

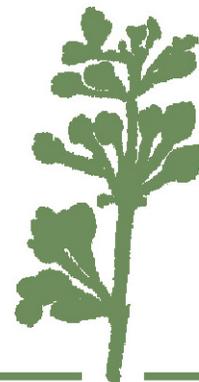


DRAFT SPECIFIC PLAN
July, 2011

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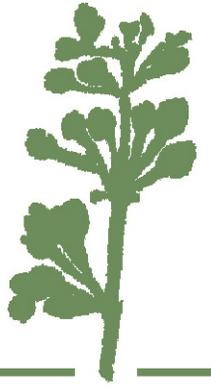
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Section 1

INTRODUCTION



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INTRODUCTION

Project Summary

Spring Trails is a 352.8-acre residential community in the foothills of the San Bernardino Mountains. The preferred plan accommodates 307 single-family lots ranging from 10,801 square feet to 18 acres. The development footprint of Spring Trails encompasses 68 percent of the total site (242 acres), on gently sloping alluvial benches between canyons, steep hillsides, and the Cable Canyon and Meyers Canyon drainageways. The remaining 32 percent (111 acres) remains open space. There are 3.8 miles of hiking trails that traverse the site and provide access to parks and natural open space. An alternative plan is depicted in Appendix F and accommodates 304 single family lots.



View looking southeast from the Spring Trails site.

Spring Trails is carefully designed to respect the San Andreas Fault system, which crosses the northern and southern ends of the project; the Cable Canyon and Meyers Canyon drainageways; and steep slopes. These features have been incorporated into Spring Trails as open space.

Purpose of the Specific Plan

The purpose of the Spring Trails Specific Plan is to provide unique development standards and guidelines to allow the creation of a high-quality residential community.

The California Government Code, Section 65450, establishes the authority for cities and counties to adopt specific plans by resolution as policy or by ordinance as regulation, identify the required contents of a specific plan, and mandate consistency with the general plan. A specific plan enables enhanced or innovative development and design options not possible under conventional zoning controls. The Spring Trails Specific Plan is a regulatory document providing a means of implementing a site-specific development proposal in accordance with the goals and policies of the City of San Bernardino General Plan.

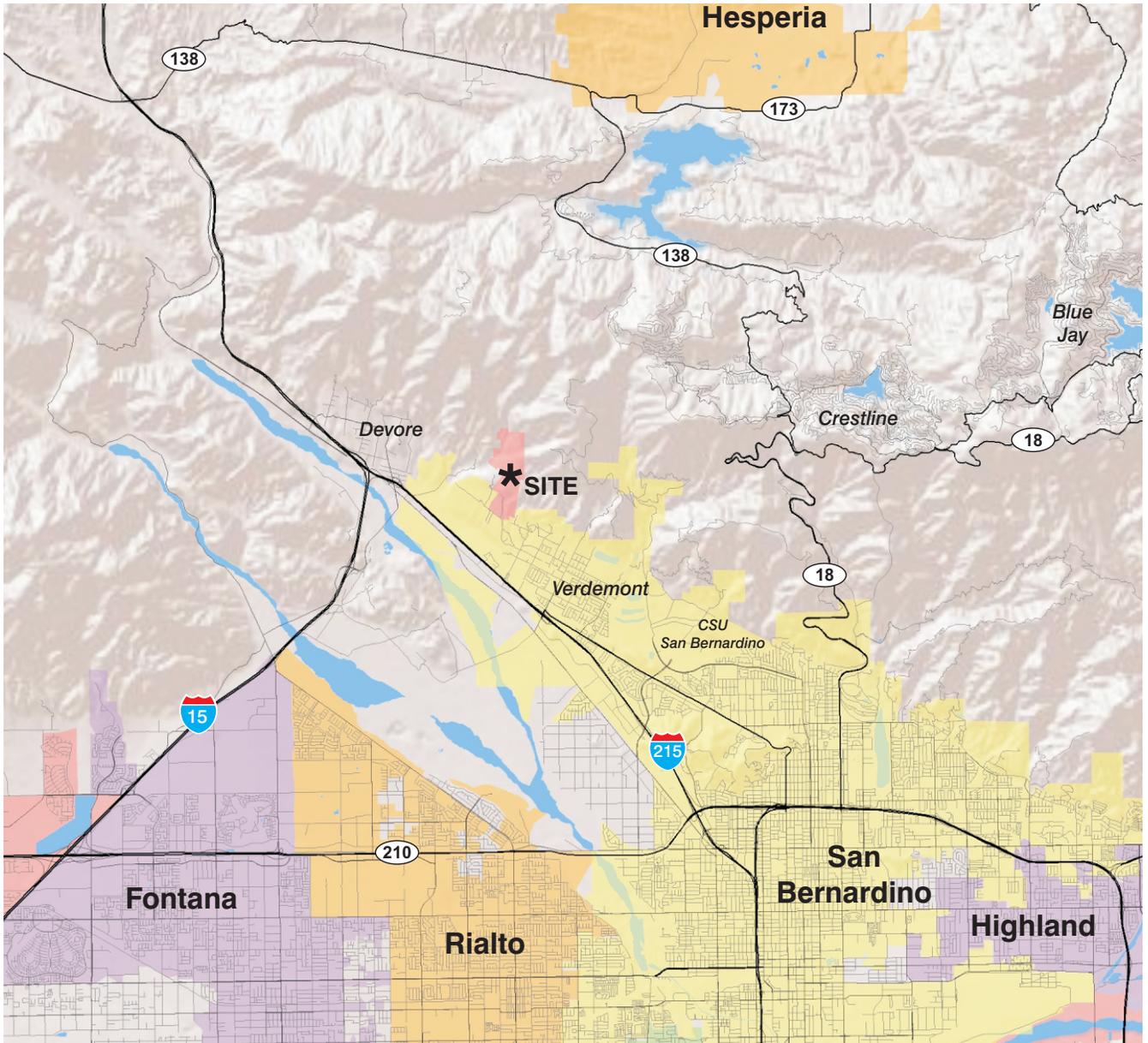
The City of San Bernardino Municipal Code Chapter 19.64 describes the purpose, requirements, regulations, and procedures for preparation of a specific plan in the City. As required by the California Government Code, a General Plan Consistency Analysis has been prepared for this Specific Plan (see Appendix B).

Project Location

As shown in Figure 1.1, *Regional Location*, Spring Trails is on the northern edge of the City of San Bernardino in the foothills of the San Bernardino Mountains. The site is approximately 1.5 miles east of the unincorporated community of Devore and the junction of Interstate 215 (I-215) and I-15. Spring Trails is bounded by the San Bernardino National Forest on three sides and Verdemon Heights on the southern side.

As shown in Figure 1.2, *Local Vicinity*, Spring Trails is in Verdemon Heights, approximately one-third mile northwest of the intersection of Meyers Road and Little League Drive. Primary access is from a new roadway connecting to Little League Drive and a secondary roadway via a new road extending south and connecting to the frontage road along I-215. Freeway access is from the Palm Avenue interchange and the Glen Helen Parkway/Devore Road interchange.

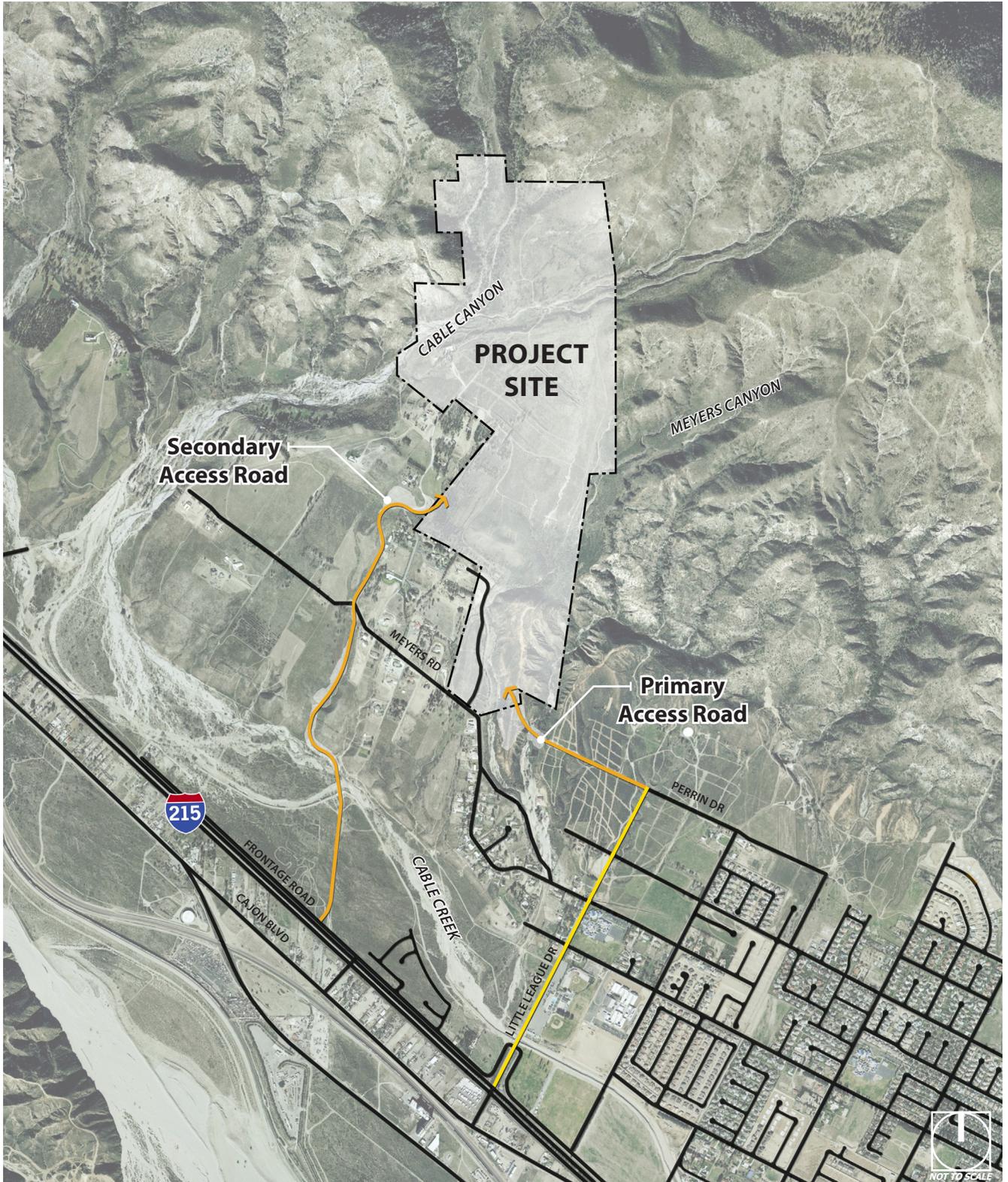
Figure 1.1: Regional Location



Introduction

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Figure 1.2: Local Vicinity



Map Source: Google Earth

Introduction

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Format of the Document

The Spring Trails Specific Plan is organized into the following sections.

Section 1: Introduction. This section describes the purpose, intent, authority, and scope of the Specific Plan: compliance with guiding documents, project setting, and a summary of opportunities and constraints.

Section 2: Development Concept. This section explains the vision and development concept. The land use plan and buildout statistics are also included in this section.

Section 3: Development Standards. This section provides the allowable uses, development standards, circulation plan, open space plan, and utility and infrastructure plans.

Section 4: Design Guidelines. This section lays out guidelines that define the aesthetic character of Spring Trails.

Section 5: Sustainability. This section describes opportunities and guidelines for environmentally sustainable development in Spring Trails.

Section 6: Administration and Implementation. This section contains the development processing and amendment procedures, as well as phasing, for Spring Trails.

Appendices. The appendices contain definitions, a General Plan consistency analysis, fire safety plan, and a comparison of this Specific Plan to the City's Foothill Fire Zones Overlay District.

Terminology

Statements occur in this plan in the form of policies, standards, and guidelines that create expectations of actions intended to successfully implement the plan. The following terms clarify the level of commitment described in the plan and reflect expected outcomes.

Shall – This type of policy is always to be followed. “Shall” represents an absolute commitment to the guidance expressed in the policy. Similar action words: require, enforce, must, ensure.

Introduction

Should – This type of policy is to be followed in most cases and exceptions or degrees of implementation are acceptable with valid reasons. Similar action words: encourage, supposed to.

Allow – This type of policy permits and supports someone else’s initiative unless there is a very good reason not to. Similar action words: permit.

Restrict – This type of policy sets specified limits within which action and/or implementation will occur. Similar action words: control, limit, contain.

Prohibit – This type of policy requires the active prevention of specified conditions or decisions. Similar action words: forbid, ban.

Other terminology may appear in certain policy statements. These terms are to be interpreted according to their similarity to the appropriate term described above.

Conceptual/Illustrative Graphics

Some illustrations, product prototypes, and accompanying descriptions contained in this Specific Plan are conceptual and are labeled accordingly. These illustrations are intended to depict the desired character and are not to be taken as compulsory or as dictating exact building types, material types, architectural styles, or final amenity designs.

Relationship to Other Plans/Agencies

Pre-Annexation

Prior to adoption of this Specific Plan, the entire site was in the jurisdiction of the County of San Bernardino and annexation of approximately 379 acres into the City of San Bernardino was necessary. The area of annexation associated with Spring Trails consisted of the project site and an adjacent 26.4-acre area required to prevent the creation of a county island within the City.

The Spring Trails site was placed in the City of San Bernardino’s Sphere of Influence in September 1996, when the Local Agency Formation Commission (LAFCO) approved a Sphere of Influence Expansion for the City of San Bernardino. Government Code Section 56706 states that a sphere of influence is the plan for the probable physical boundaries and service area of a local agency as determined by LAFCO. While the land is in the sphere of influence, the county retains land use authority. Under the County of San Bernardino’s authority, the County General Plan designated approximately 160 acres in the northern portion of the site Resource Conservation (RC) and approximately

190.6 acres in the southern portion of the site Rural Living (RL-5), which allowed up to one dwelling unit per five acres.

Prior to annexation and adoption of this Specific Plan, the City's General Plan and Zoning maps designated the entire site, which was within their Sphere of Influence, as Residential Estate (RE), which allowed one dwelling unit per acre.

General Plan

Upon annexation into the City, the entire Spring Trails site will be designated Spring Trails Specific Plan on both the City's General Plan and Zoning maps. The existing Residential Estate designation permits one dwelling unit per acre. Through the Spring Trails Specific Plan, development has been clustered into the most appropriate areas so that individual lots may exceed the density limit; however, on a gross basis the specific plan still complies with the density restrictions of the Residential Estate land use designation (307 units on 353 acres). The Specific Plan also demonstrates compliance with the City's Foothill Fire Zone development standards. Upon annexation, the 26.4-acre additional annexation area will be designated RE.

Specific plans are required to be consistent with the goals and policies of the governing General Plan. The General Plan Consistency Analysis, included as Appendix B, discusses how the project implements and exemplifies the goals and policies of the City of San Bernardino General Plan. Future projects within the Specific Plan must be consistent with this Specific Plan (Government Code, Sections 65455, 66473.5, 65860, and 65401). All projects that are found to be consistent with this Specific Plan will likewise be deemed consistent with the City's General Plan.

Verdemont Heights Area Plan

According to the State General Plan Guidelines, an area plan provides focused policies for a particular geographic area within a general plan. Spring Trails is in the Verdemont Heights Area Plan, which presents the General Plan-level development and use guidance for a 3,409-acre area in the northwestern corner of the City.

Spring Trails is in the Verdemont Estates subarea of the Verdemont Heights Area Plan, which calls for a rural character and large-lot residential uses.

As stated in the General Plan, the goal of the Verdemont Heights Area Plan is to: "Create an identifiable and unique village that includes distinct residential neighborhoods and a full array of services and activities to meet the needs of residents of the area." Issues addressed in the Area Plan include:

Introduction

- Developing a Plan-wide trail system that connects to the rest of the City
- Increasing active park lands
- Creating gateways and landscaped corridors

Municipal Code and Zoning



View from the southwestern edge of the site, looking north, with the gently sloping areas proposed for development in the foreground and the steeper slopes that will be left untouched in the background.

The Spring Trails Specific Plan is adopted by Resolution of the Mayor and Common Council and serves as the zoning for the project site. It provides the standards and development criteria to guide future development of the site. The text and diagrams of the Specific Plan address the planning of necessary infrastructure and facilities as well as land uses and open space. Future subdivisions, building permits, and public works projects must be consistent with the Specific Plan (Government Code Sections 65455, 66473.5, 65860, and 65401).

Environmental Impact Report

The California Environmental Quality Act (CEQA) was adopted to inform decision makers, staff, and the public about the potential environmental impacts of development. The CEQA process provides an opportunity to address potential impacts in order to maintain California's environmental quality. Compliance with CEQA requires that a project be evaluated for potential impacts before being approved. The adoption of a specific plan is a project subject to CEQA. In accordance with CEQA, the City has prepared an Environmental Impact Report (State Clearinghouse No. 2009111086) to accompany the Spring Trails Specific Plan. The EIR analyzes the project and its alternatives to identify potential significant environmental impacts associated with the development of the Spring Trails Specific Plan area. The EIR is incorporated into this Specific Plan by reference and is attached under separate cover.

Surrounding Environment

San Bernardino Mountains

Spring Trails is on the western flank of the San Bernardino Mountains, which run for approximately 60 miles east from the Cajon Pass to the Coachella Valley. The highest peak in the range is Mount San Geronio, which has an elevation of 11,501.6 feet and is the highest peak in southern California. Most of the range is in the San Bernardino National Forest.

Faulting

As shown on Figure 1.3 Spring Trails includes three traces of the San Andreas Fault zone, which runs in an east–west direction through the northern and

southern portions of the project site. Accordingly, prior to the creation of the land plan 26 trenches and detailed geologic studies were conducted to locate earthquake faults and assess geologic conditions in Spring Trails (see EIR appendices).

The southern portion of the site is traversed by two faults: the main trace of the San Andreas Fault and, to its north, a secondary extension feature of the main trace fault. The fault zone of the main trace ranges from approximately 50 feet to 150 feet wide and the fault zone of the secondary trace is approximately 40 feet wide.

Spring Trails has been designed to comply with the requirements of the Alquist-Priolo Earthquake Fault Zoning Act, which prevents the construction of buildings used for human occupancy within 50 feet of active faults.

Topography

As shown in Figure 1.4, the topography of the site varies from steep (over 30 percent slopes) in the north and southeast portions of the site to gentle (0–15 percent slopes) in the central portion of the site.

The elevation of the site ranges from approximately 2,010 feet above sea level at its southern boundary to approximately 3,540 feet at the northern boundary, a difference of 1,530 feet. The site slopes to the southwest at approximately 10 to 15 percent.

The site has been shaped by the San Andreas Fault and the Cable Canyon and Meyers Canyon drainageways and includes gently sloping alluvial benches, canyons, and steep hillsides.

Hillside Management Overlay

The City has established the Hillside Management Overlay District to ensure that development occurs in a manner that:

- Protects a hillside's natural and topographic character and identity, environmental sensitivities, aesthetic qualities, and the public health, safety, and general welfare. This protection is obtained by ensuring that development does not create soil erosion, silting of lower slopes, slide damage, flooding problems, and severe cutting or scarring. It is the intent to encourage a sensitive form of development while still allowing for residential uses which complement the natural and visual character of the City and its hillsides.

The Spring Trails Specific Plan contains site-specific hillside design and development standards that are consistent with the General Plan and replace the



Images of the site's topography. Top and second from top: views south and southeast showing gently sloping area proposed for development. Third from top: view east with gently sloping area in foreground and steeper slopes behind. Bottom: view north of steeply sloping areas that will not be developed.

Introduction

Hillside Management Overlay for this site. The Hillside Management Overlay zone does not apply in the Spring Trails Specific Plan.

Slope Stability

Slope failures can be hazardous to buildings, reservoirs, roads, and utilities. Therefore, the impact must be mitigated or structures need to be built in areas that have the least potential to be impacted. Accordingly, extensive on-site geologic studies were conducted to pinpoint potential landslide areas (see EIR appendices). The geologic studies indicate that significant natural slope instability is not present on the portions of the site where development is proposed.

Foothill Fire Zones

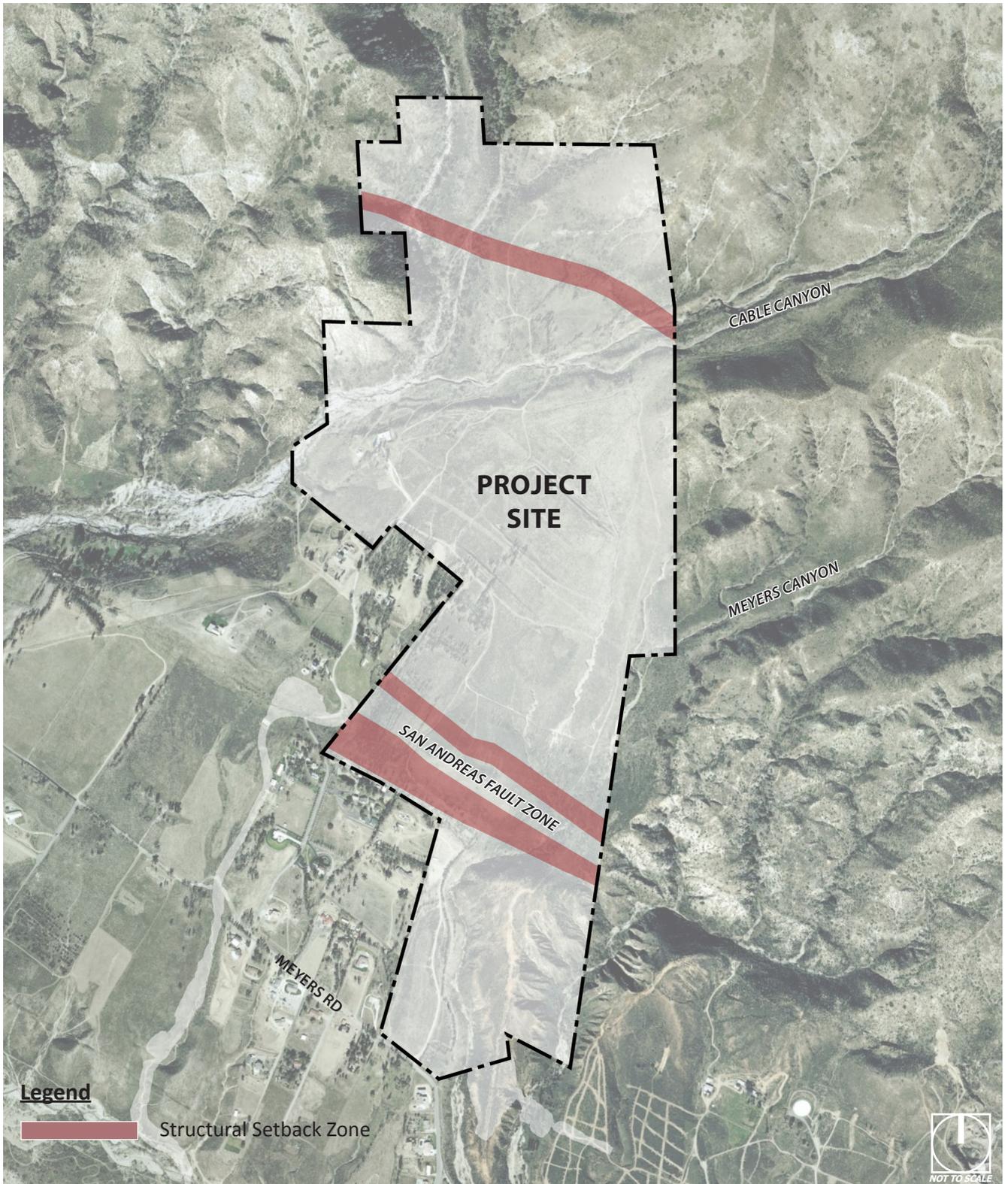
Because of the adjacent San Bernardino National Forest, steep slopes, and high winds, the Spring Trails area is at risk from wildland fires. Chapter 19.15 of the San Bernardino Development Code, Foothill Fire Zone Overlay District, has been established to “mitigate the spread of fire, to help minimize property damage and to reduce the risk to the public health and safety.” The Foothill Fire Zone Overlay District identifies three fire zones with different degrees of hazard based on slope, type of fuel, and natural barriers. The foothill fire zones are:

- Fire Zone A, Extreme Hazard. Areas with slopes of 30 percent or greater.
- Fire Zone B, High Hazard. Areas with slopes of 15–30 percent
- Fire Zone C, Moderate Hazard. Areas with slopes of 0 –15 percent

As shown on Figure 1.4, approximately one third of the site is in Fire Zone A, one third of the site is in Fire Zone B, and the remaining third is in Fire Zone C. Areas in the Foothill Fire Zones are required to be developed with proper building separation, landscaping, and building materials; adequate emergency access and evacuation routes; and sufficient water resources. A comparison of the provisions of this Specific Plan with the Foothill Fire Zones Overlay District is provided in Appendix D.

California Fire Plan (CAL FIRE) also ranks the wildland fire hazard using four main criteria: fuels, weather, assets at risk, and level of service (which is a measure of a fire department’s success in initial-attack fire suppression). While the fire hazard severity zone maps are currently being updated, the entire project site is in a very high fire hazard severity zone (CAL FIRE 2007a).

Figure 1.3: Earthquake Faults

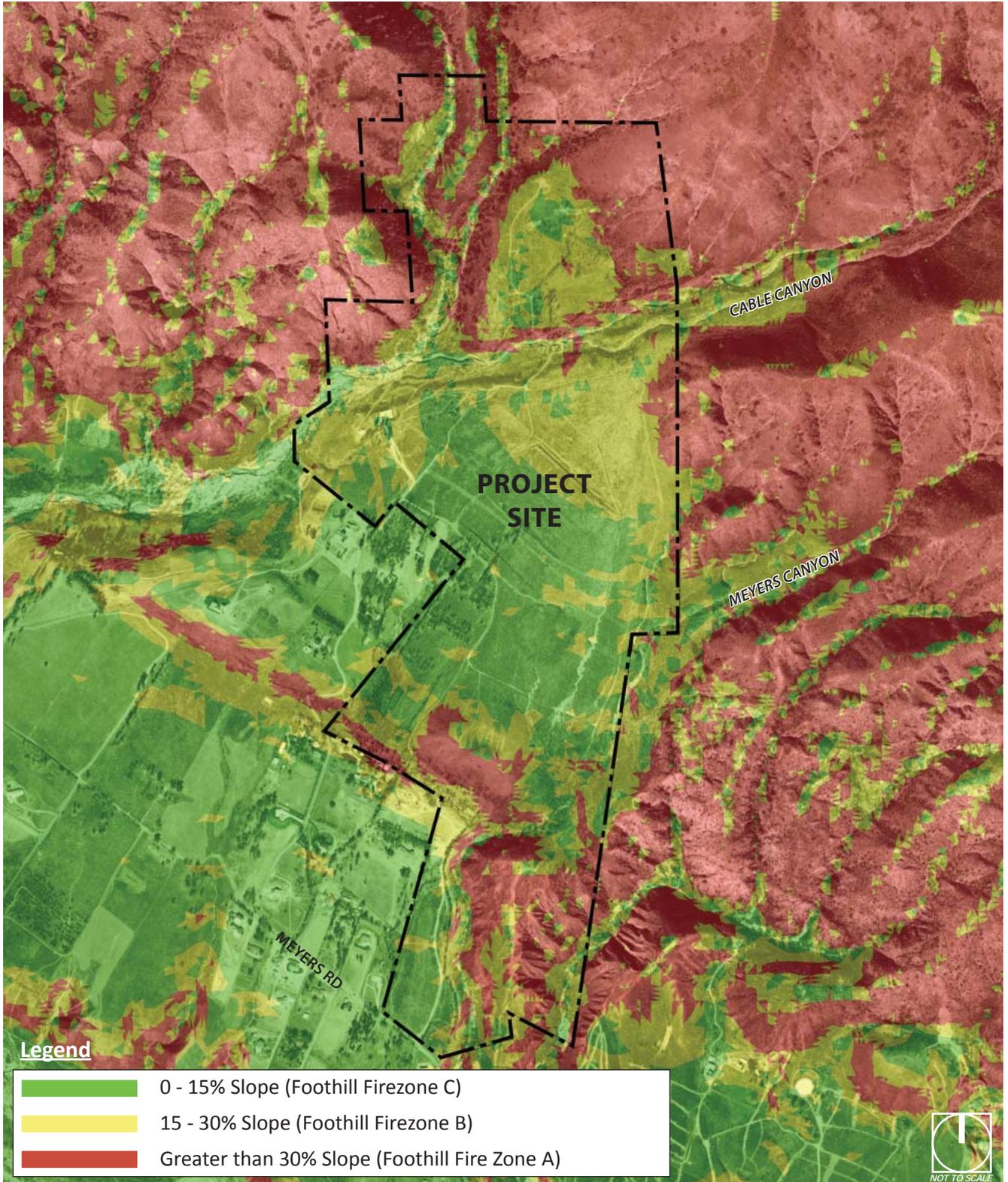


Map Source: Google Earth

Introduction

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Figure 1.4: Topography (Fire Zones)



Map Source: Google Earth

Introduction

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To ensure the safety of property and lives, a detailed fire safety analysis was conducted by FireSafe Planning Solutions and a fire protection plan was prepared (see Appendix C). The fire analysis factored in wind patterns, fuel types (vegetation), topography, weather patterns, and historical burn patterns to determine the potential severity of wildfires and appropriate protection methods.

Using the BEHAVE Computer Fire Behavior Prediction and Fuel Modeling System, FireSafe Planning Solutions assumed a worst-case scenario of Santa Ana winds (northeasterly) and the prevailing southwest wind to determine potential flame height, rate of spread, and spotting distance. These results were then used to determine the safest combination of preventative measures that ensure the protection of property and lives. The recommended preventative measures are incorporated into this Specific Plan as standards for fuel modification zones, setbacks, landscaping methods/materials, construction materials/methods, and building protection systems.

High Wind Areas

The City of San Bernardino experiences periods of high velocity winds, especially in the Cajon Pass and at the bottoms of canyons. These winds have been known to cause severe damage to roofs, utility poles, and traffic signals. Spring Trails is included in the City’s designated High Wind Area, which has certain building standards. Development will be required to comply with the building standards for this area and should be designed and oriented to avoid the creation of wind tunnels that concentrate gusts in corridors.

Flooding and Drainage

Because Spring Trails sits on an alluvial plain on the slopes of the San Bernardino Mountains, flooding and drainage are critical factors. A hydrology study was conducted to carefully study the drainage patterns affecting the site (see EIR appendices).

As shown on Figure 1.5, there are four major drainage patterns affecting Spring Trails:

- Cable Canyon and its tributaries form the dominant topographic feature of the northern portion of the site. The east and west forks of Cable Canyon flow south through the northeastern corner of the property and then meet a tributary flowing from the east. This unnamed tributary enters the property from the east as two drainages, which merge approximately 600 feet west of the eastern property boundary. All eventually drain into Cable Creek Wash, which runs parallel to I-215



Cable Creek as it passes through the Spring Trails site.

Introduction

and is funneled into a concrete channel. This watershed comprises 148.9 acres of on-site and 1,881 acres of off-site drainage area.

- Meyers Creek touches the southeastern corner of the site and forms a 30- to 50-foot-deep canyon, which is the dominant topographic feature of the southeastern portion of the site. This watershed comprises 21.8 acres of on-site and 319.8 acres of off-site drainage area.
- Surface drainage that flows southwest through the center of the project and ultimately into Cable Canyon. This watershed comprises 51.6 acres of on-site and 12.1 acres of off-site drainage area.
- Off-site surface drainage that flows onto the site and exits through southeastern part of the project. This watershed comprises 128.4 acres of on-site and 69.8 acres of off-site drainage area.

The Federal Emergency Management Agency has classified Cable Canyon and Meyers Creek as 100-year flood zones, specifically the deep channels that have cut into the alluvial fan. Development within a 100-year flood zone is prohibited unless adequate protection from flood hazards is provided. Spring Trails is designed to avoid grading or construction of residences in the flood plains.

Wildlife Corridors

Canyon bottoms and riparian areas provide the greatest opportunity for wildlife movement since they provide suitable cover, forage resources, and year-round or seasonal water sources. As shown on Figure 1.5, Spring Trails contains two primary areas of wildlife movement: Cable Creek and an unnamed tributary of Cable Creek located in the northern third of the site.

Cable Creek provides a natural wildlife corridor and a year-round water source. The vegetation associated with this water source also provides cover and food resources for animals traveling between upland areas above the project site to valley areas below the site. The unnamed tributary of Cable Creek that crosses the northern third of the site provides the most effective avenue for wildlife movement across the site. The tributary offers cover and foraging resources that make it especially suitable for wildlife movement.

The South Coast Missing Linkages Project (2004) identified the Spring Trails site and the surrounding area as an important component in maintaining wildlife population linkages between the San Bernardino Mountains and the San Gabriel Mountains to the west. Species such as mountain lion, American badger, mule deer, and a number of small mammal and bird species were identified as being likely to use the site and the surrounding area for travel between various habitat areas in the greater Cajon Pass area. A number of mammal species have been either directly observed, or their presence deduced by diagnostic sign (track,

scat, burrows, etc.) including the desert cottontail, California ground squirrel, bobcat, coyote, mule deer, mountain lion, and black bear.

The riparian areas of Cable Creek and the unnamed tributary are not planned for development; however roads will cross the identified wildlife corridors at two locations: 1) at the southern end of the site, where the outwash of Cable Creek will be crossed by the secondary access road; and 2) in the northern half of the project where the unnamed tributary will be crossed by two roads. Development standards contained in Chapter 3 will ensure that the wildlife corridor crossings accommodate the movement of wildlife through the site.

Transmission Lines

Three 112-kilovolt Southern California Edison (SCE) transmission lines traverse the western portion of the site from north to south. SCE also has an access easement over the project site to service these transmission lines. In the preferred plan, the SCE transmission lines will be undergrounded and the right-of-way relocated. Final engineering plans will commence during the final engineering portion of the project. If the transmission lines cannot be located underground, then the alternative plan contained in Appendix F will be utilized for the development of the project site.

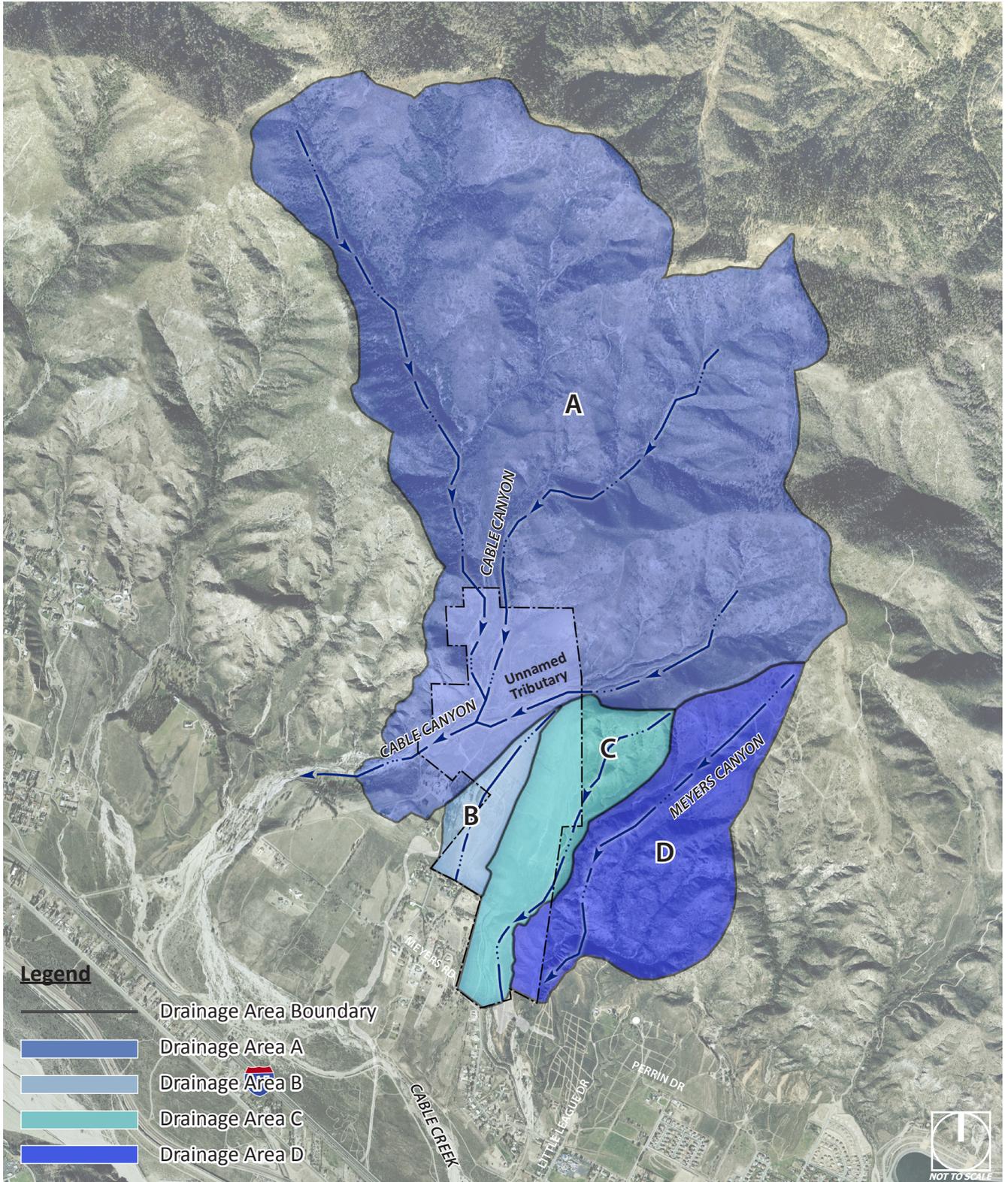


SCE transmission lines, which traverse the western edge of the site from north to south.

Introduction

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Figure 1.5: Drainage and Flooding (Pre-Development)

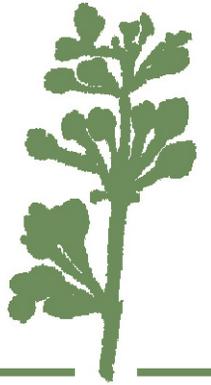


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Section 2

DEVELOPMENT CONCEPT



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DEVELOPMENT CONCEPT

Guiding Principles

Spring Trails is envisioned as a high-quality, residential living environment that is sensitively integrated into its physical surroundings. The following are the guiding principles for Spring Trails.

Sensitive to Physical Surroundings. Carefully weave Spring Trails into its physical surroundings by:

- Accounting for the potential impacts of the hazards posed by seismic activity, flooding, and wildland fires.
- Preserving significant watersheds, severely sloped areas, and seismic hazard areas and incorporating them into the land plan as open space.
- Minimizing the development footprint and area of grading and disturbance.
- Prohibiting residential development in the fault zones.
- Using lighting systems that respect habitat in the adjacent National Forest.
- Considering the long-term desires of the City as expressed in its General Plan.

Distinctive Identity. Create a distinctive identity for Spring Trails through:

- The provision of design and architectural standards in the Specific Plan that lead to a variety of architectural styles, floor plans, materials, and colors.
- A tailored array of streetscaping, signage, and lighting.
- Unique entries that create a recognizable character and sense of arrival.
- A tailored palette of landscaping that is fire resistant and drought tolerant and is carefully located to highlight significant features.
- Distinctively designed residences set among a system of open spaces and parks.



Examples of the types of residential development and street scenes envisioned in Spring Trails.

Development Concept



Examples of the character envisioned in Spring Trails.



Examples of the unique recreational amenities envisioned in Spring Trails.

Unique Living Opportunities. Provide new living opportunities in San Bernardino to take advantage of the surrounding mountains and foothills, valley views, the National Forest, and proximity to the University, and that include recreational amenities and open spaces.

Promote Health and Wellness. Promote personal health and wellness in Spring Trails through:

- A system of open spaces that serves multiple purposes as drainage courses, pedestrian pathways, recreational and visual amenities, and separations between residences.
- An internal system of integrated pathways.
- Connections to regional trail systems.
- A variety of parks and amenities that encourage outdoor use.
- Educational features that provide an understanding of the physical features of the site.

Sustainability. Incorporate active and passive energy and resource conservation measures, such as the preservation of significant drainage corridors, provision of bioswales for water quality, provision of pedestrian pathways, drought-tolerant landscaping, and utilization of green building techniques/materials.

Spring Trails

Spring Trails is a 352.8-acre residential development that is nestled in the foothills of the San Bernardino Mountains. Because of the geologic and hydraulic forces that have shaped the site, the development footprint of Spring Trails is focused on the gently sloping alluvial benches between canyons, steep hillsides, and the Cable Canyon and Meyers Canyon drainageways, as shown on Figure 2.1, *Development Footprint*, includes all graded and developed areas as well as areas within the fuel modification zones.

As shown on Figure 2.2, *Development Plan*, the preferred plan for Spring Trails accommodates 307 single-family detached units (306 new units and 1 existing residence), which are set among neighborhoods separated by open space corridors, drainage ways, roadways, and sloped areas. The preferred plan assumes that the SCE power lines will be located underground. An alternative plan that accommodates the SCE power lines above-ground is contained in Appendix F. The alternative plan is identical to the preferred plan except that it contains 304 single-family detached units (303 new units and 1 existing residence) and the power lines above ground.

In Spring Trails, pathways connect residents with parks and to 3.8 miles of trails that provide access to the surrounding natural open spaces. Development is focused onto approximately 242 acres, or 68 percent of the total site, and includes 9 acres of parks and 125.1 acres of internal slopes and fuel modification zones. The remaining 32 percent of Spring Trails (111.3 acres) is preserved as natural open space.

The average lot size in Spring Trails is 29,000 square feet. The largest lots are on the northern portion and upper elevations of the site, and the largest lot measures 18.3 acres. The smallest lots are on the lower elevations and southern portion of the project, and the smallest lot measures 10,801 square feet. It is important to note that in many instances the legal lots extend beyond the buildable area and include graded slopes, fuel modification zones, steep slopes, and open spaces. The buildable and nonbuildable areas of each lot are depicted on Figure 2.2 and Tract Map 15576, which accompanies this Specific Plan.

Primary access to Spring Trails is provided by a new road extending from the southeastern corner of the site, connecting to Little League Drive. Secondary access is provided by a new road extending from the southwestern corner of the site to a frontage road along I-215. Vehicular access from the secondary access road to Myers Road will be controlled by one of the two options discussed in Section 3. Within Spring Trails, circulation is provided by a loop road and a series of cul-de-sacs.



Examples of the physical community envisioned in Spring Trails.



Examples of the type of multipurpose trail envisioned in Spring Trails.

Development Concept

Approximately 193 acres of the total site is graded and improved for the on-site development of residential lots, roadways, trails, detention basins, fuel modification zones, and parks. An additional 23.7 acres is graded and improved for off-site access, including 4.2 acres for the primary access road and 19.0 acres for the secondary access road.

Spring Trails includes several drainage improvements that collect and convey storm flows in a manner that reduces the amount of storm runoff to levels below those existing on the site prior to development. Chiefly, the existing Cable Canyon and Meyers Canyon drainageways remain largely untouched with the exception of the crossings for necessary roadway and infrastructure improvements. In addition, on- and off-site stormwater flows are collected and routed through a series of catch basin inlets and storm drain systems that convey water to three on-site detention basins, which double as parks. Water and sewer service is provided through connections to existing facilities in the southeastern portion of the project site. There are three water storage tanks along the eastern edge of the project to provide water service for three elevation zones.

As noted earlier, Spring Trails is in the Foothill Fire Zone and a fire protection plan has been woven into the design of the community to ensure its long-term safety. The fire protection plan for Spring Trails includes:

- The protection of structures through the use of noncombustible exterior building materials; restrictions on the use of cornice and eave vents; fire sprinklers; and compliance with the most current fire codes.
- Greater levels of structure protection on the perimeters of the project.
- Adequate access and maneuverability for fire protection vehicles. And careful placement of fire hydrants to facilitate fire suppression efforts and fire hose access.
- Strict landscape and use zones, called fuel modification zones, wherein there are restrictions on the type of uses and the species, spacing, irrigation, and maintenance of landscaping.
- Clear disclosure to potential homebuyers of the fire threat, preventative measures, and individual responsibilities.
- Clear delineation of and maintenance responsibilities for the fuel modification zones.

Land Plan and Buildout

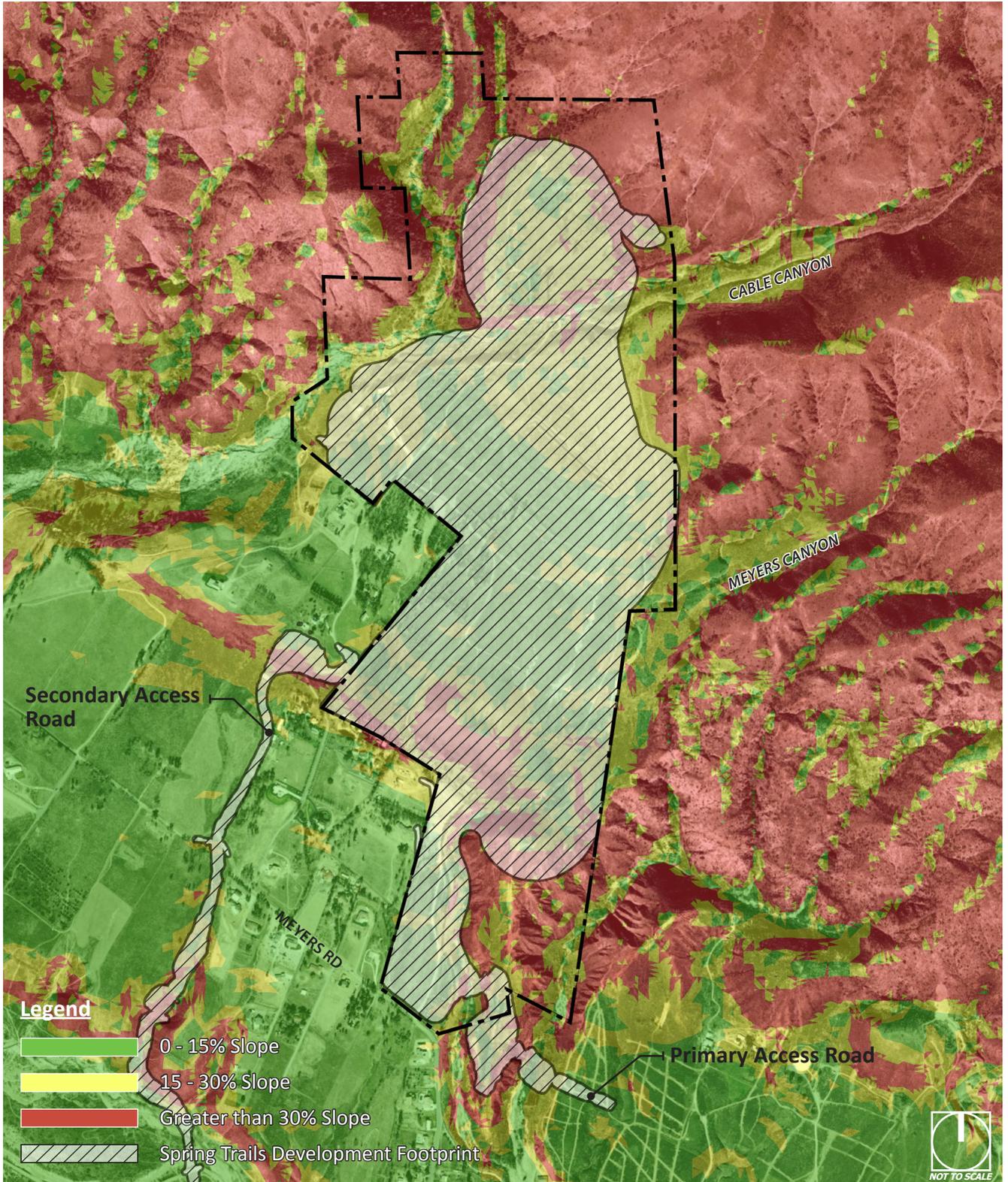
Preferred Development Plan

The preferred land use plan for Spring Trails is shown on Figure 2.2, *Development Plan*, and is a true representation of the use of land, irrespective of legal lot lines. Figure 2.2 shows the areas where buildings may be located, graded slope areas, parks, roadways, and open space areas. Figure 2.2 includes categories that describe the actual use and character of land in Spring Trails. If the alternative plan is utilized, Figure 2.2A contained in Appendix F shall be used instead.

Development Concept

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Figure 2.1: Development Footprint



Map Source: Google Earth

Development Concept

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Figure 2.2 Development Plan



Legend

- Residential
- Open Space - Natural
- Open Space - Controlled
- Parks
- Utility
- Road

Notes:

1. The Development Plan is a true representation of the use of land irrespective of legal lot lines and shows the areas where buildings may be located, graded slope areas, parks, roadways, and open space areas. The development potential shown in Table 2.1 is keyed to this figure.
 2. When determining the use, development standards, and buildable area of each lot within Spring Trails, this Figure and its associated land use categories shall govern.
 3. This Figure represents the intended development pattern of Spring Trails and minor adjustments to roadway alignments and widths, grading areas, buildable pad configurations, and land use boundaries may be made per the provisions of Chapter 6, Administration and Implementation.
 4. The preferred development plan assumes that the SCE powerlines will be located underground. The plan contained in Appendix F and Figure 2.2A shall be used if the powerlines remain above ground.
- * Lots 30 and 233 are unbuildable unless the building pads are reconfigured in a manner acceptable to the fire chief.



Development Concept

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The development potential of the preferred plan is shown in Table 2.1 and is keyed to the actual buildable area depicted on Figure 2.2 instead of the legal lot lines, so that a clear picture of the use of each acre is understood. When determining the use, development standards, and buildable area of each lot within Spring Trails, Figure 2.2 and its associated land use categories shall govern. If the alternative plan is utilized instead of the preferred plan, the plans contained in Appendix F shall be utilized for the development of Spring Trails and all other provisions of this Specific Plan shall be in place.

This Specific Plan allows minor adjustments per the provisions of Section 6, *Administration and Implementation*, in response to unforeseen physical conditions that necessitate changes in final roadway alignments and widths, grading areas, buildable pad configurations, and land use boundaries.

Table 2.1 Preferred Plan Development Potential

Land Use	Acres ^{1,2}	Maximum Density	Units ³	Pop. ⁴
Developed Area				
Residential	70.9	1 unit per lot	306	1,025
Private Lot (existing)	2.2	1 unit	1	3
Parks (public and private)	9.0			
Open Space–Controlled ⁵	125.1			
Utilities ⁵	1.2			
Roads (on-site)	33.1			
Subtotal	241.5		307	1,028
Undeveloped Area				
Open Space–Natural ⁶	111.3			
Total				
Total	352.8		307	1,028
Off-Site Access				
Roads/Grading (off-site)	23.7			

Notes:

¹ As discussed in Section 6, *Administration and Implementation*, variations to account for final roadway alignments and grading may result in a minor shifting of acres.

² Statistics are based upon buildable area depicted on Figure 2.2 instead of the legal lot area to give a true picture of the use of the land. See Figure 2.3, *Spring Trails Zoning Map*, for the zoning designations.

³ Lots 30 and 233, as numbered on Tract Map 15576, are undevelopable unless the building pads are reconfigured in a manner that is acceptable to the Fire Chief. If they are not reconfigured accordingly, the total units developed will be 305.

⁴ Population is based on 3.35 persons per unit (Table 2: E-5 City/County Population and Housing Estimates, 1/1/2007).

⁵ Noted as Non-Buildable Overlay on Figure 2.3, *Zoning Map*.

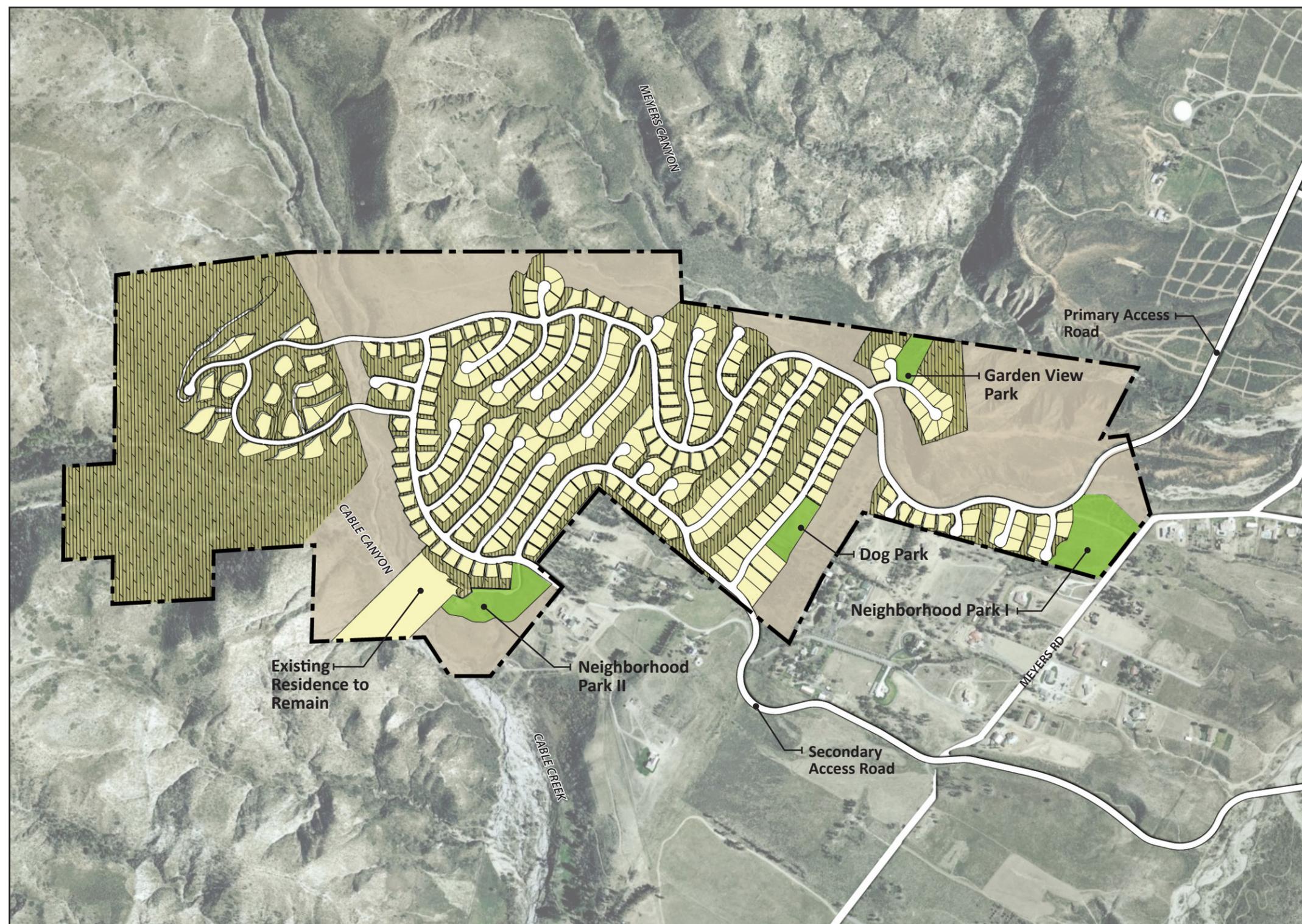
⁶ The Open-Space – Natural areas on private residential lots are noted as Non-Buildable Overlay on Figure 2.3, *Zoning Map*.

Development Concept

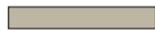
Zoning

As noted, there are a variety of lot sizes ranging from 18.3 acres to 10,801 square feet. However, portions of some lots may not be built upon as they contain fault zones, graded internal slopes, steep external slopes, water tanks, permanent open space, or trail easements. The buildable area of each lot has been determined and is shown on Figure 2.2 (preferred plan) or Figure 2.2A (alternative plan). However, a zoning designation is required to be linked to legal lot lines, which does not provide a true picture of the use and buildable area of Spring Trails. Therefore, a zoning map has been prepared to satisfy the requirements of the law, though it is not the determining factor for the location of development in Spring Trails. Figure 2.3, *Zoning Map*, and Table 3.1 describe the zoning of each parcel. When determining the use, standards, and buildable area for any legal lot, Figure 2.2, *Development Plan*, or Figure 2.2A, *Alternative Development Plan*, shall govern.

Figure 2.3 Zoning Map



Legend

-  Residential
-  Open Space - Natural
-  Parks
-  Non-Buildable Area Overlay
-  Site Boundary
-  Parcel Lines

The Zoning Map is a depiction of the zoning designation of each lot. However, due to constraints such as fault zones and slope areas, the zoning does not provide a true picture of the use and buildable area of each lot. Therefore, when determining the use, standards, and buildable area for a lot, Figure 2.2, Development Plan, shall govern.



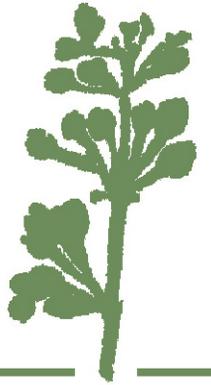
NOT TO SCALE

Development Concept

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Section 3

DEVELOPMENT STANDARDS



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DEVELOPMENT STANDARDS

This section includes land use designations, permitted uses, and development standards that are intended to shape the physical form of Spring Trails. In addition, it includes the mobility plan, parks and open space plan, preliminary grading plan, and infrastructure plans.

Unless expressly stated, the Spring Trails Specific Plan development standards shall supersede the relevant provisions of the City of San Bernardino's Development Code. Any development regulation and guideline not addressed in this Specific Plan shall be subject to the City's adopted regulations in place at the time of the individual request.

Land Use Designations and Permitted Uses

Table 3.1, *Land Use and Zoning Categories*, provides a description of each land use and zoning category in Spring Trails. The uses allowed in each land use category are summarized in Table 3.2, *Permitted Uses*. This Specific Plan allows minor adjustments per the provisions of Section 6, *Administration and Implementation*. Minor adjustments include interpretations that facilitate the approval of unlisted uses that are similar to listed uses in nature and impact. The inclusion of any uses not expressly listed in Table 3.2 may be permitted subject to a determination by the Director of Development Services made pursuant to the Minor Amendments procedures set forth in Section 6 of this Specific Plan.

Development Standards

Table 3.1 Land Use and Zoning Categories

Land Use Category (Figure 2.2)	Description of Category	Zoning Category (Figure 2.3)
Residential Uses		
Residential	Accommodates single-family detached uses with a maximum density of 1 dwelling unit per lot.	Residential
Other Uses		
Parks	Accommodates public and private recreational amenities such as tot lots, sports courts and fields, picnic areas, joggers' exercise courses, dog play areas, community gardens, and recreational facilities. Parks may also double as detention basins.	Parks
Open Space-Natural (OS-N)	Accommodates the preservation of natural open space areas that are not graded or used for fuel modification areas.	Open Space-Natural
Open Space-Controlled (OS-C)	Accommodates open spaces that are used for internal and/or graded slopes, fuel modification areas, landscaped areas, and detention areas that do not double as parks.	Not Applicable
Utility (U)	Accommodates water tanks and other utilities for public benefit.	Not Applicable
Roads	Accommodates on- and off-site streets.	Roads
Not Applicable	Refines the underlying zoning designation and depicts areas where residential development is not permitted. Utilities, trails, access streets, drainage swales, fuel modification zones, and water tanks are permitted.	Nonbuildable Area Overlay
The above-ground power line is a permitted use in the land use and zoning categories in the location depicted on Figure 2.2A contained in Appendix F.		

Table 3.2 Permitted Uses

Use	Res.	Parks	OC-C	U	OS-N
Residential Uses					
Community care facility (6 or fewer patients)	P	X	X	X	X
Congregate care, assisted living facilities, and nursing homes,	X	X	X	X	X
Day care center	X	X	X	X	X
Day care homes, family (6 or fewer children)	P	X	X	X	X
Day care homes, family (7 to 12 children)	C	X	X	X	X
Residential care facility	X	X	X	X	X
Second dwelling (granny) unit	D	X	X	X	X
Single-family detached dwellings	P	X	X	X	X
Recreational Uses					
Open spaces/parks	P	P	P	P	P
Swimming pool/spa	P	P	X	X	X
Trails (including bicycles, equestrian, pedestrian)	P	P	P	P	P
Accessory Uses					
Antennae, vertical/satellite dish	P	X	X	C	X
Fences and walls	P	P	P	P	X
Recreational vehicle and boat storage	P	X	X	X	X
Storage structures (less than or equal to 120 sf)	P	X	X	X	X
Other Uses					
Homefinding center (temporary)	D	X	X	X	X
Private/public utility facilities	C	C	C	D	X
Wireless telecommunication facilities	X	C	C	C	X
Home Occupations					
Subject to (H) home occupation permit	H	X	X	X	X
Temporary Uses					
Subject to (T) temporary use permit	T	T	T	X	X

Notes:

- Permitted Use (P): Use allowed subject to the provisions applicable to that district.
- Development Permit (D): Use allowed subject to the approval of a minor discretionary entitlement, which may be granted under the provisions of Section 19.44 of the City of San Bernardino Development Code.
- Conditional Use Permit (C): Use allowed subject to approval of a major discretionary entitlement, which may be granted under the provisions of Section 19.36 of the City of San Bernardino Development Code.
- Prohibited Use (X): Use is not permitted.
- Home Occupation Permit (H): Use allowed per the provisions of this section and Chapter 19.54 of the Development Code.
- The above-ground power line is a permitted use in the land use and zoning categories in the location depicted on Figure 2.2A contained in Appendix F.

Development Standards

As discussed in Section 2, the buildable area of each lot does not necessarily match lot lines and the buildable area of each lot is depicted on Figure 2.2 or Figure 2.2A and Tract Map 15576. Therefore, the development standards in this section, unless specifically stated, relate to the buildable pad limits depicted on Figure 2.2 or Figure 2.2A and Tract Map 15576. Development standards are subdivided as follows:

- **Development standards, Tables 3.3 and 3.4**, provide standards for each land use category and include such provisions as building height and setback requirements.
- **General development standards** provide regulations that apply to most, if not all, land use designations within Spring Trails.

Table 3.3 Residential Development Standards

Lot Standards	
Density	1 unit per lot
Minimum lot size	10,800 sf
Building Pad Standards ¹	
Buildable pad location	As shown on Figure 2.2 and Tract Map 15576
Minimum pad width	70 ft
Minimum pad depth	100 ft
Maximum pad coverage	50%
Front setback for habitable structure	15 ft
Front setback for front-entry garage	20 ft
Front setback for side-entry garage	15 ft
Front setback for unenclosed porch	12 ft
Interior side setback for habitable structure	10 ft
Projections into interior side setback ²	4 ft
Exterior side setback for habitable structure	10 ft
Projections into exterior side setback ²	4 ft
Rear setback for habitable structure	15 ft
Projections into rear setback ²	4 ft
Maximum height	35 ft
Fire Zone Setback	25–50 ft as depicted on Figures 3.17 and 3.18. Overrides all other setbacks.

ft = feet

sf = square feet

Notes:

¹ All setbacks shall be measured from the buildable pad as depicted on Figure 2.2 and Tract Map 15576.

² Projections are architectural features that extend beyond the building face. Projections include features such as eaves, chimneys, bay windows, stairways, and other architectural detailing. California Building Code requirements take precedence over this requirement.

Table 3.4 Development Standards – Other Uses

Standard	Park	OS-C	OS-N	Utilities
Height of structure	25 ft	Not Allowed	Not Allowed	35 ft
Setback of structure from property lines	15 ft	Not Allowed	Not Allowed	10 ft

Development Standards

General Development Standards

The following General Development Standards apply to all uses within Spring Trails and may be supplemented by provisions of the project's CC&Rs.

Antennas

Per Chapter 19.20.030 (3), Antennas, Satellite Dishes and Telecommunication Facilities, of the Development Code, using the spirit and intent of the Spring Trails Specific Plan as a guide.

Cornice and Eave Projections

Per Chapter 19.20.030 (17), Projections into Setbacks, of the Development Code, using the spirit and intent of the Spring Trails Specific Plan as a guide. Cornices and eaves shall be designed according to the standards set forth in California Building Code Chapter 7A.

Detention/Drainage

Detention and drainage areas shall be permitted in all land use designations as necessary and on a case-by-case basis. When possible, these areas should be designed to blend in with the surrounding development, landscaped, and designed to accommodate uses that can be flooded, such as active/passive recreation and natural open space.

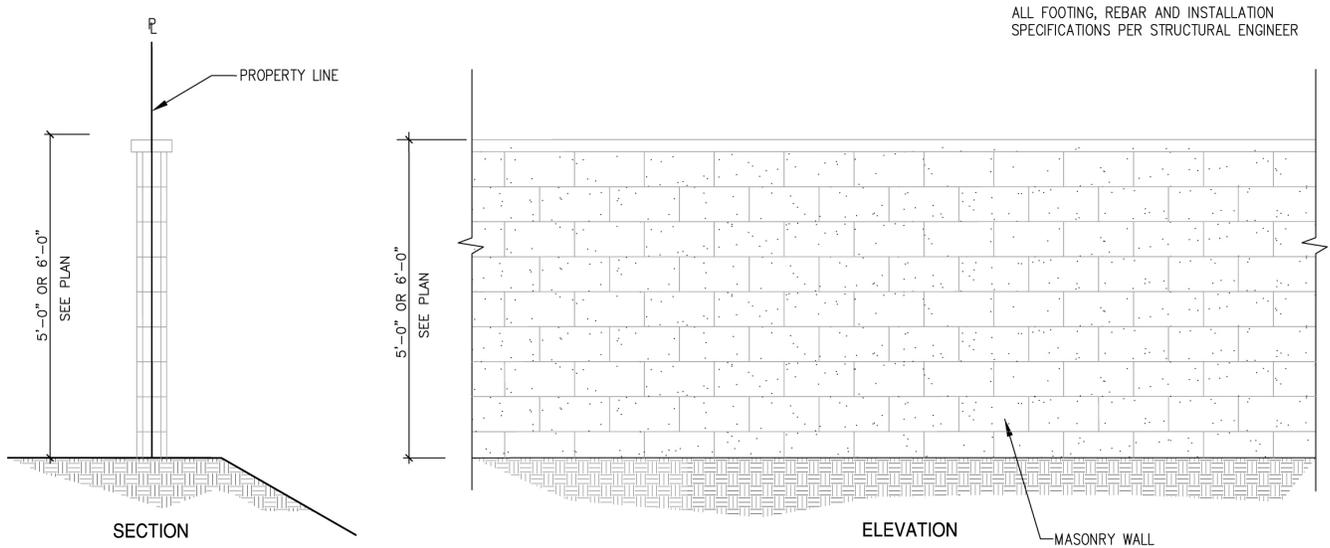
Fences and Walls

Per Section 19.20.030 (8), Fences and Walls, of the Development Code, using the spirit and intent of the Spring Trails Specific Plan as a guide. In addition, the following standards shall apply.

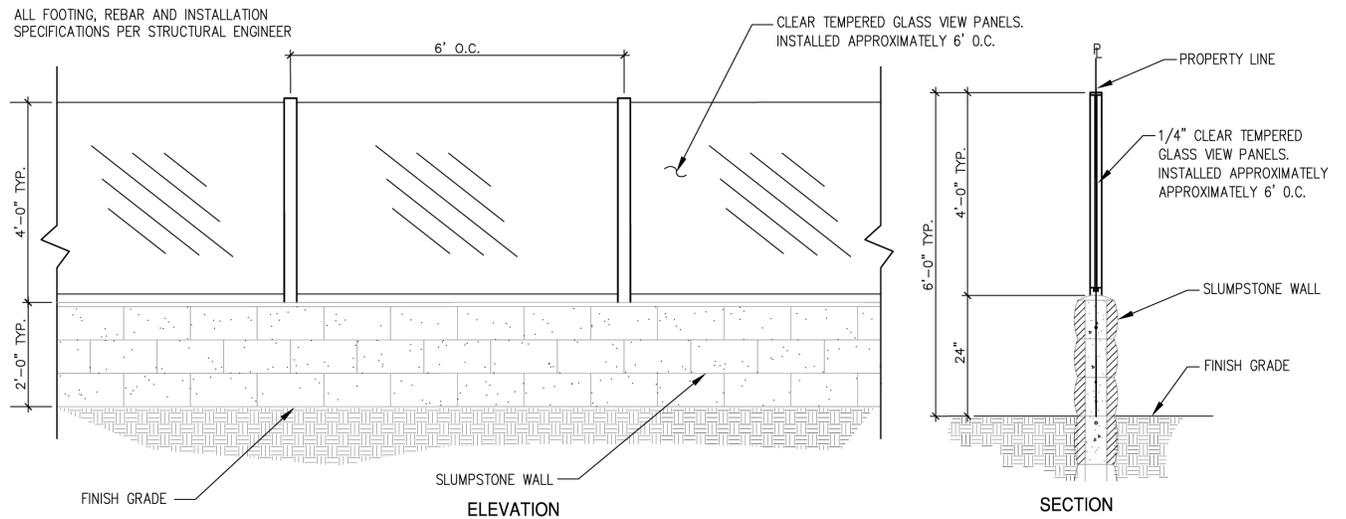
- The height of walls and fences shall be measured from the top of the highest adjacent grade unless adjacent to a public right-of-way, in which case the measurement shall be taken from the side of the public right-of-way.
- Rear or side yards. The maximum height of walls and fences in the rear and side yards shall be 6 feet.
- Front yard. The maximum height of walls and fences located between the front property line and the nearest building wall (either garage or habitable structure) shall be 3.5 feet. Thereafter, the provisions for walls in rear and side yards noted above shall apply.
- Walls and view fences shall be constructed as detailed in Figure 3.1, *Wall Details*, and as required by the Fire Protection Plan in Appendix C.

Figure 3.1: Wall Details

Block Wall



View Wall



Development Standards

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- Barbed and razor wire, plain exposed concrete block, and chain link are not permitted. Chain link may be used on a temporary basis at construction sites. Vinyl-coated chain link may be used as a fencing material for outdoor park facilities such as tennis courts, subject to approval of a Development Permit, per Section 19.44 of the San Bernardino Development Code.
- All walls, fencing, or screening materials shall be maintained in a physical state consistent with the time of installation. Repair and/or replacement of damaged, defective, or severely weathered materials shall be completed immediately upon occurrence or within a minimum of 20 days of notification by the City.
- All walls and fences shall be constructed of noncombustible materials.
- All walls and fences in Spring Trails shall be designed and constructed to withstand 100 mile per hour winds or the standard in the City of San Bernardino Development Code in effect at the time of the building permit application.
- Pilasters, articulation, and/or permanent landscaping screening shall be incorporated into the design of walls or fences that exceed 25 feet in length.

Retaining Walls

- When a retaining wall is in the front yard:
 - The maximum retaining wall height may be 2 feet and may be directly topped with a maximum 18-inch wall or fence for a total height of 42 inches, or
 - The maximum retaining wall height may be 3 feet and, in this case, a maximum 3-foot-high wall or fence may be erected above the retaining wall with a minimum 3-foot landscaped setback from the back of the retaining wall.
- For retaining walls on the perimeter, side, or rear property lines:
 - The maximum height of any solid retaining wall shall be 8 feet as measured from the lowest adjacent grade. Retaining walls may only exceed 8 feet if: (1) they are not visible from public areas, or (2) they are visible from public areas and unique designs are incorporated to disguise or break up the mass of the retaining wall (e.g., offsets, landscape walls, unique materials, or public art).
- The maximum height of any fence or wall on top of a retaining wall on the perimeter, side, or rear property lines shall be as would otherwise be allowed if there was no retaining wall.

Development Standards

Garage Variation

To avoid the monotony of projects that employ the same garage placement (e.g., all front-entry garages), a variety of garage placements and orientations is required. Standard garage placement is a front-loaded garage set in from the front property line. Alternative garage orientation and placement are required on 33 percent of the units. Roll-up garage doors with automatic openers are required for all garages. The following are potential alternative garage placements:

- Side-entry garages
- Split garages
- Garages in courtyards or driveways with a porte cochere
- Straight-in garages in rear two-thirds of the lot

Garage Sales

Garage sales are permitted once every six months for a maximum period of 48 consecutive hours.

Glossary

See Appendix A of this Specific Plan for a definition of terms.

Hillside Management

Most foothills (areas of 15 percent average slope or greater) within Spring Trails have been preserved as open space. Development and use in the areas with an average slope of 15 percent or greater shall comply with Chapter 19.15 of the Development Code.

Home-Finding Center

Home-finding centers are long-term, temporary home sales facilities. They are permitted administratively with approval by the Development Services Department during review of tract maps. The duration, location, and required parking and landscaping shall be determined during this review. Upon closure, home-finding centers are required to revert to the underlying land use per the approved tract maps.

Home Occupations

Home occupations include a vocation such as lawyer, engineer, music teacher, or art teacher that is carried on solely by the occupant of the premises. Home occupations are allowed in any residence per the provisions of Chapter 19.54 of the Development Code provided all of the following provisions are met.

- There is no alteration in the residential character of the premises.
- All operations are carried on within the dwelling.
- No more than 15 percent of the dwelling is used to conduct a home occupation.
- No merchandise or articles are displayed for advertising purposes.
- No assistants are employed at the premises.
- The premises are not used as a point of sale or for walk-in trade.
- Any necessary permits or licenses from appropriate regulating agencies are obtained and fully complied with.
- All operations in connection with the home occupation are conducted so as to prevent the emanation of any dust, gas, smoke, noise, fumes, odors, vibrations, or electrical disturbances.

Landscaping

All setback areas fronting on or visible from a public street and all recreation/common open space areas shall be landscaped and permanently maintained in an attractive manner. Such landscaping shall primarily consist of turf, lawn, groundcovers, trees, shrubs, and other living plants, and may also include some use of artificial turf. Permanent, 100 percent automatic irrigation facilities shall be provided in all landscaped areas as appropriate for the landscape type. Landscaping shall comply with the Landscape Zones Plant Palette (Table 3.6) and the fire protection plan in this section.

Lighting

The use of lighting within the community shall not be excessive and shall be consistent with the dark sky guidelines suggested by the International Dark Sky Association (www.darksky.org). A detailed lighting plan, including specifications and design standards, shall be submitted as part of the construction documents. The following policies shall apply to lighting in Spring Trails.

- Lighting shall be directed on the driveways and walkways and away from adjacent property.
- Walkway lighting shall be low-level fixtures (e.g., bollards), spaced to provide adequate walkway illumination, and shall not intrude into the residential dwelling units.

Development Standards

- Light standards shall be energy efficient and in scale with the height and use of the structures on-site.
- Light standards shall not exceed 15 feet above finish grade. The 15-foot height limit may be waived as deemed necessary by the City Engineer.
- Lighting shall be decorative, in keeping with the architectural theme of the facility served, and shall be located within landscape planter areas.
- All lighting, including security lighting, shall be directed away from adjoining properties and the public right-of-way.
- The level of lighting shall not exceed 0.5 foot-candle at any residential property line or at the perimeter of the developed areas adjacent to the areas designated as Open Space-Natural.
- A lighting plan shall be prepared for all public areas within Spring Trails. The lighting plan shall establish uniform lighting standards with regard to style, materials, and colors in order to ensure consistent design. The lighting plan shall be submitted to the City for review and approval.
- Game-court lighting is permitted on a case-by-case basis. Prior to installation, all game-court lighting shall be reviewed and approved by the City of San Bernardino and any other responsible governing agency. Court lighting fixtures shall not exceed 30 feet in height.
- Exterior lighting may be used to illuminate significant exterior features and landscaping.

Location of Accessory Buildings

A detached accessory building less than 120 square feet and 6 feet in height may be located in any rear or side yard provided necessary access is maintained. Accessory buildings exceeding 120 square feet and/or 6 feet in height are limited to a maximum of one story in height, shall not occupy more than 35 percent of a rear yard, and may not be erected closer than 5 feet to the rear property line. In addition, such accessory buildings shall not have openings facing the rear property line. This requirement may be waived by the Planning Commission based on findings that such buildings, if constructed on the rear or side property lines, will not be detrimental to adjacent properties.

Location of Patio Covers and Patio Enclosures

Patio covers and patio enclosures, defined as nonhabitable space in the adopted California Building Code, may be attached to the rear and/or side of a residential structure provided that the minimum setbacks are maintained as

measured to the posts and support members. Eaves may encroach two feet into the setback. Patio covers shall be consistent with Chapter 19.15 of the San Bernardino Development Code.

Nonconforming Uses

Per Chapter 19.62, Nonconforming Structures and Uses, of the Development Code, using the spirit and intent of the Spring Trails Specific Plan as a guide.

Parking and Loading Standards

Minimum Number of Parking Spaces

- Two enclosed garage spaces per unit.
- Public parks may use on-street parking

Parking Design and Use Provisions

- General provisions. Per Section 19.24.060, Design Standards, of the Development Code, using the spirit and intent of the Spring Trails Specific Plan as a guide.
- Driveways for single-family detached residential units. Driveways greater than 30 feet in length shall have maximum grade of 10 percent for a minimum distance of 20 feet from the garage. Driveways less than 30 feet in length shall have a maximum grade of 12 percent for a minimum distance of 20 feet from the garage. No portion of a driveway shall exceed a grade of 15 percent, unless approved by the Fire Chief and City Engineer.
- Handicapped parking. Per Section 19.24.050, Handicapped Parking Requirements, of the Development Code.
- Recreational vehicles (RVs). The parking or storing of recreational vehicles, dismounted campers, camper shells, boats, trailers, or similar recreational items on streets and lawns, landscaped areas, or other unpaved surfaces within the front yard is prohibited.

Product Variation

Spring Trails will be attractive and visually interesting. Accordingly, single-family residential neighborhoods will include a variety of product types and design styles.

- There should be a minimum of three different material and color palettes. No two single-family detached homes with identical color or materials palettes shall be adjacent to or directly across the street from one another.

Development Standards

- There shall be a minimum of three elevation/facade designs. No two homes with identical elevation/façade designs shall be adjacent to or directly across the street from one another.
- There shall be a minimum of three primary roof materials and roof designs. No two homes with identical roof designs and materials shall be adjacent to or directly across the street from one another.

Public Utility Lines

Per Section 19.30.110, Underground Utilities, of the Development Code.

Screening

- All utility connections shall be coordinated with the development of the site and should not be exposed, except where deemed appropriate or necessary by the City.
- Utility equipment, such as surface-mounted transformers, pedestal-mounted terminal boxes and meter cabinets, and sprinkler manifolds, may be placed above ground provided they are screened from view in the building or a fully enclosed structure. All vent pipes and similar devices that are attached to the building shall be painted to match the building. All roof-access ladders shall be screened from view.
- All roof-mounted equipment, including but not limited to mechanical equipment, satellite dishes, tanks, and ducts, shall be screened on all sides from street-level public view and neighboring residences by landscaping, parapet wall, decorative enclosure, or other architectural element. Equipment screening shall be designed and painted to match the building and shall be equal to the maximum height of the equipment.
- All storage, including cartons, containers, materials, or trash, shall be shielded from view within a building or area enclosed by a solid fence or wall not less than six feet in height.
- Ground-mounted equipment, including heating and air conditioning units and trash receptacles, shall be completely screened from the view of surrounding properties through the use of screen walls, landscaping, or other methods.
- Exposed gutters, downspouts, vents, louvers, and other similar elements shall be painted to match the surface to which they are attached, unless the elements are incorporated as part of the design element of the site.

Second Dwelling Units

Per Section 19.04.030 (P), Second Dwelling Unit Housing Design Standards, of the Development Code.

Signs

Per Section 19.22, Sign Regulations, of the Development Code. Specifically, the regulations governing signs in residential districts for Neighborhood Identification on Table 22.01 shall apply to Spring Trails.

Street Access

Per Section 19.20.030(1), Access, of the Development Code.

Trash Collection

Trash in Spring Trails will be serviced by individual collection with the following provisions:

- Collection vehicles must be able to provide service without backing up.
- 25 feet of overhead clearance is required at collection points.
- All homes serviced using individual containers shall have a minimum of 44 square feet (4' x 11') of designated space for each container and the space for the storage of three containers. The container storage space does not have to be contiguous. The approved site plan must identify the designated container storage area.
- All containers must be stored in a space easily accessible for the resident that is screened from view from the street.
- The conditions, covenants, and restrictions shall include detailed responsibilities of each homeowner for trash container drop-off and pick-up, container spacing, as well as penalties for noncompliance.
- All individual containers must be returned within 24 hours of collection.

Mobility Plan

Spring Trails is designed with an efficient multimodal circulation system that provides safe and efficient internal and external connectivity. The Mobility Plan, as detailed below, describes the network of streets and multiuse trails within Spring Trails that provide a range of options for vehicular, pedestrian, equestrian, and bicycle mobility.

Vehicular Circulation

As shown in Figure 3.2, *Circulation Plan*, the Spring Trails Specific Plan consists of a hierarchy of streets, described below. Primary access to Spring Trails will be provided at the southeast corner of the project site via a street extending from Little League Drive to the project site. Secondary access to Spring Trails will be via a street extending from the western edge of the project site to a frontage road along Interstate 215. All necessary public streets, both on-and off-site, shall be improved by the developer and dedicated to the City. The typical street cross-sections and plan views are illustrated in Figures 3.3 through 3.8.

Street Types

Primary Access Road

The primary access road provides the main access for residents and guests to enter and leave Spring Trails. A typical cross-section and plan view are illustrated in Figure 3.3.

Secondary Access Road

The secondary access road is intended as an alternative street for local traffic to access arterial streets outside the project site. A typical cross-section and plan view are illustrated in Figure 3.4.

Secondary Access Road – Special Segment

This designation identifies the segment of the Secondary Access Road that contains curves and grading and where it is desirable to reduce vehicular speeds to safe levels. To reinforce posted speed limits, the applicant will install design treatments, such as landscaping, medians, or pavement changes, which provide visual cues to drivers to reduce speed. The design treatments shall be approved by the City Engineer prior to construction of the Secondary Access Road.

Primary Local Street

The primary local street provides access to residences within Spring Trails. A typical cross-section and plan view are illustrated in Figure 3.5.

Secondary Local Street

A secondary local street serves residential estate lots in the northern part of Spring Trails. A typical cross-section and plan view are illustrated in Figure 3.6.

Cul-de-Sac I

Streets designated as cul-de-sac I connect to the local streets and provide access to homes on both sides of the street. A typical cross-section and plan view are illustrated in Figure 3.7.

Cul-de-Sac II

Streets designated as cul-de-sac II connect to the local streets and provide access to homes on only one side of the street. A typical cross-section and plan view are illustrated in Figure 3.8.

Secondary Road - Meyers Road Intersection Options

Local residents expressed a desire to prevent project-related traffic from accessing the eastern side of Meyers Road and negatively impacting their quality of life. In response, the intersection of Meyers Road and the Secondary Access Road shall be designed to either prevent or discourage access to Meyers Road. The final design will be determined by the City Engineer in consultation with local residents.

As shown in Figure 3.9, *Meyers Road Options*, there are two proposed options for the treatment of the intersection of Meyers Road and the Secondary Access Road.

- Option 1 – Cul-De-Sac the east side of Meyers Road at the intersection with the Secondary Access Road. In this option, Meyers Road is disconnected via a cul-de-sac on the eastern side of Meyers Road. An emergency access road and gate allow emergency access to residents on the eastern side of the Secondary Access Road. On the western side of the Secondary Access Road, full access to and from Meyers Road is maintained.
- Option 2 – Restrict left turn movements from the Secondary Access Road to Meyers Road. In this option, the intersection of the Meyers and Secondary Access Roads are realigned and offset and a raised median prevents left-hand turning movements from the Secondary Access Road onto eastbound Meyers Road yet still allows full turn movements from Meyers Road to the Secondary Access Road. The ability to make a left-hand turn movement onto westbound Meyers Road is maintained in this option.

Development Standards

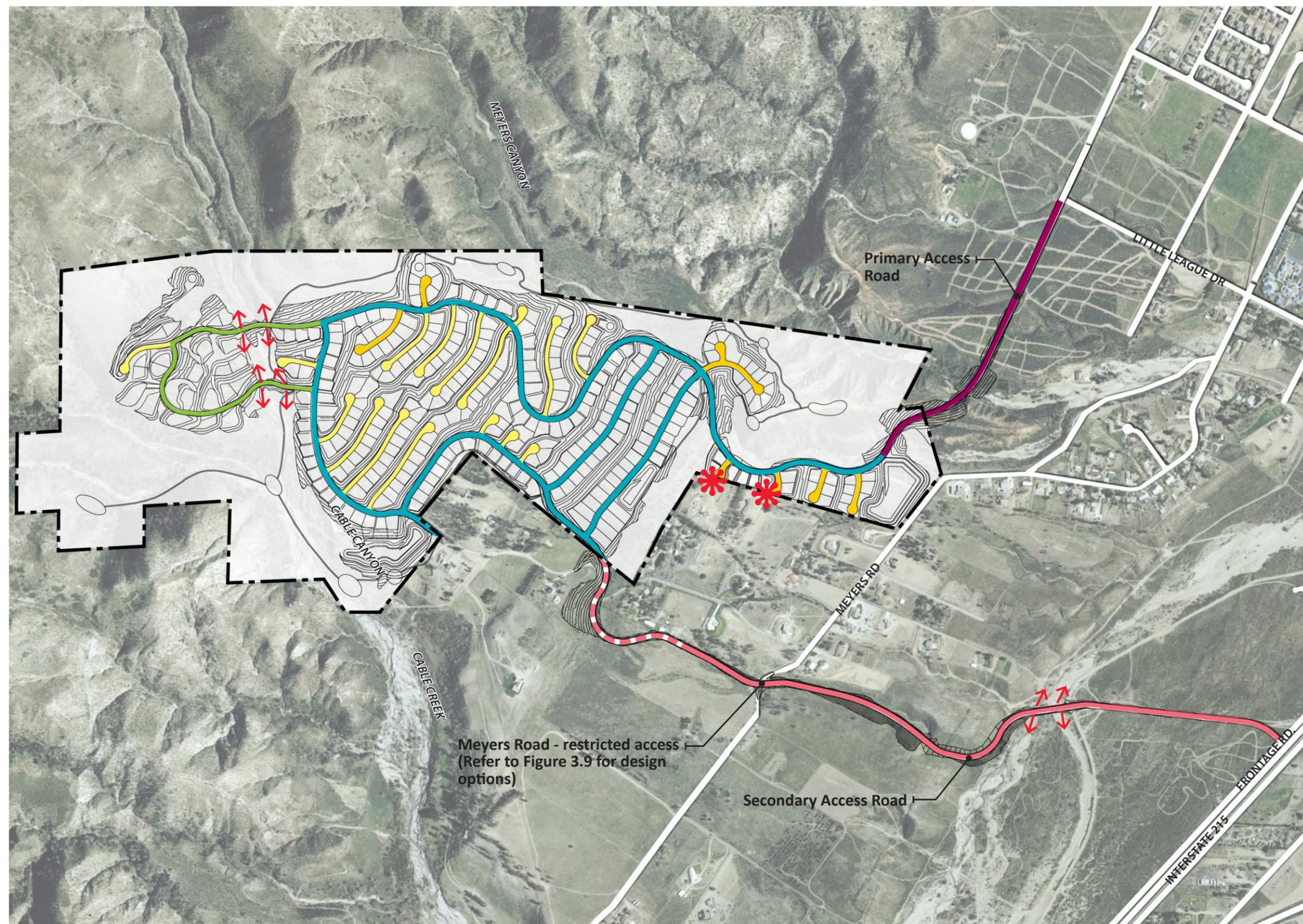
Off-Site Access Points

In the locations depicted on Figure 3.2 as Off-Site Access Points, driveways shall be provided to allow access to adjacent properties.

Off-Site Improvements

Little League Drive will be extended to the project site and, north Meyers Road, will be improved to City standards. Other necessary off-site improvements, such as the Palm Avenue/I-215 and Glen Helen Parkway improvements, are part of the City's Master Facility Plan and will be funded through developer impact fees.

Figure 3.2 Circulation Plan



Legend

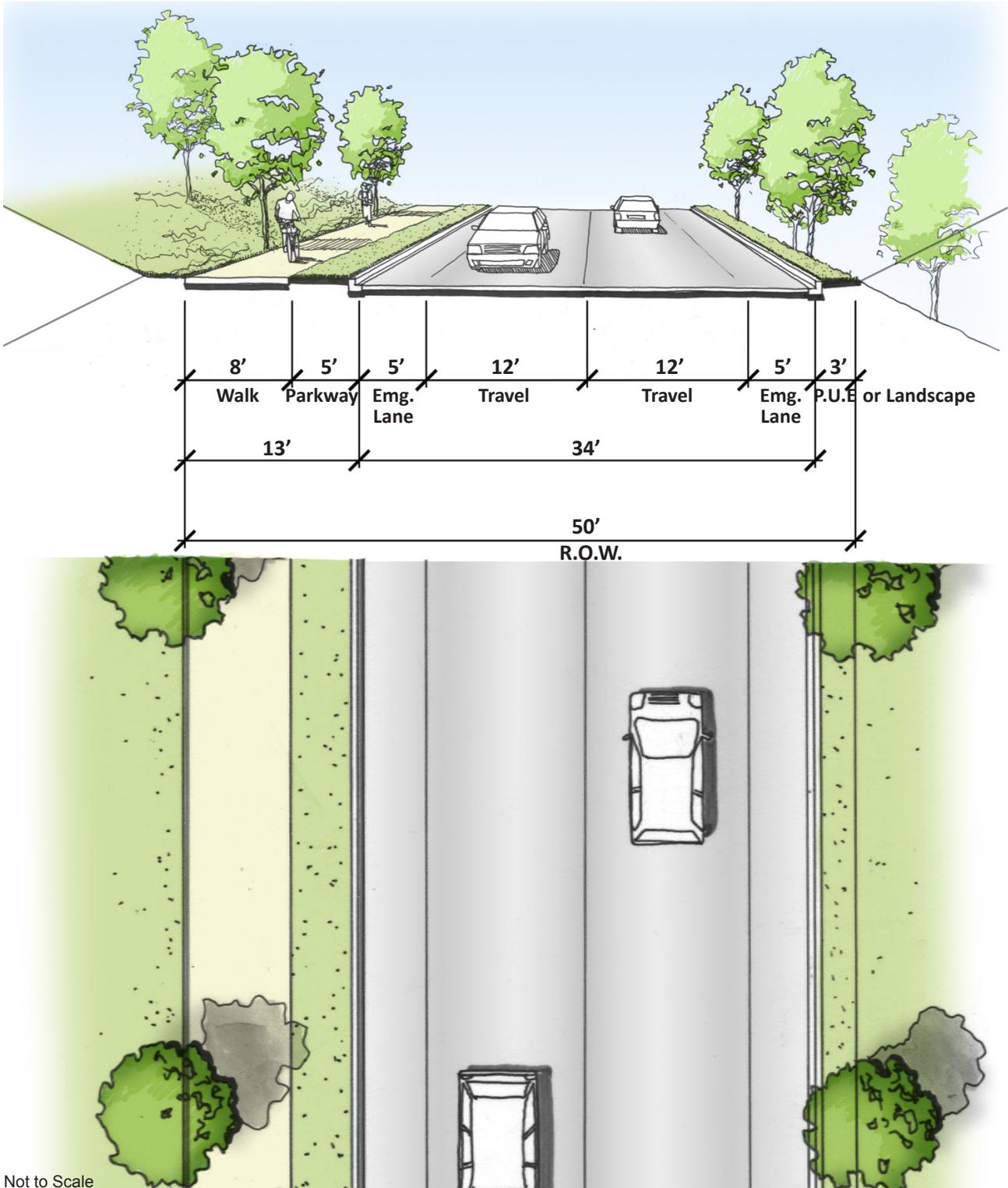
-  Primary Access Road (50' ROW)
-  Secondary Access Road (50' ROW)
-  Secondary Access Road - Special Segment (50' ROW)
-  Primary Local Road I (50' ROW)
-  Secondary Local Road (40' ROW)
-  Cul-de-sac I (46' ROW)
-  Cul-de-sac II (40' ROW)
-  Off-Site Access Points
-  Wildlife Crossing Location
(Refer to Page 3-74 for standards and guidelines related to wildlife corridors and crossings)



Development Standards

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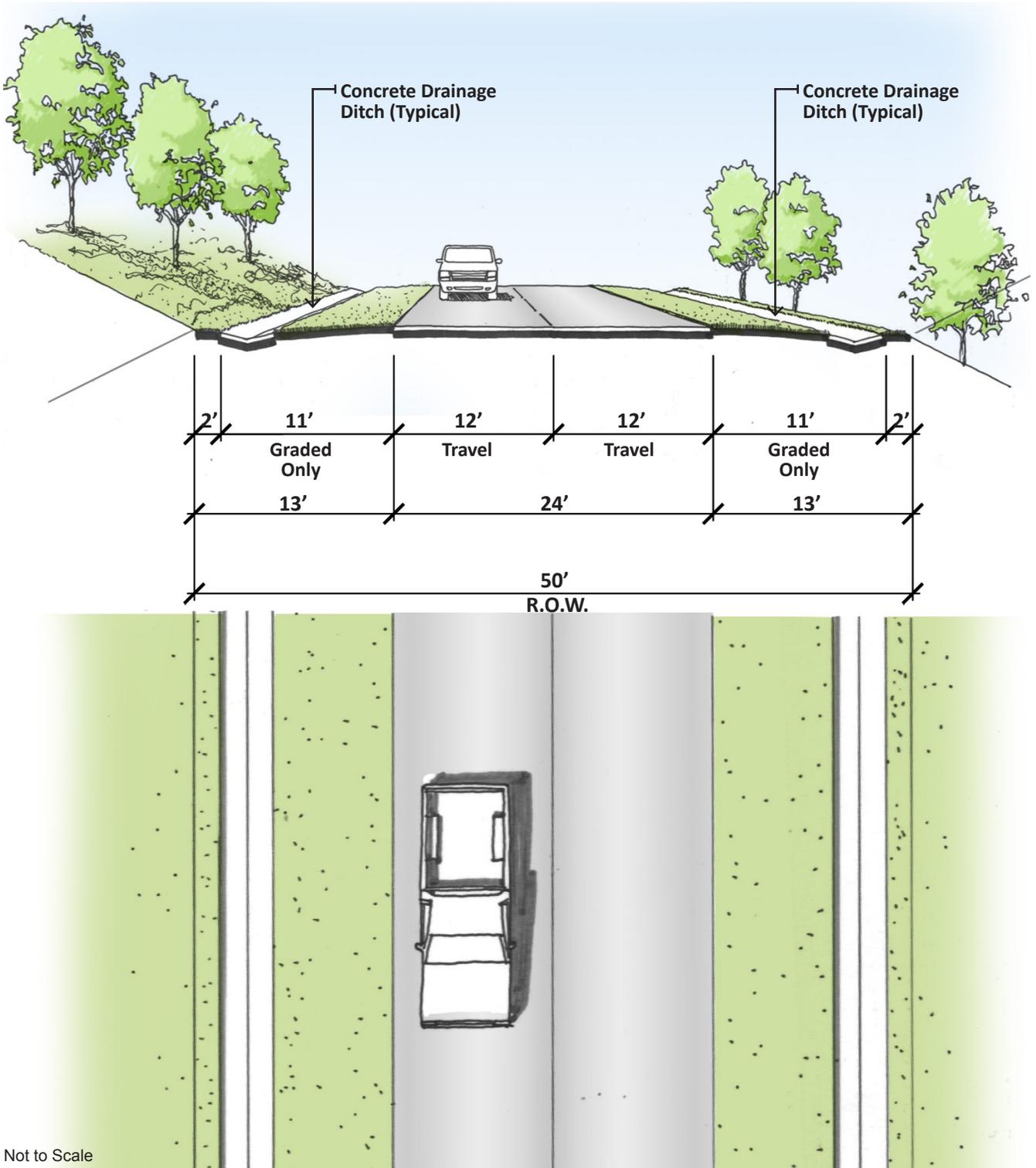
Figure 3.3 Primary Access Road



Development Standards

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Figure 3.4 Secondary Access Road

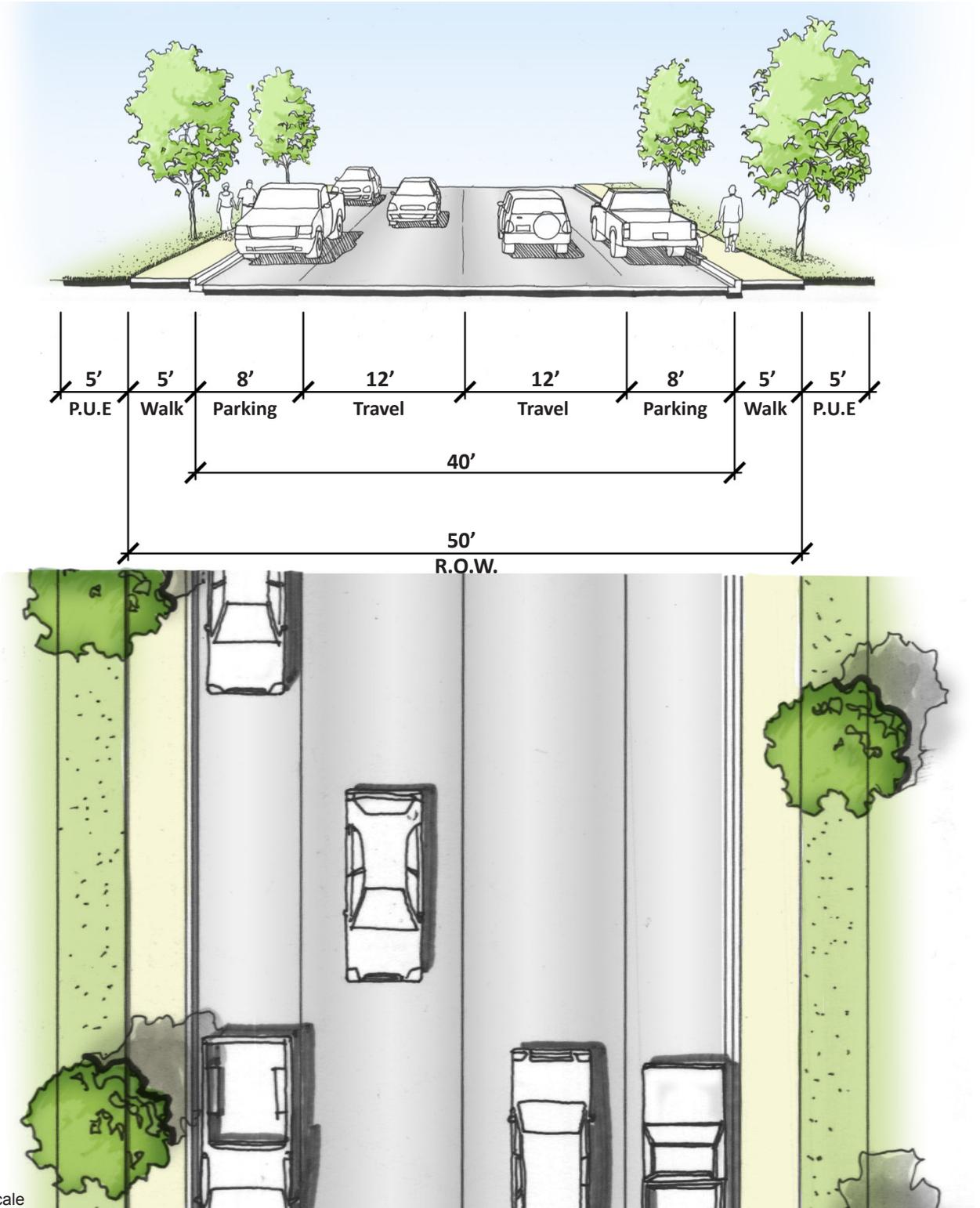


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Development Standards

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Figure 3.5 Primary Local Street

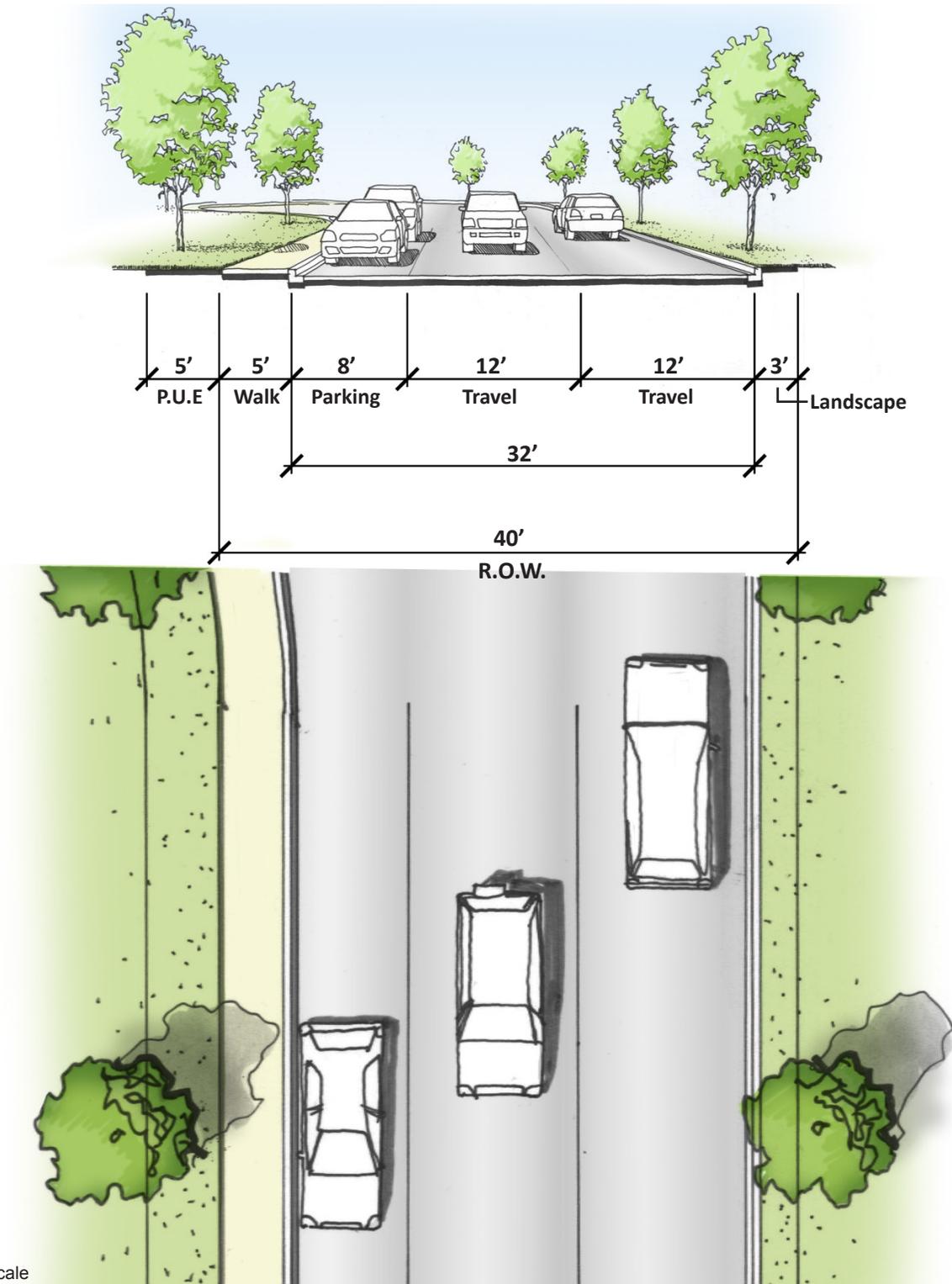


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Development Standards

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Figure 3.6 Secondary Local Street

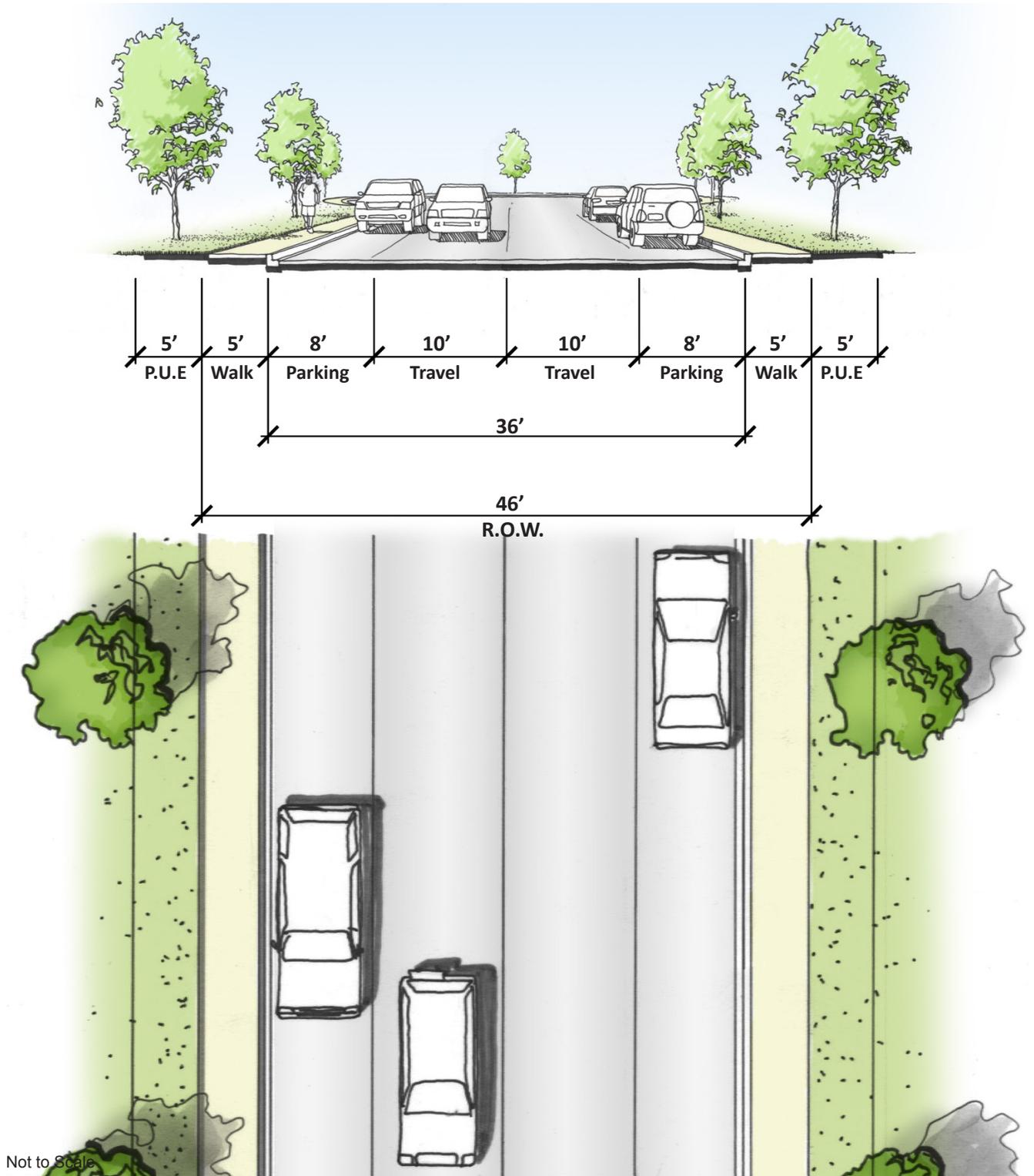


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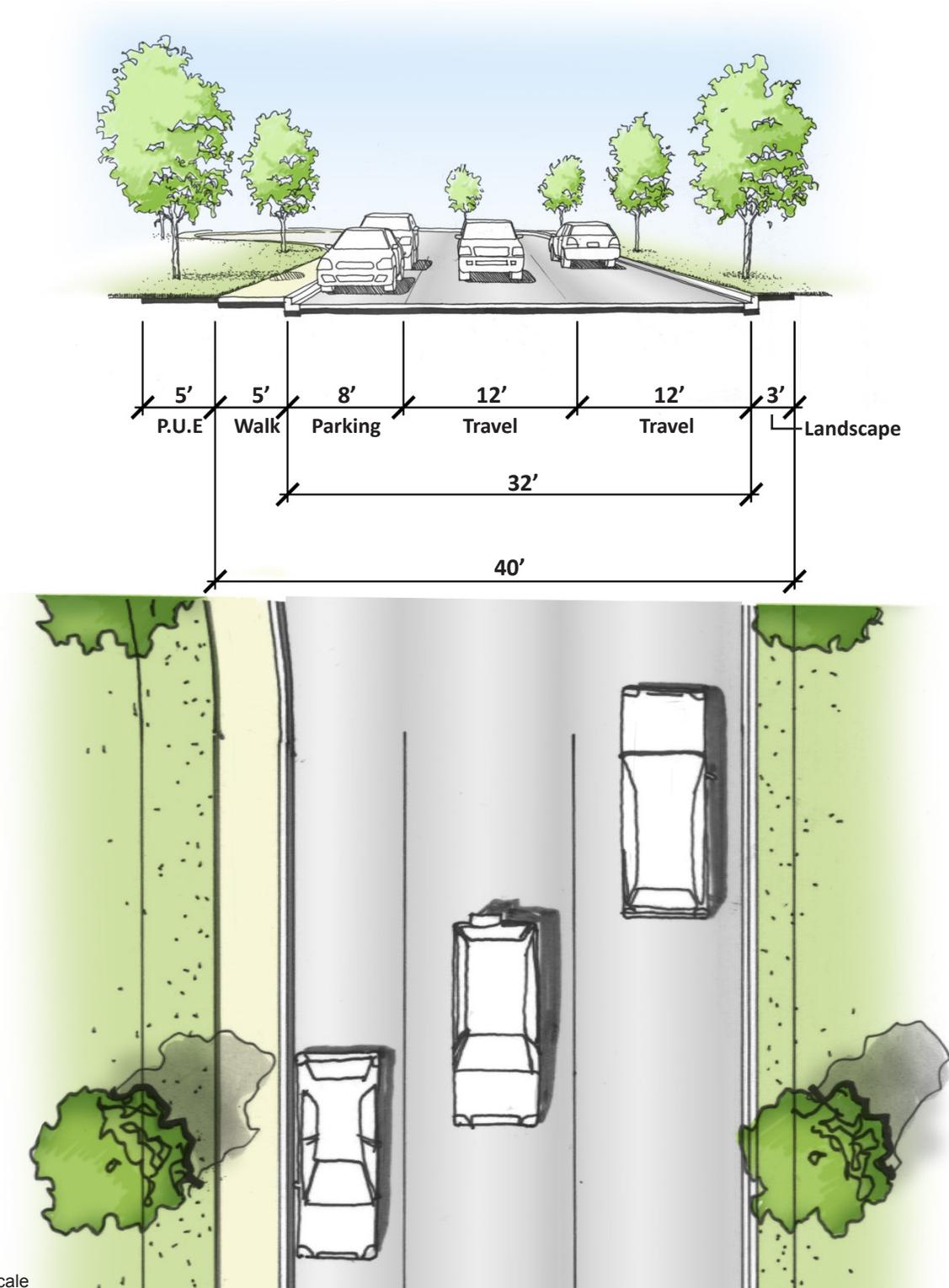
Figure 3.7 Cul-de-sac I



Development Standards

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Figure 3-8 Cul-de-sac II



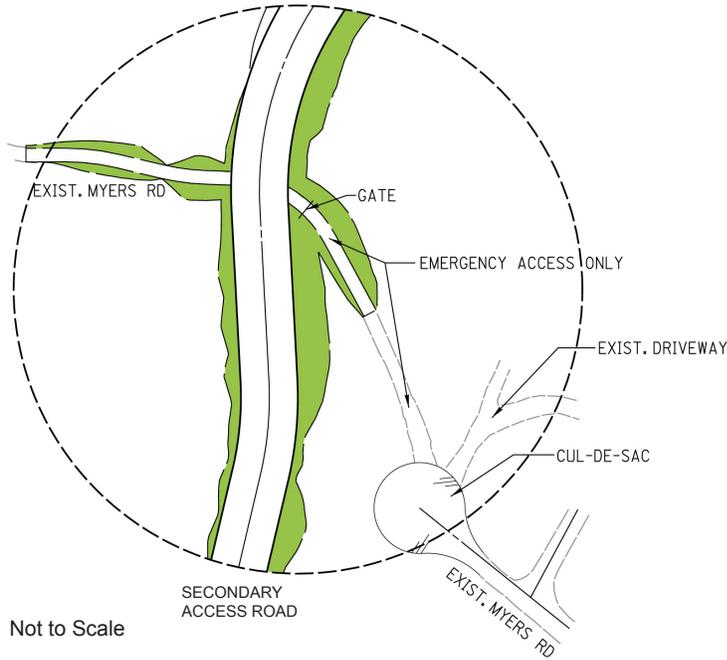
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Development Standards

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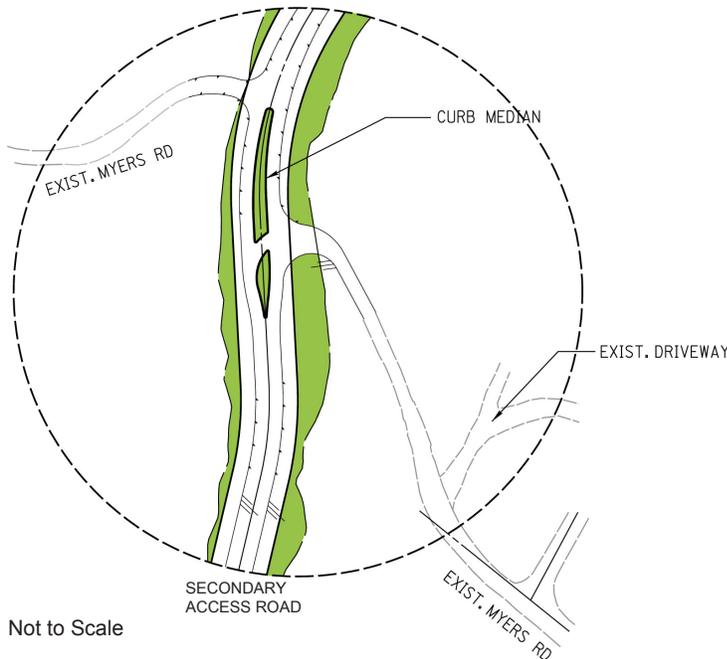
Figure 3.9 Meyers Road Options

Option 1: Cul-de-sac at Meyers Road



- Option installs a cul-de-sac on Meyers Road east of secondary access road
- Meyers Road will no longer be a through road
- Emergency only access will be provided between secondary access road and Meyers Road
- A gate will be installed on emergency access from secondary access road

Option 2: Restricted Left Turn from Secondary Access Road to Meyers Road



- Option installs a curbed median on secondary access road
- Left turn from southbound secondary access road to eastbound Meyers Road blocked by curbed median
- Full turn movements from Meyers Road to secondary access road is provided
- Creates a split intersection of Myers Road and secondary access road

Development Standards

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Trails, Parks, and Open Spaces

As shown on Figure 3.10, *Trails, Parks, and Open Space Plan*, the Spring Trails Specific Plan provides parks and open space that serve multiple functions: as recreational opportunities, as buffers, as visual landmarks, and as an interconnecting system of trails. The parks and open space are easily accessible to every resident in Spring Trails. Parks are located to ensure that all homes are within three-quarters of a mile of a park and are interconnected by a comprehensive system of trails.

Maximum buildout of the Spring Trails Specific Plan would accommodate 307 units and a population of approximately 1,028 residents. Based on the City’s standard of 5 acres of parkland per 1,000 residents, full buildout of the Specific Plan would result in the need to provide 5.14 acres of parkland or an equivalent fee in lieu of dedicated parkland.

Spring Trails provides approximately 245.4 total acres of public and private parkland, open space, and trails, as summarized in Table 3.5 and further described below. The 9.0 acres of usable public and private parks exceed the City requirements.

Table 3.5 Open Space, Parks, and Recreation Facilities Summary

Parks/Recreation Facilities	Acres
Private Parks	2.0
Public Parks	7.0
Open Space-Natural	111.3
Open Space-Controlled	125.1
Total	245.4

Trails

A diverse and comprehensive trails system is an integral part of Spring Trails. The 3.8 mile long, interconnected trail system will allow residents to walk or hike to neighborhood parks and within open space. The varied designs and scenic locations of planned trails will encourage trail use, help to reduce automobile use within the community, and promote healthier lifestyles.

The trail system is also expected to connect to future and existing regional and City trails. All trail connections will be planned in coordination with the Parks and Recreation Department and the Development Services Department.

Development Standards

Appropriate access and use restrictions should be determined prior to construction of any trail connections.



The planned trail system consists of a community trail, equestrian/pedestrian trails, and hiking trails, as shown on Figure 3.10, *Trails, Parks, and Open Space Plan*, and described below.

Community Trail

The community trail is an 8-foot-wide trail surfaced with decomposed granite or other appropriate surface and located within the primary access road right-of-way. It is intended for pedestrian and bicycle use. See Figure 3.3, *Primary Access Road*, for a conceptual cross-section of the 8-foot wide community trail.



Equestrian/Pedestrian Trails

Equestrian/pedestrian trails are 12-foot-wide trails surfaced with decomposed granite or other appropriate surface. Equestrian/pedestrian trails will include observation points at scenic vistas. Access control fencing may be provided if needed for public safety. See Figure 3.11 for a conceptual cross-section of this trail.



Hiking Trails

As shown on Figure 3.9, hiking trails are conceptual and represent the need to provide off-street connections in certain locations; however, the exact alignment is not predetermined in the Specific Plan and will be established with the approved tract map. Hiking trails will generally be a minimum of 4 feet wide. See Figure 3.12 for a conceptual cross-section of the hiking trail.

Examples of the types of trails and pedestrian paths envisioned in Spring Trails.

Trailheads

Trailheads occur at Neighborhood Parks I and II and Garden View Park, and are identified on Figure 3.10, *Trails, Parks, and Open Space Plan*. Trailheads shall have maps of the trail system and signs to advise people of rules and regulations, trail etiquette, and permitted trail uses.

Observation Points

Observation points are areas with spectacular views of the surrounding natural open space elements. Observation points are strategically located along the multipurpose and equestrian trails, as shown on Figure 3.10, *Trails, Parks and Open Space Plan*. Observation points should include benches, trash receptacles, shade structures, hitching posts, and educational kiosks describing local geology and habitat. If access to water is readily available, drinking fountains and dog comfort stations should also be provided.



Examples of the types of pedestrian amenities envisioned in Spring Trails.

Figure 3.10 Trails, Parks, and Open Space Plan



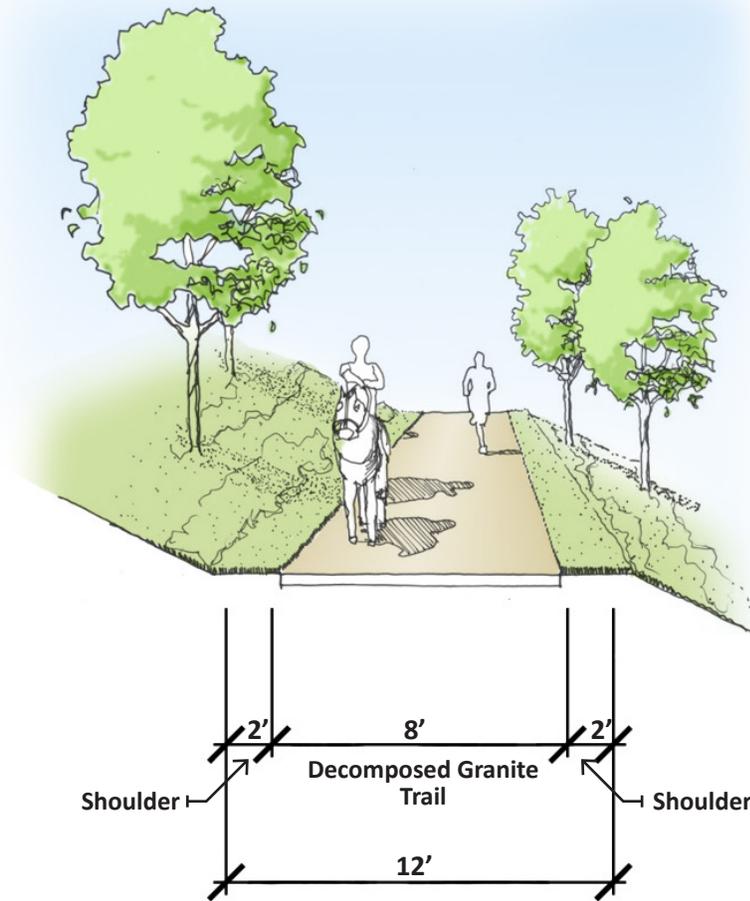
- Legend**
- Residential
 - Open Space
 - Parks
 - Graded Slopes
 - Utility
 - 12-foot Equestrian/Pedestrian Trail
 - 8-foot Community Trail (On-Street)
 - 4-foot Hiking Trail
 - Planned Trail (offsite)
 - Observation Point
 - Trailhead



Development Standards

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Figure 3.11 Equestrian/Pedestrian Trail Conceptual Cross-Section



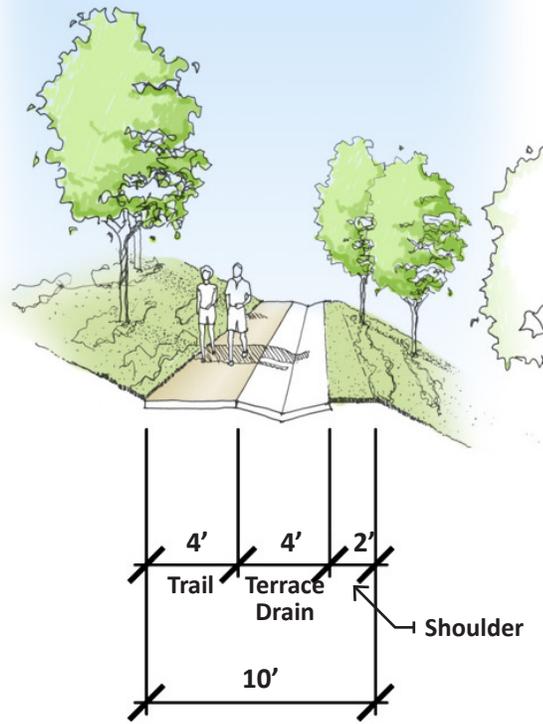
Not to Scale

Note: This illustration is conceptual in nature and is intended to show the range of facilities accommodated within the feature and potential arrangement of improvements. The exact size, configuration, and level/type of the improvements will be determined during the grading and building permit process.

Development Standards

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Figure 3.12 Hiking Trail Conceptual Cross-Section



Not to Scale

Note: This illustration is conceptual in nature and is intended to show the range of facilities accommodated within the feature and potential arrangement of improvements. The exact size, configuration, and level/type of the improvements will be determined during the grading and building permit process.

Development Standards

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Parks

Neighborhood Parks. Neighborhood parks are public parks that offer a localized opportunity for outdoor recreation in Spring Trails. The two neighborhood parks in Spring Trails are dual-use parks that also serve as water detention basins. Conceptual illustratives of each of the two neighborhood parks are shown in Figure 3.13, *Neighborhood Park I Conceptual Site Plan*, and Figure 3.14, *Neighborhood Park II Conceptual Site Plan*. Specific recreational amenities depicted in Figures 3.13 through 3.16 are representational and will be determined in the final park plan approved by the City. Additional amenities may include but are not limited to: gathering areas that provide active and passive recreation for the adjacent residents, shade structures, and tot lots.

Dog Park. This private, 1.6-acre park is conceptually envisioned to consist of a completely enclosed play area for dogs and an adjacent unenclosed family picnic area that includes view benches and a group picnic structure. A conceptual illustrative of the park is shown on Figure 3.15, *Dog Park Conceptual Site Plan*. Specific recreational amenities depicted in Figure 3.15 are representational and will be determined in the final park plan approved by the City. In the final design, this park may not include a dog park facility. If a dog park is developed, the dog play area shall be secured by a combination tubular steel fence with decorative pilasters along the perimeter of the dog play area facing the local street. A chain-link fence shall secure the play area around the remainder of the boundary.

Garden View Park. Garden View Park is a 0.4-acre private park with a thematic garden, an observation point, and a tot lot. A conceptual illustrative of Garden View Park is shown in Figure 3.16, *Garden View Park Conceptual Site Plan*. Specific recreational amenities depicted in Figure 3.16 are representational and will be determined in the final park plan approved by the City. Additional amenities may include but are not limited to: an outdoor fireplace, water feature, picnic benches, and gazebo.

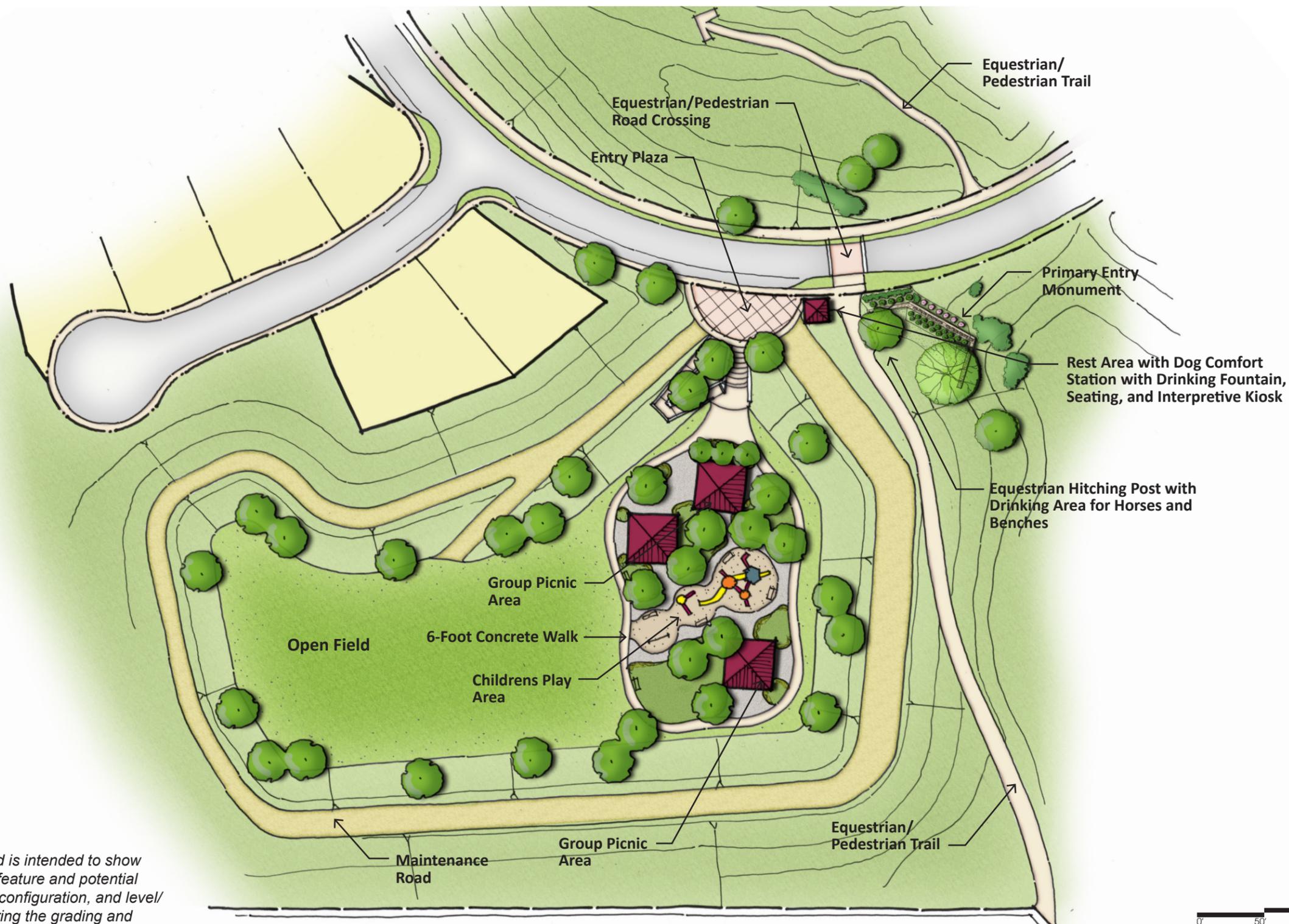


Examples of the types of recreational amenities envisioned in Spring Trails.

Development Standards

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Figure 3.13 Neighborhood Park I Conceptual Site Plan



Note: This illustration is conceptual in nature and is intended to show the range of facilities accommodated within the feature and potential arrangement of improvements. The exact size, configuration, and level/type of the improvements will be determined during the grading and building permit process.

Development Standards

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Figure 3.14 Neighborhood Park II Conceptual Site Plan



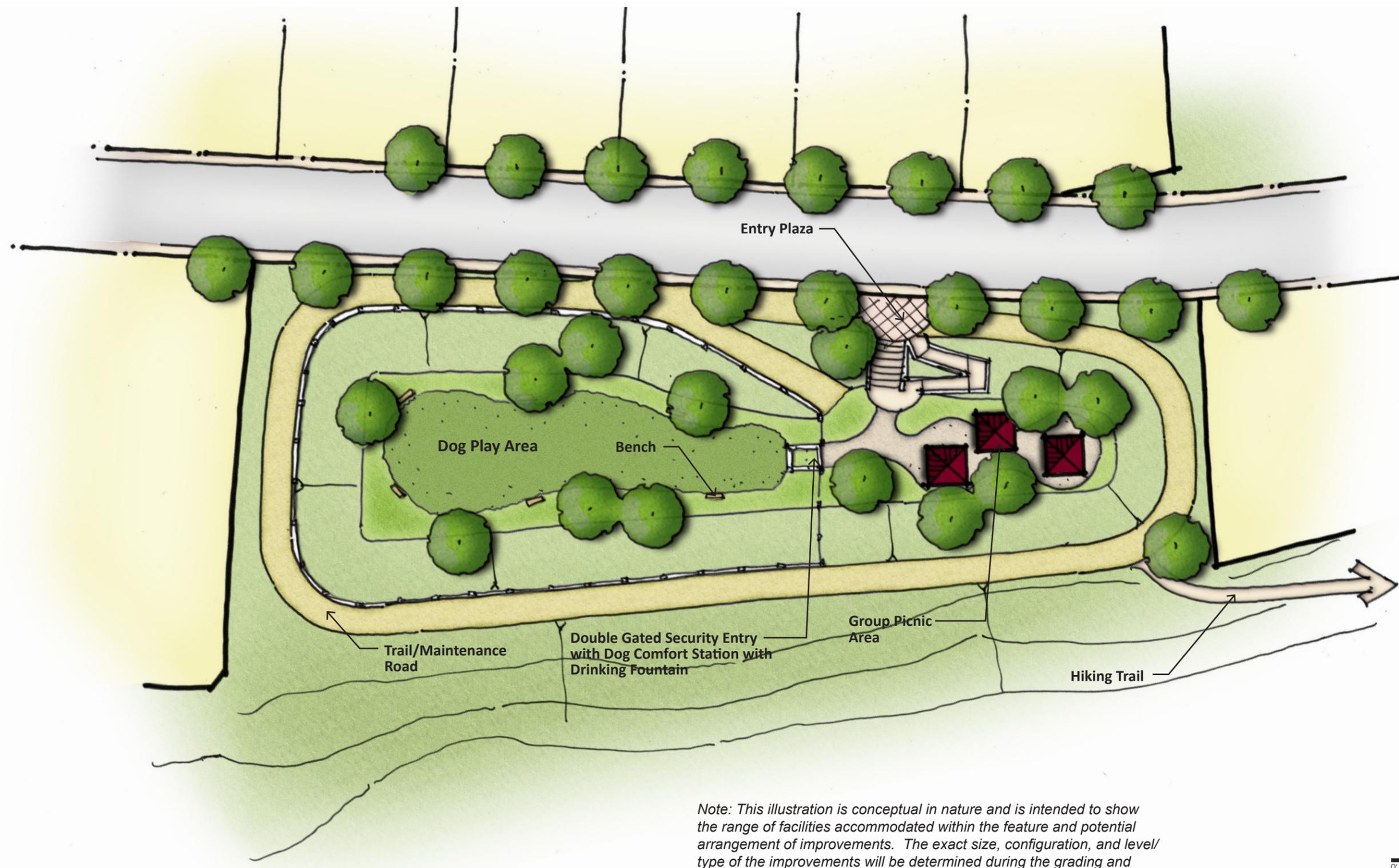
Note: This illustration is conceptual in nature and is intended to show the range of facilities accommodated within the feature and potential arrangement of improvements. The exact size, configuration, and level/type of the improvements will be determined during the grading and building permit process.



Development Standards

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Figure 3.15 Dog Park Conceptual Site Plan



Note: This illustration is conceptual in nature and is intended to show the range of facilities accommodated within the feature and potential arrangement of improvements. The exact size, configuration, and level/type of the improvements will be determined during the grading and building permit process.



Development Standards

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Figure 3.16 Garden View Park Conceptual Site Plan



Development Standards

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Fire Protection Plan

Spring Trails is in an area that is designated as a very high fire hazard area. To protect lives and property, an extensive fire protection plan has been developed as part of the Spring Trails Specific Plan. The objective of the fire protection plan is to assist the developers, builders, homeowners, and special districts/associations to understand and comply with the approved features of the development. The fire protection plan will help the San Bernardino City Fire Department (SBFD) provide fire, rescue, and EMS services to Spring Trails in an effective and efficient manner. The fire protection plan includes:

1. Fire Risk Assessment
2. Fuel Modification Zones
3. Vegetation Management Guidelines
4. Allowed and Undesirable Plant Palettes
5. Planting Maintenance and Spacing Guidelines
6. Construction Phasing Management Plan
7. Infrastructure/Structural Construction Features and Requirements
8. Compliance Matrix listing all of the building and development standards to be applied to the project

The fire protection plan was prepared in accordance with the requirements in various codes in the City of San Bernardino Municipal Code, including:

- Chapter 15.10. Foothill Fire Zone Building Standards
- Chapter 15.16. Amended Fire Code
- Chapter 19.15. Foothill Fire Zone Overlay District
- Chapter 19.17. Hillside Management Overlay District
- Chapter 19.30. Subdivision Regulations

This section provides a summary of the fire protection plan, which is contained in Appendix C.

Fuel Modification Zones

One of the most basic components of fire protection is to change and reduce the fuel that allows a fire to burn. Simply put—if there is no fuel, there is no

Development Standards

Lots 30 and 233 Fire Protection Criteria

Development of Lots 30 and 233 shall only occur when the following conditions are met and if approved by the Fire Chief.

- The total fuel modification distance for lots 30 and 233 shall be a minimum of 170 feet.
- The fuel modification shall consist of:
 - Zone A-an irrigated landscape zone within the Spring Trails property.
 - Zone B-an irrigated landscape zone within the Spring Trails property between Zone A and the project boundary allowing only non-combustible construction.
 - Zone C-an irrigated landscape between the residential structure and the wildland interface. Zone C shall extend between zone B and offsite to the required minimum distances noted below. Zone C may be a temporary off-site fuel modification zone until the adjoining property is developed. Until the adjacent property is developed, an easement will be required for maintenance of zone C. If the adjoining property is developed prior to the development of the Spring Trails, then the off-site fuel modification will not be required for Lots 30 and 233.
- For Lot 30, Zone A shall have a minimum/maximum distance of 20 feet, Zone B shall have a minimum distance of 88 feet and a maximum distance of 113 feet, and Zone C shall have a minimum distance of 37 feet and a maximum distance of 62 feet (a total of 15,469 square feet).
- For lot 233, Zone A shall have a minimum/maximum distance of 20 feet, Zone B shall have a minimum distance of 68 feet and a maximum distance of 112 feet in width, and Zone C shall have a minimum distance of 43 feet and a maximum distance of 80 feet (a total of approximately 20,706 square feet).

fire. In Spring Trails, there are three zones, called fuel modification zones, where the type, spacing, irrigation, and maintenance of landscaping are strictly controlled. The fuel modification zones will keep the flames far enough away from structures that, in combination with other efforts, the buildings will not ignite. The locations of fuel modification zones are shown on Figures 3.17 and 3.18. Cross-sections of the fuel modification zones are shown on Figures 3.19 through 3.26. Descriptions of the fuel modification zones are detailed below.

Lots 30 and 233 are currently considered unbuildable and shall be used as part of fuel modification zone B. However, these lots may be made to be buildable if the provisions in the adjacent text box are followed and if approved by the Fire Chief. Lot 307 contains an existing home and fuel modification on lot 307 shall be maintained by the existing homeowner.

Fuel Modification Zone A. This zone provides a 20- to 35-foot defensible space for fire suppression forces and protects structures from radiant and convective heat. Fuel modification zone A includes these requirements:

- Fuel modification zone A shall be as shown on Figures 3.17, 3.18 and 3.26, and in no case shall fuel modification zone A be less than 20 feet.
- Fuel modification zone A shall be located on a level graded area at the top or base of a slope between zone B and the structure.
- Fuel modification zone A shall be maintained by the homeowner and/or LLMD.
- Combustible construction is not allowed.
- Automatic irrigation systems are required to maintain healthy vegetation with high moisture content.
- Irrigation shall be maintained outside the drip line of native oak trees.
- Plant material shall be selected from Table 3.6, *Landscape Zones Plant Palette*.
- Complete removal of fire-prone plant species and minimal allowance for retention of selected native vegetation as required in Table 3.7, *Plant Removal List*.
- The first 20 feet from the structure shall consist of well-irrigated, well-spaced, approved fire-resistant groundcover, shrubs, or lawn.
- Approved trees must be properly located, spaced, and limbed up to one-third their height or six feet from the ground.

- Fire-resistant plants and shrubs shall be kept to a maximum height of 18 inches.
- Shrubs or plants shall not be planted under trees.
- Grasses must be kept to less than four inches high. Groundcover must be low profile and kept to less than six inches high.
- Pruning of foliage to reduce fuel load and vertical continuity, and the removal of plant litter and dead wood are required as necessary.
- Vegetation is not allowed within 10 feet of chimneys, and tree canopies are not allowed within 10 feet of structures.
- Chipped biomass or wood bark shall not be permitted within 30 feet of structures.
- Special considerations are permitted for rare and endangered species, geologic hazards, tree ordinances, or other conflicting restrictions and shall be reviewed and approved by the Fire Chief.
- Required maintenance includes ongoing removal and/or thinning of combustible material, replacement of dead/dying fire-resistant planting, maintenance of the operational integrity, programming of irrigation systems, and regular pruning.

Fuel Modification Zone B. This zone provides 50 to 200 feet of irrigated landscaped areas to help reduce combustible fuels. Fuel modification zone B includes the following requirements:

- Fuel modification zone B shall be as shown on Figures 3.17, 3.18, and 3.26 and in no case shall fuel modification zone B be less than 50 feet.
- Fuel modification zone B shall be maintained by LLMD.
- Combustible construction is not allowed.
- Landscape plans shall delineate that portion of the fuel modification area that will be permanently irrigated.
- Plant material selection, irrigation system design, and the landscape maintenance management plan shall sensitively address water conservation practices and include methods for erosion control to protect against slope failure.
- All irrigation shall be kept a minimum of 20 feet from the drip line of any existing native *Quercus* (oak) species.

Development Standards

- Plant material shall be selected from Table 3.6, *Landscape Zones Plant Palette*.
- Complete removal of fire-prone plant species and minimal allowance for retention of selected native vegetation as required in Table 3.7, *Plant Removal List*.
- Ground cover shall be maintained at a height not to exceed 18 inches.
- Native grasses shall be allowed to seed and shall be cut after annual seeding to a maximum height of eight inches.
- Irrigation shall be designed to supplement native vegetation and establish/maintain planted natives and ornamentals.
- Trees and tree-form shrubs (shrubs that naturally exceed four feet in height) shall be spaced and pruned in conformance with the requirements in Figure 3.26.
- Tree-form shrubs less than four feet in height and other shrubs shall be spaced so they do not create an excessive fuel mass and can be maintained in accordance with specified spacing, as indicated on Figure 3.26.
- Sensitive and/or protected species shall be identified on the fuel modification plans and tagged in the field for further disposition.
- Landscaping shall be in accordance with the planting guidelines and spacing standards as specified in Appendix C.
- Special considerations are permitted for rare and endangered species, geologic hazards, tree ordinances, or other conflicting restrictions and shall be reviewed and approved by the Fire Chief.

Fuel Modification Zone C. This zone provides a nonirrigated 50 percent thinning zone with removal of all dead and dying vegetation and undesirable species. Zone C is 40 to 185 feet in width surrounding the developed areas. Thinning zones are utilized to reduce the fuel load of wildland fires. Fuel modification zone C includes the following requirements:

- Fuel modification zone C shall be as shown on Figures 3.17, 3.18, and 3.26.
- Removal of all dead and dying vegetation, with all fuels reduced to a maximum of 8 to 12 inches in height.
- Fuel modification zone C shall be maintained by an LLMD.

- To maintain proper coverage, native grasses shall be allowed to go to seed. Native grasses shall be cut after annual seeding. Cut heights shall not exceed eight inches.
- Any plants selected for planting in this zone will be chosen from the approved plant list in Table 3.6, *Landscape Zones Plant Palette*, for the setback, irrigated, or thinning zone.
- Complete removal of fire-prone plant species and minimal allowance for retention of selected native vegetation as required in Table 3.7, *Plant Removal List*.
- Special considerations are permitted for rare and endangered species, geologic hazards, tree ordinances, or other conflicting restrictions and shall be reviewed and approved by the Fire Chief.
- Reduce fuel loading by reducing the fuel in each remaining shrub or tree without substantial decrease in the canopy cover or removal of tree holding root systems.
- Removal is required of all low-hanging tree foliage within three times the height of the understory shrubs or 10 feet, whichever is greater.
- Sensitive and/or protected species shall be identified on the fuel modification plans and tagged in the field for further disposition.
- Trees and tree-form shrubs (shrubs that naturally exceed four feet in height) shall be spaced and pruned in conformance with the requirements shown in Figure 3.26.
- Tree-form shrubs less than four feet in height and other shrubs shall be spaced so they do not create an excessive fuel mass and can maintained in accordance with specified spacing as indicated on Figure 3.26.
- Maintain sufficient cover to prevent erosion without requiring planting.

Fuel Modification Plant Palette Zone. Plant material within the fuel modification plant palette zone must be on the approved Spring Trails Fuel Modification Plant Palette in Table 3.6, *Landscape Zones Plant Palette*. No plant material from Table 3.7, *Plant Removal List*, shall be allowed in any fuel modification zone. This area shall be irrigated and must be maintained per the maintenance standards set forth in the fuel modification plan in Appendix C.

Irrigated Manufactured Slopes. This area identifies manufactured slopes beyond or in the vicinity of the fuel modification zones and is intended to reduce the fuel load of a manufactured slope.

Development Standards

- Plant material shall be selected from Table 3.6, *Landscape Zones Plant Palette*.
- Shall be maintained on a year round basis by LLMD.

Roadside Brush Clearance. This area requires removal of all undesired plant species and thinning of at least 50 percent of all existing vegetation 10 to 20 feet from curb face. Any plant material installed must be fully irrigated and from Table 3.6, *Landscape Zones Plant Palette*. This area will be maintained by the existing homeowner or LLMD.

Brush Clearance. Brush clearance includes areas around project water tanks and shall consist of removal of all dead and dying shrubs, and all plant material from Table 3.7, *Plant Removal List*. This will be maintained by the LLMD.

Building Setback. Buildings not on the wildland interface/fuel modification zones shall be set back 25 to 50 feet from the adjacent property lines or any natural area adjacent to the homes. This zone shall have no combustible construction within it.

Additional Fuel Modification Requirements. The following shall be required for the completion and maintenance of all fuel modification zones.

- The fuel modification zones shall be identified on the ground, with the markers identified as detailed in Appendix C.
- Prior to issuance of building permits in each sequence of Phase 2 (see Section 6 for the phasing plan), the fuel modification zones shall be completed to the levels deemed necessary by the Fire Chief.
- Prior to issuance of certificate of occupancy for the first building in each sequence of Phase 2, the fuel modification zones shall be installed and completed per the fire protection plan and inspected and approved by the Fire Chief.
- Prior to conveyance to the HOA of the maintenance responsibilities for the fuel modification zones, a meeting will be held with the SBFD Fire Inspector, landscape design professional, landscape installation contractor, HOA representative, and LLMD representative to discuss the requirements and responsibilities for each fuel modification zone and the fire protection plan.
- The fuel modification zones shall be maintained as originally installed and approved.

Figure 3.17 Fire Protection Plan (Northern Project Area)

NOTES: Tree and shrub locations depicted within the fuel modification zones are not exact and are only intended to convey the tree and shrub spacing requirements contained in this Fire Protection Plan. Refer to Figure 3.26 for "Tree and Tree-form Shrub Pruning and Spacing for New Plantings and Thinning Zones."



Construction Feature Legend

- Enhanced Construction Zone:** All structures on lots within 200' of the fuel modification edge shall receive enhanced construction on all four (4) sides per San Bernardino Municipal Code Chapter 15.10.
- Roofing, Venting, and Rain Gutter Requirements:** All structures on lots within the project outside 200' from the fuel modification edge shall receive enhanced construction on all four (4) sides per California Building Code Chapter 7A Phase II regarding roofing, venting, and rain gutters only.
- Lots 30 and 233:** Lots 30 and 233 are currently non-buildable and no development on these lots shall occur unless either the off-site fuel modification is provided with easements for maintenance of if the adjoining property is developed and the off-site fuel modification zone C is not required.

Symbol Legend

- Access Point:** Fuel modification walk in access point (a non-combustible gate will only be provided where necessary). 350' minimum distance between access points.
- Side Yard Maintenance Access Point:** Fuel modification walk in access point on sideyards of homeowners lot 12" in width (A non-combustible gate to be provided at the front yard fence and the rear yard fence. 250' minimum distance between access points.
- Identification Marker:** Permanent identification markers shall be constructed to identify the limits of applicable fuel modification zones. Marker design shall be 2" dia. x 8'-0" long galvanized pipe. Embed minimum 2'-6" into solid ground. Stencil top 6" with a letter 'B' or 'C'. Expose pipe 2'-0" above vegetation minimum.
- Refer to Figures X.X thru X.X for fuel modification sections

Fuel Modification Zones Legend

- Zone A (Flat) – Non-Combustible Construction:** 20'-0" – 35'-0" setback zone for non-combustible construction only. Zone A shall be maintained by the Homeowner or LLMD.
- Zone B – Wet Zone (100% Removal Undesirable Plant Species):** First 50'-0" – 200'-0" from Zone A. Zone B shall be permanently irrigated, fully landscaped with approved drought tolerant, deep rooted, moisture retentive material. This zone shall be planted with container shrub material and hydroseeded per SBFD approved plant list. Handseeding of bare areas may need to be performed six months after hydroseeding establishment period. Zone B area shall be maintained by LLMD.
- Zone C – Dry Zone (50% Thinning Native Shrubs):** 40'-0" – 185'-0" Zone C shall be a non-irrigated area. Removal of all flammable undesirable species, specimen and trees shall be retained as directed by the owner's representative but must be thinned a minimum of 50% including removal of all low hanging foliage within (3x) three times the height of the understory shrubs or (10) - ten feet, whichever is greater, along with dead or broken branches. All accumulated plant debris on the ground shall be removed. Zone C area shall be maintained by LLMD
- Roadside Brush Clearance:** Removal of all undesired plant species and thinning of at least 50% of all vegetation within 20'-0" of curb.
- Fuel Modification Plant Palette:** Plant material must be on approved plant palette. Plant material on the Plant Removal List is not allowed in this zone. This zone shall be irrigated and be maintained by the LLMD.
- Brush Clearance:** 50% brush clearance shall consist of removal of all dead and dying shrubs and all plant material on the Plant Removal List located around water tanks.
- Irrigated Manufactured Slope:** Planted and irrigated manufactured slope, maintained on a year round basis.
- Building Setback:** 25' - 50' building setback. No combustible construction allowed. Planting material must be from the Fuel Modification Plant Palette.



A 100 scale (36"x60") version of this figure is provided in Appendix C.

Development Standards

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Figure 3.18 Fire Protection Plan (Southern Project Area)



Construction Feature Legend

- Enhanced Construction Zone:** All structures on lots within 200' of the fuel modification edge shall receive enhanced construction on all four (4) sides per San Bernardino Municipal Code Chapter 15.10.
- Roofing, Venting, and Rain Gutter Requirements:** All structures on lots within the project outside 200' from the fuel modification edge shall receive enhanced construction on all four (4) sides per California Building Code Chapter 7A Phase II regarding roofing, venting, and rain gutters only.
- Lots 30 and 233:** Lots 30 and 233 are currently non-buildable and no development on these lots shall occur unless either the off-site fuel modification is provided with easements for maintenance of if the adjoining property is developed and the off-site fuel modification zone C is not required.

Symbol Legend

- Access Point:** Fuel modification walk in access point (a non-combustible gate will only be provided where necessary). 350' minimum distance between access points.
- Side Yard Maintenance Access Point:** Fuel modification walk in access point on sideyards of homeowners lot 12" in width (A non-combustible gate to be provided at the front yard fence and the rear yard fence. 250' minimum distance between access points.
- Identification Marker:** Permanent identification markers shall be constructed to identify the limits of applicable fuel modification zones. Marker design shall be 2" dia. x 8'-0" long galvanized pipe. Embed minimum 2'-6" into solid ground. Stencil top 6" with a letter 'B' or 'C'. Expose pipe 2'-0" above vegetation minimum.
- Refer to Figures X.X thru X.X for fuel modification sections

Fuel Modification Zones Legend

- Zone A (Flat) – Non-Combustible Construction:** 20'-0" – 35'-0" setback zone for non-combustible construction only. Zone A shall be maintained by the Homeowner or LLMD.
- Zone B – Wet Zone (100% Removal Undesirable Plant Species):** First 50'-0" – 200'-0" from Zone A. Zone B shall be permanently irrigated, fully landscaped with approved drought tolerant, deep rooted, moisture retentive material. This zone shall be planted with container shrub material and hydroseeded per SBFD approved plant list. Handseeding of bare areas may need to be performed six months after hydroseeding establishment period. Zone B area shall be maintained by LLMD.
- Zone C – Dry Zone (50% Thinning Native Shrubs):** 40'-0" – 185'-0" Zone C shall be a non-irrigated area. Removal of all flammable undesirable species, specimen and trees shall be retained as directed by the owner's representative but must be thinned a minimum of 50% including removal of all low hanging foliage within (3x) three times the height of the understory shrubs or (10) - ten feet, whichever is greater, along with dead or broken branches. All accumulated plant debris on the ground shall be removed. Zone C area shall be maintained by LLMD
- Roadside Brush Clearance:** Removal of all undesired plant species and thinning of at least 50% of all vegetation within 20'-0" of curb.
- Fuel Modification Plant Palette:** Plant material must be on approved plant palette. Plant material on the Plant Removal List is not allowed in this zone. This zone shall be irrigated and be maintained by the LLMD.
- Brush Clearance:** 50% brush clearance shall consist of removal of all dead and dying shrubs and all plant material on the Plant Removal List located around water tanks.
- Irrigated Manufactured Slope:** Planted and irrigated manufactured slope, maintained on a year round basis.
- Building Setback:** 25' - 50' building setback. No combustible construction allowed. Planting material must be from the Fuel Modification Plant Palette.



Development Standards

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Figure 3.19 Fuel Modification Section 1-1

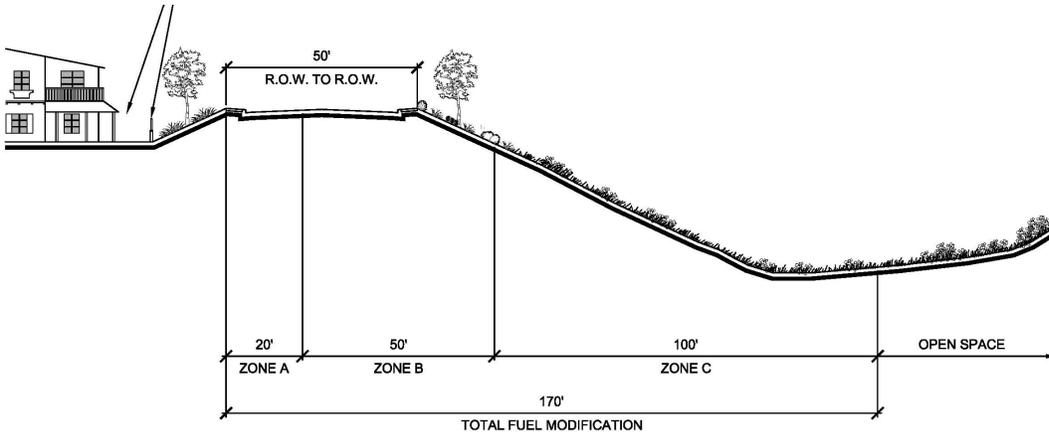
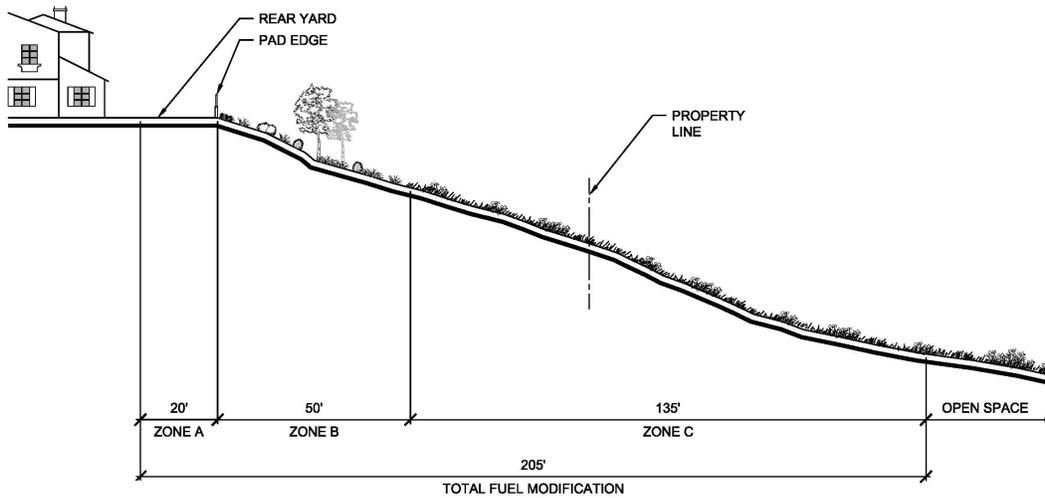


Figure 3.20 Fuel Modification Section 2-2



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Figure 3.21 Fuel Modification Section 3-3

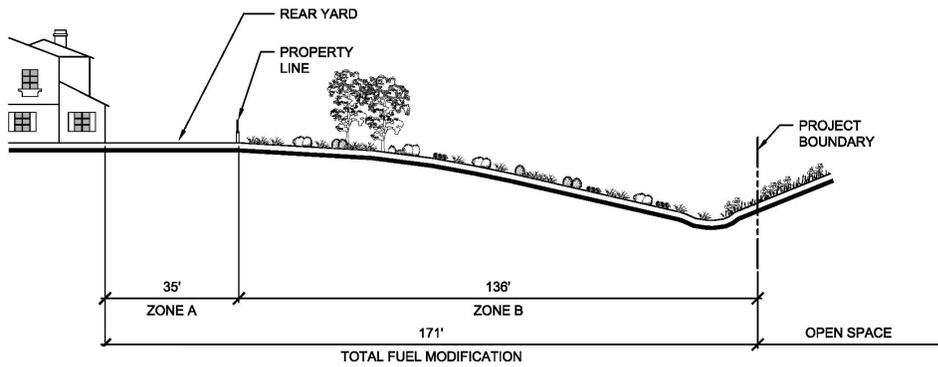
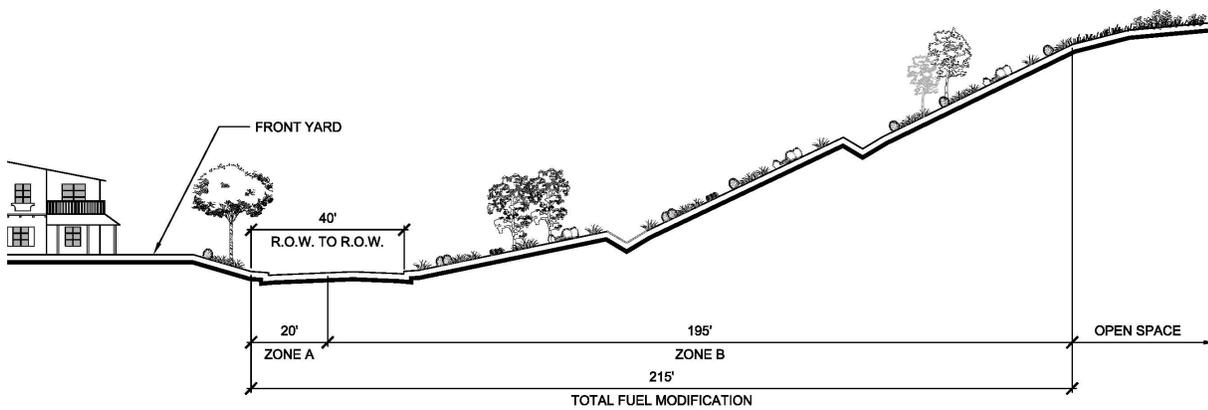


Figure 3.22 Fuel Modification Section 4-4



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Figure 3.23 Fuel Modification Section 5-5

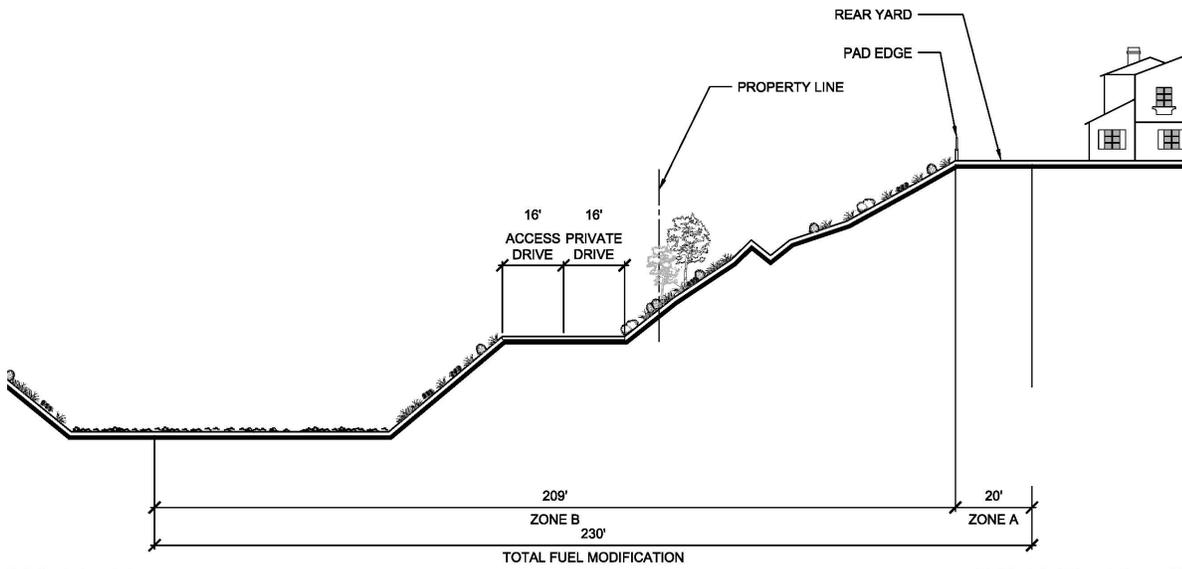
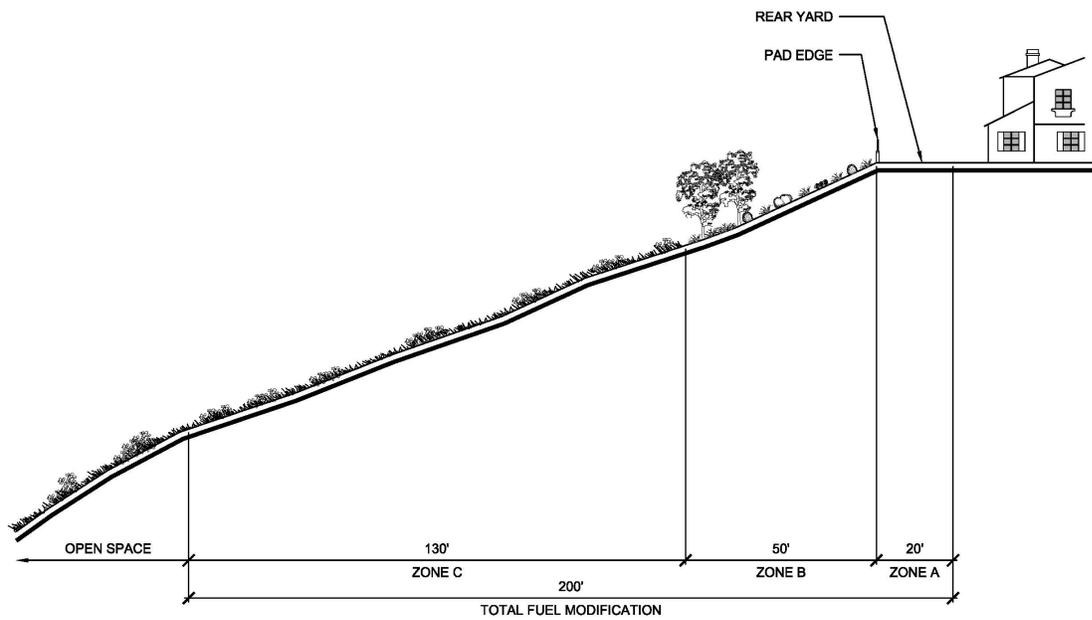


Figure 3.24 Fuel Modification Section 6-6

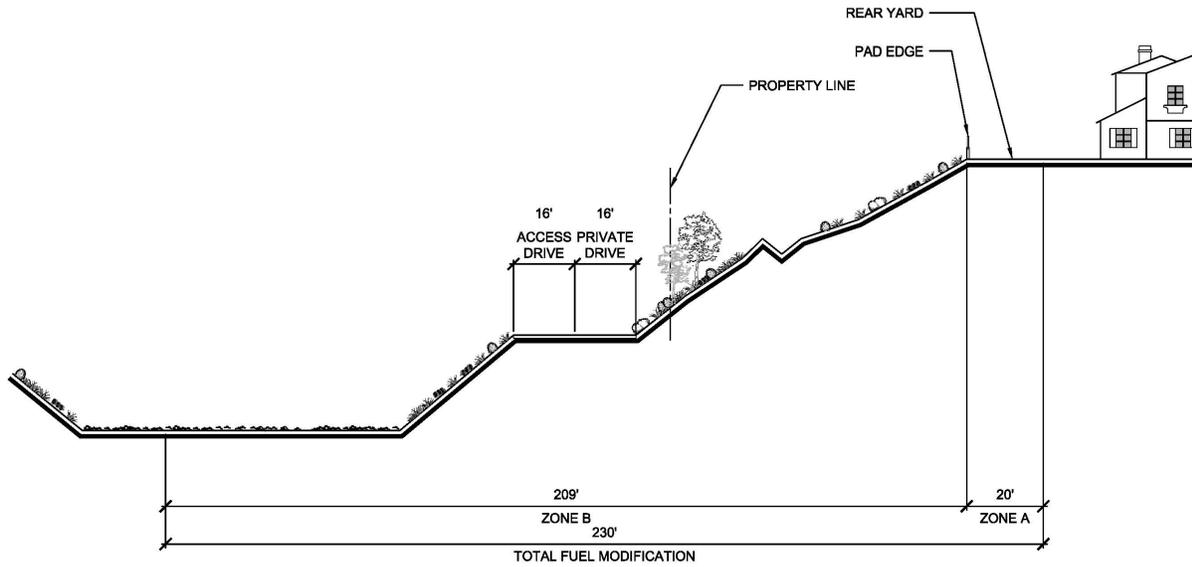


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Figure 3.25 Fuel Modification Section 7-7



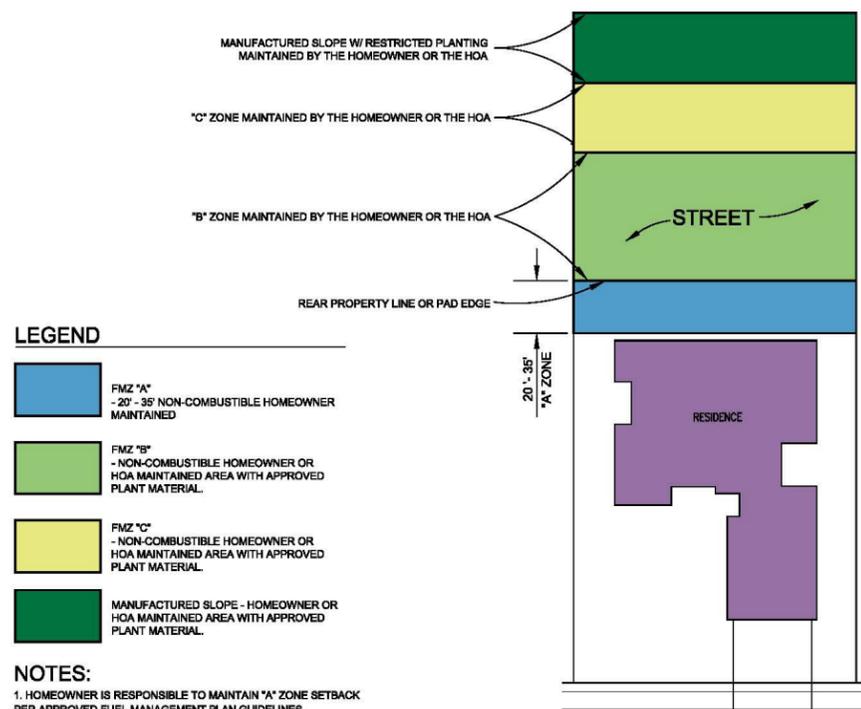
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Development Standards

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Figure 3.26 Fire Protection Plan Details

TYPICAL FUEL MODIFICATION AND CONSTRUCTION



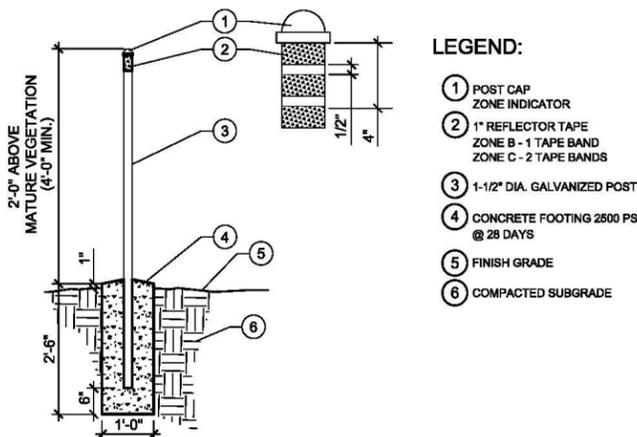
CONSTRUCTION REQUIREMENTS



The requirements of this Chapter shall be applicable to those properties located in Foothill Fire Zones A, B, or C as defined in Chapter 19.15. (Ord. MC - 1163, 1-20-04; Ord. MC - 1162, 1-05-04; Ord. MC - 960, 3-4-96)

- All exterior elements, including, but not limited to walls, overhangs, garage doors, fences, fascias, ect., shall be free from exposed wood (e.g. minimum 1/8" stucco protection). (A+B, and C where abuts wildlands)
Exception: Entry doors, windows, and door and window jambs.
- Vinyl window frame assemblies shall be prohibited, except when they have the following characteristics:
 - Frames and sash are comprised of vinyl material with welded corners;
 - Metal reinforcement is the interlock area;
 - Glazed with insulated glass or tempered;
 - Frame and sash profiles are certified in AAMA Lineal Certification Program (verified with either an AAMA product label or Certified Products Directory); and
 - Certified and labeled to ANSI/AAMA/NWWDA 101/.S.2-97 for structural requirements.
 - Except when needed to meet the requirements of the California Energy Code at Title 24, Part 6 of the California Code regulations.
- All glazing shall be double-paned and meet California Building Code requirements. (A+B+C)
- No attic vent shall be placed facing the foothills/wildland. (A+B, and C where abuts wildlands) All vents shall be covered with 1/8 inch mesh corrosion-resistant metal screen or the approved material that offers equivalent protection.
- Roof mounted turbine vents shall not be permitted. (A+B+C)
- All roof coverings shall be of non-wood materials with at least a Class A or B fire retardant rating. (A+B+C)
- The open ends of high-profile tile roofs shall be capped with non-ignitable material to prevent birds' nests or other combustible material from accumulating. (A+B+C)
- All new residential structures (except those rebuilt due to damage or destruction from any one common fire or other catastrophe) shall be provided with automatic fire sprinklers. If the floor area of an existing dwelling is increased more than 60%, the entire dwelling must be retrofitted to meet this requirement. The design and installation shall be approved by the City Fire Department. (A+B, and C where abuts wildlands) (Ord. MC-960, 3-4-96)
- Insulation. Paper-faced insulation shall be prohibited in attics or ventilated spaces.

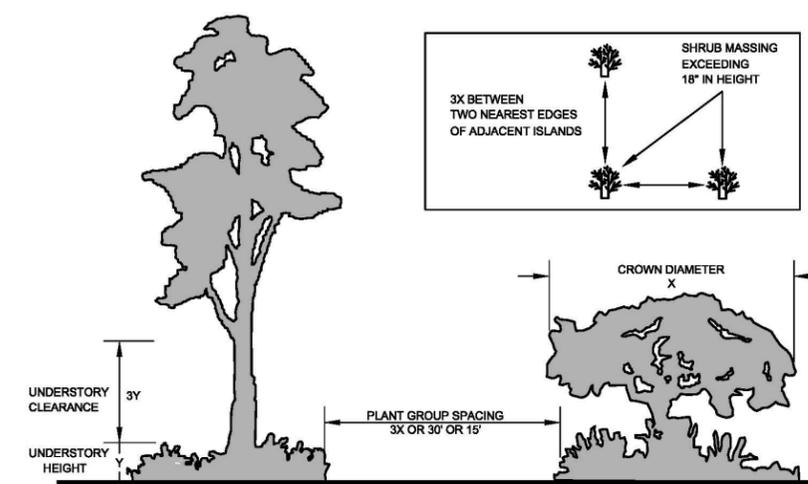
IDENTIFICATION MARKER DETAIL



FUEL MODIFICATION PLANT PALLETTE (refer to Figures 3.17 and 3.18)

TREES	Scientific Name	Common Name
	<i>Alnus rhombifolia</i>	White Alder
	<i>Eriobotrya japonica</i>	Loquat
	<i>Heteromeles arbutifolia</i>	Toyon
	<i>Juglans californica</i>	California Black Walnut
	<i>Lagerstromia indica 'Tuskogee'</i>	Crape Myrtle, Multi Trunk
	<i>Lagerstromia indica 'Watermelon red'</i>	Crape Myrtle, Multi Trunk
	<i>Lagerstromia indica 'Samuel Sommer'</i>	Crape Myrtle, Multi Trunk
	<i>Pistacia chinensis</i>	Chinese Pistache
	<i>Platanus racemosa</i>	California Sycamore
	<i>Quercus agrifolia</i>	Coast Live Oak
	<i>Quercus ilex</i>	Holly Oak
	<i>Quercus kelloggii</i>	California Oak
	<i>Quercus suber</i>	Cork Oak
	<i>Rhus lancea</i>	African Sumac
	<i>Ulmus parvifolia</i>	Chinese Evergreen Elm

TREE AND TREE-FORM SHRUB PRUNING AND SPACING FOR NEW PLANTINGS AND THINNING ZONES



- UNDERSTORY CLEARANCE.** NEW AND EXISTING TREES AND TREE-FORM SHRUBS (NATURALLY REACHING 4' AND TALLER), WHICH ARE BEING RETAINED WITH THE APPROVAL OF THE AGENCY HAVING JURISDICTION, SHALL BE PRUNED TO PROVIDE CLEARANCE OF THREE TIMES THE HEIGHT OF THE UNDERSTORY PLANT MATERIAL OR 10 FEET, WHICHEVER IS GREATER (SEE FIGURE ABOVE). NEW TREES AND TREE-FORM SHRUBS MAY COMPLY WITH THE LESSER IF SUFFICIENT HEIGHT IS NOT AVAILABLE TO ACHIEVE 10 FEET. DEAD AND EXCESSIVELY TWIGGY GROWTH SHALL BE REMOVED.
- PLANT GROUP SPACING.**
 - TREES AND TREE-FORM SHRUBS SHALL BE SINGLE SPECIMENS OR IN A MAXIMUM GROUPING OF THREE PLANTS. GROUPINGS SHALL BE SEPARATE BY A DISTANCE OF THREE TIMES THE DIAMETER OF THE LARGEST INDIVIDUAL MATURE CROWN OR 15 FEET, WHICHEVER IS GREATER (SEE FIGURE ABOVE).
 - TREE SHALL BE SINGLE SPECIMENS OR IN A MAXIMUM GROUPING OF THREE PLANTS. GROUPING SHALL OTHER LIMITED GROUPING ARRANGEMENTS AND SPACING MAY BE ACCEPTABLE IF APPROVED BY SBF.
- C. PLANT SPECIMENS LISTED IN THE SBF "APPROVED PLANT PALLETTE-QUALIFICATION STATEMENTS FOR SELECT PLANT SPECIES" SHALL COMPLY WITH PLANT GROUPINGS AND SPACING REQUIREMENTS SPECIFIED IN THOSE RESTRICTIONS.**

TREES	Scientific Name	Common Name
	<i>Photinia fraseri</i>	Red Tip Photinia
	<i>Pennisetum setaceum 'Little Bunny'</i>	Dwarf Red Fescue
	<i>Pittosporum tobira</i>	Tobira
	<i>Prunus caroliniana 'Bright n Tight'</i>	Flowering Plum
	<i>Pyracantha species</i>	Firethorn
	<i>Rhapiolepis indica 'Dancer'</i>	Indian Hawthorn
	<i>Rhus integrifolia</i>	Lemonade Berry
	<i>Rhus ovata</i>	Sugar Bush
	<i>Ribes indecorum</i>	White-flowered Currant
	<i>Romneya coulteri</i>	Mattija Poppy
	<i>Rosmarinus officinalis</i>	Rosemary
	<i>Trachospermum jasminoides</i>	Star Jasmine
	<i>Gnaphalium lanatum</i>	Wholly Blue Curls
	<i>Viburnum japonicum</i>	Japanese Viburnum
	<i>Xylosma congestum</i>	Lupine

GROUPCOVERS	Scientific Name	Common Name
	<i>Baccharis pilularis</i>	Twin Peaks #2
	<i>Bougainvillea 'Oh la la'</i>	Bougainvillea
	<i>Ceanothus griseus horizontalis</i>	Yankee Point
	<i>Frankenia salina</i>	Alkali Heath
	<i>Hypericum calycinum</i>	St. John's Wart
	<i>Lantana sp.</i>	Lantana
	<i>Lonicera japonica 'Halliana'</i>	Hall's Honeysuckle
	<i>Myoporum parvifolium 'Pink'</i>	Pink Myoporum
	<i>Myoporum 'pauciflorum'</i>	Myoporum
	<i>Pelargonium peltatum</i>	Ivy Geranium
	<i>Sisyrinchium bellum</i>	Blue Eyed Grass
	<i>Trachospermum jasminodes</i>	Star Jasmine

VINES	Scientific Name	Common Name
	<i>Ficus pumila</i>	Creeping Fig
	<i>Gelsemium sempervirens</i>	Carolina Jessamine
	<i>Parthenocissus tricuspidata</i>	Boston Ivy

HYDROSEED MIX	Scientific Name	Common Name
	<i>Clarkia botata</i>	Farwell To Spring
	<i>Eschscholzia californica</i>	California Poppy
	<i>Encelia californica</i>	California Encelia
	<i>Eriophyllum confertiflorum</i>	No Common Name
	<i>Trifolium californicum</i>	California Everlasting
	<i>Lathraea californica</i>	Dwarf Goldfields
	<i>Lupinus bicolor</i>	Lupine
	<i>Mimulus aurantiacus</i>	Bush Monkeyflower
	<i>Nemophila menziesii</i>	Baby Blue Eyes
	<i>Plantago erecta</i>	Dwarf Plantain

NOTE: GROUNDCOVER NOT TO EXCEED 18" IN HEIGHT PER CITY OF SAN BERNARDINO STANDARDS.

Development Standards

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Building Construction/Protection Systems

By themselves, the setbacks, materials, and methods stipulated in the fuel modification zones are not enough to prevent structures from igniting. Airborne embers can ignite fires great distances from the flames themselves. Many homes actually burn from the inside out due to embers blowing into attic vents or under barrel tiles. Therefore, structures in Spring Trails shall adhere to the following standards:

- All structures shall be equipped with automatic fire sprinklers built per the specifications of the SBFD.
- Roof coverings shall be a minimum Class A roof assembly.
- All structures within 200 feet of a fuel modification edge, as shown on Figures 3.17 and 3.18, shall receive enhanced construction on all four sides of the structure per California Building Code, Chapter 7A. In addition, the following requirements from San Bernardino Municipal Code Chapter 15.10 shall apply:
 - Fencing, fascias, patios, exterior trim, and other exterior elements shall be of approved noncombustible or ignition-resistant material.
 - Vinyl window frame assemblies shall have the following characteristics:
 - Frames shall have welded corners and metal reinforcement in the interlock area,
 - Dual-paned insulated glazed units with at least one pane of tempered glass,
 - Frame and sash profiles are certified in AAMA Lineal Certification Program (verified by an AAMA product label or a Certified Products Directory),
 - Certified and labeled to ANSI/AAMA/NWWDA 101/I.S.2-97 for structural requirements.
 - Attic and underfloor vents shall be protected by corrosion-resistant noncombustible wire mesh with maximum 1/8-inch openings or provide equivalent protection. Attic vents shall not face wildlands.
 - Roof-mounted turbine vents shall not be permitted.
 - All roof coverings shall be of nonwood materials with at least a Class A fire-retardant rating.
 - Paper-faced insulation shall be prohibited in attics or ventilated spaces.
- All structures within Spring Trails but outside of the area 200 feet from a fuel modification zone edge, as shown on Figures 3.17 and 3.18, shall receive Enhanced Construction on all four sides of the structure per California Building Code, Chapter 7A, Phase II, regarding roofing, venting, and rain gutters only.

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Ongoing Education

In addition to the built-in fuel modification zones and construction techniques, the active participation of the homeowners is necessary to adequately protect Spring Trails. Accordingly, the following shall be required:

- The fire threat, fuel modification zone requirements, maintenance responsibilities, protection plans, approved plant palette, list of unacceptable plants, preventative measures, and evacuation routes shall be disclosed to potential homebuyers prior to the sale of any residence and readily available to homeowners upon request.
- The HOA shall sponsor annual clinics conducted by fire professionals to educate residents on the fire threat, fuel modification zone requirements, maintenance responsibilities, protection plans, landscaping requirements, preventative measures, and evacuation routes.

Safety Plan

Postfire/Flood Recovery Plan

Hillsides that have burned as a result of wildfires may be subject to debris flows, which can fill downstream drainage corridors, debris basins, and flood control channels beyond their capacity. Accordingly, the following shall be required:

- Prior to issuance of building permits, a postfire/flood recovery plan shall be in place to address the maintenance of drainage facilities and debris removal after a significant fire or flooding event. The recovery plan shall be developed with input from the City of San Bernardino, San Bernardino County Flood Control District, and the Spring Trails landscape maintenance district and/or homeowners association.

Seismic/Geologic Safety

Spring Trails is in the San Andreas Fault zone and includes three traces of the San Andreas Fault, which runs in an east–west direction through the northern and southern portions of the project site (see Figure 1.3). These faults were precisely located through detailed geologic investigations (see the EIR appendices) to establish safe structural setback limits.

Due to the potential seismic and geologic hazards, proposed development in Spring Trails is subject to the following:

- All structures in Spring Trails shall be required to meet or exceed the applicable seismic design standards of the California Building Standards Code, which correspond to the level of seismic risk in a given location.
- Construction of habitable buildings shall not occur over or within 50 feet of any known active fault or as required by the geotechnical analyses.
- No water reservoir or booster pump station shall be constructed within 15 feet of an active fault.
- Grading for building pads and roads shall conform to specifications of the geologist, based on a soils study and final geotechnical study.
- Flexible materials and joints shall be used for infrastructure (e.g., roads, sewer and water lines) located across known faults.
- Flexible pipe fittings shall be used to avoid gas or water leaks. Flexible fittings are more resistant to breakage.
- The final project grading plan shall be reviewed by the City geologist.

Wildlife Corridors

As described in Chapter 1, Spring Trails contains two important corridors for wildlife movement: 1) the unnamed tributary of Cable Creek that flows in an east-to-west direction in the northern third of the project site (northern corridor); and 2) the outwash of Cable Creek adjacent to the Interstate 215 freeway (southern corridor).

The northern corridor is crossed by an access roadway in two locations and the secondary access road crosses the southern corridor. As shown in Figure 3.27, Spring Trails preserves these corridors as natural drainageways, open space, and wildlife movement, even under the roadway crossings. Accordingly, the following requirements apply to the corridors:

Northern Corridor

- As shown on Figure 3.27, the northern corridor shall be a minimum 100 foot wide open space corridor with a minimum of 50 feet separation between the nearest development pad and the centerline of the creek.
- Native vegetation within this corridor must be maintained to the maximum extent allowed by the Fire Protection Plan
- Riparian vegetation that provides high-quality foraging opportunities, cover, and other habitat values shall be the preferred vegetation type, unless specifically prohibited by the Fire Protection Plan.
- The corridor shall be maintained free of fences, walls, or other obstructions.
- Any lighting associated with the project in this area, including street lights and residential lights, shall be of the minimum output required and shall be down-shielded to prevent excessive light bleed into adjacent areas.
- Any road crossings, bridges, culverts, etc. shall be constructed with soft bottoms with an openness ratio of at least 0.9 (openness ratio = height x width/length).
- Additional recommendations, as outlined in the report entitled A Linkage Design for the San Gabriel-San Bernardino Connection (South Coast Missing Linkages Project, 2004), may be incorporated as agreed upon by the City Engineer and applicant.

Southern Corridor

- Any bridge, culvert, or other road crossing structure shall be designed in such a manner as to allow for the natural drainage flow through/under

the structure and downstream of the structure, as conditioned by the U.S. Fish and Wildlife Service during the Section 7 permitting process.

- Any road crossings, bridges, culverts, etc. shall be constructed with soft bottoms with an openness ratio of at least 0.9 (openness ratio=height x width/length).
- Additional recommendations as outlined in the report entitled A Linkage Design for the San Gabriel-San Bernardino Connection (South Coast Missing Linkages Project, 2004) may be incorporated as agreed upon by the City Engineer and applicant.

These measures shall be incorporated into site development plans, and must be reviewed and approved prior to the issuance of grading permits. These requirements shall be implemented to the satisfaction of the Development Services Director.

Development Standards

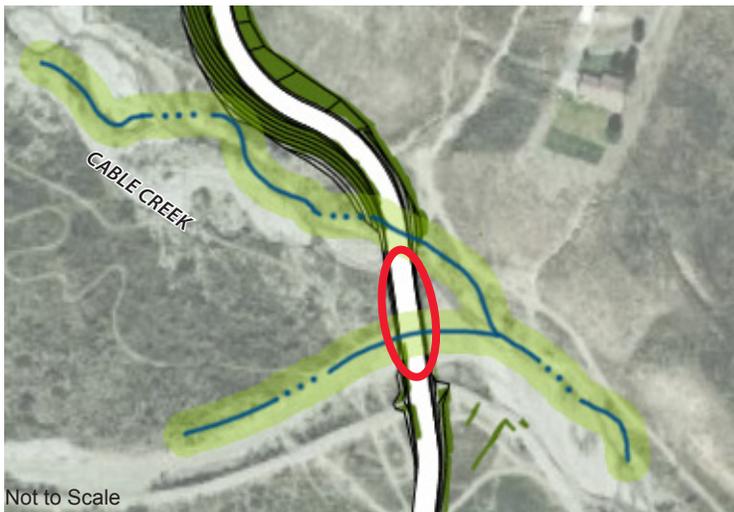
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Figure 3.27 Wildlife Corridors

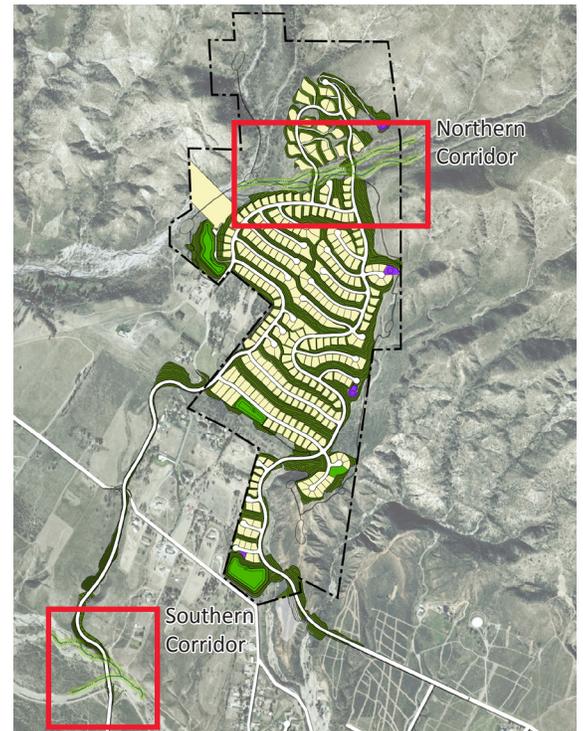
Northern Corridor



Southern Corridor



Location Map



Legend

-  Wildlife Road Crossing
-  Wildlife Corridor (100' minimum width)

Refer to Page 3-74 for standards and guidelines related to wildlife corridors and crossings.

Development Standards

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Landscape Plan

Landscape Theme

The Spring Trails landscape has been designed to reflect the natural beauty of the surrounding environment and elements of sustainability. Plant materials have been chosen based on the area’s environmental conditions and fire protection needs, as well as the aesthetics they will bring to the community. The landscape is designed to enhance the walkability of the community by leading residents to parks and open space. The landscape design guidelines for Spring Trails are intended to guide the project developer by describing the design intent for the landscape features and amenities of Spring Trails. The landscape design concept is intended to create elements of design continuity to reinforce a “sense of place” for the community as a whole.

Landscape Zones

The intent of designating landscape zones is to seamlessly and naturally blend the community landscape with the surrounding natural environment. Plant material proposed for each landscape zone is consistent with the landscape zones plant palette described in Table 3.6. The designated landscape zones are shown in Figure 3.28, *Landscape Zones*, and are described below.

Natural Open Space Zone

The natural open space zone contains a mixture of Riversidean sage scrub, chaparral, nonnative grassland, and several riparian and woodland communities. This area is generally located in the perimeter areas of Spring Trails outside of the fuel modification zones and will be preserved. If any intentional or unintentional grading occurs within this zone, the development contractor shall restore this zone to its original state.

Transition Open Space Zone

The transition open space zone is primarily located on the perimeter, ungraded slopes of the development footprint and provides an interface between natural open space areas and the more formal landscape of the residential neighborhoods. The transition open space zone is intended to be planted in such a manner as to blend into the ungraded natural areas. This zone is in fuel modification zone C and plant materials in the transition open space zone shall be on the approved fuel modification plant palette found in Table 3.6.

Refined Open Space Zone

The refined open space zone generally consists of open space areas within Spring Trails and includes natural and manufactured slopes. Portions of the refined open space zone are in fuel modification zones A and B, and plant



Examples of the types of the variety of landscaping that can be found in Spring Trails.

Development Standards

materials in the refined open space zone shall be on the approved Landscape Zones Plant Palette in Table 3.6.

Theme Zone

The theme zone occurs in parks and along streets in Spring Trails. The streetscape plant palette should provide a unifying theme and a sense of permanence. It is also intended that the landscape features within this zone, such as entry monuments, also provide character supportive to the landscape theme of Spring Trails, setting the tone and establishing the uniqueness of the community.

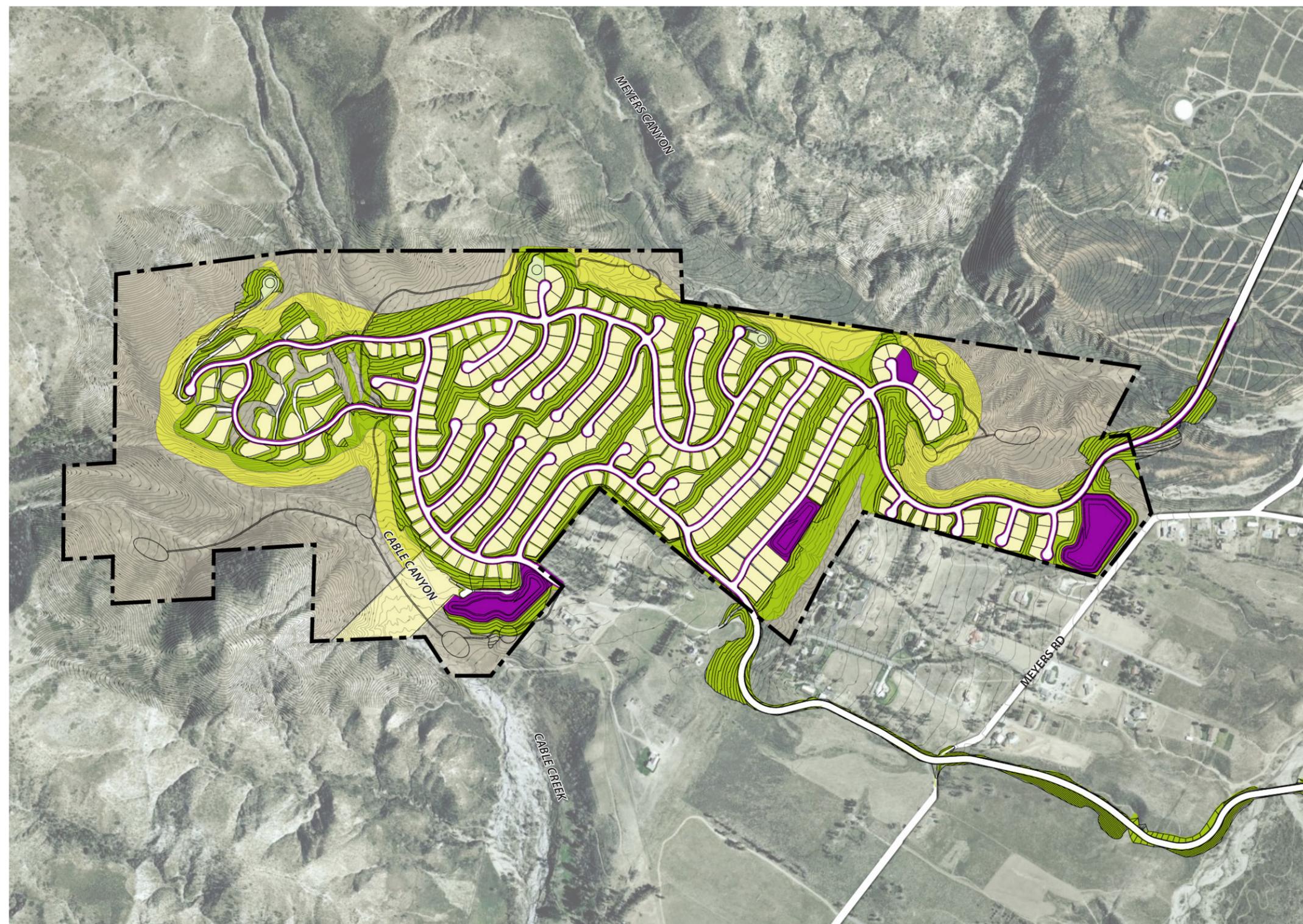
Landscape Plant Palette

The plant palette presented in Table 3.6 contains plant species appropriate for each landscape zone in Spring Trails (refer to Figure 3.28, *Landscape Zones*). All plant materials presented in Table 3.6 are approved for use within the fuel modification zones of Spring Trails. Proposed plant materials and their location shall be consistent with the Spring Trails Fuel Modification Plan described in Section 3 and contained in Appendix C.

Landscape Zones Plant Palette

The plant palette presented in Table 3.6 shall be used as the landscape selection along streets, parks, and in developed and controlled open space areas. All plant materials contained in Table 3.6 are approved for use within the fuel modification zones in Spring Trails.

Figure 3.28 Landscape Zones



Legend

- Residential
- Natural Open Space Zone
- Transition Open Space Zone
- Refined Open Space Zone
- Theme Zone



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Table 3.6 Landscape Zones Plant Palette

Botanical Names	Common Names	Transition Open Space Zone	Refined Open Space Zone	Theme Zone	Notes
Trees					
<i>Acer macrophyllum</i>	Big Leaf Maple	p	p	p	o
<i>Alnus cordata</i>	Italian Alder		p	p	W
<i>Alnus rhombifolia</i>	White Alder		p	p	o
<i>Arbutus unedo</i>	Strawberry Tree		p	p	W
<i>Beaucarnea recurvata</i>	Bottle Palm		p	p	W
<i>Ceratonia siliqua</i>	Carob		p	p	W
<i>Cercis occidentalis</i>	Western Redbud		p	p	W
<i>Citrus</i> species	Citrus		p	p	W
<i>Eriobotrya japonica</i>	Loquat	p	p	p	N
<i>Erythrina</i> species	Coral Tree		p	p	W
<i>Feijoa sellowiana</i>	Pineapple Guava	p	p	p	N
<i>Ginkgo biloba</i>	Maidenhair Tree		p	p	W
<i>Juglans californica</i>	California Black Walnut	p	p	p	N
<i>Lagerstroemia indica</i>	Crape Myrtle		p	p	W
<i>Lagunaria patersonii</i>	Primrose Tree		p	p	W
<i>Liquidambar styraciflua</i>	American Sweet Gum		p	p	W n
<i>Liriodendron tulipifera</i>	Tulip Tree		p	p	W
<i>Lyonothamnus floribundus</i> ssp. <i>asplenifolius</i>	Fernleaf Ironwood		p	p	W
<i>Macadamia integrifolia</i>	Macadamia Nut		p	p	W
<i>Maytenus boaria</i>	Mayten Tree		p	p	W
<i>Metrosideros excelsus</i>	New Zealand Christmas Tree		p	p	N
<i>Parkinsonia aculeata</i>	Mexican Palo Verde			p	X
<i>Pistacia chinensis</i>	Chinese Pistache		p	p	W
<i>Pittosporum tobira</i>	Tobira		p	p	n
<i>Pittosporum undulatum</i>	Victorian Box			p	X
<i>Plantanus racemosa</i>	California Sycamore	p	p	p	W
<i>Populus fremontii</i>	Western Cottonwood	p	p	p	o
<i>Prunus caroliniana</i>	Carolina Cherry Laurel			p	X
<i>Prunus lyonii</i>	Catalina Cherry			p	X
<i>Punica granatum</i>	Pomegranate		p	p	N
<i>Quercus agrifolia</i>	Coast Live Oak	p	p	p	o
<i>Quercus engelmannii</i>	Engelmann Oak			p	X
<i>Quercus ilex</i>	Holly Oak		p	p	W
<i>Quercus kelloggii</i>	California Oak	p	p	p	N
<i>Quercus suber</i>	Cork Oak		p	p	X

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Botanical Names	Common Names	Transition Open Space Zone	Refined Open Space Zone	Theme Zone	Notes
<i>Rhus lancea</i>	African Sumac		p	p	N
<i>Sambucus mexicana</i>	Mexican Elderberry	p	p	p	o
<i>Stenocarpus sinuatus</i>	Firewheel Tree		p	p	W
<i>Umbellularia californica</i>	California Laurel	p	p	p	o
Shrubs					
<i>Abelia x grandiflora</i>	Glossy Abelia		p	p	W
<i>Acacia redolens</i> 'Desert Carpet'	Desert Carpet	p		p	n
<i>Achillea millefolium</i>	Common Yarrow	p	p	p	X
<i>Achillea tomentosa</i>	Woolly Yarrow	p	p	p	W
<i>Aloe arborescens</i>	Tree Aloe		p	p	N
<i>Alogyne huegeii</i>	Blue Hibiscus		p	p	W
<i>Amorpha fruticosa</i>	Western False Indigobush	p	p	p	o
<i>Antirrhinum nuttalianum</i> ssp.	no common name	p	p	p	o
<i>Arctostaphylos glandulosa</i> ssp.	Eastwood Manzanita	p	p	p	o
<i>Arctostaphylos hookeri</i> Monterey Carpet'	Monterey Carpet Manzanita		p	p	W
<i>Arctostaphylos pungens</i>	no common name		p	p	N
<i>Arctostaphylos refugioensis</i>	Refugio Manzanita		p	p	N
<i>Arctostaphylos x 'Greensphere'</i>	Greensphere Manzanita		p	p	W
<i>Atriplex canescens</i>	Four-Wing Saltbush			p	X
<i>Atriplex lentiformis</i> ssp. <i>breweri</i>	Brewer Saltbush			p	X
<i>Baccharis emoyi</i>	Emory Baccharis	p	p	p	o
<i>Baccharis salicifolia</i>	Mulefat	p	p	p	o
<i>Baccharis pilularis</i> ssp. <i>consanguinea</i>	Chaparral Bloom	p	p	p	W o
<i>Bougainvillea spectabilis</i>	Bougainvillea		p	p	N n
<i>Brickellia californica</i>	no common name	p	p	p	o
<i>Camissonia cheiranthiflora</i>	Beach Evening Primrose	p	p	p	o
<i>Carpenteria californica</i>	Bush Anemone		p	p	W
<i>Ceanothus gloriosus</i> 'Point Reyes'	Point Reyes Ceanothus		p	p	W
<i>Ceanothus griseus</i> 'Louis Edmunds'	Louis Edmunds Ceanothus		p	p	W
<i>Ceanothus griseus</i> var. <i>horizontalis</i>	Carmel Creeper Ceanothus		p	p	W
<i>Ceanothus griseus</i> var. <i>horizontalis</i>	Yankee Point Ceanothus		p	p	W
<i>Ceanothus megarcarpus</i>	Big Pod Ceanothus	p	p	p	o
<i>Ceanothus prostratus</i>	Squaw Carpet Ceanothus		p	p	W
<i>Ceanothus spinosus</i>	Green Bark Ceanothus	p	p	p	o

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Botanical Names	Common Names	Transition Open Space Zone	Refined Open Space Zone	Theme Zone	Notes
<i>Ceanothus verrucosus</i>	Wart-Stem Ceanothus		p	p	W
<i>Cistus hybridus</i>	White Rockrose		p	p	W
<i>Cistus incanus</i>	no common name		p	p	W
<i>Cistus incanus</i> ssp. <i>Corsicus</i>	no common name		p	p	W
<i>Cistus salviifolius</i>	Sageleaf Rockrose		p	p	W
<i>Cistus x purpureus</i>	Orchid Rockrose		p	p	W
<i>Cneoridium dumosum</i>	Bushrue	p	p	p	o
<i>Comarostaphylis diversifolia</i>	Summer Holly		p	p	W o
<i>Convolvulus cneorum</i>	Bush Morning Glory		p	p	N
<i>Coprosma pumila</i>	Prostrate Coprosma		p	p	W
<i>Cotoneaster aprmey</i>	no common name		p	p	W
<i>Cotoneaster buxifolius</i>	no common name		p	p	W
<i>Crassula ovata</i>	Jade Tree			p	X
<i>Dendromecon rigida</i>	Bush Poppy	p	p	p	o
<i>Dodonaea viscosa</i>	Hopseed Bush		p	p	N
<i>Echium candians</i>	Pride of Maderia		p	p	W
<i>Elaeagnus pungens</i>	Silverberry		p	p	W
<i>Encelia californica</i>	California Encelia	p	p		o
<i>Epilobium canum</i> [<i>Zauschneria californica</i>]	Hoary California Fuschia	p	p	p	o *
<i>Eriodictyon crassifolium</i>	Thick Leaf Yerba Santa	p	p	p	o
<i>Eriodictyon trichocalyx</i>	Yerba Santa	p	p	p	o
<i>Eriophyllum confertiflorum</i>	no common name	p	p		W o
<i>Escallonia</i> species	Several varieties		p	p	N
<i>Fremontodendron californicum</i>	California Flannelbush		p	p	W
<i>Galvezia speciosa</i>	Bush Snapdragon		p	p	W
<i>Garrya ellipta</i>	Silktassel		p	p	W
<i>Grevillea 'Noellii'</i>	Grevillea	p	p	p	
<i>Grewia occidentalis</i>	Starflower		p	p	W
<i>Hakea suaveolens</i>	Sweet Hakea		p	p	N n
<i>Hardenbergia comptoniana</i>	Lilac Vine		p	p	W
<i>Helianthemum scoparium</i>	Rush Rose	p	p	p	o
<i>Heteromeles arbutifolia</i>	Toyon	p	p	p	o n
<i>Hypericum calycimum</i>	Aaron's Beard			p	X
<i>Isocoma menziesii</i>	Coastal Goldenbush	p	p	p	o
<i>Isomeris arborea</i>	Bladderpod	p	p	p	o
<i>Keckiella antirrhinoides</i>	Yellow Bush Penstemon	p	p	p	o
<i>Keckiella cordifolia</i>	Heart Leaved Penstemon	p	p	p	o

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<i>Keckiella ternata</i>	Blue Stemmed Bush Penstemon	p	p	p	o
<i>Lantana camara cultivars</i>	Yellow Sage		p	p	W
<i>Lantana montevidensis</i>	Trailing Lantana		p	p	W
<i>Lavandula dentata</i>	French Lavender		p	p	W
<i>Lavandula stoechas</i> 'Otto Quast'	Spanish Lavender		p	p	
<i>Leptospermum laevigatum</i>	Australian Tea Tree		p	p	W
<i>Leucophyllum frutescens</i>	Texas Ranger		p	p	W
<i>Ligustrum japonicum</i>	Texas privet		p	p	N
<i>Limonium perezii</i>	Sea Lavender			p	X
<i>Lonicera japonica</i> 'Halliana'	Hall's Japanese Honeysuckle			p	X
<i>Lonicera subspicata</i>	Wild Honeysuckle	p	p	p	o
<i>Lotus scoparius</i>	Deerweed	p	p	p	o
<i>Mahonia aquifolium</i> 'Golden Abundance'	Golden Abundance Oregon Grape	p	p	p	W
<i>Mahonia nevenii</i>	Nevin Mahonia		p	p	W
<i>Malacothamnus fasciculatus</i>	Chapparal Mallow	p	p	p	o
<i>Melaleuca nesophila</i>	Pink Melaleuca		p	p	W
<i>Myoporum debile</i>	no common name		p	p	N
<i>Myoporum insulare</i>	Boobyalla		p	p	W
<i>Nerium oleander</i>	Oleander			p	X
<i>Nolina cismontana</i>	Chapparal Nolina	p	p	p	o
<i>Nolina</i> species	Mexican Grasstree		p	p	N
<i>Osmanthus fragrans</i>	Sweet Olive		p	p	W
<i>Penstemon</i> species	Beard Tongue			p	X
<i>Photinia fraseria</i>	no common name		p	p	W
<i>Plumbago auriculata</i>	Plumbago Cape		p	p	W
<i>Portulacaria afra</i>	Elephant's Food			p	X
<i>Potentilla glandulosa</i>	Sticky Cinquefoil	p	p	p	o
<i>Prunus caroliniana</i> 'Bright 'n Tight'	Flowering Plum		p	p	W
<i>Prunus ilicifolia</i> ssp. <i>ilicifolia</i>	Holly Leafed Cherry	p	p	p	o
<i>Puya</i> species	Puya		p	p	W
<i>Pyracantha</i> species	Firethorn	p	p		W
<i>Quercus berberidifolia</i>	California Scrub Oak	p	p	p	o n *
<i>Quercus dumosa</i>	Coastal Scrub Oak	p	p	p	o n *
<i>Rhamnus alaternus</i>	Italian Buckthorn			p	X
<i>Rhamnus californica</i>	California Coffee Berry	p	p	p	o
<i>Rhamnus crocea</i>	Redberry	p	p	p	o

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Botanical Names	Common Names	Transition Open Space Zone	Refined Open Space Zone	Theme Zone	Notes
<i>Rhamnus crocea</i> ssp. <i>Illicifolia</i>	Hollyleaf Redberry	p	p	p	o
<i>Rhaphiolepis</i> species	Indian Hawthorne		p	p	N
<i>Rhus integrifolia</i>	Lemonade Berry	p	p	p	o
<i>Rhus ovata</i>	Sugarbush	p	p	p	o n
<i>Ribes aureum</i>	Golden Currant	p	p	p	o
<i>Ribes indecorum</i>	White Flowering Currant	p	p	p	o
<i>Ribes speciosum</i>	Fuschia Flowering Gooseberry	p	p	p	o
<i>Ribes viburnifolium</i>	Evergreen currant		p	p	W
<i>Romneya coulteri</i>	Matilija Poppy	p	p	p	o *
<i>Romneya coulteri</i> 'White Cloud'	White Cloud Matilija Poppy			p	X
<i>Rosmarinus officinalis</i>	Rosemary		p	p	W n
<i>Salvia greggii</i>	Autums Sage		p	p	W n
<i>Santolina virens</i>	Green Lavender Cotton		p	p	W
<i>Solanum douglasii</i>	Douglas Nightshade	p	p	p	o
<i>Symphoricarpos mollis</i>	Creeping Snowberry	p	p	p	o
<i>Tecoma stans</i> [<i>Stenolobium stans</i>]	Yellow Bells		p	p	W
<i>Trachelospermum jasminoides</i>	Star Jasmine	p	p	p	N
<i>Trichostems lanatum</i>	Woolly Blue Curls	p	p	p	o
<i>Viburnum japonicum</i>	Japanese Viburnum		p	p	n
<i>Westringia fruticosa</i>	no common name		p	p	W
<i>Xylosma congestum</i>	Shiny Xylosma		p	p	W
<i>Yucca</i> species	Yucca			p	X
<i>Yucca whipplei</i>	Yucca	p	p	p	o
Groundcover					
<i>Aeonium decorum</i>	Aeonium			p	X
<i>Aeonium simsii</i>	no common name			p	X
<i>Agave victoriae-reginae</i>	no common name		p	p	N
<i>Ajuga reptans</i>	Carpet Bugle			p	X
<i>Aloe aristata</i>	no common name		p	p	N
<i>Aloe brevifoli</i>	no common name		p	p	N
<i>Aptenia cordifolia</i> x 'Red Apple'	Red Apple Aptenia			p	X
<i>Arctostaphylos</i> 'Pacific Mist'	Pacific Mist Manzanita		p	p	W
<i>Arctostaphylos edmundsii</i>	Little Sur Manzanita		p	p	W
<i>Arctostaphylos uva-ursi</i>	Bearberry		p	p	W
<i>Artemisia caucasica</i>	Caucasian Artemisia		p	p	N
<i>Baccharis pilularis</i> var. <i>pilularis</i>	Twin Peaks #2'			p	X
<i>Baileya Multiradiata</i>	Desert Marigold		p	p	N

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Botanical Names	Common Names	Transition Open Space Zone	Refined Open Space Zone	Theme Zone	Notes
<i>Bougainvillea</i> 'Oh la la'	Bougainvillea		p	p	n
<i>Carissa macrocarpa</i>	Green Carpet Natal Plum		p	p	N
<i>Carpobrotus chilensis</i>	Sea Fig Ice Plant			p	X
<i>Ceanothus griseus horizontalis</i>	Yankee Point		p	p	W
<i>Cerastium tomentosum</i>	Snow-in-Summer		p	p	W
<i>Chrysanthemum leucanthemum</i>	Oxeye Daisy			p	X
<i>Cistus crispus</i>	no common name		p	p	W
<i>Coprosma kirkii</i>	Creeping Coprosma		p	p	W
<i>Corea pulchella</i>	Australian Fuschia		p	p	N
<i>Coreopsis lanceolata</i>	Coreopsis		p	p	W
<i>Cotoneaster congestus</i> 'Likiang'	Likiang Cotoneaster		p	p	W
<i>Cotoneaster horizontalis</i>	Rock Cotoneaster		p	p	W
<i>Crassula lactea</i>	no common name			p	X
<i>Crassula multicava</i>	no common name			p	X
<i>Crassula tetragona</i>	no common name			p	X
<i>Croton californicus</i>	California Croton	p	p	p	W o
<i>Delosperma</i> 'Alba'	White trailing Ice Plant			p	X
<i>Drosanthemum floribundum</i>	Rosea Ice Plant			p	X
<i>Drosanthemum hispidum</i>	no common name			p	X
<i>Drosanthemum speciosus</i>	Dewflower			p	X
<i>Euonymus fortunei</i>	Winter Creeper Euonymus		p	p	N
<i>Festuca ovina</i> 'Glauca'	Sheep Fescue		p	p	n
<i>Ficus pumilla</i>	Creeping Fig	p	p	p	n
<i>Fragaria chiloensis</i>	Wild Strawberry/Sand Strawberry		p	p	N
<i>Frankenia salina</i>	Alkali Heath	p	p	p	o
<i>Gaillardia x grandiflora</i>	Blanketflower			p	X
<i>Gazania</i> hybrids	South African Daisy			p	X
<i>Gazania rigens leucolaena</i>	Training Gazania			p	X
<i>Gelsemium sempervirens</i>	Carolina Jessamine	p	p	p	n
<i>Grindelia stricta</i>	Gum Plant	p	p	p	o
<i>Heliathemum mutabile</i>	Sunrose		p	p	N
<i>Heliotropium curassavicum</i>	Salt Heliotrope	p	p	p	o
<i>Helix canariensis</i>	English Ivy			p	X
<i>Iberis sempervirens</i>	Edging Candytuft		p	p	N
<i>Iberis umbellatum</i>	Globe Candytuft		p	p	N
<i>Iva hayesiana</i>	Poverty Weed		p	p	W
<i>Lampranthus fillicaulis</i>	Redondo Creeper			p	X
<i>Lampranthus spectabilis</i>	Trailing Ice Plant			p	X

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<i>Lamprathus aurantiacus</i>	Bush Ice Plant			p	X
<i>Leymus condensatus</i>	Giant Wild Rye	p		p	o
<i>Limonium pectinatum</i>	no common name			p	X
<i>Lotus corniculatus</i>	Bird's Foot Trefoil			p	X
<i>Malephora luteola</i>	Training Ice Plant			p	X
<i>Myoporum Pacificum'</i>	no common name		p	p	W
<i>Myoporum parvifolium</i>	no common name		p	p	W
<i>Nassella (stipa) lepidra</i>	Foothill Needlegrass	p	p	p	o
<i>Nassella (stipa) pulchra</i>	Purple Needlegrass	p	p	p	o
<i>Oenothera belandieri</i>	Mexican Evening Primrose		p	p	W
<i>Ophiopogon japonicus</i>	Mondo Grass			p	X
<i>Osteospermum fruticosum</i>	Training African Daisy			p	X
<i>Parthenocissus tricuspidata</i>	Boston Ivy		p	p	W
<i>Pelargonium peltatum</i>	Ivy Geranium		p	p	W
<i>Pennisetum setaceum 'Little Bunny'</i>	Little Bunny Fountain Grass		p	p	W
<i>Plantago sempervirens</i>	Evergreen Plantain			p	X
<i>Potentilla tabernaemontanii</i>	Spring Cinquefoil			p	X
<i>Salvia sonomensis</i>	Creeping Sage		p	p	W n
<i>Santolina chamaecyparissus</i>	Lavender Cotton		p	p	W
<i>Sedum acre</i>	Goldmoss Sedum			p	X
<i>Sedum album</i>	Green Stonecrop			p	X
<i>Sedum confusum</i>	no common name			p	X
<i>Sedum lineare</i>	no common name			p	X
<i>Sedum x rubrotinctum</i>	Pork and Beans			p	X
<i>Senecio serpens</i>	no common name			p	X
<i>Sisyrinchium bellum</i>	Blue Eyed Grass	p	p	p	o
<i>Tecomaria capensis</i>	Cape Honeysuckle			p	X
<i>Teucrium chamedrys</i>	Germander		p	p	N
<i>Thymus serpyllum</i>	Lemon Thyme		p	p	N
<i>Trifolium fragerum 'O'Connor's'</i>	O'Connor's Legume			p	X
<i>Trifolium hirtum 'Hyron'</i>	Hyron Rose Clover			p	X
<i>Verbena peruviana</i>	no common name		p	p	N
<i>Verbena species</i>	Verbena			p	X
<i>Vinca minor</i>	Dwarf Periwinkle			p	X

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Vines					
<i>Distinctis buccinatoria</i>	Blood-Red Trumpet Vine		p	p	N
<i>Vitis girdiana</i>	Desert Wild Grape	p	p	p	o
Hydroseed Mix					
<i>Clarkia bottae</i>	Showy Fairwell to Spring	p	p	p	o
<i>Collinsia heterophyllia</i>	Chinese Houses	p	p	p	o
<i>Coreopsis californica</i>	California Coreopsis	p	p	p	o
<i>Eriastrum saphirinum</i>	Mojave Woolly Star	p	p	p	o
<i>Gnaphalium californicum</i>	California Everlasting	p	p		o
<i>Lasthenia californica</i>	Dwarf Goldfields	p	p	p	o
<i>Lupinus arizonicus</i>	Desert Lupine		p	p	W
<i>Lupinus benthamii</i>	Spider Lupine		p	p	W
<i>Lupinus sparsiflorus</i>	Loosely Flowered Annual Lupine/Coulter's Lupine	p	p	p	o
<i>Nemophila menziesii</i>	Baby Blue Eyes	p	p	p	o
<i>Plantago erecta</i>	California Plantain	p	p		o
<i>Plantago insularis</i>	Woolly Plantain	p	p	p	**
Cactus					
<i>Opuntia littoralis</i>	Prickly Pear	p	p	p	o *
<i>Opuntia oricola</i>	Oracle Cactus	p	p	p	o *
<i>Opuntia prolifera</i>	Coast Cholla	p	p	p	o *
Flower					
<i>Eschscholzia californica</i>	California Poppy	p	p	p	W o
<i>Lupinus bicolor</i>	Sky Lupine	p	p	p	o
<i>Mimulus species</i>	Monkeyflower	p	p	p	o *
<i>Oenothera hookeri</i>	California Evening Primrose		p	p	N
Grass					
<i>Bromus carinatus</i>	California Brome		p	p	W o
<i>Vulpia myuros</i> 'Zorro'	Zorro Annual Fescue			p	X
Herb					
<i>Dichelostemma capitatum</i>	Blue Dicks	p	p	p	o
<i>Eschscholzia mexicana</i>	Mexican Poppy			p	X
Palms					
<i>Brahea armata</i>	Mexican Blue Palm/Blue Hesper Palm		p	p	N n
<i>Brahea brandegeei</i>	San Jose Hesper Palm		p	p	N n
<i>Brahea edulis</i>	Guadalupe Palm		p	p	N n

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Perennials					
<i>Ambrosia chammissonis</i>	Beach Bur-Sage	p	p	p	o
<i>Anigozanthus flavidus</i>	Kangaroo Paw		p	p	W
<i>Artemisia pycnocephala</i>	Beach Sagewort			p	X
<i>Gilia leptantha</i>	Showy Gilia		p	p	W
<i>Gilia tricolor</i>	Bird's Eyes		p	p	W
<i>Gilia capitata</i>	Globe Gilia	p	p	p	o
<i>Hesperaloe parviflora</i>	Red Yucca		p	p	W
<i>Juncus acutus</i>	Spiny Rush	p	p	p	o
<i>Kniphofia uvaria</i>	Red Hot Poker		p	p	W
<i>Lotus hermannii</i>	Northern Woolly Lotus	p	p	p	o
<i>Mirabilis californica</i>	Wishbone Bush	p	p	p	o
<i>Oenothera speciosa</i>	Show Evening Primrose		p	p	W
<i>Satureja chandleri</i>	San Miguel Savory	p	p	p	o
<i>Scirpis scutus</i>	Hard Stem Bulrush	p	p	p	o
<i>Scirpus californicus</i>	California Bulrush	p	p	p	o
<i>Solanum xanthii</i>	Purple Nightshade	p	p	p	o
<i>Strelitzia nicolai</i>	Giant Bird of Paradise		p	p	W
<i>Strelitzia reginae</i>	Bird of Paradise		p	p	W
<i>Verbena lasiostachys</i>	Western Vervain	p	p	p	o
<i>Xanthorrhoea</i> species	Grass Tree		p	p	W
Succulents					
<i>Agave attenuata</i>	Century Plant		p	p	W
<i>Agave shawii</i>	Shaw's Century Plant		p	p	W
<i>Aloe vera</i>	Medicinal Aloe		p	p	W
<i>Dudleya lanceolata</i>	Lance-leaved Dudleya	p	p	p	o
<i>Dudleya pulverulenta</i>	Chalk Dudleya	p	p	p	o

p = Permitted

x = Plant species prohibited in wet and dry fuel modification zones adjacent to wildlands. Acceptable on all other fuel modification locations and zones.

W= Plant species appropriate for use in wet fuel modification zones adjacent to wildlands. Acceptable in all other wet and irrigated dry (manufactured slopes) fuel modification locations and zones.

o= Plant species native to local area. Acceptable in all fuel modification wet and dry zones in all locations.

N= Plant species appropriate on a limited basis (maximum 30% of the area) in wet fuel modification zones adjacent to wild lands. Acceptable on all other fuel modification zones.

*= If locally collected.

**= Not native but can be used in all zones.

n= Plant species acceptable on a limited use basis. Refer to qualification requirements following plant palette.

Qualification Statements for Select Plant Species

- **Acacia redolens desert carpet.** May be used in the upper half of fuel modification zone B. The plants may be planted at 8-foot on-center, maximum spacing in meandering zones not to exceed a mature width of 24 feet or a mature height of 24 inches.
- **Bougainvillea spectabilis (procumbent varieties).** Procumbent to mounding varieties may be used in the middle levels of fuel modification zone B. The plants may be planted in clusters at 6-foot on-center spacing, not to exceed eight plants per cluster. Mature spacing between individual plants or clusters shall be 30 feet minimum.
- **Brahea armata.** Additional information may be required as directed by the Fire Department.
- **Brahea brandegeel.** Additional information may be required as directed by the Fire Department.
- **Brahea edulis.** May be used in upper and middle levels of fuel modification zone B. The plants shall be used as single specimens with mature spacing between palms of 20 feet minimum.
- **Hakea suaveolens.** May be used in the middle levels of fuel modification zone B. The plants shall be used as single specimens with mature spacing between plants of 30 feet minimum.
- **Heteromeles arbutifolia.** May be used in the middle to lower levels of fuel modification zone B. The plants may be planted in clusters of up to three plants per cluster. Mature spacing between individual plants or clusters shall be 30 feet minimum.
- **Liquidambar styraciflua.** May be used in the middle levels of fuel modification zone B. The plant shall be used as single specimens with mature spacing between trees of 30 feet minimum.
- **Quercus berberdifolia.** Additional information may be required as directed by the Fire Department.
- **Quercus dumosa.** May be used in the middle to lower levels of fuel modification zone B. The plants may be planted in clusters of up to three plants per cluster. Mature spacing between individual plants or clusters shall be 30 feet minimum.
- **Rhus ovata.** May be used in the middle to lower levels of fuel modification zone B of inland areas only. The plants may be planted in clusters of up to 3 plants per cluster. Mature spacing between individual plants or clusters shall be 30 feet minimum.
- **Rosmarinus officinalis.** Additional information may be required as directed by the Fire Department.

- **Salvia greggii.** Additional information may be required as directed by the Fire Department.
- **Salvia sonomensis.** May be used in the middle to upper levels of fuel modification zone B. The plants may be planted in clusters of up to three plants per cluster. Mature spacing between individual plants or clusters shall be 15 feet minimum.

Plant Removal List

The plant materials contained in Table 3.7 are prohibited in Spring Trails and shall be removed from all fuel modification zones and developed areas.

Table 3.7 Plant Removal List

Botanical Names	Common Names
The following plant species shall be removed from all fuel modification zones:	
<i>Adenostoma fasciculatum</i>	Wild Turnip, Yellow Mustard
<i>Adenostoma sparsifolium</i>	Red Shanks
<i>Anthemix cotula</i>	Mayweed
<i>Artemisia californica</i>	California Sagebrush
<i>Brassica nigra</i>	Black Mustard
<i>Brassica rapa</i>	Chamise
<i>Cardaria draba</i>	Noary Cress, Perennial Peppergrass
<i>Centaurea solstitialis</i>	Yellow Star Thistle
<i>Cirsium vulgare</i>	Wild Artichoke
<i>Conyza canadensis</i>	Horseweed
<i>Cortaderia selloana</i>	Pampas Grass
<i>Cupressus sp.</i>	Cypress
<i>Cyanra cardunculus</i>	Artichoke Thistle
<i>Datura wrightii</i>	Jimsonweed
<i>Eriognum fasciculatum</i>	Common Buckwheat
<i>Eucalyptus sp.</i>	Eucalyptus
<i>Foeniculum vulgare</i>	Fennel
<i>Heterothaca grandiflora</i>	Telegraph Plant
<i>Juniperus sp.</i>	Juniper
<i>Lactuca serriola</i>	Prickly Lettuce
<i>Malosma laurina</i>	Laurel sumac
<i>Nicotiana bigeleveli</i>	Indian Tobacco
<i>Nicotiana glauca</i>	Tree Tobacco
<i>Pinus sp.</i>	Pine
<i>Salvia mellifera</i>	Black sage
<i>Salsola australis</i>	Russian Thistle/Tumblewood
<i>Silybum marianum</i>	Milk Thistle
<i>Ricinus communis</i>	Castor Bean Plant
<i>Urtica urens</i>	Burning Needle

Development Standards

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Infrastructure and Utility Plan

Grading and Infrastructure Plans

Introduction

This section details the on-/off-site plans for the grading, potable water, drainage, and sewer systems necessary to accommodate buildout of Spring Trails.

Grading Plan

Spring Trails has been responsibly designed to fit into the existing landscape, at the same time meeting the intent of the City of San Bernardino Hillside Management Overlay Zone. The Conceptual Grading Plan for Spring Trails is illustrated in Figure 3.29, *Conceptual Grading Plan*.

The total area that is proposed for grading is 216.7 acres, which includes 193 acres on-site and 23.7 acres off-site. On-site grading encompasses roughly 2.7 million cubic yards and will balance on-site. The primary access street will require approximately 171,000 cubic yards of cut and 55,000 cubic yards of fill, which necessitates exporting approximately 116,000 cubic yards. The secondary access street will require 244,000 cubic yards of cut and 109,000 cubic yards of fill, which necessitates exporting approximately 135,000 cubic yards. These earthwork quantities are preliminary and do not account for shrinking, bulking and or removals.

Development within Spring Trails avoids steep hillside areas and clusters development in the lower foothill areas. This has the following benefits in terms of grading impacts:

- Minimizes hillside grading and scarring that would be visible from public rights-of-way.
- Preserves the Cable Canyon and Meyers Canyon drainage courses in their natural conditions and minimizes impacts on natural topography.
- Maintains significant natural drainage courses within the proposed development area to enhance water quality.

The overall goals of the site-specific grading guidelines are to minimize the height of visible slopes, provide for more natural-appearing manufactured slopes, minimize grading quantities, minimize slope maintenance and water consumption, and provide for stable slopes and building pads. All preliminary and final grading plans shall be prepared in accordance with the Uniform

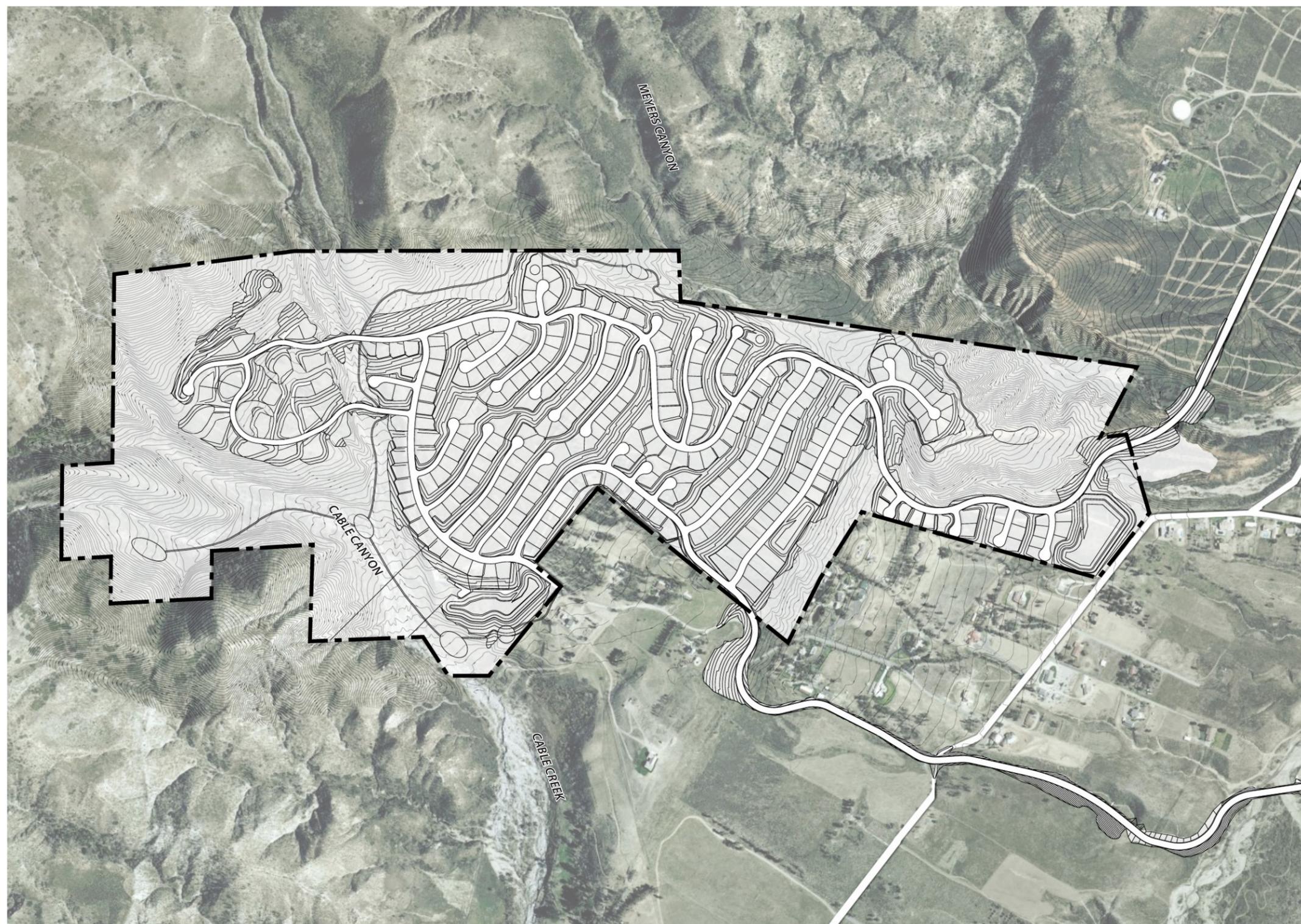
Development Standards

Building Code and Title 15 of the City of San Bernardino Municipal Code, except as modified herein and approved by the City Engineer.

General Guidelines

- Minimize grading where possible.
- Avoid grading in areas where slopes exceed an average of 15 percent, to the greatest extent possible.
- Where a cut or fill slope is privately owned and is adjacent to a lot line, the lot line should be located at the top of the slope. In some cases the property line may be located at the bottom of a slope where the property line extends to a road or the property line may be located in the middle of a slope at a drainage bench to prevent cross-lot drainage.
- Terrace drains and benches shall be added where slope height exceeds 30 feet, in accordance with the Uniform Building Code. In some instances, benches should be widened to provide for dual use as a recreation trail.
- Existing significant drainage courses shall be maintained as much as possible.
- Final grading design shall adhere to the final soils report recommendations.
- Grading shall be performed under the supervision of a registered soils engineer.
- Final grading plans shall be prepared and certified by a registered civil engineer and registered geotechnical engineer in the State of California Board of Professional Registration and approved by the City Engineer.
- Prepare and process a stormwater pollution prevention plan (SWPPP) prior to grading.
- Preserve the natural terrain as much as possible by focusing development in the development footprint shown on Figure 2.1.

Figure 3.29 Conceptual Grading Plan



Legend

-  Proposed Contour
-  Existing Contour
-  2:1 Slope

Development Standards

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- Retaining walls may be used to minimize slope heights, especially in areas that are not visible from public rights-of-way.
- Earth retention systems, where slopes can be planted to blend with the natural terrain, should be used where possible.
- All cut-and-fill slopes shall be revegetated to control erosion.

Water Plan

The City of San Bernardino Municipal Water Department (SBMWD) will provide water services to Spring Trails and currently provides service to pressure zones ranging from 1,249 feet to 2,300 feet. Spring Trails lies between the 2,300 to 3,000-foot pressure zones. The nearest existing reservoir is the Meyers Canyon Reservoir, which is within the 2,100-foot pressure zone but is not adequate for buildout of Spring Trails or Verdemont Heights. Therefore, water will be supplied to Spring Trails from lower elevations by a combination of expanding and improving the off-site water system and the provision of on-site reservoirs and transmission lines.

As shown on Figures 3.30A and B, *Conceptual Water Plan*, off-site improvements include the creation/improvement of a series of pump stations and transmission lines in Verdemont Heights. In addition, SBMWD has identified the need for additional reservoirs.

Based upon the projected buildout of Spring Trails, the maximum daily demand is 568 gallons per minute (gpm). The on-site water facilities necessary to serve the total water demands of Spring Trails include three reservoirs in the 2,500, 2,700, and 3,000-elevation pressure zones as well as transmission lines traversing the project. The storage requirements for each pressure zone are detailed on Table 3.8. In addition, the water system serving Spring Trails and the locations of the reservoirs are shown on Figures 3.30A and B.

The water facilities for Spring Trails were sized per SBMWD guidelines and to meet maximum demand in addition to fire flow requirements (see Table 3.9). Pumping stations shall be designed with 100 percent redundancy in the event that one or more of the pumping units fails, and shall be equipped with on-site generators that can operate in a blackout or emergency condition.

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Table 3.8 On-Site Water Storage Facilities

Pressure Zone	2,300	2,500	2,700	3,000
Units	11	24	137	135
Maximum Daily Demand (gpm)	20 gpm	44 gpm	254 gpm	250 gpm
Emergency Storage ¹	28,800 glns	63,360 glns	365,760 glns	360,000 glns
Operational Storage ²	7,200 glns	15,840 glns	91,440 glns	90,000 glns
Fire Flow Storage ³	360,000 glns	360,000 glns	360,000 glns	360,000 glns
Total Storage Required	396,000 glns	439,200 glns	817,200 glns	810,000 glns
Storage Provided ⁴	4,000,000 glns	2,500,000 glns	900,000 glns	900,000 glns

glns = gallons; gpm = gallons per minute

¹ Equivalent to one full day of maximum demand

² Equivalent to 25% of one full day of maximum demand

³ Fire flow required of 1,500 gpm for four-hour duration

⁴ Includes on and off-site reservoirs serving the Spring Trials (2007 SBMWD Master Plan)

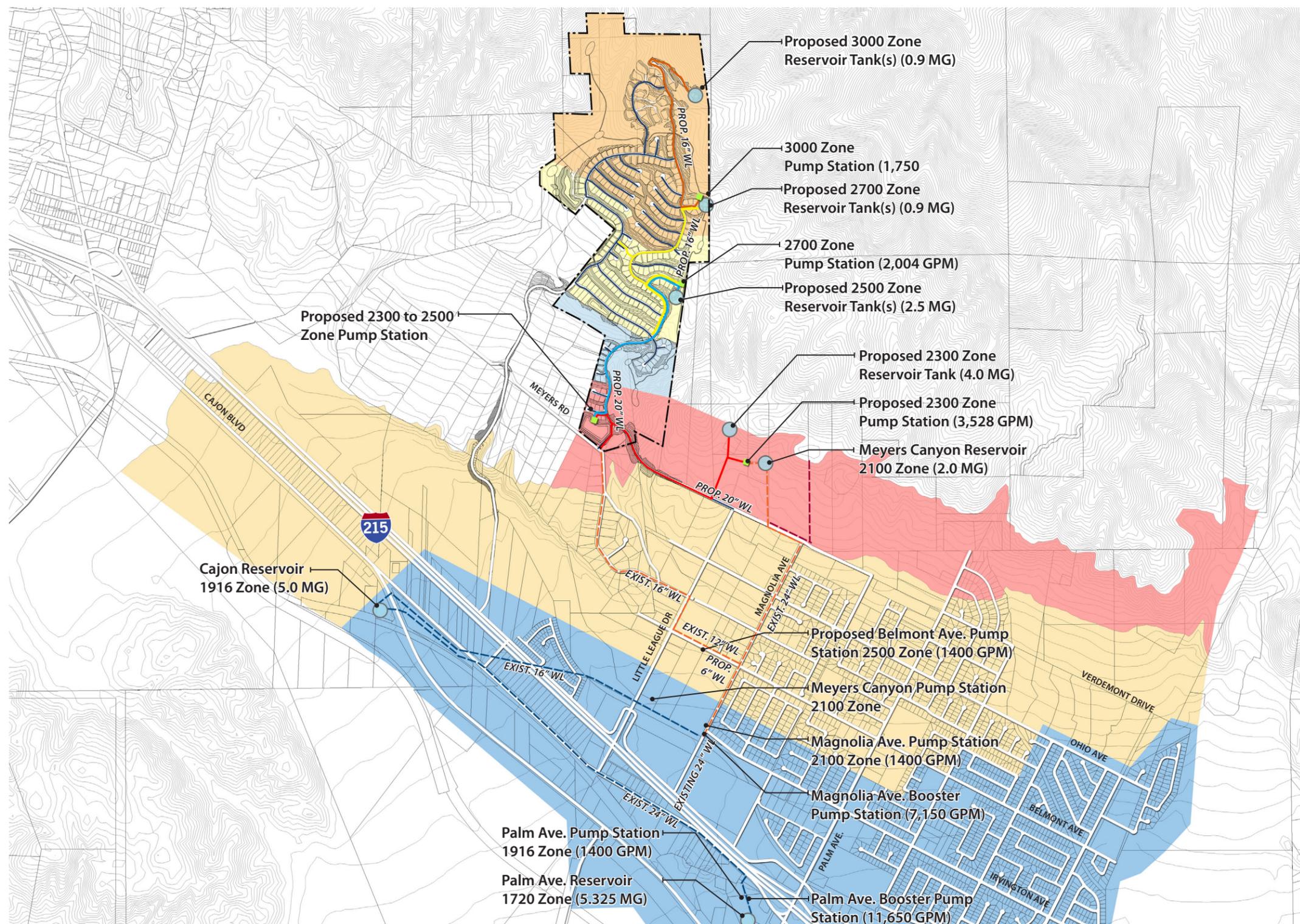
Table 3.9 On-Site Water Pumping Requirements

Pressure Zone	2,300	2,500	2,700	3,000
Units	11	24	137	135
Maximum Daily Demand (gpm)	20 gpm	44 gpm	254 gpm	250 gpm
Fire Flow Requirement	1,500 gpm	1,500 gpm	1,500 gpm	1,500 gpm
Total Capacity	2,048 gpm	2,004 gpm	1,750 gpm	NA

Hp = horsepower

The details of all water facilities, their sizing, and hydraulic analysis can be found in the CDM report (October 17, 2003) and Dexter Wilson report (December 30, 2003) in the EIR appendices.

Figure 3.30A Conceptual Water Plan



Legend

- Future 3000 Zone WL
- Proposed 2700 Zone WL
- Proposed 2400 Zone WL
- Proposed 2100 Zone WL
- Proposed 1916 Zone WL
- Existing and Proposed 2300 Zone WL
- Existing 2100 Zone WL
- Existing 1916 Zone WL
- 3000 Pressure Zone (135 units)
- 2700 Pressure Zone (137 units)
- 2500 Pressure Zone (24 units)
- 2300 Pressure Zone (11 units)
- 2100 Pressure Zone
- 1916 Pressure Zone



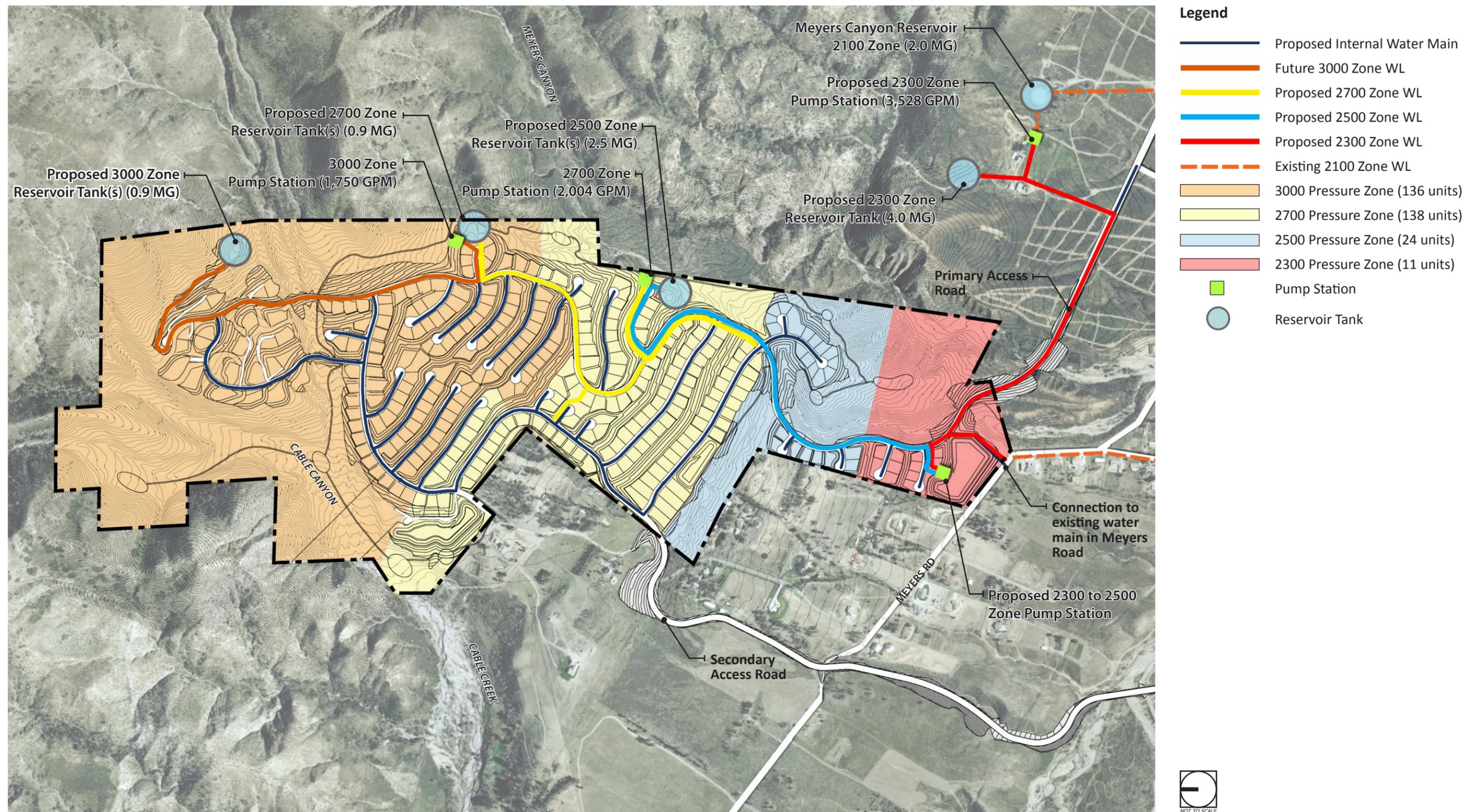
NOT TO SCALE

Source: PBS&J, 2005 and Litchfield, 2009

Development Standards

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Figure 3.30B Conceptual Water Plan



Development Standards

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Drainage Plan

Existing Conditions

The drainage area to which Spring Trails belongs flows into Cable Canyon, then into Cable Creek, then into the Devil Creek Diversion Channel, then into the Lytle Creek Wash, and eventually into the Santa Ana River. On the site itself, there are four major drainage patterns affecting Spring Trails, as shown on Figure 1.5:

- **Drainage area A.** A 2,030-acre drainage area (148.9 acres on-site and 1,881 acres off-site) that includes the west and east forks of Cable Canyon, and an unnamed blue-line stream that drains into the project from the east in a southwesterly direction. The west fork flows south through the property and meets the east fork flowing from the east. The east fork enters the property from the east as two drainages, which merge approximately 600 feet west of the eastern property boundary.
- **Drainage area B.** A 63.7-acre watershed (51.6 acres on-site and 12.1 acres off-site) comprised of surface flow drainage that flows southwesterly through the center of the site and ultimately into Cable Creek.
- **Drainage area C.** A 198.2-acre watershed (128.4 acres on-site and 69.8 acres off-site) that consists of off-site surface flows and a defined drainage course that run onto the site and exit through the southern part of the project.
- **Drainage area D.** A 341.6-acre drainage area (21.8 acres on-site and 319.8 acres off-site) that includes drainage from Meyers Canyon.

Proposed Drainage Facilities

The proposed drainage improvements are shown on Figure 3.31, *Conceptual Drainage Plan*. The drainage concept for Spring Trails is designed to either maintain natural drainage courses or capture both on- and off-site stormwater flows and route them through a series of catch basin inlets and storm drain systems, which convey water to three on-site detention basins where it is treated and discharged at a controlled rate into Cable Canyon. The following is a description of the proposed drainage facilities for each drainage area discussed above:

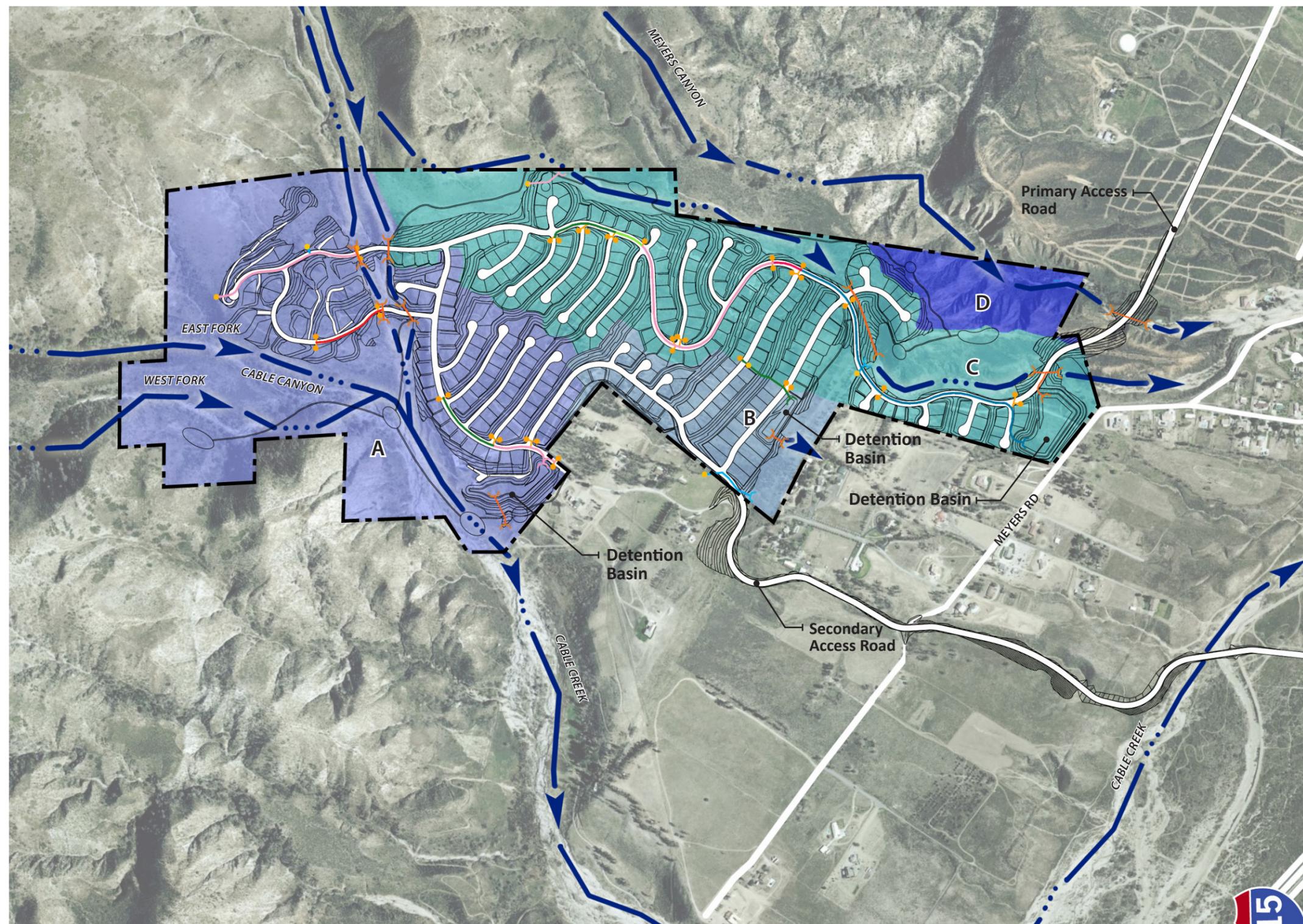
- **Drainage area A.** Runoff in drainage area A is handled from a combination of undisturbed watercourses, detention basins, rain gardens, and media filtration systems.
 - The significant drainageways in the northern part of Spring Trails remain virtually untouched. The two forks of Cable Canyon will

Development Standards

remain undisturbed through the Spring Trails site while the unnamed tributary, which enters the property from the east as two drainages, remains undisturbed except for those portions flowing through culverts under two streets.

- Drainage from a 35.6-acre developed area is routed into detention basin A, which is on the western edge of the site and discharges into Cable Canyon.
- The flows from the areas north of Cable Canyon are not routed into a detention basin; instead, each residential lot will be designed with a rain garden to treat the flows on the residential lot. Media filtration devices will be used to treat the flows on the streets prior to discharging into Cable Creek. In all, 39.3 acres in the northern portion of the project, including 15.1 acres of off-site drainage, are handled in this manner.
- **Drainage area B.** Drainage area B is divided into two areas that handle flows from a developed area and an undeveloped area.
 - Drainage from a 21.8-acre, on-site, developed area is routed into detention basin B, which is located on the southwestern edge of the site and discharges into a natural flow line and ultimately into Cable Canyon.
 - Drainage from an undeveloped 17.5-acre area, which includes both on- and off-site lands, flows under a new street and is discharged into an existing flow line south of the site and ultimately into Cable Canyon.
- **Drainage area C.** Drainage area C is a 209.8-acre area that includes both on- and off-site lands.
 - Drainage from a 96.8-acre, on-site, developed area drains into detention basin C, which is located in the southwestern corner of the project and eventually discharges into an unnamed flow line west of Meyers Creek and into Cable Creek.
 - Drainage from a 107.8-acre undeveloped, on- and off-site area flows south through a culvert under the primary access street.
- **Drainage area D.** Drainage area D is made up of Meyers Canyon and its tributary areas along the southeastern edge of the site. This drainage area consists of a total of 339.3 on- and off-site acres (319.8 off-site acres and 19.5 undeveloped on-site acres). Drainage from this area flows through a culvert under the primary access street and eventually into Cable Creek.

Figure 3.31 Conceptual Drainage Plan



Legend

- 24-inch RCP
- 30-inch RCP
- 36-inch RCP
- 42-inch RCP
- 48-inch RCP
- 60-inch RCP
- Other RCP
-  RCB Culvert
-  Catch Basin with Lateral
- Drainage Area A
- Drainage Area B
- Drainage Area C
- Drainage Area D

RCP Reinforced Concrete Pipe
RCB Reinforced Concrete Box



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The proposed storm drain system for Spring Trails will reduce the risk of flooding within the project through the following:

- The drainage system and detention basins will reduce stormwater runoff from the site to levels at or below those that existed prior to the project.
- The proposed storm drain system will be able to convey the on- and off-site flow to downstream discharge points.
- Construction of the storm drain system will ensure the conveyance of the 100-year runoff away from the project site, and the conveyance of off-site flow through the site to existing natural channels, thereby eliminating flooding hazards.

Drainage outlets, energy dissipaters, extended detention basins, rain gardens, media filtration units, and other drainage facilities will be designed to control urban runoff pollutants caused by the development of the project. In addition, site designs that reduce urban runoff and pollutant transport by minimizing impervious surfaces and maximizing on-site infiltration have been incorporated into the project. A Water Quality Management Plan (WQMP) that includes best management practices (BMPs) has been prepared for Spring Trails in accordance with the Santa Ana Regional Water Quality Control Board. The WQMP can be found in the EIR appendices.

Spring Trails will include BMPs designed to reduce the volume, rate, and amount of stormwater runoff that must be treated, and reduce the potential for urban runoff and pollutants to come into contact with one another. Some of the BMPs that may be incorporated into Spring Trails include:

- Infiltrating roof runoff into landscaped areas.
- Rain gardens.
- Media filtration units for street flows that are not treated by a detention basin.
- Hydrodynamic separation and pollutant screening.
- Efficient irrigation systems and landscape maintenance.
- Common-area litter control.
- Sweeping of public and private streets and parking lots.
- Drainage facility inspection and maintenance.
- Municipal Separate Storm Sewer System (MS4) stenciling and signage.

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- Protection of slopes and channels with riprap, landscaping, and other appropriate methods.

As described in Section 2, Cable Canyon and Meyers Canyon are identified as 100-year flood zones. The 100-year flood levels are constrained to the deep channels of the creeks and development is located to avoid these areas and minimize road crossings.

Sewer Plan

The Spring Trails project lies within the City of San Bernardino sanitary sewer service area. A sewer capacity study was conducted by Rick Engineering (see EIR Appendices) that concluded that the existing sewer system has the capacity to accommodate the development of Spring Trails.

A general layout of the sewer system is shown on Figure 3.32, *Conceptual Sewer Plan*. Spring Trails will connect to the City's existing 10-inch sewer line in Little League Drive, which then connects to a major interceptor system to the south and is eventually treated in the San Bernardino Water Reclamation Plant. The only offsite improvement that may be required is North Little League Drive, which may be upgraded from an 8" to a 10" line depending upon the ultimate slope as determined in final engineering.

The sewer facilities will be designed and constructed in accordance with the City of San Bernardino standards and specifications and in accordance with the *Standard Specifications for Public Works Construction* (latest edition). The sewer mains will be located in public street rights-of-way where possible. If not, they will be constructed within dedicated public utility easements. The sewer system will be dedicated to and maintained by the City of San Bernardino.

Dry Utilities

Spring Trails will be served with electric, gas, water, sewer, solid waste collection, telephone cable, and Internet (data) from companies serving the City of San Bernardino, as shown in Table 3.10.

Table 3.10 Utility Providers

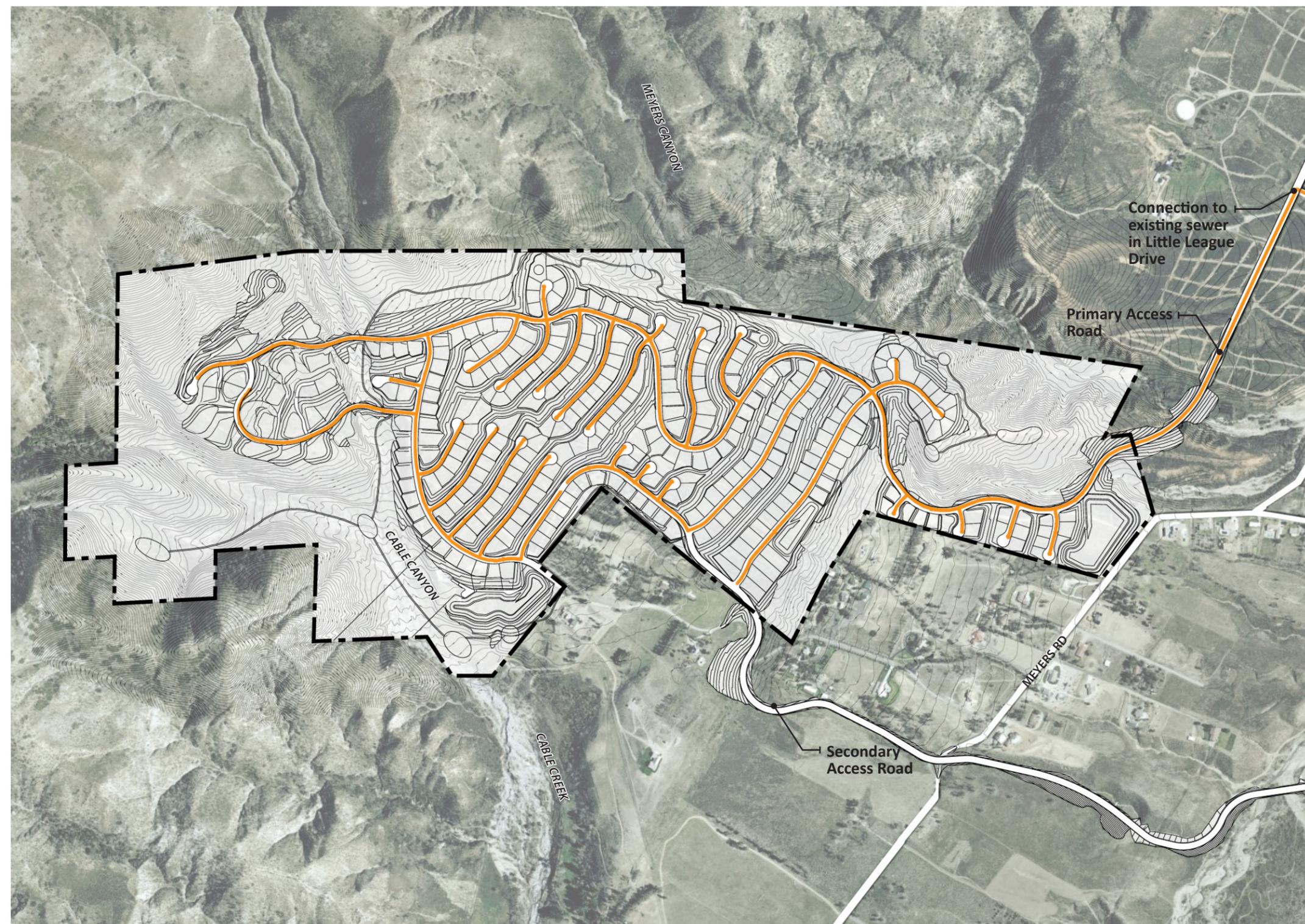
Utility	Provider
Electricity	Southern California Edison
Gas	Southern California Gas Company
Water	San Bernardino Municipal Water Department
Sewer	San Bernardino Public Works Department
Solid Waste Collection	City of San Bernardino Refuse & Recycling Division
Telephone	Verizon
Cable	Charter Communications

SCE owns three 112 kv transmission lines that run north–south along the western boundary of Spring Trails. SCE also has an access easement over the project site to service these transmission lines. The easement will be relocated to accommodate the transmission lines underground within the project. This design will be finalized during the final engineering stages of the project approvals.

Development Standards

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Figure 3.32 Conceptual Sewer Plan



Legend

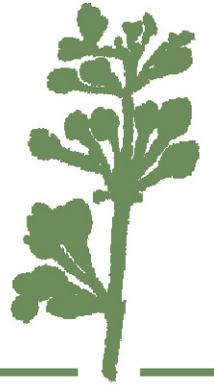
 Proposed Sewer Main

Development Standards

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Section 4

DESIGN GUIDELINES



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DESIGN GUIDELINES

Introduction

The Spring Trails Design Guidelines provide general criteria for architecture, landscaping, entry monumentation, walls and fences, and other design elements in order to ensure a high quality development and strong community character. The overall goal of these Design Guidelines is to create an attractive and distinct community within the City of San Bernardino and adhere to Verdemon Area Plan policies in the General Plan.

These guidelines are intended to:

- Provide guidance to builders, engineers, architects, landscape architects, and other professionals in order to obtain high quality design.
- Provide the City of San Bernardino with the necessary assurances that the Spring Trails community will be developed in accordance with a certain quality and character as set forth in this document.
- Integrate areas of development with open space areas in a manner that provides a natural transition between the two elements.

The Design Guidelines are intended to be flexible and work in concert with the Development Standards contained in Section 3. Variation and customization within the context of the guidelines is encouraged in order to achieve individually distinctive neighborhoods complemented by recreational amenities. These guidelines shall be followed in the design and buildout of the community—they shall not be viewed as voluntary. These guidelines shall be implemented through the review of development plans through the building permit process.

Format

The Design Guidelines are arranged to first address aspects at the community-wide level and then at the residential level. The community-wide design guidelines address the layout and design of the entire community including common landscape and streetscape treatment. At the residential level, the guidelines address details such as orientation, massing, and architectural treatment.



Examples of the quality of residential design expected in Spring Trails.

Community-Wide Design Guidelines



Community-wide guidelines apply to Spring Trails as a whole. They are intended to create a strong community identity through the use of consistent streetscape, entry monumentation, landscaping, and lighting elements. The landscape design concept and plant palette for Spring Trails can be found in Section 3.

Entries and Monuments

The character of the community entries should be simple and restrained according to an identifiable hierarchy within Spring Trails. Entries are intended to enhance the community architectural theme and provide community identity.

The entry treatments described below provide the desired quality of the entry monument types. The exact design, configuration, and content of each will be determined in detailed site plans with detailed landscape plans.



Entry monuments should use natural materials.

Primary Entry Monument

The primary entry monument is the most prominent in Spring Trails and represents the most significant design treatment. The primary entry monument will be located off the primary entry road near Neighborhood Park I. The landscaping at the primary entry, in concert with the signage, lighting, and hardscape elements, will form the scenic gateway into Spring Trails.

The primary entry monument should incorporate distinctive signage, attractive landscaping, and distinguishing elements. These may consist of a stone veneer wall and landscaping that includes a large specimen tree. Please see Figure 4.1 for the primary entry monument concept.

Secondary Entry Monument

In addition to the primary entry monument, Spring Trails will feature a smaller monument located where the secondary entry road intersects the western project boundary.

The secondary entry monument should consist of a small-scale pilaster monument within a distinctive landscaped area. The secondary entry should reflect the character and materials of the primary entry monument using trees, shrubs, groundcover, signage, and lighting. Refer to Figure 4.2 for a secondary entry monument concept.

Figure 4-1: Primary Entry Concept

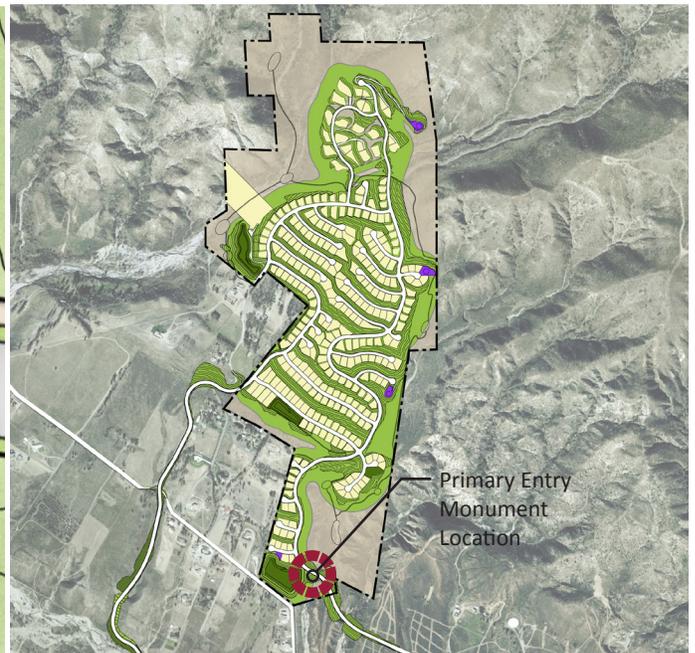


Plan View



Not to Scale

Location Map



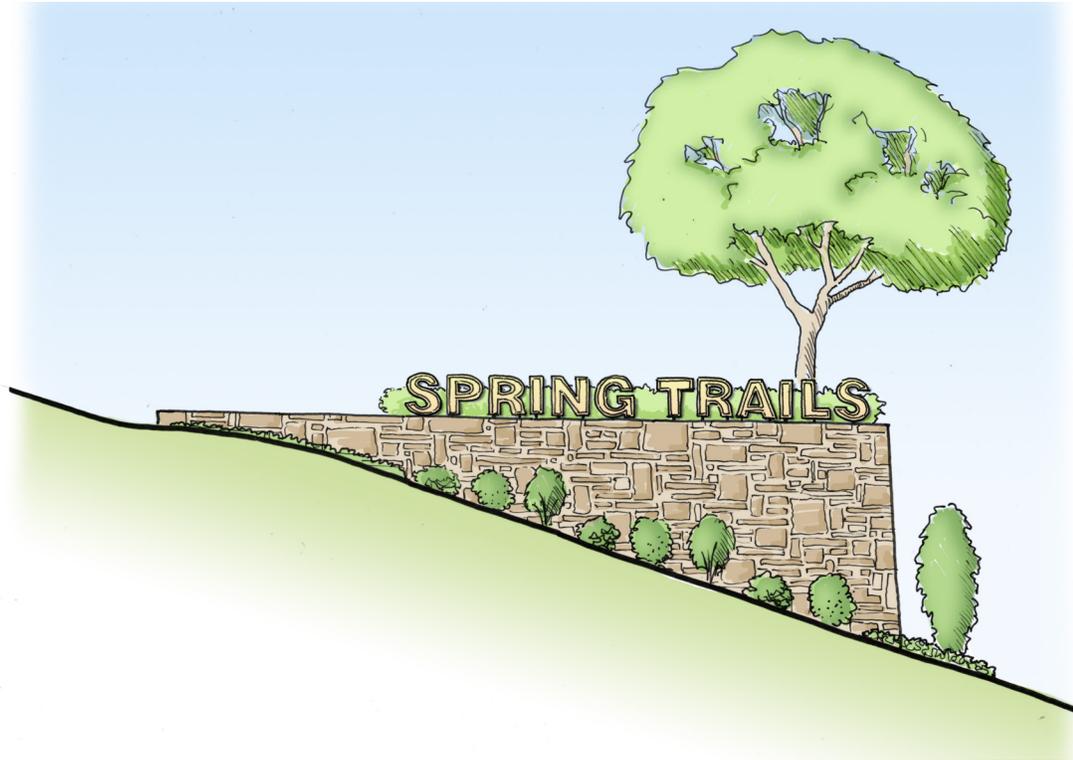
Primary Entry Monument Location

Note: This illustration is conceptual in nature and is intended to show the range of facilities accommodated within the feature and potential arrangement of improvements. The exact size, configuration, and level/type of the improvements will be determined during the grading and building permit process.

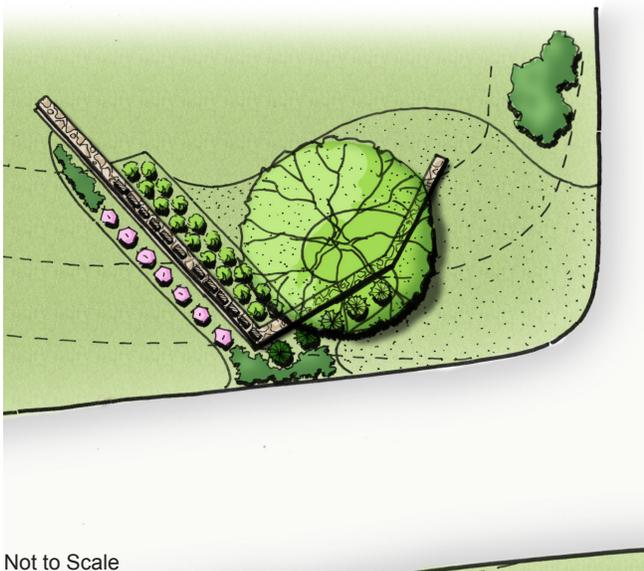
Design Guidelines

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Figure 4-2: Secondary Entry Concept



Plan View



Not to Scale

Location Map



Note: This illustration is conceptual in nature and is intended to show the range of facilities accommodated within the feature and potential arrangement of improvements. The exact size, configuration, and level/type of the improvements will be determined during the grading and building permit process.

Design Guidelines

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Landscaping

Landscape within Spring Trails will be planted with combinations of evergreen and deciduous canopy trees with flowering evergreen shrubs and groundcovers. It is intended that the landscape provide a theme and continuity throughout Spring Trails, enhance desirable views, screen undesirable views, beautify and control erosion of graded slopes exposed to public views, preserve existing landscape material (whenever possible), and enhance interfaces between graded and natural open space areas. Landscaping for streets within Spring Trails is discussed in the Landscape Plan section of Section 3.

- Streetscape elements, such as landscaping, lighting, street furniture, and signage, should create an attractive, consistent, and cohesive community image.
- Streetscape elements, such as lighting, landscaping, and street furniture, should complement the surrounding architectural styles.
- Special patterned paving should be provided at important intersections and trail crossings within the Specific Plan area.
- All landscaping shall comply with the approved trees, shrubs, and groundcovers listed in Table 3.6, *Landscape Zones Plant Palette*.
- Landscaping along major streets and at project entries should be tasteful and consistent to create an attractive and cohesive community identity. Formal plantings of nonnative species may be used at key entries and intersections to highlight these areas.
- Water usage should be minimized through the planting of native and low-water species and the utilization of water-efficient and drip irrigation systems.



Landscaping plays a critical role in the character of a development and must be thoughtfully integrated into a community.



Walls and Fences

Walls and fences will predominantly be located around the perimeter boundaries of individual residences where they interface with open spaces, streets, parks, or off-site land uses. Excessive use of walls and fencing can impair the aesthetic quality of Spring Trails and, therefore, shall be carefully designed to complement the setting and community theme.

- Solid walls and fences should not dominate the street scene. They should only be used when necessary for noise attenuation, privacy, and shielding of incompatible adjacent uses.



Perimeter walls (top) and view fencing (bottom) should blend in with the surrounding landscape and architecture.

Design Guidelines



Examples of the types of thematic fencing and gates that should be used in Spring Trails.

- Wall faces that are visible to the public should be constructed of attractive materials and finished with architectural detailing or articulation. The incorporation of high quality materials and surface articulation are strongly encouraged. Walls and/or wall surfaces not visible to the public do not need the same high level of detail.
- Pilasters should be incorporated into wall design, especially at entries and important community intersections. Pilaster placement shall conform to the City of San Bernardino Municipal Code.
- Trees, vines, and landscaping should be used to soften the visual appearance of the walls.
- Where solid walls are necessary, split-face block, stone, or materials with similar visual qualities should be used.
- Long, monotonous walls are to be avoided. Walls should be modulated with breaks, recesses, and offsets, especially at entries and important intersections. Long walls should be made more attractive and visually interesting through the incorporation of surface articulation and pilasters.
- View fences provide a visually attractive alternative to solid walls and fences. They allow for safety and privacy while preserving views and creating a more visually appealing neighborhood. View fences should be used instead of solid walls when feasible, especially when facing onto parks and trails.
- View fences should incorporate visually attractive materials such as tubular steel, decorative metal, and/or stone (or faux-stone). Glass or acrylic panels are not permitted. If the site conditions permit, the first two to three feet of a combination view fence shall be a concrete block wall, with the base portion of the wall being split-face block, stone, or materials with similar visual qualities.
- Thematic fencing (e.g., split-rail fencing constructed of woodcrete or vinyl) should be used as a separation between decomposed granite paths adjacent to streets or as safety barriers. The exact location of the fencing shall be approved during the final tract process in coordination with the Parks and Recreation Department and the Development Services Department.
 - Fencing should be three to four feet high, depending on slope and site conditions.
 - To accommodate wildlife movement and avoid its excessive use, fencing is not necessary along trails in the areas designated Open Space (natural or controlled) and should only be used to

- provide separation between streets, properties, sensitive habitat, or parks.
- An appropriate substitute (plants, rocks, etc...) may be used instead of fencing.
- Entrances to the trails should be designed with a gate or feature to restrict access to motorized vehicles to essential emergency or maintenance vehicles.

Lighting

Lighting within Spring Trails is intended to help define vehicular and pedestrian circulation patterns, provide safe pedestrian movement, distinguish community entries and activity areas, and contribute to the overall landscape theme of the community. The goal is to provide a sense of place by varying fixtures and illumination levels.

- Attractive and consistent lighting elements should be provided along streets within the neighborhood. The height, brightness, and spacing of the lighting elements should be appropriate to the scale and speed of the street.
- Lighting fixtures should be compatible with the architectural styles of surrounding buildings and yet consistent throughout the community.
- Entry areas (both pedestrian and vehicular) and highly used recreation areas shall be creatively lit to develop a sense of place and arrival.
- All exterior lights shall be shielded and focused to minimize spill light into the night sky or adjacent properties.
- The lighting concept of the entry monuments is to illuminate the sign graphics and gently wash the site elements, walls, and pilasters with light.
- Lighting standards should be consistent with City safety and illumination requirements for rural areas.
- Wall-mounted lighting fixtures shall be selected according to the individual style of the building.
- Exterior lighting on homes should be set to automatic timers.
- Provide low-contrast lighting and use low-voltage fixtures and energy-efficient bulbs, such as compact fluorescent (CFL) and light-emitting diode (LED) bulbs.



Examples of the types of lighting in Spring Trails.

Design Guidelines

- Refer to Section 5, *Sustainability*, for additional standards and guidelines pertaining to lighting within Spring Trails.
- Refer to the Residential Design Guidelines for design guidelines pertaining to lighting fixtures placed on homes.

Parks

- Recreation and open space areas should be designed to accommodate the needs of different ages and abilities.
- Canopy trees should be used to provide shade. Informal groupings create visual interest and are encouraged.
- Ample outdoor furniture should be provided. This furniture should match the surrounding architectural styles, materials, and colors.
- A combination of hard and soft paving may be used depending on the function of the recreational amenity.
- Active areas may utilize turf, grasses, and ornamental plantings. Passive areas should primarily be composed of drought-tolerant species.

Common Recreation Facilities

Common recreation facilities may include picnic shelters, barbecue areas, or other such amenities and facilities, as appropriate to the community. Because common facilities act as key character elements in neighborhoods, the following should be considered when designing such facilities:

- Structures should exhibit a high level of quality and attention to detail on all visible sides of the structure.
- All architectural and community elements, such as street furnishings, benches, and lighting standards, should be consistent with the selected overall architectural character of the community.

Graded Slopes

- Where feasible, grading shall be minimized by following the natural ground contours.
- Human-made landforms shall be graded to avoid unnaturally sharp or straight edges and planes. The top and toe of graded slopes shall be rounded to avoid harsh, machine-made appearance.
- Significant natural vegetation should be retained and incorporated into the project whenever feasible.

- All graded slopes shall be stabilized and planted with the approved trees, shrubs, and groundcovers listed in Table 3.6, *Landscape Zones Plant Palette*.

Residential Design Guidelines

Creating street scenes that function aesthetically and have visual interest is a primary community objective. The following basic elements and criteria are intended to develop variations in appearance and a sense of individuality for each home. Neighborhoods that have nearly identical homes and streets without variation in product placement and form are not allowed.

Building Level Guidelines

Architectural Style

- The massing, character, and detailing of the architectural styles should be as authentic to the selected styles as possible. However, contemporary adaptation of traditional vernacular styles is acceptable.
- The choice of architectural expression must be derived primarily from the respective building typology (e.g., row towns, courtyard buildings, single-family homes). Architectural styles should be accurate and appropriate for the building typology. Refer to the Architectural Styles section at the end of this section.
- Use architectural elements that form an integral part of the building and avoid ornamentation and features that appear to be cheap and tacked on.

Building Orientation

- Use residential entrances to activate the street, and utilize elements such as canopies, porches, stoops, trellises, and courtyards as transitional spaces between the private and public realms.
- Orient buildings to face streets, parks, and open spaces/trails. This orientation will create more attractive, safe, and pedestrian-friendly streetscapes and public spaces.

Variety and Aesthetic Quality

- A variety of single-story heights and profiles should be provided while stepping back second-story massing where appropriate.

Design Guidelines

- Each residence should include at least one significant single-story element on an exposed front or side elevation, such as:
 - Front or wraparound porch (minimum 6 feet deep and 10 feet wide)
 - Roofed porte-cochere
 - Single-story living space in conjunction with a second-story recess of at least 5 feet
 - Pop-out gable element, enclosed or open
- Adjacent homes of the same architectural style should not have identical elevations or colors. Rather, a rich variety of architectural styles, elevations, colors, and detailing is encouraged.
- Porches, detailed entries, and stoops add to the character of a neighborhood and should be incorporated. These features should be varied along the street to create visual interest. If possible, these features should project forward of a front-entry garage door.
- Entry features, such as gates, trellises, arches, and arbors should be employed to add visual interest and variety within the neighborhood.
- Variation in floor plans, unit types, roof forms, colors, and materials adds character and visual interest to a neighborhood. Two identical units may not be placed adjacent to each other.
- Exercise creativity and individual expression in conceiving and interpreting architectural form.
- Apply massing breaks, such as eroded building corners and entry courts, to promote visibility and allow block transparency. Create variety in building mass by providing adequate vertical and horizontal offsets.

Environmental Considerations

- Where possible, building articulation and form should be expressive of and driven by environmental and site conditions such as solar orientation, views, noise, prevailing winds, and local climate. Plan forms that employ features such as courtyards, plazas, and patios are encouraged.
- Builders are encouraged to incorporate sustainable design features. Refer to Section 5, *Sustainability*, for more detailed guidelines.

Enhanced Architectural Treatment

- Neighborhood quality is enhanced by adding a home plan designed specifically for a corner condition, or by enhancing an interior lot plan

for use on the corner, with additional architectural elements and/or details found on the front elevation.

- Buildings plotted at corner locations become important design features. These areas are focal points in the streetscape and as such should be places for architectural elements such as articulation, corner glazing, color, and material accents.
- All corner homes should include wrapping materials and continued articulation around to the side façade. All material changes shall occur on an inside corner such as a porch, fireplace, niche, bay window, etc., or coincide with an architectural element that conceals the material change.

Roofs

- Roof forms of each home should be appropriate to the architectural style.
- A variety of roof forms is encouraged to provide visual interest to the neighborhood and to avoid a monotonous roofline.
- Roofs should exhibit variety between different plans by using front-to-rear and side-to-side gabled and hipped roofs and/or by the introduction of single-story elements.
- Overly complex and distracting roof forms are discouraged.
- High-quality composition, concrete, or clay tiles should be used in conjunction with the style of the home.
- Roof materials, colors, and treatments should correspond to the individual character or style of the home or building and should be compatible with the overall look of the neighborhood.
- Skylights and roof vents are prohibited on sloped roofs facing public streets.

Garages

- The front elevation should focus on the home, not the garage.
- Garage wall planes on front elevations should be recessed.
- Garage door surrounds should be articulated with trellises, trim, enhanced materials, or other methods to help minimize the architectural impact of the garage door.

Design Guidelines

- Garage door appearance should be varied by using door patterns, colors, and windows appropriate to individual architectural styles.
- The installation of elements such as an attached trellis beneath a single-story garage roof fascia and/or trims above the garage door header, or landscaped pockets along driveways is encouraged.

Colors and Materials

- Each elevation should have a minimum of three colors; four is preferred. For example, one field color, one trim color, and two accent colors. This helps to establish variation among architectural styles and products within a neighborhood and community.
- Each neighborhood shall have a minimum of three different roof colors and profiles.
- Individual single-family homes shall not have identical color schemes adjacent to one another.
- Hue variation in adjacent homes shall be provided to create diversity within the neighborhood.
- Use materials, colors, and details to enrich building character and emphasize human scale by employing rich, durable, and high quality finishes at the street level.
- Materials shall be fire resistant per the fire protection plan in Section 3.
- Accent materials should be used to enhance and reinforce the architectural style and composition of individual homes and should provide variety in the street scene. Selective use of appropriate materials, color, and placement can provide maximum impact while imparting a sense of unique character to each home.
- Natural stone, approved manufactured or cultured stone, painted or natural brick, precast concrete, ceramic tile, slump block, and fire-resistant horizontal or vertical wood siding or approved manufactured siding (e.g., cementitious board) are encouraged.
- Culmination of accent materials shall terminate at inside corners or coincide with an edge or architectural element to conceal changes in material. Where views are limited or edges concealed by an architectural element, accent materials should terminate at privacy wall conditions.

Doors, Windows, and Entries

- Doors shall be protected by a deep recess, porch, or other covered element.
- The home entry should be considered a focal point when designing the front elevation.
- Proportions and alignment shall be appropriate to individual architectural styles.
- Highly reflective glazing is prohibited.
- Recessed windows shall be a minimum of two inches in depth.
- Recessed windows are encouraged to be 12 inches or greater in depth if appropriate based on architectural style.
- Style-appropriate grates, shutters, and tile surrounds are encouraged.
- Direct alignment of windows between homes shall be avoided to ensure privacy.
- Provide articulation and rhythm of windows, doors, and balcony openings, using a variety of devices such as canopies, awnings, or railings.
- The placement of windows should be designed to work with interior uses and to provide “eyes on the street.”

Rakes and Eaves

- Where appropriate to individual style, larger eave overhangs are encouraged to provide opportunities for shading and relief.
- When exposed, rafter tails shall be a minimum of four inches and painted or stained.

Articulation and Detailing

- Articulate elements such as roof overhangs, canopies, and parapets to add interest to building silhouettes.
- Varied architectural detailing and projections should be used to accentuate specific features and ensure a visually pleasing and varied experience. Architectural projections may include elements such as cantilevered massing, secondary roof changes, and bay windows.

Design Guidelines

- The second-story portion of all elevations of homes shall include a variety of window treatments, single-story elements, roof projections, etc.
- Architectural trim applied to all elevations is encouraged for consistency with the front elevation and architectural style.

Balconies

- Balconies are encouraged for both aesthetic and practical purposes. They are useful in breaking up large wall planes, offsetting floors, providing shade, creating visual interest, and adding human scale to a building.
- Balconies should be designed as integral elements with details, eaves, supports, and railings consistent with the architectural style and other elements of the building design.
- Balconies should be partially recessed into the mass of the building or serve as a projecting element.

Exterior Lighting Fixtures

- Where fixtures are not an important focal point, light sources shall be concealed and concentrated.
- Lighting used on walls and walkways shall focus light downward and provide appropriate down-casting hardware to minimize glare.
- Ambient light shall be cast downward to reduce the impact on the neighborhood.
- Surface-mounted lights shall not be permitted in garage door soffits.
- Wall-mounted lighting fixtures shall be selected according to the individual style of the home or building.

Screening

- Storage and maintenance areas and other ancillary uses shall be screened from public view whenever reasonably possible.
- Accessory structures, such as storage areas, refuse receptacles, mechanical equipment, parking structures, backflow preventers, loading docks, security fences, and similar uses can seriously detract from the visual quality of an area. Therefore, care must be taken to minimize the visual impact of these uses through site design and visual shielding. When possible, these uses should be located away from roadways and public views, behind buildings, or in enclosed structures. Effective

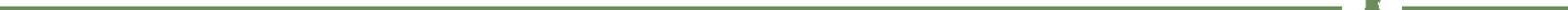
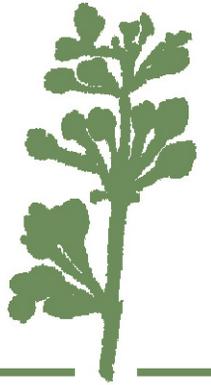
shielding methods include landscaping, berms, walls and fences, and ornamental screening.

- Accessory structures should be designed to look like a continuation or extension of the primary structure. They should have architectural detailing and landscaping similar to the primary structure.
- Any equipment mounted on the roofs shall be screened to minimize its visibility from the street.

Design Guidelines

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Section 5
SUSTAINABILITY



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SUSTAINABILITY

Intent and Application

The 1987 Bruntland Report of the United Nations World Commission on Environment and Development defines sustainability as “meeting the needs of the present without compromising the ability of future generations to meet their own needs.” A goal of Spring Trails is to create a sustainable and resource-efficient community.

These guidelines establish a framework that is to be used to evaluate how proposed developments meet the objectives for sustainable development. Future developers must demonstrate compliance with these guidelines through the development review process and proposals will be evaluated based upon compliance with those measures labeled “required” and the incorporation of any measures labeled “suggested” in this section.

An additional resource, the Sustainability Resource Guide, which is a list of providers and entities that offer green building and sustainability programs, is provided at the end of this section.

Green Infrastructure

Green infrastructure integrates natural systems and capitalizes on opportunities for creating multipurpose systems, thereby using land and resources more efficiently. Implementing green infrastructure and related methods for watershed management improves water quality, conserves water, and reduces runoff volumes, peak flows, and durations. In addition to these direct benefits to the watershed, implementing such methods also benefits the quality and availability of biological habitat, provides energy conservation by reducing the heat trapping and impervious areas of typical land development, and can be aesthetically pleasing.

- Required – Divert runoff into detention basins to allow water recharge, reduce drainage runoff, and control the rate of storm flows from the site.
- Suggested – Collect rainwater on-site through the use of stormwater management practices such as the incorporation of infiltration basins and bioswales.



Preserve natural drainage courses to minimize stormwater runoff and provide opportunities for pedestrian and recreational amenities.

Sustainability



Collect water in bioswales to provide a cost-effective alternative to traditional stormwater drainage systems and serve as landscaping buffers.

- Suggested – Grade property to divert stormwater flow to permeable areas, following natural drainage contours to the greatest extent possible.
- Suggested – Where applicable, create curb cuts to allow stormwater flows to drain to permeable or landscaped areas.
- Suggested – Where possible, use pervious or open-grid paving for driveways, walkways, plazas, and parking areas. Implement small-scale design features, such as “Hollywood” or dual-track driveways.
- Suggested – Use pervious paving materials wherever possible to reduce the negative effects of stormwater runoff and to facilitate groundwater recharge.
- Suggested – Utilize bioswales, particularly with native or drought-tolerant grasses, to collect and filter water runoff.

Landscaping

Sustainable landscaping practices help promote water conservation, reduce water demand, and control water and irrigation costs. Efficient irrigation techniques help reduce water demand while sustainable landscape design can lead to the reduction of the heat-island effect (the absorption of solar heat in paved surfaces), improved environmental habitat, and reduced overall maintenance and replacement cost.



Utilize drought tolerant landscaping such as the California buckwheat (Eriogonum fasciculatum).

- Required – Install high efficiency, xeriscape irrigation systems to reduce the amount of water devoted to landscaped areas, such as drip and bubbler irrigation and low-angle, low-flow nozzles on sprayheads.
- Required – Install and correctly program automated irrigation systems to reduce water use.
- Required – Install properly programmed EvapoTranspiration-based controllers on homeowners’ properties. These are weather based controllers with greater efficiency. In addition, supply homeowners with information on how to properly program their controller using the Metropolitan Water District’s guidelines as a reference.
- Required – Install moisture sensors and other similar irrigation technology to ensure that landscaping is watered only as needed.
- Required – Plant selection shall be based on species that are drought tolerant, heat resistant, and hardy. Native plant material should also be closely examined and considered for most landscape areas.

- Required – Prohibit the use of large turf areas in landscaping by substituting water-conserving native groundcovers or perennial grasses, shrubs, and trees.
- Suggested – Trails shall be constructed of pervious materials such as earth or decomposed granite.
- Required – Group plants with similar water requirements together, a technique known as hydrozoning. A plant reference is available from the California Department of Water Resources.
- Suggested – Mulch planting beds and apply compost and environmentally friendly fertilizers to promote healthy topsoil, maximize plant growth, and reduce plant replacement. This also reduces the need for longer or more frequent irrigation run times.



Permeable paving materials allow water and air to filter through to the ground underneath, reducing stormwater runoff and associated need for standard drainage infrastructure.

Building-Level Sustainability

The following are sustainable building practices and techniques that provide safe and healthy living environments.

Building Materials

- Suggested – Use 20 percent locally manufactured and produced building materials, defined as materials manufactured or produced within 500 miles of the project.
- Suggested – Strive to use rapidly renewable or recycled building materials and products for at least 5 percent of the total value of materials. Flooring alternatives like bamboo, wheatboard, and cork are rapidly renewable materials. Linoleum, exposed concrete, and recycled-content ceramic tiles are also desirable materials.
- Suggested – Encourage the installation of insulation with at least 75 percent recycled content, such as cellulose, newspaper, or recycled cotton.



Operable windows allow natural air flow through interiors, reducing energy needed for cooling.

Indoor/Outdoor Air Quality

- Required – Use only flooring and insulation products that are low emitters of volatile organic compounds (VOC) and formaldehyde.
- Required – Use only low- and zero-VOC paints, finishes, adhesives, caulks, and other substances to improve indoor air quality and reduce the harmful health effects of off-gassing.

Sustainability

- Required – In compliance with Air Quality Management District Rule 445, new homes are prohibited from permanently installing wood-burning devices unless: they are Environmental Protection Agency (EPA) Phase II-Certified, pellet-fueled, masonry heaters; meet US EPA emission standards, or are dedicated gaseous-fueled fireplaces.

Lighting



Reduce light pollution (top) by installing lighting fixtures that direct light downward or only where it is needed (bottom).

- Required – Use shielded fixtures, avoiding overhead lighting of areas such as walkways.
- Required – Provide low-contrast lighting and use low-voltage fixtures and energy-efficient bulbs, such as compact fluorescent and light emitting diode bulbs.
- Required – Use automated occupancy sensors in nonresidential buildings that automatically shut off lights when rooms are unoccupied.

Building Envelope



Energy-efficient lighting products, such as this compact fluorescent bulb, use 75 percent less energy and last 10 times longer than standard incandescent bulbs.

- Required – Install radiant barriers to reduce summer heat gain and winter heat loss.
- Required – Use natural ventilation techniques, such as operable windows, to take advantage of airflow for cooling interiors, reducing the amount of energy needed for cooling.
- Suggested – As practical, design taller windows that start close to the ceiling to optimize daylighting of interiors.
- Suggested – Consider installing light shelves, architectural features that bounce light farther into interiors, to optimize daylighting.
- Suggested – Consider the use of “cool roofs,” which are painted with a highly reflective coating or employ light-colored materials, or “green roofs,” vegetated areas on roofs that contain plants in engineered soil, to cool building interiors and increase stormwater retention.
- Required – Install water- and energy-saving fixtures and appliances, such as showerheads, toilets, washing machines, clothes dryers, refrigerators, and dishwashers certified as Energy Star compliant.
- Suggested – Install recirculating hot water systems to reduce the need to heat water, or tankless water heaters that heat water as needed instead of storing hot water in tanks, thus reducing standby energy use.
- Required – Utilize a minimum insulation value of R30 in ceilings.
- Required – Install programmable thermostats in all units.

Resource Conservation

Actions that increase water and energy efficiency and conserve resources offer tremendous cost savings to both builders and future residents. A substantial reduction in energy use can be achieved through techniques such as building design that maximize shading and insulation; high performance heating, ventilation, and air conditioning (HVAC) systems; and use of natural daylighting. The use of high-performance appliances and irrigation systems that minimize water and energy use can substantially impact the amount of resources that flow into and out of the community.

Water

- Required – Install only low-water-consumption, Energy Star–compliant appliances and fixtures.
- Required – Install only sensor-operated faucets in nonresidential buildings.
- Suggested – Install dual flush or other toilets using less than 1.6 gallons per flush.
- Suggested – Install waterless urinals in nonresidential buildings.
- Suggested – Install faucets and showerheads using 2.5 gallons per minute or less.
- Required – Use water-saving landscaping techniques, such as drip irrigation systems and drought-tolerant plant species. (For a more detailed list of water-saving techniques and practices, see the Landscaping section of this section.)



By taking into account solar orientation of the building, overhangs and other devices placed on the exterior of buildings reduce direct sunlight into interiors, lowering heat gain and the amount of energy needed for cooling.

Energy

- Required – Install only energy-efficient windows, such as models with spectrally selective low-e glass and with wood, vinyl, or fiberglass frames.
- Required – Incorporate building materials that take advantage of heat storage or thermal mass to reduce energy needed for heating and cooling interiors. Materials such as concrete, masonry, and wallboard store heat absorbed during the day and slowly release it throughout the evening, thereby moderating indoor temperatures over a 24-hour period.
- Suggested – Encourage participation in energy-efficiency rebate programs offered by utility providers and government agencies.

Heating, Ventilation and Air Conditioning

- Required – Design and install HVAC systems according to the standards provided by the Air Conditioning Contractors of America handbooks or other comparable high-performance HVAC standards.
- Required – Install sealed-combustion/sealed-duct furnaces and water heaters for increased efficiency and indoor air quality.
- Required – Install only EnergyStar-qualified ceiling fans to circulate air, improve comfort, and reduce the demand on heating and cooling systems.

Sustainability Resource Guide

Table 5.1 presents a consolidated list of available programs, resources, and potential funding sources to assist in implementing the sustainability guidelines presented in this section. Since the programs and efforts of the various agencies and providers that serve the Spring Trails community may change over time, it is encouraged to check with the relevant entity for current programming and incentives.

Table 5.1 Sustainability Resource Guide

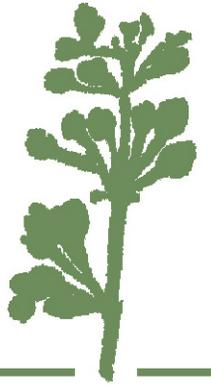
Provider	Program	Description	For More Information
Energy			
Southern California Edison (SCE)	Sustainable Communities Program	For multiple-building and/or mixed-use projects. Provides design assistance, training, education, and financial incentives relating to energy efficiency, demand response, and self-generation.	www.sce.com
SCE and Southern California Gas Company	Savings By Design	For nonresidential projects. Provides design assistance, energy analysis, and financial incentives.	www.socalgas.com/business
Southern California Gas Company	Advanced Home Program (Part of ENERGY STAR New Homes Program)	For residential projects. Offers financial incentives through either a performance-based or measure-based approach.	www.socalgas.com/construction/ahp/ www.sce.com/RebatesandSavings/
California Energy Commission	New Solar Homes Partnership (NSHP)	For new residential construction. Financial incentives for production homes with solar panels that exceed Title 24 by 15% as a standard feature.	www.gosolarcalifornia.ca.gov/nshp
Infrastructure			
No current programs; see policies and strategies outlined earlier in this section.			
Fuscoe Engineering and City of Irvine Redevelopment Dept.	Sustainable Travelways Guidelines	Guidelines for street development created in partnership with the Orange County Fire Authority for the Great Park Community.	www.cityofirvine.org/depts/cd/redevelopment/
Water and Wastewater			
Metropolitan Water District	California Friendly Homes; California Friendly Landscape	General provisions and design standards for residential landscaping.	www.bewaterwise.com
Building Level			
US Green Building Council	Leadership in Energy and Environmental Design (LEED)	Sustainable community and building-level rating system.	www.usgbc.org
US Department of Energy	Energy Star	Certifies homes and products for energy efficiency.	www.energystar.gov

Sustainability

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Section 6

IMPLEMENTATION



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ADMINISTRATION AND IMPLEMENTATION

California Government Code Section 65451(a)(4) requires that specific plans contain a “program of implementation measures, including regulations, programs, public works projects, and financing measures.” This section sets forth the procedures needed to administer and implement the Spring Trails Specific Plan.

Alternative Plan

As noted, the preferred plan assumes that the SCE power lines will be located underground. However, authority to do this rests with SCE and, by the writing of this Specific Plan, locating the lines underground has not been resolved. An alternative plan that accommodates the SCE power lines above ground is contained in Appendix F. The alternative plan is identical to the preferred plan except that it contains 304 single-family detached units (303 new units and 1 existing residence) and the SCE power line easement. If the alternative plan is utilized instead of the preferred plan, then the plans and development potential contained in Appendix F shall be utilized. All other provisions of this Specific Plan shall remain in effect and shall apply to the alternative plan.

Administering the Plan

The Spring Trails Specific Plan shall comply with all procedural requirements cited in the City of San Bernardino Development Code, Chapter 19.64, Specific Plans. Whenever the regulations contained in this Specific Plan conflict with the regulations of the City of San Bernardino Development Code, the provisions of this Specific Plan shall take precedence.

Responsibility

Following approval of this Specific Plan by the Planning Commission and City Council of the City of San Bernardino, the City’s Director of Development Services shall be responsible for administering the provisions of the Spring Trails Specific Plan in accordance with the provisions of this Specific Plan, the State of California Government Code, and the Subdivision Map Act. All necessary permits and approvals shall be processed through the City’s permit

Administration and Implementation

and application processes as noted in Article IV, *Administration*, of the City of San Bernardino Development Code.

Applicability

All development in the Specific Plan area shall comply with the requirements and standards set forth in this document. Where there are conflicts between the following standards and those found in the City of San Bernardino Development Code, the standards contained in this document shall apply. The provisions of the City of San Bernardino Development Code shall apply to any area of site development, administration, review procedures, environmental review, landscaping requirements, and parking regulations not expressly addressed by this Specific Plan document.

Interpretations

When there is a question or ambiguity regarding the interpretation of any provision of this Specific Plan, the Director of Development Services has the authority to interpret the intent of such provision. In interpreting this Specific Plan, the City's Director of Development Services shall give consideration to the Vision of this Specific Plan while ensuring that development can proceed in accordance with the terms of this Specific Plan and the approved tentative map.

The Director of Development Services may, at his/her discretion, refer interpretations to the Planning Commission for consideration and action. Such a referral shall be accompanied by specific details, information, and analyses that tie the information to the Director's decision. The Planning Commission shall make similar findings in conjunction with its decision. The Planning Commission action may be appealed to the City Council. All interpretations made by the Director of Development Services may be appealed to the Planning Commission in accordance with the appeal procedures set forth in the Chapter 19.52 of the City of San Bernardino Development Code.

Specific Plan Amendment

Modifications to the Specific Plan text and/or exhibits may be necessary during the development of the project. Depending on the nature of the proposed Specific Plan amendment, additional environmental analysis may be required, pursuant to the California Environmental Quality Act. Any modifications to the Specific Plan shall occur in accordance with the amendment process described in this section. These amendments, should they occur, are divided into major and minor amendments.

Major Amendments

If, after making written findings, an amendment is deemed major by the Director of Development Services, it will be processed in the same manner as the original Specific Plan, as directed by Chapter 19.64, Specific Plans, of the City of San Bernardino Development Code.

Minor Amendments

Minor amendments include simple modifications to text or exhibits that do not: change the meaning, intent, or materially alter the nature or scope of the Specific Plan; increase the maximum allowable density; or exceed the total units of the Specific Plan. Minor amendments include, without limitation, minor changes in locations of streets, public improvements, or infrastructure; minor changes in the configuration or size of parcels; minor modification of land use boundaries to conform with street alignments or easements; and interpretations that facilitate the approval of unlisted uses that are similar in nature and impact to listed uses.

Minor amendments to the Spring Trails Specific Plan require approval of the Director of Development Services. Minor amendments may be accomplished per the procedures contained in Chapter 19.60, Minor Modifications, of the San Bernardino Development Code. Any determination or action taken by the Director may only be appealed to the Planning Commission. In a similar manner, any action taken by the Planning Commission may be appealed to the City Council. Any determination or action taken by the City Engineer may only be appealed directly to the City Council. All appeals shall be reviewed and processed according to the procedures set forth in Chapter 19.52, Hearings and Appeals, of the City of San Bernardino Development Code.

Severability

If any section, subsection, sentence, clause, or phrase of this Specific Plan, or future amendments or additions hereto, is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this plan.

Phasing, Capital Improvements, and Maintenance

Infrastructure Improvements

Within Spring Trails, the developer(s) will be responsible for constructing/funding their fair share of required on- and off-site infrastructure improvements.

Administration and Implementation

All infrastructure improvements will be developed in conjunction with the roadway improvements.

Development Phasing

Phase 1

- Off-site grading and improvement of the primary and secondary access roads.
- Off-site backbone utilities (water, sewer, drainage, dry utility line extensions to site, and necessary improvements)
- Approximately 200 acres of the Spring Trails site will be rough graded for development of residential lots, roadways, trails, detention basins and parks.
- Detention basins improved
- All on-site roadways roads will be undercut with the rough grading

Phase 2

- Residential development will sequence from the south to the north. Infrastructure, roadways, fuel modification zones, parks, and landscaping necessary to serve development will be phased accordingly.
- Improvements will generally follow the sequence of the water improvements, which are divided into the following pressure zones:
 - On-site 2500 pressure zone improvements, including the transmission line and reservoir, prior to issuance of residential building permits in this zone.
 - On-site 2700 pressure zone improvements, including the pump station, transmission line, and reservoir, and replacement of the existing 16-inch water line in Meyers Road, prior to issuance of residential building permits in this zone.
 - On-site 3000 pressure zone improvements, including the pump station, transmission line, and reservoir, prior to issuance of residential building permits in this zone.
- Main gateway/entry features prior to or concurrent with the issuance of residential building permits in the 2700 pressure zone.
- Trails, parks, and common area landscaping in each pressure zone will occur prior to or concurrent with the issuance of residential building permits for that pressure zone.

- Fuel modification zones necessary to support physical development in each pressure zone will occur as noted in the Fire Protection Plan.
- Sewer, storm drain, dry utilities, and roadway paving will be sequenced with improvements in each water pressure zone.

It should be emphasized that the phasing program described in this section is a projection based on a judgment of future planning and market factors. Therefore, it is not to be taken as a compulsory development sequence. Development area sequencing may change as the result of future conditions that neither the City nor the developer has knowledge of as of the date of this submittal. However, the basic standards will not change and compliance is required regardless of shifts in the composition of each development phase. The developers of property in Spring Trails will be required to comply with all grading, drainage, and road improvements as specified in the Specific Plan.

Administration and Implementation

Maintenance

Table 6.1 describes maintenance responsibilities in Spring Trails.

Table 6.1 Maintenance Plan

Type	Developed By	Maintained By	Owned By
Streetscape			
Primary and Secondary Entry Roads	Master Developer	City	City
Primary and Secondary Local Roads and cul-de-sacs	Master Developer	City	City
Entry Features/Landscaping	Master Developer	HOA	HOA
Street Lighting	Master Developer	City	LLMD/HOA/City
Community Walls and Fences	Master Developer	HOA	HOA
Interior Neighborhood Walls and Fences	Guest Builder	Homeowner	Homeowner
Parks and Open Space			
Private Parks	Master Developer	HOA/LLMD	HOA/LLMD
Public Parks	Master Developer	HOA/LLMD	City
Trails	Master Developer	HOA/LLMD	City
Detention Basins	Master Developer	HOA/LLMD	HOA/LLMD
Cable Creek and Meyers Open Space Areas	Master Developer	HOA/LLMD	City
Fuel Modification Zone A	Master Developer	LLMD/Homeowner	Homeowner
Fuel Modification Zones B and C	Master Developer	LLMD	HOA/Homeowner
Infrastructure			
Water Systems (on- and off-site)	Master Developer	City	City
Nonpotable Water Systems	Master Developer	City	City
Sewer Systems (on- and off-site)	Master Developer	City	City
Drainage Systems (on- and off-site)	Master Developer	City /SBCFC	City /SBCFC

LLMD = Landscape and Lighting District or special maintenance district

HOA = Homeowners' Association (Master or Neighborhood)

SBCFC = San Bernardino County Flood Control

Note: Certain facilities and improvements may be subject to reimbursement agreements.

Master Homeowners Associations

Common areas identified within the Specific Plan shall be owned and maintained by a permanent private maintenance organization. These areas may include common recreation areas, open space, circulation systems, landscaped easements, landscaped areas at entryways and roadways, paseos, and amenities such as the clubhouse.

Neighborhood Homeowners Associations

In certain residential areas of the project, smaller homeowners associations may be created to provide maintenance for common areas and facilities that only benefit residents in the immediate area.

Open Space and Parks

Open space and parks not directly associated with a particular neighborhood shall be the responsibility of a landscape and lighting district or a public facilities maintenance district.

Project Roadways

All public roadways shall be incorporated into the City's system of roads for operation and maintenance. All private roads shall be owned and maintained by either the master homeowners' association or a neighborhood association.

Financing Strategies

The financing of construction, operation, and maintenance of public improvements and facilities will include a combination of mechanisms. However, the developer shall ultimately be responsible for all fair-share costs associated with implementing the project, including but not limited to the costs of providing infrastructure and complying with all mitigation measures, conditions of approval, and other requirements of the project.

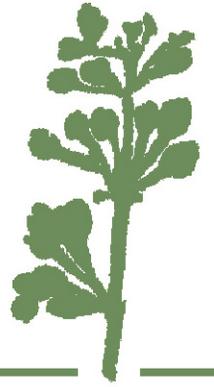
Various financing strategies may be used to fund the public facility improvements specified by the Specific Plan. Financing may involve a combination of impact fees and exactions, special assessment districts, landscaping and lighting districts, community facilities districts, and other mechanisms as agreed to by the developer and City.

The City and developer will cooperate to ensure that the public facilities are built in accordance with all requirements of the Specific Plan. Development agreements and conditions of approval may be used to facilitate this process.

Administration and Implementation

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APPENDICES



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APPENDIX A: GLOSSARY

Accessory use: A use incidental and subordinate to the principle use of a lot or building located on that lot.

Acres, gross: The entire acreage of a site. Gross acreage is calculated to the centerline of proposed bounding streets and to the edge of the right-of-way of existing or dedicated streets.

Acres, net: The portion of a site that can actually be built on. The following are not included in the net acreage of a site: public or private road rights-of-way, public open space, and publicly owned floodways.

Bikeways: A term that encompasses bicycle lanes, bicycle paths, and bicycle routes.

Buildable Area/Buildable Pad: For purposes of this Specific Plan, refers to the area where a structure may be erected on a lot. The buildable area/pad does not necessarily coincide with the legal lot lines and accounts for graded slope areas, fault zones, and fuel modification zones where building is not permitted.

Buildout: Development of land to its full potential or theoretical capacity as permitted under current or proposed planning or zoning designations.

Density, residential: A measurement of the number of permanent residential dwelling units per acre of land. Densities specified may be expressed in units per gross acre or per net developable acre. (See “Acres, gross” and “Developable acres, net.”)

Developable acres, net: The portion of a site that can be developed and is assumed for the purpose of density calculations. This area would include the building pad but not public or private road rights-of-way and flood control channels.

Developable land: Land that is suitable for structures and can be developed without hazards to, disruption of, or significant impact on natural resource areas.

Dwelling unit: A room or group of rooms (including sleeping, eating, cooking, and sanitation facilities, but not more than one kitchen), that constitutes an independent housekeeping unit, occupied or intended for occupancy by one household on a long-term basis.

Appendix

Family: (1) Two or more persons related by birth, marriage, or adoption (Census Bureau); (2) An individual or a group of persons living together who constitute a bona fide single-family housekeeping unit in a dwelling unit, not including a fraternity, sorority, club, or other group of persons occupying a hotel, lodging house, or institution of any kind (State of California).

Granny flat: See “Second unit.”

Household: All those persons (related or unrelated), who occupy a single housing unit. (See “Family.”)

Housing unit: The place of permanent or customary abode of a person or family. A housing unit may be a single-family dwelling, a multifamily dwelling, a condominium, a modular home, a mobile home, a cooperative, or any other residential unit considered real property under state law. A housing unit has, at least, cooking facilities, a bathroom, and a place to sleep. It also is a dwelling that cannot be moved without substantial damage or unreasonable cost. (See “Dwelling unit,” “Family,” and “Household.”)

Intensity, building: For residential uses, the actual number or the allowable range of dwelling units per net or gross acre.

Land use classification: A system for classifying and designating the appropriate use of properties.

Median: The dividing area, either paved or landscaped, between opposing lanes of traffic on a roadway.

Neighborhood: A grouping of residential, commercial, service, and recreational uses that are related by their orientation, design, or access points.

Nonconforming use: A lawful use of a building or land, or any part thereof, existing at the time of the adoption of this title that does not conform to the regulations for the district in which it is located as set forth in this title.

Open space land: Any parcel or area of land or water that is essentially unimproved and devoted to an open space use for the purposes of (1) the preservation of natural resources, (2) the managed production of resources, (3) outdoor recreation, or (4) public health and safety.

Parcel: A lot in single ownership or under single control, usually considered a unit for purposes of development.

Parkland: Land that is publicly owned or controlled for the purpose of providing parks, recreation, or open space for public use.

Parking area, public: An open area, excluding a street or other public way, used for the parking of automobiles and available to the public, whether for free or for compensation.

Parks: Open space lands for the primary purpose of recreation.

Parkway: A piece of land between the rear of a curb and the front of a sidewalk usually used for planting low ground cover and/or street trees, also known as a “planter strip.”

Recreation, active: A type of recreation or activity that requires the use of organized play areas including, but not limited to, softball, baseball, football, and soccer fields; tennis and basketball courts; and various forms of children’s play equipment.

Recreation, passive: Type of recreation or activity that does not require the use of organized play areas and includes multipurpose trails and picnic areas.

Right-of-way: A strip of land occupied or intended to be occupied by certain transportation and public use facilities, such as roads, railroads, and utility lines.

Second unit: A self-contained living unit either attached to or detached from the primary residential unit on a single lot. A “granny flat” is one type of second unit intended for the elderly.

Street, collector: A relatively low speed (25–30 mph), relatively low volume (5,000–20,000 average daily trips) street that provides circulation within and between neighborhoods. Collectors usually serve short trips and are intended for collecting trips from local streets and distributing them to the arterial network.

Street, local: A low-speed (15–25 mph), low-volume (less than 5,000 average daily trips) street that provides circulation within neighborhoods. Local streets provide direct access to fronting properties and are not intended for through-traffic. Local streets are typically not shown on the Circulation Plan, Map, or Diagram.

Street, private/private road: Privately owned (and usually privately maintained) motor vehicle access that is not dedicated as a public street. Typically the owner posts a sign indicating that the street is private property and limits traffic in some fashion. For density calculation purposes, private roads are excluded when establishing the total acreage of the site.

Streets, through: Streets that extend continuously between other major streets in the community.

Appendix

Structure: Anything constructed or erected that requires a location on the ground (excluding swimming pools, fences, and walls used as fences).

Subdivision: The division of a tract of land into defined lots, either improved or unimproved, which can be separately conveyed by sale or lease, and which can be altered or developed. “Subdivision” includes a condominium project as defined in Section 1350 of the California Civil Code and a community apartment project as defined in Section 11004 of the Business and Professions Code.

Zoning: The division of a city or county by legislative regulations into areas, or zones, that specify allowable uses for real property and size restrictions for buildings within these areas; a program that implements policies of the General Plan.

APPENDIX B: GENERAL PLAN CONSISTENCY ANALYSIS

The San Bernardino General Plan, adopted in November 2005, sets the long-term strategy for City. The General Plan Vision states:

... developing an adequate and diverse supply of quality housing is one of our primary goals. Current and future residents need a balanced supply of housing, providing opportunities for first time homebuyers, students, estates, those in need of or choosing multi-family units, and individuals seeking single family homes.

However, we do not want sterile living arrangements; instead, we offer safe and attractive neighborhoods with quality homes and a range of recreational amenities. We want to create a place where San Bernardino's homeowners and renters take pride in their surroundings and contribute to the beautification and upkeep of our community. We desire a place where we can own our homes, raise our families, and then retire in our community.

This appendix provides an analysis of how the Spring Trails Specific Plan directly implements this vision and the goals of the City of San Bernardino General Plan.

Land Use

General Plan Goals

Goal 2.1: Preserve and enhance San Bernardino's unique neighborhoods. (Land Use)

Goal 2.2: Promote development that integrates with and minimizes impacts on surrounding land uses. (Land Use)

Goal 2.3: Create and enhance dynamic, recognizable places for San Bernardino's residents, employees, and visitors. (Land Use)

Specific Plan Response

Upon annexation into the City, the entire Spring Trails site was designated as Residential Estate, and as appropriate based on slope studies, the Foothill Fire Zone, on both the City's General Plan and Zoning maps. The Residential Estate designation permits one dwelling unit per acre. Through the Spring Trails Specific Plan, development was clustered into the most appropriate areas so that, when taken individually, certain lots exceeded the one unit per acre density

limit yet on a gross basis still complied with the overall density restrictions of the Residential Estate land use designation.

Spring Trails is a 352.8-acre residential development in the foothills of the San Bernardino Mountains. Spring Trails accommodates 307 residences situated in several neighborhoods, which are separated by open space corridors, drainage ways, and sloped areas and interconnected by a series of trails and roadways. The development footprint of Spring Trails is focused on the gently sloping alluvial benches between canyons, steep hillsides, and the Cable Canyon and Meyers Canyon drainageways. Development is focused onto approximately 242 acres, or 68 percent of the total site, and includes 9 acres of parks and 125.1 acres of internal slopes and fuel modification zones. The remaining 32 percent of Spring Trails (111.3 acres) is preserved as natural open space

The following elements of the Specific Plan promote the land use goals of the General Plan:

- Providing approximately 111 acres of permanent open space.
- Carefully weaving Spring Trails into its physical surroundings by clustering development on the gentle slopes; avoiding steep slopes, ridgelines, and physical hazards; and preserving significant drainage ways.
- Including guidelines and standards that address unique entries, tailored landscaping, and detailed design factors that will help make Spring Trails a unique neighborhood in San Bernardino.

In addition, Spring Trails is designed to minimize the impacts of light intrusion and spillover. CSUSB is contemplating building an observatory on the nearby Badger Hill. To help preserve a dark nighttime sky, this Specific Plan includes controls on the type and design of lighting.

Circulation

General Plan Goals

Goal 6.1: Provide a well-maintained street system. (Circulation)

Goal 6.2: Maintain efficient traffic operations on City streets. (Circulation)

Goal 6.3: Provide a safe circulation system. (Circulation)

Specific Plan Response

Spring Trails consists of a hierarchy of streets, including collector and local roads, which provides a comprehensive and connected street network and is designed

to the specifications of the City of San Bernardino. Access to the project site will be provided via a new roadway extending from Little League Drive, and a new road extending south and connecting to the frontage road along I-215.

Spring Trails also includes a system of bicycle and pedestrian trails that interconnect all neighborhoods and provide connections to the surrounding areas and region. In addition, several natural drainage ways and sloped areas are used as open space corridors and pathways.

Housing

General Plan Goals

Goal 3.1: Facilitate the development of a variety of types of housing to meet the needs of all income levels in the City of Sand Bernardino. (Housing)

Specific Plan Response

Spring Trails accommodates 307 single-family detached housing units that appeal to families, those looking to move up, and CSUSB faculty. The proximity of Spring Trails to the University may help attract teachers to the community and strengthen the ties between the City and University.

Community Design

General Plan Goals

Goal 2.5: Enhance the aesthetic quality of land uses and structures in San Bernardino. (Land Use)

Goal 5.3: Recognize unique features in individual districts and neighborhoods and develop a program to create unifying design themes to identify areas throughout the City. (Community Design)

Goal 5.4: Ensure individual projects are well designed and maintained. (Community Design)

Goal 5.5: Develop attractive, safe, and comfortable single-family neighborhoods. (Community Design)

Goal 12.8: Preserve natural features that are characteristic of San Bernardino's image. (Natural Resources and Conservation)

Specific Plan Response

The overall goal of the Specific Plan is to create an attractive and distinct community within the City of San Bernardino. The Spring Trails Specific Plan provides development standards and criteria for architecture, landscaping, entry monumentation, walls and fences, and other design elements in order to ensure a high quality development and strong community character.

In addition, Spring Trails is designed to enhance the aesthetic quality of San Bernardino through:

- The compact design of Spring Trails limits the development footprint so that open lands are maximized; natural drainage ways are maintained and incorporated into the design of the project as open space amenities and landscaping; and hazards are avoided or mitigated.
- Unique entries that create a recognizable identity and sense of arrival.
- Avoiding development on ridgelines and steep slopes so that views of the mountains are not impacted.
- An interconnected system of open spaces that serve multiple purposes as drainage courses, pedestrian pathways, recreational and visual amenities, and separations between neighborhoods.
- Distinctively designed residences set among a system of unified lighting, streetscape, landscape, and parks.

Maintenance assessment district(s) will be responsible for maintaining the long-term aesthetic quality of Spring Trails. Maintenance responsibilities may be divided between a Master Homeowners Association, Neighborhood Associations, Landscape and Lighting Maintenance District(s), and/or other maintenance mechanisms.

Utilities and Public Services

General Plan Goals

Goal 2.7: Provide for the development and maintenance of public infrastructure and services to support existing and future residents, businesses, recreation, and other uses. (Land Use)

Goal 9.1: Provide a system of wastewater collection and treatment facilities that will adequately convey and treat wastewater generated by existing and future development on the City's service area. (Utilities)

Goal 9.3: Provide water supply, transmission, distribution, storage, and treatment facilities to meet present and future water demands in a timely and cost effective manner. (Utilities)

Goal 9.4: Provide appropriate storm drain and flood control facilities where necessary. (Utilities)

Goal 9.5: Provide adequate and orderly system for the collection and disposal of solid waste to meet the demands of new and existing development in the City. (Utilities)

Goal 9.6: Ensure an adequate, safe, and orderly supply of electrical energy is available to support existing and future land uses within the City on a project level. (Utilities)

Goal 9.7: Ensure an adequate supply of natural gas is available to support existing and future land uses within the City at a project level. (Utilities)

Goal 9.8: Ensure the operation and maintenance of telecommunications systems to support existing and future land uses within the City. (Utilities)

Goal 9.10: Ensure that the costs of infrastructure improvements are borne by those who benefit. (Utilities)

Specific Plan Response

Spring Trails has been designed with a careful attention to the provision of services and infrastructure. According to initial studies, there is adequate supply, capacity, and facilities to accommodate the buildout of Spring Trails.

Dry Utilities. Spring Trails will be served with electric, gas, solid waste collection, telephone cable, and Internet (data) from companies serving the City of San Bernardino. The utility providers, including the Gas Company, Southern California Edison, Verizon, and Charter Communications, have indicated the ability to provide service to Spring Trails.

Water. The City of San Bernardino Municipal Water Department (SBMWD) will provide water services to Spring Trails. Water will be supplied to Spring Trails from lower elevations by a combination of expanding and improving the off-site water system and the provision of on-site reservoirs and transmission lines. Detailed water system improvement plan and supply analysis have been prepared and demonstrate that adequate water supply and service are available to accommodate the buildout of Spring Trails.

Drainage. Spring Trails maintains the significant drainage courses on-site to carry most of the off-site water through the site to existing drainage facilities. The drainage concept for Spring Trails is designed to either maintain natural drainage courses or capture both on-and off-site stormwater flows and route

them through a series of catch basin inlets and storm drain systems that convey water to three on-site detention basins where it is treated and discharged at a controlled rate into Cable Canyon. The drainage system and detention basins will reduce stormwater runoff from the site to levels below those that existed prior to the project.

Sewer. The Spring Trails project lies within the City of San Bernardino sanitary sewer service area. Spring Trails will connect to the City's existing 10-inch sewer line that ends at Little League Drive and Meyers Road, which is then connected to the south to a major interceptor system and is eventually treated in the San Bernardino Water Reclamation Plant. Existing capacity is available in the sewer system to serve the buildout population within the City. The sewer facilities will be designed and constructed in accordance with the City of San Bernardino standards and specifications and in accordance with the *Standard Specifications for Public Works Construction* (latest edition).

In addition, the infrastructure that crosses earthquake faults is carefully designed to handle earthquakes and surface ruptures.

Within Spring Trails, the developer(s) will be responsible for constructing/funding their fair share of required on- and off-site infrastructure improvements, such as water lines, sewers, storm drains, recycled-water lines, and streets. All infrastructure improvements will be developed in conjunction with the roadway improvements.

Parks, Trails, and Open Space

General Plan Goals

Goal 8.1: Improve the quality of life in San Bernardino by providing adequate parks and recreation facilities and services to meet the needs of our residents. (Parks, Recreation, and Trails)

Goal 8.2: Design and maintain our parks and recreation facilities to maximize safety, function, beauty, and efficiency. (Parks, Recreation, and Trails)

Goal 8.3: Develop a well-designed system of interconnected multi-purpose trails, bikeways, and pedestrian paths. (Parks, Recreation, and Trails)

Specific Plan Response

Maximum buildout of the Spring Trails Specific Plan would accommodate 307 units and a population of approximately 1,028 residents. Based on the City's standard of 5 acres of parkland per 1,000 residents, full buildout of the Specific Plan would result in the need to provide 5.14 acres of parkland or an equivalent

fee in lieu of dedicated parkland. Spring Trails exceeds the City's requirement and provides approximately 111 total acres of natural open spaces and 9 acres of improved parkland.

Spring Trails will be integrated and linked both internally and with surrounding uses via 3.8 miles of trails as well as on-street bike lanes. The open spaces and parks will be maintained by homeowners associations and/or lighting and landscape maintenance district.

Safety

General Plan Goals

Goal 2.8: Protect the life and property of residents, businesses, and visitors to the City of San Bernardino from crime and the hazards of flood, fire, seismic risk, and liquefaction. (Land Use)

Goal 7.1: Protect the residents of San Bernardino from criminal activity and reduce the incidence of crime. (Public Facilities and Services)

Goal 7.2: Protect the residents and structures of San Bernardino from the hazards of fire. (Public Facilities and Services)

Goal 10.6: Protect the lives and properties of residents and visitors of the City from flood hazards. (Safety)

Goal 10.7: Protect life, essential lifelines, and property from damage resulting from seismic activity. (Safety)

Goal 10.9: Minimize exposure to and risks from geologic activities. (Safety)

Goal 10.10: Protect people and property from the adverse impacts of winds. (Safety)

Goal 10.11: Protect people and property from urban and wildland fire hazards. (Safety)

Specific Plan Response

Spring Trails contains several significant natural features that have made safety a special concern in the design of the community. Significantly, the San Andreas Fault system runs through the project, natural drainage courses cut through the project, and wildland fire is a threat.

Seismic Safety. Spring Trails includes three traces of the San Andreas Fault, which runs in an east–west direction through the northern and southern portions of the project site. These faults were precisely located through detailed geologic investigations to establish safe structural setback limits. Development in Spring Trails is sited to avoid the fault and comply with the Alquist-Priolo requirements. Development is required to comply with the latest building codes, which are designed to resist damage from seismic shaking.

Drainage and Flooding. Because Spring Trails sits on an alluvial plain on the slopes of the San Bernardino Mountains, flooding and drainage is a critical factor. On a regional perspective, the drainage area of which Spring Trails belongs flows east into Cable Canyon, then into Cable Creek, and eventually into the Santa Ana River. The site itself consists of four major drainage patterns:

- Drainage area A. A 2,030-acre drainage area (148.9 acres on-site and 1,881 acres off-site) that includes the west and east forks of Cable Canyon, which flow south through the northeastern corner of the property and meet a tributary flowing from the east.
- Drainage area B. A 63.7-acre watershed (51.6 acres on-site and 12.1 acres off-site) comprises surface flow drainage that flows southwesterly through the center of the site and ultimately into Cable Canyon.
- Drainage area C. A 198.2-acre watershed (128.4 acres on-site and 69.8 acres off-site) that consists of off-site surface flows and a defined drainage course that run onto the site and exit through the southeastern part of the project.
- Drainage area D. A 341.6-acre drainage area (21.8 acres on-site and 319.8 acres off-site) that includes Meyers Creek.

Spring Trails is designed to either maintain natural drainage courses or capture both on- and off-site stormwater flows and route them through a series of catch basin inlets and storm drain systems that convey water to three on-site detention basins where it is treated and discharged at a controlled rate into Cable Canyon.

Portions of Cable Canyon and Meyers Canyon are identified as 100-year flood zones, which are constrained to the deep channels of the creeks, and development is located to avoid these areas and minimize road crossings.

Wildland Fire. Because of the adjacent San Bernardino National Forest, steep slopes, and high winds, the Spring Trails area is at risk from wildland fires. To ensure the safety of lives and property, a detailed fire analysis was conducted and an extensive fire protection plan was developed for Spring Trails that will protect development from wildland fires. Significant provisions of the fire protection plan include:

- The protection of structures through the use of noncombustible exterior building materials, restriction on the use of cornice and eave vents, fire sprinklers, and compliance with the most current fire codes.
- Greater levels of structure protection on the perimeters of the project.
- Placement of streets on the perimeter of the project to provide a firebreak and a first line of defense against fires.
- Adequate access and maneuverability for fire protection vehicles.
- Careful placement of fire hydrants and design of structures to facilitate fire suppression efforts and fire hose access.
- Strict landscape and use zones, called fuel modification zones, which include private yards and extend approximately 170 to 230 feet from structures. Within the fuel modification zones, there are restrictions on the type, spacing, irrigation, and maintenance of landscaping.
- Clear disclosure to potential homebuyers of the fire threat, preventative measures, and individual responsibilities.
- Clear delineation of and maintenance responsibilities for the fuel modification zones.
- Aggressive program to educate residents on the fire threat, landscaping requirements, and maintenance responsibilities.

High Winds. The City of San Bernardino experiences periods of high winds, especially in the Cajon Pass and at the bottom of canyons. Spring Trails is included in the City’s designated High Wind Area, which has certain appropriate building standards. Development in Spring Trails is required to comply with the building standards for this area and will be designed and oriented to avoid the creation of wind tunnels that concentrate gusts in corridors.

Environmental Sensitivity

General Plan Goals

Goal 2.6: Control development and the use of land to minimize adverse impacts on significant natural, historic, cultural, habitat, and hillside resources. (Land Use)

Goal 10.4: Minimize the threat of surface and subsurface water contamination and promote restoration of healthful groundwater resources. (Safety)

Goal 10.5: Reduce urban run-off from new and existing development. (Safety)

Appendix

Goal 12.1: Conserve and enhance San Bernardino's biological resources. (Natural Resources and Conservation)

Goal 12.2: Protect riparian corridors to provide habitat for fish and wildlife. (Natural Resources and Conservation)

Goal 12.3: Establish open space corridors between and to protected wildlands. (Natural Resources and Conservation)

Goal 12.5: Promote air quality that is compatible with the health, well-being, and enjoyment of life. (Natural Resources and Conservation)

Goal 12.6: Reduce the amount of vehicular emissions in San Bernardino. (Natural Resources and Conservation)

Goal 13.1: Conserve scarce energy resources. (Energy and Water Conservation)

Goal 13.2: Manage and protect the quality of the City's surface waters and ground water basins. (Energy and Water Conservation)

Specific Plan Response

The Spring Trails Specific Plan includes guidelines that address sustainable and green building practices for the individual building as well as overall community design. The sustainability guidelines address the use of active and passive energy and resource conservation measures—such as efficient landscaping and building designs—and utilization of other green building techniques/materials. The land plan for Spring Trails is based on this commitment. In particular, development is focused on 70 percent of the total site, avoiding significant drainage corridors, fault zones, steep slopes, and ridgelines.

Another critical sustainability issue is water and watershed management. Spring Trails includes the following elements to address the critical issues of water conservation, water quality, and watershed management:

- The compact design limits the development footprint; open lands that can absorb runoff are maximized.
- Natural drainage ways are maintained and incorporated into the design of the project as open space amenities.
- Landscaping and irrigation materials and methods are designed to increase efficiency and minimize water demand.
- Efficient, water-conserving technologies, such as low-flow toilets, are used.

- Drainage outlets, bioswales, and other permeable surfaces will be designed to control urban runoff pollutants caused by the development of the project.

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APPENDIX C: FIRE PROTECTION PLAN

Appendix

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APPENDIX D: FOOTHILL FIRE ZONES OVERLAY DISTRICT CONFORMANCE

This section outlines Spring Trails’ compliance with the standards contained in the City of San Bernardino’s Foothill Fire Zones Overlay District. Spring Trails is located within the City’s FF (Foothill Fire Zones Overlay) District. The overlay district identifies 3 foothill fire zones that have different degrees of hazard. The foothill fire zones are: A-Extreme Hazard, B-High Hazard, and C-Moderate Hazard. Development within Spring Trails is within Fire Zone C. The following table describes Spring Trails’ compliance with the standards contained in the FF District (Section 19.15.040).

FF District Standards

Section	FF District Standard	Spring Trails Compliance
1. Access and Circulation		
1.A.	Local hillside street standards shall be used to minimize grading and erosion potential while providing adequate access for vehicles, including emergency vehicles. The right-of-way shall be 48.5 feet with 40 feet of paved width and parking on both sides and a sidewalk on 1 side. (A + B)	Cul-de-sacs with homes fronting on both sides have a right-of-way of 46 feet with parking on both sides and a paved width of 36 feet. Cul-de-sacs with homes fronting on only one side have a right-of-way of 40 feet with parking on one side and a paved width of 32 feet. All other streets have a right-of-way of 50 feet, except as noted in 1.B. below.
1.B.	Streets shall have a paved width of 32 feet with parking and sidewalk on 1 side of the street only and right-of-way of 40.5 feet, subject to review and recommendation by the Fire Chief and the City Engineer, with approval by the Commission. (A + B)	Secondary local roads have a right-of-way of 40 feet with parking and sidewalk on one side of the street and a paved width of 32 feet.
1.C.	Subdivisions shall be designed to allow emergency vehicle access to wildland areas behind structures. This is to be accomplished in either of 2 ways:	

Appendix

Section	FF District Standard	Spring Trails Compliance
	1. Provide a perimeter street along the entire wildland side of development or	Spring Trails provides a perimeter road along portions of the eastern side of the development.
	2. Provide a fuel-modified area, a minimum of 150 feet in depth from the rear of the structure, adjacent to the subdivision and connected to the interior street by flat 12 foot minimum access ways placed no more than 350 feet apart. If designed as a gated easement, access ways may be part of a side yard. (A + B + C where abuts wildland)	Spring Trails also provides a minimum 170-foot-deep fuel-modified area from the rear of structures that are adjacent to wildland areas.
1.D.	No dead-end streets are permitted. Temporary cul-de-sacs are required.	Spring Trails does not have dead-end streets.
1.E.	All permanent cul-de-sac turnarounds and curves shall be designed with a minimum radius of 40 feet to the curb face. No parking shall be allowed on the bulb of a cul-de-sac. (A + B + C)	Cul-de-sacs within Spring Trails are designed with a minimum radius of 40 feet and no parking will be allowed on the bulb of the cul-de-sac.
1F.	Cul-de-sacs to a maximum of 750 feet in length may be permitted with a maximum of 30 dwelling units, and to a maximum of 1,000 feet in length with a maximum of 20 dwelling units. (A + B)	The cul-de-sacs comply with this requirement. The maximum proposed cul-de-sac length is 885 feet with 9 D.U.
1.G.	Driveways to residential garages of more than 30 feet in length shall extend for a minimum distance of 20 feet from the garage, on a maximum grade of 5%. Driveways less than 30 feet in length shall have a maximum grade of 8% for a minimum distance of 20 feet from the garage. No portion of a driveway shall exceed a grade of 15%, unless approved by the Fire Chief and City Engineer. Driveways shall be designed so that the algebraic difference in grades will not cause a vehicle to drag or hang-up. (A+B+C)	Driveways greater than 30 feet in length shall have maximum grade of 10% for a minimum distance of 20 feet from the garage. Driveways less than 30 feet in length shall have a maximum grade of 12% for a minimum distance of 20 feet from the garage. Any variance would require approval from the Fire Chief and/or City Engineer.
1.H.	Hillside collector and arterial streets shall not exceed 8% grade. Hillside residential streets shall not exceed 15% grade. Grades of streets shall be as provided in this subsection, unless otherwise approved in writing by the Public	Primary local roads with a 50-foot right-of-way are designed with a maximum grade of 12%.

Section	FF District Standard	Spring Trails Compliance
	Services, Fire, and Public Works Departments. (A+B+C)	
1.I.	A tentative tract or parcel map shall provide for at least 2 different standard means of ingress and egress which provide safe, alternate traffic routes subject to approval by the Fire Department. The two separate means of access shall be provided pursuant to Section 19.30.200 of this Development Code. (A+B+C)	Spring Trails provides two points of access to the development.
2. Site and Street Identification		
2.A.	Non-combustible and reflective street markers shall be visible for 100 feet pursuant to City standards. (A+B+C)	Spring Trails will include noncombustible, reflective street markers that will be visible for 100 feet.
2.B.	Non-combustible building addresses of contrasting colors shall be placed on the structure fronting the street. Four inch high (residential) and 5 inch high (commercial) lettering and numbers visible at least 100 feet are required. (A+B+C)	Spring Trails will provide noncombustible building addresses of contrasting colors on structures fronting the street.
3. Roadside Vegetation		
3.	All vegetation shall be maintained and all dead plant material shall be removed for a distance of 10 feet from curblines. (A+B+C)	All vegetation within Spring Trails will be maintained by either the Master Homeowners Association or Landscape and Lighting Maintenance District.
4. Water Supply		
4.A.	Static water sources such as fire hydrants and wells shall have clear access on each side of at least 15 feet. (A+B+C)	Static water sources within Spring Trails will have clear access on each side of at least 15 feet.
4.B.	A minimum of 2 private spigots facing the foothills/wildlands shall be required for each structure. (A+B+C)	A minimum of 2 private spigots facing the foothills/wildlands will be provided on each structure within Spring Trails.
4.C.	Fire hydrants shall be identified with approved blue reflecting street markers. (A+B+C)	Fire hydrants will be identified with approved blue reflecting street markers within Spring Trails.

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Section	FF District Standard	Spring Trails Compliance
4.D.	Each cul-de-sac greater than 300 feet in length shall have a minimum of 1 hydrant. (A+B+C)	Cul-de-sacs within Spring Trails over 300 feet in length will have at least one fire hydrant.
4.E.	Minimum fire flow shall be 1,000 gallons per minute. (A+B+C)	Spring Trails will provide a minimum fire flow of 1,000 gallons per minute.
5. Erosion Control		
5.A.	All fills shall be compacted. (A+B+C)	All fills within Spring Trails will be compacted.
5.B.	For all new projects, erosion and drainage control plans must be prepared by a licensed civil engineer, and be approved prior to permit issuance. (A+B+C)	Erosion and drainage control plans have been prepared by a licensed civil engineer.
5.C.	The faces at all cut and fill slopes shall be planted with a ground cover approved by the City Engineer. This planting shall be done as soon as practicable and prior to final inspection. Planting of any slope less than 5 feet in vertical height, or a cut slope not subject to erosion due to the erosion-resistant character of the materials, may be waived by the City Engineer. An automatic irrigation system shall be installed for planted slopes in excess of 15 feet in vertical height, unless recommended otherwise in the preliminary soils report or waived by the City Engineer. If required by the City Engineer, a recommendation for types of planting materials shall be obtained from a Landscape Architect. The Landscape Architect shall, prior to final inspection, provide the City Engineer with a statement that the planting has been done in compliance with recommendations approved by the City Engineer. (A+B+C)	<p>The faces of all cut-and-fill slopes within Spring Trails will be planted with ground cover approved by the City Engineer.</p> <p>An automatic irrigation system will be installed for planted slopes in excess of 15 feet in vertical height, unless recommended otherwise in the preliminary soils report or waived by the City Engineer.</p> <p>The Landscape Architect will provide the City Engineer with a statement that the planting has been done in compliance with recommendations approved by the City Engineer.</p>
5.D.	Erosion landscaping plans shall incorporate the use of fire resistant vegetation. (A+B+C)	All erosion landscaping plans within Spring Trails will use fire-resistant vegetation.
5.E.	All parties performing grading operations, under a grading permit issued by the City Engineer, shall take	All parties performing grading operations within Spring Trails will take

Section	FF District Standard	Spring Trails Compliance
	<p>reasonable preventive measures, such as sprinkling by water truck, hydroseeding with temporary irrigation, dust palliatives, and/or wind fences as directed by the City Engineer, to avoid earth or other materials from the premises being deposited on adjacent streets or properties, by the action of storm waters or wind, by spillage from conveyance vehicles or by other causes. Earth or other materials which are deposited on adjacent streets or properties shall be completely removed by the permittee as soon as practical, but in any event within 24 hours after receipt of written notice from the City Engineer to remove the earth or materials, or within such additional time as may be allowed by written notice from the City Engineer. In the event that any party performing grading shall fail to comply with these requirements, the City Engineer shall have the authority to engage the services of a contractor to remove the earth or other materials. All charges incurred for the services of the contractor shall be paid to the City by the permittee prior to acceptance of the grading. (A+B+C)</p>	<p>reasonable preventive measures to avoid earth or other materials from the premises being deposited on adjacent streets or properties. Earth or other materials that are deposited on adjacent streets or properties will be completely removed by the permittee as soon as practical, but in any event, within 24 hours after receipt of written notice from the City Engineer, or within additional time as allowed by written notice from the City Engineer.</p>
<p>6. Construction and Development Design</p>		
<p>6.A.</p>	<p>Building standards governing the use of materials and construction methods for structures contained within the Foothill Fire Zones shall be in accordance with the San Bernardino Municipal Code Section 15.10.</p>	<p>Materials and construction methods for structures within Spring Trails will be in accordance with the San Bernardino Municipal Code.</p>
<p>6.B.</p>	<p>A slope analysis shall be filed with all discretionary applications for all projects in Fire Zones A & B consistent with the Hillside Management section of the General Plan and Section 19.17.080(2) of this Development Code. (A+B)</p>	<p>A slope analysis has been prepared and is included as part of the Spring Trails Specific Plan.</p>
<p>6.C.</p>	<p>Structures shall be located only where the upgraded slope is 50% or less. If the</p>	<p>No structure within Spring Trails is adjacent to a slope</p>

Appendix

Section	FF District Standard	Spring Trails Compliance
	building pad is adjacent to a slope which is greater than 50% and is greater than 30 feet in height, a minimum pad setback of 30 feet from the edge of the slope is required. The setback may be less than 30 feet only when the entire slope, or 100 feet adjacent to the building pad, whichever is less, is landscaped with fire resistant vegetation and maintained by an automatic irrigation system. (A+B)	greater than 50%.
6.D.	All proposed property lines shall be placed at the top of slopes, except where the original parcel's exterior boundary line does not extend to the top of the slope. (A+B+C)	In some cases the property line may be located at the bottom of a slope where the property line extends to a road or the property line may be located in the middle of a slope at a drainage bench to prevent cross-lot drainage.
6.E.	Development on existing slopes exceeding 30% or greater may occur if in conformance with all applicable ordinances, statutes and California Environmental Quality Act review. (A)	This condition does not apply in Spring Trails.
6.F.	Structures shall be permitted in narrow canyon mouths or ridge saddles, only if approved by the City Engineer and Fire Department. (A+B)	This condition does not apply in Spring Trails.
6.G.	All new structures requiring permits, including accessory structures, guest housing or second units shall conform to all applicable fire zone standards. (A+B+C)	All structures within Spring Trails will conform to all applicable fire zone standards.
6.H.	Excluding openings, all exterior elements, including walls, garage doors, fences, etc., shall be free of exposed wood (as defined in Chapter 15.10). (A+B, and C where abuts wildlands.)	All exterior elements, including walls, garage doors, fences, etc., will be free of exposed wood, as provided for in the Spring Trails Fire Protection Plan.
6.I.	The minimum distance between structures shall be 60 feet in Zone A and 30 feet in Zone B, unless otherwise approved by the Fire Chief with Concurrence by the Development Review Committee. (A+B)	Development within Spring Trails occurs on slopes less than 15% (Zone C); therefore, this standard does not apply.

Section	FF District Standard	Spring Trails Compliance
6.J.	A fuel-modification plan or a reasonable equivalent alternative as approved by the Fire Chief is required. The plan shall include a "wet zone" of a minimum depth of 50 feet of irrigated landscaping behind any required setback and "thinning zones" of a minimum depth of 100 feet of drought tolerant, low volume vegetation, adjacent to any natural area behind structures and provisions for maintenance. A fire model shall be prepared pursuant to Section 19.30.200(6)(D)(3). (A+B, and C where abuts wildlands.)	The Spring Trails Fire Protection Plan includes a fuel-modification plan that includes "wet zones" and "thinning zones" as required by this standard. A fire model has been prepared and submitted to the San Bernardino Fire Department.

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Section	FF District Standard	Spring Trails Compliance
6.K.	Retrofitting of any element is required when more than 25% replacement of that element occurs; i.e., roofing, fencing. (A+B+C)	This condition does not apply in Spring Trails. However, future retrofitting of any element will be required when more than 25% replacement of that element occurs: i.e., roofing, fencing.
7. Miscellaneous		
7.A.	All future transfers of property shall disclose to the purchaser at the time of purchase agreement and the close of escrow the high fire hazard designation applicable to the property. (A+B+C)	All future transfers of property within Spring Trails will be required to disclose to the purchaser at the time of purchase agreement and the close of escrow the high fire hazard designation applicable to the property.
7.B.	Firebreak fuel modification zones shall be maintained, when required, through homeowner associations, assessment districts or other means. (A+B+C)	Firebreak fuel modification zones within Spring Trails will be maintained by either the Master Homeowners Association or Landscape and Lighting Maintenance District.

APPENDIX E: TENTATIVE TRACT MAP

Appendix

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APPENDIX F: ALTERNATIVE PLAN

If the SCE power lines cannot be located underground as assumed in the preferred plan, then the Alternative Development Plan contained in these appendices shall be utilized for the development of Spring Trails. All other provisions of this Specific Plan shall remain in effect and shall apply to the alternative plan.

The alternative plan for Spring Trails is the same as the preferred plan in every respect except for the treatment of the land beneath the above-ground power lines and the number of residential lots. As shown on Figure 2.2A, *Alternative Development Plan*, the alternative plan for Spring Trails accommodates the above-ground SCE power lines and 304 single-family detached units (303 new units and 1 existing residence). Underneath the central portion of the power line easement, the land use is designated as Open Space-Controlled. If permitted by SCE, a park and/or trail may be located under this portion of the power lines as a permitted use; however, they are not assumed in the buildout of the alternative plan. The northern portion of the power line easement is designated as residential on Figure 2.2A; however, development is not permitted within the power line easement.

Zoning

A zoning designation is linked to legal lot lines but does not provide a true picture of the buildable area of Spring Trails as portions of many lots contain fault zones, graded internal slopes, steep external slopes, water tanks, permanent open space, trail easements, or above-ground power lines and may not be built upon. With the exception of the northern lots under the power lines, the unbuildable areas are accounted for in the alternative land plan (Figure 2.2A).

Figure 2.3A, *Alternative Zoning Map*, has been prepared to satisfy zoning law but, with the exception of the northern lots under the power lines, is not the determining factor for the location of development in Spring Trails. If the alternative plan is utilized, Figure 2.2A, *Alternative Development Plan*, shall govern when determining the use, standards, and buildable area for any legal lot except for those lots on the northern portion of project that contain the above-ground power line easement. The northern portion of the power line easement is zoned with the Non-Buildable Area Overlay and development is not permitted within this area.

Table 2.1A Alternative Plan Development Potential

Land Use	Acres ^{1,2}	Maximum Density	Units ³	Pop. ⁴
Developed Area				
Residential	70.0	1 unit per lot	303	1,015
Private Lot (existing)	2.2	1 unit	1	3
Parks (public and private)	9.0			
Open Space–Controlled ⁵	126.0			
Utilities ⁵	1.2			
Roads (on-site)	33.1			
Subtotal	241.5		304	1,018
Undeveloped Area				
Open Space–Natural ⁶	111.3			
Total				
Total	352.8		304	1,018
Off-Site Access				
Roads/Grading (off-site)	23.7			

Notes:

- ¹ As discussed in Section 6, *Administration and Implementation*, variations to account for final roadway alignments and grading may result in a minor shifting of acres.
- ² Statistics are based upon buildable area depicted on Figure 2.2A instead of the legal lot area to give a true picture of the use of the land. See Figure 2.3A, *Alternative Zoning Map*, for the zoning designations.
- ³ The lots depicted on Figure 2.2A are undevelopable unless the building pads are reconfigured in a manner that is acceptable to the Fire Chief. If they are not reconfigured accordingly, the total units developed will be 302.
- ⁴ Population is based on 3.35 persons per unit (Table 2: E-5 City/County Population and Housing Estimates, 1/1/2007).
- ⁵ Noted as Non-Buildable Overlay on Figure 2.3A, *Alternative Zoning Map*.
- ⁶ The Open-Space – Natural areas on private residential lots are noted as Non-Buildable Overlay on Figure 2.3A, *Alternative Zoning Map*.

Open Space

The Alternative Trails, Parks, and Open Space Plan, Figure 3.10A, is identical to the open space and parks plan shown on Figure 3.10 in the Specific Plan except that a portion of the power line easement is designated as the graded slopes open space category. If permitted by SCE, a park and/or equestrian/pedestrian trail may be located under the power lines as a permitted use; however, they are not assumed in the buildout of the alternative plan.

In the alternative plan, Spring Trails provides approximately 246.3 total acres of public and private parkland, open space, and trails, as summarized in Table 3.5A and further described below.

Table 3.5A Open Space, Parks, and Recreation Facilities Summary

Parks/Recreation Facilities	Acres
Private Parks	2.0
Public Parks	7.0
Open Space-Natural	111.3
Open Space-Controlled	126.0
Total	246.3

Landscape Theme

The landscape theme in the alternative plan is identical to that for the preferred plan except that an area under the power lines that is identified as a refined landscape zone. As discussed in Chapter 3, Development Standards, the refined open space zone generally consists of natural and manufactured slopes and the plant palette presented in Table 3.6 contains plant species appropriate for each landscape zone.

Other Refinements

There may be other minor revisions to the grading plan and the placement of utility lines that may accompany the alternative plan. These will be addressed through the grading plan and tract map process and must be in substantial conformance with the alternative plan.

Appendix

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Figure 2.2A Alternative Development Plan



Legend

- Residential
- Open Space - Natural
- Open Space - Controlled
- Parks
- Utility
- Road

Notes:

1. This Alternative Development Plan will be utilized if the SCE powerlines cannot be located underground as assumed in the preferred plan.
 2. The Alternative Development Plan is a true representation of the use of land irrespective of legal lot lines and shows the areas where buildings may be located, graded slope areas, parks, roadways, and open space areas. The development potential shown in Table 2.1A is keyed to this figure.
 3. When determining the use, development standards, and buildable area of each lot within Spring Trails, this Figure and its associated land use categories shall govern.
 4. This Figure represents the intended alternative development pattern of Spring Trails and minor adjustments to roadway alignments and widths, grading areas, buildable pad configurations, and land use boundaries may be made per the provisions of Chapter 6, Administration and Implementation.
- * Lots 30 and 233 are unbuildable unless the building pads are reconfigured in a manner acceptable to the fire chief.



Appendix

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Figure 2.3A Alternative Zoning Map



Legend

- Residential
- Open Space - Natural
- Parks
- Non-Buildable Area Overlay
- Site Boundary
- Parcel Lines

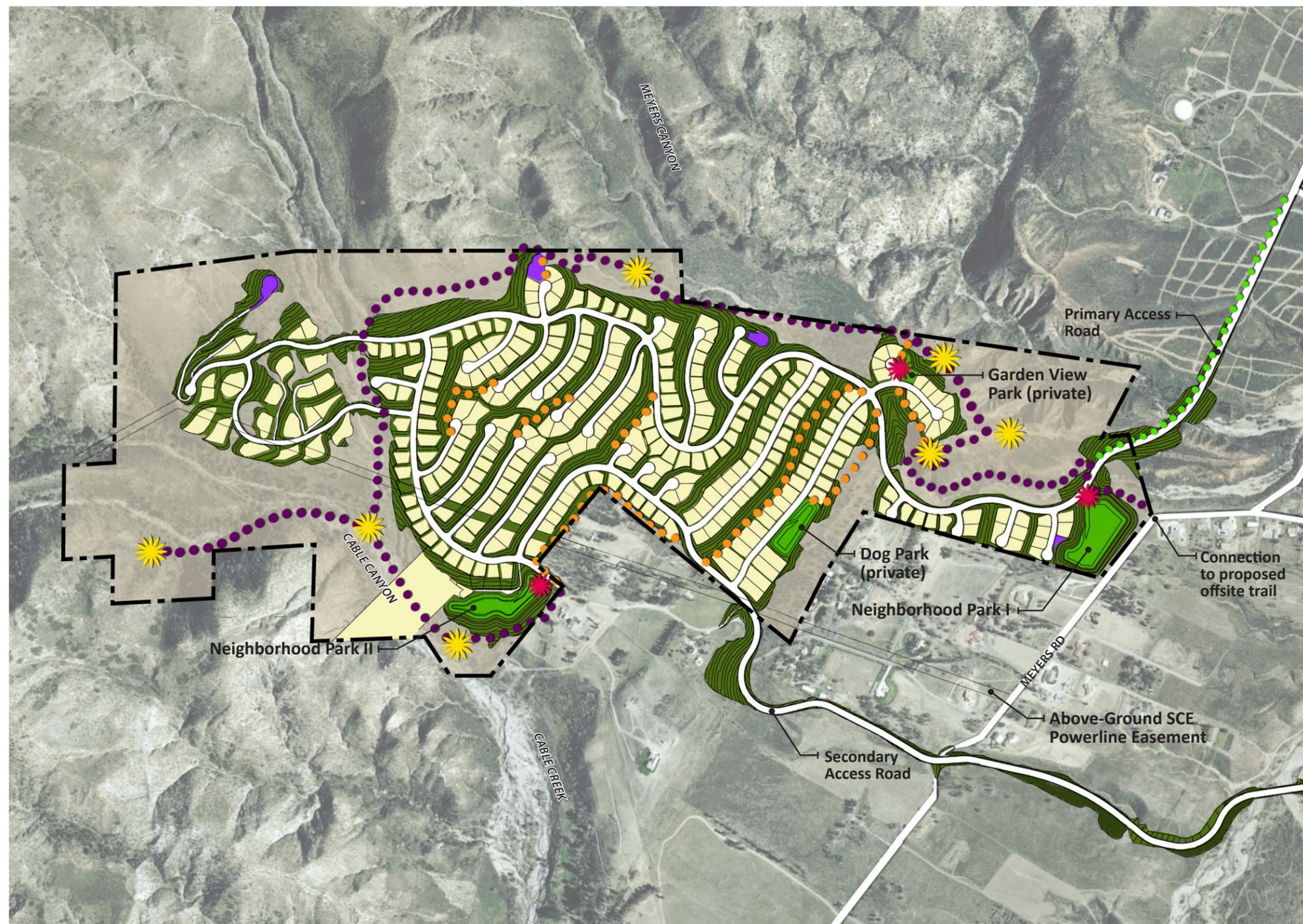
The Alternative Zoning Map is a depiction of the zoning designation of each lot. However, due to constraints such as fault zones and slope areas, the zoning does not provide a true picture of the use and buildable area of each lot. Therefore, when determining the use, standards, and buildable area for a lot, Figure 2.2A, Alternative Development Plan, shall govern.



Appendix

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Figure 3.10A Alternative Trails, Parks, and Open Space Plan



- Legend**
- Residential
 - Open Space
 - Parks
 - Graded Slopes
 - Utility
 - 12-foot Equestrian/Pedestrian Trail
 - 8-foot Community Trail (On-Street)
 - 4-foot Hiking Trail
 - Planned Trail (offsite)
 - Observation Point
 - Trailhead

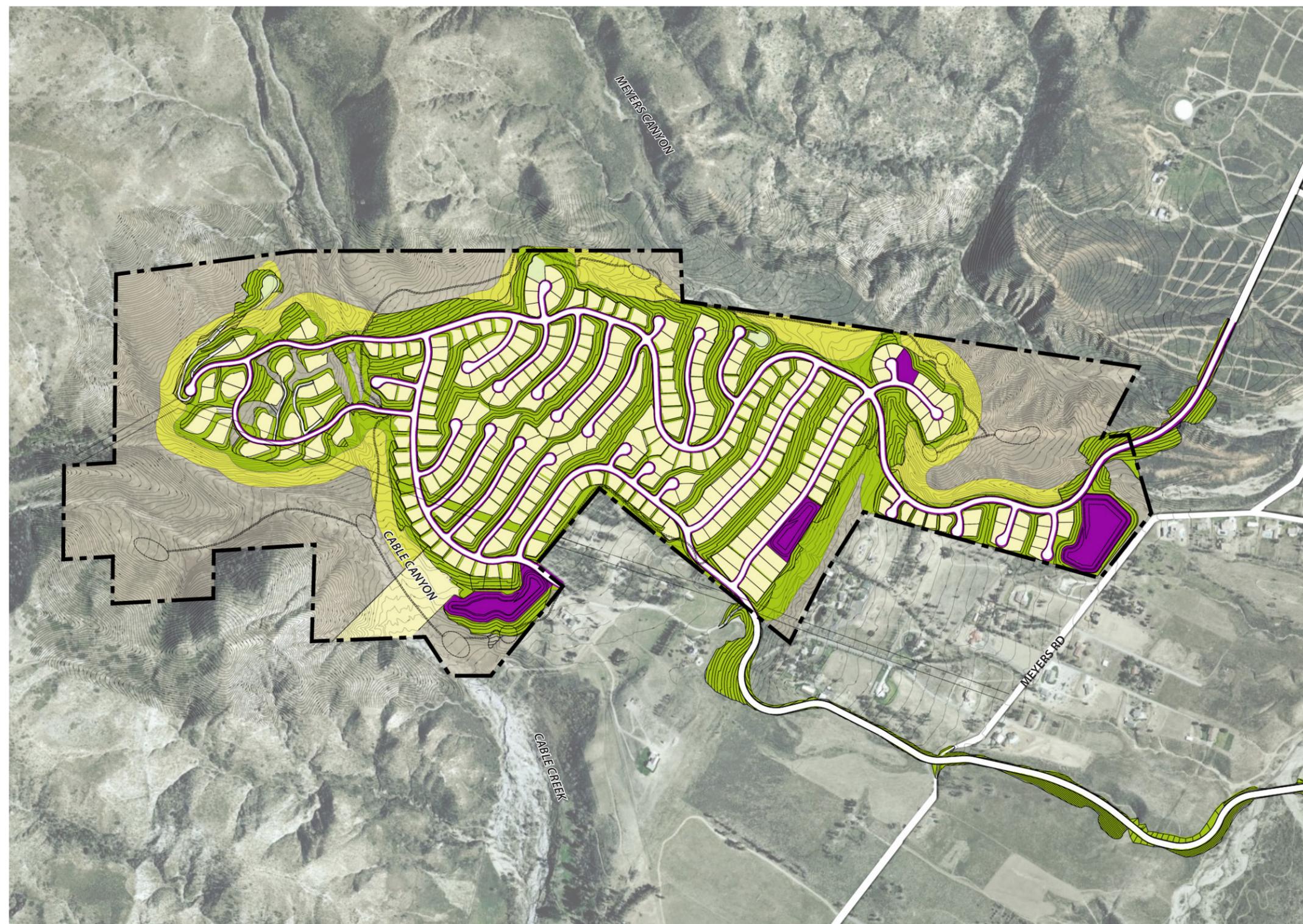
If permitted by SCE, a park and/or equestrian/pedestrian trail may be located under the power lines.



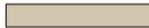
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Figure 3.28A Alternative Landscape Zones



Legend

-  Residential
-  Natural Open Space Zone
-  Transition Open Space Zone
-  Refined Open Space Zone
-  Theme Zone



NOT TO SCALE

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