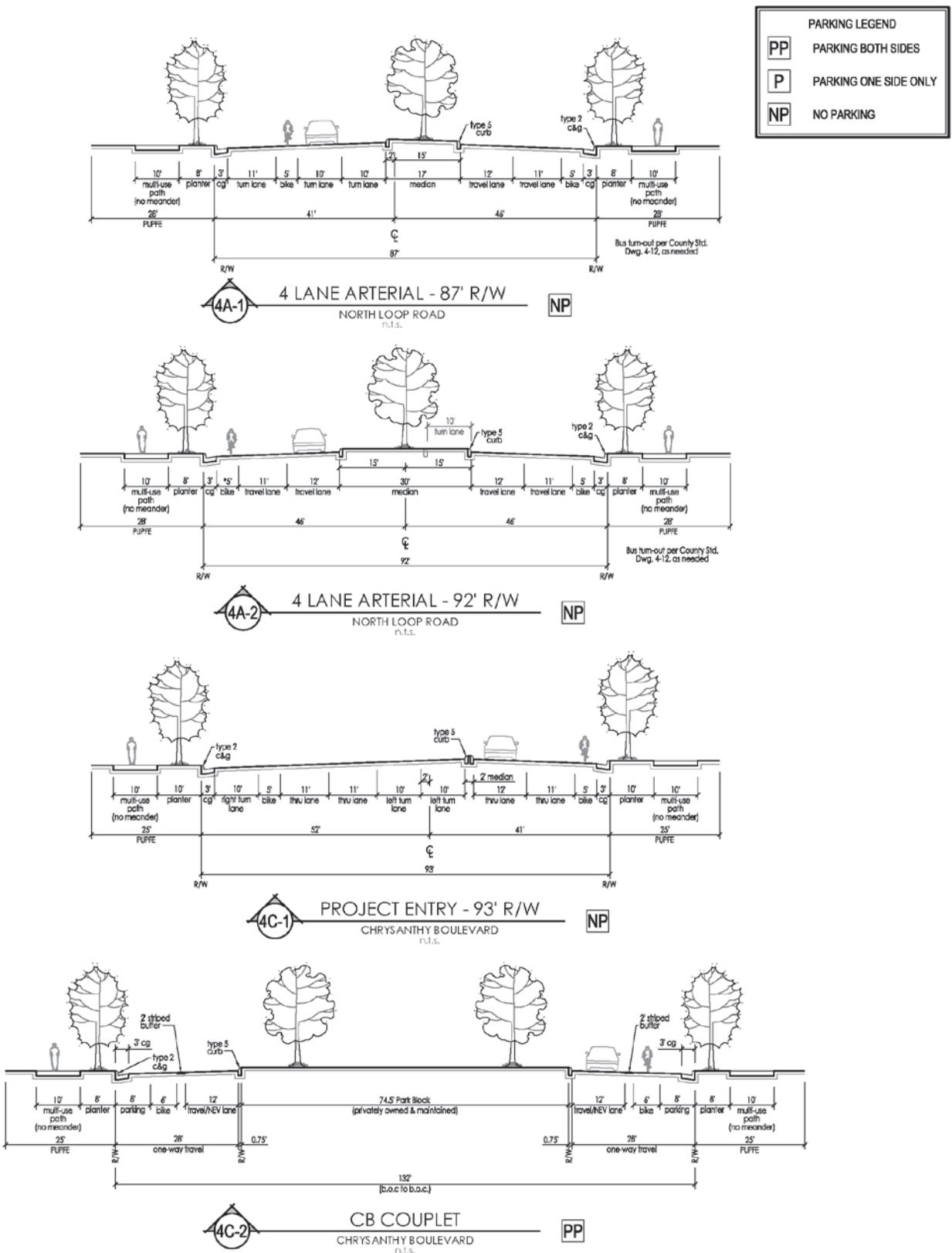


Figure A.6: Street Sections (4A-1, 4A-2, 4C-1, 4C-2)

APPENDIX A

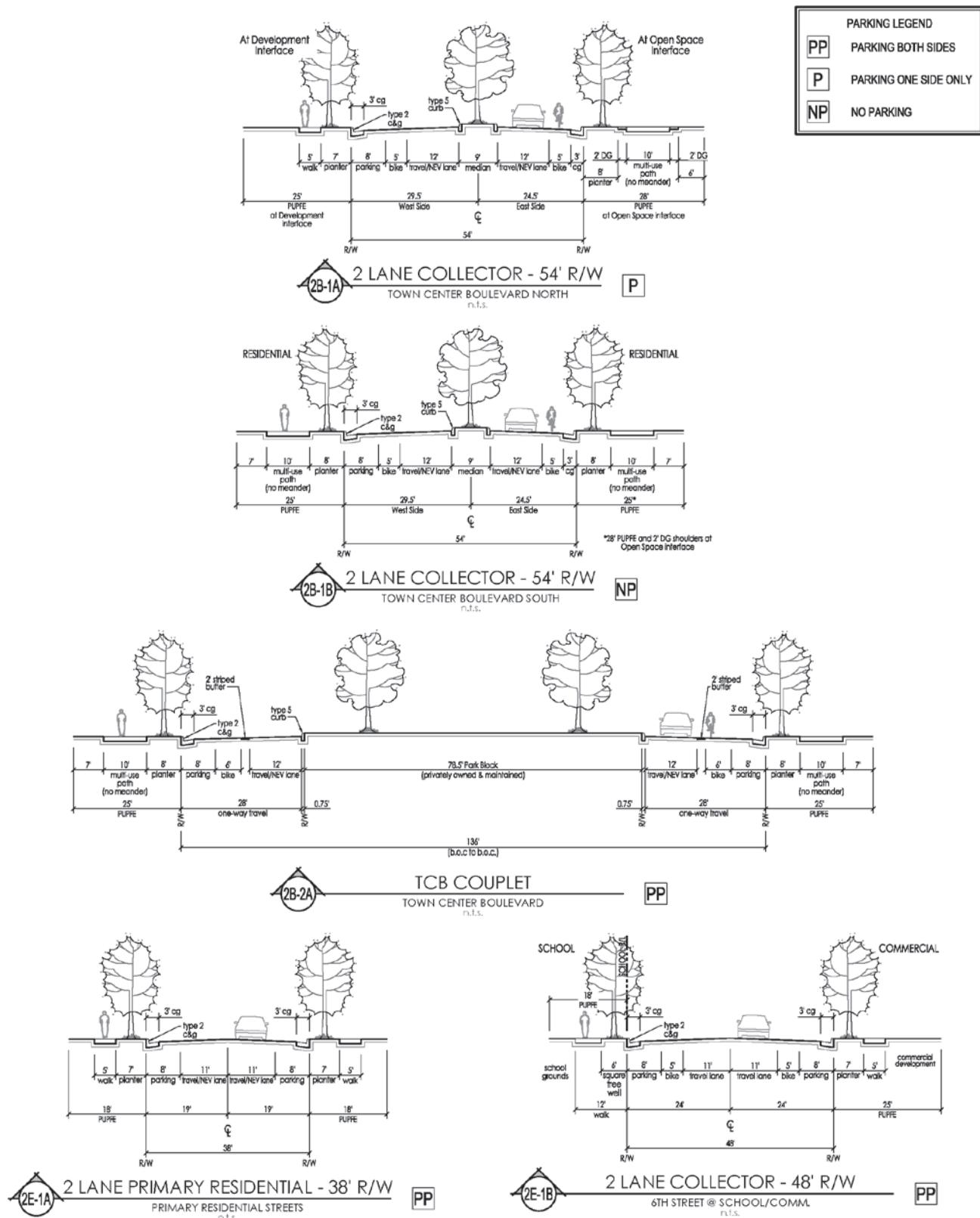
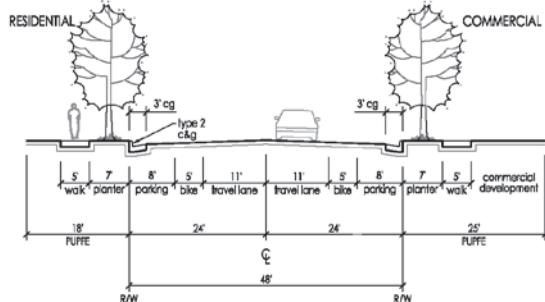


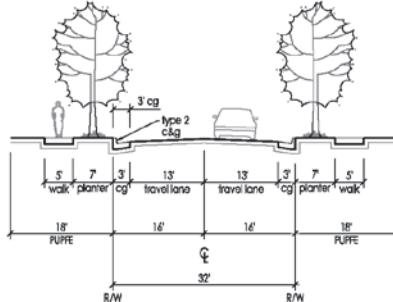
Figure A.7: Street Sections (2B-1A, 2B-1B, 2B-2A, 2E-1A, 2E-1B)



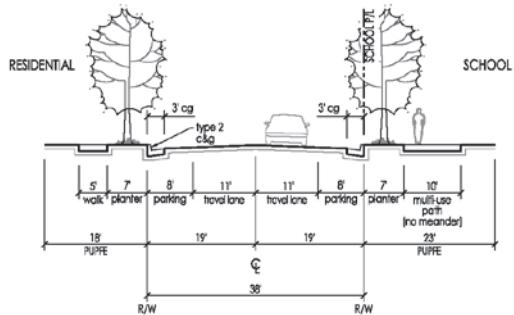
PARKING LEGEND	
PP	PARKING BOTH SIDES
P	PARKING ONE SIDE ONLY
NP	NO PARKING



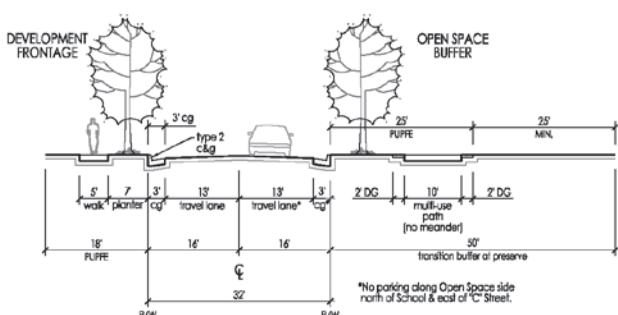
2E-1C
2 LANE COLLECTOR - 48' R/W
6TH STREET @ RESIDENTIAL/COMMERCIAL
n.t.s. PP



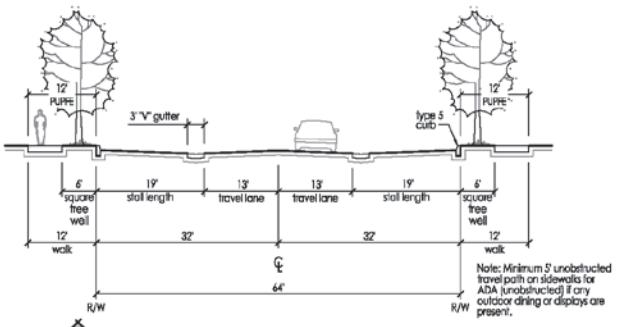
2G-1A
2 LANE RESIDENTIAL - 32' R/W
MINOR RESIDENTIAL STREETS
n.t.s. PP



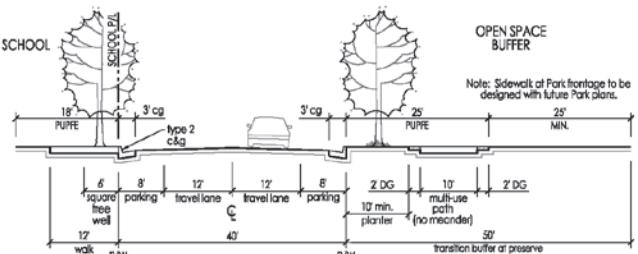
2E-1D
2 LANE PRIMARY RESIDENTIAL - 38' R/W
'C' Street
n.t.s. PP



2G-1B
2 LANE RESIDENTIAL - 32' R/W
FRONTAGE STREET @ PRESERVE P



2TC-2A
60° ANGLED PARKING
2 LANE MIXED-USE - 64' R/W
'B' STREET
n.t.s. PP



2G-1C
2 LANE RESIDENTIAL - 40' R/W
FRONTAGE STREET @ EAST SIDE OF SCHOOL
n.t.s. PP

Figure A.8: Street Sections (2E-1C, 2E-1D, 2TC-2A, 2G-1A, 2G-1B, 2G-1C)

APPENDIX A

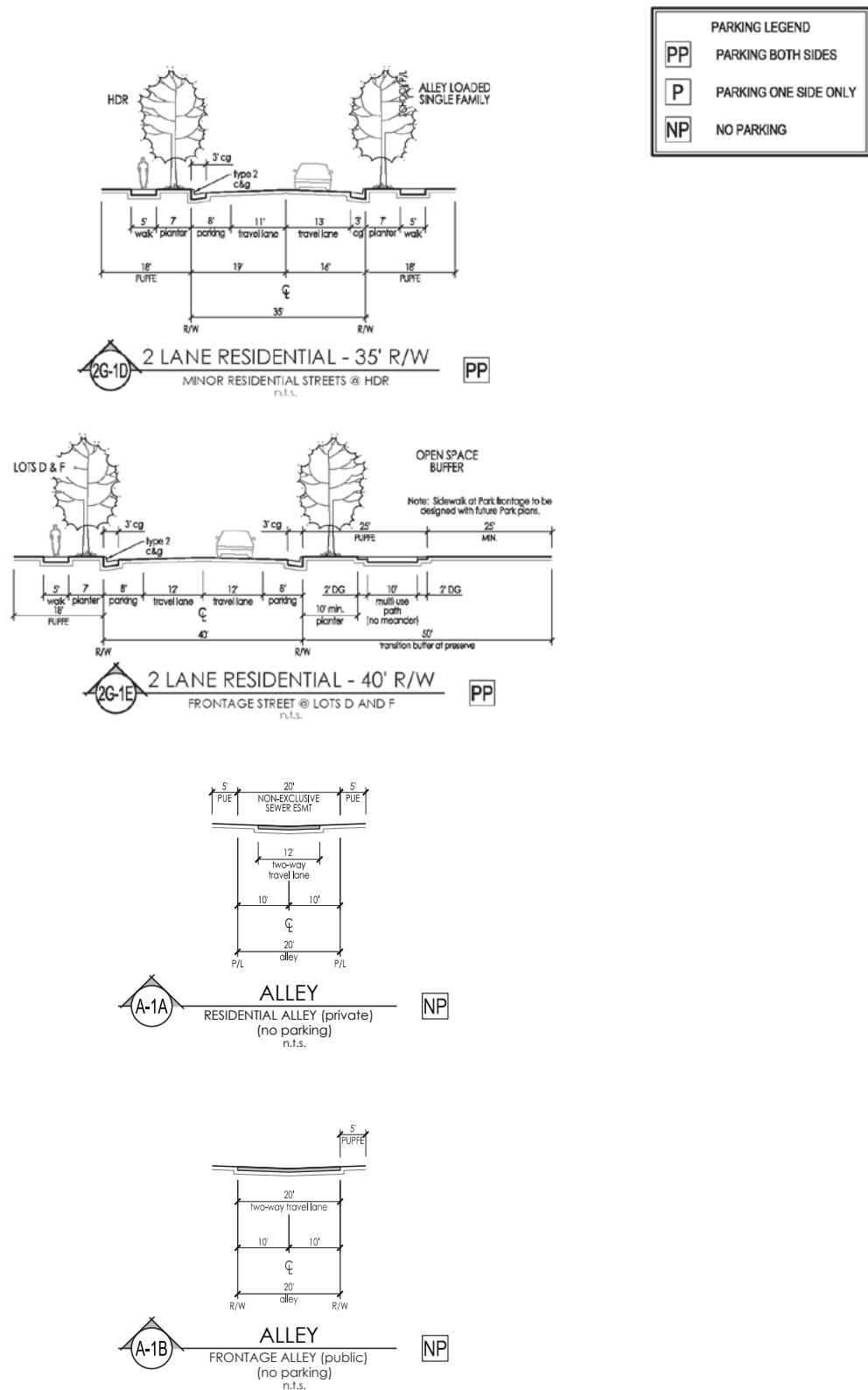


Figure A.9: Street Sections (2G-1D, 2G-1E, A-1A, A-1B)

APPENDIX B

APPENDIX B

B.1 COMMUNITY PLANT PALETTE

Plant selection is based on a number of geographic features such as topography, exposure, proximity to open space and ephemeral drainage areas, slopes, canyons and ridgelines.

The plant palette reflects the need for a combination of non-invasive plant material with a lifespan that endures several generations.

B.1.1 Town Center Plant Palette

Primary Street Trees (Dominant Tree - minimum 70% of total trees)

15 gallon minimum size

<i>Celtis sinensis</i>	Chinese Hackberry
<i>Cinnamomum camphora</i>	Camphor Tree
<i>Koelreuteria paniculata</i>	Goldenrain Tree
<i>Pinus canariensis</i>	Canary Island Pine
<i>Pistacia chinensis</i>	Chinese Pistache
<i>Platanus a. 'Bloodgood'</i>	London Plane Tree
<i>Quercus wislizenii</i>	Interior Live Oak
<i>Tilia cordata 'Greenspire'</i>	Little-leaf Linden
<i>Ulmus parvifolia 'Drake'</i>	Evergreen Elm
<i>Zelkova serrata</i>	Zelkova

Secondary Street Trees (Background Trees)

15 gallon minimum size

<i>Liquidamber s. 'Festival'</i>	American Sweet Gum
<i>Liriodendron tulipifera</i>	Tulip Tree
<i>Magnolia grandiflora</i>	Southern Magnolia
<i>Pinus eldarica</i>	Afghan Pine
<i>Populus nigra 'Italica'</i> (outside of r.o.w.)	Lombardy Poplar
<i>Prunus caroliniana</i>	Carolina Laurel Cherry
<i>Pyrus calleryana</i>	Evergreen Pear

Accent Trees (at visual focal areas)

15 gallon minimum size

<i>Cercis occidentalis</i>	Western Redbud
<i>Lagerstroemia indica</i>	Crape Myrtle
<i>Olea europaea "Swan Hill"</i>	Fruitless Olive
<i>Populus nigra 'Italica'</i> (outside of r.o.w.)	Lombardy Poplar
<i>Prunus c. 'Krauter Vesuvius'</i>	Purple-Leaf Plum
<i>Pyrus calleryana</i>	Flowering Pear



B.1.2 Ridgeline Plant Palette

Primary Street Trees (Dominant tree - minimum 70% of total)

15 gallon minimum size

<i>Arbutus 'Marina'</i>	Strawberry Tree
<i>Celtis sinensis</i>	Chinese Hackberry
<i>Cinnamomum camphora</i>	Camphor Tree
<i>Koelreuteria paniculata</i>	Goldenrain Tree
<i>Pinus canariensis</i>	Canary Island Pine
<i>Pinus pinea</i>	Italian Stone Pine
<i>Pistacia chinensis</i>	Chinese Pistache
<i>Platanus a. 'Bloodgood'</i>	London Plane Tree
<i>Quercus wislizenii</i>	Interior Live Oak
<i>Rhus lancea</i>	African Sumac
<i>Tilia cordata 'Greenspire'</i>	Little-leaf Linden
<i>Ulmus parvifolia 'Drake'</i>	Evergreen Elm
<i>Zelkova serrata</i>	Zelkova

Secondary Street Trees (Background Trees)

15 gallon minimum size

<i>Liquidamber s. 'Festival'</i>	American Sweet Gum
<i>Liriodendron tulipifera</i>	Tulip Tree
<i>Magnolia grandiflora 'St. Mary's'</i>	Southern Magnolia
<i>Pinus coulteri</i>	Coulter Pine
<i>Pinus eldarica</i>	Afghan Pine
<i>Pinus halepensis</i>	Aleppo Pine
<i>Populus nigra 'Italica'</i> (outside of r.o.w.)	Lombardy Poplar
<i>Prunus caroliniana</i>	Carolina Laurel Cherry
<i>Pyrus calleryana</i>	Flowering Pear

Accent Trees (at visual focal areas)

15 gallon minimum size

<i>Cercis occidentalis</i>	Western Redbud
<i>Lagerstroemia indica</i>	Crape Myrtle
<i>Olea europaea 'Swan Hill'</i>	Fruitless Olive
<i>Populus nigra 'Italica'</i> (outside of r.o.w.)	Lombardy Poplar
<i>Prunus c. 'Krauter Vesuvius'</i>	Purple-Leaf Plum
<i>Pyrus calleryana</i>	Flowering Pear

APPENDIX B

B.1.3 University Village Plant Palette

Primary Street Trees (Dominant tree - minimum 70% of total)

15 gallon minimum size

<i>Arbutus 'Marina'</i>	Strawberry Tree
<i>Cedrus deodara</i>	Deodar Cedar
<i>Celtis sinensis</i>	Chinese Hackberry
<i>Cinnamomum camphora</i>	Camphor Tree
<i>Koelreuteria paniculata</i>	Goldenrain Tree
<i>Pinus canariensis</i>	Canary Island Pine
<i>Pinus pinea</i>	Italian Stone Pine
<i>Pistacia chinensis</i>	Chinese Pistache
<i>Platanus a. 'Bloodgood'</i>	London Plane Tree
<i>Platanus racemosa</i>	Western Sycamore
<i>Quercus wislizenii</i>	Interior Live Oak
<i>Rhus lancea</i>	African Sumac
<i>Tilia cordata 'Greenspire'</i>	Little-leaf Linden
<i>Ulmus parvifolia 'Drake'</i>	Evergreen Elm
<i>Zelkova serrata</i>	Zelkova

Secondary Street Trees (Background Trees)

15 gallon minimum size

<i>Fraxinus o. 'Raywood'</i>	Raywood Ash
<i>Liquidamber s. 'Festival'</i>	American Sweet Gum
<i>Liriodendron tulipifera</i>	Tulip Tree
<i>Magnolia grandiflora</i>	Southern Magnolia
<i>Pinus coulteri</i>	Coulter Pine
<i>Pinus eldarica</i>	Afghan Pine
<i>Pinus halepensis</i>	Aleppo Pine
<i>Prunus caroliniana</i>	Carolina Laurel Cherry
<i>Pyrus calleryana</i>	Flowering Pear
<i>Sequoia s. 'Soquel'</i>	Coast Redwood

Accent Trees (at visual focal areas)

15 gallon minimum size

<i>Cercis occidentalis</i>	Western Redbud
<i>Lagerstroemia indica</i>	Crape Myrtle
<i>Olea europaea 'Swan Hill'</i>	Fruitless Olive
<i>Populus nigra 'Italica'</i> (outside of r.o.w.)	Lombardy Poplar
<i>Prunus c. 'Krauter Vesuvius'</i>	Purple-Leaf Plum
<i>Pyrus calleryana</i>	Flowering Pear



B.1.4 East Valley Village Plant Palette

Primary Street Trees (Dominant tree - minimum 70% of total)

15 gallon minimum size

<i>Arbutus 'Marina'</i>	Strawberry Tree
<i>Cedrus deodara</i>	Deodar Cedar
<i>Celtis sinensis</i>	Chinese Hackberry
<i>Cinnamomum camphora</i>	Camphor Tree
<i>Koelreuteria paniculata</i>	Goldenrain Tree
<i>Pinus canariensis</i>	Canary Island Pine
<i>Pinus pinea</i>	Italian Stone Pine
<i>Pistacia chinensis</i>	Chinese Pistache
<i>Platanus a. 'Bloodgood'</i>	London Plane Tree
<i>Platanus racemosa</i>	Western Sycamore
<i>Quercus wislizenii</i>	Interior Live Oak
<i>Rhus lancea</i>	African Sumac
<i>Tilia cordata 'Greenspire'</i>	Little-leaf Linden
<i>Ulmus parvifolia 'Drake'</i>	Evergreen Elm
<i>Zelkova serrata</i>	Zelkova

Secondary Street Trees (Background trees)

15 gallon minimum

<i>Fraxinus o. 'Raywood'</i>	Raywood Ash
<i>Liquidamber s. 'Festival'</i>	American Sweet Gum
<i>Liriodendron tulipifera</i>	Tulip Tree
<i>Magnolia grandiflora</i>	Southern Magnolia
<i>Pinus coulteri</i>	Coulter Pine
<i>Pinus eldarica</i>	Afghan Pine
<i>Pinus halepensis</i>	Aleppo Pine
<i>Prunus caroliniana</i>	Carolina Laurel Cherry
<i>Pyrus calleryana</i>	Flowering Pear

Accent Trees (at visual focal areas)

(15 gallon minimum size)

<i>Cercis occidentalis</i>	Western Redbud
<i>Lagerstroemia indica</i>	Crape Myrtle
<i>Olea europaea 'Swan Hill'</i>	Fruitless Olive
<i>Populus nigra 'Italica' (outside of r.o.w.)</i>	Lombardy Poplar
<i>Prunus c. 'Krauter Vesuvius'</i>	Purple-Leaf Plum
<i>Pyrus calleryana 'Chanticleer'</i>	Chanticleer Pear

APPENDIX B

B.1.5 Creekside Village Plant Palette

Primary Street Trees (Dominant tree - minimum 70% of total) (15 gallon minimum size)

<i>Arbutus 'Marina'</i>	Strawberry Tree
<i>Celtis sinensis</i>	Chinese Hackberry
<i>Koelreuteria paniculata</i>	Goldenrain Tree
<i>Pinus pinea</i>	Italian Stone Pine
<i>Pistacia chinensis</i>	Chinese Pistache
<i>Platanus a. 'Bloodgood'</i>	London Plane Tree
<i>Platanus racemosa</i>	Western Sycamore
<i>Quercus wislizenii</i>	Interior Live Oak
<i>Rhus lancea</i>	African Sumac
<i>Tilia cordata 'Greenspire'</i>	Little-leaf Linden
<i>Ulmus parvifolia 'Drake'</i>	Evergreen Elm
<i>Zelkova serrata</i>	Zelkova

Secondary Street Trees (Background Trees) (15 gallon minimum size)

<i>Liriodendron tulipifera</i>	Tulip Tree
<i>Magnolia grandiflora 'St. Mary's'</i>	Southern Magnolia
<i>Pinus coulteri</i>	Coulter Pine
<i>Pinus eldarica</i>	Afghan Pine
<i>Pinus halepensis</i>	Aleppo Pine
<i>Prunus caroliniana</i>	Carolina Laurel Cherry
<i>Pyrus kawakamii</i>	Evergreen Pear

Accent Trees (at visual focal areas) (15 gallon minimum size)

<i>Cercis occidentalis</i>	Western Redbud
<i>Lagerstroemia indica</i>	Crape Myrtle
<i>Prunus c. 'Krauter Vesuvius'</i>	Purple-Leaf Plum
<i>Pyrus calleryana</i>	Flowering Pear



B.1.6 The Estates Village Plant Palette

Primary Street Trees (Dominant tree - minimum 70% of total)

(15 gallon minimum size)

<i>Arbutus 'Marina'</i>	Strawberry Tree
<i>Cedrus deodara</i>	Deodar Cedar
<i>Koelreuteria paniculata</i>	Goldenrain Tree
<i>Pinus pinea</i>	Italian Stone Pine
<i>Platanus racemosa</i>	Western Sycamore
<i>Quercus wislizenii</i>	Interior Live Oak
<i>Rhus lancea</i>	African Sumac
<i>Ulmus parvifolia 'Drake'</i>	Evergreen Elm

Secondary Street Trees (Background trees)

(15 gallon minimum)

<i>Pinus coulteri</i>	Coulter Pine
<i>Pinus eldarica</i>	Afghan Pine
<i>Pinus halepensis</i>	Aleppo Pine
<i>Populus nigra 'Italica'</i> (outside of r.o.w.)	Lombardy Poplar
<i>Prunus caroliniana</i>	Carolina Laurel Cherry

Accent Trees (at visual focal areas)

(15 gallon minimum size)

<i>Cercis occidentalis</i>	Western Redbud
<i>Olea europaea 'Swan Hill'</i>	Fruitless Olive
<i>Populus nigra 'Italica'</i> (outside of r.o.w.)	Lombardy Poplar
<i>Pyrus calleryana</i>	Flowering Pear

B.1.7 Parks Plant Palette

(85% 15 gallon, 15% 24" box)

Trees:

<i>Arbutus 'Marina'</i>	Strawberry Tree
<i>Cedrus deodara</i>	Deodar Cedar
<i>Cercis occidentalis</i>	Western Redbud
<i>Celtis sinensis</i>	Chinese Hackberry
<i>Cinnamomum camphora</i>	Camphor Tree
<i>Koelreuteria paniculata</i>	Goldenrain Tree
<i>Lagerstroemia indica</i>	Crape Myrtle
<i>Liquidamber s. 'Festival'</i>	American Sweet Gum
<i>Liriodendron tulipifera</i>	Tulip Tree
<i>Magnolia grandiflora</i>	Southern Magnolia
<i>Pinus canariensis</i>	Canary Island Pine

APPENDIX B

<i>Pinus eldarica</i>	Afghan Pine
<i>Pinus pinea</i>	Italian Stone Pine
<i>Pistacia chinensis</i>	Chinese Pistache
<i>Platanus x a. 'Bloodgood'</i>	London Plane Tree
<i>Platanus racemosa</i>	Western Sycamore
<i>Prunus caroliniana</i>	Carolina Laurel Cherry
<i>Pyrus calleryana</i>	Evergreen Pear
<i>Quercus wislizenii</i>	Interior Live Oak
<i>Rhus lancea</i>	African Sumac
<i>Tilia cordata 'Greenspire'</i>	Little-leaf Linden
<i>Ulmus parvifolia 'Drake'</i>	Evergreen Elm
<i>Zelkova serrata</i>	Zelkova

B.1.8 Open Space and Transitional Lands Plant Palette

(15 gallon minimum size)

Trees:

<i>Aesculus californica</i>	California Buckeye
<i>Heteromeles arbutifolia</i>	Toyon
<i>Pinus sabiniana</i>	Gray Pine
<i>Pinus coulteri</i>	Coulter Pine
<i>Platanus racemosa</i>	Western Sycamore
<i>Quercus berberidifolia</i>	Interior Scrub Oak
<i>Quercus douglasii</i>	Blue Oak
<i>Quercus lobata</i>	Valley Oak
<i>Quercus wislizenii</i>	Interior Live Oak

SHRUBS:

Large Shrubs (5' + Tall) (minimum 1 gallon)

<i>Abelia "Edward Goucher"</i>	Glossy Abelia
<i>Baccharis sp.</i>	Coyote Bush
<i>Calycanthus occidentalis</i>	Spice Bush
<i>Camellia japonica</i>	Japanese Camellia
<i>Ceanothus species</i>	California Lilac
<i>Cotoneaster lacteus</i>	Cotoneaster
<i>Dodonaea viscosa</i>	Hopseed Bush
<i>Escallonia fradesii</i>	Escallonia
<i>Fiejoa sellowiana</i>	Pineapple Guava
<i>Ilex cornuta</i>	Chinese Holly
<i>Juniperus chinensis</i>	Juniper
<i>Ligustrum texanum</i>	Texas Privet
<i>Nerium oleander</i>	Oleander
<i>Photinia fraseri</i>	Red-tip Photinia
<i>Pittosporum tobira</i>	Mock Orange



Podocarpus macrophyllus

Prunus laurocerasus

Rhamnus californica

Rhamnus ilicifolia

Viburnum "Spring Bouquet"

Xylosma congestum

Yew Pine

English Laurel

Coffeeberry

Hollyleaf Redberry

Viburnum

Shiny Xylosma

Medium Shrubs (3' – 5' Tall) (minimum 1 gallon)

Azalea species

Berberis thunbergii

Buxus japonica

Callistemon 'Little John'

Camellia sasanqua

Ceanothus sp.

Cistus sp.

Dietes bicolor

Grevillea noelii

Nandina domestica

Nerium oleander (dwarf var.)

Pennisetum rubrum

Raphiolepis indica sp.

Rose sp.

Southern Azalea

Japanese Barberry

Boxwood

Dwarf Bottlebrush

Sasanqua Camellia

California Lilac

Rock Rose

Butterfly Iris

Grevillea

Heavenly bamboo

Dwarf Oleander

Red Fountain Grass

India Hawthorn

Rose

Small Shrubs (1' – 3' Tall) (minimum 1 gallon)

Agapanthus africanus

Artemesia sp.

Baccharis "Pigeon Point"

Ceanothus sp.

Cotoneaster dammeri

Hemerocallis hybrid

Heuchera sanguinea

Juniperus horizontalis

Lantana montevidensis

Lavendula spp.

Liriope gigantea

Lupinus albifrons

Mahonia aquifolium "Compacta"

Nandina "Harbor Dwarf"

Pittosporum t. "Wheeler's Dwarf"

Raphiolepis i. "Clara"

Rosemarinus prostrate

Salvia gregii

Santolina rosmarinifolia

Zauschneria canum

Lily of the Nile

Artemesia

Dwarf Coyote Bush

Dwarf Ceanothus

Bearberry Cotoneaster

Evergreen Daylily

Coral Bells

Juniper

Lantana

Lavender

Liriope

Bush Lupine

Dwarf Oregon Grape

Dwarf Heavenly Bamboo

Dwarf Mock Orange

Indian Hawthorn

Dwarf Rosemary

Salvia

Santolina

California Fuchsia

APPENDIX B

Groundcovers and Perennials (minimum 1 gallon or flattened rooted cuttings).

<i>Arctostaphylos</i> sp.	Dwarf Mazanita
<i>Baccharis</i> "Twin Peaks"	Dwarf Coyote Brush
<i>Coprosma</i> "Verde Vista"	Coprosma
<i>Gazania</i> sp.	Gazania
<i>Hypericum calycinum</i>	St. Johns Wort
<i>Iris douglasiana</i>	California Iris
<i>Juniperus conferta</i>	Shore Juniper
<i>Myoporum pacificum</i>	Myoporum
<i>Phacelia imbricata</i>	Pine Bee Flower
<i>Ranunculus californicus</i>	California Buttercup
<i>Trachelospermum jasminoides</i>	Star Jasmine

Vines (minimum 1 gallon).

<i>Campsis radicans</i>	Blood-Red Trumpet Vine
<i>Clytostoma</i> sp.	Violet Trumpet Vine
<i>Ficus pumila</i>	Creeping Fig
<i>Lonicera japonica</i>	Japanese Honeysuckle
<i>Parthenocissus quinquefolia</i>	Virginia Creeper
<i>Parthenocissus tricuspidata</i>	Boston Ivy
<i>Rosa</i> sp.	Climbing Rose
<i>Wisteria sinensis</i>	Wisteria

Turf (seeded or sodded – No Turf areas less than 8' wide)

Water conserving tall-type fescue mix
UC Verde Buffalo Grass

Open Space Slope Shrubs :

1 gallon minimum size

<i>Adenostoma fasciculatum</i>	Chamise
<i>Arcostaphylos</i> spp.	Mazanita
<i>Baccharis</i> spp.	Coyote Brush
<i>Calycanthus occidentalis</i>	Spice Bush
<i>Ceanothus</i> species	Wild Lilac
<i>Cercis occidentalis</i>	Western Redbud
<i>Fremontodendron californicum</i>	Flannel Bush
<i>Heteromeles arbutifolia</i>	Toyon
<i>Lupinus albifrons</i>	Bush Lupine
<i>Mahonia</i> spp.	Oregon Grape
<i>Quercus berberidifolia</i>	Interior Scrub Oak
<i>Rhamnus californica</i>	Coffeeberry
<i>Rhamnus ilicifolia</i>	Hollyleaf Redberry



Common Open Space Slope Hydroseed Cover:

<i>Clarkia amoena</i>	Farewell to Spring
<i>Elymus glaucus</i>	Blue Wildrye
<i>Eschscholzia californica</i>	California Poppy
<i>Hordeum californicum</i>	California Barley
<i>Lupinus nanus</i>	Sky Lupine
<i>Nassella cernua</i>	Nodding Needlegrass
<i>Nassella lepida</i>	Foothill Needlegrass
<i>Nassella pulchra</i>	Purple Needlegrass
<i>Poa secunda</i>	Native Pine Bluegrass
<i>Vulpia microstachys</i>	Small Fescue

B.1.9 Natural Resource Area Edge Conditions Plant Palette (Native)

Trees (15 gallon minimum size):

<i>Aesculus californica</i>	California Buckeye
<i>Junglans californica</i>	Black Walnut
<i>Populus fremontii</i>	Fremont Cottonwood
<i>Quercus douglasii</i>	Blue Oak
<i>Quercus kelloggii</i>	Black Oak
<i>Quercus wislizenii</i>	Interior Live Oak

Shrubs (1 gallon minimum size):

<i>Archostaphylos manzanita</i> Dr. Hurd'	Dr. Hurd's Manzanita
<i>Archostaphylos uva-ursi</i> 'Green Supreme'	Green Supreme Bearberry
<i>Baccharis pilularis</i> Pigeon Point'	Dwarf Coyote Brush
<i>Berberis aquifolium</i>	Mahonia
<i>Berberis a. var. repens</i>	Creeping Mahonia
<i>Ceanothus species</i>	Ceanothus
<i>Cercis occidentalis</i>	Western Redbud
<i>Cornus sericea</i> ssp. <i>Sericea</i>	Red-twig Dogwood
<i>Epilobium canum</i>	California Fuchsia
<i>Frangula californica</i> ssp. <i>Tomentella</i>	Hoary Coffeeberry
<i>Fremontodendron californicum</i>	Flannel Bush
<i>Heteromeles arbutifolia</i>	Toyon
<i>Lonicera hispida</i> var. <i>vacillans</i>	Pink Wild Honeysuckle
<i>Mimulus aurantiacus</i>	Bush Monkeyflower
<i>Muhlenbergia rigens</i>	Deergrass
<i>Ribes aureum</i>	Golden Current
<i>Ribes sanguinum</i>	Red-flowering Current
<i>Rosa californica</i>	California Wild Rose
<i>Rubus ursinus</i>	California Blackberry
<i>Vitis californica</i>	California Grape

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Upland Hydroseed Mix:

<i>Clarkia amoena</i>	Farewell to Spring
<i>Elymus glaucus</i>	Blue Wildrye
<i>Eschscholzia californica</i>	California Poppy
<i>Hordeum californicum</i>	California Barley
<i>Lupinus nanus</i>	Sky Lupine
<i>Nassella cernua</i>	Nodding Needlegrass
<i>Nassella lepida</i>	Foothill Needlegrass
<i>Nassella pulchra</i>	Purple Needlegrass
<i>Poa secunda</i>	Native Pine Bluegrass
<i>Vulpia microstachys</i>	Small Fescue

B.1.10 Ephemeral Drainage Area Hydroseed Cover Plant Palette

Along the margins of watersheds and bio-retention basins:

<i>Juncus bufonius</i>	Toad Rush
<i>Limnanthes douglasii</i>	Meadowfoam
<i>Mimulus guttatus</i>	Seep-spring Monkeyflower
<i>Trifolium variegatum</i>	White-tipped Clover
<i>Vulpia bromoides</i>	Annual Fescue

Drier grasslands in areas where slopes discharge perched water table:

<i>Poa secunda</i>	Native Pine Bluegrass
<i>Eschscholzia lobbii</i>	Frying-Pan Poppies
<i>Lasthenia californica</i>	Goldfields
<i>Nassella pulchra</i>	Purple Needlegrass
<i>Nassella lepida</i>	Foothill Needlegrass
<i>Vulpia bromoides</i>	Annual Fescue

Spring-flowering Plants:

<i>Lasthenia californica</i>	Goldfields
<i>Layia fremontii</i>	Tidy-tips
<i>Lupinus nanus</i>	Dwarf Lupine
<i>Plagiobothrys northofulvus</i>	Popcorn Flower
<i>Trifolium species</i>	Clovers
<i>Triphysaria eriantha</i>	Butter-and-eggs

Perennial Bulbs:

<i>Brodiaea appendiculata</i>	Appendaged Brodiaea
<i>Brodiaea elegans</i>	Harvest Brodiaea
<i>Calochortus luteus</i>	Gold Nuggets
<i>Triteleia laxa</i>	Wally Baskets



Shallow soil grasslands:

<i>Agrostis elliotiana</i>	Elliot's Hairgrass
<i>Aira caryophyllea</i>	Silver Hairgrass
<i>Calycadenia multiglandulosa</i>	Sticky Calycadenia
<i>Lasthenia californica</i>	Goldfields
<i>Navarretia tagetina</i>	Blue Navarretia

B.1.11 Speciality Landscape Areas Plant Palette (LID)

1. Vegetated Swales

Vegetated swales slowly convey runoff flow to downstream discharge points. Vegetated swales will be planted with species adapted to seasonal inundation and extended periods of dry conditions. The following plant list does not include proposed trees and shrubs for the perched areas in the swales as illustrated in the street sections.

Emergent Species: Planted within the center of the swale where the soil will be saturated for a greater duration.

<i>Carex densa</i>	Dense Sedge
<i>Carex obnupta</i>	Slough Sedge
<i>Juncus bufonius</i>	Toad Rush
<i>Juncus patens</i>	Blue Rush
<i>Juncus xiphiooides</i>	Iris-leaved Rush

Grass Species: Grown throughout the area of the vegetated swale above the emergent zone.

<i>Bromus carinatus</i>	California Brome
<i>Danthonia californica</i>	California Oatgrass
<i>Festuca idahoensis</i> (upper swale only)	Blue Bunchgrass
<i>Festuca rubra</i>	Red Fescue
<i>Hordeum californicum</i>	California Barley
<i>Leymus triticoides</i>	Creeping Wild Rye
<i>Melica californica</i> (upper swale only)	California Melic
<i>Nassella cernua</i> (upper swale only)	Nodding Needlegrass
<i>Nassella lepida</i> (upper swale only)	Foothill Needlegrass
<i>Nassella pulchra</i> (upper swale only)	Purple Needle Grass

2. Shrubs and Groundcovers for surface soil retention and limited

hillside stabilization:

Plants may be used in combination with other erosion control prevention measures for immediate protection, such as short term fiber and tack hydroseed mix, erosion control blanket or netting and shredded bark mulch.

<i>Adenostoma fasciculatum</i>	Chamise
<i>Arcostaphylos spp.</i>	Mazanita
<i>Baccharis spp.</i>	Coyote Brush
<i>Berberis a. var. repens</i>	Creeping Mahonia
<i>Calycanthus occidentalis</i>	Spice Bush

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<i>Ceanothus</i> species	Wild Lilac
<i>Cercis occidentalis</i>	Western Redbud
<i>Cornus sericea</i> ssp. <i>Sericea</i>	Red-twig Dogwood
<i>Epilobium canum</i>	California Fuschia
<i>Festuca californica</i>	California Fescue
<i>Frangula californica</i> ssp. <i>Tomentella</i>	Hoary Coffeeberry
<i>Fremontodendron californicum</i>	Flannel Bush
<i>Heteromeles arbutifolia</i>	Toyon
<i>Lupinus albifrons</i>	Bush Lupine
<i>Lonicera hispidula</i> var. <i>vacillans</i>	Pink Wild Honeysuckle
<i>Mahonia</i> spp.	Oregon Grape
<i>Mimulus aurantiacus</i>	Bush Monkeyflower
<i>Muhlenbergia rigens</i>	Deergrass
<i>Mahonia</i> spp.	Oregon Grape
<i>Quercus berberidifolia</i>	Interior Scrub Oak
<i>Rhamnus californica</i>	Coffeeberry
<i>Rhamnus ilicifolia</i>	Hollyleaf Redberry
<i>Ribes aureum</i>	Golden Current
<i>Ribes sanguinum</i>	Red-flowering Current
<i>Rosa californica</i>	California Wild Rose
<i>Rubus ursinus</i>	California Blackberry
<i>Vitis californica</i>	California Grape

3. Community Olive Groves

Privately Maintained

Grove:

Olea europaea (variety to be determined) – Olives planted at 20' on-center

Background Trees:

<i>Pinus eldarica</i>	Afghan Pine
<i>Pinus halepensis</i>	Aleppo Pine
<i>Populus italicica</i>	Lombardy Poplar
<i>Pyrus calleryana</i>	Flowering Pear

Complimentary Shrubs:

<i>Lavendula</i> spp.	Lavender
Ornamental Non-Invasive Grasses	Grasses
<i>Prunus caroliniana</i>	Carolina Laurel Cherry
<i>Rosemarinus prostrata</i>	Dwarf Rosemary



4. **Community Grape Vineyards**

Privately Maintained. Installed and managed by a specialty Contractor

PROHIBITED PLANTS

The following plants are prohibited from use in Cordova Hills. They are inconsistent with the community planting scheme and have been identified as highly invasive. Other plants may be prohibited upon review of landscape plans, depending on the species, location and quantity proposed.

<i>Aegilops triuncialis</i>	
<i>Ailanthus altissima</i>	<i>Rhynchoselytrum repens</i>
<i>Arundo donax</i>	<i>Ricinus communis</i>
<i>Atriplex semibaccata</i>	<i>Ricinus communis</i>
<i>Brassica nigra</i>	<i>Salsola salina</i>
<i>Broussonetia papyrifera</i>	<i>Silybum marianum</i>
<i>Carprobodus edulis</i>	<i>Spartium junceum</i>
<i>Centayrea species</i>	<i>Tribulus terrestris</i>
<i>Cytisus</i>	<i>Tamarix spp.</i>
<i>Cortaderia selloana</i>	<i>Xanthium strumarium</i>
<i>Cynara cardunculus</i>	<i>Leontodon taraxacoides</i>
<i>Cynara scolymus</i>	<i>Oxalis pes-caprae</i>
<i>Cynodon dactylon</i>	<i>Palms (all genus and types)</i>
<i>Delairea odorata</i>	<i>Picris echiodes</i>
<i>Foeniculum vulgare</i>	<i>Taeniamathrum caput-medusa</i>
<i>Hedera helix</i>	<i>Bromus diandrus</i>
<i>Lolium species</i>	<i>Bromus rubens</i>
<i>Melilotus spp.</i>	<i>Bromus hordeaceus</i>
<i>Mesembryanthemum nodiflorum</i>	<i>Erodium spp.</i>
<i>Avena fatua</i>	

APPENDIX C

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