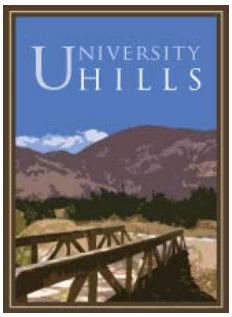
Section 3

Development Criteria



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DEVELOPMENT CRITERIA

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

Unless expressly stated, the University Hills Specific Plan development regulations and 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

The University Hills Specific Plan contains nine different land use categories, including four residential designations. Table 3-1, *Land Use Categories*, provides a description of each category.

The uses allowed in each land use category are summarized in Table 3-2, *Permitted Uses.* The inclusion of any uses not expressly listed shall be subject to the discretion of the Director of Development Services and/or Planning Commission using the spirit of this Specific Plan as a guide. This table categorizes the uses allowed in each category as follows:

- ***Permitted Use (P):*** Use allowed subject to the provisions applicable to that district.
- ***Development Use 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.

Table 3-1 Land Use Categories

Land Use Category	Description of Category
Residential Uses	
Large-Lot Detached (LLD)	Accommodates large-lot, single-family detached uses at an average density of 2.6 dwelling units per acre. The residential density within this land use category ranges between 0 and 3.1 units per acre.
Standard-Lot Detached Residential (SLD)	Accommodates a range of low density residential uses at an average density of 6.7 dwelling units per acre. The residential density within this land use category ranges between 3.2 and 9 units per acre.
Mixed Detached/Attached Residential (MDA)	Accommodates medium density detached and attached residential uses at an average density of 11.9 dwelling units per acre. The residential density within this land use category ranges between 9.1 and 15.0 units per acre in Planning Areas 5 and 13 and between 9.1 and 17.0 in Planning Areas 10, 14, and 20.
Attached Residential (A)	Provides for high density, multiple-family residential uses at an average density of 16.8 dwelling unit per acre. The residential density within this land use category ranges between 15.1 and 20 units per acre.
Other Uses	
Parks (Public)	Accommodates a range of public open space opportunities such as tot lots, sports courts and fields, picnic areas, joggers' exercise courses, and recreational facilities.
Clubhouse	Accommodates private recreational facilities, such as clubhouse, pool, barbeque facilities, conference rooms, tennis courts, gym, tot lots, picnic areas, and open space.
Open Space	Provides undeveloped open space for recreational uses.
Utility	Accommodates water tanks, electrical substations, water filtration systems, and other utilities for public benefit.
Internal Slopes	Accommodates trails, community gardens, and landscape.

Table 3-2 Permitted Uses

Use	LLD	SLD	MDA	A	Pub Pk	Club	U	OS
Residential Uses								
Community care facility (6 or fewer patients)	P	P	P	P	X	X	X	X
Day care center	X	X	X	X	X	C	X	X
Day care homes, family (6 or fewer children)	P	P	P	P	X	X	X	X
Day care homes, family (7 to 12 children)	C	C	X	X	X	X	X	X
Dormitories/fraternity/sorority	X	X	X	X	X	X	X	X
Homeless facilities	X	X	X	X	X	X	X	X
Second dwelling (granny) unit	D	D	D	X	X	X	X	X
Multifamily attached dwellings	X	X	P	P	X	X	X	X
Residential care facility	X	C	C	C	X	X	X	X
Congregate care, assisted living facilities, and nursing homes,	X	X	X	X	X	X	X	X
Single-family detached dwellings	P	P	P	P	X	X	X	X
Caretaker's unit	X	X	X	X	X	X	X	C
Age-restricted (senior) projects	X	X	X	C	X	X	X	X
Recreational Uses								
Clubhouse	C	P	P	P	P	P	X	X
Golf course	X	X	X	X	X	X	X	X
Open spaces/parks	P	P	P	P	P	P	P	P
Trails (including bicycles, equestrian, pedestrian)	P	P	P	P	P	P	P	P
Swimming pool/spa	P	P	P	P	P	P	X	X
Accessory Uses								
Antennae, vertical/satellite dish	P	P	P	P	P	P	X	X
Fences and walls	P	P	P	P	P	P	P	C
Storage structures (less than or equal to 120 sf)	P	P	P	P	P	P	X	X
Recreational vehicle and boat storage	P	X	X	X	X	X	X	X
Personal Services (not stand alone, but inside Clubhouse)								
Barber/beauty/nail shops	X	X	X	X	X	P	X	X
Dance schools/karate studios	X	X	X	X	X	P	X	X
Dry cleaners	X	X	X	X	X	P	X	X
Laundromats (self-serve)	X	X	P	P	X	P	X	X
Other Uses								
Conference rooms	X	X	X	X	X	P	X	X
Homefinding center (temporary)	X	D	D	D	X	D	X	X
Private/public utility facilities	C	C	C	C	C	C	D	C
Wireless telecommunication facilities	X	X	X	X	C	C	C	C
Home Occupations								
Subject to (H) home occupation permit	H	H	H	H	X	X	X	X
Temporary Uses								
Subject to (T) temporary use permit	T	T	T	T	T	T	T	T

C=Conditional D=Develop Permit P=Permitted X=Not Permitted H=Home Occupation Permit

Development Standards

Development standards are provided to regulate development in University Hills. With this Specific Plan standards are grouped into specific development standards for each land use, and general development standards that apply project wide.

- ***Development standards***, which provide the tailored standards for each land use category and include such provisions as lot size, lot dimension, and building height and setback requirements. Development Standards are provided in Table 3-3 for detached residential, Table 3-4 for attached residential, and Table 3-5 for other uses.

- ***General development standards***, which include regulations that apply to most, if not all, land use designations within University Hills.

Detached Residential Standards

Development standards for detached residential products, which are allowed in the LLD, SLD, and MDA land use categories, are provided in Table 3-3.

Attached Residential Standards

Development standards for attached residential products, which are allowed in the MDA and A land use categories, are provided in Table 3-4.

Table 3-3 Development Standards – Detached Residential Uses

Standard	LLD	SLD	MDA
Density			
Average density	2.6 DU/ac	6.7 DU/ac	11.9 DU/ac
Density range	0–3.1 DU/ac	3.2–9.0 DU/ac	9.1–15.0 DU/ac in PA 5 & 13 9.1–17.0 DU/ac in PA 10, 14, & 20
Building Site Specifications			
Minimum lot size per unit	5,000 sf	2,400 sf	1,200 sf
Minimum lot width [1, 2]	50 ft	35 ft	25 ft
Minimum lot depth	100 ft	60 ft	50 ft
Corner lot streetside lot width	55 ft	40 ft	30 ft
Maximum lot coverage	60%	70%	75%
Front Setbacks			
To habitable structure	12 ft	8 ft	7 ft
To front-entry garage	18 ft	18 ft	N/A
To alley-entry garage	0 ft	0 ft	0 ft
To side-entry garage	15 ft	10 ft	10 ft
To unenclosed porch	10 ft	5 ft	3 ft
Side Setbacks from Street ROW			
To structure	10 ft	5 ft	3 ft
Projections into setback [3]	4 ft	2 ft	1 ft
Interior Side Setbacks			
To habitable structure [8]	0 or 5 ft	0 or 3 ft	0 or 3 ft
To front-entry garage in rear 1/3 of lot	0 ft	0 ft	0 ft
To alley-entry garage	0 ft	0 ft	0 ft
Projections into setback[3]	2 ft	1 ft	1 ft
Rear Setbacks			
To habitable structure (interior lot)	15 ft	10 ft	6 ft
To habitable structure (home-to-alley) [4,5]	5 ft	5 ft	5 ft
To alley-entry garage	0 ft, but either (1) a 30 foot wide alley (24-foot wide paved area with a 3 foot apron on each side) is required in alleys with no parking, or (2) a 34 foot wide alley (28 foot wide paved area with a 3 foot apron on each side) is required in alleys with parking.		
To front-entry garage in rear 1/3 of lot	0 ft	0 ft	0 ft
Projections into setback [3, 5]	3 ft	3 ft	2 ft
Height			
Maximum height [6]	35 ft	35 ft	40 ft

Table 3-3 Development Standards – Detached Residential Uses

Standard	LLD	SLD	MDA
Other			
Tandem parking [9]	Third car is permitted to be tandem	Permitted in 25% of units	Permitted in 25% of units
Building separation [7]	10 ft	6 ft	6 ft

ft = feet sf = square feet DU/ac = dwelling units per acre

Notes:

All setbacks shall be measured from the property line to the structure unless otherwise noted.

[1] Any lot with a width of 35 ft or less shall provide garage access from an alley unless on a knuckle or cul-de-sac.
[2] For knuckle and cul-de-sac lots, the minimum lot width shall be met at 20 ft from the front property line.
[3] 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.
[4] Habitable structures (nongarage) may cantilever beyond the garage door to the rear property line.
[5] Applies to habitable structures only. Garage projections are not permitted.
[6] Maximum building height is defined as the height from the top of the finished grade to the top of the roof peak. An architectural projection such as a chimney or nonhabitable tower may exceed the maximum building height by 10 ft.
[7] Building separation is measured from the exterior wall of a structure to the exterior wall of another structure.
[8] Zero lot line developments are permitted if the balance of the required setback is provided on the opposite side yard of the same lot.
[9] Tandem parking not permitted for shared, guest, or public parking.

Table 3-4 Development Standards – Attached Residential Uses

Standard	MDA	A
Density		
Average density	11.9 DU/ac	16.8 DU/ac
Density range	9.1–15.0 DU/ac in PA 5 & 13 9.1–17.0 DU/ac in PA 10, 14, & 20	15.1–20.0 DU/ac
Building Site Specifications		
Minimum site area	2 acres	2 acres
Maximum site coverage (building footprint)	75%	75%
Setbacks From Exterior Public Street		
To habitable structure	10 ft	10 ft
Projections into setback[1]	7 ft	7 ft
Building Separation [2]		
Front-to-front separation	20 ft avg.	20 ft avg.
Front-to-side separation	15 ft	15 ft
Side, rear, oblique separation	10 ft	10 ft
Alley	Either: (1) a 30 foot wide alley (24-foot wide paved area with a 3 foot apron on each side) is required in alleys with no parking, or (2) a 34 foot wide alley (28 foot wide paved area with a 3 foot apron on each side) is required in alleys with parking.	
Other		
Maximum height [3]	40 ft	40 ft
Minimum livable area	Studio – 550 sf 1 Bedroom – 700 sf 2 Bedroom – 900 sf 3 Bedroom – 1,100 sf	
Minimum common open space [4, 5]	150 sf per unit	
Min. private open space per unit [4]	60 sf per unit Minimum dimension of 6 ft in any direction.	
Tandem parking	Permitted in 30% of units	Permitted in 30% of units

ft = feet sf = square feet DU/ac = dwelling units per acre

Notes:

All setbacks shall be measured from the back of the curb to the structure unless noted otherwise.

[1] Projections are architectural features that extend beyond the building face. Projections include features such as eaves, bay windows, stairways, porches, and other architectural detailing. Projections shall not encroach within 3 ft of the property line.

[2] Building separation is measured from the exterior wall of a structure to the exterior wall of another separate structure. The following may encroach into the required separation: 1) architectural projections, window-boxes, and eaves-3 ft, 2) covered porches and stoops-5 ft, 3) balconies and stairways-5 ft.

[3] Maximum building height is defined as the height from finished grade to the top of the roof peak, whichever is greater. An architectural projection such as a chimney or nonhabitable tower may exceed the maximum building height by 10 feet.

[4] See the open space provisions in the Multi-Family Open Space guidelines on page 3-13 for greater detail and definition.

[5] The clubhouse (planning area 7) and public parks (planning areas 1, 17, 19, and 21) count towards the required common open space requirement.

Development Standards for Other Uses

Development standards for structures within the Clubhouse, Public Park, Open Space, Utilities, and Internal Slope land use categories are provided in Table 3-5.

Table 3-5 Development Standards – Other Uses

Standard	Club	Pub. Pk.	Open Space	Utilities	Internal Slopes
Height of structure	40 ft	20 ft	15 ft	35 ft	NA
Setback of structure from property lines	20 ft	20 ft	20 ft	10 ft	NA

General Development Standards

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

Accessory Uses in Multifamily Developments

Possible accessory uses within a multifamily development shall be approved through the Development Permit Review and include such features as, common laundry facilities for developments with no individual hook-ups, tot lots, pools, spas, barbeque areas, clubhouses, and game courts.

Antennas

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

Cornices and Eave Projections

Cornices and eaves may extend into a required yard per the California Building Code.

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, be landscaped, and be 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 Municipal Code using the spirit and intent of the University Hills Specific Plan as a guide. In addition the following standards shall apply.

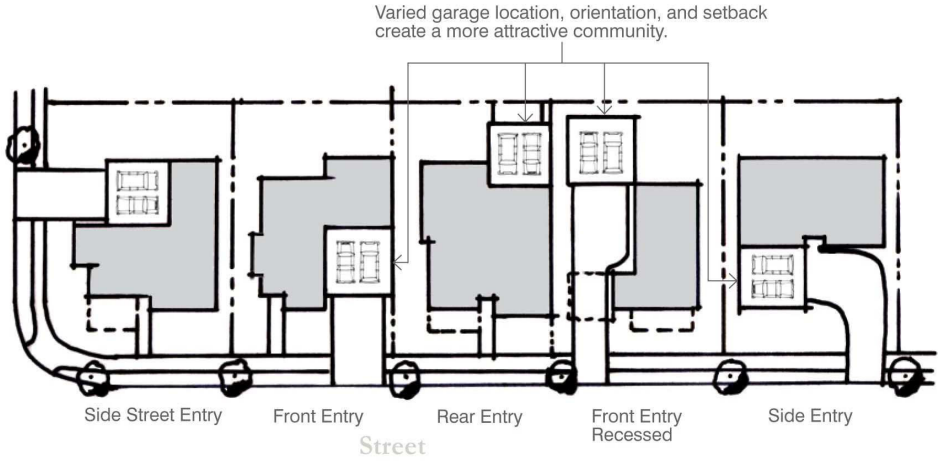
- The height of walls and fences shall be measured from the top of the highest adjacent grade unless adjacent to a public right-of-way, in which case the measurement shall be taken from the side of the public right-of-way.
- Rear or side yards. The maximum height of walls and fences in the rear and side 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.
- 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 located 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 located on the perimeter, side, or rear property lines shall be as would otherwise be allowed if there was no retaining wall.
- 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.
- 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 located within University Hills shall be designed and constructed to withstand 100 mile per hour winds or the current 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.

Garage Variation

To avoid the monotony of projects that employ the same garage placement (e.g., all front-entry garages), single-family neighborhoods in University Hills are required to include a variety of garage placements and orientations. Standard garage placement is a front-loaded garage set in from the front property line. Projects with more than five units shall use alternative garage orientation and placement 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:

- Alley–loaded garages
- Side-entry garages
- Split garages
- Garages located in courtyards or driveways providing multiple-unit access
- Straight-in garages in rear two-thirds of the lot



Garage Sales

Garage sales at a single-family detached residence are permitted once every six months for a maximum period of 48 consecutive hours. Garage sales are not permitted within multifamily projects.

Glossary of Terms

See Appendix A of this Specific Plan.

Hazardous Materials

Property management shall include language in all tenant contracts in the clubhouse or in contracts for contractors hired by the property management association, that (1) the use, handling, storage, and transportation of hazardous materials shall comply with Section 19.20.030 (12) of the Municipal Code, and (2) submit a Hazardous Materials Business Plan to the San Bernardino Health Services Hazardous Materials Program for the storage of 55 gallons or more of hazardous liquid, 500 pounds of hazardous solids, or 200 cubic feet of hazardous gas onsite. The plan shall identify emergency response procedures in the event of an accident or spill and include an initial inventory of hazardous materials, including new or waste materials that are toxic, reactive, ignitable, or corrosive. The contractual language shall provide property management with the ability to enforce the conditions through measures such as fines or other penalties.

Hillside Management

Most foothills (areas of 15 percent average slope or greater) within University Hills have been preserved as open space and are included within the boundaries of the Land Laboratory, as described later in this chapter. Development and use in the areas with an average slope of 15 percent or greater shall comply with the Chapters 19.15 and 19.17 of the Municipal 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, 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, which is carried on solely by the occupant of the premises. Home occupations are allowed in any residence per the provisions of Chapter 19.454 of the Municipal 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.
- 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, 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 University Hills plant palette (Tables 3-8 and 3-9) and the fire protection plan in this chapter.

Lighting

Due to the proximity of University Hills to the planned CSUSB observatory at Badger Hill, 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 University Hills.

- 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. Please see Chapter 5, *Sustainability Guidelines*, for additional guidelines regarding the reduction of light pollution.
- 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 in height above finish grade. Lighting in parks may exceed this limit where deemed appropriate by the University Hills Design Review Committee and approved by the City. 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.
- Parking areas shall have lighting that provides adequate illumination for safety and security. Parking lot lighting fixtures shall maintain a minimum of 1 foot-candle of illumination at ground level at any location within the parking facility.
- 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.
- A lighting plan shall be prepared for all public areas within University Hills. 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 in the LLD, SLD, and MDA land use designations, provided necessary access is maintained. Accessory buildings exceeding than 120 square feet and/or 6 feet in height are limited to a maximum of 1 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 building 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 2 feet into the setback. Patio covers shall be consistent with Chapter 19.15 of the San Bernardino Development Code.

Multifamily Open Space

Open spaces are those areas that are used for private or common use, as defined below. Open space does not include public or private streets, alleys, driveways, parking spaces, parkways, or recreational storage areas. Open space includes parks, the clubhouse, and public trails within the internal slope areas and Land Laboratory.

Private Open Space

Private open space is defined as those areas that are designed and intended to be used exclusively by the individual homeowner. Private open space includes patios, balconies, fenced private yards, and other private areas. Private open space may include ground-floor patios or courtyards, second-/or third-floor balconies or decks, and rooftop decks. Private open space may be covered, but must be open on at least one side. Refer to Table 3-4 for private open space requirements.

Common Open Space

Common open space is defined as those areas designated for the use and enjoyment of all residents and developed for recreational or leisure-time activities. These common areas may include game courts, swimming pools, garden grounds, sauna baths, public trails, tennis courts, basketball courts, volleyball courts, putting greens, play lots, and clubhouse facilities.

It is the express intent of this Specific Plan to focus common open space requirements into the locations depicted on Figure 3-43 instead of individual Planning Areas to create community gathering places and a sense of identity.

Accordingly, the clubhouse (planning area 7) and public parks (planning areas 1, 17, 19, and 21) count towards the required common open space requirement noted on Table 3-4.

Nonconforming Uses

Per Chapter 19.62, Nonconforming Structures and Uses, of the Municipal Code using the spirit and intent of the University Hills Specific Plan as a guide.

Parking and Loading Standards

Minimum Number of Parking Spaces

- Two enclosed garage spaces per each detached residential unit.
- For attached units, the following shall apply:
  - Studio unit: 1.5 covered spaces per unit
  - One-bedroom unit: 1.5 covered spaces per unit
  - Two -bedroom units: 2 covered spaces per unit
  - Three or more bedrooms: 2 covered spaces per unit
  - Guest parking: 1 guest parking space for every 5 units
- For the clubhouse, 1 space per 300 square feet with a minimum of 10 spaces is required.
- For the public parks, 5 public spaces are required at each facility.

Parking Design and Use Provisions

- General provisions. Per Section 19.24.060, Design Standards, of the Municipal Code using the spirit and intent of the University Hills Specific Plan as a guide.
- Driveways for single-family detached residential units. The driveway to a garage shall have a minimum width of 10 feet and a maximum grade of 12 percent.
- Access to off-street parking. Either (1) loop system, where each one-way road has a minimum width of 20 feet; or (2) driveway with a minimum width of 24 feet to permit two-way traffic. Along all driveway and vehicular access ways that provide access for fire or emergency vehicles, there shall be a minimum vertical clearance of 14 feet and horizontal clearance of 20 feet.
- Handicapped parking. Per Section 19.24.050, Handicapped Parking Requirements, of the Municipal 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. In attached developments without yards, parking of these recreational items must be in a common storage area or off-site. If storage areas are provided on-site, they shall be constructed per the Storage Facilities section below and the standards in Section 19.04.030 (O), Recreational Vehicle Storage Facilities, of the Municipal Code.

Pedestrian Circulation

A pedestrian circulation system shall be incorporated into the residential development for the purpose of providing direct access to and from all individual dwelling units, trash storage areas, parking areas, recreational areas, outdoor living areas, transit connections, and internal/regional trails. The circulation system shall be developed with a combination of the following standards:

- A sidewalk system shall be developed adjacent to all public streets, as detailed on the street sections contained in this Specific Plan. This requirement may be waived where pedestrian accessible trails are located adjacent to the street.
- Sidewalks shall comply with ADA requirements.
- Direct pedestrian connections to the Regional Multipurpose Trail shall be provided from Planning Areas 16, 18, and 20.
- The interior walkway system shall include pedestrian walks or paths consisting of varying widths designed to provide curvilinear forms wherever possible. The minimum unobstructed width of interior pedestrian walks and paths shall be four feet. Walkway systems shall use materials such as concrete, decomposed granite, brick, flagstone, or other materials.

Private Storage Areas

For each dwelling unit without an enclosed garage, a minimum of 100 cubic feet of private storage space shall be provided outside the dwelling. The design, location, and size of the storage space shall be integrated into the development.

Product Variation

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

- Single-family neighborhoods over five units should have a minimum of three different material and color palettes. No two single family detached homes with identical color or materials palettes shall be located adjacent to or directly across the street from one another.
- Single-family neighborhoods over five units shall include a minimum of three elevation/facade designs. No two homes with identical elevation/façade designs shall be located adjacent to or directly across the street from one another.
- Single-family neighborhoods over five units shall have a minimum of three primary roof materials and roof designs. No two single-family detached homes with identical roof designs and materials shall be located adjacent to or directly across the street from one another.

Public Utility Lines

Per Section 19.30.110, Underground Utilities, of the Municipal 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 a 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 6 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 Municipal Code.

Signs

Per Section 19.22, Sign Regulations, of the Municipal Code. Specifically, the regulations governing signs in residential districts on Table 22.01 shall apply in University Hills.

Storage Facilities

- Common areas for parking trailers, boats, campers, camper shells, motor homes, and similar vehicles may be provided within a

development. If a common parking area is provided, the units that would have otherwise been allowed without the common storage area may be transferred within the development or to another residentially designated area of University Hills as described in Chapter 6, *Implementation*.

- Common storage facilities should be enclosed with a minimum 6-foot-high decorative masonry wall, screened by a 5-foot-wide perimeter landscaping buffer that is maintained by an electric remote-control sprinkler system, adequately lighted, provided with yard drains for adequate drainage, and have electrical outlets and hose bibbs.

Street Access

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

Trash Collection Areas

- Trash in University Hills may be serviced by individual or centralized collection as is appropriate for the design of each product. Individual container collection is the preferred method of collection where space allows and may occur at the front or rear of each unit or in common collection points. Centralized collection is the best method of collection for the higher density residential projects and some cluster projects. A waste management plan shall be submitted and approved prior to issuance of building permits.

Individual Collection

- Individual collection is trash collection that is provided at each unit.
- Individual container collection is required in the Large Lot detached and Standard Lot Detached land use categories.
- 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 9 square feet (3' x 3') of designated space for each container and the space for the storage of 2 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.

Common Collection Points for Individual Containers

- Common collection points for individual containers are designated areas where residents roll individual containers for collection.
- Common collection points for individual containers are permitted in the Mixed Detached/Attached and Attached land use categories.
- Common collection areas shall comply with the following standards:

- Common collection areas shall either be in designated off-street or curb-side areas that are identified by signs (stating necessary information such as pick-up hours, no parking hours, return deadlines, penalties, etc…) and, if necessary, be curb-painted.
- The maximum container roll distance from any residence shall not exceed 150 feet.
- A maximum of 12 homes may roll containers to a common collection area.
- 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 9 square feet (3' x 3') of designated space for each container and the space for the storage of 2 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.

Centralized Collection

- Centralized collection areas provide common trash bins for projects without individual containers.
- Centralized collection is permitted in the Mixed Detached/Attached and Attached land use categories.
- Bin enclosure will have a minimum of 2.5 foot distance between all inside walls of the enclosure and the side edges of the waste container.
- Walking distance to bins or compactors should be less than 150 feet from the door of the furthest residence.
- Collection vehicles must be able to provide service to residents without backing up, not including the distance required during the stab and lift operation.
- 25 feet of overhead clearance is required at collection points.
- Developments may utilize a chute to compactor system for both trash and recyclables.
- All bins must be screened from view. All bin locations and placement must be approved by Public Works.
- All compactors must be the stationary type and are owned and maintained by the development.

General Requirements

- 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.
- Trash receptacles shall be covered and completely screened from public rights-of-way and parking areas through site orientation, screening materials (walls/landscaping), or a combination of both, and shall be situated to eliminate noise and visual intrusions and fire hazards.

Mobility Plan

University Hills 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 roadways and multiuse trails within University Hills that provide a range of options for vehicular, pedestrian, equestrian, and bicycle mobility.

Vehicular Circulation

As shown in Figure 3-1, *Vehicular Circulation Plan*, the University Hills Specific Plan consists of a hierarchy of streets, including collector and local roads, which provide a comprehensive and connected street network. Access to the project site will be provided via (1) an extension of Campus Parkway from the intersection of Northpark Boulevard in an existing right-of-way to the western area of the site, and (2) an extension of Little Mountain Drive from Northpark Boulevard in an existing right-of-way adjacent to the flood control channel to the eastern area of the project site. All necessary public streets, both on or 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 3-2 through 3-9.

Roadways

Primary Collector

Primary collector roads are intended to feed local traffic to arterial roads outside the project site. Primary collector roads shall be designed to complement the character of surrounding uses. Campus Parkway is designated as a primary collector for University Hills, as shown in Figure 3-1, *Vehicular Circulation Plan*. Typical cross-sections and plan views are illustrated in Figures 3-2 and 3-3.

Secondary Collector

Secondary collectors are intended as alternative roads for local traffic to access arterial roads outside the project site. The secondary collector roadway designation is assigned to Little Mountain Drive, as shown in Figure 3-1. Typical cross-sections and plan views are illustrated in Figure 3-4.

Primary Local

The primary local roadway designation serves local residents and provides access from Campus Parkway to the California Walnut Grove Linear Park. The

locations of primary local roads within University Hills are shown in Figure 3-1. Typical cross-sections and plan views are illustrated in Figure 3-5.

Community Local

Community local roads will be developed within University Hills with alternative configurations, depending on the adjacent land use. In some instances, the Regional Trail will be located adjacent to the community local roadways. Roadways designated as community local roads in University Hills are shown in Figure 3-1. Typical cross-sections and plan views are illustrated in Figures 3-6 through 3-8.

Neighborhood Local

Neighborhood local roads serve individual residential neighborhoods. Roadways designated as neighborhood local roads in University Hills are shown in Figure 3-1. A typical cross-section and plan view are illustrated in Figure 3-9.

Alleys

Alleys may be found in some residential neighborhoods depending on the type of product. A 30 foot wide alley (24-foot wide paved area with a 3 foot apron on each side) is required in alleys where parking is prohibited, and a 34 foot wide alley (28 foot wide paved area with a 3 foot apron on each side) is required in alleys that allow parking alleys are not depicted on the Vehicular Circulation Plan, as they will be the function of individual projects and approved during the tract map process.

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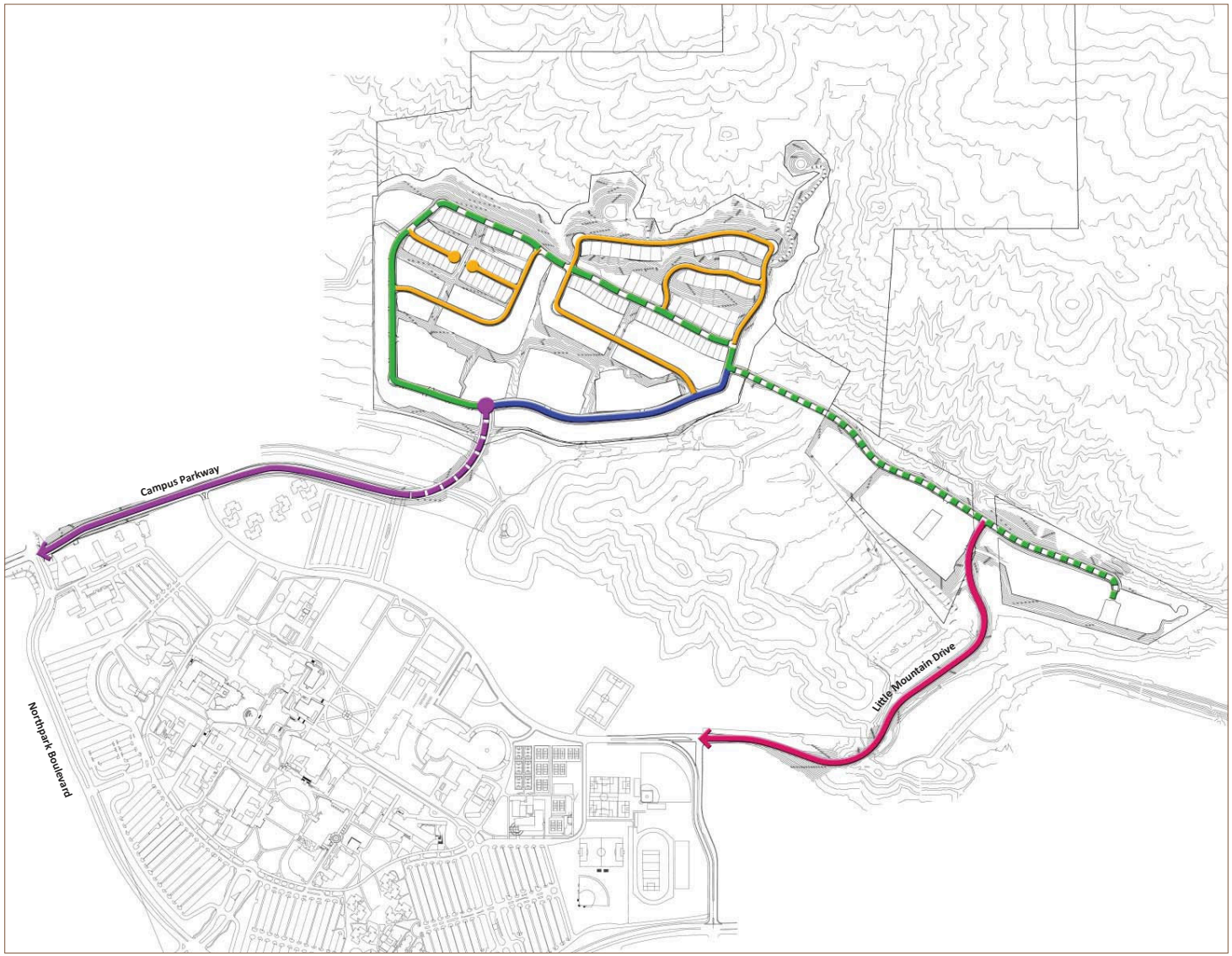

Figure 3-1: Vehicular Circulation Plan

LEGEND

- Primary Collector I
- Primary Collector II
- Secondary Collector
- Primary Local
- Community Local I
- Community Local II
- Community Local III
- Neighborhood Local

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.

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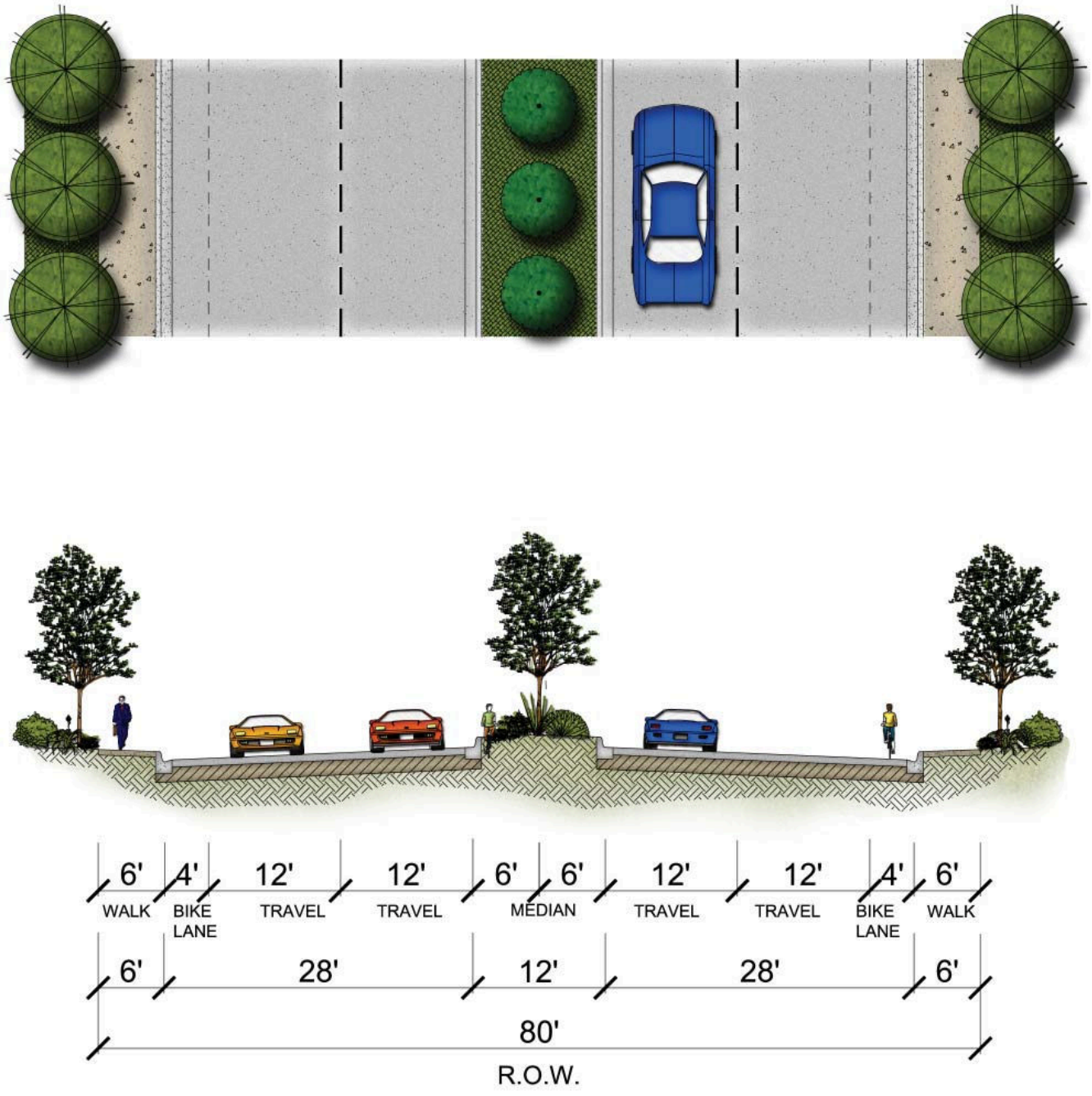
Figure 3-2: Primary Collector I



Note: The typical street cross-section and plan illustrated above is conceptual in nature and is intended to show the design intent for University Hills. The exact design and type of improvements will be determined during the review and approval of the tract map using the sptirit and intent of this Specific Plan as a guide.

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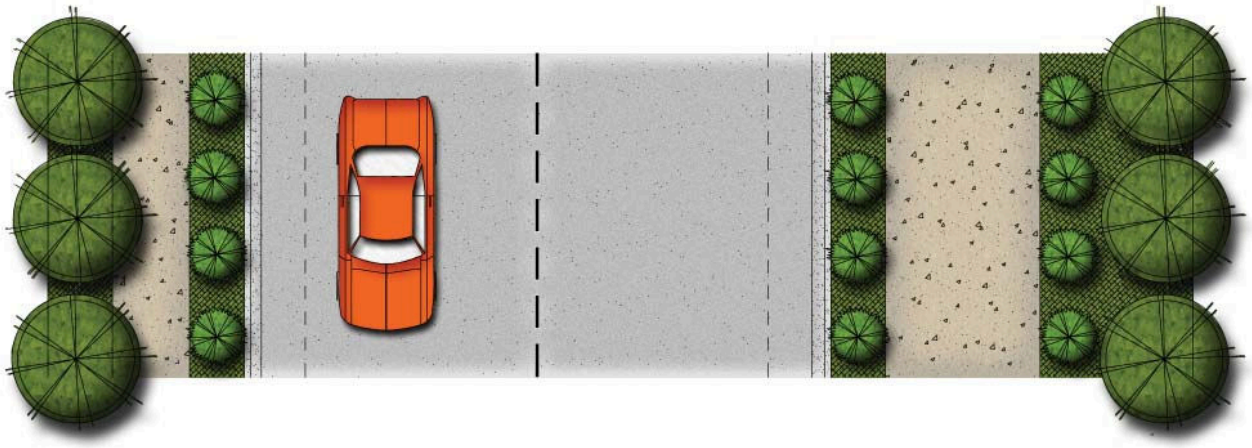
Figure 3-3: Primary Collector II



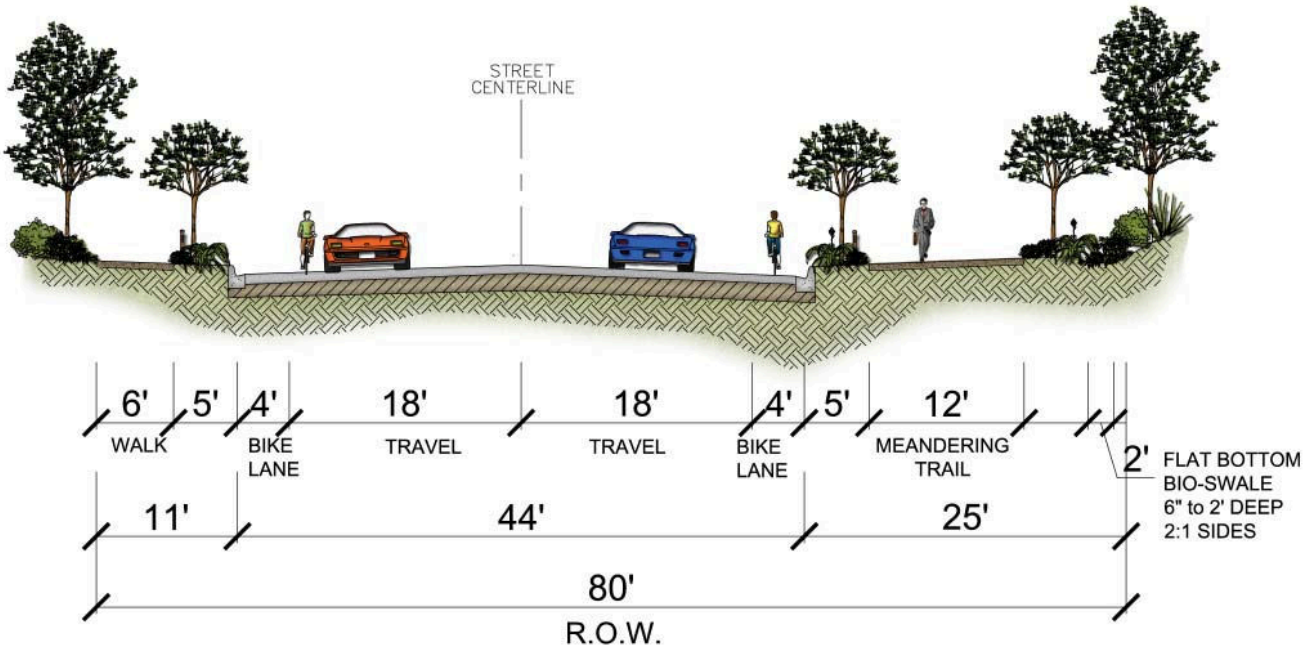


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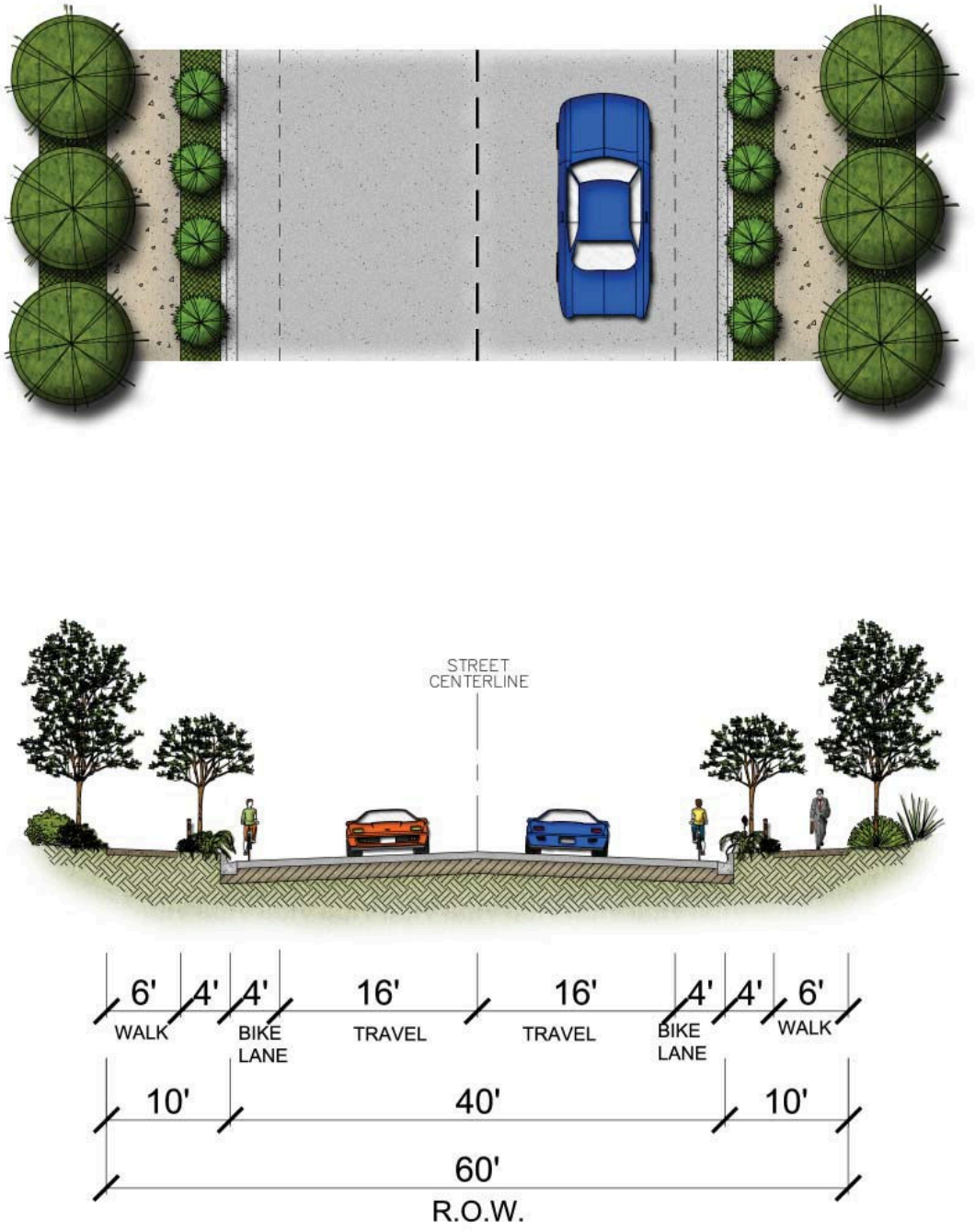
Figure 3-4: Secondary Collector



Note: The typical street cross-section and plan illustrated above is conceptual in nature and is intended to show the design intent for University Hills. The exact design and type of improvements will be determined during the review and approval of the tract map using the sptirit and intent of this Specific Plan as a guide.

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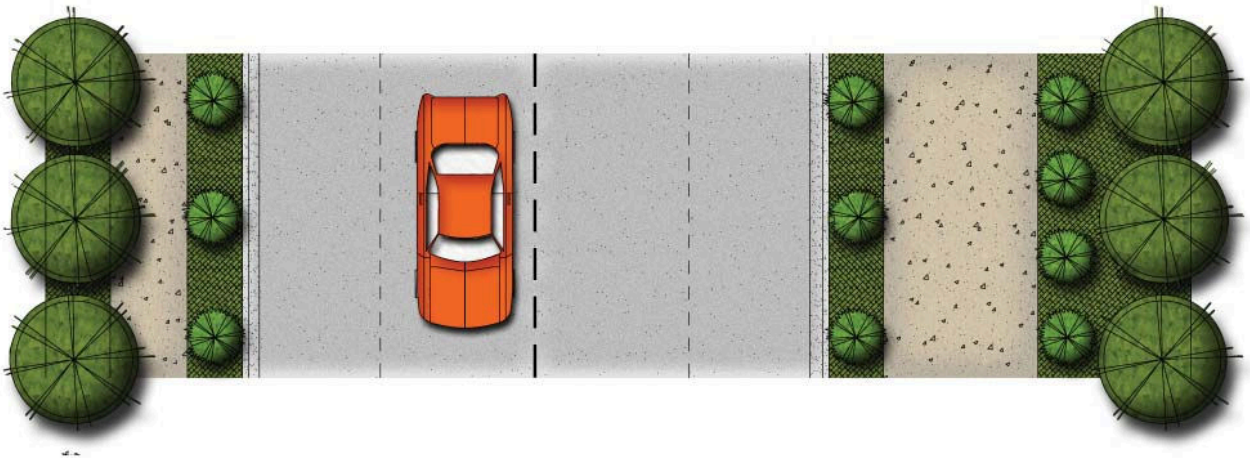
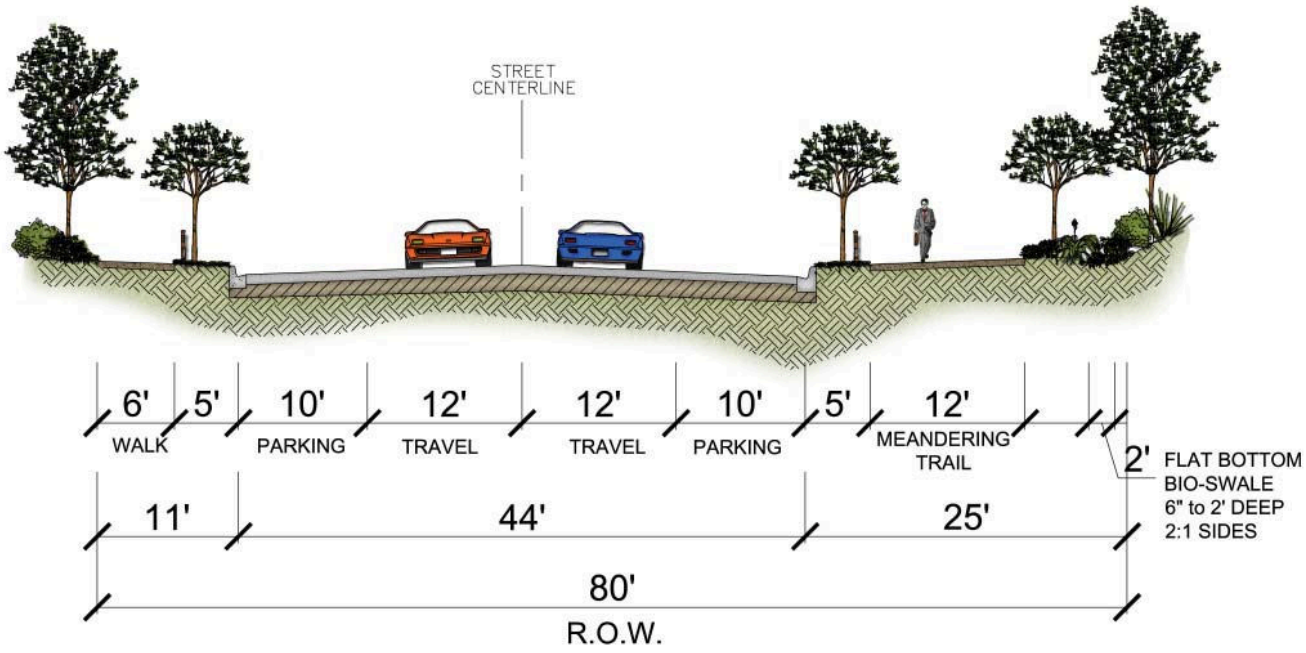
Figure 3-5: Primary Local





Note: The typical street cross-section and plan illustrated above is conceptual in nature and is intended to show the design intent for University Hills. For streets with on-street parking, there are several options that will be determined during the review and approval of tract maps including: 1) meandering sidewalks with curb adjacent paved areas; 2) curb-adjacent sidewalk where the width of the landscape parkway is added to the landscaped area in back of the sidewalk; and 3) curb-adjacent landscaped parkway with sidewalk behind (illustrated). If a landscaped parkway is located adjacent to the curb, low profile landscaping and turf should be used and trees spaced so as to allow access to/from cars.

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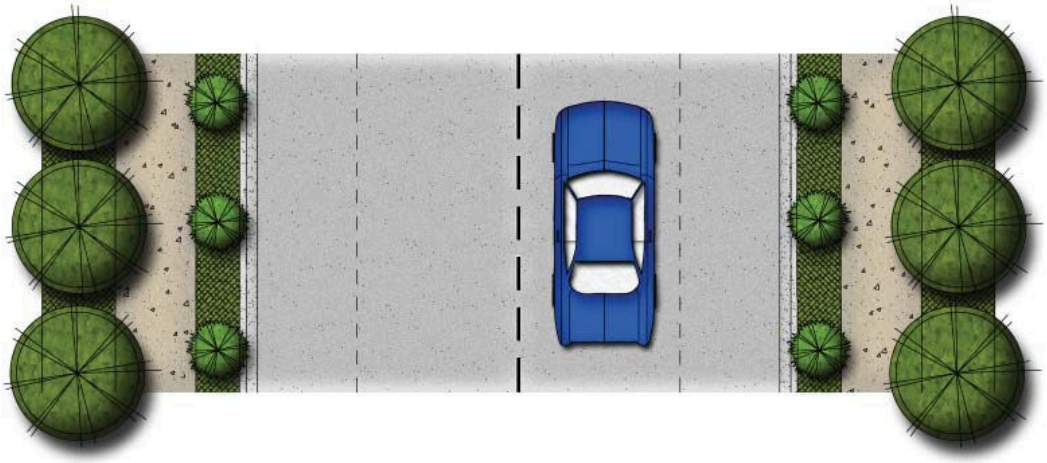
Figure 3-6: Community Local I



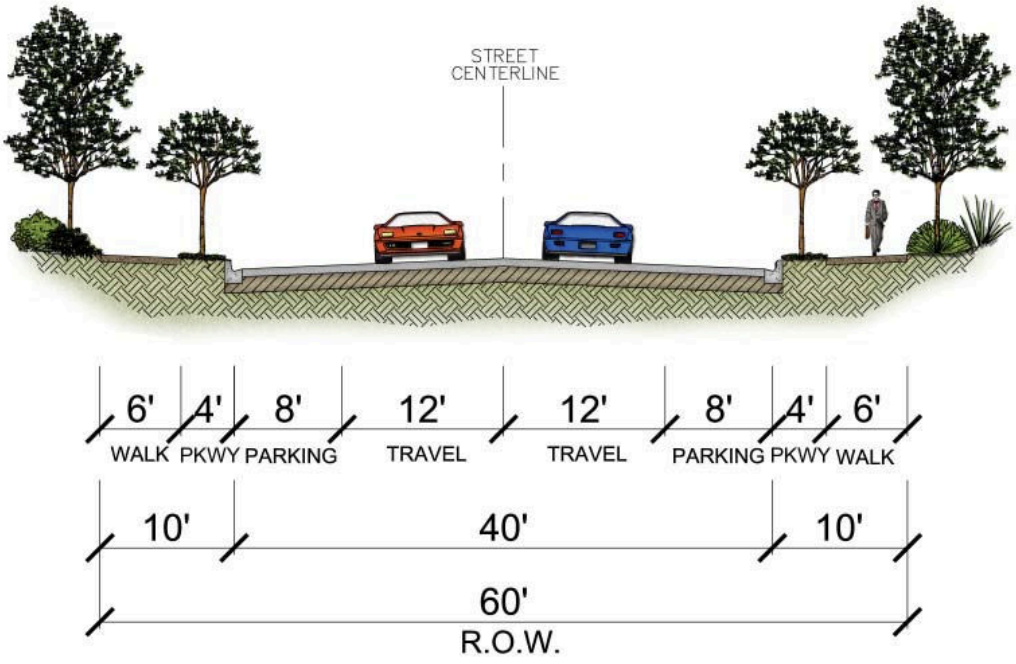


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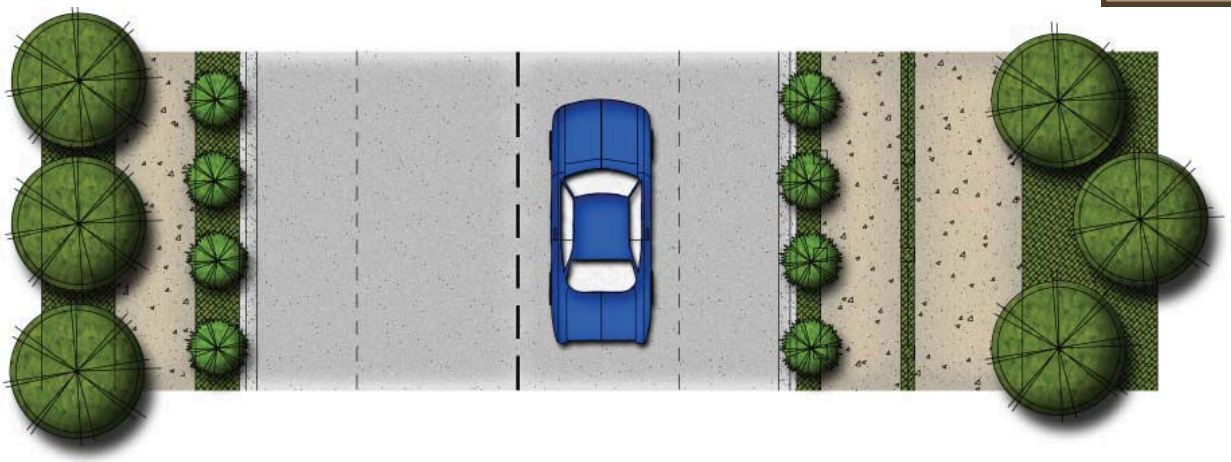
Figure 3-7: Community Local II



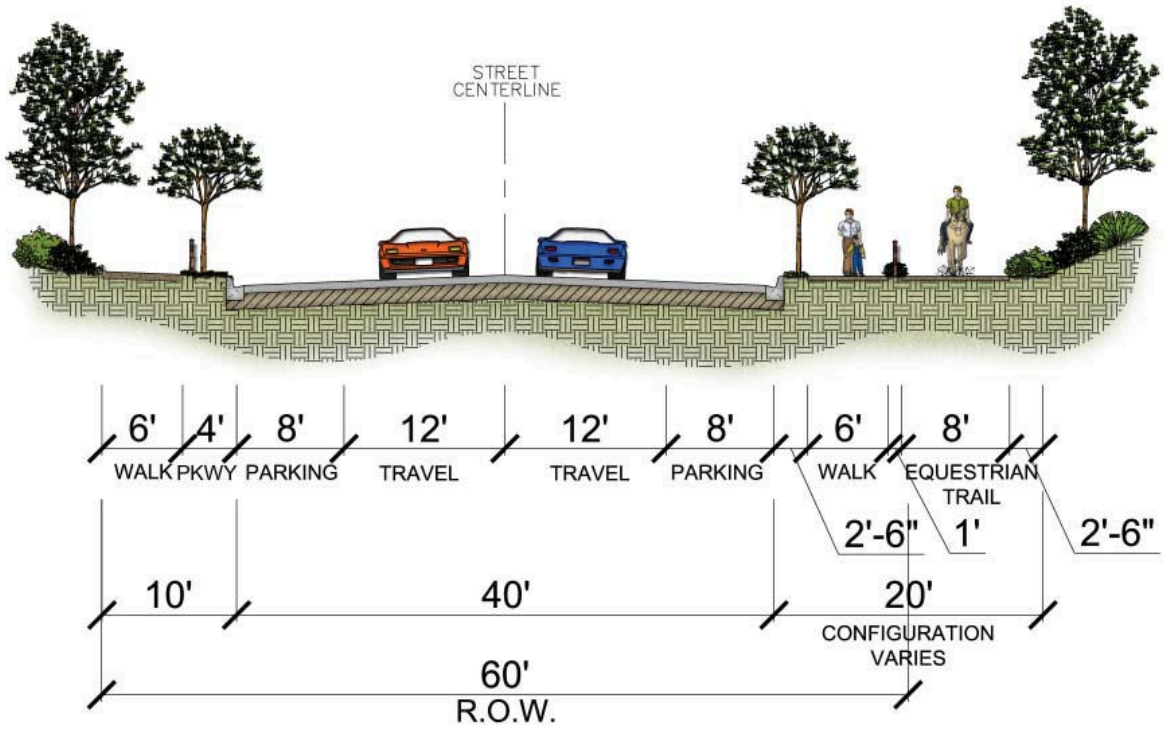


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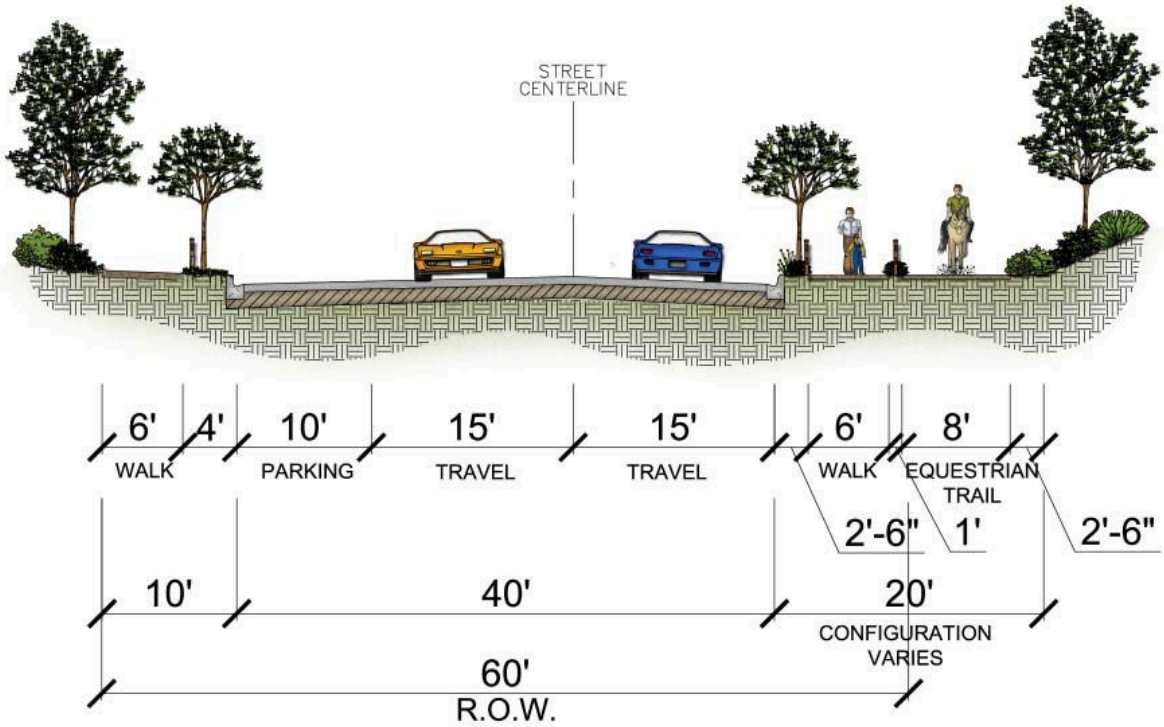
Figure 3-8: Community Local III



Note: The typical street cross-section and plan illustrated above is conceptual in nature and is intended to show the design intent for University Hills. For streets with on-street parking, there are several options that will be determined during the review and approval of tract maps including: 1) meandering sidewalks with curb adjacent paved areas; 2) curb-adjacent sidewalk where the width of the landscape parkway is added to the landscaped area in back of the sidewalk; and 3) curb-adjacent landscaped parkway with sidewalk behind (illustrated). If a landscaped parkway is located adjacent to the curb, low profile landscaping and turf should be used and trees spaced so as to allow access to/from cars.

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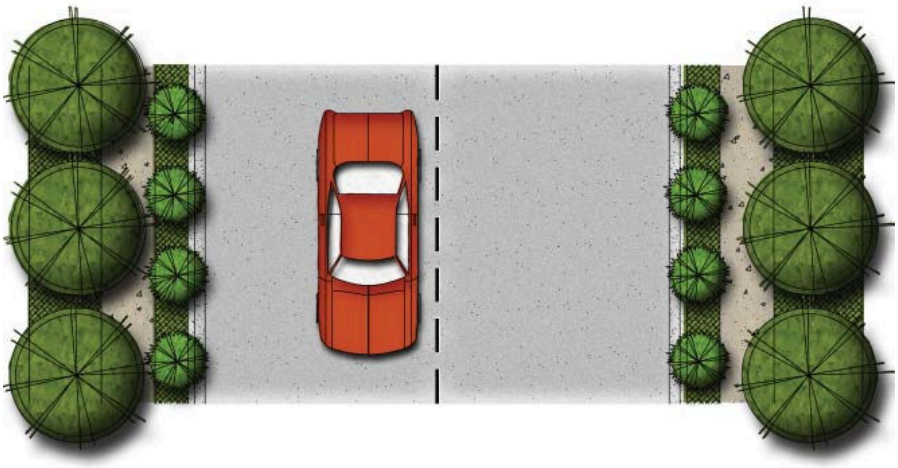
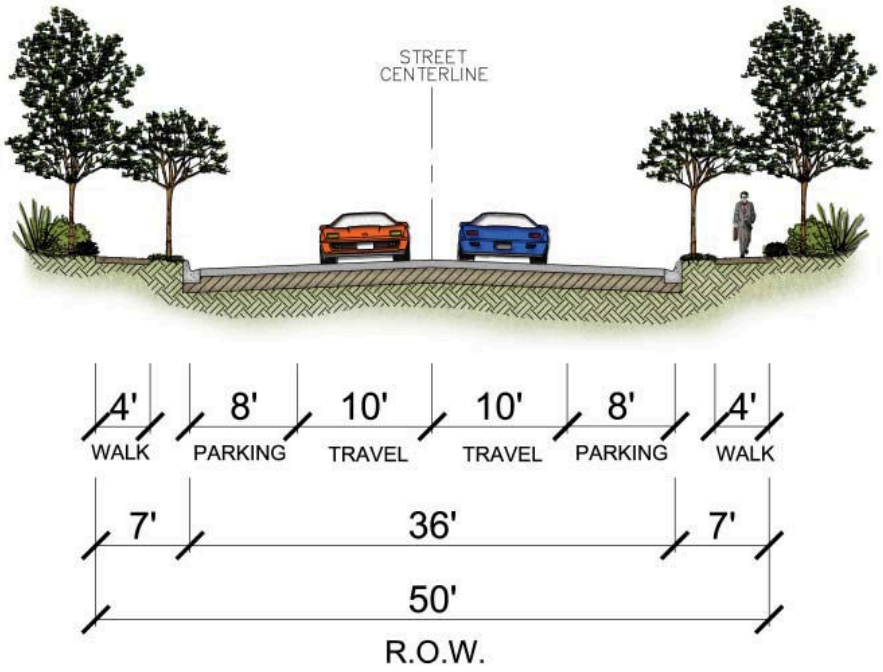
Figure 3-9: Neighborhood Local





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Transit

University Hills is committed to reducing vehicular trips through the increased use of local transit. CSUSB is currently studying the feasibility of providing shuttle service within approximately one mile of the campus. University Hills encourages the establishment of a local shuttle service and will participate in the decision-making process. A preferred route for the proposed shuttle service through University Hills is shown in Figure 3-10, *Transit Circulation Plan*. University Hills is designed to provide bicycle and pedestrian connections to the transit stops shown on Figure 3-10. The master developer will coordinate with Omnitrans on the final location of the shuttle stops and transit route.

Currently, four Omnitrans bus lines provide service to CSUSB. Routes 5, 7, and 11 provide connections between CSUSB and the 4th Street Transit Station in downtown San Bernardino. Route 2 provides connections between CSUSB, the 4th Street Transit Station in downtown San Bernardino, and Loma Linda. From the 4th Street Transit Station riders can transfer to Omnitrans lines connecting to six area Metrolink stations. The bus stop located on the CSUSB campus is approximately 0.75 miles from the clubhouse at University Hills.

Omnitrans is a joint-powers authority governed by a 20-member Board of Directors representing the County of San Bernardino and the 15 cities Omnitrans serves. As bus routes change and development occurs in University Hills, the accommodation of transit lines should be coordinated with Omnitrans.

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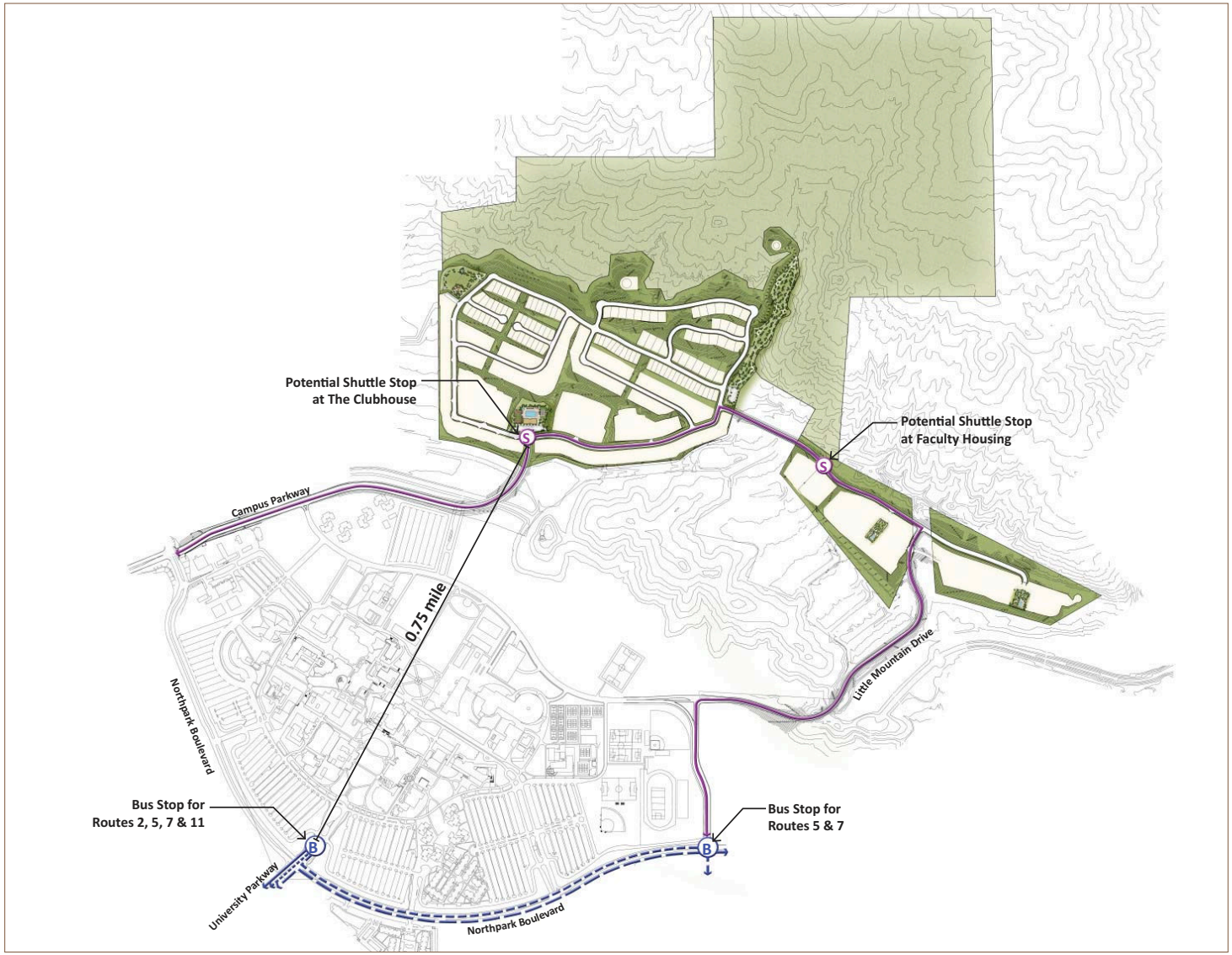

Figure 3-10: Transit Circulation Plan

LEGEND

- Bus Route 2[1]
- Bus Route 5[1]
- Bus Route 7[1]
- Bus Route 11[1]
- Bus Stop/Transfer[1]
- Potential Shuttle Route[2]
- Potential Shuttle Stop[2]

Notes: 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.

[1.] The transit system is maintained by OmniTrans. Contact OmniTrans for the latest route and schedule information.
[2.] To maximize transit use,a shuttle route/stop is desired in University Hills. A suggested route is porivded; howver, the land owner shall work with CSUSB and OmniTrans to study the potential for routes/stops in University Hills.

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Trails, Parks and Open Spaces

As shown on Figure 3-11, *Trails, Parks and Open Space Plan*, the University Hills Specific Plan provides abundant parks and open space that serve multiple functions: as recreational and educational opportunities, as buffers, as visual landmarks, as theme setters, and as an interconnecting system of trails. The parks and open space are easily accessible to every resident in University Hills. Parks are located to ensure that all homes are within one-quarter mile of a park and are interconnected by a comprehensive system of trails.

Maximum buildout of the University Hills Specific Plan would accommodate 980 units and a population of approximately 3,283 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 16.4 acres of parkland or an equivalent fee in lieu of dedicated parkland.

University Hills exceeds the City's requirement and provides approximately 256 total acres of public and private parkland, open space, and trails, as summarized in Table 3-6 and further described below.

Table 3-6 Open Space, Parks, and Recreation Facilities Summary

Private Parks/Recreation Facilities	Acres
Private Parks	
Clubhouse	2.2
Subtotal Private Parks/Recreation Facilities	**2.2**
Public Parks	
Glider Park	2.1
California Walnut Grove Linear Park	5.0
Neighborhood Recreation Facility (PA 17)	0.5
Neighborhood Recreation Facility (PA 19)	0.5
Regional Trail	1.5
Internal Trails	2.1
Land Laboratory Trails	7.3
Subtotal Public Parks/Recreation Facilities	**19.0**
Open Space	
Land Laboratory	234.8
Subtotal Public Parks/Recreation Facilities	**234.8**
TOTAL	**256.0**

Notes:
The area for trails was determined using the standard recreational Trail width of 4 feet within a 12 foot wide easement.

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Figure 3-11: Trails, Parks, and Open Space Plan

LEGEND

- Regional Multipurpose Trail
- Community Multipurpose Trail (Class I Bike Lane)
- Recreational Trail
- Land Laboratory Trail
- Class II Bike Lanes
- Land Laboratory
- Internal Slopes
- Parks

Notes: 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.

The location and configuration of the clubhouse, Glider Park, and two Half Acre Parks may vary slightly; however, a similar size or appropriate in-lieu fee must be provided.

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Trails

A diverse and comprehensive trails system is an integral part of University Hills. The interconnected system will allow residents to walk or bike between neighborhood parks, open space, and the clubhouse and, if eventually provided on site, access transit. 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 with similar trails on adjoining public lands. All trail connections with public lands will be planned in coordination with the Parks and Recreation Department and the Development Services Department. Appropriate access and use restrictions should be determined prior to construction of any public land trail connections.

The planned trail system is comprised of the Regional Trail, community trails, and recreation trails, as shown on Figure 3-11, *Trails, Parks, and Open Space Plan*. The three types of trails in the University Hills Specific Plan are described below.

Regional Multipurpose Trail

A 6,391-foot-long portion of the City's regional multipurpose trail system runs east–west through University Hills as a combination 8-foot-wide multipurpose trail and a 6-foot-wide sidewalk. The multipurpose portion of the trail will be surfaced with decomposed granite or other appropriate surface and be suitable for hiking and equestrian use. The regional trail will include fitness stations along its length through University Hills. The 6-foot-wide sidewalk will be paved and is intended for leisurely walking. See Figures 3-12 through 3-14 for conceptual cross-sections of the regional trail.

Community Trails

Community trails are 12-foot-wide paved combined walkways and Class I bikeways. The community trails have been located to provide pedestrians and bicyclists convenient access to the clubhouse, potential transit stops, and the California Walnut Grove Linear Park. Community trails will be surfaced with asphalt or concrete over a compacted gravel base. See Figure 3-15 for a conceptual cross-section of the community trails.

Recreation Trails

As shown on Figure 3-11, Recreational Trails are conceptual and represent the need to provide off-street connections in certain locations; however, the exact alignment is not predetermined but will be established with each tract map. The alignment of conceptual connections may be moved to suit the needs of each development; however, the ends of the conceptual connections must align between tract maps and Planning Areas. Recreation trails will generally be a

minimum of four feet wide. See Figure 3-16 for a conceptual cross-section of the recreation trails.

Pedestrian and Bicycle Circulation

An objective for University Hills is to create a lifestyle that promotes walking and bicycling and enhances the community's health and wellness. Accordingly, University Hills includes an extensive system of trails, as shown in Figure 3-11, *Trails, Parks, and Open Space Plan*.

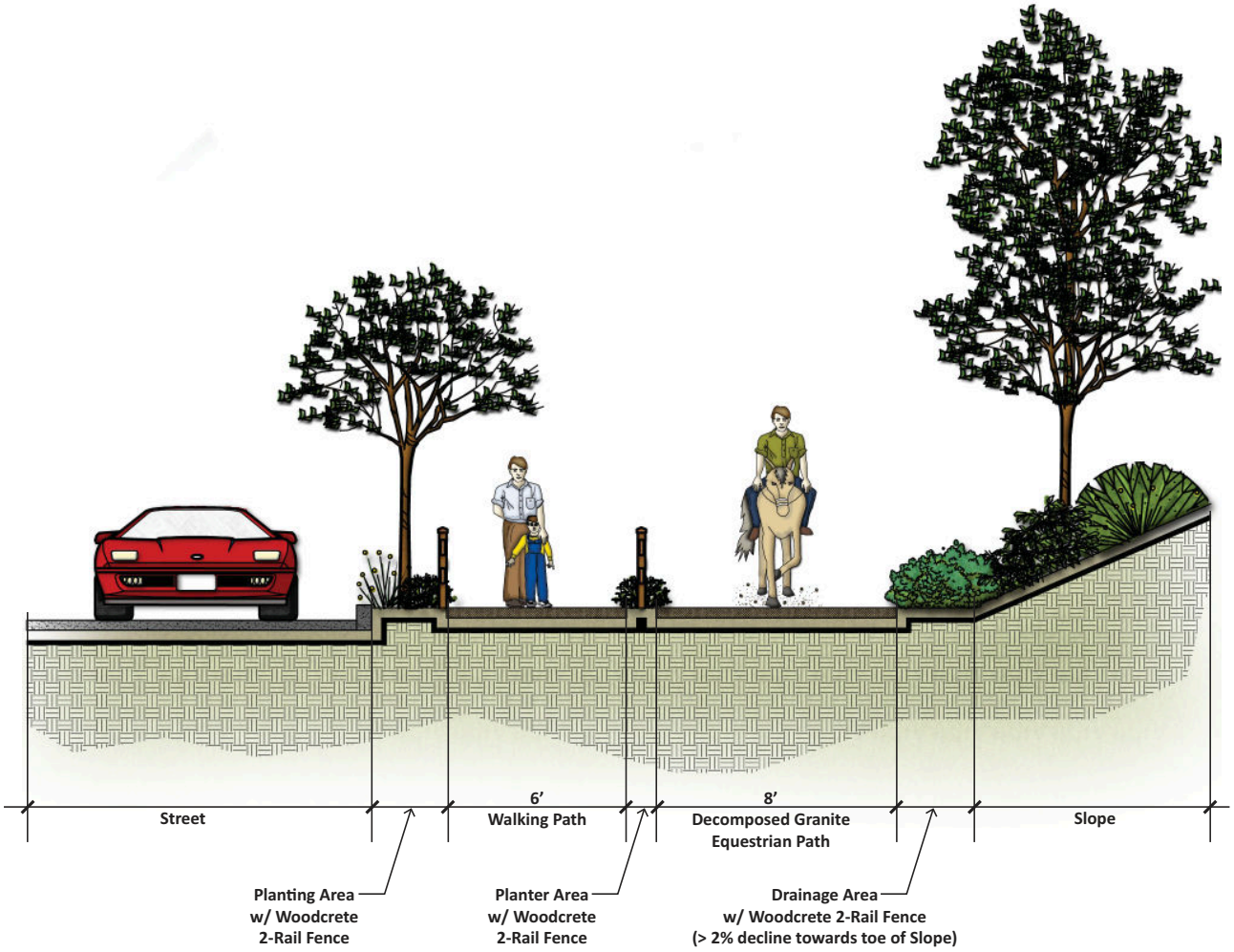
The pedestrian and bicycle circulation system connects important community features, such as the California Walnut Grove Linear Park, Glider Park, the clubhouse, other public parks, and the CSUSB Land Laboratory. The pedestrian and bicycle circulation system also makes a vital connection to CSUSB via Class I and Class II bike paths and lanes. The University Hills clubhouse is located approximately a half-mile (10-minute walk) from the campus. This pedestrian and bicycle linkage will promote safe nonvehicular movement throughout University Hills and to CSUSB.

As shown in Figure 3-11, the pedestrian circulation system is composed of public on-/and off-street trails. On-street trails are depicted in the roadway sections described earlier. The off-street trails are described in this section. While not depicted in Figure 3-11, direct pedestrian connections to the Regional Multipurpose Trail shall be provided from Planning Areas 16, 18, and 20.

Bicycle circulation in University Hills occurs on the roadways and trails as follows.

- Class I: off-road bike paths located in the multipurpose trails. All trails are intended to be used by both bicyclists and pedestrians.
- Class II: striped on-street bike lanes.
- Class III: nonstriped, on-street bike lanes.

Figure 3-12: Regional Multipurpose Trail Conceptual Cross-Section (Typical)



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.

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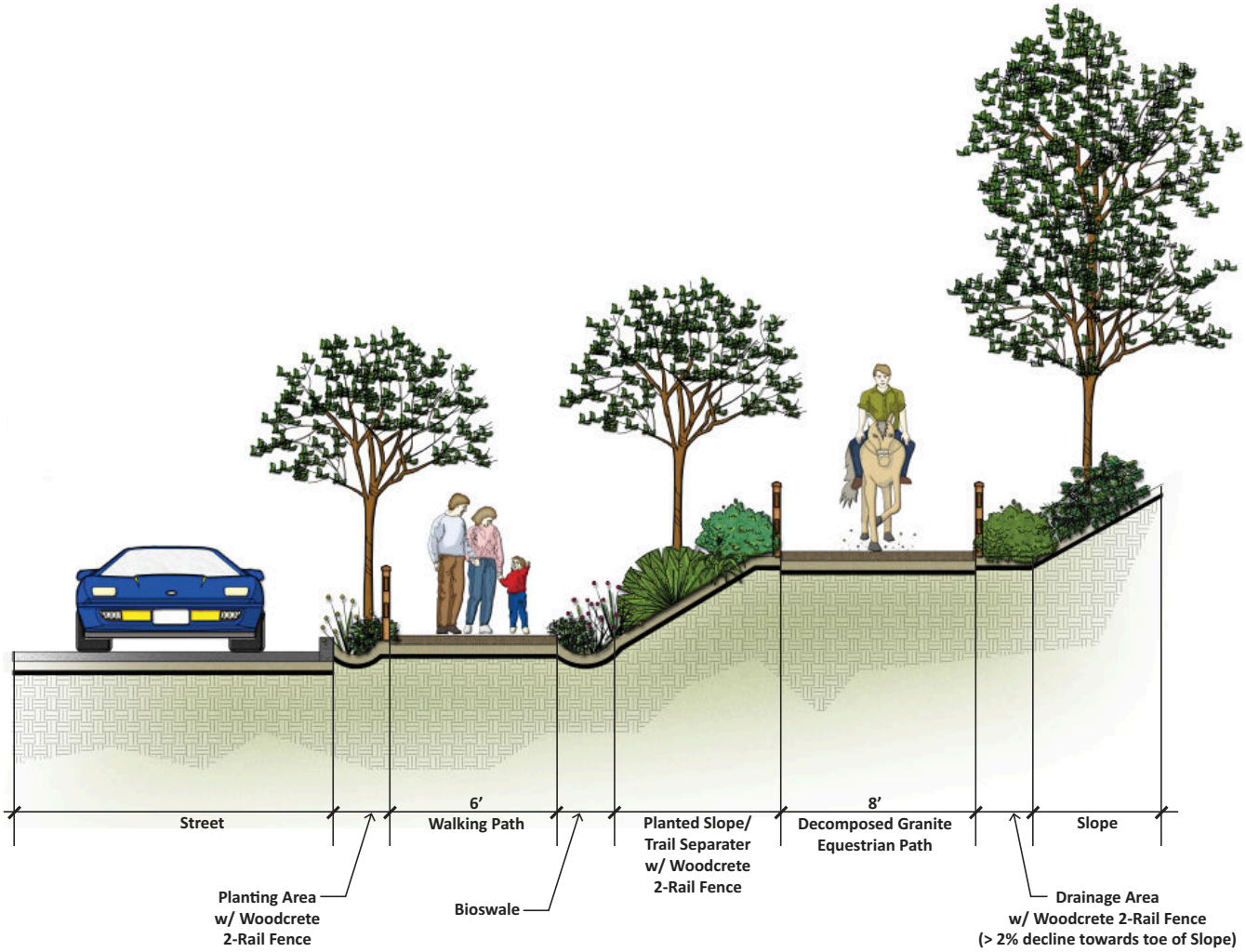
Figure 3-13: Regional Multipurpose Trail Conceptual Cross-Section (Split Grade)



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.

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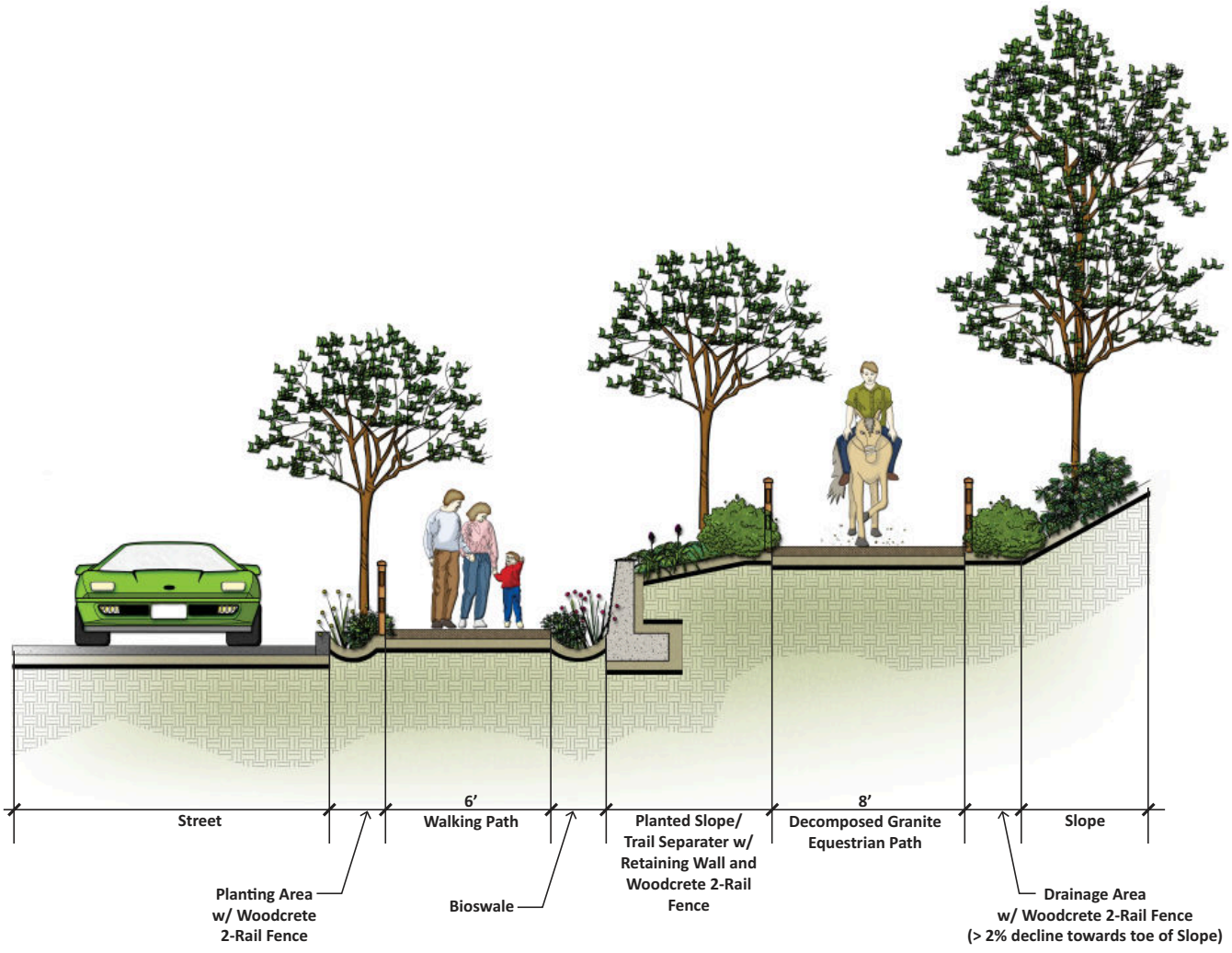
Figure 3-14: Regional Multipurpose Trail Conceptual Cross-Section (Split Grade with Retaining Wall)



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.

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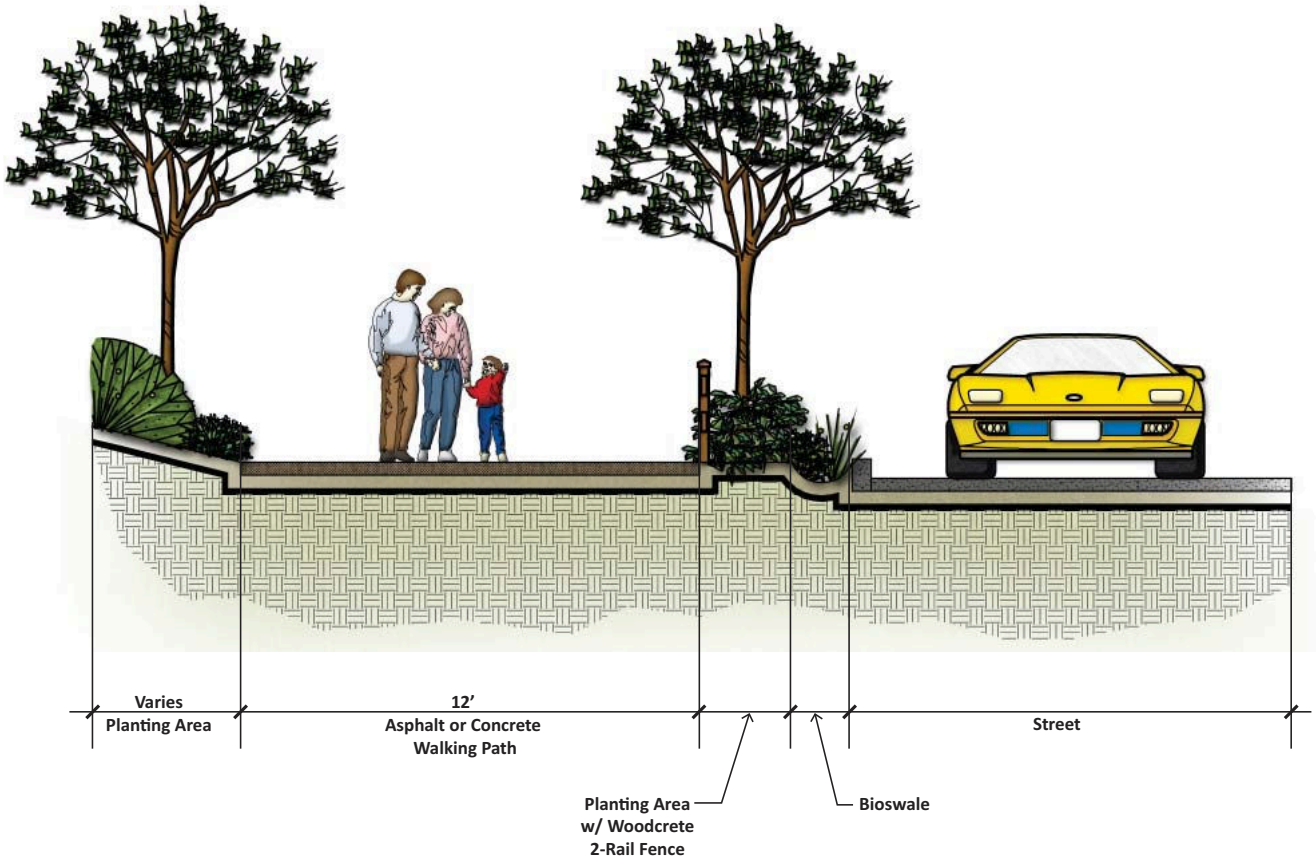
Figure 3-15: Community Trail
Conceptual Cross-Section



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.

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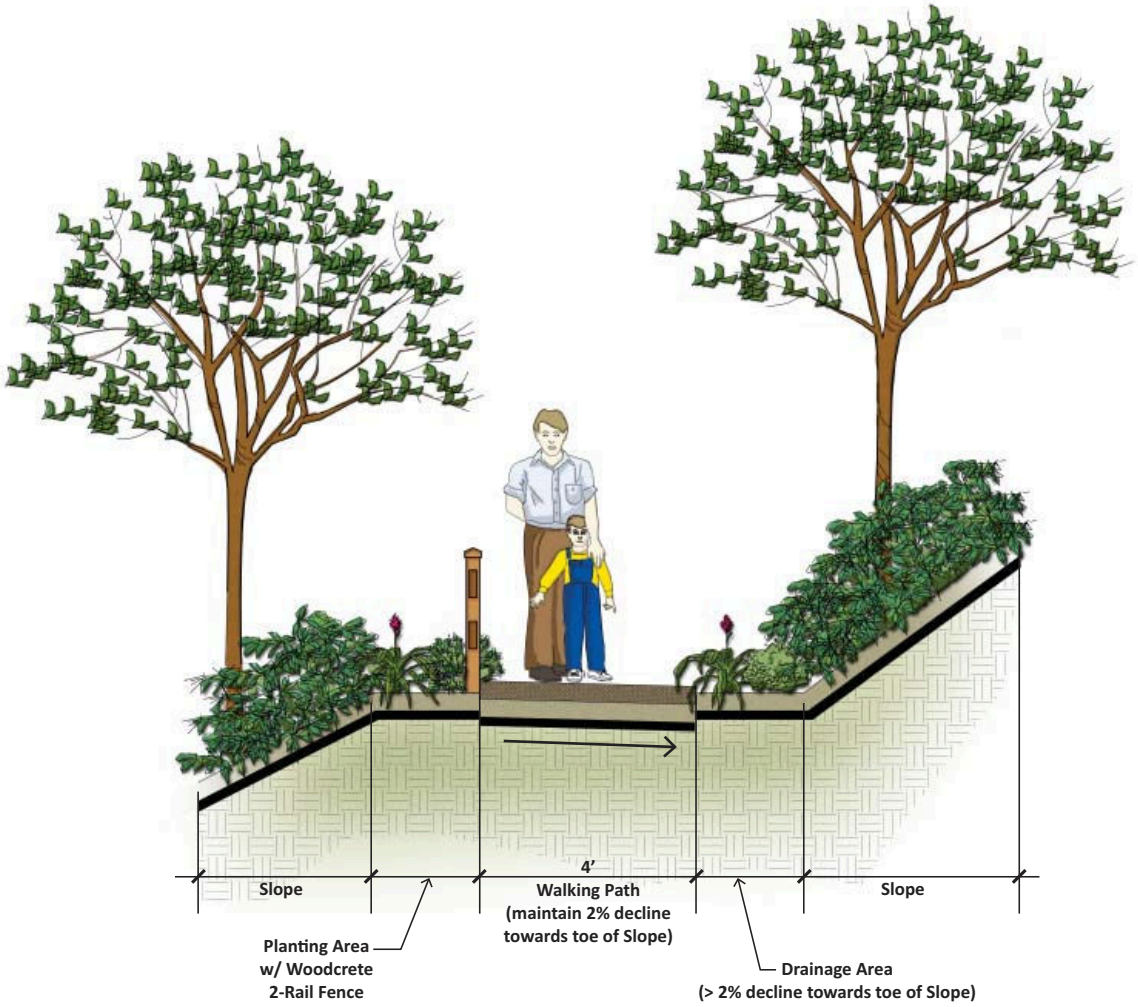
Figure 3-16: Recreation Trail
Conceptual Cross-Section



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.

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Parks

Glider Park. This 2.1-acre park is in the northwest corner of the residential community. The park serves a dual purpose: as a community gathering area and as a safe approach zone for the hang gliders landing at the adjacent Andy Jackson Airpark. See Figure 3-17, *Glider Park Conceptual Site Plan*, for a conceptual plan for the park.

Glider Park shall accommodate a minimum of 3 amenities such as play equipment, interpretive area, community garden, dog comfort station, open green areas, and shaded picnic areas. Landscaping and structures within the safe approach zone shall not exceed grass height.

Glider Park may include seating areas, community gardens, and open green areas.

California Walnut Grove Linear Park. This 5-acre community park is centrally located within University Hills. The park shall accommodate a minimum of 3 amenities such as exercise stations, interpretive kiosks, walking paths, dog comfort stations, shaded picnic areas, and gathering areas. In addition a trailhead, with vehicular parking, will be located at the southern end of the park. See Figure 3-18, *California Walnut Grove Linear Park Conceptual Site Plan*, for a conceptual plan for the park.

The Walnut Grove Linear Park will provide passive recreation, such as hiking, and educational opportunities.

Half-Acre Parks. Two 0.5-acre parks are depicted on the land use diagram; however, their exact location may vary within each residential planning area. These parks will be both active and passive and shall include a minimum of 5 amenities such as pools, spas, barbeques, Jacuzzi, small pool houses for equipment and restrooms/showers, open green areas, community gardens, shade structures with tables and chairs, and gathering areas. See Figures 3-19 and 3-20 for a conceptual site plan for half-acre parks.

Half-acre parks may provide a variety of passive and active recreational uses.

The private clubhouse will act as an activity center for the residents of University Hills.

Clubhouse. This 2.2-acre active recreation facility will form the hub of activity for University Hills. The private clubhouse may include recreational amenities such as tennis courts, spa, gym, fireplace room, restrooms, meeting rooms, and a pool. The clubhouse will be designed to create a visual impact at the main entry to University Hills. Figure 3-21, *Clubhouse Conceptual Site Plan*, shows a conceptual site plan for the recreation center. The following provide guidance for the use and development of the Clubhouse:

- Conference facilities will be made available to CSUSB staff and faculty with appropriate reservations.
- Transit passes and route information may be sold/available in the clubhouse.
- Fire safety and sustainable education materials will be made available in the clubhouse.
- The Clubhouse shall include restrooms, meeting room(s), and a minimum of 5 amenities such as sports court(s), spa, gym, community garden, fireplace room, outdoor barbeque, Jacuzzi, and/or pool

Figure 3-17: Glider Park Conceptual Site Plan

LEGEND

- Accent Tree (not to exceed 15')
- Deciduous Tree
- Evergreen Tree

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.

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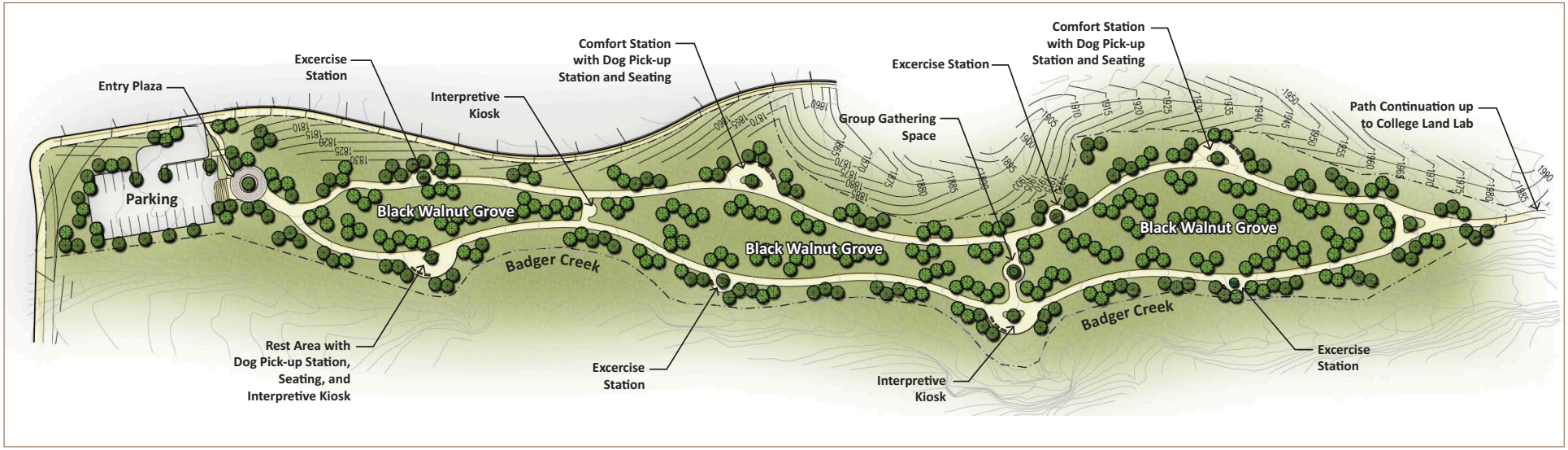
Figure 3-18:
California Walnut Grove Linear Park Conceptual Site Plan



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LEGEND

- Accent Tree
- Deciduous Tree
- Evergreen Tree
- Sodded Turf

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.

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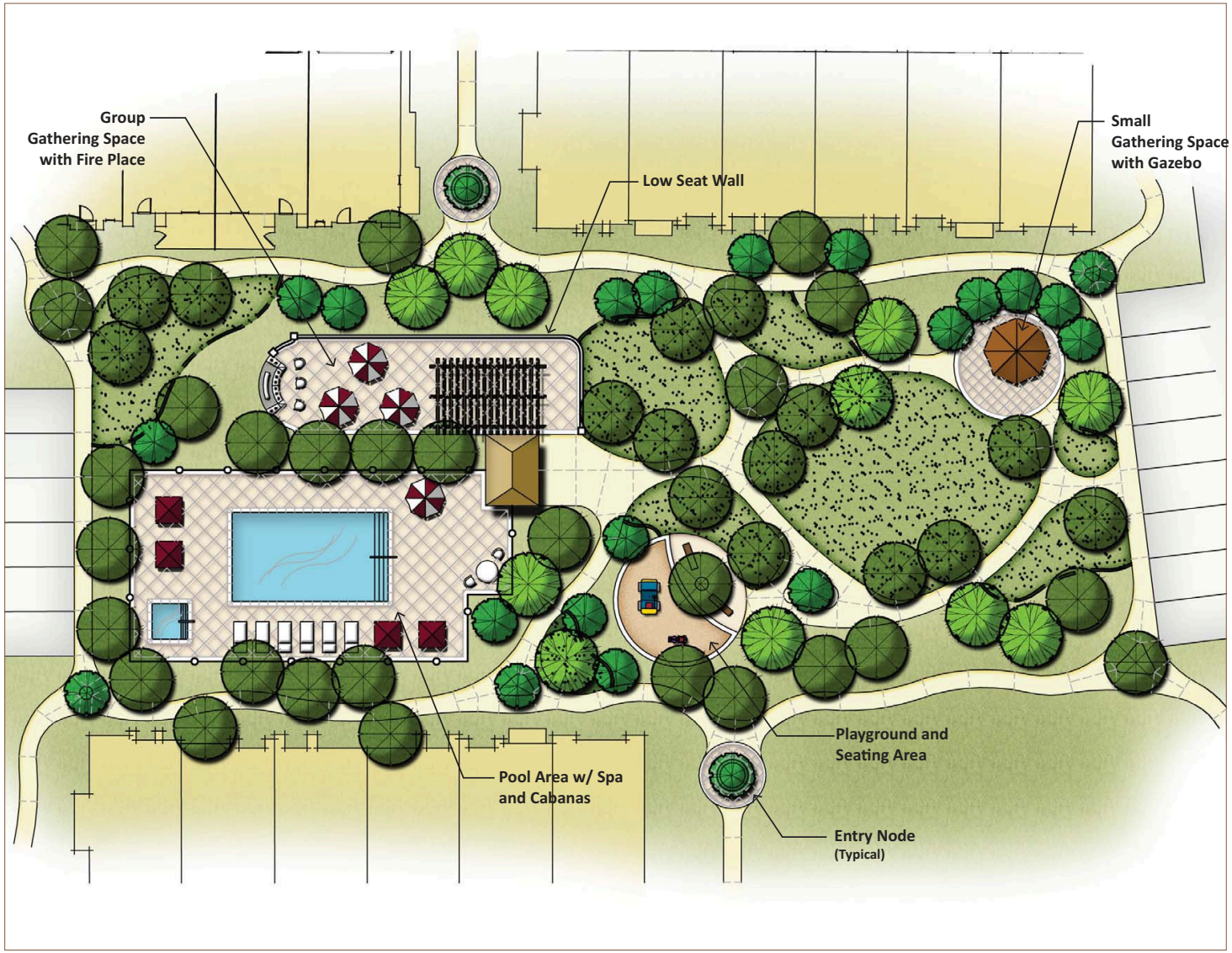

Figure 3-19:
Half-Acre Park
Conceptual Site Plan (PA-17)

LEGEND

- Accent Tree
- Deciduous Tree
- Evergreen Tree
- Sodded Turf

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.

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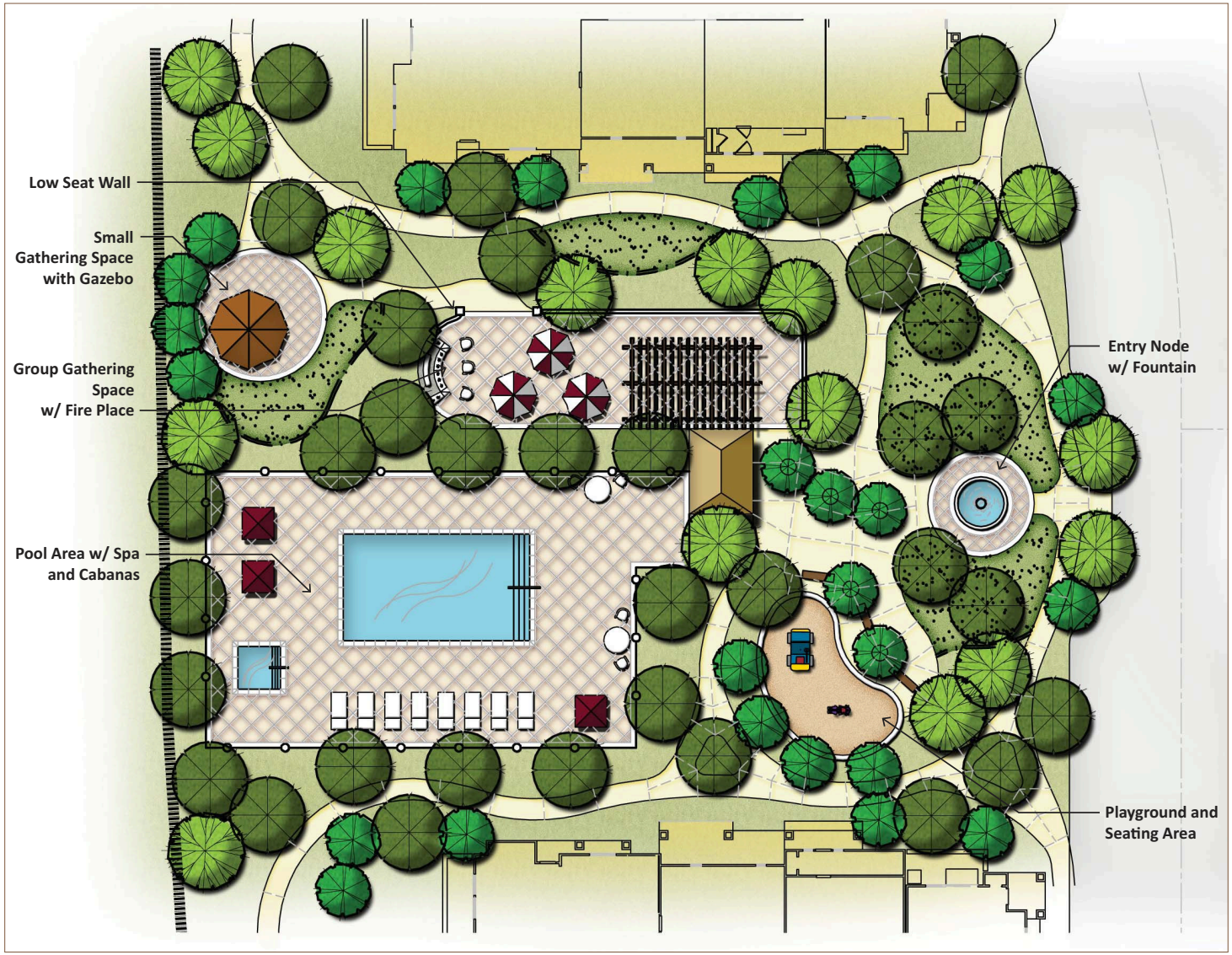

Figure 3-20: Half-Acre Park Conceptual Site Plan (PA-19)

LEGEND

- Accent Tree
- Deciduous Tree
- Evergreen Tree
- Sodded Turf

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.

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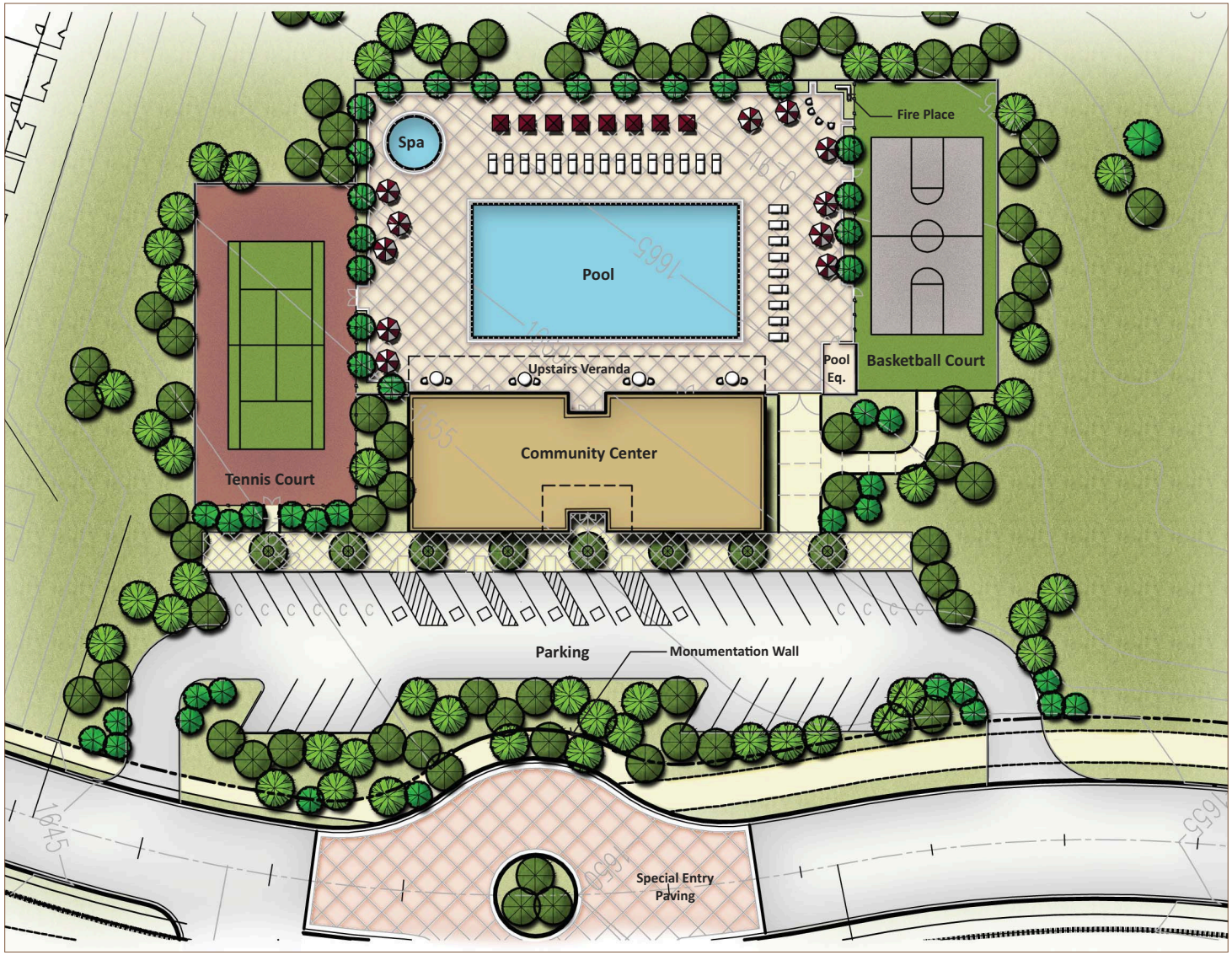

Figure 3-21: Clubhouse Conceptual Site Plan

LEGEND

- Accent Tree
- Deciduous Tree
- Evergreen Tree

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.

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Land Laboratory

Located north of the residential areas of University Hills, the Land Laboratory is a 235-acre open space area to be dedicated to CSUSB (See Figure 2-6). Existing trails in the Land Laboratory will be retained as public trails. The Land Laboratory is intended to provide a wide range of educational opportunities for CSUSB students and faculty in a variety of curriculum areas.

The Land Laboratory contains a variety of native vegetation species, natural drainages, including Badger Creek, and the San Andreas Fault system. The proximity of these features to the CSUSB campus provides unique educational opportunities. It is envisioned that the biology, geology, geography and environmental studies, and science education departments would be the primary users of the Land Laboratory, but it could be used by other disciplines. Potentially other educational users, such as local public or private schools, could use the site.

- Landscape adjacent to the Land Laboratory shall use the plants listed in the plant palette for the fuel modification zone (Table 3-9) to minimize the intrusion of nonnative plants.
- CSUSB will be responsible for the improvement and maintenance of the Land Laboratory.
- The main use of the Land Laboratory is as undisturbed and natural open space; however, the following types of uses may also be accommodated:
  - Pedestrian trails and bridges
  - Caretaker unit
  - Amphitheater
  - Informational displays and kiosks
  - Composting areas
  - Restroom
  - San Andreas fault stations (excavations or road cuts into bedrock where geology can be studied)
  - Gauging station to measure stream flows
- Vehicular parking for the Land Laboratory will be provided at the parking area in the California Walnut Grove Linear Park.
- Public access will be restricted to the existing trails by a combination of signage, fencing, and physical barriers (e.g., rock piles at trails). Public trails identified on Figure 3-11, *Trails, Parks, and Open Space Plan*, will become trail easements and be maintained through a landscape and lighting maintenance district (LLMD) and administered by the Parks Department.

Fire Protection Plan

University Hills is located within a designated high fire hazard area. To protect lives and property, an extensive fire protection plan has been developed as part of the University Hills Specific Plan. This section provides a summary of the Fire Protection Plan, as detailed in Appendix C. The fire protection plan consists of fuel modification zones, landscaping methods/materials, building construction/protection systems, and on-going education of residents.

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, the fire has nothing to burn. In University Hills, 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 3-22 and 3-23. Cross-sections of the Fuel Modification Zones are shown on Figures 3-24A and 3-24B. The Fuel Modification Zones are detailed below and in Figure 3-25. In the event that building in all or a portion of Planning Area 15 is not feasible, then the Fuel Modifications Zones will be adjusted accordingly, as described in Section 6, *Implementation*.

Fuel Modification Zone A–This zone provides a 10-20 foot defensible space for fire suppression forces and protects structures from radiant and convective heat. Fuel Modification Zone A includes the following requirements:

- Fuel Modification Zone A shall be as shown on Figures 33-24A and 3-24B and in no case shall Fuel Modification Zone A be less than 10 feet.
- Fuel Modification Zone A shall be located on a level graded area at the top or base of a slope shall be between Zone B and the structure.
- Fuel Modification Zone A shall be maintained by the homeowner.
- 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
- Pruning of foliage to reduce fuel load and vertical continuity and the removal of plant litter and dead wood is required as necessary.
- Complete removal of fire prone plant species and minimal allowance for retention of selected native vegetation as required in the Landscape Plant Palette, Table 3-9.
- Plant material shall be selected from the Plant Palette for Fuel Modification Zones, Table 3-9.
- Tree species are not allowed within 10 feet of combustible structures, as measured from the edge of the full grown crown.

- 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.
- Plants listed on the Plant Removal List contained in Table 3-9 shall be removed by the property owner.
- Maintenance, including ongoing removal and/or thinning of combustible material, replacement of dead/dying fire resistant planting, maintenance of the operational integrity and programming of irrigation systems, and regular pruning is required.

Fuel Modification Zone B–This zone provides 50 to 150 foot 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 3-24A and 3-24B.
- Fuel Modification Zone B shall be maintained by LLMD.
- 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
- Combustible construction is not allowed.
- 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.
- 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 8 inches.
- Irrigation shall be designed to supplement native vegetation and establish/maintain planted natives and ornamentals.
- Plant material shall be selected from the Plant Palette for Fuel Modification Zones, Table 3-9.
- Trees and tree-form shrubs (shrubs that naturally exceed 4 feet in height) shall be spaced and pruned in conformance with the requirements contained in Appendix C.
- Tree-form shrubs less than 4 feet in height and other shrubs shall be spaced such that they do not create an excessive fuel mass and can maintained in accordance with specified spacing as indicated on the Fuel Modification Plans in Appendix C.
- 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.
- Plants listed on the Plant Removal List contained in Table 3-9 shall be removed.
- All dead or dying vegetation shall be removed and all fine fuels shall be reduced to a height of 8-12 inches.

Fuel Modification Zone C–This zone provides a non-irrigated 50% thinning zone with removal of all dead and dying vegetation and undesirable species. Zone C is 40 to 70 feet in width. Thinning zones are utilized to reduce the fuel load of wildland fires. Fuel Modification Zone C includes the following requirements:

- Removal of all dead and dying vegetation with all fine fuels reduced to a maximum of 8 to12 inches in height.
- Fuel Modification Zone C shall be maintained by a LLMD.
- In order 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 8 inches.
- Any plants selected for planting in this zone will be chosen from the approved plant list in Table 3-9, for the setback, irrigated, or thinning zone.
- 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.
- 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 4 feet in height) shall be spaced and pruned in conformance with the requirements contained in Appendix C.
- Tree-form shrubs less than 4 feet in height and other shrubs shall be spaced such that they do not create an excessive fuel mass and can maintained in accordance with specified spacing as indicated on the Fuel Modification Plans in Appendix C.
- Maintain sufficient cover to prevent erosion without requiring planting.

Manufactured slopes in the vicinity of Fuel Modification Zones– 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.

- Plant material shall be selected from the Plant Palette for Fuel Modification Zones, Table 3-9.

- Additional plant material may be used upon approval by the San Bernardino City Fire Department.
- Maintenance per LLMD requirements.

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, the Fuel Modification Zones shall be completed to the levels deemed necessary by the Fire Chief.
- Prior to Issuance of Certificate of Occupancy, the Fuel Modification Zones shall be installed and completed per the fire protection plan and inspected and approved by the Fire Chief.
- Prior to acceptance by the HOA of 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.

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 with openings that allowed embers to ignite a roof. Accordingly, structures in University Hills 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 3-22 and 3-23, shall receive Enhanced Construction on all 4 sides of the structure per California Building Code, Chapter 7A, Phase II.
- All structures within University Hills but outside of the area 200 feet from a Fuel Modification Zone edge, as shown on Figures 3-22 and 3-23 shall receive Enhanced Construction on all 4 sides of the structure per California Building Code, Chapter 7A, Phase II, excluding exterior glazing and window requirements.
- All 4 sides of structures shall incorporate the following:

- Exterior walls shall be constructed of non-combustible materials or 1-hour fire resistant construction. Openings shall not be permitted in such walls with the exception of 1-3/8" (34 MM) solid core doors, metal doors, and multi-glazed windows and doors.
- Attic and foundation ventilation openings in vertical walls and attic roof vents shall not exceed 144 square inches per opening and shall be covered with metal louvers and minimum ¼" (6.25 MM) mesh, corrosive resistant metal screens. Ventilation openings and access doors shall not be permitted on walls facing the fuel modification zones as shown on Figure 3-25.
- Cornices, eave overhangs, soffits, exterior balconies, and patio covers and similar architectural features/projections on the exposed sides of structures shall be of noncombustible material, or enclosed with 1-hour fire resistant material, or of heavy timber construction conforming to Section 605.6 of the adopted Building Code.
- Spaces between the rafters at the roof overhangs shall be protected by noncombustible materials or with double, 2 inch (51MM) nominal solid blocking under the exterior wall covering.
- Ventilation openings or other openings shall not be permitted in the eave overhangs, soffits, between rafters at eaves, or in other overhanging areas on walls facing the fuel modification zones as shown on Figure 3-25.
- Exterior wall venting shall not be allowed on walls facing the fuel modification zones.
- The walking surface of balconies and decks shall be constructed of fire resistant materials.
- Roof coverings shall be at a minimum Class A roof assembly.
- Skylights shall have a noncombustible frame and shall either be of dual glazing of heat-strengthened or fully tempered glass or shall be a 1-hour fire resistant assembly.

On-Going Education

In addition to the built-in Fuel Modification Zones and construction techniques, the active participation of the homeowners is necessary to adequately protect University Hills. 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 in the clubhouse.
- 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.

Post Fire/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 Post-Fire/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 University Hills Landscape Maintenance District and/or Homeowners Association.

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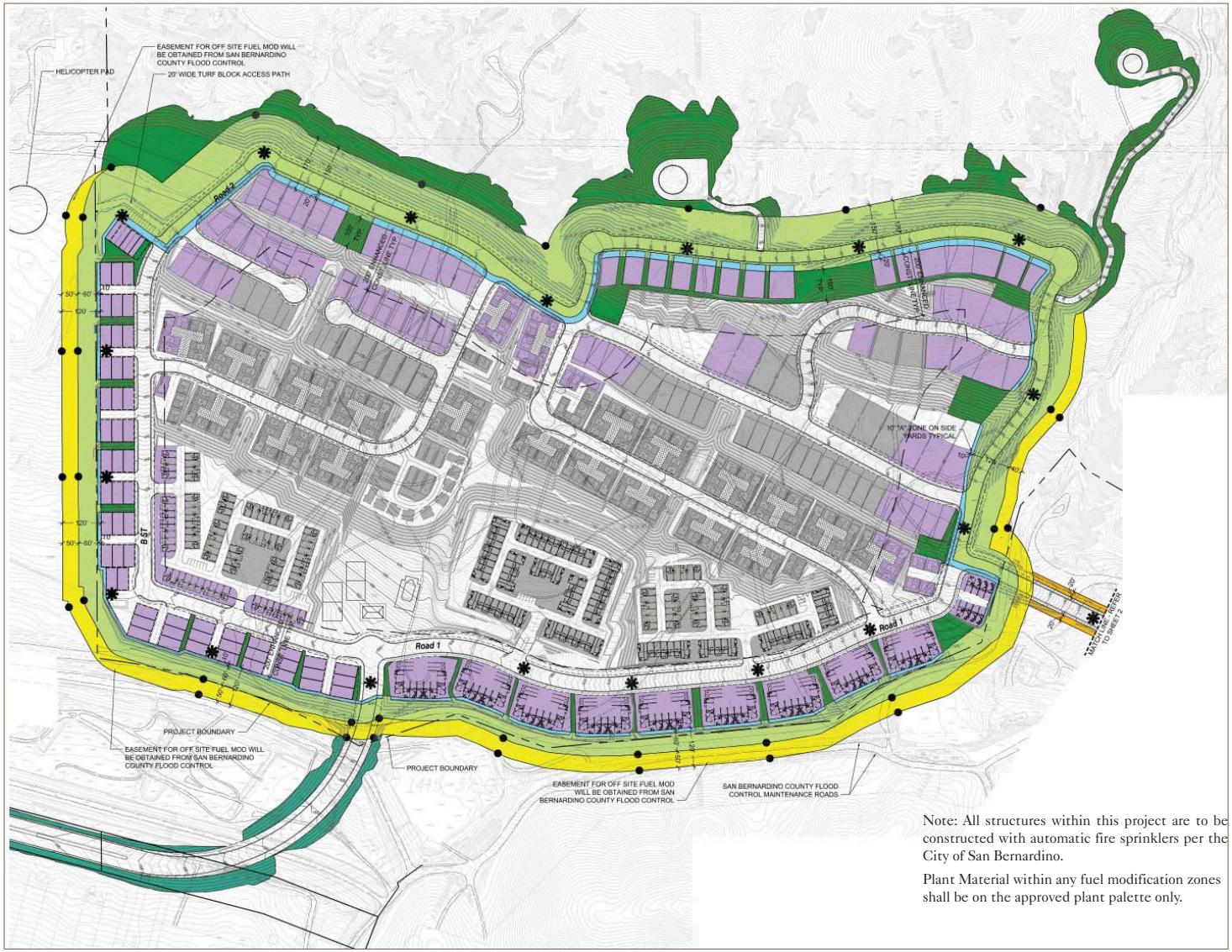

Note: All structures within this project are to be constructed with automatic fire sprinklers per the City of San Bernardino.

Plant Material within any fuel modification zones shall be on the approved plant palette only.

Figure 3-22:
Fire Protection Plan
Western Development 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 California Building Code Chapter 7A Phase II.

Ember Impact Zone: 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 excluding exterior glazing and window requirements.

Symbol Legend

Access Point: Fuel modification walk in access point (a 5' non-combustible tubular steel gate will ony be provided where necessary). 500' minimum distance between access points at fuel modification.

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.

Conceptual Fuel Modification Legend

Zone A (Flat) – Non-Combustible Construction: 10'-0" – 20'-0" setback zone for non-combustible construction only. Zone A shall be maintained by the Homeowner or LLMD.

Zone B – Wet Zone (100% Removal Native Shrubs): First 50'-0" –150'-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" – 70'-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 accumuated plant debris on the ground shall be removed. Zone C area shall be maintained by LLMD

Roadside Clearance: Removal of all undesired plant species and thinning of at least 50% of all vegetation.

Manufactured Slope in the Vicinity of the Fuel Modification: Plant material on manufactured slopes beyond the fuel modification must be on approved plant palette.

Irrigated Manufactured Slope: Planted and irrigated manufactured slope. maintained on year roud basis.

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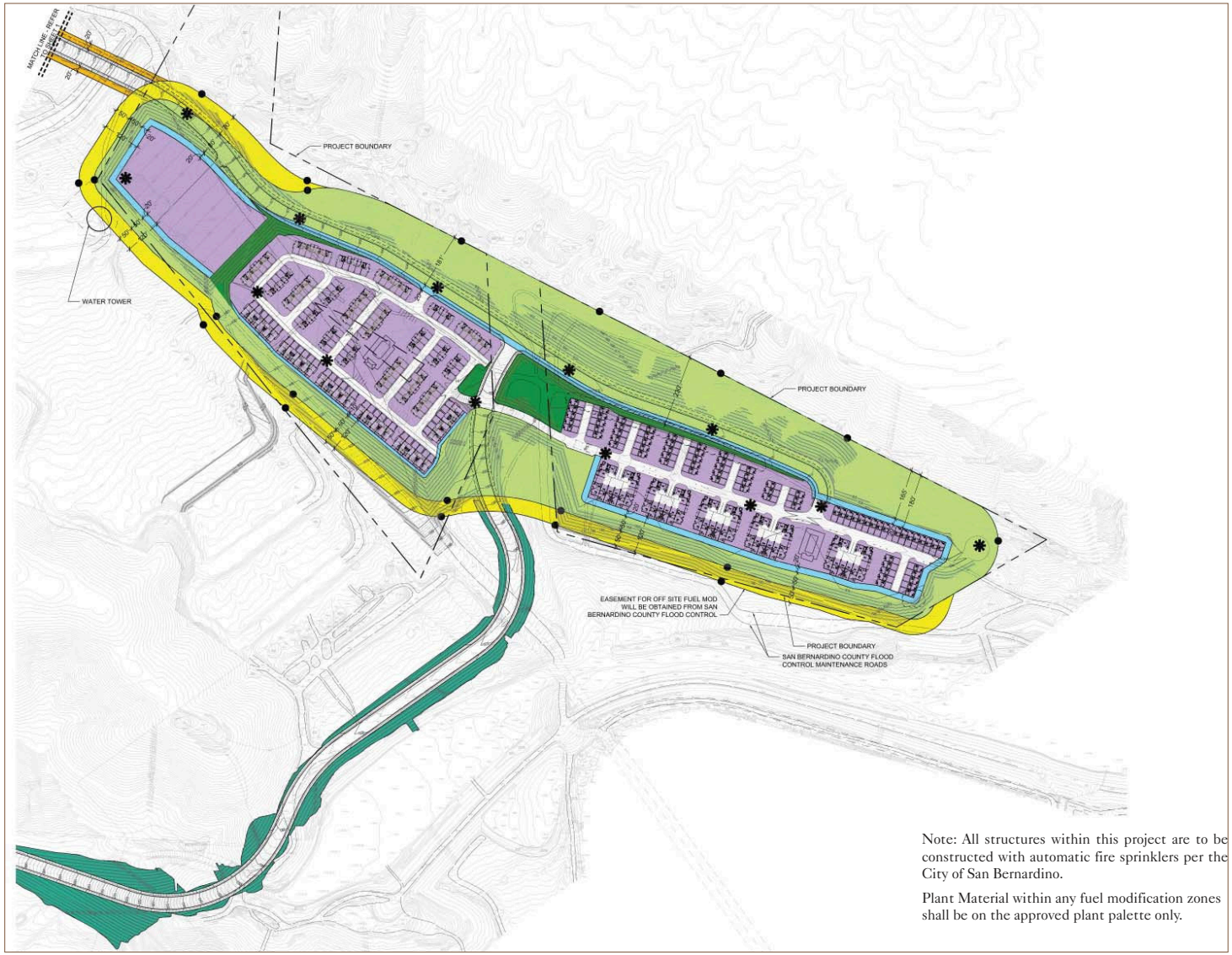

Figure 3-23:
Fire Protection Plan
Eastern Development Area

Note: All structures within this project are to be constructed with automatic fire sprinklers per the City of San Bernardino.

Plant Material within any fuel modification zones shall be on the approved plant palette only.

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 California Building Code Chapter 7A Phase II.

Ember Impact Zone: 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 excluding exterior glazing and window requirements.

Symbol Legend

Access Point: Fuel modification walk in access point (a 5' non-combustible tubular steel gate will ony be provided where necessary). 500' minimum distance between access points at fuel modification.

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.

Conceptual Fuel Modification Legend

Zone A (Flat) – Non-Combustible Construction: 10'-0" – 20'-0" setback zone for non-combustible construction only. Zone A shall be maintained by the Homeowner or LLMD.

Zone B – Wet Zone (100% Removal Native Shrubs): First 50'-0" –150'-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" – 70'-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 accumuated plant debris on the ground shall be removed. Zone C area shall be maintained by LLMD

Roadside Clearance: Removal of all undesired plant species and thinning of at least 50% of all vegetation.

Manufactured Slope in the Vicinity of the Fuel Modification: Plant material on manufactured slopes beyond the fuel modification must be on approved plant palette.

Irrigated Manufactured Slope: Planted and irrigated manufactured slope. maintained on year roud basis.

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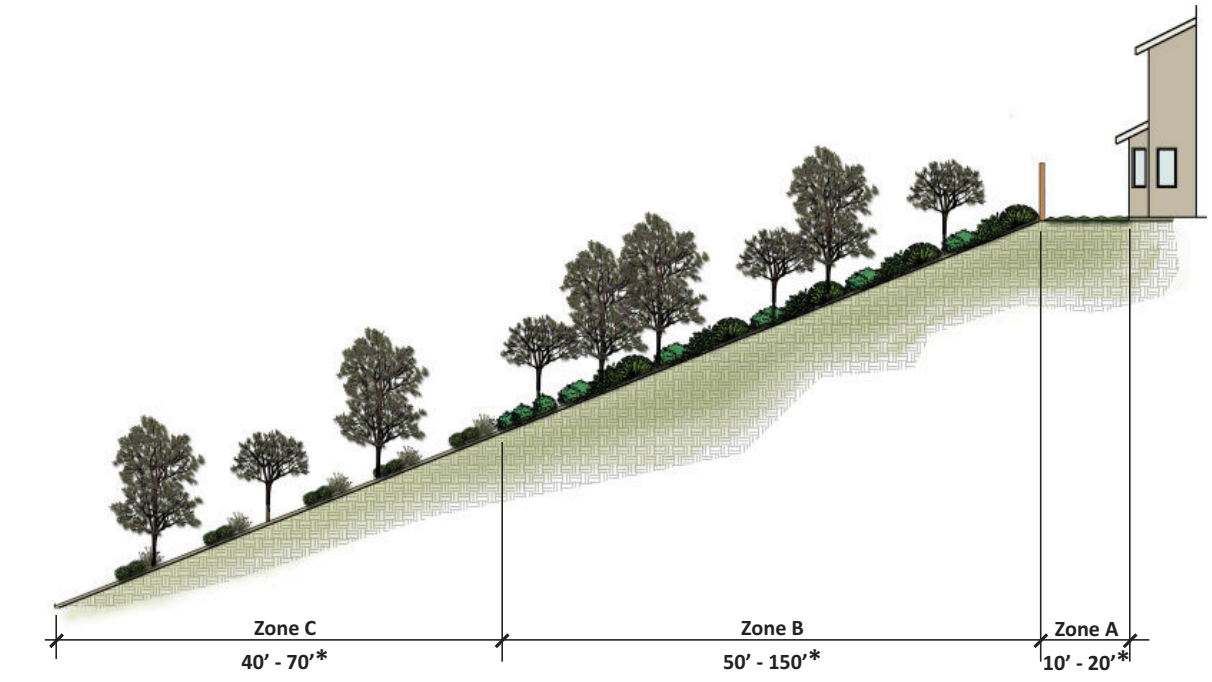
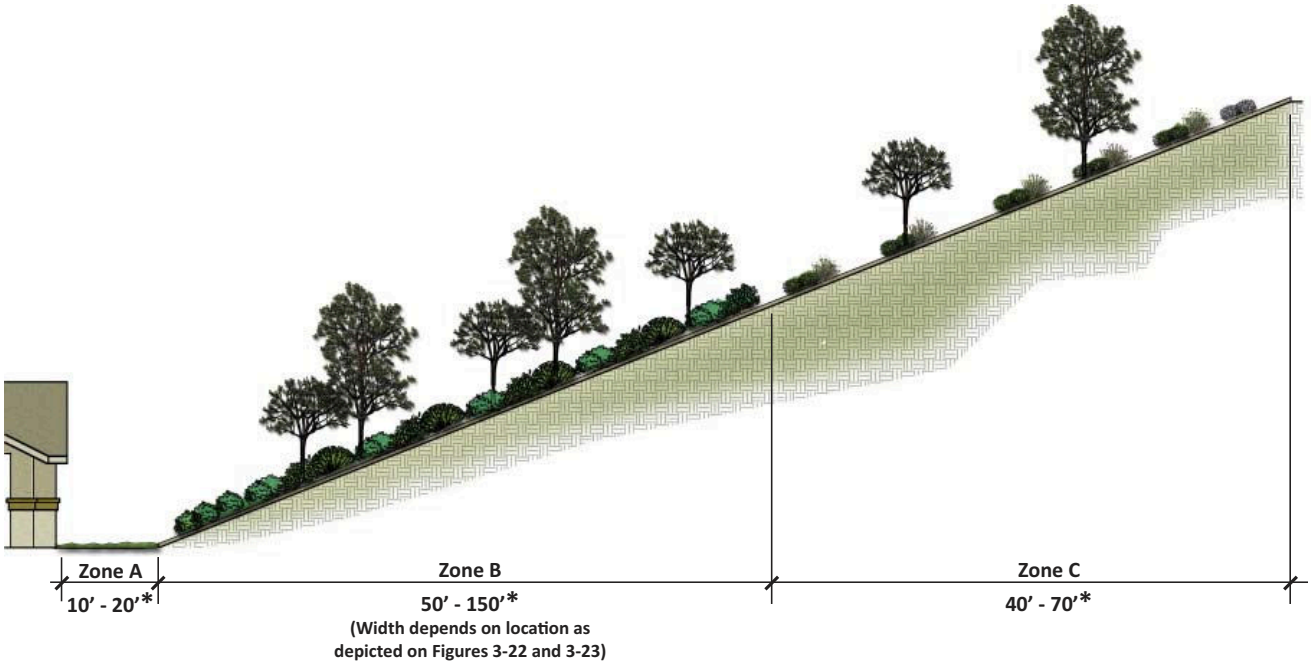
Figure 3-24A: Fuel Modification Zones





*Note: Width depends on location as depicted on Figures 3-22 and 3-23.

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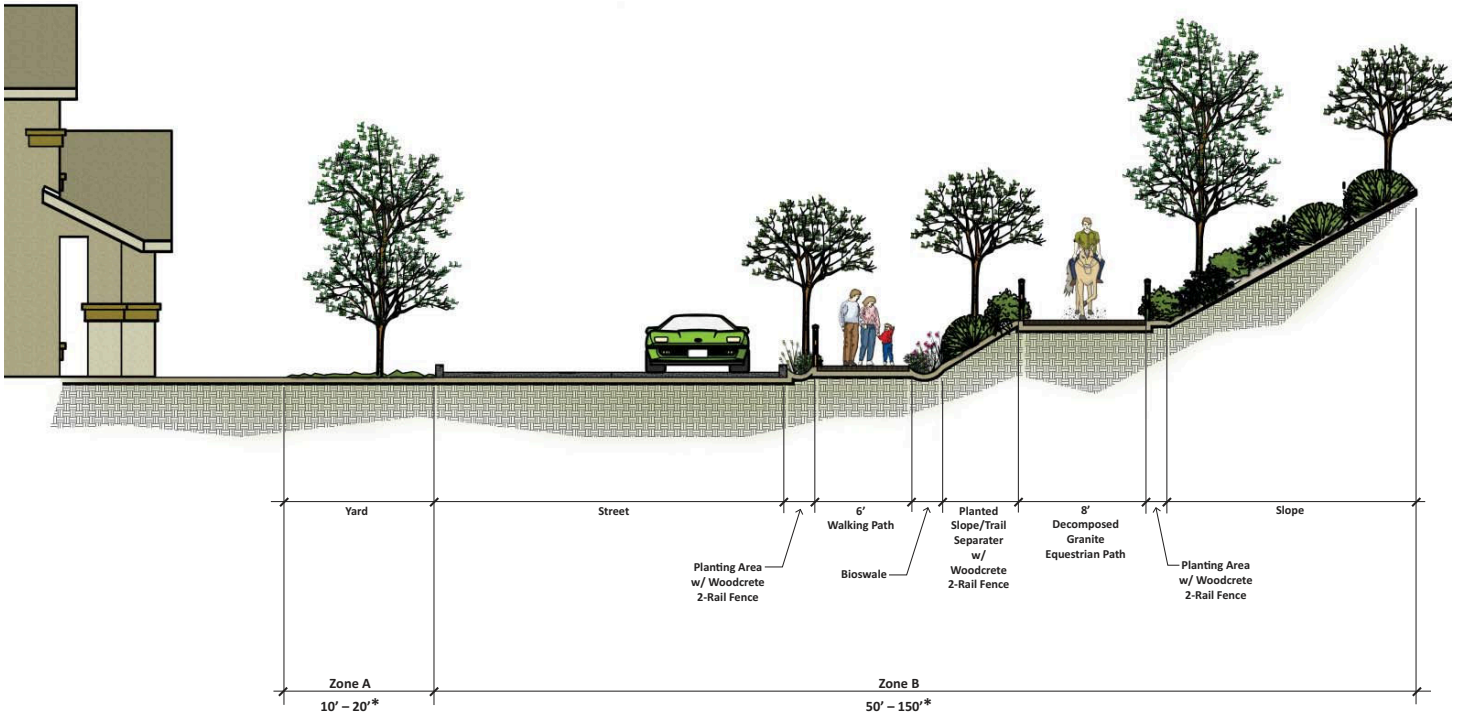
Figure 3-24B:
Fuel Modification Zones



* Note: Width Varies. See Figure 3-22 for widths..

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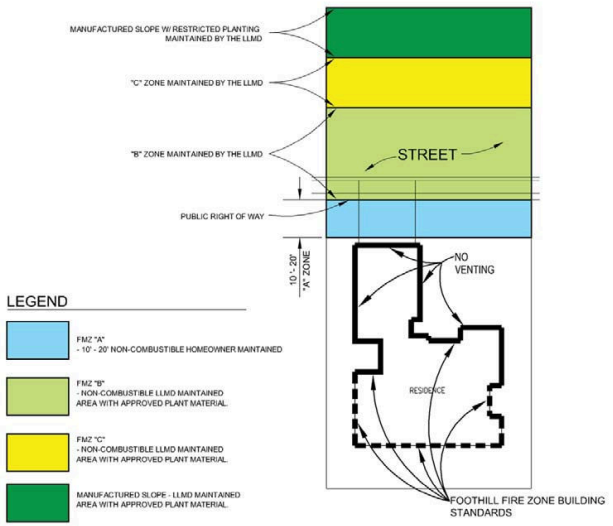
Figure 3-25: Fire Protection Plan Details

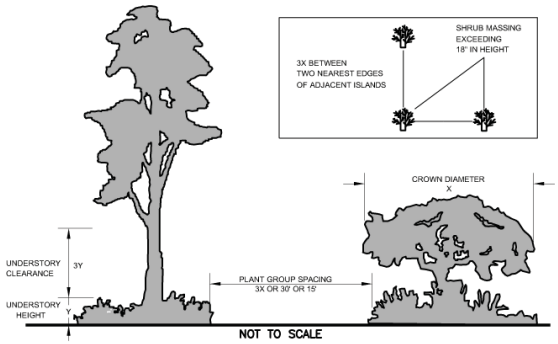
HOMEOWNERS DISCLOSURE EXHIBIT
SPECIFIC PLAN NO. SP 07-01
TYPICAL FUEL MODIFICATION AND CONSTRUCTION



NOTES:

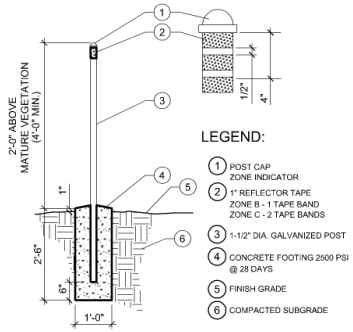
1. HOMEOWNER IS RESPONSIBLE TO MAINTAIN "A" ZONE SETBACK PER APPROVED FUEL MANAGEMENT PLAN GUIDELINES.

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



1. 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.
2. PLANT GROUP SPACING.
   A. 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).
   B. 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 SBFD SEPARATED BY DISTANCE OF THREE TIMES THE DIAMETER OF THE LARGEST INDIVIDUAL MATURE CROWN OR 30 FEET, WHICHEVER IS GREATER (SEE FIGURE ABOVE). OTHER LIMITED GROUPING ARRANGEMENTS AND SPACING MAY BE ACCEPTABLE IF APPROVED BY SBFD
   C. PLANT SPECIMENS LISTED IN THE SBFD "APPROVED PLANT PALETTE-QUALIFICATION STATEMENTS FOR SELECT PLANT SPECIES" SHALL COMPLY WITH PLANT GROUPINGS AND SPACING REQUIREMENTS SPECIFIED IN THOSE RESTRICTIONS.

IDENTIFICATION MARKER DETAIL



CONSTRUCTION REQUIREMENTS

The requirments of this Chapter shall be applicable tp 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)

A. 1. All exterior elements, including, but not limited to walls, overhangs, garage doors, fences, fascias, ect., shall be free from exposed wood (e.g. minimum ⅞" stucco protection). (A+B, and C where abuts wildlands)

Exception: Entry doors, windows, and door and window jambs.

2. Vinyl window frame assemblies shall be prohibited, except when they have the following characteristics:

   a) Frames and sash are comprised of vinyl material with welded corners;
   b) Metal reinforcement is the interlock area;
   c) Glazed with insulated glass or tempered;
   d) Frame and sash profiles are certified in AAMA Lineal Certification Program (verified with either an AAMA product label or Certified Products Directory); and
   e) Certified and labeled to ANSIA/AAMA/NWWDA 101/I.S.2-97 for structural requirements.
   f) Except when needed to meet the requirements of the California Energy Code at Title 24, Part 6 of the California Code regulations.

B. All glazing shall be double-paned and meet California Building Code requirements. (A+B+C)

C. No attic vent shall be placed facing the foothills/wildland. (A+B, and C where abuts wildlands) All vents shall be covered with ⅛ inch mesh corrosion-resistant metal screen or the approved material that offers equivalent protection.

D. Roof mounted turbine vents shall not be permitted. (A+B+C)

E. All roof coverings shall be of non-wood materials with at least a Class A or B fire retardant rating. (A+B+C)

F. 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)

G. All new residential structures (exccept 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)

H. Insulation. Paper-faced insulation shall be prohibited in attics or ventilated spaces.

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Seismic/Geologic Safety

University Hills is located within the San Andreas Fault zone and includes three active faults including: South Branch of the San Andreas Fault, which runs in an east–west direction along the entire length of the project; the Mill Creek Fault, which is located approximately 600 feet north of the South Branch, and; the North Branch San Andreas Fault, which is located approximately 1,600 feet north of the South Branch (see Figure 1-3). These faults run in an east-west direction and were precisely located through detailed geologic investigations (see the EIR appendices) to establish safe, structural setback limits. In addition, historical landslide areas have been identified north of the South Branch of the San Andreas Fault (see Figure 1-5).

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

- Prior to the issuance of tract maps, grading permits, or building permits in the area north of the South Branch of the San Andreas Fault (Planning Area 15), detailed, site specific geologic investigations shall be required to determine slope stability, landslide limits, and appropriate structural and grading requirements. This study must demonstrate that any pads and associated residences to be built in this area will not be subject to landslides. This measure shall be implemented to the satisfaction of the City Planner in consultation with the County Geologist or qualified geotechnical personnel retained by the City. If it determined that building in all or a portion of Planning Area 15 is not feasible and/or the units are transferred to another Planning Area, then the land use for Planning Area 15 shall revert to Open Space and, as necessary for slope stability and grading, Internal Slopes. Development of the water storage tank in Planning Area 23 is only necessary if development occurs in Planning Area 15. If development does not occur in Planning Area 15, then the land use for Planning Area 23 shall revert to Open Space.
- New construction and significant alterations to structures located within Planning Area 15 shall be evaluated for site stability, including potential impact to other properties during project design and review.
- All structures within University Hills 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 know faults.
- Flexible pipe fittings should 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.

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 University Hills.

Grading Plan

University Hills 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 University Hills is illustrated in Figure 3-26, *Conceptual Grading Plan*. The details of the geotechnical studies can be found in the EIR appendices.

Development within University Hills 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 Badger Canyon in its natural condition and minimizes impacts on natural topography.
- Maintains significant natural drainage courses within the proposed development area to enhance water quality.

The Hillside Management Overlay Zone applies to average slopes 15 percent or greater. Slopes less than 15 percent at the base of the hillsides are excluded from the density and development provisions of the Hillside Management Overlay Zone. Figure 1-4 shows the areas within University Hills that are subject to the Hillside Management Overlay Zone as well as the proposed development footprint. As can be seen on Figure 1-4, the development footprint for University Hills is contained in areas where average slopes are less then 15 percent.

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 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 and 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 shall be located at the top of the slope.
- Terrace drains and benches will be added where slope height exceeds 30 feet in accordance with the Uniform Building Code. In some instances benches will be widened to provide for dual use as a recreation trail.
- Proper drainage facilities and patterns will be facilitated throughout the site to minimize erosion on graded slopes.
- Existing significant drainage courses will 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 Storm Water Pollution Prevention Program (SWPPP) prior to grading.
- Prior to the issuance of grading permits in the area north of the South Branch of the San Andreas Fault (Planning Area 15), detailed, site specific geologic investigations shall be required to determine slope stability, landslide limits, and appropriate structural and grading requirements. This study must demonstrate that any pads and associated residences to be built in this area will not be subject to landslides. This measure shall be implemented to the satisfaction of the City Planner in consultation with the County Geologist or qualified geotechnical personnel retained by the City.
- Preserve the natural terrain as much as possible by focusing development in the development footprint shown on Figure 3-26.
- 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. Vegetation shall avoid a manufactured look.

Figure 3-26: Conceptual Grading Plan

LEGEND

- 1670 Proposed Contour
- 1670 Existing Contour
- 2:1 Slope
- Brow Ditch

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.

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Potable Water Plan

The City of San Bernardino Municipal Water Department (SBMWD) will provide potable water services to University Hills. Water will be supplied from the existing Sycamore 1 reservoir, which is located east of the development and has a capacity of 2.5 million gallons (MG) of potable water. According to the SBMWD, the Sycamore 1 reservoir has sufficient capacity to meet the demands of University Hills. Based upon the projected buildout of University Hills, total water demands are projected to be:

- Average Daily Demand – 401 gallons per minute (gpm)
- Maximum Daily Demand – 681 gpm
- Peak Hour Demand – 1,363 gpm
- Fire Demand – 1,500 gpm for 4 hours

The proposed water facilities for University Hills are shown on Figure 3-27, *Conceptual Water Plan*. As shown on Figure 3-27, the proposed water facilities will be located within three pressure zones: 1720, 1880, and 2040. Although there will not be any development in the 1720 Zone, SBMWD requires storage and pumping facilities for this zone to provide an orderly water distribution system for the development within the 1880 and 2040 zones.

As noted, water will be pumped from the Sycamore 1 reservoir just east of the project to a reservoir in the 1720 pressure zone. From there it will be pumped to another reservoir in the 1880 pressure zone, and finally it will be pumped up to a reservoir in the 2040 pressure zone. A secondary water system, which will be used in the event that the main supply from Sycamore 1 reservoir is interrupted, is located at the intersection of Northpark Boulevard and Campus Parkway and is accessed via a pipeline in Campus Parkway.

The water facilities for University Hills were sized per SBMWD guidelines. The storage facility within each pressure zone was sized for operational storage (25 percent of the maximum day demand) plus emergency storage (100 percent of the maximum day demand) plus fire storage (1,500 gpm for 4 hours). The water storage facility required is 1.0 MG for 1720 Zone, 1.5 MG for 1880 Zone, and 0.5 MG for 2040 Zone.

The pumping facilities have been sized for the cumulative maximum day demand plus fire flow requirement (1,500 gpm). The pumping capacity required for 1720 Zone is 2,250 gpm (two-75 hp duty pumps), 2,250 gpm (two-90 hp duty and one-90 hp standby) for 1880 Zone, and 1,600 gpm (two-60 hp duty and one-60 hp standby) for 2040 Zone.

The pipelines within the development are considered distribution lines for all practical purposes. The pipelines that connect pump stations to the reservoirs will be minimum 12-inch in diameter. All looping lines will be 12-inch in diameter and other distribution pipelines would be 8-inch in diameter. The

hydraulic model run for these facilities confirmed that the sizes of pipelines are adequate.

The details of all water facilities, their sizing, and hydraulic analysis can be found in the EIR appendices.

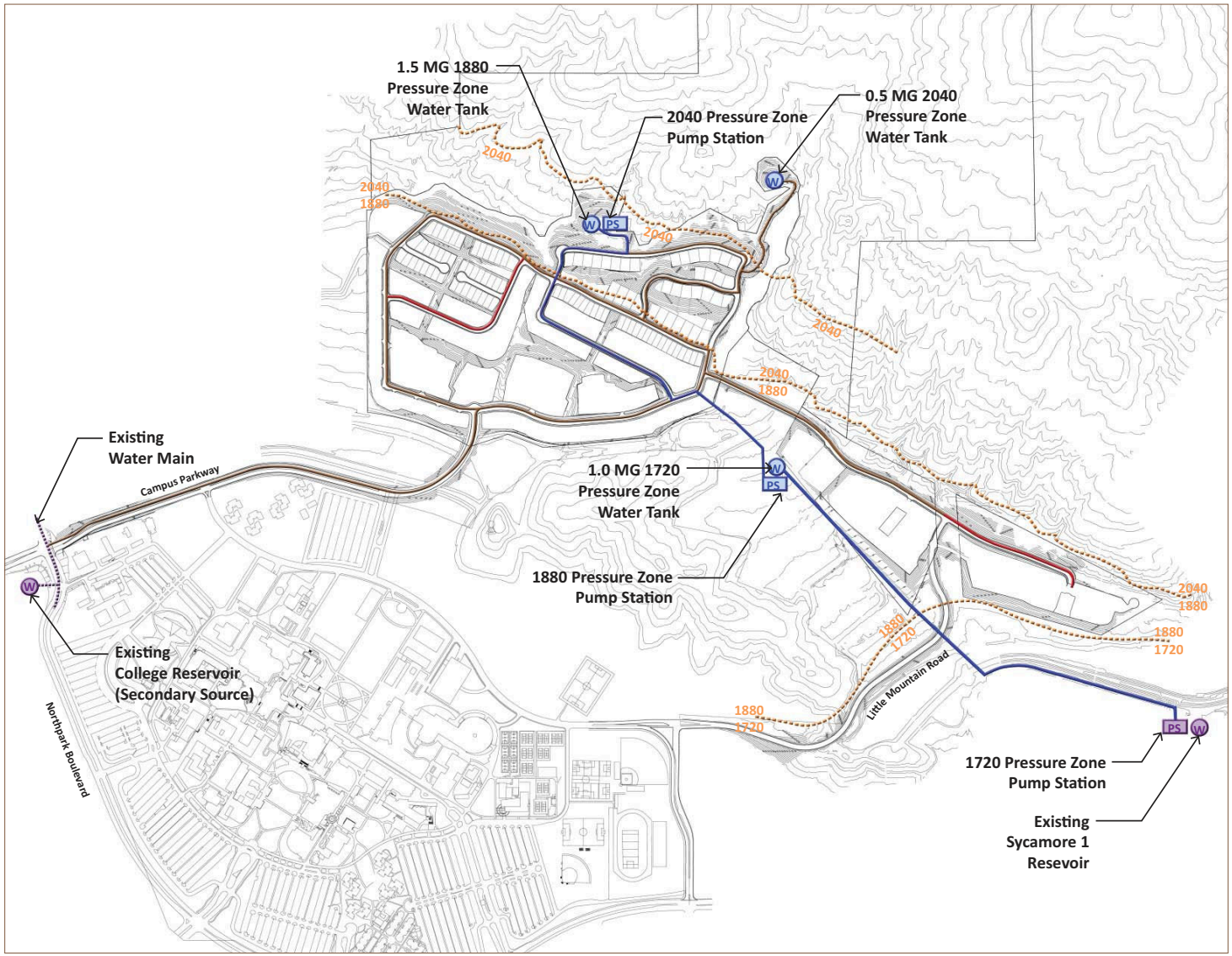

Figure 3-27: Conceptual Water Plan

LEGEND

- 8-inch Dip Water Main
- 12-inch Dip Water Main
- 16-inch Dip Water Main
- Existing Water Main
- Pressure Zone Boundary
- Existing Water Tank (size as shown)
- Existing Pump Station (size as shown)
- Proposed Pressure Zone Water Tank (size as shown)
- Proposed Pressure Zone Pump Station (size as shown)
- Pressure Zone

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.

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Drainage Plan

Existing Conditions

The project site drains into two major basins: Badger Basin and Sycamore Basin. Badger Canyon, a natural drainage course, runs north to south through the site and will be preserved in its natural state. Another unnamed stream runs north to south between the two easterly parcels of the project site, Planning Areas 18 and 20.

The total tributary drainage area, off-/on-site, to the project site is approximately 900 acres. This drainage area is bounded by Devil Canyon to the west, San Bernardino National Forest to the north, and Sycamore Canyon to the east. Waterman Canyon is approximately 1.5 miles east of the site. There are a series of debris basins, detention basins, and percolation basins outside of the project boundaries that are maintained by San Bernardino County Flood Control District.

Of the 900 acres contributing to the total tributary drainage area, only 18% (167acres) will be mass graded. The remaining 753 acres will be kept in its natural condition to minimize the increase of drainage runoff volume. The project site consists of two areas: the west development area, which includes Planning Areas 1 through 15, with a total subarea of 125 acres; and the east development area, which includes Planning Areas 16 through 20, with a total subarea of 42 acres. The west area and the east area are separated by Badger Canyon, which flows west into a natural earthen channel; the east area drains east to Sycamore Creek and into the Sycamore Basin.

The drainage area tributary to Badger Canyon is estimated to be 460 acres, which flows in a natural drainage course. This tributary area drains toward the eastern side of the west development area, crosses the road that links the west and east development areas, and continues in a southerly direction to drain into a debris basin known as North Badger Basin, which acts as the first stage for collecting debris. It then flows in a westerly direction via an existing flood control earthen channel into another debris basin known as West Badger Basin adjacent to Badger Hill.

In addition, three other subareas that are tributary to the site enter the project at various locations where the flow will be intercepted in storm drain pipes and conveyed through the project site to its historical discharge point at the existing earthen channel. The remainder of the off-site tributary drainage area enters the site from the north at various smaller concentration points and continues south as sheet flow.

Additional detailed analysis of the existing hydrology and proposed drainage facilities can be found in the EIR appendices.

Existing Drainage Facilities

No underground storm drain system exists within the project vicinity. The majority of the site, approximately 70 percent, drains as sheet flow into the existing earthen channel that links two debris basins south of the project, then flows in a westerly direction. The remaining 30 percent of the tributary area flows toward the Sycamore Basin, which also drains into an earthen channel that flows south then ultimately drains into a covered concrete-lined channel that crosses Northpark Boulevard in Little Mountain Drive. The existing debris basins, detention basins, and percolation basins outside of the project boundary are maintained by San Bernardino County Flood Control District (SBCFCD).

Proposed Drainage Facilities

The proposed drainage improvements are shown on Figure 3-28, *Conceptual Drainage Plan*. The figure shows proposed underground storm drains, tributary areas, and catch basin inlets.

Criteria for the conceptual layout and design of drainage improvements were adopted based on the current guidelines of the City of San Bernardino and SBCFCD. All underground storm drains proposed in the study are intended to collect local urban runoff and off-site undeveloped flows. These drains are located in existing and proposed street rights-of-way, including proposed easements. For local and major streets located in the study area, runoff from the 25-year storm is allowed to flow in the streets until it reaches the top of the curb; however, the 100-year storm flow is allowed to flow within the street section until it reaches the street right-of-way limit. Underground storm drains will be constructed when either of those two conditions are exceeded in the hydrological analysis. All conduits are proposed to be reinforced concrete pipes (RCP). The minimum pipe size will be 18 inch RCP, and the minimum depth will be 2 feet.

Line A is proposed to collect runoff flow from the central portion of the project site of the west development area and off-site flow north of the project site. Line B is proposed to collect off-site flow north of the project, and to collect runoff flows tributary from the north and northwest side of the west development area. Line C is proposed to collect runoff flow from the northeast and southeast portion of the project site. Line D is proposed to collect runoff flow from the northwest and west portion of the east development area. Line F is proposed to collect runoff flow from the northeast portion of the east development area. Lines A, B, C, D, and F outlet into an existing flood control facility.

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

- The proposed storm drain system will be able to convey the on-/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 flood control facilities, thereby eliminating flooding hazards.

Drainage outlets, bioswales, 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 onsite infiltration have been incorporated into the project. A Water Quality Management Plan (WQMP) that includes best management practices (BMPs) has been prepared for University Hills in accordance with the Santa Ana Regional Water Quality Control Board. The WQMP can be found in the EIR appendices.

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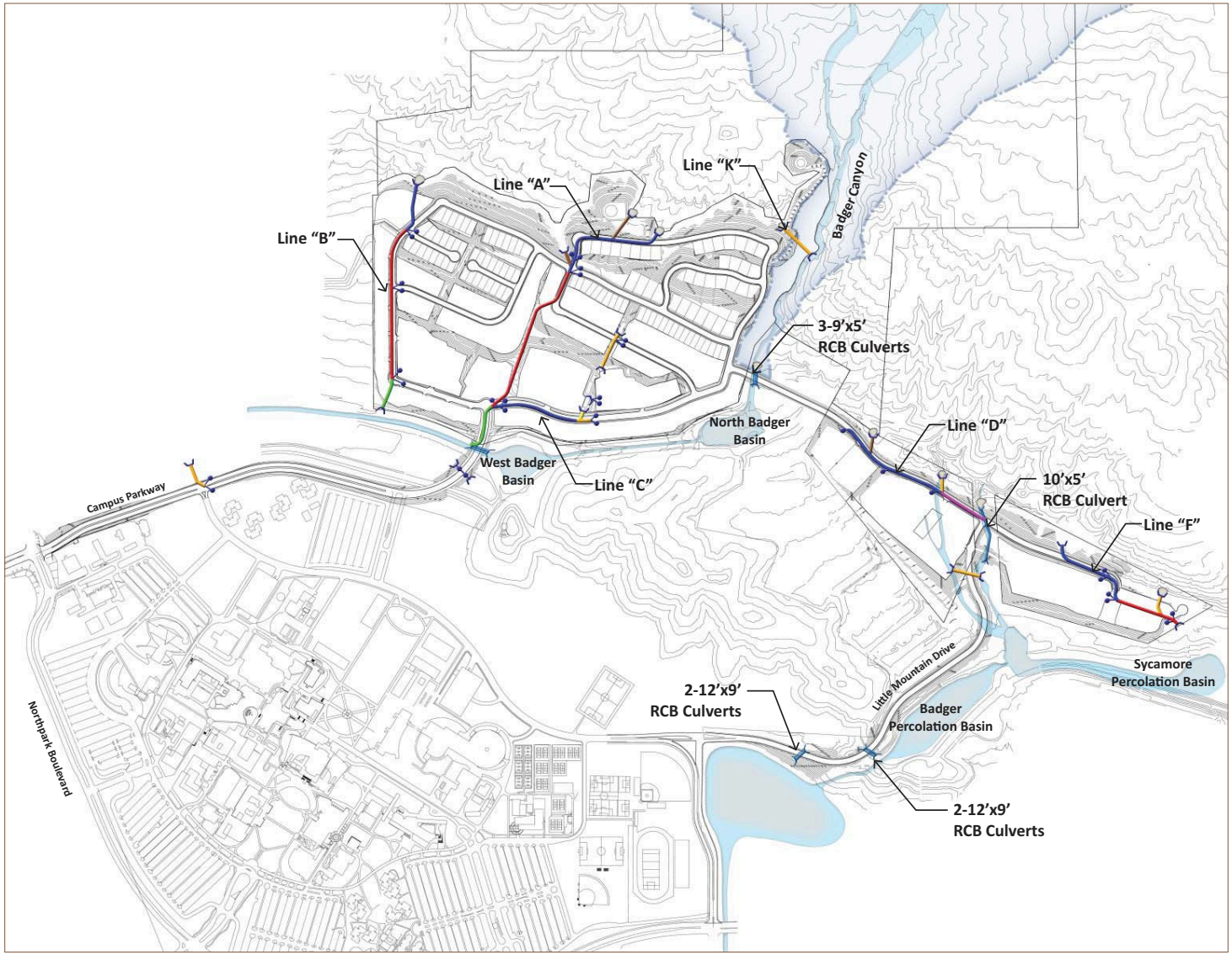

Figure 3-28: Conceptual Drainage Plan

LEGEND

- 18-inch RCP
- 24-inch RCP
- 30-inch RCP
- 36-inch RCP
- 42-inch RCP
- 48-inch RCP
- 54-inch RCP
- 60-inch RCP
- RCB Culvert
- Catch Basin with Lateral
- Inlet/Outlet
- Desilting Basin
- Existing Off-Site Drainage (unchanged)
- Natural Drainage Course (unchanged)

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.

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Sewer Plan

The University Hills project lies within the City of San Bernardino sanitary sewer service area. Discussion with staff at the Development Services Department, Public Works Division, indicated that the project will connect to an existing sewer trunk line at the intersection of Northpark Boulevard and Little Mountain Drive. A general layout of the sewer system is shown on Figure 3-29, *Conceptual Sewer Plan*.

A hydraulic analysis was performed by City staff to evaluate the available capacity of the sewer system and to determine the facilities required to service the project. It was determined by the City that the existing sewer trunk line in Little Mountain Drive is adequate to support the project. The University Hills project will pay its fair share of any project related cost impacts to the existing sewer trunk line.

Badger Canyon divides University Hills into two major drainage areas. The west development area drains toward the southwest corner of the project and the east development area drains to the east and southeast and then southerly. A sewage lift station is proposed at the southwest corner of the west development area to collect the effluent flow and pump it easterly through a sewer force main to a gravity sewer line in front of Planning Area 16. This gravity sewer line would connect to the existing sewer trunk line located at the intersection of Little Mountain Drive and Northpark Boulevard. The main line sizes will vary from 8-inch diameter to 12-inch diameter.

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, including the sewage lift station, will be dedicated to and maintained by the City of San Bernardino.

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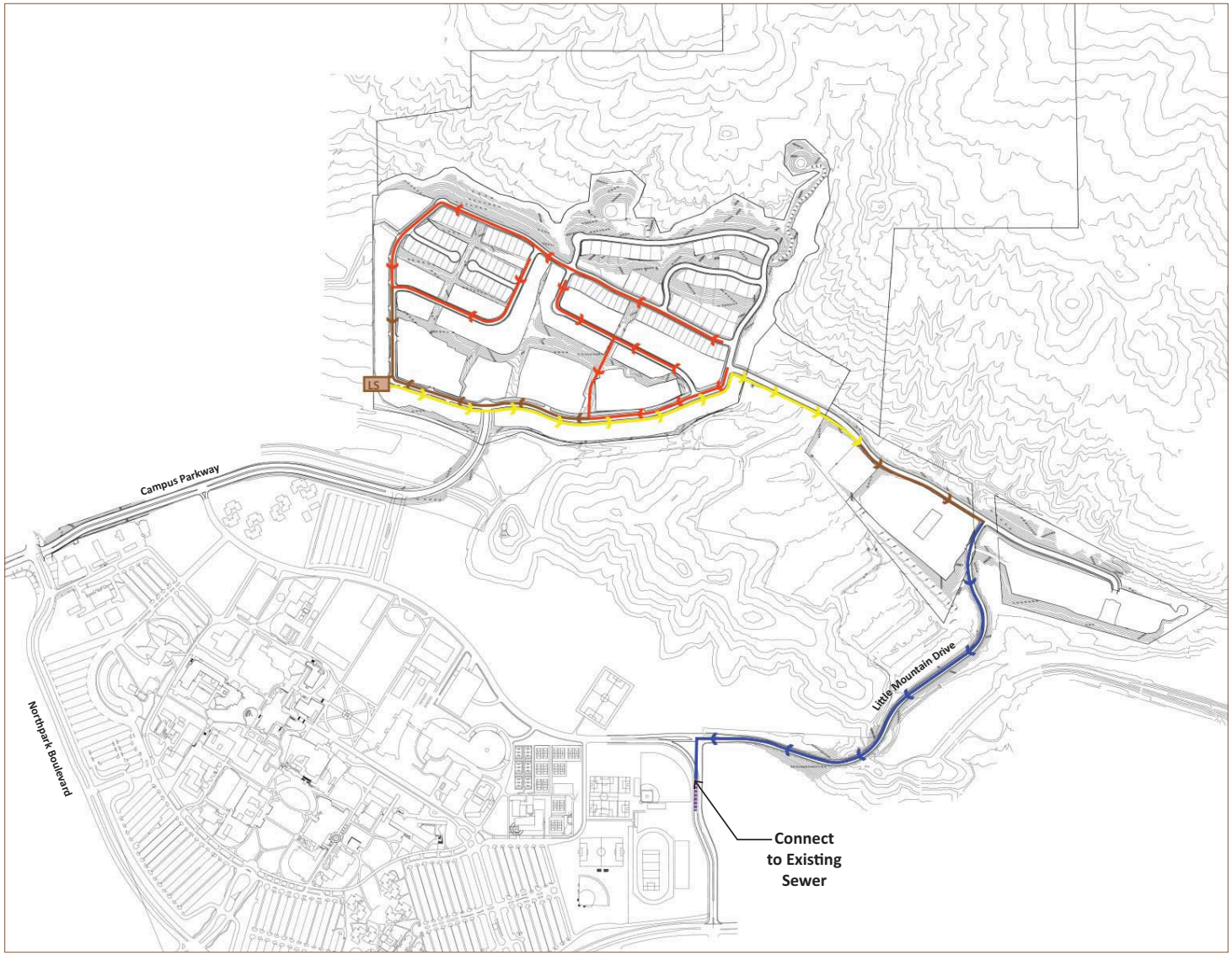

Figure 3-29: Conceptual Sewer Plan

LEGEND

- 8-inch Main
- 10-inch Main
- 12-inch Main
- 6-inch Force Main
- Existing Sewer
- Direction of Flow
- LS — Sewage Lift Station

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.

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Dry Utilities

University Hills 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 3-7. Will serve letters have been received from The Gas Company, Southern California Edison, Verizon, and Charter Communications. The *Dry Utilities Study for University Hills* can be found in the EIR appendices.

Table 3-7 Utility Providers

Utility	Provider
Electricity	Southern California Edison
Gas	The 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

Landscape Plant Palette

The Plant Palette is divided into two tables and contains the landscape selection for the developed areas and fuel modification zones.

Plant Palette for Developed Areas

The following Table shall be used as the landscape selection in the developed areas.

Table 3-8 Plant Palette for Developed Areas

Botanical Names	Common Names
Interior Street Plant Palette	
Trees	
Chitalpa tashkentensis	Chitalpa
Lagerstroemia indica 'Tuskogee'	Crape Myrtle, Multi Trunk Version
Lagerstroemia indica 'Muskogee'	Crape Myrtle, Multi Trunk Version
Lagerstroemia indica 'Watermelon Red'	Crape Myrtle, Multi Trunk Version
Magnolia grandiflora 'Samuel Sommer'	Samuel Sommer Magnolia
Pinus canariensis	Canary Island Pine
Pinus eldarica	Afghan Pine
Pinus halepensis	Aleppo Pine
Pistacia chinensis	Chinese Pistache
Pyrus calleriana 'Aristocrat'	Callery Pear
Rhus lancea	African Sumac
Tristania conferta	English Boxwood
Shrubs	
Abelia grandiflora 'Edward Goucher'	Glossy Abelia
Anigozanthos flavidus	Kanga Roo Paw
Asparagus densiflorus 'Meyers'	Meyers Asparagus Fern
Bougainvillea 'San Diego Red'	Bougainvillea
Cistus 'sunset'	Sunset Rock Rose
Cistus purpureus	Orchid Rock Rose
Coleonema pulchrum	Pink Breath of Heaven
Dietes bicolor	Fortnight Lily
Escallonia fradesii 'Pink'	Escallonia
Feijoa sellowiana	Pineapple Guava
Grevillea 'Noellii'	Grevillea
Hemerocallis 'Rum Red'	Daylily
Hemerocallis 'Red Magic'	Daylily
Hemerocallis 'Starburst Orange Evergreen'	Daylily
Hemerocallis 'Blacked-Eyed Susan'	Daylily
Hemerocallis 'Starburst Susie Evergreen'	Daylily

Table 3-8 Plant Palette for Developed Areas

Botanical Names	Common Names
Isolepis cernua	Fiber Optic Grass
Juniprus sp.	Juniper
Lavandula stoechas 'Otto Quast'	Spanish Lanvender
Mahonia 'Golden Abundance'	Mahonia
Mulhenbergia capllaris	Pink Muhly
Mulhenbergia rigens	Deer Grass
Nandina domestica	Heavnely Bamboo
Osmanthus fragrans	Sweet Olive
Phormium tenax 'Atropurpureum'	New Zealand Flax
Phormium tenax 'Pink Stripe'	New Zealand Flax
Phormium tenax 'Maori Queen'	New Zealand Flax
Photinia fraseri	Red Tip Photinia
Pennsietum setaceum 'Little Bunny'	Dwarf Red Fescue
Pittosporum tobira	Tobira
Rhaphiolepis indica 'Dancer'	Indian Hawthorn
Rosa 'Iceburg'	Iceburg Rose
Rosmarinus officinalis	Rosemary
Xylosma congestum	Shiny Xylosma
Groundcovers	
Bougainvillea 'Oh la la'	Bougainvillea
Convolvulus tomentosum	Ground Morning Glory
Festuca glauca	Blue Fescue
Heuchera sanguinea	Coral Bells
Hypericum calycinum	St. John's Wart
Lantana sp.	Lantana
Lonicera japonica 'Halliana'	Hall's Honeysuckle
Nandina domestica 'Nana'	Dwarf Heavenly Bamboo
Ophiopogon japonicus	Mondo grass
Phormium tenax 'jack Spratt'	New Zealand Flax
Phormium tenax 'Tom Thumb'	New Zealand Flax
Pittosporum tobira 'Cream de Mint'	Dwarf Tobira
Rosa 'Carpet White'	White Carpet Rose
Rosmarinus officinalis	Rosemary
Trachelospermum jasminodes	Star Jasmine
Vines	
Ficus pumilla	Creeping Fig
Gelsemium sempervirens	Carolina Jessamine
Parthenocissus tricuspidata	Boston Ivy
Clubhouse and Other Recreation Areas Plant Palette	
Trees	
Alnus rhombifolia	White Alder
Geijera parviflora	Australian Willow

Table 3-8 Plant Palette for Developed Areas

Botanical Names	Common Names
Hymenosporum flavum	Sweet Shade Tree
Koelreuteria bipinnata	Chinese Flame Tree
Koelreuteria paniculata	Golden Rain Tree
Lagerstroemia indica 'Tuskogee'	Crape Myrtle, Multi Trunk Version
Lagerstroemia indica 'Muskogee'	Crape Myrtle, Multi Trunk Version
Lagerstroemia indica 'Watermelon Red'	Crape Myrtle, Multi Trunk
Magnolia grandiflora	Southern Magnolia
Magnolia grandiflora 'Samuel Sommer'	Samuel Sommer Magnolia
Magnolia soulangeana	Saucer Magnolia
Pinus canariensis	Canary Island Pine
Pinus eldarica	Afghan Pine
Pistacia chinensis	Chinese Pistache
Platanus racemosa	California Sycamore
Podocarpus gracilor	Fern Pine
Pyrus calleriana 'Aristocrat'	Callery Pear
Pyrus Kawakamii	Evergreen Pear
Rhus lancea	African Sumac
Tristania conferta	English Boxwood
Ulmus parvifolia	Chinese Evergreen Elm
Shrubs	
Abelia grandiflora 'Edward Goucher'	Glossy Abelia
Aloe maculata	Soap Aloe
Anigozanthos flavidus	Kangaroo Paw
Asparagus densiflorus 'Meyers'	Meyers Asparagus Fern
Bougainvillea 'San Diego Red'	Bougainvillea
Cistus 'sunset'	Sunset Rock Rose
Cistus purpureus	Orchid Rock Rose
Coleonema pulchrum	Pink Breath of Heaven
Dietes bicolor	Fortnight Lily
Escallonia fradesii 'Pink'	Escallonia
Feijoa sellowiana	Pineapple Guava
Grevillea 'Noellii'	Grevillea
Hemerocallis 'Rum Red'	Daylily
Hemerocallis 'Red Magic'	Daylily
Hemerocallis 'Starburst Orange Evergreen'	Daylily
Hemerocallis 'Blacked-Eyed Susan'	Daylily
Hemerocallis 'Starburst Susie Evergreen'	Daylily
Isolepis cernua	Fiber Optic Grass
Juniprus sp.	Juniper
Lavandula stoechas 'Otto Quast'	Spanish Lanvender
Mahonia 'Golden Abundance'	Mahonia
Mulhenbergia capllaris	Pink Muhly
Mulhenbergia rigens	Deer Grass

Table 3-8 Plant Palette for Developed Areas

Botanical Names	Common Names
Nandina domestica	Heavnely Bamboo
Osmanthus fragrans	Sweet Olive
Phormium tenax 'Atropurpureum'	New Zealand Flax
Phormium tenax 'Pink Stripe'	New Zealand Flax
Phormium tenax 'Maori Queen'	New Zealand Flax
Photinia fraseri	Red Tip Photinia
Pennsietum setaceum 'Little Bunny'	Dwarf Red Fescue
Pittosporum tobira	Tobira
Rhaphiolepis indica 'Dancer'	Indian Hawthorn
Rosa 'Iceburg'	Iceburg Rose
Rosmarinus officinalis	Rosemary
Salvia greggii	Autumn Sage
Salvia leucophylla	Purple Sage
Xylosma congestum	Shiny Xylosma
Groundcovers	
Bougainvillea 'Oh la la'	Bougainvillea
Convolvulus tomentosum	Ground Morning Glory
Festuca glauca	Blue Fescue
Heuchera sanguinea	Coral Bells
Hypericum calycinum	St. John's Wort
Lantana sp.	Lantana
Lonicera japonica 'Halliana'	Hall's Honeysuckle
Nandina domestica 'Nana'	Dwarf Heavenly Bamboo
Ophiopogon japonicus	Mondo grass
Phormium tenax 'Jack Spratt'	New Zealand Flax
Phormium tenax 'Tom Thumb'	New Zealand Flax
Pittosporum tobira 'Cream de Mint'	Dwarf Tobira
Rosa 'Carpet White'	White Carpet Rose
Rosmarinus officinalis	Rosemary
Trachelospermum jasminodes	Star Jasmine
Vines	
Ficus pumilla	Creeping Fig
Gelsemium sempervirens	Carolina Jessamine
Parthenocissus tricuspidata	Boston Ivy
Park Plant Palette	
Trees	
Alnus rhombifolia	White Alder
Juglans californica	California Black Walnut
Koelreuteria bipinnata	Chinese Flame Tree
Koelreuteria paniculata	Golden Rain Tree
Lagerstroemia indica 'Tuskogee'	Crape Myrtle, Multi Trunk Version
Lagerstroemia indica 'Muskogee'	Crape Myrtle, Multi Trunk Version

Table 3-8 Plant Palette for Developed Areas

Botanical Names	Common Names
Lagerstroemia indica 'Watermelon Red'	Crape Myrtle, Multi Trunk
Magnolia grandiflora	Southern Magnolia
Magnolia grandiflora 'Samuel Sommer'	Samuel Sommer Magnolia
Melaleuca quinquenervia	Paperbark Tree
Pinus canariensis	Canary Island Pine
Pinus eldarica	Afghan Pine
Pinus halepensis	Aleppo Pine
Pistacia chinensis	Chinese Pistache
Platanus racemosa	California Sycamore
Podocarpus gracilor	Fern Pine
Pyrus calleriana 'Aristocrat'	Callery Pear
Pyrus Kawakamii	Evergreen Pear
Quercus ilex	Holly Oak
Quercus suber	Cork Oak
Rhus lancea	African Sumac
Schinus molle	California Pepper
Sequoia sempervirens	Coast Redwood
Tristania conferta	English Boxwood
Ulmus parvifolia	Chinese Evergreen Elm
Shrubs	
Abelia grandiflora 'Edward Goucher'	Glossy Abelia
Aloe maculata	Soap Aloe
Anigozanthos flavidus	Kanga Roo Paw
Asparagus densiflorus 'Meyers'	Meyers Asparagus Fern
Bougainvillea 'San Diego Red'	Bougainvillea
Cistus 'sunset'	Sunset Rock Rose
Cistus purpureus	Orchid Rock Rose
Coleonema pulchrum	Pink Breath of Heaven
Dietes bicolor	Fortnight Lily
Dodonaea viscosa	Purple Hop Seed Bush
Escallonia fradesii 'Pink'	Escallonia
Feijoa sellowiana	Pineapple Guava
Grevillea 'Noellii'	Grevillea
Hemerocallis 'Rum Red'	Daylily
Hemerocallis 'Red Magic'	Daylily
Hemerocallis 'Starburst Orange Evergreen'	Daylily
Hemerocallis 'Blacked-Eyed Susan'	Daylily
Hemerocallis 'Starburst Susie Evergreen'	Daylily
Isolepis cernua	Fiber Optic Grass
Juniprus sp.	Juniper
Lavandula stoechas 'Otto Quast'	Spanish Lanvender
Mahonia 'Golden Abundance'	Mahonia
Mulhenbergia capllaris	Pink Muhly

Table 3-8 Plant Palette for Developed Areas

Botanical Names	Common Names
Mulhenbergia rigens	Deer Grass
Nandina domestica	Heavnely Bamboo
Osmanthus fragrans	Sweet Olive
Phormium tenax 'Atropurpureum'	New Zealand Flax
Phormium tenax 'Pink Stripe'	New Zealand Flax
Phormium tenax 'Maori Queen'	New Zealand Flax
Photinia fraseri	Red Tip Photinia
Pennsietum setaceum 'Little Bunny'	Dwarf Red Fescue
Pittosporum tobira	Tobira
Prunus caroliniana 'Bright n Tight'	Flowering Plum
Rhaphiolepis indica 'Ballerina'	Indian Hawthorn
Rhaphiolepis indica 'Dancer'	Indian Hawthorn
Rosa 'Iceberg'	Iceberg Rose
Rosmarinus officinalis	Rosemary
Salvia greggii	Autumn Sage
Salvia leucophylla	Purple Sage
Xylosma congestum	Shiny Xylosma
Groundcovers	
Bougainvillea 'Oh la la'	Bougainvillea
Convolvulus tomentosum	Ground Morning Glory
Festuca glauca	Blue Fescue
Heuchera sanguinea	Coral Bells
Hypericum calycinum	St. John's Wart
Lantana sp.	Lantana
Lonicera japonica 'Halliana'	Hall's Honeysuckle
Nandina domestica 'Nana'	Dwarf Heavenly Bamboo
Ophiopogon japonicus	Mondo grass
Phormium tenax 'Jack Spratt'	New Zealand Flax
Phormium tenax 'Tom Thumb'	New Zealand Flax
Pittosporum tobira 'Cream de Mint'	Dwarf Tobira
Rosa 'Carpet White'	White Carpet Rose
Rosmarinus officinalis	Rosemary
Trachelospermum jasminodes	Star Jasmine
Vines	
Ficus pumilla	Creeping Fig
Gelsemium sempervirens	Carolina Jessamine
Parthenocissus tricuspidata	Boston Ivy

Plant Palette for Fuel Modification Zones

The palette in Table 3-9 shall be the landscape selection in the Fuel Modification Zones. Plants included in the plant palette for University Hills are designed to (1) limit the spread of fire, and (2) limit the spread of invasive species in the open space areas by complying with the California Invasive Plant Council's California Invasive Plant Inventory.

Table 3-9 Plant Palette for Fuel Modification Zones

Botanical Names	Common Names
Fuel Modification Zones Plant Palette	
Trees	
Alnus rhombifolia	White Alder
Heteromles arbutifolia	Toyon
Juglans californica	California Black Walnut
Lagerstroemia indica 'Tuskogee'	Crape Myrtle, Multi Trunk Version
Lagerstroemia indica 'Watermelon Red'	Crape Myrtle, Multi Trunk Version
Lagerstroemia indica 'Samuel Sommer'	Crape Myrtle, Multi Trunk Version
Pistacia chinensis	Chinese Pistache
Platanus racemosa	California Sycamore
Quercus ilex	Holly Oak
Quercus kelloggii	California Oak
Quercus suber	Cork Oak
Rhus lancea	African Sumac
Ulmus parvifolia	Chinese Evergreen Elm
Shrubs	
Abelia grandiflora 'Edward Goucher'	Glossy Abelia
Anigozanthos flavidus	Kanga Roo Paw
Bougainvillea 'San Diego Red'	Bougainvillea
Carpenteria californica	Bush Anemone
Ceanothus 'Dark Star'	Wild Lilac
Ceanothus 'Julia Phelps'	Wild Lilac
Cistus 'sunset'	Sunset Rock Rose
Cistus purpureus	Orchid Rock Rose
Cotoneaster horizontalis	Rock Cotoneaster
Escallonia fradesii 'Pink'	Escallonia
Euonymus fortunei	Euonymus
Feijoa sellowiana	Pineapple Guava
Grevillea 'Noellii'	Grevillea
Lavandula stoechas 'Otto Quast'	Spanish Lavender
Mahonia 'Golden Abundance'	Mahonia
Osmanthus fragrans	Sweet Olive
Photinia fraseri	Red Tip Photinia
Pennsietum setaceum 'Little Bunny'	Dwarf Red Fescue
Pittosporum tobira	Tobira

Table 3-9 Plant Palette for Fuel Modification Zones

Botanical Names	Common Names
Prunus caroliniana 'Bright 'n Tight'	Flowering Plum
Rhaphiolepis indica 'Dancer'	Indian Hawthorn
Rhus ovata	Sugar Bush
Rosmarinus officinalis	Rosemary
Salvia greggii	Autumn Sage
Trichostema lanatum	Wholly Blue Curls
Viburnum japonicum	Japanese Viburnum
Xylosma congestum	Shiny Xylosma
Groundcovers	
Bougainvilla 'Oh la la'	Bougainvilla
Hypericum calycinum	St. John's Wort
Lantana sp.	Lantana
Lonicera japonica 'Halliana'	Hall's Honeysuckle
Myoporum parvifolium 'Pink'	Pink Myoporum
Ophiopogon japonicus	Mondo grass
Rosmarinus officinalis	Rosemary
Trachelospermum jasminodes	Star Jasmine
Vines	
Ficus pumilla	Creeping Fig
Gelsemium sempervirens	Carolina Jessamine
Parthenocissus tricuspidata	Boston Ivy
Plant Removal List	
The following plant species shall be removed from all fuel modification zones:	
Adenostoma fasciculatum	Wild Turnip, Yellow Mustard
Adenostoma sparsifolium	Red Shanks
Anthemix cotula	Mayweed
Artemisia californica	California Sagebrush
Brassica nigra	Black Mustard
Brassica rapa	Chamise
Cardaria draba	Noary Cress, Perrennial Peppergrass
Centaurea solstitials	Yellow Star Thistle
Cirsium vulgare	Wild Artichoke
Conyza canadensis	Horseweed
Cortaderia selloana	Pampas Grass
Cupressus sp.	Cypress
Cynara cardunculus	Artichoke Thistle
Datura wright II	Jimsonweed
Eriognum fasciculatum	Common Buckwheat
Eucalyptus sp.	Eucalyptus
Foeniculum vulgare	Fennel
Heterothaca grandiflora	Telegraph Plant
Juniperus sp.	Juniper

Table 3-9 Plant Palette for Fuel Modification Zones

Botanical Names	Common Names
Lactuca serriola	Prickly Lettuce
Malosma laurina	Laurel Sumac
Nicotiana bigelevil	Indian Tobacco
Nicotiana glauca	Tree Tobacco
Pinus sp.	Pine
Salvia mellifera	Black Sage
Salsola australis	Russian Thistle/Tumblewood
Silybum marianum	Milk Thistle
Ricinus communis	Castor Bean Plant
Urtica urens	Burning Needle