THE CITY OF SAN DIEGO

REPORT TO THE PLANNING COMMISSION

DATE ISSUED: April 15, 2014 **REPORT NO.** PC – 14-034

ATTENTION: Planning Commission Agenda of April 24, 2014

SUBJECT: City Heights Urban Greening Plan Workshop

SUMMARY

This is an informational item to update the Planning Commission on the City Heights Urban Greening Plan and obtain comments on the draft Plan. No action is required on the part of the Planning Commission at this time.

BACKGROUND

The City of San Diego was awarded a Proposition 84 Urban Greening Grant in January 2011 by the Strategic Growth Council (SGC) to develop an Urban Greening Plan for City Heights. The grant effort establishes a green strategy framework for City Heights which incorporates four design elements: urban runoff, urban open space, multi-modal connectivity, and urban forestry. The strategies identified within these elements will connect community destinations through enhanced street design. The urban forestry element includes a Street Tree Master Plan that can help promote efforts to combat climate change through carbon sequestration, improvements to the pedestrian environment, and reduction of the community's urban heat island.

DISCUSSION

Public Outreach

An extensive public participation process was utilized to engage community members in the development of the Urban Greening Plan. A stakeholder committee was formed and met regularly to establish the vision and goals of the Plan and to help refine the areas of focus and prioritization for analysis. The committee included residents and representatives from community organizations, including: the City Heights Area Planning Committee, Azalea Recreation Council, Urban Corp, Bike SD, City Heights Community Development Corporation, San Diego Canyon Lands, and the El Cajon Boulevard Business Improvement Association.
In addition to regular stakeholder meetings, the participation process included collaboration with two PARK(ing) Day events, a two-part community-wide workshop, community surveys, a walk audit with Hoover High School students, and participation in the Colina Park "National Night Out" event. The City Heights Area Planning Committee collaborated with staff and the consultant team to develop and refine the tree palate for the Street Tree Master Plan.

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Urban Runoff

Within areas of City Heights, storm water runoff can flow untreated into open space canyons before reaching Chollas Creek and eventually San Diego Bay. Water flowing on the surface of the street can pick up trash, oil, chemicals, and other contaminants. Because urban runoff is considered the biggest contributor to coastal water pollution, the Plan seeks to maximize the capture of urban runoff and reuse of those water resources for supplemental watering of trees and plants. An additional goal is to improve water quality by filtering urban runoff through the roots and soil of planting zones and street infrastructure.

Low impact design (LID) strategies can help mitigate urban runoff by slowing, filtering, and absorbing runoff into planting areas and hardscape surfaces. The Plan identifies areas within the community that are particularly sensitive to urban runoff and where LID strategies could be incorporated.

Urban Open Space

Like many neighborhoods in San Diego, City Heights faces a shortage of usable neighborhood open space. City Heights has a total of 122.8 acres of usable park space that is divided among mini, neighborhood, and community parks. According to the Mid-City Communities Plan, City Heights should have a total of 215.97 acres of park space. Currently City Heights has a deficit of 93.17 acres.

The open space design element identifies opportunities for increasing open space areas through reclamation of underutilized spaces in existing right-of-ways and publicly owned land. Open space and park access focuses on increasing connectivity through the planning area.

Canyons are an important natural open space resource for the community and provide passive recreation in an ecologically sensitive area of City Heights. Additionally, canyons provide an opportunity for environmental-based education. San Diego Canyonlands has been working in City Heights on implementing a trail system planning and restoration effort, known as the Canyons Loop Trail, which connects four canyons within City Heights. The Urban Greening Plan provides recommendations to enhance trail access and reduce runoff on streets adjacent to the Swan and Manzanita canyons.

Multi-modal Connectivity

Compared with other communities, City Heights has higher rates of transit rides and a relatively lower rate of private vehicle use. The Plan seeks to further increase walking, bicycling, and transit use through improvements to the street design along key community corridors. The Plan identifies three primary categories of 'Green Streets:' Commercial Focus; Transit Focus; and Pedestrian/Bike Focus. Specific design improvements were developed through the inventory process and recommendations are based on the use, roadway width, and character of each street.

Additionally, a City Heights Street Design Toolbox has been developed to help improve the public realm. The toolbox is organized by the Plan's four design elements and also considers where a solution is applied in a street cross section. The toolbox includes options for urban forestry, urban runoff, multi-modal connectivity, and urban open space.

Pilot Projects

Ten pilot projects that identify conceptual design improvements at key locations within the community have been identified through the public participation process. These projects were selected to highlight key community connections and can be considered significant areas of opportunity, with the potential to leverage other community efforts through the implementation process. The plan aims to consolidate relevant information and recommendations from previous plans for each project and provide planning-level cost estimates to help determine prioritization and implementation opportunities.

The Pilot Projects are:

1. 52nd Street between El Cajon Boulevard & University Avenue
2. Chamoune Avenue between El Cajon Boulevard & University Avenue
3. University Avenue between Euclid Avenue and Estrella Avenue (including Reno Drive)
4. 43rd Street from Myrtle Avenue & Fairmount Avenue (adjacent to the Ocean Discovery Institute)
5. 43rd St. between Myrtle Avenue & Fairmount Avenue
6. Olive Avenue at Swan Canyon
7. Fairmount Avenue & Home Avenue
8. 43rd St. between El Cajon Boulevard & University Ave.
9. Fairmount Avenue between El Cajon Boulevard & University Avenue
10. University Avenue between Swift Avenue & 29th Street

Urban Forestry

The City Heights Street Tree Plan is designed to provide an optimum range of tree species that have been selected to reinforce community character. This Plan is intended to be used to facilitate the species selection based on a review of tree size at maturity, as well as physical characteristics.

The street tree framework was developed with input from the City Heights Area Planning Committee and the Community Forest Advisory Board. This plan considers the existing tree species in City Heights in conjunction with the City's Street Tree Selection Guide. Street trees were selected based on three primary categories: visual aesthetic, function, and viability. These factors are interrelated, and depend upon the context of the street.

The City of San Diego manages the selection of street trees through an approved Street Tree Plan for a planning area or through the City's Street Tree Selection Guide. The Mid-City Communities Plan does not contain a street tree plan; this plan was developed to be incorporated as an appendix to the community plan through a future effort.

CONCLUSION

Staff is seeking Planning Commission input on the Draft City Heights Urban Greening Plan.

Respectfully submitted,

[SIGNED]
_____
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_____
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MJP/NB

Attachments
1. Draft City Heights Urban Greening Plan

CITY HEIGHTS URBAN GREENING PLAN

BRINGING NATURE BACK INTO THE COMMUNITY

CONNECTING THE COMMUNITY BACK TO NATURE.

Prepared by:

Prepared for:

Contract H125568
Funded by:
Strategic Growth Council

Natural Resources Agency

California Environmental Protection Agency

California Health and Human Services Agency

City of San Diego City Council

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Date: February 14, 2014

City Heights
Urban Greening Plan

Vision

Design Elements

Green Streets

Street Design Toolbox

Pilot Projects

Street Tree Plan

Implementation

Appendices

Recommended Street Tree Species Summary

Community Outreach Summary

Existing Conditions


control
unattractive
fertilizers
activity
Plan
life
back
reduced
San
Diego
Increase
increase
street
value
healthier
business
Connect
trees
oil
businesses
streets
flooding
transportation
community
exhaust
Incorporate
walk/bike
Thru
Offer
contaminants
production
property
rainwater
harmful
residential
cross
traffic
potable
Lead
Use
make
help
increased
planting
sediment
Runoff
species
overall
communities
resources
nature
forestry
Make
Slow
waters
destinations
pesticides
safe
visibility
regular
coastal
Chollas
physical
Provide
parks
sun
opportunities
Reduce
rain
features
senses
Forestry
Lower
urban
Improve
Bioretention
horticulture
emissions
capture
demand
environments
Open
entire
minimize
Parklets
tree
rains
exposure
Trees
choices
Greening
Screen
selection
emotional
modes
Flow
canyons
strategies
Give
frequency
reducing
amount
Add
revenues
manage
reduce
cars
Filter
reaching
walking
lower
system
speeds
Capture
Creek
Space
number
isolation
people
social
health
commercial
neighborhoods
including
interaction
use
attractive
psychological
creation
places
runoff
residents
Street
job
air
Infiltration
stress
Create
provide
gardens
drainage
Strengthen
water
exercise
ages
source
cleaner
ozone
Urban
expenses

1 Vision

The City Heights Urban Greening (Urban Greening) Plan:

- Considers the character and history of City Heights
- Defines a Green Street system that incorporates walking, bicycling, transit, and vehicular uses for City Heights
- Establishes street design and street tree guidelines for the Green Streets system
- Presents maintenance concepts and standards for the public landscape
- Establishes a process to help city and community decision-makers set implementation priorities.

Streets represent the largest public space resource in City Heights. They take up more space than the City Heights canyons system, schools, and other public facilities combined. Streets are the connections to neighbors, paths to work, school, and play.

This Urban Greening Plan recognizes the importance of street design to facilitate connectivity for drivers, pedestrians, bicyclists, and transit riders. The plan highlights four design elements: Urban Forestry, Urban Runoff, Multi-Modal Connectivity, and Urban Open Space that are a part of street design. The right combination of these elements results in comfortable, shaded walkways that efficiently use water, improves water quality, while connecting through walking, biking, transit and driving.

The creation of this Plan delineates how street design can incorporate each of the design elements into City Heights. Streets need to move traffic, but they should be efficient and attractively designed public spaces that can positively impact the community and the environment.

Why Green Streets?

Streets are typically thought of as a route for vehicle traffic. The concept of a Green Street addresses the street as a public space that meets the needs of pedestrians, bicyclists, transit riders, and motorists but also addresses appearance and functionality through Urban Forestry, Urban Runoff, Multi-Modal Connectivity, and Urban Open Space design. With this comprehensive approach, Green Streets accomplish a number of desirable social outcomes as identified below.

Improved Traffic Safety

Green Streets that have trees and are visually attractive can reduce stress on drivers, lower blood pressure, and decrease perceived travel times for motorists. Green Streets can potentially reduce the occurrence of road rage and help make an everyday drive more enjoyable.

Increased Property Values

Green Streets add urban green space, trees, and wildlife experiences to daily routines. Attractive streets enhance properties and increase residential and businesses property values. The overall pride and investment in properties is often improved when a community's streets look and function properly.

Upgraded Development

Green Streets encourage foot traffic and increase retail sales along commercial corridors. An attractive street environment encourages an upgraded quality for private developments, encourages higher value uses along the streets, and enhances business viability.

Better Image and Community Marketing

Green Streets can physically and visually connect the major destinations found within City Heights. The Urban Greening includes a Street Tree Plan that identifies specific streets that should receive specific theme trees set to the character of those streets. Street trees can aid in way finding and attractive public streets can create positive community image.

Increased Pedestrian and Bicycle Routes

Green Streets encourage modes of transportation that reduce air pollution. This Plan integrates the concept of "complete streets," which designs streets to provide motorized and non-motorized connectivity in City Heights. Complete streets are necessary as fuel costs continue to increase and public health continues to decline. By providing safe environments for pedestrians and bicyclists, Green Streets encourage residents to walk and bike ultimately contributing to improved public health and support the goal of lowered vehicle miles traveled and greenhouse gas emissions.

Better Stormwater & Urban Runoff Management

Tree canopies and landscaped areas can increase the permeability of street right-of-ways and prevent rainfall from becoming runoff. Green Streets reduce water velocity and water discharge in opens space areas, reduce the strain and cost to the sewer system, and ultimately help protect valuable surface and groundwater resources. Green Streets also help meet regulatory requirements for pollutant reduction and watershed resource management for the City of San Diego.

1.1 Purpose

This Urban Greening Plan establishes a Green Streets system in City Heights based on a hierarchy of surrounding land use, traffic intensity, and function of the streets. Recommendations for creating Green Streets are identified for Green Streets design in City Heights. Major themes include:

- Connect community destinations thru safe walking, biking, and transit access.
- Unify streetscape design and improve the function, aesthetics, and sustainability of City Heights' streets
- Create an urban forest thru expanded parkway, trees in tree grates, and trees in bulbouts
- Reduce speeding and enhance safety through traffic calming
- Improve water quality by lowering the water discharge into the storm drain system and urban open space areas
- Incorporate permeability into hardscape design
- Maximize and optimize pedestrian walking areas
- Incorporate pedestrian and bicycle facilities such as raised crossings, speed tables, and clearly identified bike routes
- Identify opportunities for urban open space such as temporary use of the parking lane for restaurant seating or landscape planters.
- Create public space by reclaiming excess street

This Plan is designed to promote community connectivity, community ownership and enjoyment of public streets and open spaces. It will prioritize physical improvements for City Heights.

The Plan aligns with the City of San Diego General Plan, Mid-City Community Plan, City of San Diego Street Design Manual and Street Tree Selection Guide. In addition, this plan identifies funding mechanisms and community support needed for maintenance of any proposed recommendations. This Plan is organized into the following chapters:

Introduction

Chapter 1: Vision

Chapter 2: Design Elements

Chapter 3: Green Streets

Chapter 4: Street Design Toolbox

Chapter 5: Pilot Projects

Chapter 6: Street Tree Plan

Chapter 7: Implementation Strategies

The images below are based on community input from the public outreach process. Input informed the subsequent chapters.

Commonly traveled commercial routes

Commonly traveled transit routes

1.2 Mid-City Heights Community Plan Vision

City Heights is currently planned as a part of the larger planning area called Mid-City. The Mid-City Heights Community Plan includes Normal Heights, Kensington-Talmadge, Eastern Area, and City Heights. This Urban Greening Plan focuses solely on the City Heights planning area, but does incorporate regional bike and transit connectivity. The Mid-City Heights Community Plan established the following vision statement for City Heights.

"Our vision is for the re-establishment of a deep-rooted community: one that attracts new residents and whose inhabitants are planning to stay. We envision a stable community close to everything within San Diego's urban core that offers a high quality of life and is characterized by the following:

- *Neighborhoods that recognize, maintain, and enhance their unique identity and provide an excellent environment for family living,*
- *A community, in partnership with local government and surrounding communities, that sees its physical, economic, and social evolution as a continuing process of planning and development activity oversight that endures beyond the completion of this planning stage,*
- *An integrated open space system of natural canyons, park grounds, urban plazas, and landscaped streets,*
- *Preserved environmental, cultural, and historic resources,*
- *First class schools, educational and recreational facilities,*
- *Vital commercial, business, and employment centers,*
- *A functioning transportation system that connects to the larger regional system and features landscaped streets, fixed rail, electric buses and trolleys, and intra-community shuttles,*
- *Streets, businesses, and public gathering spaces that promote interaction among residents of Mid-City and that will draw people from elsewhere to discover Mid-City."*

Commonly traveled pedestrian routes

Commonly traveled bike routes

1.3 Study Area

City Heights is one of the oldest communities in San Diego; it includes the corridors of University Avenue and El Cajon Boulevard, roughly between I-805 eastward to 54th Street. It extends from El Cajon Boulevard all the way south to SR-94 with Fairmount Avenue acting as a spine. Today, City Heights is a large, dense, and ethnically diverse community that has a high concentration of retail outlets, restaurants, and other examples of self-employment resulting from the Hispanic, Somali, Cambodian, Vietnamese, and Ethiopian immigrant communities. The concentration of ethnic diversity and growth has been so strong that El Cajon Boulevard has been designated specifically for a commercial district and international marketplace that highlights these cultures (Mid-City Community Plan).

City Heights is a walkable neighborhood with many community destinations, but it faces walking, biking, and accessible transit challenges and safety concerns due to the presence of the canyons that are spread throughout the community. When compared to other San Diego communities, City Heights has a higher rate of transit and pedestrian activity. This is one of the key reasons why emphasis has been placed on improving the physical walking, biking, and transit environment; creating a more attractive street and safer access also reduces air pollution and has many social and physical health benefits.

"This Urban Greening plan will result in physical changes to City Heights that will improve air and water quality, safety, energy savings, walkability, bikeability, and enhance the social, economic and physical opportunities of the community and its residents."

Figure 1-1: Neighborhoods in City Heights

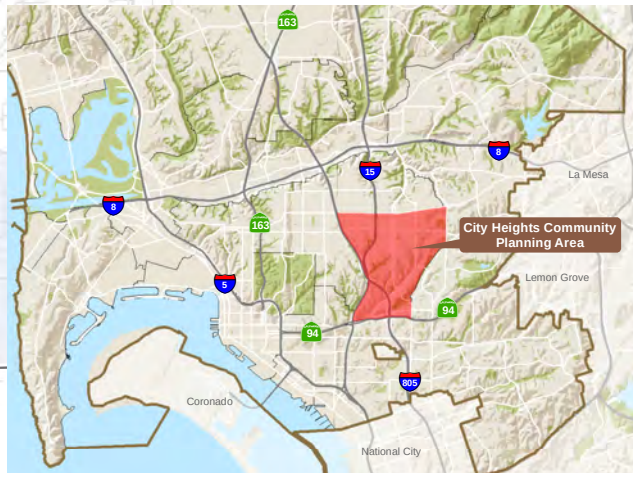


Figure 1-2: City Heights Planning Area Location

1.4 Previous Planning Efforts

This Urban Greening Plan considers current policies and planning efforts that reflect the community's values. Since 1995, there have been at least 35 projects within the City Heights Planning Area aimed at revitalizing and strengthening the community. Below is a summary list of planning efforts and the initiating agency or organization.

1995
FaceLift
CHCDC

1998
Mid-City Heights Community Plan (MCHCP)
City of San Diego

Mid-City Public Facilities Financing Plan
City of San Diego

2000
Euclid Ave. Revitalization Action Plan
City of San Diego

2002
Azalea Park-Hollywood Park Revitalization Action Program
City of San Diego

Regional Transportation Center (RTC)
Redevelopment Agency

Chollas Creek Enhancement Program City of San Diego

City Heights Urban Village Master Plan
Redevelopment Agency

2003
Mid-City Heights CP Amendment
City of San Diego

2004
Metro Career Center & Villas
Redevelopment Agency

2006
Talmadge Senior Village
Redevelopment Agency

Extension of Plan Effectiveness for City Heights Redevelopment Area
Redevelopment Agency

2007
Auburn Apartments
Redevelopment Agency

City Heights Square Senior Housing (Part of City Heights Square Project)
Redevelopment Agency

2008
San Diego Pedestrian Master Plan - City Heights Pedestrian Audit
City of San Diego

San Diego General Plan
City of San Diego

2009
Redevelopment Implementation Plan
Redevelopment Agency

Colina Park Quality of Life Report
LISC San Diego

SANDAG Design for Smart Growth guidelines
SANDAG

2010
Redevelopment Implementation Plan
La Maestra Community Health Centers
Redevelopment Agency

City Heights Safe Routes to School CHCDC

Building Healthy Communities Survey
California Endowment

2011
Mixed use project - Price Charities (Part of City Heights Square Project)
Redevelopment Agency

Swan Canyon Restoration Project (Provided funding)
Redevelopment Agency

Colina Park Upgrades
Redevelopment Agency

Mid-City SR- 15 Bus Rapid Transit Station Area Planning Study
SANDAG

CPTED Initiative - 44th Street Plaza, Fairmount Village, Monroe Clark Middle School - Community

Health Equity by Design
CHCDC, IRC, Proyecto, San Diego County

SANDAG Regional Transportation Plan
SANDAG

2012
Full Access Community Transport System (FACTS) Project
CHCDC

2013
Little Saigon District
The Boulevard

Today
Mid-City SR- 15 Bus Rapid Transit (BRT)Station Area Planning & Design
SANDAG

Mid-City Rapid Bus Transit (RBT) SANDAG

City Heights Canyons Restoration, Cleanup, & Trail Design
SD Canyonlands

Walk & Shop Program
CHCDC

Central Avenue Park Plan
Mid City Skate Park Advocates

Mid-City Regional Bike Corridors Project - SANDAG

Price Charities Property Redevelopment Projects

Silverado Ballroom Restoration
City of San Diego


ozone
value
contaminants
Slow
healthier
destinations
manage
traffic
species
cleaner
urban
nature
visibility
demand
Use
Chollas
choices
residential
residents
Provide
modes
rain
Trees
runoff
amount
entire
transportation
cross
Screen
unattractive
Create
back
fertilizers
Thru
Urban
senses
water
Give
walk/bike
Infiltration
Incorporate
reduced
streets
Reduce
forestry
safe
ages
Improve
Bioretention
emissions
Diego
coastal
resources
interaction
stress
control
oil
street
number
Plan
help
creation
environments
system
use
selection
Flow
Capture
physical
property
parks
horticulture
Filter
exposure
Runoff
job
isolation
increased
reducing
Parklets
revenues
minimize
Space
provide
people
Connect
business
sun
speeds
rains
waters
planting
increase
sediment
trees
Street
flooding
Offer
strategies
drainage
exercise
reduce
reaching
Increase
regular
frequency
emotional
rainwater
tree
life
production
Greening
potable
places
social
neighborhoods
capture
harmful
activity
community
businesses
Make
Forestry
Add
canyons
commercial
air
Strengthen
health
psychological
Lead
gardens
source
pesticides
attractive
Open
make
walking
Lower
lower
San
expenses
including
opportunities
overall
exhaust
cars
communities
features
Creek

2 Design Elements

Design Elements take into consideration the community context of City Heights and seeks to enhance key community destinations in order to establish an overall character and identity for the study area. This Section includes:

- Defines "Greening" versus a Green Street
- Discusses the benefits of Urban Forestry
- Highlights the opportunities to integrate Urban Runoff into Street Design
- Provides visual examples as to how Multi-modal Connectivity can add functionality to a street
- Identifies strategies for new Urban Open Space in existing public ROWs

2.1 Public Realm

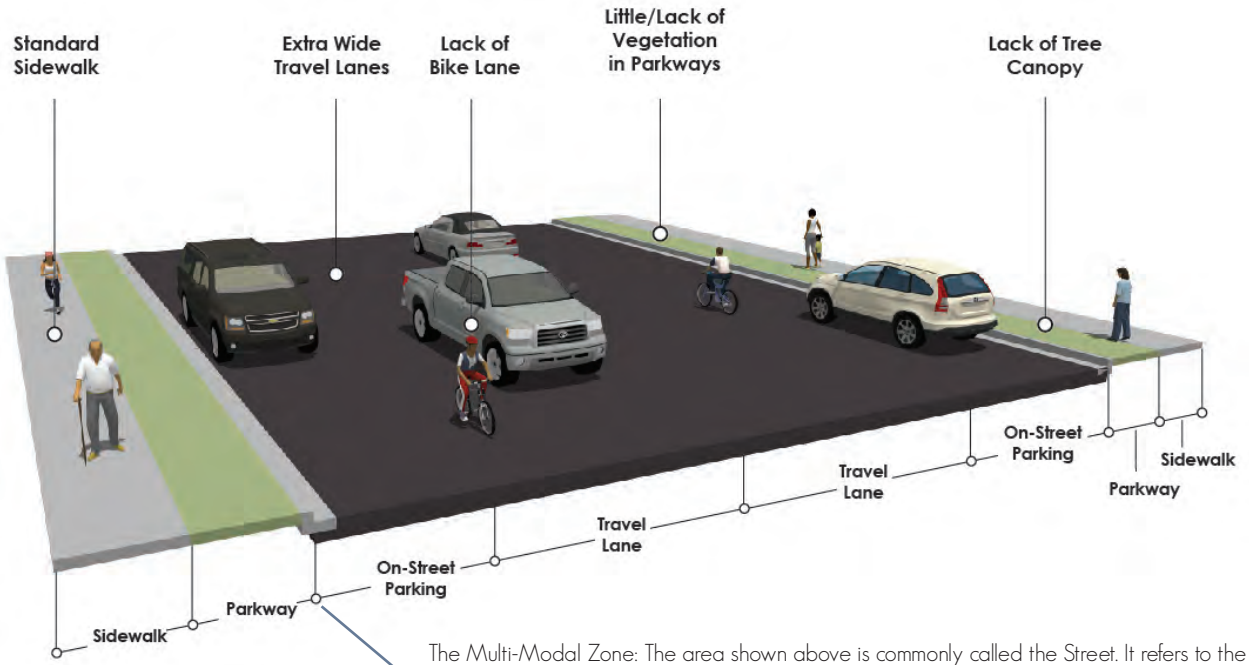
The vision of the Urban Greening Plan identifies recommendations in 4 areas: Urban Forestry, Urban Runoff, Multi-Modal Connection, and Urban Space. Chapter 4 highlights specific recommendations and where these solutions are applied in the street or public realm. This chapter establishes why the four design elements are important and key strategies that guided the specific recommendations identified in Chapter 4.

The public realm, public right-of-way (ROW), or street are all terms for the area between two property lines set across from each other. Although street design is commonly thought of as just what is occurring between two curb widths, the safety and quality of life in a community is tied to good street design. The public realm connects buildings and people to one another and extends through a community.

The public realm includes two areas: the pedestrian zone and multi-modal zone as highlighted on Figure 2-1. Street design factors in uses accommodated in both zones.

"A Green Street addresses the needs of pedestrians, bicyclists, transit, street trees, urban runoff management, utilities, livability, vehicular circulation, and parking."

Figure 2-1: Typical Street Design in City Heights



Pedestrian Zone: The Sidewalk and Parkway are two parts of the Pedestrian Zone and this area is the primary interface between buildings and the street. It is also the pedestrian's primary street experience.

The Multi-Modal Zone: The area shown above is commonly called the Street. It refers to the curb to curb width. The Street includes on-street parking, bike routes or lanes, vehicle travel lanes, medians, and intersection treatments such as bulbouts and crosswalks. The above images shows a typical street section in City Heights but parts of the street that are not shown are missing from City Height's streets.

2.1 Design Elements

Green Street design includes transforming auto-oriented thoroughfares into attractive public spaces retrofitted to perform sustainably and accommodate a wider range of users. The four elements of this plan are:

- Urban Forestry
- Urban Runoff
- Multi-Modal Connections
- Urban Open Space

Plants and trees are discussed in urban forestry; their benefits include providing shade and improving air quality (Urban Forestry). The surface area of planting areas and depth of the soil can have positive impacts on runoff by increasing water filtering and absorption (Urban Runoff). In the same manner, the existing and proposed curb conditions and ultimate curb to curb width can influence what happens to the pedestrian and bicycle connections (Multi-modal Connectivity) and opportunities for parklets and urban parks (Urban Space).

Figure 2-1 Conventional Street Design shows a street that has specific sustainable treatments. The streets are older and were not designed for pedestrian or bicycle access. Today, streets in City Heights often have non-ADA compliant sidewalks, concreted parkways, and numerous sidewalk interruptions from driveways, and oversized vehicular travel lanes that do not safely accommodate bicycles.

Figure 2.2 Green Street Design shows how a street can bring the four elements together in the public realm through an integrated design. The trees and plants of Urban Forestry work together with the surface drainage and swales of Urban Runoff which in turn provide additional street capacity for bicycles in the street and pedestrians on the sidewalk. All of which create positive benefits for residents and the general public.

Each element is discussed separately in this chapter; however, these elements should work together for optimum performance. Chapter 4 identifies solutions that combine several of these elements to give an integrated solution.

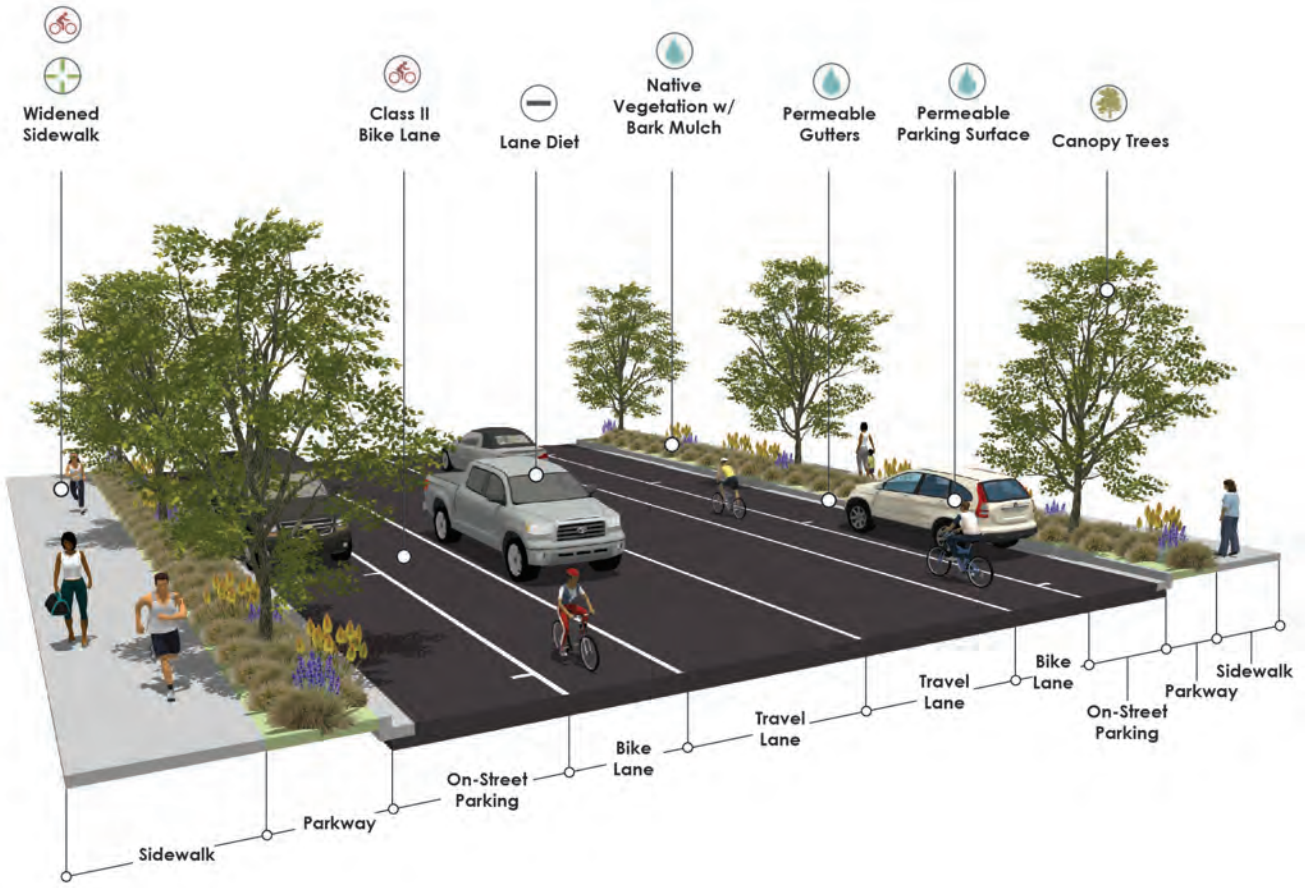


Figure 2-2: Preferred Green Street Design

2.2 Urban Forestry

Urban Forestry is the practice of planting and maintaining trees and plants. This Plan focuses on increasing the number of trees to create an urban canopy that will maximize the positive benefits of Urban Forestry. Urban Forestry can:

- Reduce traffic speeds
- Improve overall emotional and psychological health
- Connect human senses to nature
- Create safer walking environments
- Screen unattractive street features
- Increase security
- Increase street character though regular spaced trees & consistent species selection
- Improve business opportunities
- Add value to homes, and businesses
- Reduce rainwater flooding
- Protect people from rain, sun, and heat
- Reduce exposure to harmful exhaust fumes
- Lower ozone creation
- Lower urban air temperatures
- Lower energy costs for residents and businesses
- Increase pavement life
- Increase number of horticulture, arboriculture, nursery production and tree planting job opportunities

The images above show a contrast of how the street tree species selection can make a huge difference in how much shade is produced.

The image above shows Fern Street It highlights how street trees contribute to the character of a street.

Primary Goal: Use street trees to increase the urban forest of City Heights.

Secondary Goal: Improve the character of retail districts and create youth job training opportunities.

Action 1: Increase the number of trees in City Heights by 250 trees per year. This represents a 5% increase in the total number of trees.

Action 2: Establish a Street Tree Plan to encourage continuous street character and neighborhood identity.

Action 3: Eliminate invasive species and remove any species that pose a threat of spreading dramatically in the canyons.

Framework for selecting trees in City Heights

Street trees are used to give each street a distinct identity as well as provide mental and physical health benefits and positive environmental conditions. The framework for selecting street trees includes the following qualities:

- Drought, and heat tolerance
- Minimal allergy problems (pollen production)
- Native to California
- Minimal root damage potential
- Long life span
- Good branch strength and structure
- No major insect/disease problems
- Good cold tolerance
- Low maintenance
- Shading potential
- Low amount of natural hydrocarbon production
- No messy fruit/other plant parts
- Colorful, attractive flowers

Community Corridors

- Streets that are heavily traveled and have been identified as major thoroughfares
- Streets that should have consistent character due to their high visibility and importance as a connection to City Height's destinations

Residential Corridors

- Select streets that have been identified through the public outreach process as critical streets that provide access and connectivity throughout City Heights for residents and visitors

Landscape District A: Local Streets

- All local streets as identified by the Mid-City Community Plan and the City of San Diego Street Design Manual
- Streets found most commonly throughout City Heights
- No particular dominant species or theme tree. is required - any recommended species can be established for a particular block or neighborhood street, or area

Landscape District B: Canyon Interface

- Streets within 250 feet of the canyon edge
- Streets have a specific palette due to the sensitivity of the canyons to seeds and potential root problems and invasive species
- Streets should be sensitive to the impact to the canyon when considering street trees

Figure 2-3: Street Tree Plan

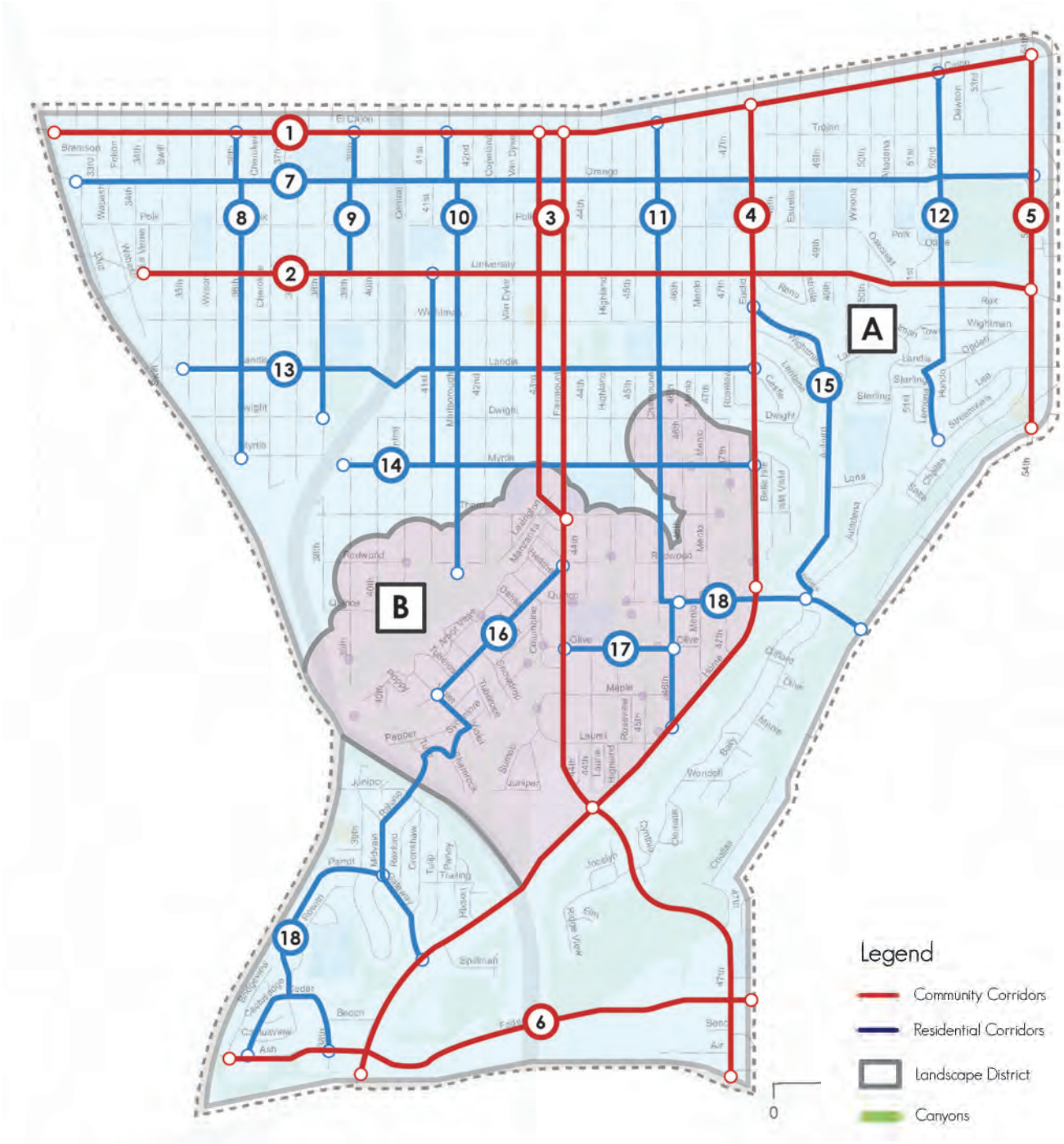


Figure 2-4: Street Tree Palette

Map Key	Description	Botanical Name	Common Name	Category
		Community Corridors		
1	El Cajon Boulevard	Sygarus Romanzoffianum	Queen Palm	Theme
		Lophostemon Confertus	Brisbane Box	Theme
		Jacaranda Mimosifolia	Jacaranda	Accent
2	University Avenue	Koelreuteria Bipinatta	Chinese Flame Tree	Theme
		Afrocarpus Gracilior	African Fern Pine	Theme
		Jacaranda Mimosifolia	Jacaranda	Accent
3	Federal Boulevard	Plantanus acerfolia 'Bloodgood'	London Plane	Theme
		Quercus Agrifolia	Coast Live Oak	Theme
4	43rd Street & Fairmount Avenue	Afrocarpus gracilior	African Fern Pine	Theme
		Arbutus 'Marina'	Marina Madrone	Theme
5	Euclid Ave & Home Avenue	Plantanus Racemosa	California Sycamore	Theme
		Lophostemon Confertus	Brisbane Box	Theme
6	54th Street	Geijera Parvifolia	Australian Willow	Theme
		Ulmus Parvifolia	Chinese Elm	Theme
		Residential Corridors		
7	Orange Avenue	Cassia Leptophylla	Gold Medallion Tree	Theme
		Fraxinus Oxycarpa	Raywood Ash	Theme
8	36th Street	Melaleuca Linarifolia	Flaxleaf Paperbark	Theme
9	38th / 39 Street	Pinus Canariensis	Canary Island Pine	Theme
		Pistachia Chinensis	Chinese Pistache	Theme
10	Marlborough Street	Podocarpus Macrophyllus	Yew Pine	Theme
11	Chamoune Avenue	Tipuanu Tipu	Tipu Tree	Theme
12	52nd Street	Archontophoenix Cunninghamiana	King Palm	Accent
		Bauhinia Purpurea	Purple Orchid Tree	Accent
13	Landis Street	Cupaniopsis Anacardioides	Carrotwood	Accent
14	Myrtle Avenue	Koelreuteria Paniculata	Golden Rain Tree	Accent
		Lagerstroemia Indica	Crape Myrtle	Accent
		Magnolia Grandiflora	St. Mary's Magnolia	Accent
		Pyrus Calleryana	Bradford Pear	Accent
		Landscape Districts		
A	Local Streets	All species listed in Figure 2-5 are accepted.		
B	Canyon Interface	Arbutus Menziesii	Madrona	Theme
		Platanus Racemosa	California Sycamore	Theme
		Quercus Agrifolia	Coast live Oak	Theme
		Heteromeles Arbutifolia	California Toyon	Theme

2.3 Urban Runoff

In San Diego, runoff can flow untreated to the Bay and Pacific Ocean. Unfortunately, water flowing on the surface of the street can pick up trash, oil, chemicals, and other contaminants. This contaminated water is called urban runoff. Urban runoff is considered the biggest contributor to coastal water pollution. Urban runoff results in beach closures and drinking water contamination; it puts our health and the integrity of our natural resources at risk. Low impact design or LID strategies can help mitigate urban runoff by slowing, filtering, and absorbing runoff into planting areas and hardscape surfaces. Implementing LID strategies can:

- Reduce the amount of sediment, metals, oil, fertilizers, and pesticides reaching the coastal waters of San Diego
- Filter and begin to treat contaminants and pollutants
- Provide an additional water source that does not increase demand on potable water
- Slow runoff
- Minimize erosion and sedimentation within the canyons
- Decrease standing water when it rains
- Recharge local groundwater resources
- Lead to healthier and cleaner canyons, Chollas Creek, and San Diego Bay

Primary Goal: Maximize the capture of urban runoff and reuse of those water resources for supplemental watering of trees and plants.

Secondary Goal: Improve water quality by filtering urban runoff through the roots and soil of planting zones and street infrastructure.

Action 1: Increase on-street runoff capture areas to reduce flooding conditions in City Heights.

Action 2: Incorporate runoff capture and reuse strategies into all street designs.

Action 3: Develop strategic ways that erosion control measures can be incorporated near the canyons.

LID Strategies

LID strategies are often described as best management practices (BMPs) that are typically organized by their primary function. There are three primary functions that can be used alone or in conjunction: Shallow Infiltration; Flow Through; and Energy Dissipation.

Shallow Infiltration Strategies

Shallow infiltration strategies focuses on using tree wells and planted parkway strips as zones to absorb urban runoff, filter it through the soil, and allow excess to flow into a sub drain that connects to the larger storm drain system. These strategies are the top priority for City Heights and can be implemented wherever connections are made to storm drain infrastructure. Figure 2-5 identifies zones where shallow infiltration strategies are recommended.

Flow Through Strategies

Flow through strategies are similar to shallow infiltration strategies, but they don't have a sub-drain that connects these areas to the storm drain system. As such, they often have less soil volume designed to capture runoff and are instead designed to fill to capacity and then allow runoff to continue to flow through the area. Figure 2-5 identifies opportunities for these strategies.

Energy Dissipation Strategies

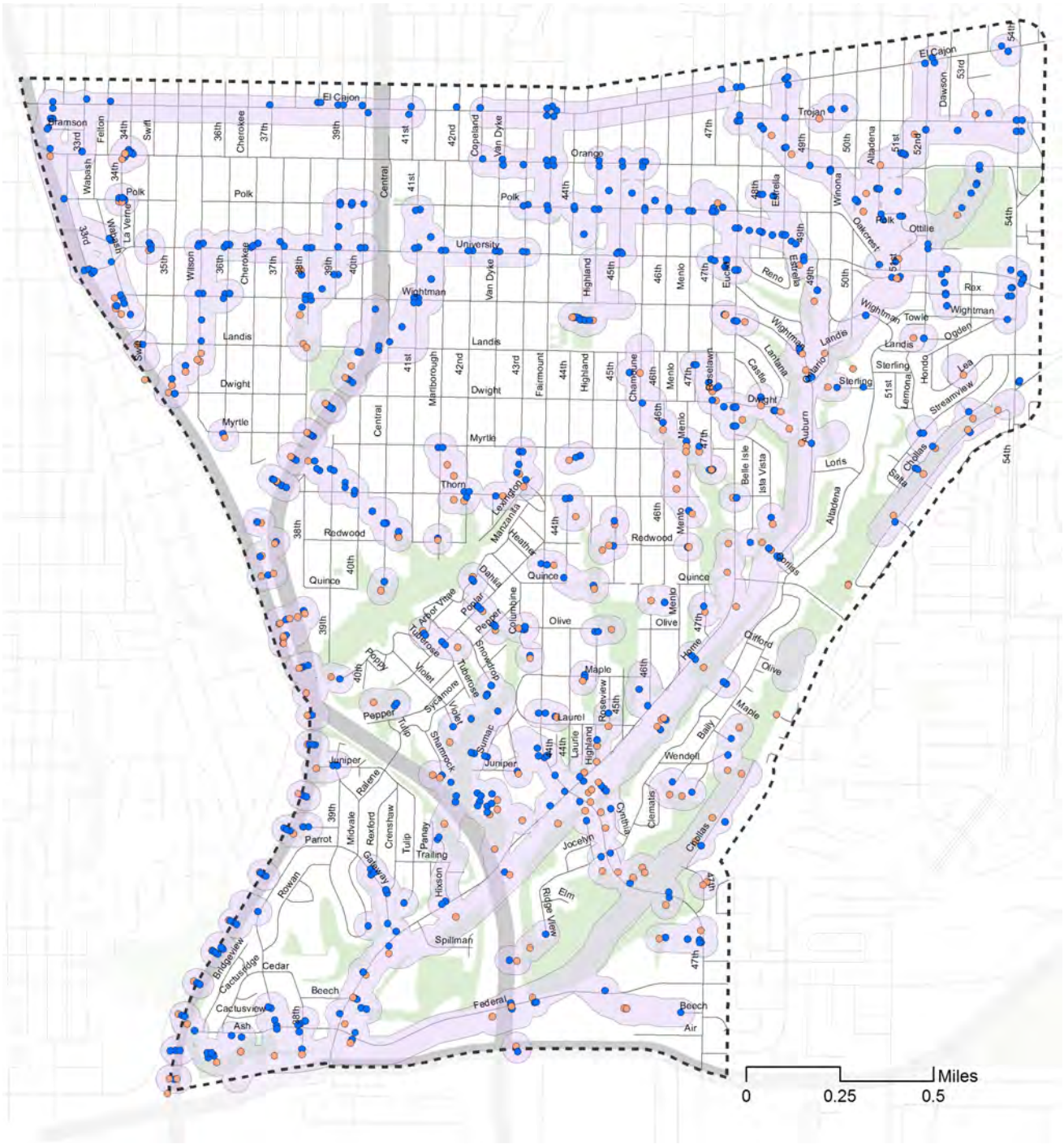
Energy dissipation strategies focus on reducing the speed of runoff so that is does not cause erosion further downstream. These areas include planting areas designed to capture some runoff, but their primary focus is on slowing it down. Energy dissipation strategies should be included within 100 ft of canyons edges.

Shallow Infiltration Strategy

Flow Through Strategy

Energy Dissipation Strategy

Figure 2-5: Targeted LID Areas



Based on drainage areas, slope analysis, and drainage inlet and outlets, the areas highlighted in pink above are areas that are particularly sensitive to urban runoff. These areas must incorporate LID strategies into the pedestrian zone and multi-modal zone design.

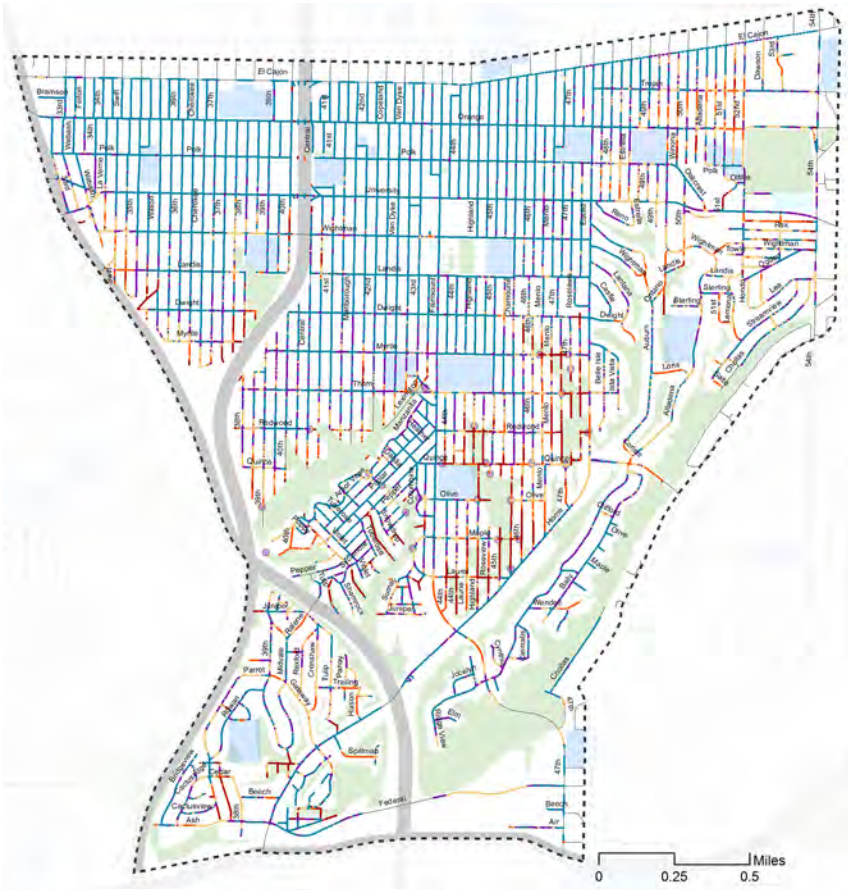


Figure 2-6: Steep Slope Patterns

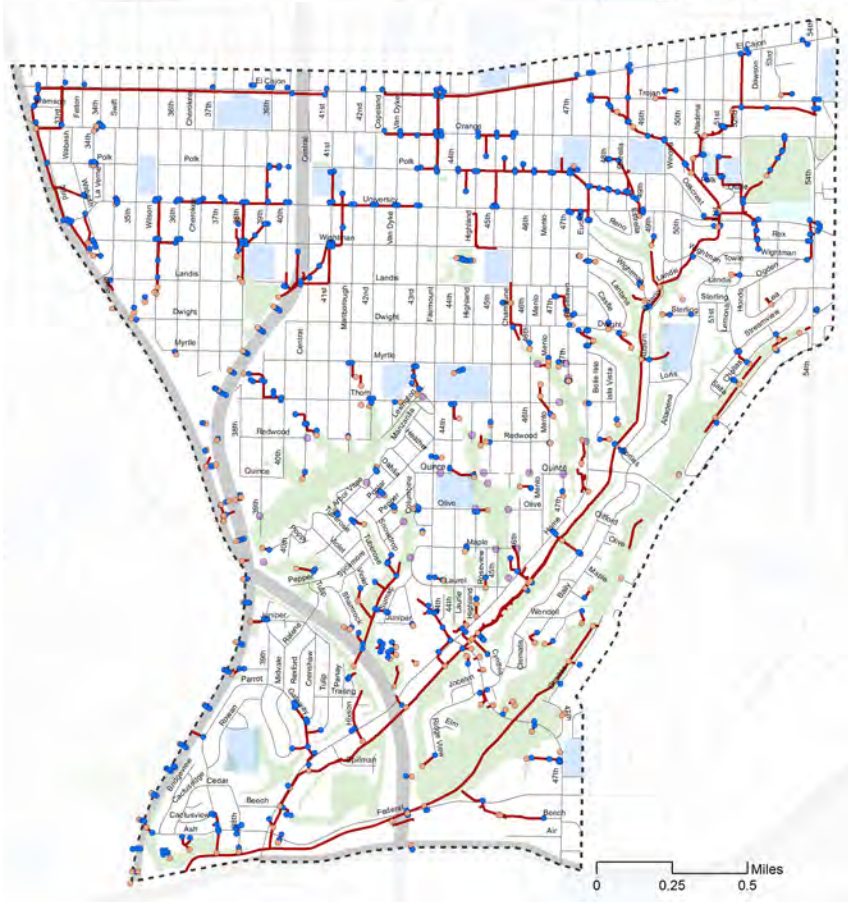


Figure 2-7: Drainage Inlets & Outlets

2.4 Multi-Modal Connectivity

The need for a roadway system that supports choices to walk, bike, or use transit is especially important in City Heights due to the low rate of private vehicle use. The term multi-modal connectivity or "complete streets" refers to method of street design that addresses all users and modes. This design element builds on San Diego's Street Design Manual to offer quality transportation choices for residents, businesses, and general public. Complete streets can:

- Offer transportation choices for all ages & users
- Reduce pollution through lower emissions including runoff capture strategies & urban forestry
- Create a more attractive street environment that brings people together in neighborhoods streets
- Encourage physical activity opportunities
- Use the entire right-of-way to increase street capacity & provide safe & easily navigable streets
- Make streets easier to cross & walk/bike to community destinations
- Improve safety & social health of residents by reducing social isolation
- Reduce the number of accidents by slowing cars down when necessary & improving visibility
- Give control of expenses back to people by giving options for modes of transportation

Primary Goal: Increase walking, bicycling, and transit use through physical changes and by incorporating the elements of complete street design.

Secondary Goal: Create safe physical and social connections by incorporating lighting and signage.

Action 1: Establish a guide for pedestrian focused street design.

Action 2: Establish a guide for bicycle focused street design.

Action 3: Establish a Safe Routes Plan that builds on Walk San Diego's safe routes to schools but adds safe routes to businesses, employment centers, parks, and transit.

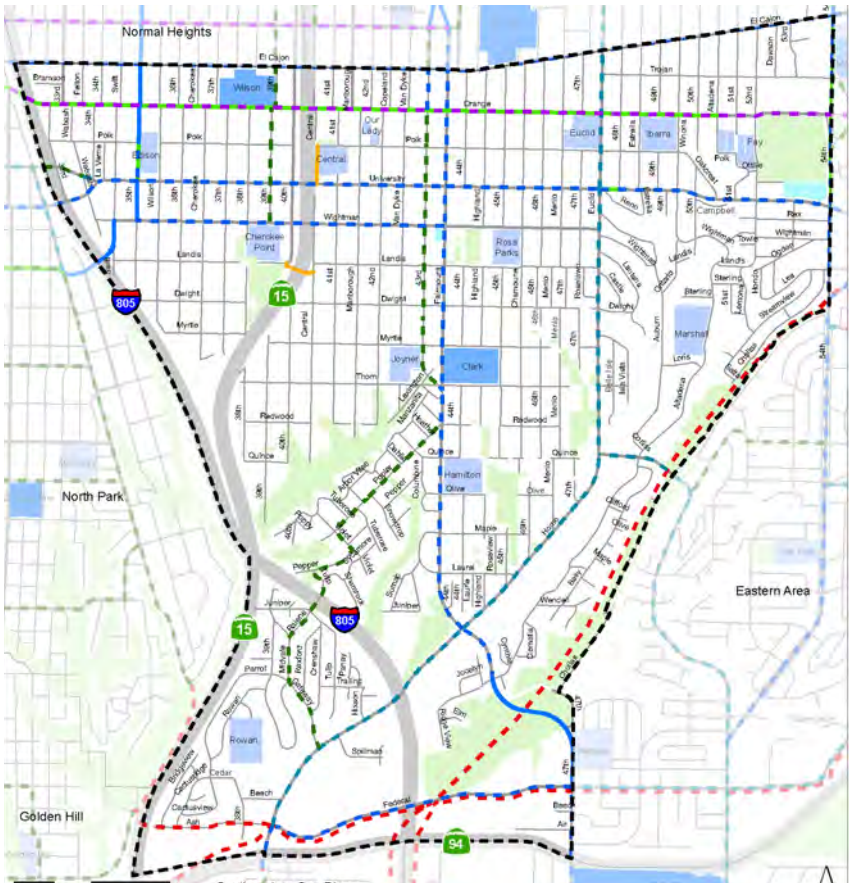


Figure 2-8: Bicycle Facilities

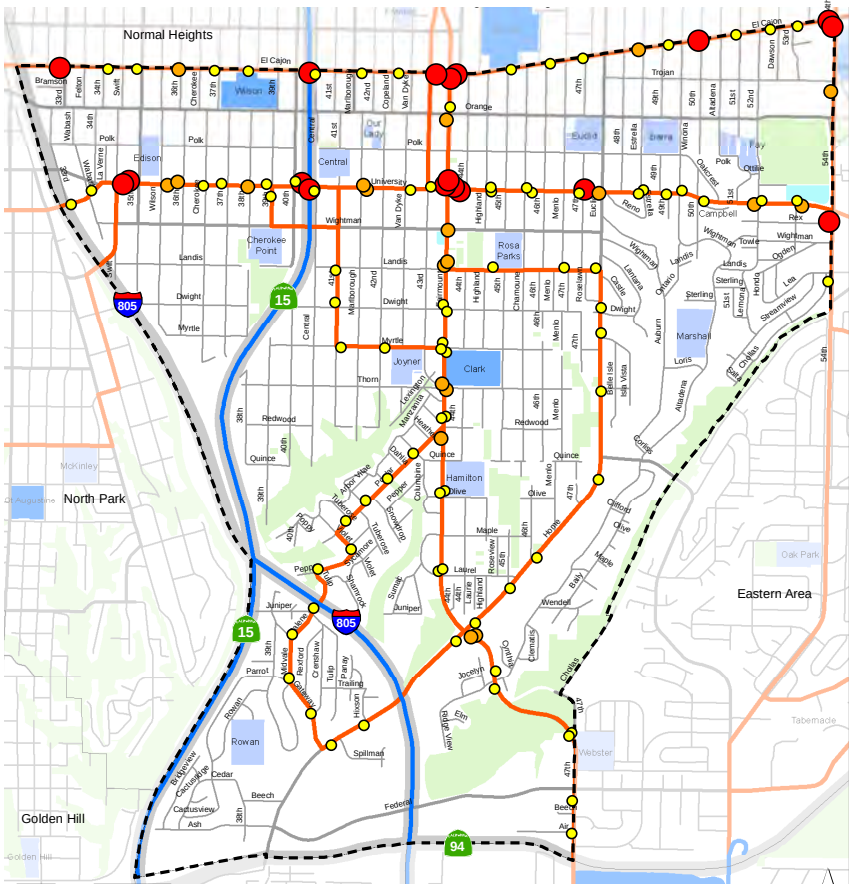


Figure 2-9: MTS Transit Routes

2.5 Urban Open Space

Open spaces can include small parks, plazas, canyons, and many other types of spaces. The open space design element identifies opportunities for increasing open space or parks by reclaiming excess space in existing right-of-ways and publicly owned land. Open space and park access focuses on increasing connectivity through the planning area. Open space, parks, and recreation can:

- Improve physical health with increased use of parks and frequency of exercise
- Improve psychological health through exposure to nature and greenery
- Improve emotional health through increased opportunities for social interaction and reduced social isolation
- Strengthen communities and make neighborhoods more attractive places to live and work
- Increase the value of residential property
- Increase the value of commercial property and increase revenues
- Incorporate urban forestry and plantings for environmental benefits
- Capture urban runoff and help manage Urban Runoff and reduce stress on the drainage system
- Give a sense of community and provide opportunities for community gardens

Open space and recreation in City Heights is comprised of mini, neighborhood, and community parks, open spaces and canyons. Like many neighborhoods in San Diego, City Heights faces a shortage of usable neighborhood open space. City Heights has a total of 122.8 acres of usable park space that is divided among mini, neighborhood, and community parks. According to the Community Plan, City Heights should have a total of 215.97 acres of park space. Currently City Heights has a deficit of 93.17 acres.

Urban Open Space Opportunities

City Heights has canyons and parks listed in Figure 2-6. Canyons are an important natural open space resource, but it is important to incorporate open space into street design. Some opportunities are listed below.

Canyons: Canyons provide passive recreation in an ecologically sensitive area of City Heights and provide an opportunity for environmental-based education. Canyons are an important natural resource but some need of restoration. Others need both visual and physical access improvements for resident use. San Diego Canyonlands has been working in City Heights on a trail system, Canyons Loop Trail, that connects all four canyons.

Parklet: Often called "parklets," a temporary urban park provides the opportunity to integrate outdoor seating, greens space, or extended sidewalk into an on street parking space.

Primary Goal: Connect the community with its open spaces and parks by well lit, safe and connected walk-ways, green corridors and bike facilities.

Secondary Goal: Allow, where appropriate, access and connections through open space and provide for nature appreciation and environmental education.

Action 1: Identify opportunities for new linear public spaces and parklets.

Action 2: Identify linkages between open space, parks and the broader community.

Action 3: Identify opportunities for urban agriculture.

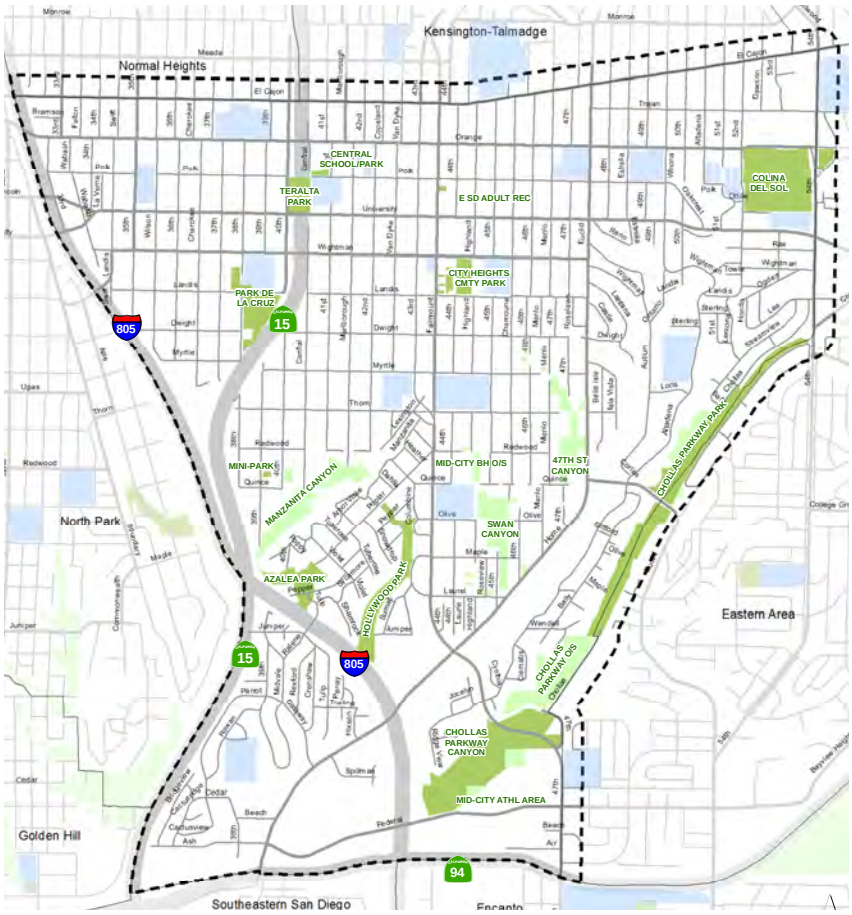


Figure 2-10: Bicycle Facilities

Neighborhood/Community Park
Open Space

Re-purposing a dumpster to enhance urban forestry and provide public seating

A low cost way of expanding the sidewalk and create urban open space is a parklet (shown with cafes and plants)

2.6 "Greening" versus a "Green Street

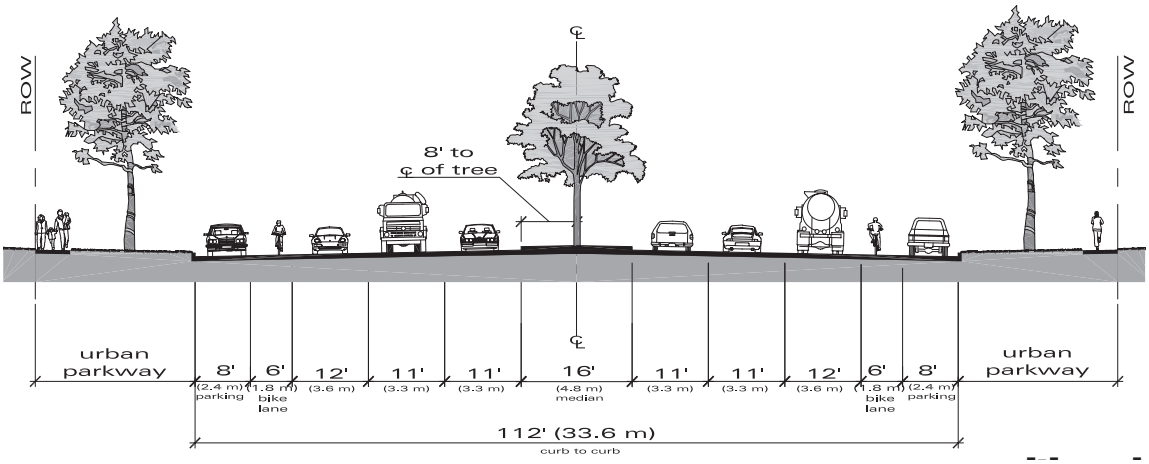
Greening is the strategy of making a street more attractive and more sustainable. When a street has trees and plants added, it is referred to as "greening." A Green Street is a street that is transformed and designed to intercept rainwater and runoff, clean that water through soil and vegetation, and allow the water to percolate and return to the earth naturally.

The City of San Diego has a Street Design Manual (CSDSDM) that is primarily for new development. The Manual is divided into six sections: Roadway Design, Pedestrian Design, Traffic Calming, Street Lighting, Parkway Configurations, and Design Standards. The CSDSDM classifies each street type and indicates the appropriate parkway configuration and traffic calming devices. This Plan builds on guidance from the CSDSDM and the Mid-City Community Plan in terms of street hierarchy and regional connectivity. Streetscape guidelines for specific streets in City Heights are described in the Mid-City Community Plan adopted in 1998. Refer to the Mid-City Community Plan for details.

The Green Streets in City Heights considers the street designations per the CSDSDM, related adjacent land uses, transit patterns, and non-vehicular uses on the street rather than solely looking at the vehicle capacity and flow.

This Chapter and Chapter 3 work together to identify strategies for creating Green Streets in City Heights. Chapter 2 highlights why each element is important. Chapter 3 identifies specific design strategies for each Green Street type.

The above images contrast two existing conditions in City Heights. The top shows street trees in the median; the lower shows a median without street trees.



The image above shows a street section from the CSDSDM for an urban major street. See the manual for specific street guidance.

3 Green Streets

This section highlights the different types of Green Streets and related information for each Green Street type. This section includes:

- Green Streets System
- Street design solutions for the Design Elements
- Sample solutions for City Heights

3.1 Green Streets System

The streets in City Heights were analyzed based on their functions, surrounding land uses, and community prioritized use of the streets. In addition, streets were evaluated for street use compared to ROW width. It is common for streets to have excess width and opportunities for better pedestrian and bicycle facilities.

The study area was divided into a number of multi-block segments so the community could select the areas that they felt needed the most attention or would benefit from change. The community was specifically asked to address topics of walkability, bicycle access, transit access, and commercial destinations. The community was then asked to identify ten potential areas per topic category. The prioritized areas led to top selected pedestrian focus, bicycle focus, transit focus, and commercial focus streets.

For each Green Street type, recommendations are made based on the use, width, and character of the street. Each Green Street type will be discussed in this section based on the four design elements of Urban Forestry, Urban Runoff, Multi-Modal Connectivity, and Urban Open Space.

Types of Green Streets

Figure 3-2 shows the proposed Green Streets system in City Heights.

Commercial Focus Green Street: Emphasizes specific branding to establish a strong retail presence. The street includes coordinated streetscape furnishings. Surrounding buildings are typically mixed use with ground floor retail.

Transit Focus Green Street: Highlights the transit stops on specific streets. These streets focus creating safe, attractive pedestrian and bicycle connections as a priority to allow optimized access to transit stops.

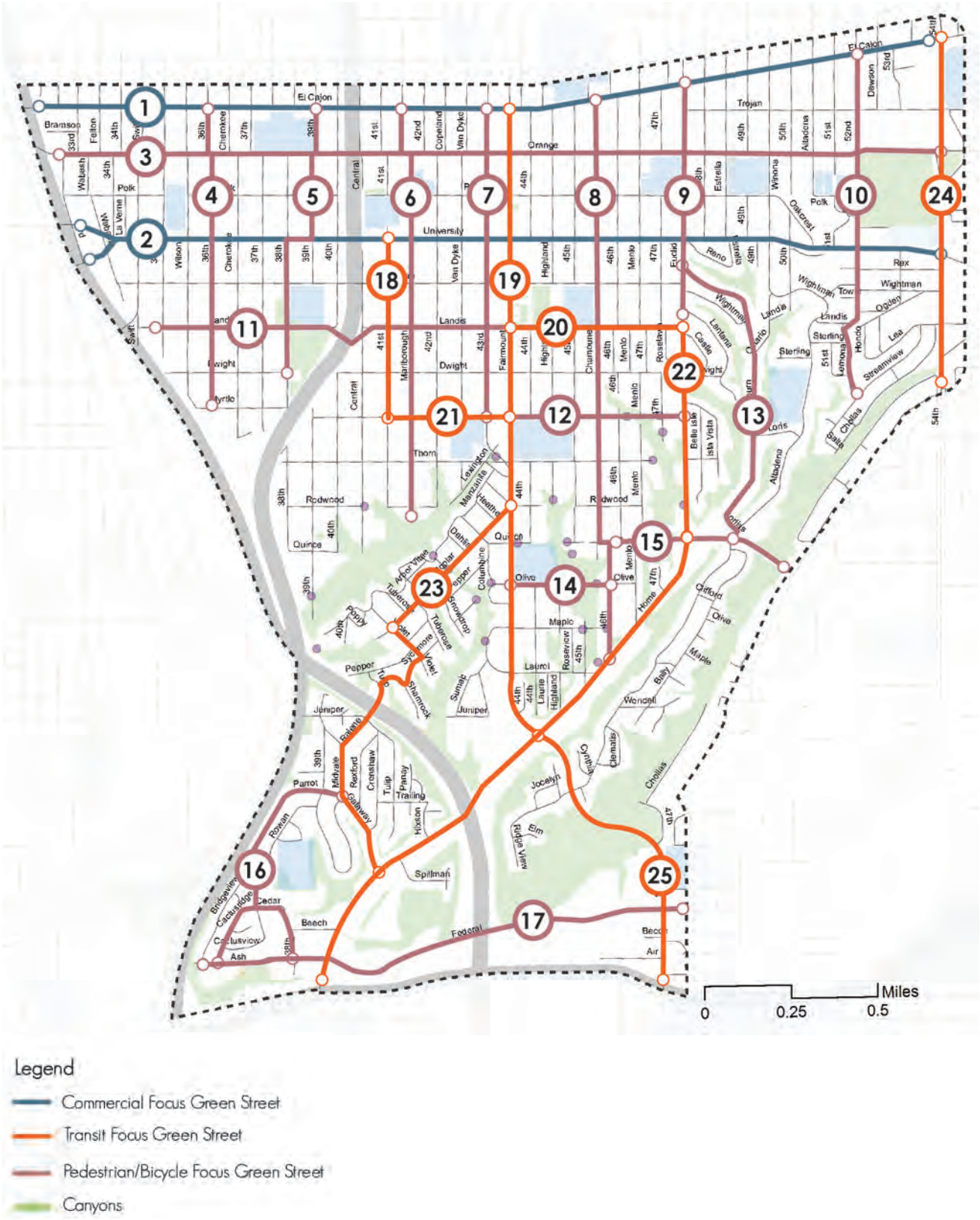
Ped/Bike Focus Green Street: Creates a comfortable and safe walking environment which including a minimum bicycle standard of class 3 bike route. The street design focuses on walking and biking throughout City Heights and connects major origins and destinations.

Figure 3-1: Green Streets Inventory

Type of Green Street

Commercial Focus		Transit Focus		Ped/Bike Focus	
1	El Cajon Blvd.	18	41st Street	3	Orange Ave
2	University Ave	19	Fairmount Ave	4	36th St.
		20	Landis St. east of Fairmount Ave	5	38th/39th St.
		21	Myrtle Ave west of Fairmount Ave	6	Marlborough Ave
		22	Euclid Ave to Home Ave	7	43rd St.
		23	Poplar to Violet to Ralene to Gateway	8	Chamoune Ave
		24	54th St.	9	Euclid Ave El Cajon Blvd. to Landis
		25	47th St.	10	52nd St.
				11	Landis Ave west of Fairmount Ave
				12	Myrtle Ave east of Fairmount Ave
				13	Wightman Ave to Auburn Dr to Corliss Ave
				14	Olive St.
				15	Quince Ave connecting Euclid Ave
				16	Parrot Ave to Cactus Ridge Ave
				17	Federal Blvd.

Figure 3-2: Green Streets System



3.2 Commercial Focus Green Street

Commercial focus green streets are defined by their retail focus. The land uses surrounding a commercial focus green street should be a blend of retail, office, and small businesses. To support these uses, the commercial focus green street should focus on providing a continuous pedestrian path with limited driveway interruptions. The sidewalk should include an expanded walking area that incorporates broad canopied, high branching street trees in tree grates, significant pedestrian and bike amenities, and cohesive streetscape furnishings.

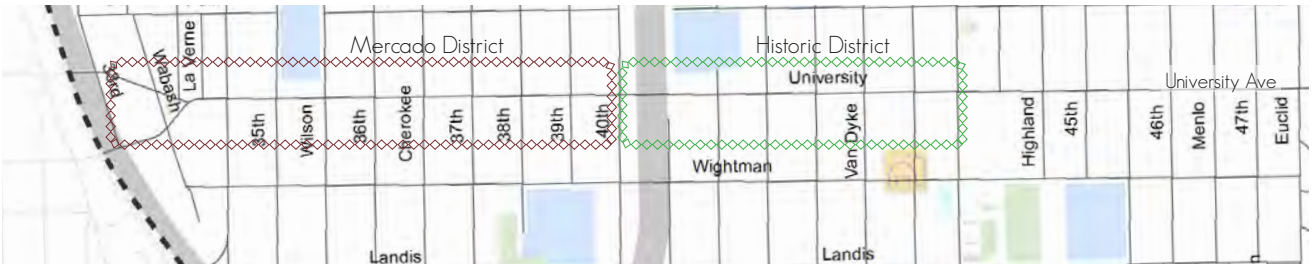
Considerations

- High levels of retail activity, transit, vehicles, pedestrians, and bike activity
- Desire for generous sidewalk zone and increased sense of character
- Connections to businesses and active retail use in the sidewalk
- Potential runoff storage in tree grates and adjacent below grade areas.

Figure 3-3: Green Streets Inventory

	Street Name	Extents	ROW Width	Excess Width	Street Classification
1A	El Cajon Blvd.: 1-5 story mixed-use commercial buildings with retail ground floor	I-805 to Fairmount Ave	120 Ft..	No	6 Lane Major
1B	El Cajon Blvd.: 1-3 story mixed-use commercial buildings with retail ground floor	Fairmount Ave to 54th St.	83 Ft..	No	4 Lane Major
2A	University Ave: Historic Main Street District*	I-805 to Fairmount Ave	83 Ft..	No	3 Lane Major
2B	University Ave: 1-3 story mixed-use commercial buildings with retail ground floor	Fairmount Ave to 54th St.	83 Ft..	No	3 Lane Major

Figure 3-4: City Heights CDC Walk & Shop Program Character Districts



* These districts have a focus on pedestrian scale buildings and street furnishings. El Cajon Boulevard is a high intensity mixed use commercial street. It supports a broad range of mode types as well including buses, bicycles, people, and soon the rapid bus transit. The character along University Ave changes several times throughout the corridor. The City Heights CDC Walk and Shop Program identifies two different character districts for University Ave. Contact the City Heights CDC for any improvements in these districts.

Figure 3-5: Commercial Focus Green Streets

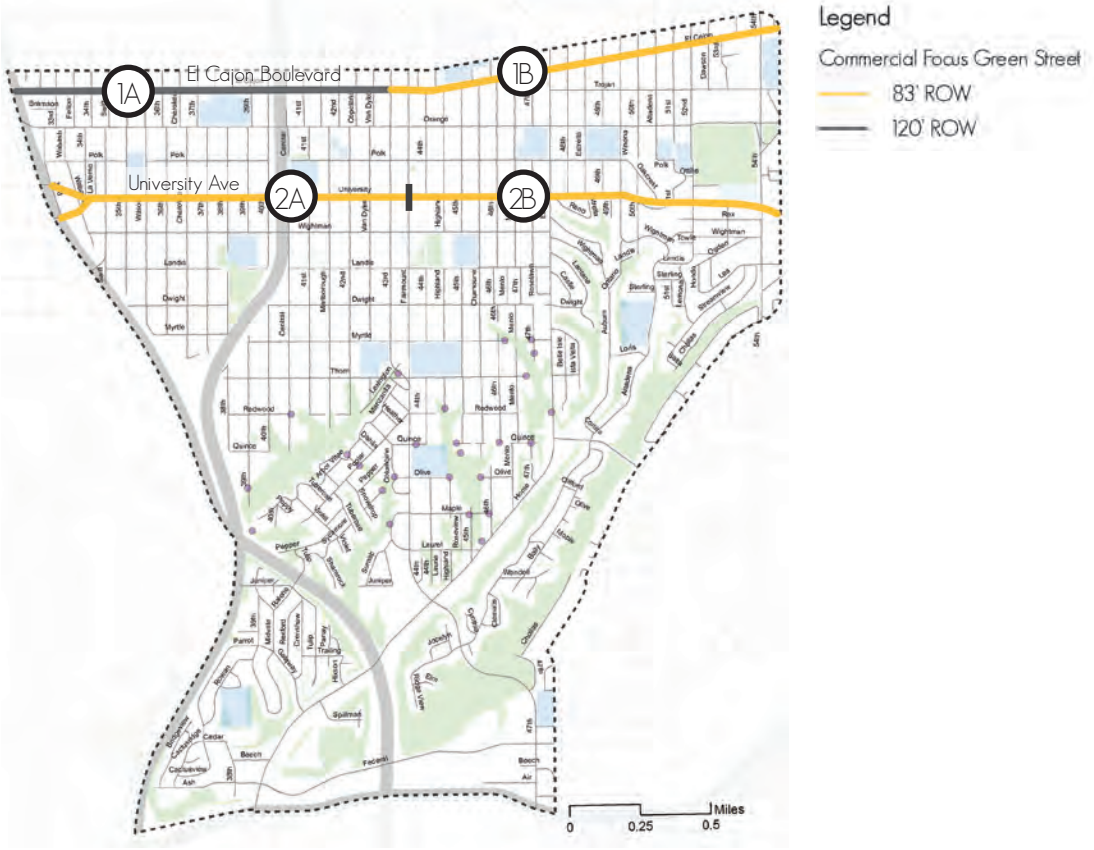


Figure 3-6: Example of Green Street Design can be applied to El Cajon Boulevard

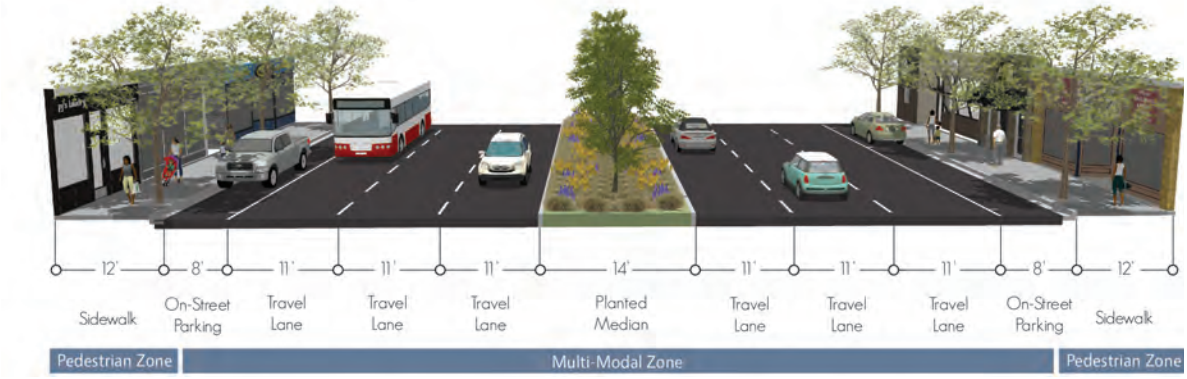
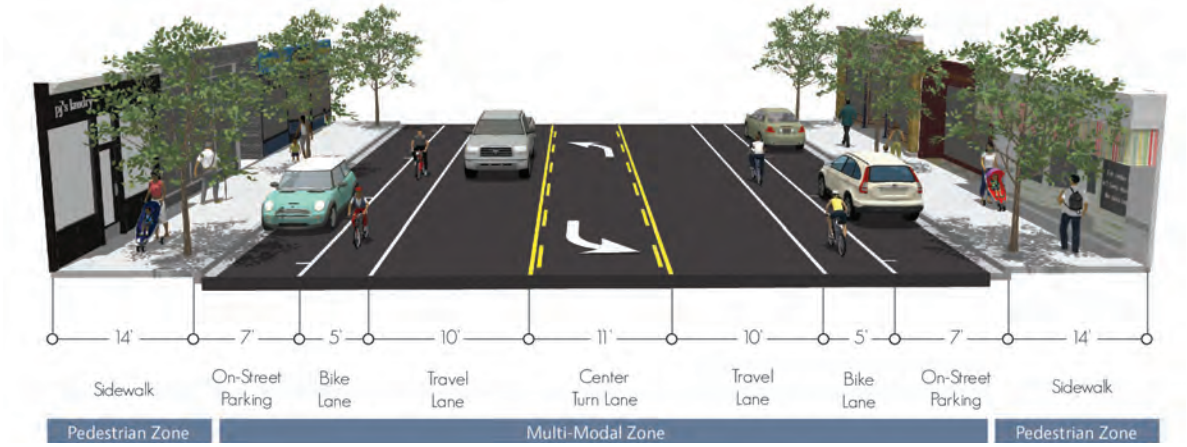


Figure 3-7: Example of Green Street Design can be applied to University Ave



3.3 What defines a Commercial Focus Green Street?

Urban Forestry Element

Commercial focus green streets require consistent street trees to create an attractive retail environment that in turn encourages people to stop, stay and shop. The canopy of the street trees shall provide shade for cafes and walking.

Urban Forestry Tree Characteristics	
Consistent Street Tree Character	✔
Regularly spacing of Street Trees	✔
Broad Shade Canopy	✔
Vertical Accent	✔
Trees pruned so that bottom of limbs are a minimum of 7 ft.. above the top of sidewalk	✔
Trees allowed to grow so that signage for businesses is visible. (Removing the tops of street trees is strictly prohibited)	✔

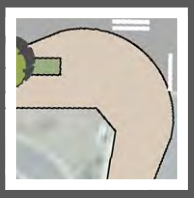
Street tree palettes includes:

Street Name	Street Tree Plan Information
El Cajon Boulevard	Community Corridor
University Avenue	Community Corridor

	El Cajon Boulevard			University Avenue		
	Community Corridor			Community Corridor		
	Sygarus romanzoffianum Queen Palm	Lophostemon confertus Brisbane Box	Jacaranda mimosifolia Jacaranda	Koelreuteria bipinatta Chinese Flame Tree	Afrocarpus gracilior African Fern Pine	Jacaranda mimosifolia Jacaranda
Type	P.	E.	D.	D.	E.	D.
Height	40+	20-40	20-40	20-40	40+	20-40
Crown Spread	40+	20-40	20-40	20-40	20-40	20-40
Spacing	25-30	30-35	35-40	30-35	30-35	35-40
Parkway Size	3-4	4-6	6-8	6-8	6-8	6-8
Drought Tolerant	Yes	Yes				
Native						
With Drain	Yes	Yes	Yes	Yes	Yes	Yes
Flow Through	No	No	No	No	?	No

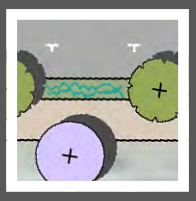
Standard Improvements

Corner curb extensions



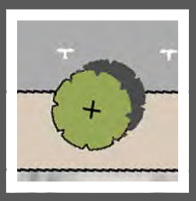
Pedestrian scale lighting

Marked Crosswalks



Parkway Plants

Ped Signals (Count-down)



Street Trees

Special paving in sidewalk zone

New Signals & Signal calibration

Street furnishings

Class 3 bike route Class 2 bike lane

Case by Case Improvements

- *Planted Medians*
- *HAWK (High-Intensity Activated crossWalK Beacon) for Mid-block Crossings*
- *Parklets*
- *Integral Public Seating*

Urban Runoff Element

LID Strategies for commercial focus green streets focus on improving stormwater but also consider the pedestrian focus of the retail land use. The LID strategies assume street trees are in tree grates and the parkway is used to increase the walking environment. LID strategies include:

- Street trees in tree grates with subsurface drain (C.U. soil or silva cells are integrated with the adjacent tree grates & have open curb faces or pipe to allow water to flow into the street tree soil)
- Colored, permeable pavers that coordinate with the area's branding/character
- Permeable asphalt in parking areas
- Shrubs and groundcover with bioretention soil in bulbout planting areas with flow through drainage

Multi-Modal Connectivity Element

The focus of the commercial focus green streets is primarily on the pedestrian environment. However, El Cajon Blvd. and University both support bus routes as well as bicycle facilities.

- El Cajon Blvd. has a planned Class 3 bike route
- University Ave has a planned Class 2 bike lane
- Street furnishings should include bike corrals and bike racks
- Timing of intersections and signal calibration
- Raised crosswalks and pedestrian signal countdowns.

Urban Open Space Element

There are limited opportunities for urban open space on El Cajon Boulevard or University Avenue. One opportunity for addition urban open space is capitalizing on parklets. A parking space can be converted into a public plaza, seating area, or passive green space with vertical separation between traffic and the parklet use.

3.5 Transit Focus Green Streets

Transit Focus Green Streets follow the bus routes in City Heights. There are eleven bus routes that run throughout City Heights. These Transit Focus Green Streets are vital to community connectivity in City Heights.

People commonly bike or walk to bus stops. Transit focus green streets are key community destinations; they need to accommodate bus specific transportation while integrating safe pedestrian and bike access to transit stops. Transit access is critical to facilitating regional bus connections to and from City Heights.

Considerations

- MTS Bus Route(s) along the streets
- Street design accommodates bus pads and bus stops while allowing vehicles, pedestrians, and bike visibility and access
- Bus stops location is recommended to include transit plaza with shade device, seating with artful design
- Expanded sidewalks and pedestrian scale street lighting for increased visibility and safety
- Integrated bike facilities class 3 bike routes including bike locks, racks, and corrals.
- Increase permeable surfaces to reduce runoff

	Street Name	Extents	ROW Width	Excess Width	Street Classification
18	41st St	University to Myrtle	64 Ft..	No	Local St.
19	Fairmount Ave		64 ft..	No	2 Lane Major
20	Landis St.	Fairmount to Euclid Ave	72 ft..	Yes	2 Lane Collector
21	Myrtle Ave	41st to Fairmount	72 Ft..	Yes	2 Lane Collector
22	Euclid to Home Ave	South of Landis St.	56 ft.. to 72 ft..	No	3 Lane Collector*
23	Poplar		72 Ft..	Yes	2 Lane Collector
23	Violet to Gateway		48 Ft..	No	2 Lane Collector
24	54th St.		100 ft..	No	3 Lane Collector
25	47th St.	Home Ave to SR-94	100 ft..	No	4 Lane Collector

Figure 3-8: Transit Focus Green Streets

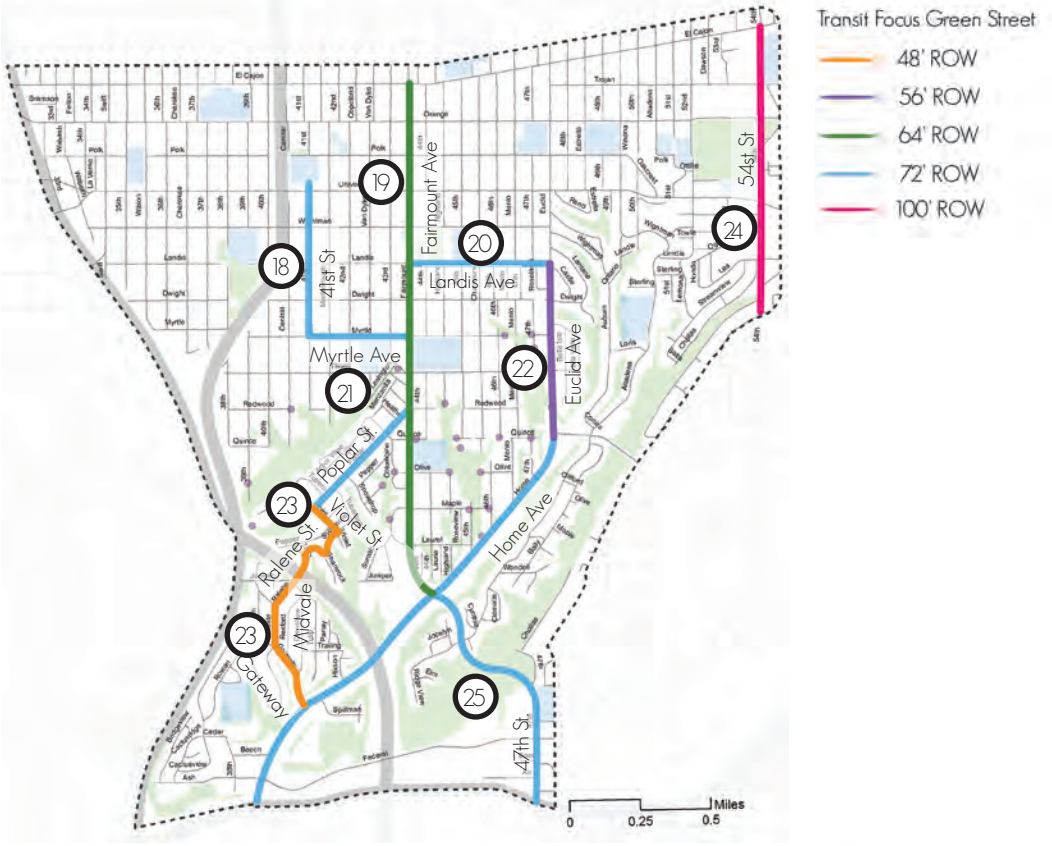
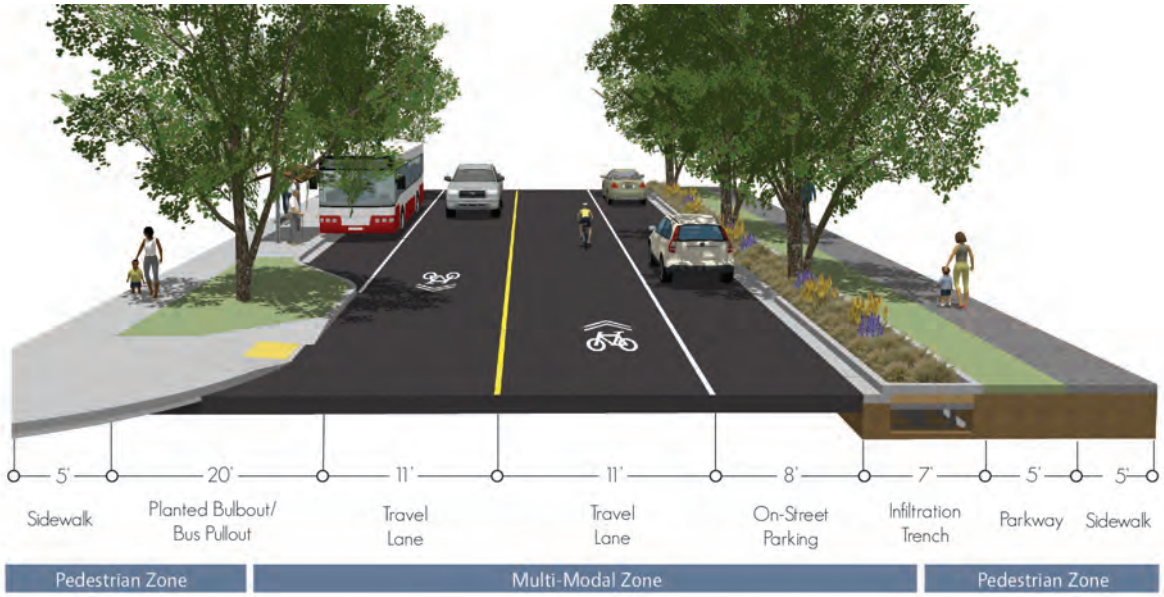


Figure 3-9: Typical Existing Street Condition (72 ft.. ROW)

Figure 3-10: Example of Transit Focus Green Street Design applied to a 72 ft. ROW*



* Assumes existing curbs are not demolished

3.6 What defines a Transit Focus Green Street?

Urban Forestry Element

The key focus for a transit focus green street is to provide good shade canopy for residents who walk to transit stops. In addition, tree branches need to be pruned and maintained so that buses do not clip the trees and visibility to transit stops is maintained.

Transit Focus Green Street Tree Characteristics	
Native Tree Species	✔
Highly Consistent Tree Character	✔
Pedestrian Scale Street Tree Character	✔
Vertical Accent	✔
Broad Shade Canopy	✔
Screen/Windbreaker	✔
Color Accent	✔

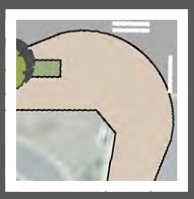
Street tree palettes includes:

Street Name	Street Tree Plan Information
41st Street	Landscape District A*
54th Street	Community Corridor
Euclid Ave & Home Avenue	Community Corridor
Fairmount Avenue	Community Corridor
Landis St.	Residential Corridor*
Myrtle Avenue	Residential Corridor
Poplar to Violet	Landscape District B*
Ralene to Gateway	Landscape District A

	54th St.		Euclid/Home Ave		Fairmount Ave	
	Geijera parviflora Australian willow	Ulmus Parvifolia Sempervirens Chinese elm	Plantanus racemosa California Sycamore	Lophostemon confertus Brisbane Box	Afrocarpus gracilior African Fern Pine	Arbutus menziesii Madrona
Type	E.	E.	D.	D.	E.	E.
Height	20-40	20-40	20-40	20-40	40+	40+
Crown Spread	20-40	20-40	20-40	20-40	20-40	40+
Spacing	30-35	35-40	35-40	30-35	30-35	35-40
Parkway Size	6-8	6-8	6-8	6-8	6-8	6-8
Drought Tolerant	Yes	Yes				Yes
Native						Yes
With Drain	Yes	Yes	Yes	Yes	Yes	Yes
Flow Through	No	Yes	No	No	?	No

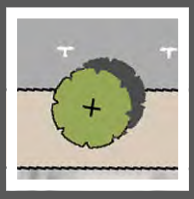
Standard Improvements

Corner curb extensions



Pedestrian scale lighting

Marked crosswalks



Street Trees

Ped Signals (Count-down)

New Signals & Signal calibration

Transit Amenities

Special paving in sidewalk zone

Case by Case Improvements

- *Planted Medians*
- *Below Grade Water Capture and Storage*
- *Permeable Surfaces*
- *HAWK (High-Intensity Activated crossWalK Beacon) for Mid-block Crossings*
- *Parklets*
- *Double Row of Trees with Seating*
- *Integral Public Seating*
- *Bike Corral*
- *Bike Lockers*
- *Combination Vehicle and Pedestrian Light Standards*

Figure 3-8 shows how these strategies can come together to form a "green street" solution. See the City Heights Street Design Toolbox for details.

* See Chapter 6 for Street Tree Palettes

Urban Runoff Element

Fairmount Ave has an expanded sidewalk instead of parkways adjacent to the sidewalk. The image at right highlights this condition. Recommendations for Fairmount Ave between El Cajon Blvd. to Poplar St. include:

- Tree grates with C.U. soil or silva cells with sub drain are recommended to allow for expanded sidewalks
- Permeable pavers, concrete, or asphalt are strongly recommended

Recommendations for other transit focus streets include:

- Street trees in parkways with bioretention soil and flow thru infiltration
- Bulbouts with bioretention soil, sub drain, and flow thru infiltration

Multi-Modal Connectivity Element

People commonly walk or bike to a bus stop. It is important for adjacent streets to provide safe pedestrian and bicycle routes. Multi-modal connections include:

- Class 3 bike routes with sharrow markings & roadway signage that bicycle may take lane

Urban Open Space Element

Recommendations include:

- 41st, Myrtle, & Landis have excessive width that should be recaptured to create urban open spaces
- Expanded parkway with a double row of street trees
- Plaza next transit stop with integrated public art
- Expand plaza into a parking space to provide a larger public space

3.7 Ped/Bike Focus Green Streets

In a series of workshops, participants identified key community destinations including businesses, schools, parks, and other day-to-day amenities. Ped/Bike Focus Green Streets connect these destinations. In addition, they are the streets that are used to connect residents to Transit Focus Green Streets.

Residents were asked to give input on which streets they common walked and "which streets they commonly biked. The community's input was distilled to the Ped/Bike Focus Green Streets shown in Figure 3-10.

In some instances, the consultant team shifted the ped/bike focus to a different street to capitalize on the opportunity to improve on an excessively wide street. 36th and 38th street are the only shifted Ped/Bike Focus Green Streets.

Community Connector Considerations

- High levels of pedestrian and/or bicycle activity
- Urban Runoff solutions are integrated into the planting areas and parking areas
- Parallel on-street parking and angled on-street parking shall be integrated into street design
- Recapture excessively wide streets when possible to incorporate urban open space
- Broad canopied trees shall provide shade but must maintain a clearance of 7 feet from top of sidewalk to bottom of tree branches to allow for cyclists
- Planting areas incorporate street trees and shrubs shall be maintained to a maximum height of 30 inches for visibility

	Street Name	Extents	ROW Width	Excess Width	Street Classification
3	Orange Ave		64-72 ft..	Yes	3 Lane Collector
4	36th St.		72 ft..	Yes	Local Street
5	38th/39th St.		72 ft..	Yes	Local Street
6	Marlborough Ave		72 ft..	Yes	2 Lane Collector
7	43rd St.		72 ft..	No	2 Lane Major (one way)
8	Chamoune Ave		48 ft..	No	Local Street
9	Euclid Ave	El Cajon Blvd. to Landis	56 ft..	No	3 Lane Major*
10	52nd St.		48 ft..	No	Local Street
11	Landis Ave		72 ft..	Yes	2 Lane Collector
12	Myrtle Ave	East of Fairmount Ave	72 ft..	Yes	2 Lane Collector
13	Wightman Ave to Auburn to Corliss Ave		48 ft..	No	Local Street
14	Olive St.		56 ft..	No	Local Street
15	Quince Ave to Euclid Ave		40 ft..	No	Local Street
16	Parrot Ave to Cactus Ridge Ave		48 ft..	No	Local Street
17	Federal Blvd.		72 ft..	No	2 & 3 Lane Collector

Although the Mid-City Community Plan recommends Euclid Ave expand to a 3 lane major roadway classification. The community and City Heights Planning Committee do not agree with this recommendation. This plan incorporates the community's desires and retains Euclid Ave in its current road configuration. It is emphasized as an important street in City Heights and any future roadway design should include an emphasis on an attractive pedestrian and bike environment.

Figure 3-11: Ped/Bike Focus Green Streets

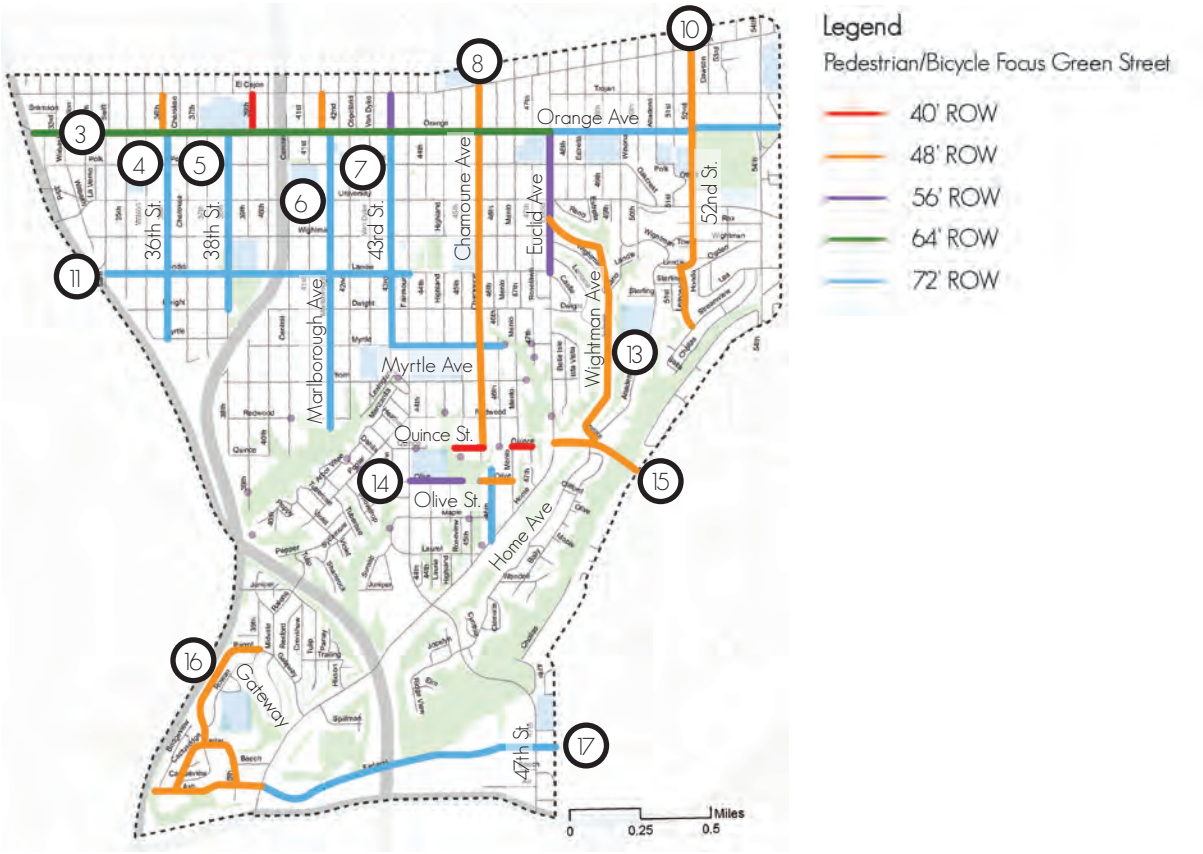


Figure 3-13: Example of Bicycle Focus Green Street Design applied to a 72 ft.. ROW

This design assumes new curb and gutter. It adds a class 2 buffered bike lane and maintains on-street parking and vehicle travel lanes. Buffering a bicycle lane from the swing of car doors is important for bicycle safety.

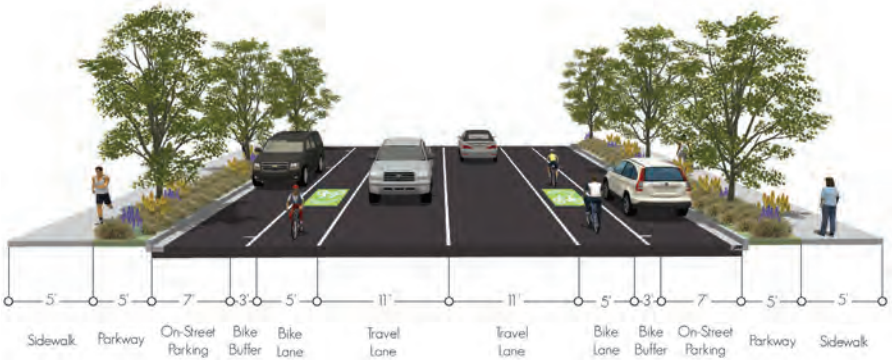
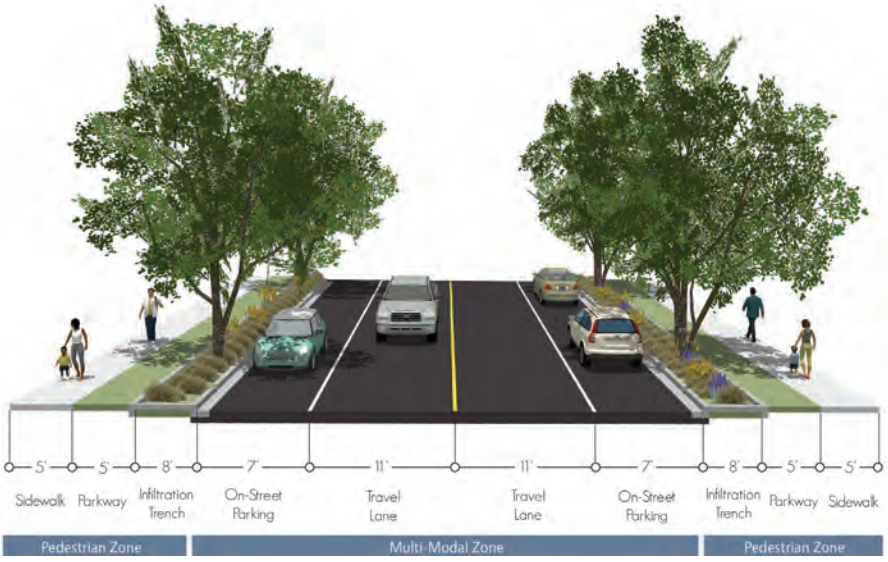


Figure 3-12: Example of Pedestrian Focus Green Street Design applied to a 72 ft. ROW

The design retains the existing curb and gutter. It adds a bioretention or infiltration trench to add planting area. On-street parking and vehicle lanes are restriped and a class 3 bike route should be supported by adding sharrow markings and vertical signage.
If new curb and gutter were assumed, the parkway and infiltration trench could be combined to provide 13 ft. of parkway. If the infiltration trench were combined from both sides of the street, this would allow for 21 ft. of parkway space (additional roadway design is required) This 21 ft. parkway could be used for a small park or garden.



3.8 What defines a Ped/Bike Focus Green Street?

There is a dual focus for the Ped/Bike Focus Green Streets. The street must provide a minimum 5 ft. clear unobstructed pedestrian route; however, a pedestrian focus street could allow for a wider sidewalk adjacent to a planted parkway. A bike focus street could use additional street width to provide a class 2 buffered or non-buffered bike lane. A ped/bike focus street could incorporate a multi-use path for pedestrians and cyclists.

Urban Forestry Element

Ped/Bike Focus Green Streets should incorporate street trees but do not require a consistent character throughout the entire street. The character of the street can change based on the neighborhood area or community input. Streets trees for the Ped/Bike Focus Green Streets can rely on the following palette:

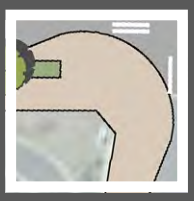
Ped/Bike Focus Green Street Tree Characteristics	
Native Tree Species	✔
Drought Tolerant Species	✔
Pedestrian Scale Lighting	✔
Consistent Street Tree Character	✔
Regularly spacing of Street Trees	✔
Broad Shade Canopy	✔
Vertical Accent	✔
Trees pruned so that bottom of limbs are a minimum of 7 ft.. above the top of sidewalk	✔

Street tree palettes include (See Ch. 6 for details):

Street Name	Street Tree Plan Information
36th St.	Residential Corridor
38th/39th St.	Residential Corridor
43rd St.	Community Corridor
52nd St.	Residential Corridor
Chamoune Ave	Residential Corridor
Euclid Ave	Community Corridor
Federal Blvd.	Community Corridor
Landis Ave	Residential Corridor
Marlborough Ave	Residential Corridor
Myrtle Ave	Residential Corridor
Olive St.	District B
Orange Ave	Residential Corridor
Parrot Ave to Cactus Ridge Ave	District A
Quince Ave to Euclid Ave	District B
Wightman Ave to Auburn to Corliss Ave	District A

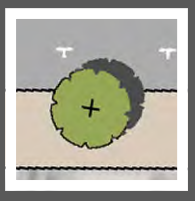
Standard Improvements

Corner curb extensions

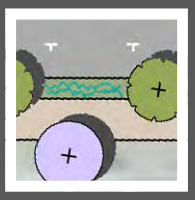


Pedestrian scale lighting

Marked crosswalks



Street Trees



Parkway Plants

Case by Case Improvements

- *Parking Pop Outs*
- *Sidewalk with Planting Areas*
- *Water Capture and Storage Swales*
- *Permeable Surfaces*
- *Double Row of Trees*
- *Combination Vehicle and Pedestrian Light Standards*

Urban Runoff Element

Recommendations include:

- Parkways & bulbouts with bioretention soil and flow thru infiltration
- If planting a street tree in an existing parkway, street tree should be...

Multi-Modal Connectivity Element

Each Ped/Bike Focus Green Streets prioritize pedestrian and bicycle connectivity throughout City Heights. Recommendations include:

- 5 ft.. minimum clear, unobstructed walking route (utilities and other small objects should not in fringe on this clear area)
- All Ped/Bike Focus Green Streets shall include a minimum of a Class 3 bike route and bike racks

Orange Ave is highlighted as a bicycle boulevard - recommendations include:

- A low stress, continuous and direct bicycle route
- Low traffic street that diverts traffic to other streets
- Enhanced wayfinding signs & pavement markings
- Smooth, even pavement surface

The two images at right show an example of how a diverter at an intersection could keep continuous bicycle movements on Orange Ave.

Urban Open Space Element

Ped/Bike Focus Green Streets have the greatest opportunities for urban open space. The typical 72 ft.. ROW street in City Heights has about 16 feet of additional space. This space can be captured as urban open space including:

- Design a street with a chicane to allow 16 feet to be added to one side of a street. This will increase the parkway to 21 ft...
- Add 8 ft.. to each side of the street without demolishing the curb. The additional area could be used as an expanded self-treating planting area or could include a multi-use path.

The arrows highlight how pedestrian connections can be made from a street through a canyon and back up to a street

3.9 Examples of how to apply Green Street Design

48 ft.. ROW

Typical Street Section

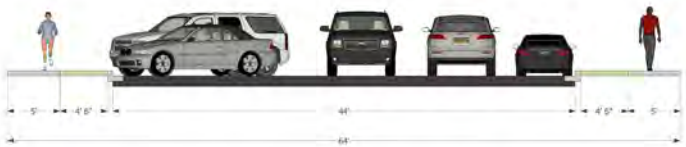
Example of Green Street Design

56 ft. ROW

Typical Street Section

Example of Green Street Design

64 ft. ROW



Typical Street Section

Example of Green Street Design

The existing ROW widths for typical streets in City Heights range from 40 ft.. to 100 ft.. The most common street width is 72 ft.. For streets narrower than 72 feet, there is a limited ability to change the curb and gutter location and gain a significant benefit.

Green Street Design in these streets require additional design consideration. They should all include street trees (see Ch. 6) and urban runoff/LID strategies. Recommendations include:

- Small to medium canopy in the parkway
- Shrubs and ground cover in the parkway
- Self-treating soil in the parkway with flow through curb design
- Bioretention soil and sub-drain in the parkway (when connection to stormwater system is available)
- Curb openings to allow water to enter parkway and any bulbouts
- Permeable pavers in the sidewalk
- Permeable asphalt in on-street parking areas (stormwater analysis is required to identify where this is appropriate)
- Class 3 bike routes with sharrow symbols in roadway and vertical signage
- A minimum of 5 ft.. Clear unobstructed continuous pedestrian route
- Urban open space opportunities are limited due to narrow street width

4 Street Design Toolbox

The City Heights Street Design Toolbox is a tool that can be used to build a desirable street and attractive public realm. The Toolbox is organized by the four design elements and also considers where a solution is applied in a street cross section. This section includes:

- Options for Urban Forestry, Urban Runoff, Multi-Modal Connectivity, Urban Open Space
- Reference Codes that refer to a specific design solution used in the Preferred Street Concepts as well as Pilot Project recommendations found in Chapter 5

4.1 City Heights Street Design Toolbox

Standard Improvements & Case by Case Improvements

The improvements shown in the preferred concept street graphics reference the Toolbox. The toolbox is a matrix that includes the physical elements of a street and where these improvements should take place. The following pages identify the various improvements organized by the design elements of Urban Forestry, Urban Runoff, Multi-Modal Connectivity, and Urban Open Space. Multi-modal Connectivity is separated into three focus areas of Pedestrian Focus, Bicycle Focus, and Vehicle Focus.

What are the Elements of the Toolbox?

Urban Forestry Element (UF)

This Element addresses improvements that relate to "greening" the street. The improvements in this element must coordinate with the Urban Runoff Element.

Urban Runoff Element (UR)

The Urban Runoff Element addresses improvements as they relate to capturing water. These strategies can be incorporated into the sidewalk, parkway, median and even the roadway as the toolbox and cross sections highlight.

Multi-Modal Connectivity Element

Pedestrian Focus (PF): One part of the Multi-Modal Connectivity Element is the pedestrian experience. The design solutions found here focus on enhancing the pedestrian experience by providing a range of design options from crosswalks to lighting and wayfinding improvements.

Bicycle Focus (BF): Another focus in the Multi-Modal Connectivity Element is the bicycle safety and access improvements. These design options include in street bike lanes as well as bike lockers and racks.

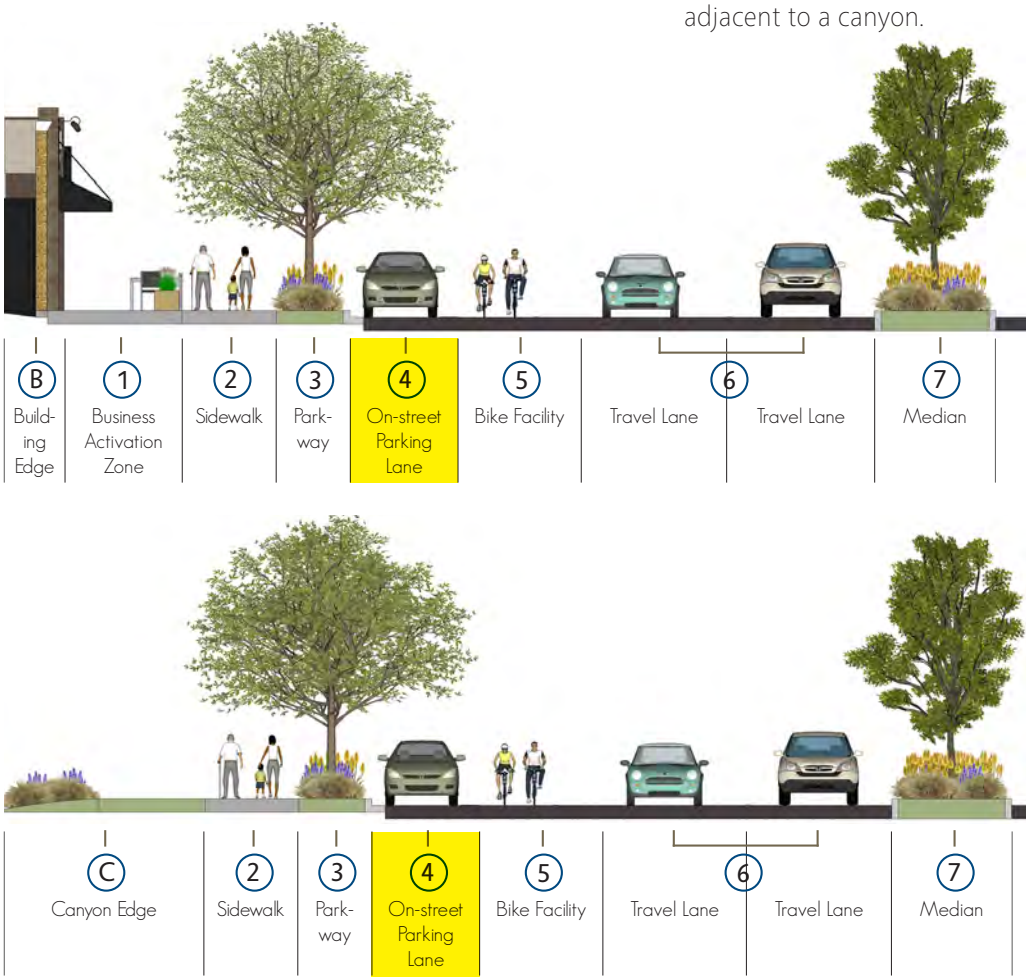
Vehicle Focus (VF): The vehicle efficiency and visibility are an important part of this Element. Design solutions for vehicles primarily focus on enhancing safety by slowing vehicle speeds and simultaneously increasing efficiency. It includes cars but also buses, trucks, and all vehicle types.

Urban Open Space (OA)

Open spaces ideally occur adjacent to or part of the street. These can include canyons, parks, parklets, plaza, and other options. This Element describes how open spaces can be pla ced in the public realm and integrated into all parts of street design.

Figure 4-1: How to Use the Toolbox

The Toolbox shows two options for the Public Realm Section. The first section is for a street section with buildings and the second section is for a street that is adjacent to a canyon.



Element Types

Multi-Modal Connectivity - Bicycle Focus

Urban Open Space Element

Multi-Modal Connectivity - Pedestrian Focus

Urban Forestry Element

Urban Runoff Element

Multi-Modal Connectivity - Vehicle Focus

Public Realm Locators

1: Business Activation Zone

2: Walking Zone

3: Parkway

4: On-street Parking Lane

5: Bike Facility

6: Travel Lane

7: Median

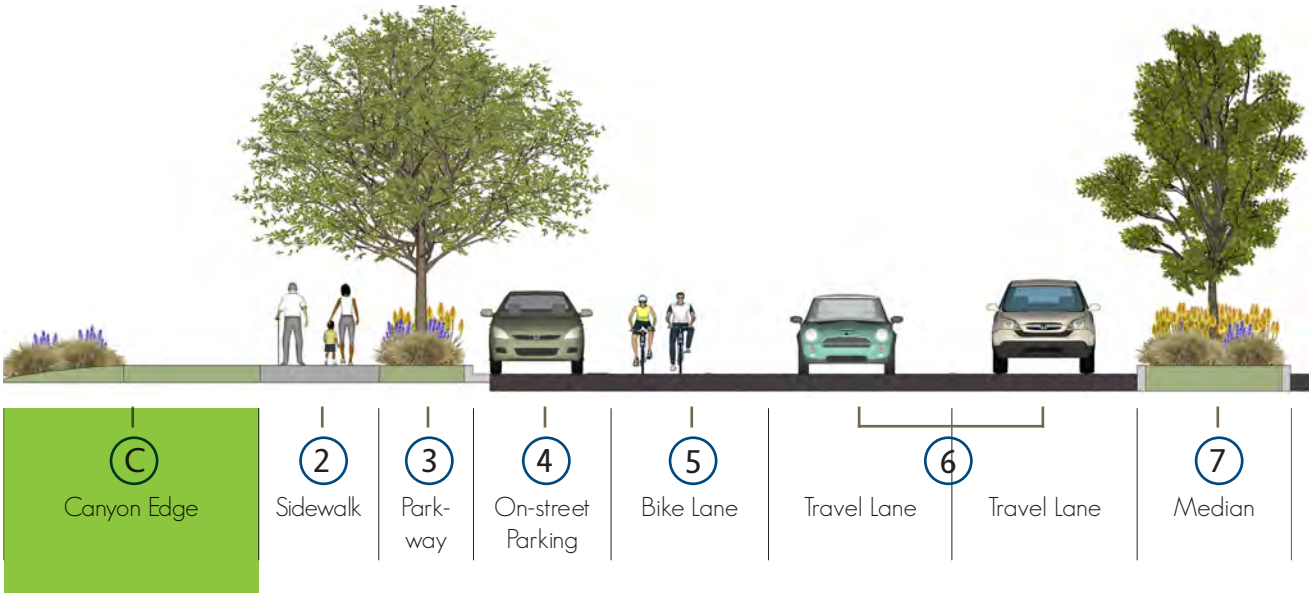
SC: Street Crossing

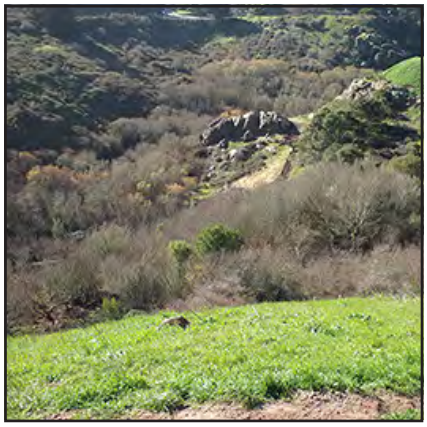
Edge Conditions

B: Building Edge

C: Canyon Edge

URBAN FORESTRY ELEMENT: CANYON EDGE OPTIONS

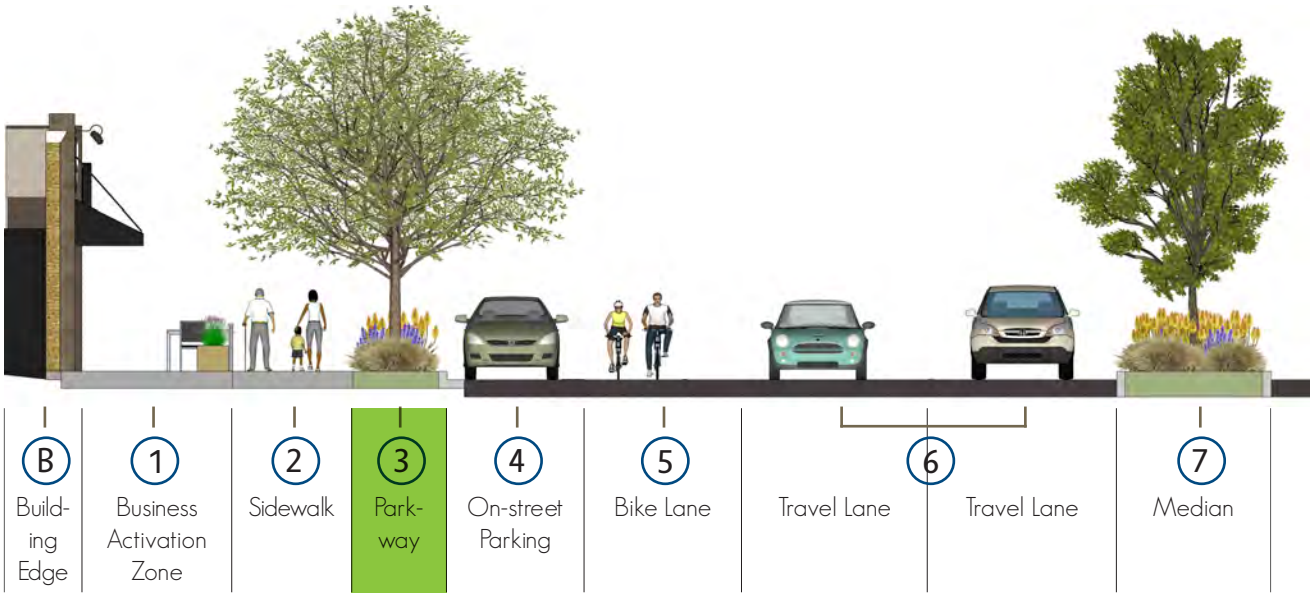




Native Plants & Trees planted along Slope Transitions

Native Groundcover on Slope Transitions

URBAN FORESTRY ELEMENT: PARKWAY OPTIONS



Medium to Large Canopy Tree

Small Open Tree

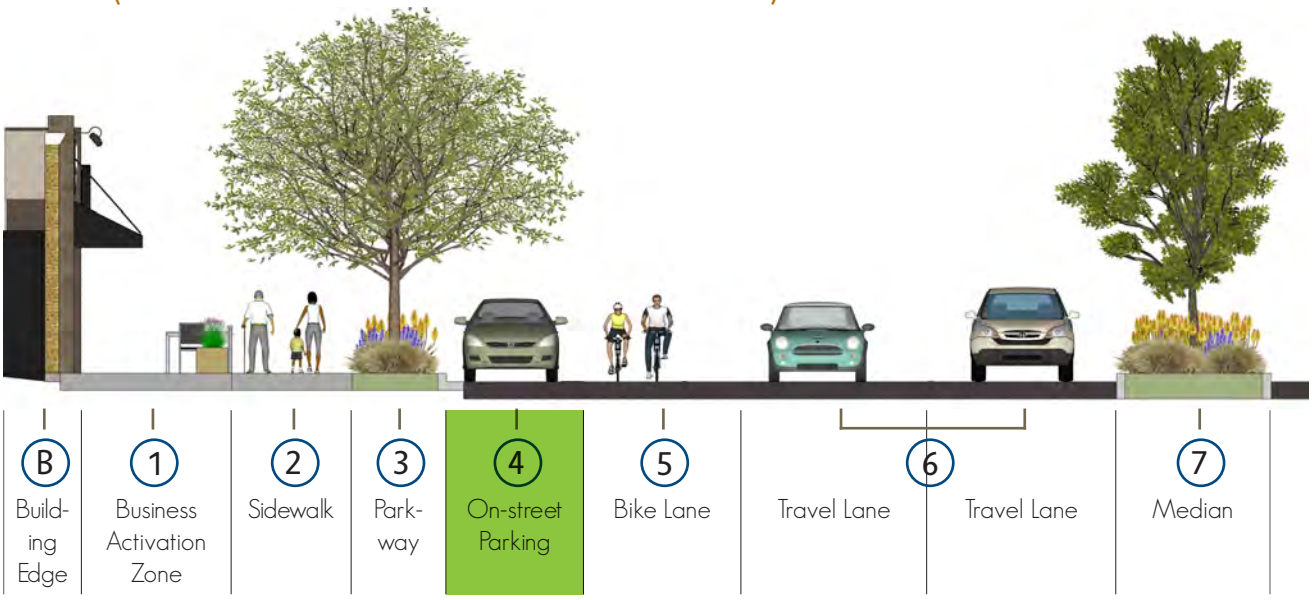
Native Shrubs, Succulents, Grasses w/ Rock Mulch

Shrubs Low Plants w/ Bark Mulch

Small to Large Tree w/ Tree Grate

Urban Forestry Element: Parking Lane Options

(Where Bulbout Extensions Are Proposed)



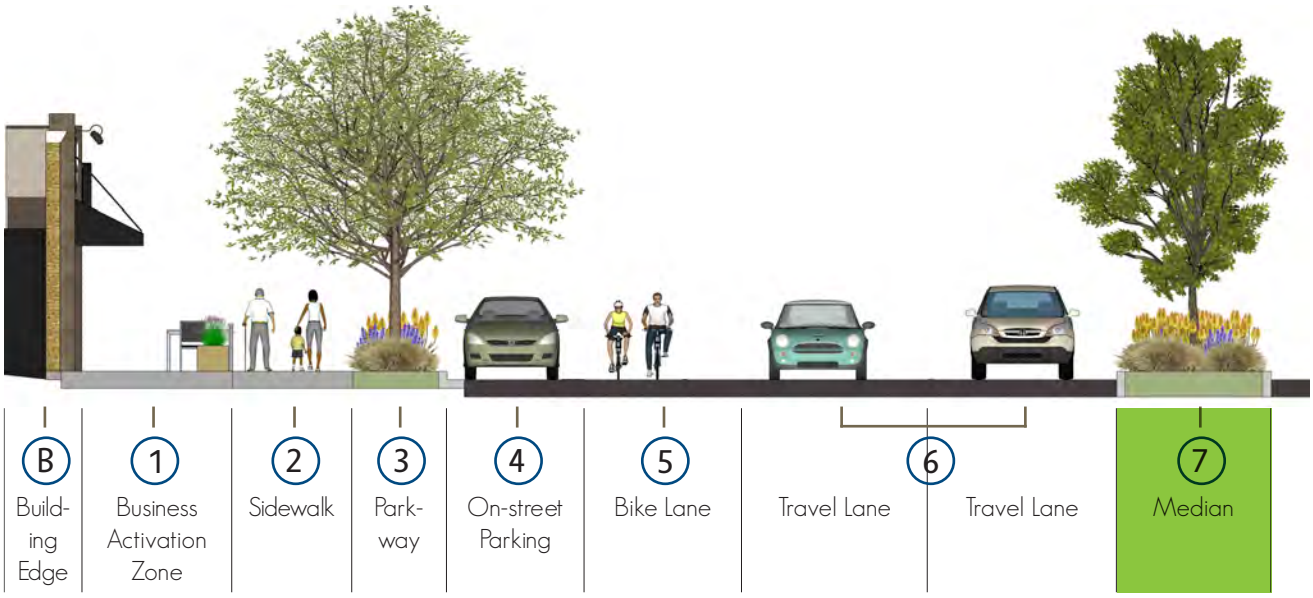
Medium to Large Canopy Trees

Small Open Tree

Native Shrubs, Succulents, Grasses w/ Bark Mulch

Low Plants & Groundcover in a Mid-block Bulbout

URBAN FORESTRY ELEMENT: MEDIAN OPTIONS



Medium to Large Canopy Trees

Small Tree

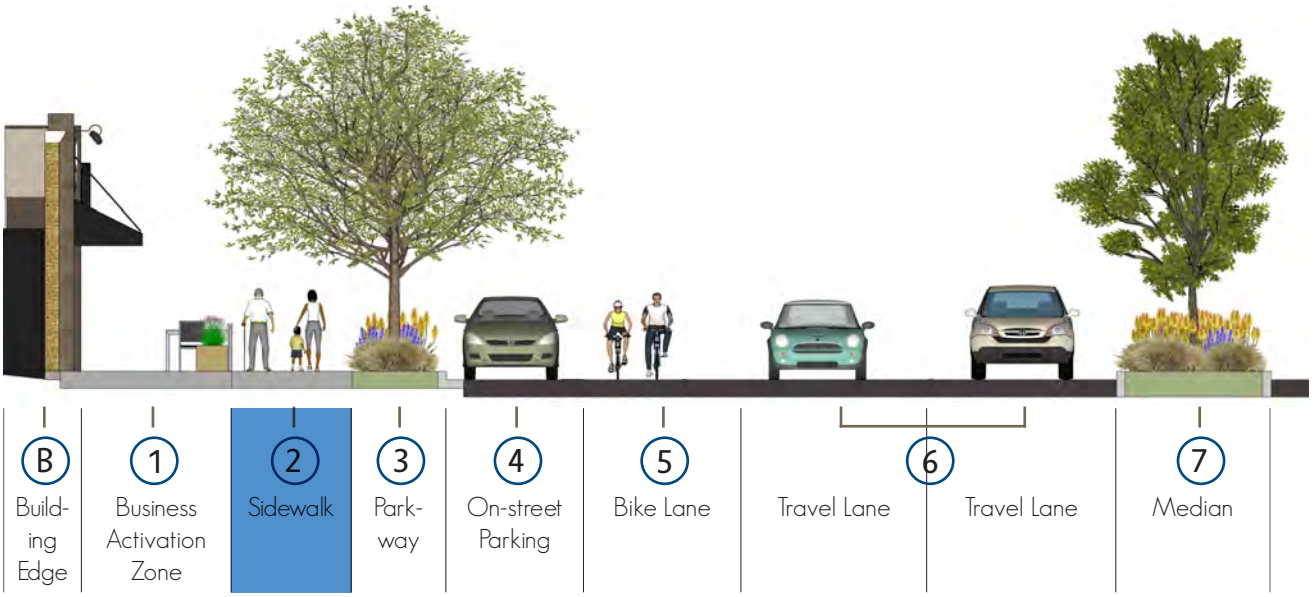
Vertical Tree/Palm

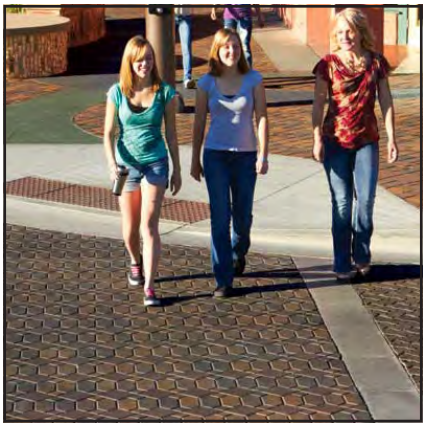
Native Shrubs, Succulents, Grasses w/ Rock Mulch

Shrubs/Groundcover

Shrubs/Bark w/Mulch

URBAN RUNOFF ELEMENT: WALKING ZONE OPTIONS





Permeable Pavers

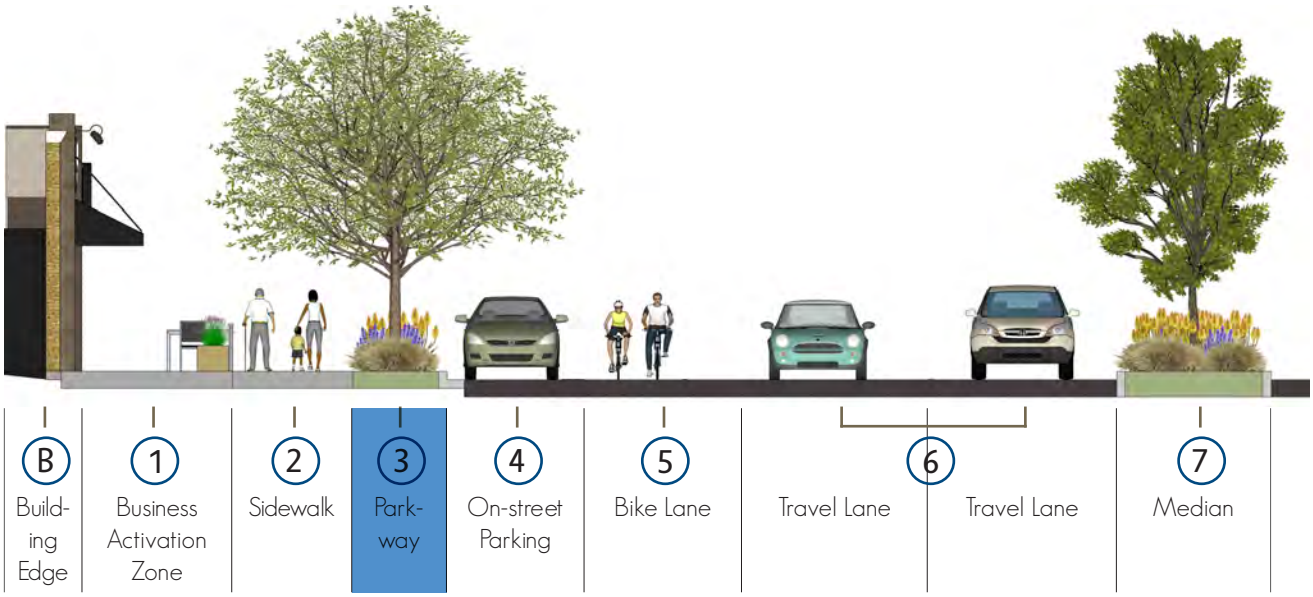
Permeable Asphalt or Concrete

French Drain with Grates

Subsurface Silva Cell Subsurface Drain (Use with RS2.1)

Compacted Decomposed Granite Walkway

URBAN RUNOFF ELEMENT: PARKWAY OPTIONS



Rain Garden with Bio-retention Soils & Subsurface Drain

Tree Basin w/ Filters & Subsurface Drain

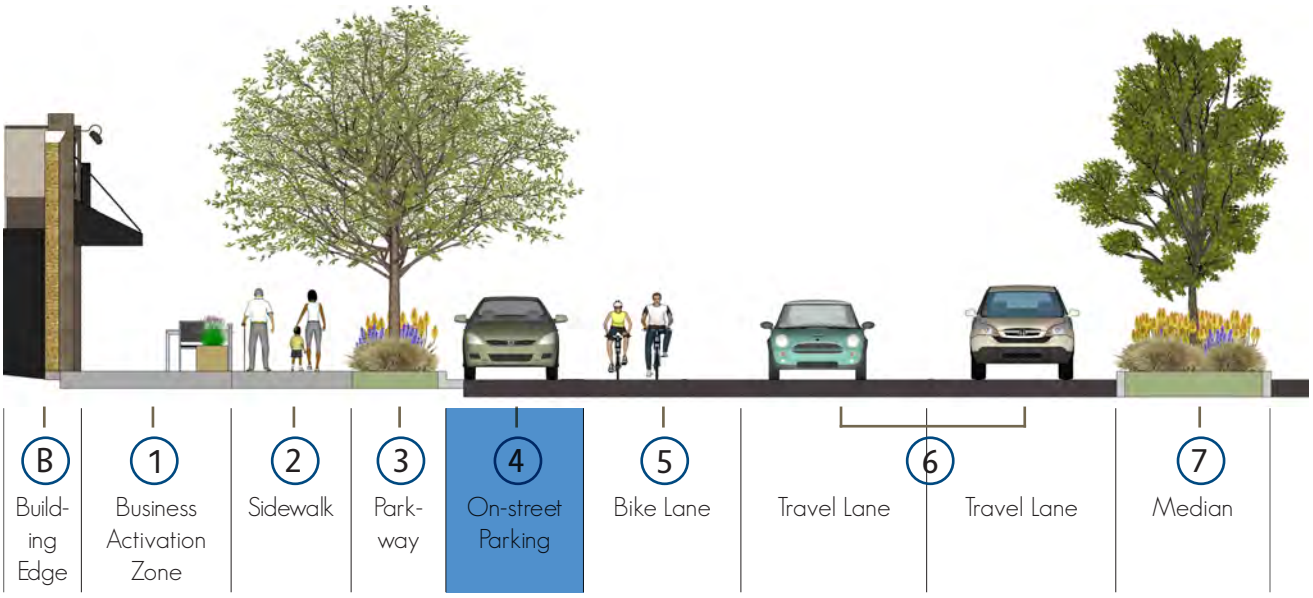
Infiltration Basin w/ Bio-retention Soils & Subsurface Drain

Permeable Curb/Gutter & Curb Openings

Tree Grates with Permeable Pavers (Only Commercial Streets)

Subsurface Silva Cells & Drain (Use w/ Permeable Surface)

URBAN RUNOFF ELEMENT: PARKING LANE OPTIONS



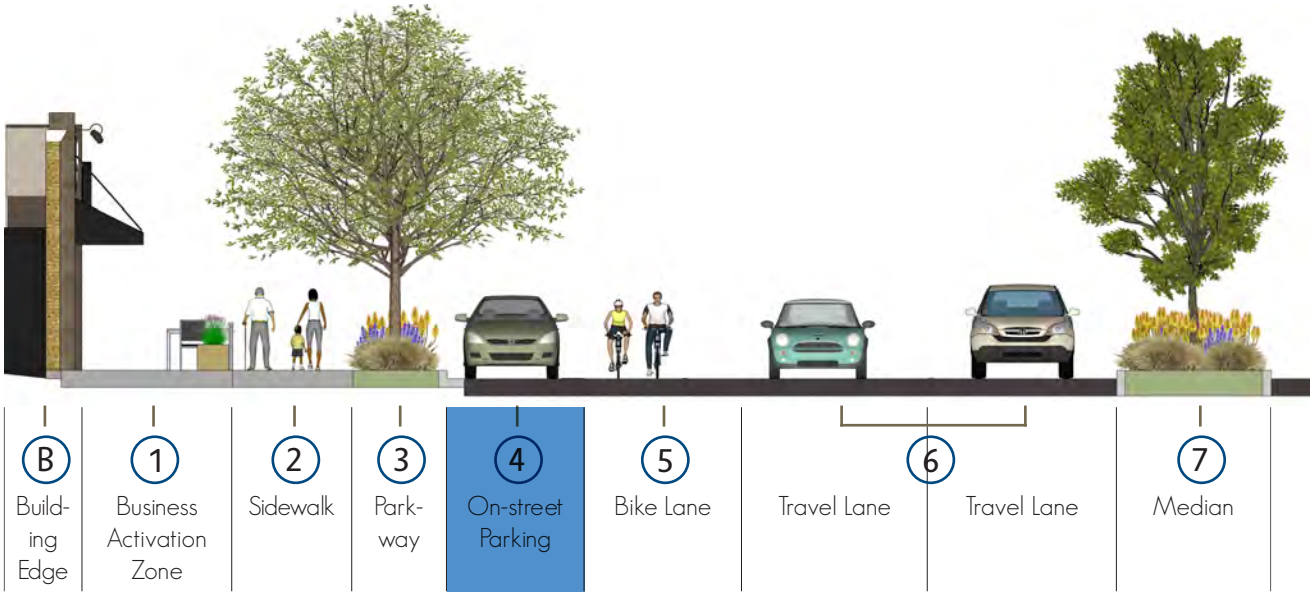
Subsurface Silva Cell & Drain (Use w/ Permeable Surfaces)

Permeable Pavers

Permeable Asphalt/Concrete

URBAN RUNOFF ELEMENT: PARKING LANE OPTIONS

(WHERE BULBOUT EXTENSIONS ARE PROPOSED)



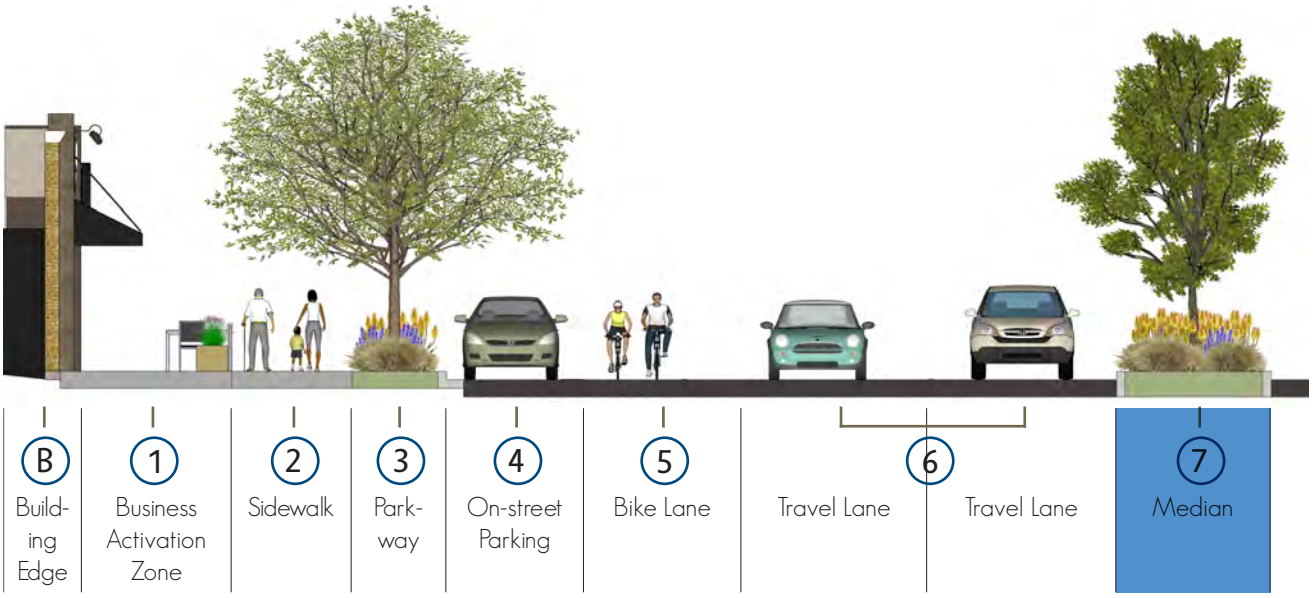
Intersection Bulb-out w/ Bio-retention Soil & Subsurface Drain

Mid-block Bulbout w/ Bio-retention Soil & Subsurface Drain

Bulbout as an Infiltration Basin w/ Bio-retention Soils & Subsurface Drain

Permeable Curb/Gutter & Curb Openings

Urban Runoff Element: Median Options



Permeable Paver w/ Subsurface Filtration & Drains

Permeable Concrete w/ Sand Filtration & Subsurface Drain

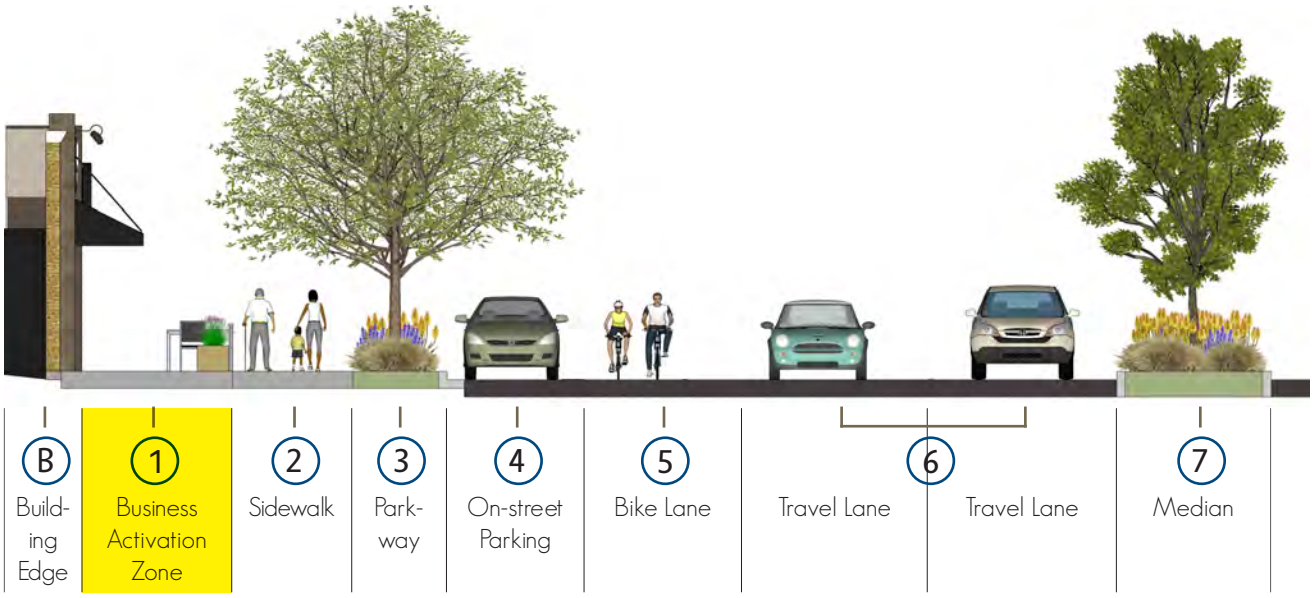
Decomposed Granite/Rock Swale/ Gravel Trench

Permeable Curb/Gutter & Curb Opening

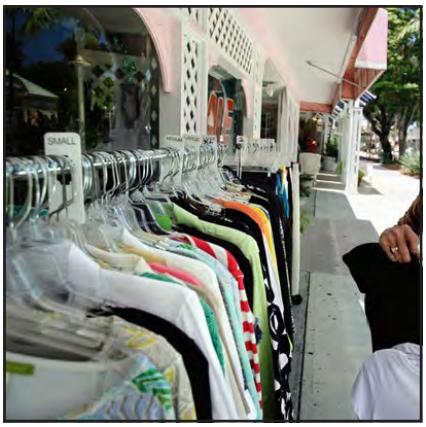
Infiltration Basin w/ Bio-retention Soils & Subsurface Drain

Tree Basin with Bio-retention Soils & Subsurface Drain

Multi-Modal Connectivity Element: Business Activation Zone



Outdoor Cafes & Restaurant Seating



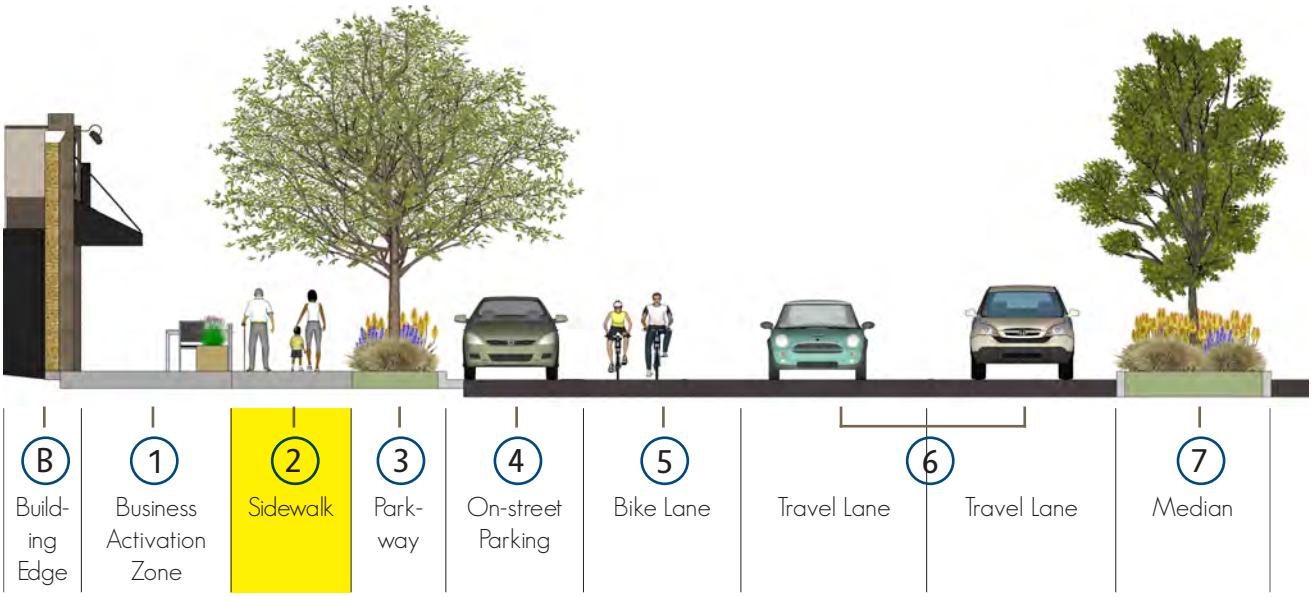
Merchandise Display or Sidewalk Sale

Public Seating

Bicycle Corral or Rack

Bike Lockers

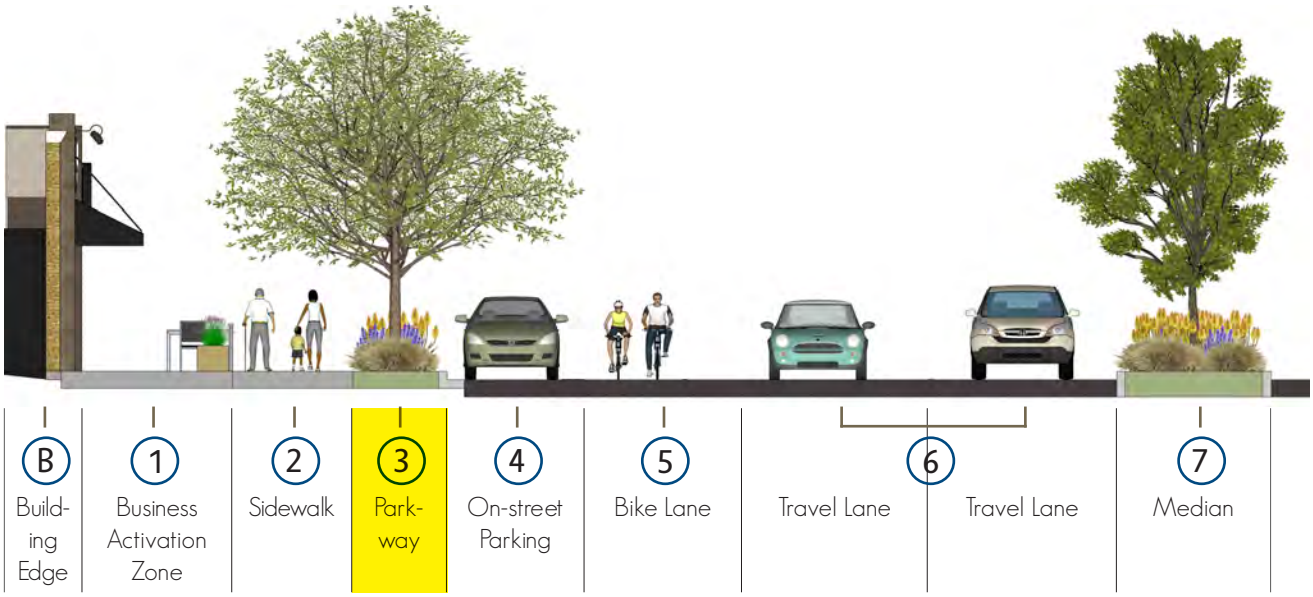
Multi-Modal Connectivity Element: Walking Zone Options



Min. 5 ft. Clear Walkway Space

Walkway Over Tree Grate

Multi-Modal Connectivity Element: Parkway Options



Meters, Waste & Recycling Bins

Public Art/Wayfinding Banners

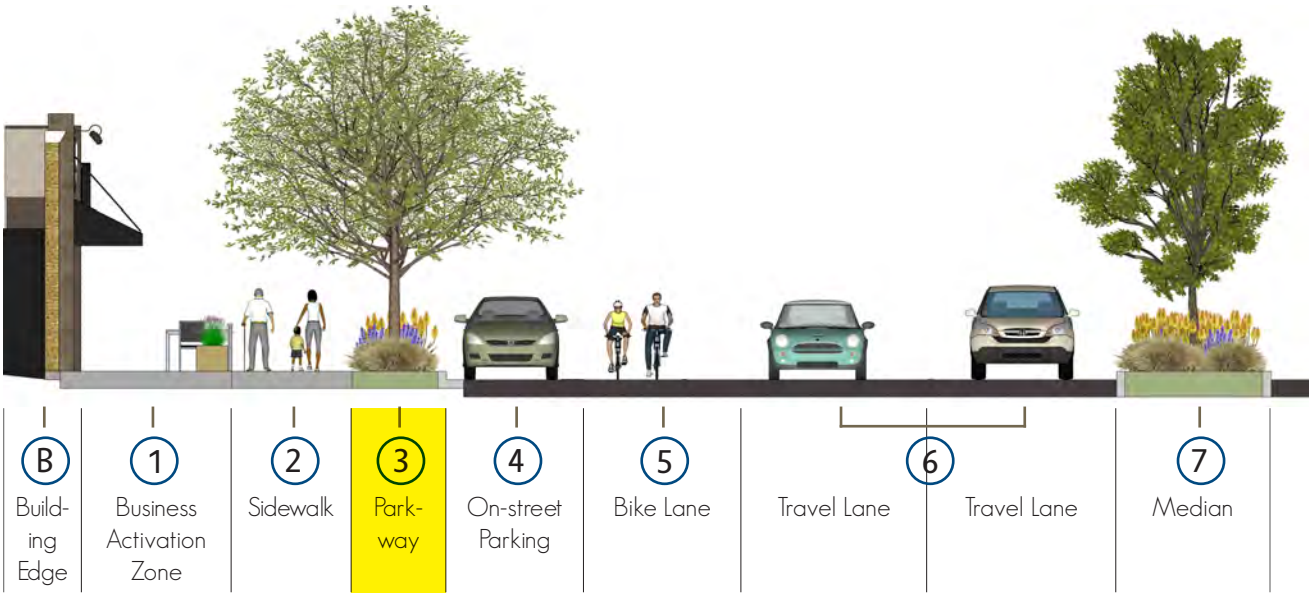
Pedestrian Scale Lighting

Transit Facilities with Shelters & Seating

Public Information & Transit Kiosks

Public Seating

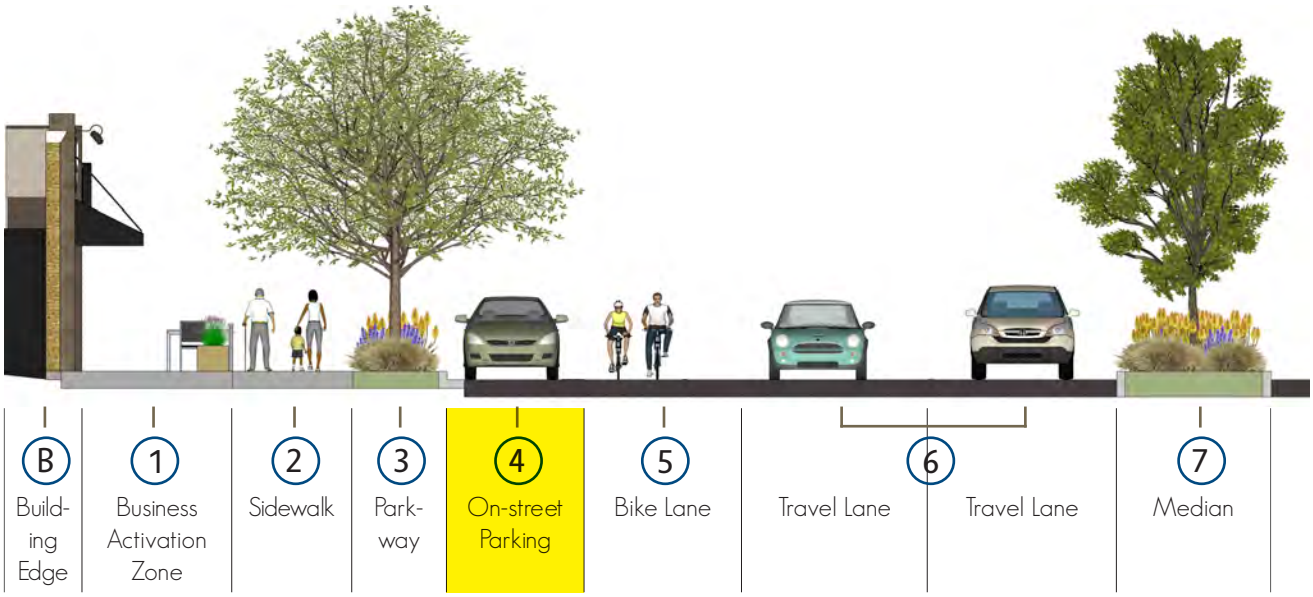
Multi-Modal Connectivity Element: Parkway Options



Bike Parking Corral

Individual Bike Rack

Multi-Modal Connectivity Element: Parking Lane Options



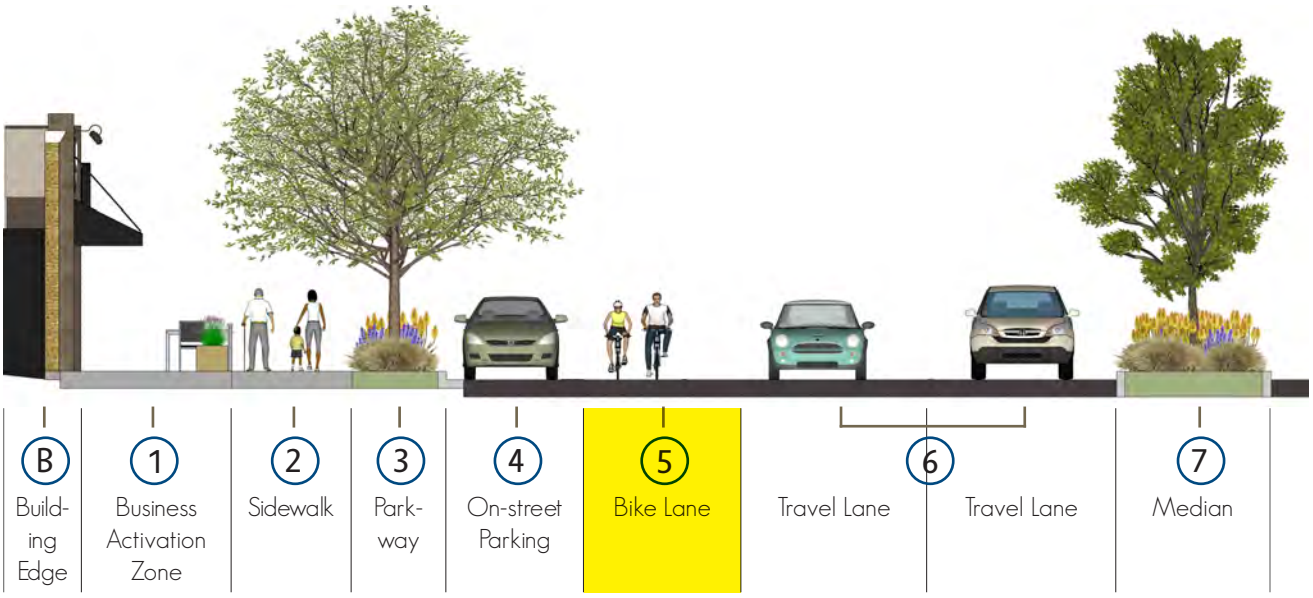
Convert On-Street Parking Into a Bike Corral

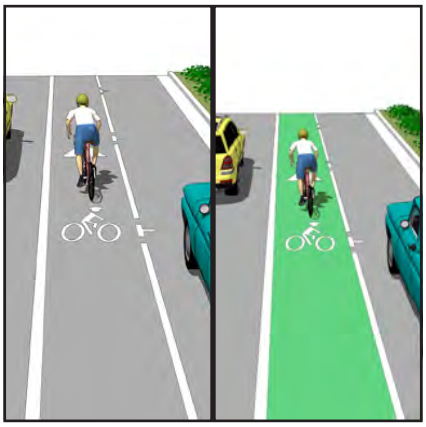
Angled Parking

Back-in Angled Parking

Wrap-Around Parking Bulbouts

Multi-Modal Connectivity Element: Bike Facility Options

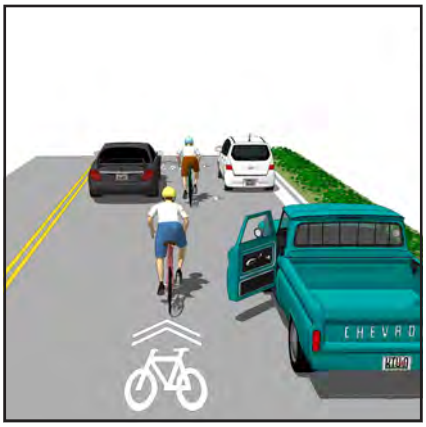




Class 2 Bike Lane - Painted or Unpainted

Class 2 Bike Lane with Inside Buffer

Class 2 Buffered Bike Lane - Both Sides Buffered

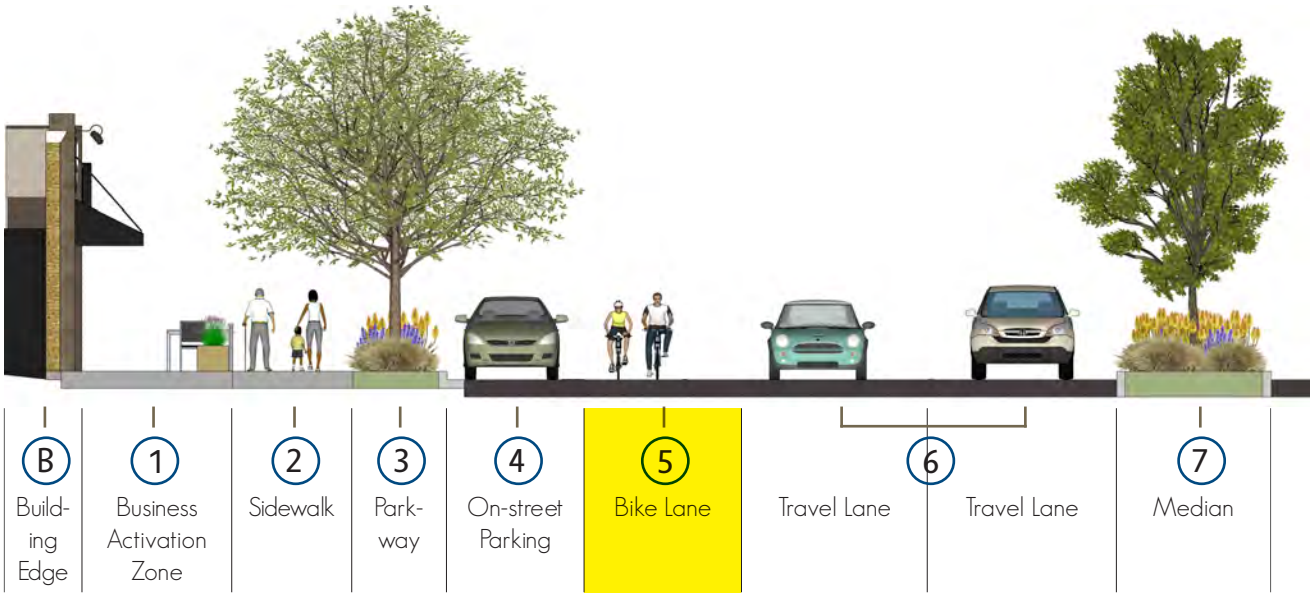


Class 3 Bike Sharrow

Class 3 Bike Route

Two-Way Cycle Track with Barrier

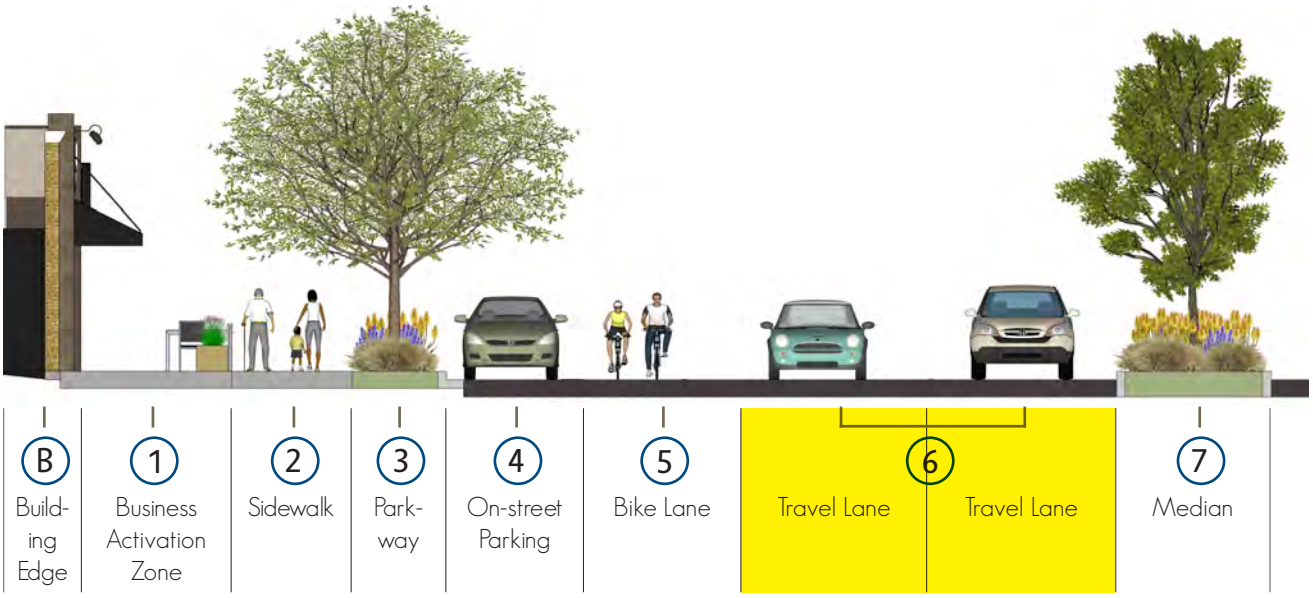
Multi-Modal Connectivity Element: Bike Facility Options

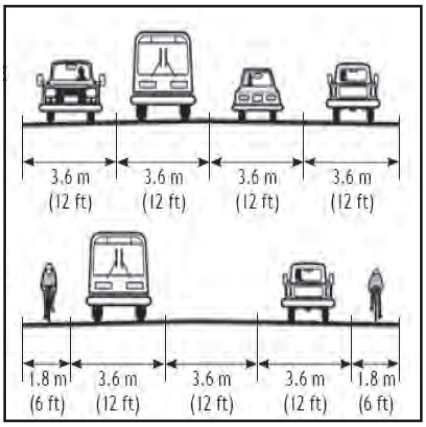


Cross-Over Lane

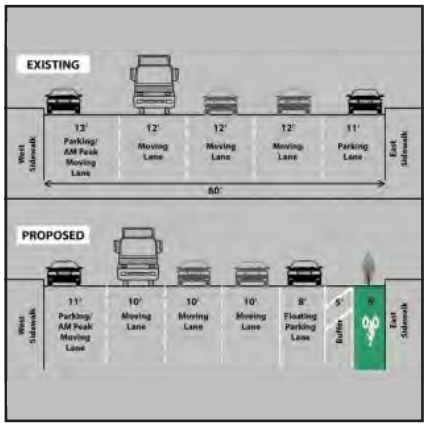
Bike Boulevard w/ Vehicle Diverters to Limit through Traffic

Multi-Modal Connectivity Element: Travel Lane Options





Road Diet (Number of Lanes)

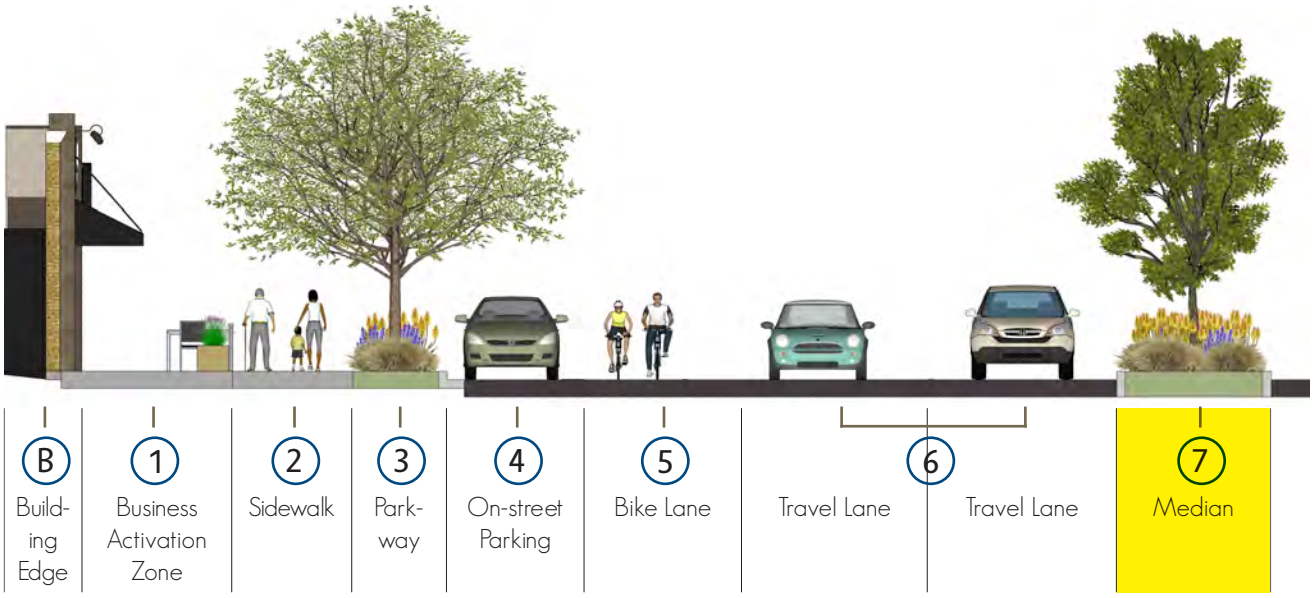


Lane Diet (Size of Lane)

Speed Table

Lane Striping

Multi-Modal Connectivity Element: Median Options

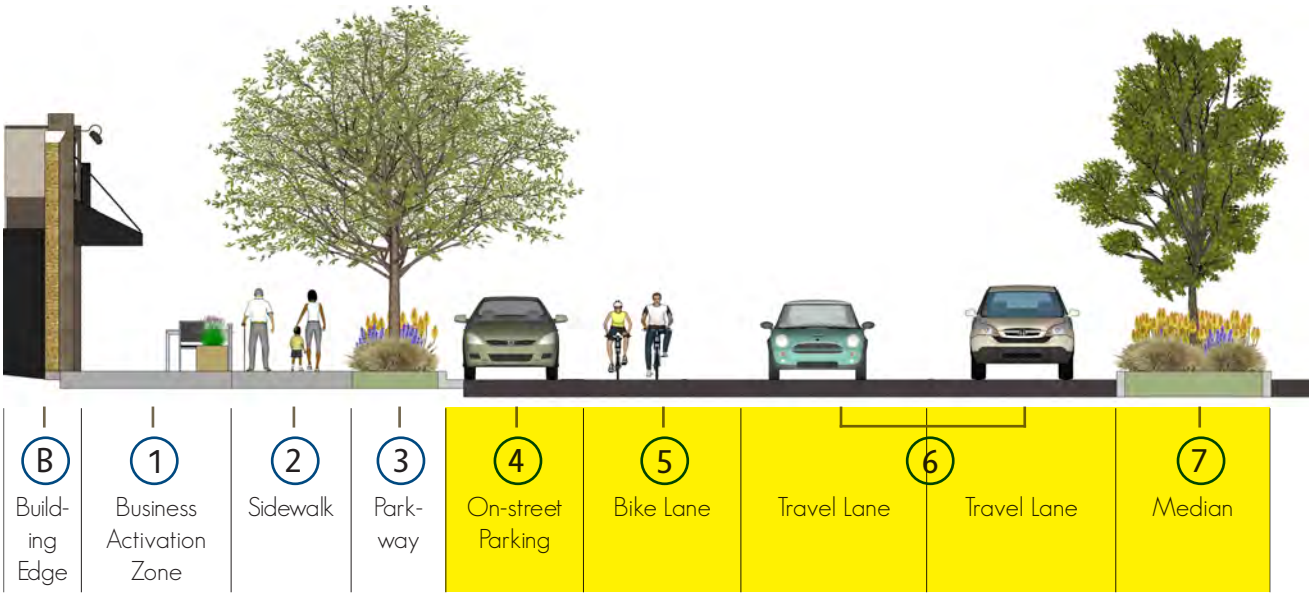


Left Turn Pocket

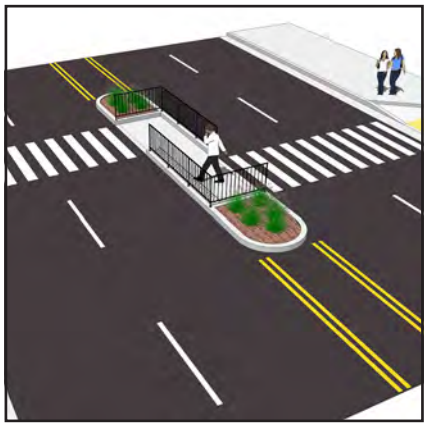
Signage/Monumentation

Pedestrian Signal

Multi-Modal Connectivity Element: Street Crossing Options



.Median Refuge (Use with SC.3 Pedestrian Crosswalk)



Staggered Pedestrian Crosswalk (Use with SC.1)

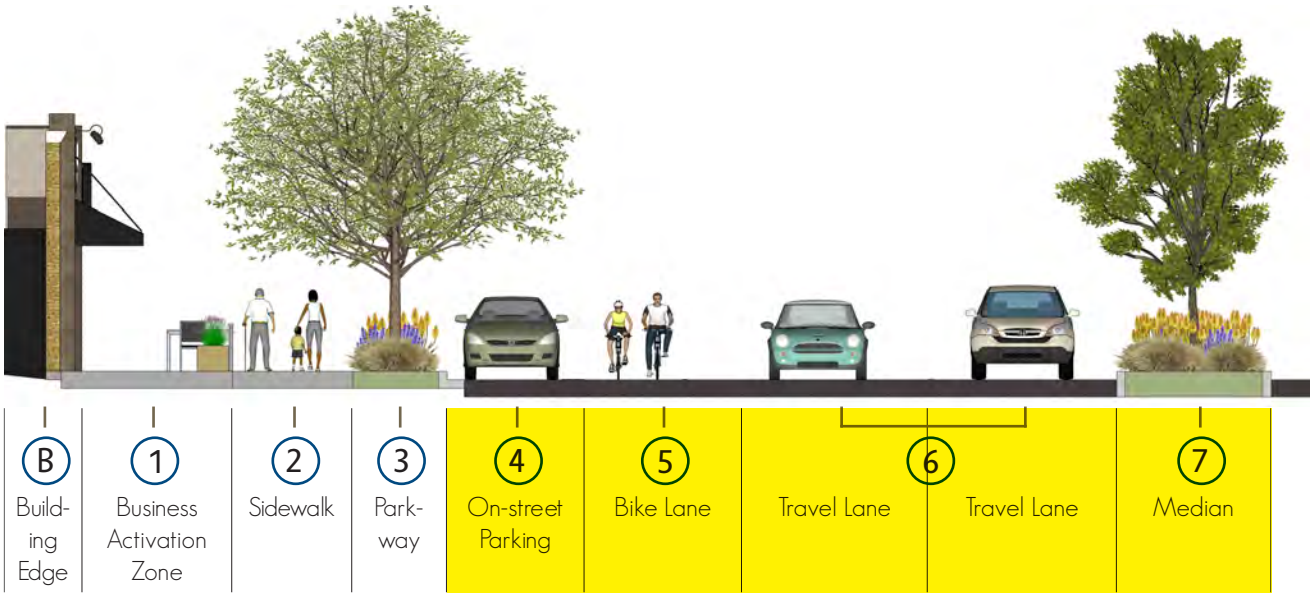
Enhanced Marked Pedestrian Crosswalks

Pedestrian Ramp & Bulbout (Midblock or Intersection)

. In-Road Flashers at Mid-block Crossing

High Intensity Activated Crosswalk Beacon

Multi-Modal Connectivity Element: Street Crossing Options



Pedestrian Signal

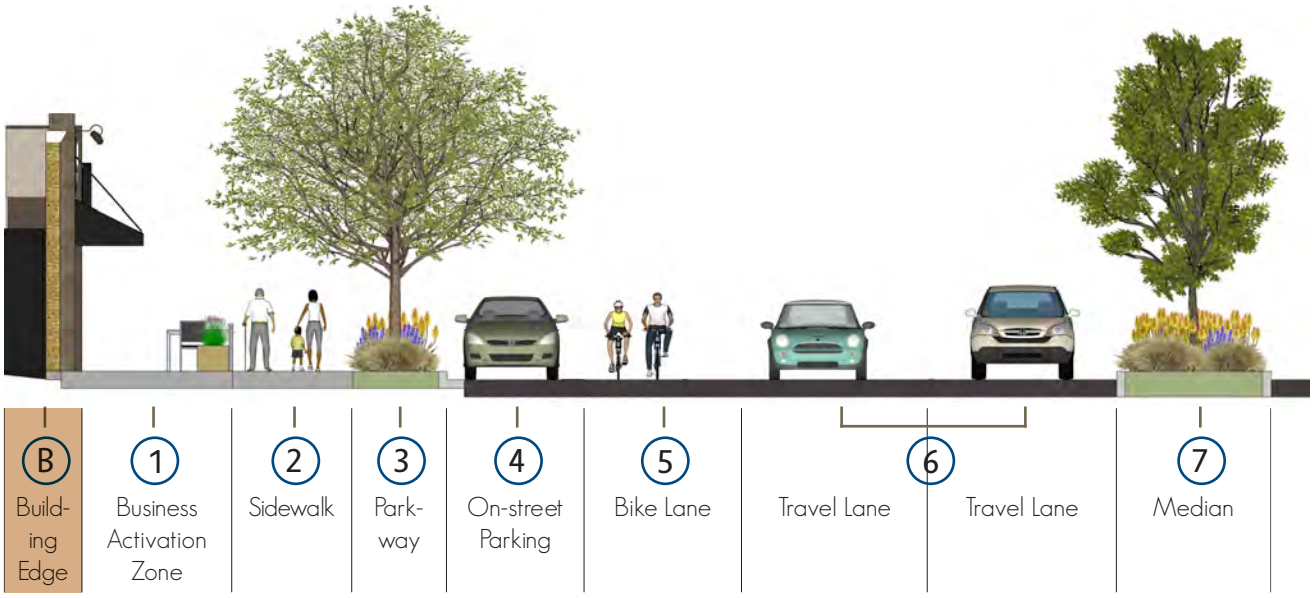
New Traffic Signal at Intersection

Urban Open Space: Canyon Edge Options

Trailhead Kiosk

Trailhead Access

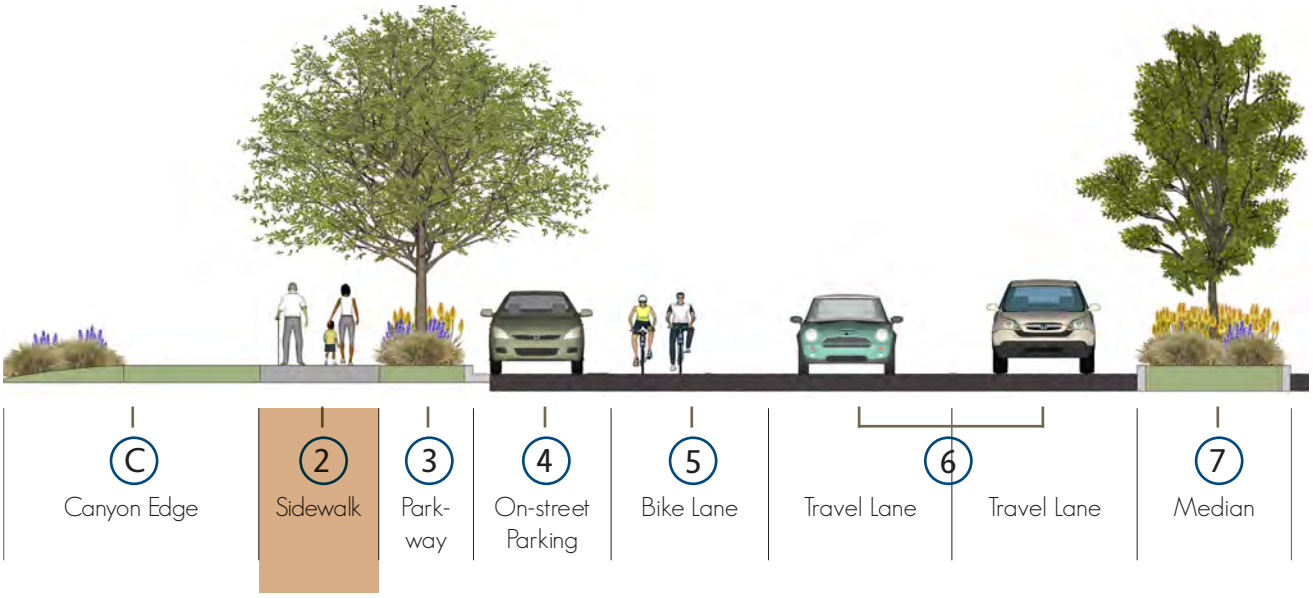
URBAN OPEN SPACE: BUILDING EDGE OPTIONS



New Park/Plaza w/ New Development

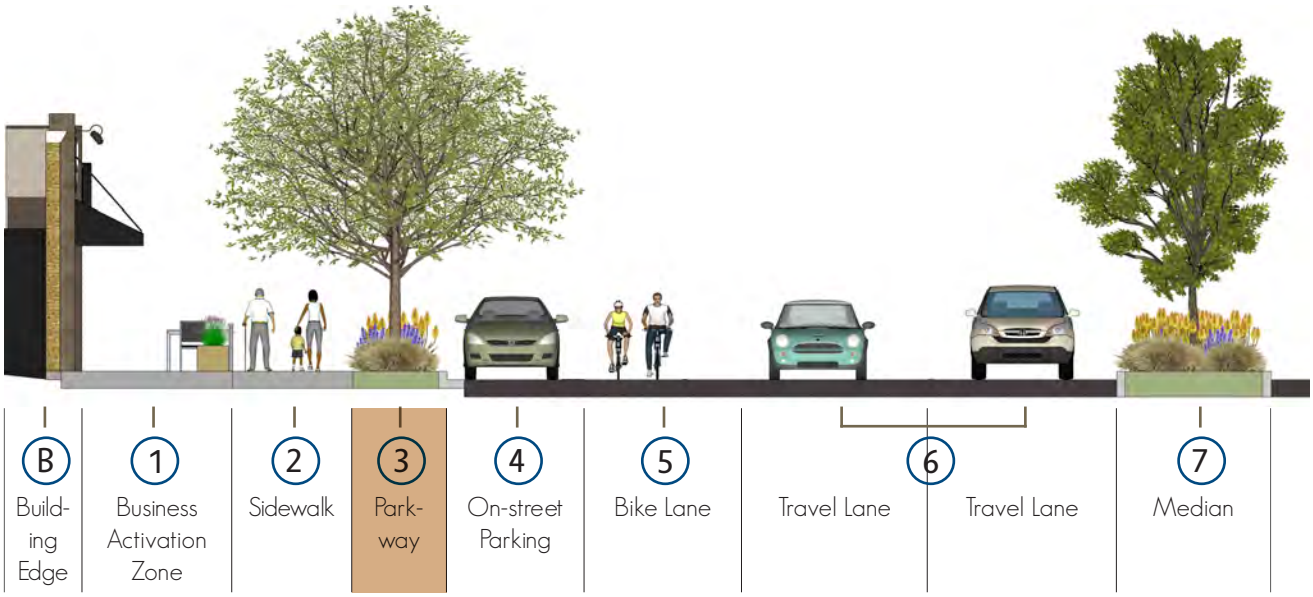
New Rooftop Park on New Development

Urban Open Space: Walking Zone Options



Compacted Decomposed Granite Walkway

Urban Open Space: Parkway Options

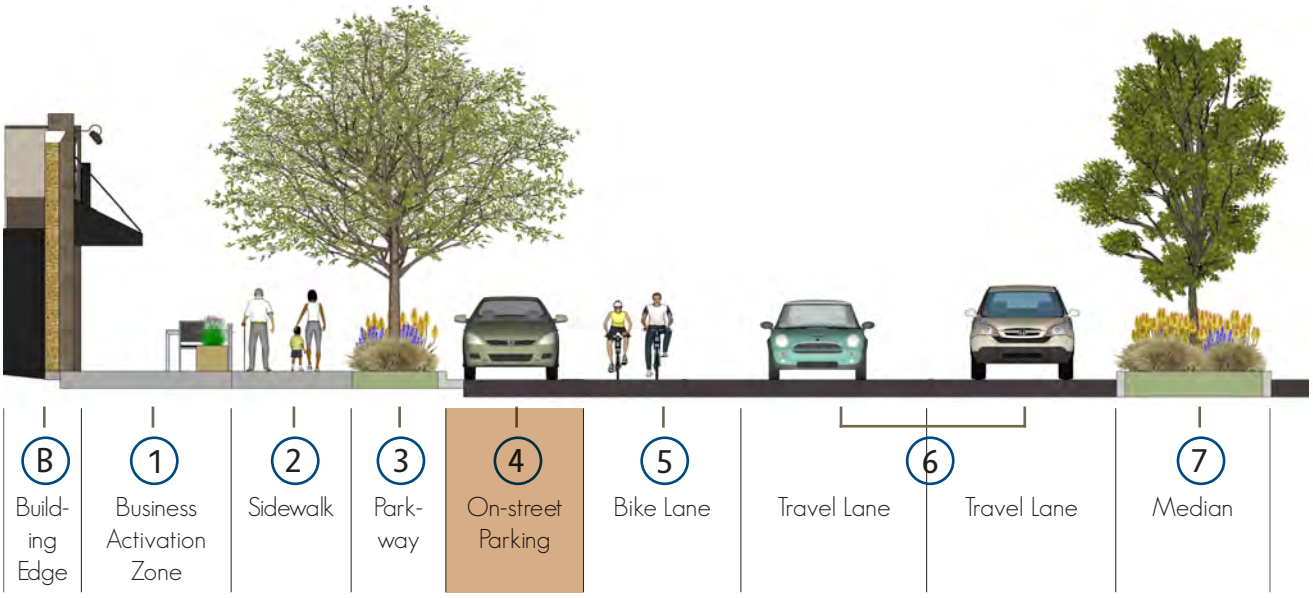


Wayfinding/Signage for Safe Route to Parks

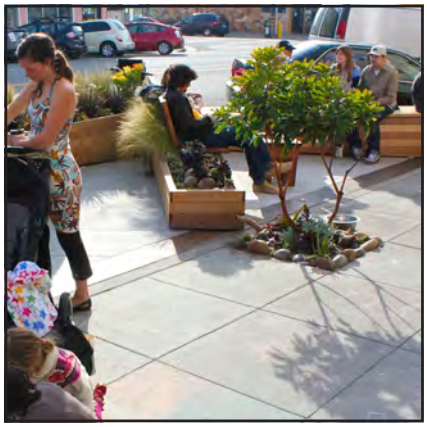
Urban Park on Wide Parkway or 3.3 Double Row of Trees

Decomposed Granite/Rock Swale/ Gravel Trench

Urban Open Space: Parking Lane Options



Convert On-Street Parking Into Public Cafe Seating



Convert On-Street Parking to extend Sidewalk & Public Seating

Convert a Paper Street into a Park

5 Pilot Projects

The Pilot Projects identify specific projects in City Heights that the community identified in the public participation process as significant areas of opportunity. This section includes:

- Pilot Projects
- Conceptual Designs for these Pilot Projects
- Conceptual Cost Estimates

5.1 Project Locations

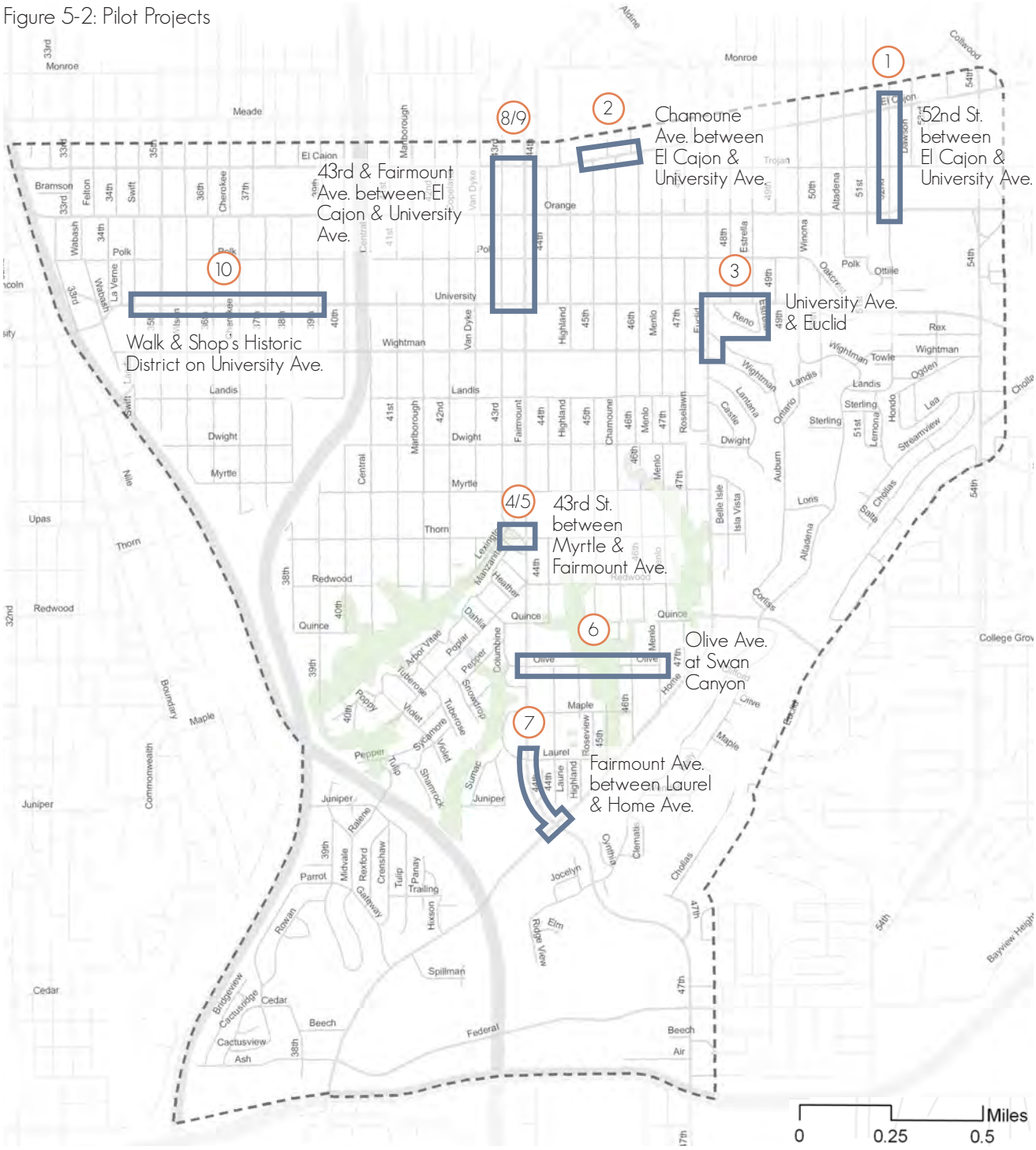
The Pilot Projects rely on information documented through previous planning efforts, field observations, and community input. Because City Heights has already received an extensive amount of attention and funding for various planning efforts, the CHUG plan consolidates relevant information and recommendations from previous plans for each Pilot Project. These projects were selected because they highlight a cross-section of community connections and improvement opportunities.

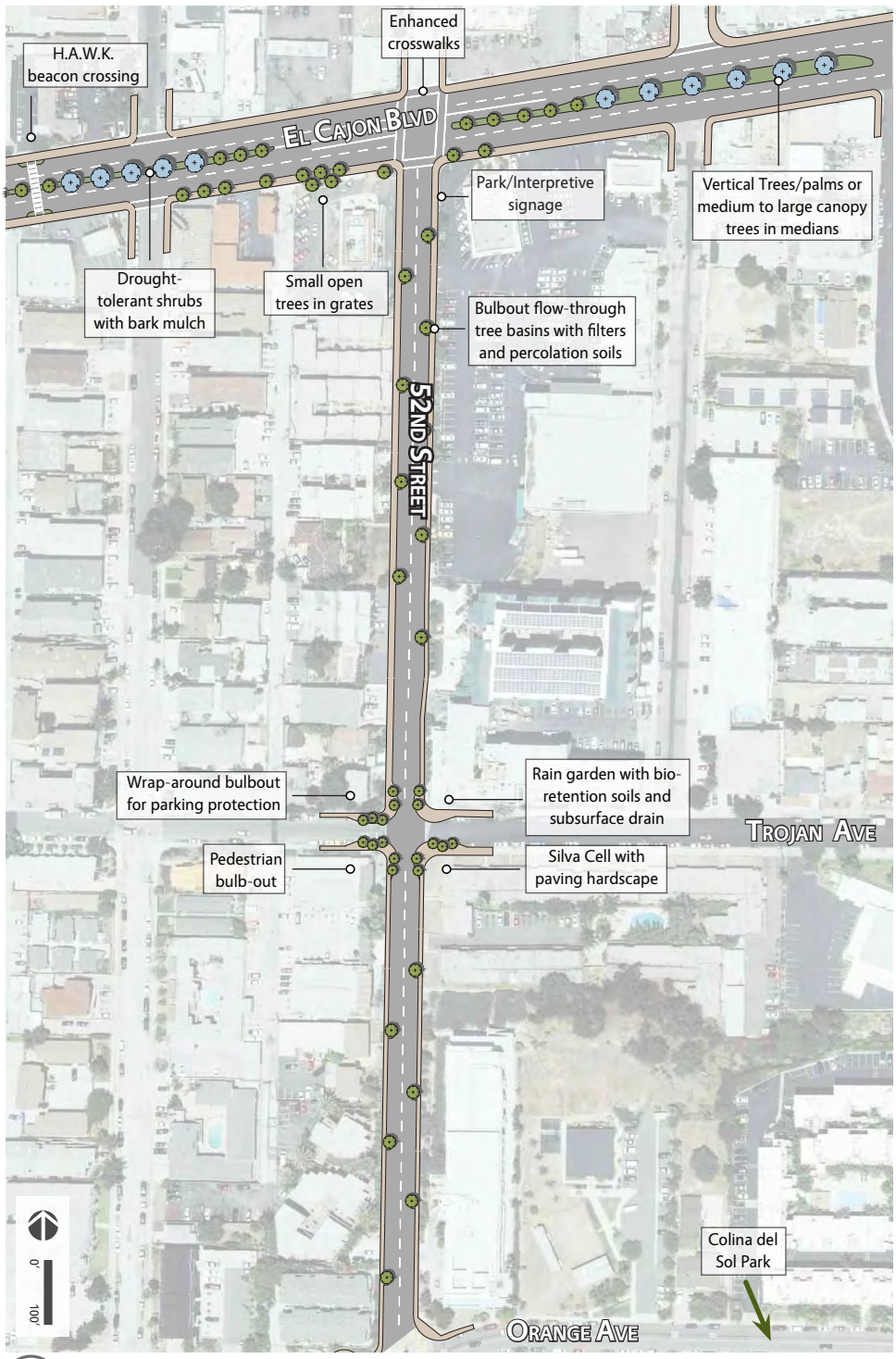
The Pilot Projects presented are based on community input and conceptual design. In addition, cost estimates are provided to make these projects grant ready. Since the City of San Diego has limited capital improvement funds, it is important to seek grant funds to facilitate the construction of these projects.

The Pilot Projects are:

1. 52nd Street between El Cajon & University Ave.
2. Chamoune Ave. between El Cajon & University Ave.
3. University Ave. between Euclid Ave. and Estrella Ave. (Includes Reno Drive)
4. Open Space and Educational Park along 43rd St. (at Ocean Discovery Institute)
5. 43rd St. between Myrtle & Fairmount Ave.
6. Olive Ave. at Swan Canyon
7. Fairmount Ave. between Laurel & Home Ave.
8. 43rd St. between El Cajon & University Ave.
9. Fairmount Ave. between El Cajon & University Ave.
10. Walk & Shop's Historic District on University Ave.

Figure 5-2: Pilot Projects





Urban Forestry

Parkway Options
- Small to large tree w/ grate

Parking Lane Options
- Small open tree

Median Options
- Vertical tree/palm
- Medium to large canopy trees
- Native shrubs, succulents, grasses w/ rock mulch

Urban Runoff

Parkway Options
- Tree grates w/ permeable pavers
- Subsurface Silva Cells & drain (use w/ permeable pavers)

Parking Lane Options
- Intersection bulb-out w/ bio-retention soils & subsurface drain

Median Options
- Tree basin w/ bio-retention soils & subsurface drain

Urban Open Space

Parkway Options
- Wayfinding/signage for safe route to parks

Multi-Modal Connectivity

Walking Zone Options
- Bicycle corral or rack
- Min. 5 ft. clear walkway space

Parking Lane Options
- Wrap-around parking bulbouts

Parkway Options
- Meters, waste and recycle bins
- Pedestrian scale lighting
- Transit facilities w/ shelters & seating

Bike Facility Options
- Class 3 bike route

Street Crossing Options
- Enhanced marked pedestrian crosswalks
- High Intensity Activated Crosswalk Beacon (H.A.W.K.)

Pilot Project 1: 52nd St. between El Cajon Blvd. and Orange Ave.

Pilot Project 1: 52nd St. between El Cajon Blvd. & Orange Ave.

Description: Identify 52nd Street as a Safe Route to Parks Community Connector. It will connect El Cajon Boulevard to Colina del Sol Park.

Benefits: Increase community access to Colina del Sol Park. Enhance urban runoff capture and filtration on 52nd Street and Trojan Avenue.

Community Connectivity: This Pilot Project focuses on connecting pedestrians to Colina del Sol Park as a Community Connector.

Previous Planning: The Full Access Community Transport System (FACTS) Project was completed in February 2012 to identify key recommendations for the Colina Park neighborhood. There were two areas where action was desired. One area was implementing a complete street program consistent with SANDAG's guidance. The second area was desired was to create a shared ride taxi service.

- Support the Regional Complete Streets Policy to be developed by SANDAG during 2012-13
- Explore funding options including National Highway System (NHS), Surface Transportation Program(STP), Transportation Enhancements (TE), Congestion Mitigation and Air Quality (CMAQ), and Safe Routes to School(SRTS)
- Establish a Built Environment Team as a collaborative effort by CHCDC, IRC, EHC, and PCS to increase resident capacity and build community empowerment
- Integrate complete streets into design through project reviews and engagement with city staff
- Support the development of performance measurements for multi-modal level of service, in collaboration with city staff and professional organizations of practitioners

While these recommendations are not specific in the descriptions included on these pages, the Pilot Project is consistent with the residents' desire for increased connectivity within the Colina Park neighborhood.

Cost Estimate for Pilot Project

Total:	$271,500
20% Contingency/Escalation	$54,300
Total with Contingency/Escalation	$325,800

See pages 111-120 for details.

Urban Forestry: 52nd Street currently has very few trees but this is a heavily used street by pedestrians due to its proximity to schools. 52nd Street is recommended to be a Canopy Street, however due to the number and size of driveway cuts and heavy use of on street parking, the number of recommended additional trees has been limited.

52nd Street is a Pedestrian Focus Community Connector but does not have a specific street tree palette. Rather it utilities the recommended street tree list in Appendix A.

52nd Street between El Cajon Boulevard and Trojan Avenue has been targeted for 30 additional street trees. The additional trees absorb 1,440 pounds of carbon dioxide per year. Assuming a 40 year lifespan, these trees will provide $19,200 in oxygen benefit, $37,200 in air pollution control, $22,500 in water retention for adjacent landscapes, and $18,600 in soil erosion prevention. An additional 30 trees representing the same values have been recommended along El Cajon Boulevard.

Urban Runoff: This portion of 52nd Street is a headwater street meaning that runoff is generated locally when it rains. With the addition of urban runoff from Trojan Avenue, the intersection functions as the beginning of the storm drain system. Currently urban runoff flows unimpeded and unfiltered along 52nd Street and Trojan Avenue directly into two curb inlets near the intersection. Incorporating flow-through tree planters along 52nd Street and incorporating trees with silva cells and sub drains within the proposed build out at their intersection provides a significant benefit to the quantity and quality of stormwater reaching the storm drain system.

Multi-Modal Connectivity: Due to the topography and need for a pedestrian route in the eastern area of City heights, 52nd Street is identified as a Pedestrian Focus Community Connector. This Pilot Project identifies an opportunity for enhancement from El Cajon Boulevard to Orange Avenue. South of Orange Ave., some pedestrian improvements have been made at Ottillie Place and 52nd Place in conjunction with Mary Lanyon Fay Elementary School and the Colina Park Golf Course. The intersection of 52nd Street and Orange Avenue is a critical intersection because this is a high point and motorized vehicles have reduced visibility as they come up or down to the intersection.

52nd Street is 64 ft. wide and has parallel on-street parking. The sidewalks are approximately 5 feet wide. However the side walk is immediately adjacent to the on-street parking with no parkway buffer. See the conceptual plan for recommended improvements.

Open Space Access: While this Pilot Project does not include any additional open space, conversion from on-street parking space to a park or parklet is a possibility.

Urban Forestry

Parkway Options

- Small to large tree w/ grate
- Medium to large canopy tree

Median Options

- Medium to large canopy trees
- Native shrubs, succulents, grasses w/ rock mulch

Urban Runoff

Parkway Options

- Tree grates w/ permeable pavers
- Infiltration basin w/ bio-retention soils & subsurface drain

Median Options

- Tree basin w/ bio-retention soils & subsurface drain

Multi-Modal Connectivity

Walking Zone Options

- Bicycle corral or rack
- Min. 5 ft. clear walkway space

Parkway Options

- Meters, waste and recycle bins
- Pedestrian scale lighting
- Transit facilities w/ shelters & seating

Bike Facility Options

- Class 3 bike route

Parking Lane Options

- Wrap-around parking bulbouts

Street Crossing Options

- Enhanced marked pedestrian crosswalks
- Median refuge
- Pedestrian signal
- New traffic signal at intersection

Urban Open Space

Parkway Options

- Wayfinding/signage for safe route to parks

Pilot Project 2: El Cajon Blvd. from 45th Street to Chamoune Ave.

Pilot Project 2: El Cajon Blvd. from 45th St. to Chamoune Ave.

Description: Identify Chamoune Avenue as a Canopy Street and Community Connector. Improve vehicular and pedestrian flow between Hoover High School and Chamoune Avenue. Improve bicycle access, walking environment, and urban runoff flow along Chamoune Avenue and at its intersections with El Cajon Boulevard, Orange Avenue, Polk Avenue, and University Avenue

Benefits: Improved pedestrian safety near Hoover High School. Improved pedestrian environment for students and residents. Improved urban runoff capture and filtration.

Community Connectivity: The north end of the project is located at a key intersection in City Heights. At the beginning and end of a school day Hoover High students flood this area. The combination of pedestrians, school related vehicular traffic, and normal non-school related vehicular traffic on El Cajon Boulevard creates a series of unsafe conditions, that could be improved upon.

The project area is located in a mixed use area that focuses on neighborhood uses. The proposed Pilot Project is intended to highlight a Commercial Corridor on El Cajon Boulevard and a Canopy Street and Community Connector on Chamoune Avenue.

Urban Forestry: It is recommended that large canopy trees be applied to enhance the walking environment on Chamoune Avenue and small canopy trees be applied on El Cajon Boulevard. Palm trees are commonly used in commercial areas and there are currently palm trees on El Cajon Boulevard. The palms could be added to be consistent with the existing character. On El Cajon Boulevard, this would increase the number of palms by 23 trees. However, canopy trees need to be used with the palms, in order to obtain the proper level of urban forestry benefits associated with canopy trees.

El Cajon Boulevard is a Commercial Corridor and has a specific street tree palette that includes:

- Theme Tree: Syagrus romanzoffianum (Queen Palm)
- Alt. Theme Tree: Lophostemon confertus (Brisbane Box)
- Accent Median Tree: Jacaranda mimosifolia (Jacaranda)

Based on current drive way cuts, Chamoune Avenue could accommodate 70 additional street trees. Over a 40 year lifespan, the 70 additional trees would absorb 910 pounds of carbon dioxide per year. The 70 additional trees on Chamoune Avenue provides $44,800 in oxygen benefit, $86,800 in air pollution control, $52,500 in water retention for adjacent landscaped areas, and $43,400 in soil erosion prevention. This adds a total value of $227,500 associated with the street trees alone.

Urban Runoff: From the intersection of Chamoune and El Cajon Boulevard south to Orange Avenue Chamoune functions as a Headwater Street. From Orange Avenue south to University Avenue, it functions as a Conveyor Street. The Orange Avenue intersection functions as a diverter due to storm drain inlets on either side. Parkway planters, and intersection pop-outs near the intersection would integrate planting areas, sub-surface retention areas, and sub drains connected to the storm drain system.

Multi-Modal Connectivity: El Cajon Boulevard is a heavily traveled street. It is identified as BRT corridor and has numerous bus routes traveling on it. Although it is a major transit corridor, El Cajon Boulevard is identified as a Commercial Corridor in the Green Streets System. This is due to its importance to the businesses and community of City Heights. Any new traffic calming measures should analyze potential slow down of service and increase traffic volumes. Chamoune is a low volume street and no mobility improvements are recommended.

Open Space Access: There are no open space opportunities at this Pilot Project.

Cost Estimate for Pilot Project

Total:	$239,988
20% Contingency/Escalation	$47,997
Total with Contingency/Escalation	$287,985

See pages 111-120 for details.

Urban Open Space

Parkway Options

- Wayfinding/signage for safe route to parks
- Convert a paper street into a park

Urban Forestry

Parkway Options

- Small to large tree w/ grate
- Medium to large canopy tree

Median Options

- Medium to large canopy trees
- Native shrubs, succulents, grasses w/ rock mulch

Multi-Modal Connectivity

Walking Zone Options

- Bicycle corral or rack
- Min. 5 ft. clear walkway space

Parkway Options

- Meters, waste and recycle bins
- Pedestrian scale lighting
- Transit facilities w/ shelters & seating

Bike Facility Options

- Class 3 bike route

Urban Runoff

Parkway Options

- Tree grates w/ permeable pavers
- Infiltration basin w/ bio-retention soils & subsurface drain

Parking Lane Options

- Bulb-out as an infiltration basin w/ bio-retentions soils and subsurface drain

Median Options

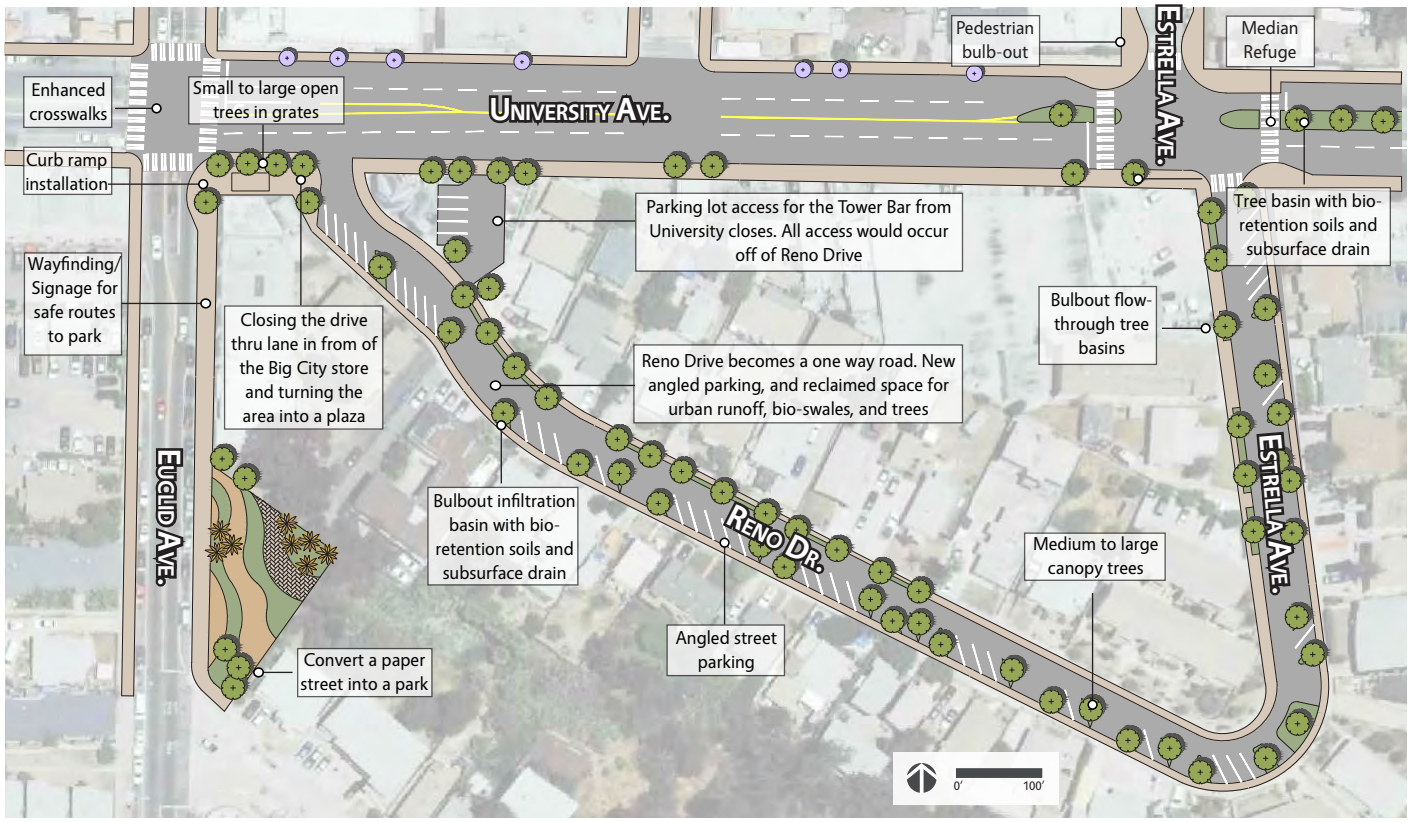
- Tree basin w/ bio-retention soils & subsurface drain

Parking Lane Options

- Wrap-around parking bulb-outs
- Angled parking

Street Crossing Options

- Enhanced marked pedestrian crosswalks
- Median refuge
- Pedestrian signal
- New traffic signal at intersection



Pilot Project 3: University Avenue between Euclid Ave. & Winona Ave.

Pilot Project 3: University Ave. Between Euclid Ave. & Winona Ave.

Description: Improve the identify of University Avenue as a Main Street area. Improve the vehicular flow in the project area. Improve bicycle access, walking environments, and urban runoff flow by changing the physical conditions on University Avenue and Reno Drive. Create a mini-park in the vacant lot at Euclid Avenue and Auburn Drive.

Benefits: Improved conditions may help to alleviate the number of accidents, improper vehicular movements common in the project area and enhance the quality of life by installing a plaza at University and Reno Drive. Improve bicycle connectivity and safety along University Avenue. Improve urban runoff retention and quality along Reno Drive. Provide additional park space for the City Heights community.

Previous Planning: This project area is included in the CHCDC's on-going Walk and Shop Program and is highlighted in the Gateway/ Tower District. The Walk and Shop Program will provide direction on signage and branding for the Gateway/Tower District.

The City of San Diego Bicycle Master Plan proposes a Class II bicycle facility on University Avenue from Utah Street to the La Mesa city limit.

The Mid-City Community Plan (MCCP)also includes the City Heights Planning Area. The recommendations are consolidated from the MCCP and include:

- Angled parking and wider sidewalks
- Street trees, attractive bus stops, and direction signage
- Paved alleys, urban plazas/mini-parks
- Public acquisition of vacant or under-used land for park/recreation development along the street
- Widened eastbound University Avenue to provide one left-turn, two through, and one right turn lane
- There should be no narrowing of sidewalks. Widen northbound Euclid Avenue to provide one left-turn, one through, and one right-turn lane

The Euclid Revitalization Action Plan (ERAP) also highlights recommendations for this project area. These include:

- Urban plaza along University Avenue at Reno Drive
- Sign regulations of the citywide neighborhood commercial zones should apply
- Parking limitations near the intersection of University and Euclid Avenue

Community Connectivity: This project is located at a key intersection in City Heights. Euclid Avenue has been identified as a key improvement street by the Euclid Revitalization Area Plan (2000). The project area is located in a mixed use area that focuses on neighborhood uses. The proposed Pilot Project is intended to highlight a Main Street.

Urban Forestry: For this section of University Avenue, it is recommended that 27 small canopy trees be applied to enhance the walking environment on University Avenue. Additional street trees are recommended along Reno Drive.

This section of University Avenue is a Commercial Corridor and has a specific street tree palette that includes:

- Theme Tree: Koelreuteria bipinatta (Chinese flame)
- Alt. Theme Tree: Afrocarpus gracilior (African fern pine)
- Accent Tree: Jacaranda mimosifolia (Jacaranda)

Although Euclid Avenue is not the primary focus of this project, it is a Transit Access Street and has a specific street tree palette. Because there is a paper street that is being recommended to be converted to a park, it is recommended that the Euclid Ave. / Home Ave. street tree palette be applied when possible and included in the park design. Additional trees should include:

- Theme Tree: Plantanus racemosa (California Sycamore)
- Alt. Theme Tree: Quercus ilex (Holly Oak)

Urban Runoff: Euclid Avenue functions as a runoff conveyor within the area with diversions at the intersection with University and then midway to Auburn Drive. University Avenue east of Euclid and the western half of Reno Dr. function as a headwater street. The eastern half of Reno Drive and University Avenue east of Reno Dr. function as conveyor streets with a diversion at the bottom of the slope. The flow-through planter improvements on Reno Dr. will capture small surface flows before discharging to University Avenue.

Multi-Modal Connectivity: University Avenue supports a Class II Regional Bicycle Route and MTS Local Bus Route. The street design of University Avenue is important area due to the large topography changes that impact visibility for transit and other vehicles. Improvements to this area include lane striping and a new signal at University Avenue and Estrella.

Open Space Access: The Pilot Project calls for an urban plaza along University Avenue at Reno Drive in front of the Tower Bar as well as at the corner of University Avenue and Euclid Avenue in front of the Big City store. This provides an opportunity to enhance the historic nature of this area and increase street interest. A vacant lot at the intersection of Euclid Avenue and Auburn Dr. provides an opportunity for a mini park.

Cost Estimate for Pilot Project

Total:	$601,584
20% Contingency/Escalation	$120,901
Total with Contingency/Escalation	$721,901

See pages 111-120 for details.

Urban Forestry

Canyon Edge Options

- Native plants and trees planted along slope transitiions
- Native groundcover on slope transitions

Parkway Options

- Medium to large canopy tree
- Native shrubs, succulents, grasses w/ rock mulch

Parking Lane Options (where bulbout extensions are proposed)

- Small open trees
- Native shrubs, succulents, grasses w/ rock mulch

Urban Runoff

Walking Zone Options

- Permeable pavers
- Permeable asphalt or concrete
- Compacted decomposed granite walkway

Parkway Options

- Infiltration basin w/ bio-retention soils & subsurface drain
- Tree basin w/ filters & subsurface drain
- Subsurface Silva Cells & drain (use w/ permeable pavers)

Parking Lane Options

- Bulb-out as an infiltration basin w/ bio-retentions soils and subsurface drain

Multi-Modal Connectivity

Parkway Options

- Meters, waste and recycle bins
- Public art/wayfinding banners
- Pedestrian scale lighting
- Transit facilities w/ shelters & seating
- Public seating

Bike Facility Options

- Class 2 buffered bike lane

Travel Lane Options

- Lane diet

Parking Lane Options

- Wrap-around parking bulb-outs
- Angled parking

Street Crossing Options

- Enhanced marked pedestrian crosswalks
- Pedestrian signal
- New traffic signal at intersection

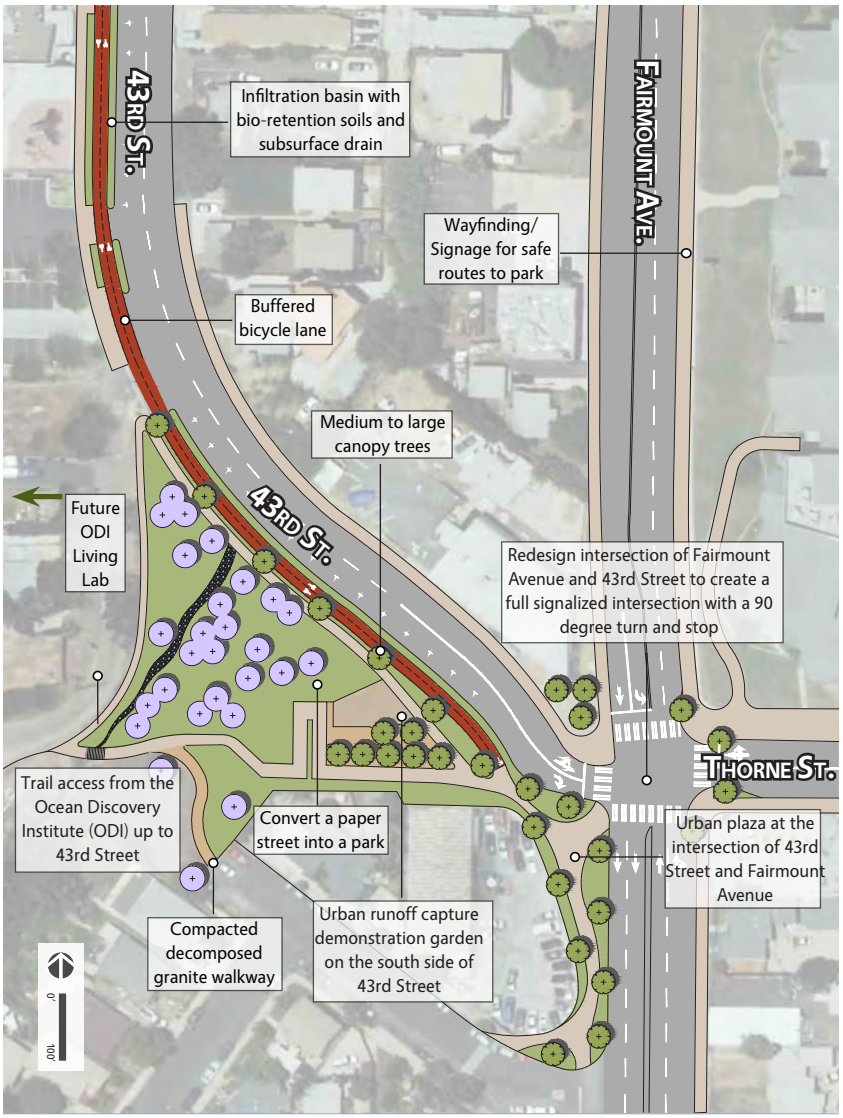
Urban Open Space

Canyon Edge Options

- Trailhead kiosk
- Trailhead access

Parkway Options

- Wayfinding/signage for safe route to parks
- Convert a paper street into a park



Pilot Project 4 & 5: 43rd St. between Myrtle and Fairmount Ave.

Pilot Project 4: 43rd St. from Myrtle to Fairmount Ave & 5: Living Lab Park

Description: Modify 43rd Street as a Canyon Interface Street. Improve the vehicular flow in the project area. Improve bicycle access, walking environment, and urban runoff flow by changing the physical conditions on 43rd Street.

Identify two Neighborhood Place opportunities that integrate urban forestry and urban runoff capture and re-use.

Benefits: Increase on-street parking and safer school access to Joyner Elementary School and Monroe Clark Middle School. Create a mini-park in the vacant lot west of the intersection of 43rd and Fairmount. Integrate the open space opportunity, and trail access with the future Ocean Discovery Institute (ODI).

Previous Planning: This Pilot Project received attention from the Safe Routes to School Study. The Mid-City Community Plan (MCCP) identifies this area as a place of pedestrian interchange. The recommendations are consolidated from the MCCP and include:

- 43rd St. and Fairmount are identified as a natural crosswalk or main street intersection
- Integrate street trees and provide space for a landscaped urban plaza
- In commercial areas, the first floor of buildings should be carefully set back from intersections to create large public areas at the corner.
- Restaurants, flower shops, and similar enterprises should be encouraged to help blur the transition between interior and exterior spaces
- Sidewalk pop-outs should be created to give greater space protection to the pedestrian, and reduce the actual vehicular crossing
- The vehicular intersection should be staked-out with permanent markings such as patterned paving, and painted pedestrian crossings
- Good lighting conditions have to be provided to enhance vehicular and pedestrian visibility
- Maintain 43rd St. as a two-lane collector street one-way southbound

Community Connectivity: This Pilot Project focuses on 43rd Street as an opportunity to naturally filter and slow urban runoff before it reaches the Manzanita Canyon.

Urban Forestry: It is recommended that 43rd Street receive native plantings in this area and incorporate street trees. With the recommendations for parking and street changes, it is recommended that an additional 11 trees be included in the sidewalk environment.

43rd Street and Fairmount are both Transit Access Streets (See Chapter 3). In addition, they each receive a specific street tree palette (See Appendix A) which includes:

- Theme Tree: Cinnamomum camphora (Camphor Tree)
- Alt. Theme Tree: Arbutus 'Marina' (Marina Madrone)

Assuming a 40 year lifespan, the additional trees on 43rd Street provides $7,040 worth of oxygen, $13,640 worth of air pollution prevention, $8,250 of water retention for adjacent landscapes, and $6,820 of soil erosion control. This is a total lifespan value of $35,750 in benefits resulting from the planting of an additional 11 trees.

Urban Runoff: 43rd Street functions as a conveyor within this area with a curb inlet diversion on the east side of the street at the low point. Water drains from Myrtle south and from Fairmount north. The drain inlet discharges the urban runoff under 43rd Street and into a drainage channel that flows south into Manzanita Canyon that may be undersized. The proposed mini-park could be used as a demonstration garden to showcase different types of urban runoff capture and management.

Multi-Modal Connectivity: 43rd & Fairmount are Transit Access Streets but this area of 43rd Street does not have transit activity. Fairmount Avenue does support transit activity in this area. It is recommended that a bicycle facility be integrated into 43rd Street to provide a safe route of travel apart from Fairmount Avenue. As 43rd Street joins back to Fairmount Avenue, it is important that bicycle access be integrated for residents and students.

Open Space Access: Two plaza or open space opportunities exist with this Pilot Project. One would be along 43rd Street as the edge drops off into the canyon. A second would be at the intersection of 43rd Street and Fairmount. The MCCP and CHUG both recommend that building setbacks allow of reclaimed urban space at the intersection.

Cost Estimate for Pilot Project 4 & 5

Total:	$287,848
20% Contingency/Escalation	$57,569
Total with Contingency/Escalation	$345,417

See pages 111-120 for details.

Urban Forestry

Canyon Edge Options

- Native plants and trees planted along slope transitiions
- Native groundcover on slope transitions

Parkway Options

- Medium to large canopy tree
- Native shrubs, succulents, grasses w/ rock mulch

Urban Runoff

Walking Zone Options

- Compacted decomposed granite walkway

Parkway Options

- Infiltration basin w/ bio-retention soils & subsurface drain
- Tree basin w/ filters & subsurface drain

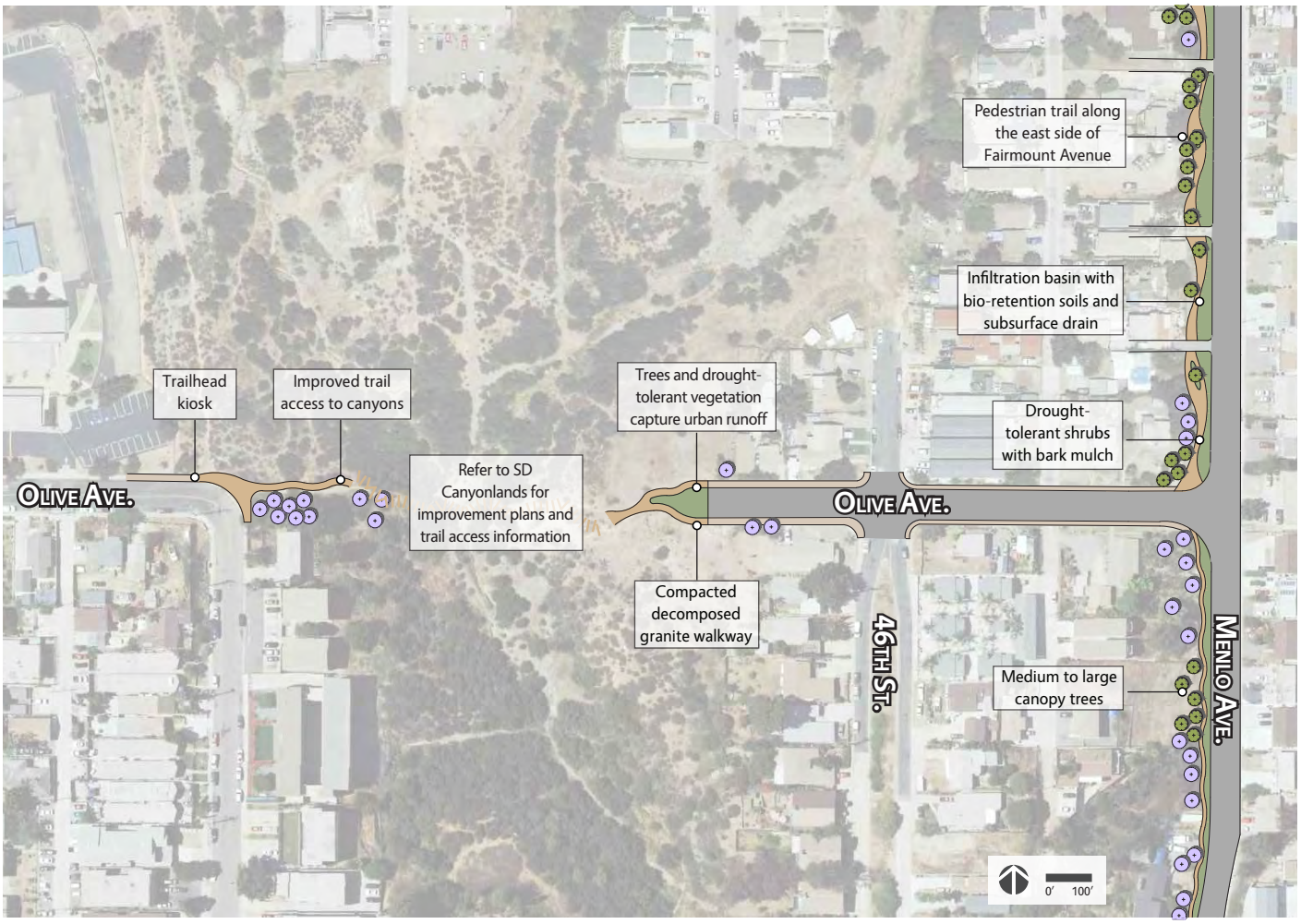
Urban Open Space

Canyon Edge Options

- Trailhead kiosk
- Trailhead access

Parkway Options

- Wayfinding/signage for safe route to parks



Pilot Project 6: Olive Ave. between Fairmount Ave. & Menlo Ave.

Pilot Project 6: Olive Ave. between Fairmount Ave. & Menlo Ave.

Description: Modify Olive Avenue as an Canyon Interface Street and Menlo Avenue as a Community Connector. Increase the trail access, improve bicycle access, walking environment, and urban runoff flow by changing the physical conditions.

Benefits: Increase trail access to Swan Canyon. Slow urban runoff flows to the canyon and increase pedestrian and bicycle connectivity. Improved bicycle and pedestrian connectivity should also be added along Menlo Avenue.

Previous Planning: San Diego Canyonlands has been working extensively on the canyons clean up, restoration, and trailhead design. The CHUG defers to these designs for construction of the trail heads. However, this Pilot Project focuses on access from the trailheads from Olive Avenue.

Community Connectivity: This Pilot Project focuses on the integration of Swan Canyon and Olive Avenue as a pedestrian and bicycle connection point for City Heights. The canyons that are spread throughout City Heights are an amenity but can also act as a barrier. This Pilot Project identifies a connection through Swan Canyon in conjunction with the work that SD Canyonlands is doing.

Urban Forestry: This Pilot Project focuses on Olive Avenue as a native landscape street. The plantings in this area should be native due to its adjacency to the canyon. This is an area that is within the Canyon Interface Zone and plants and trees should be carefully considered for their impact to the canyon. It is recommended that street trees be used with native plantings and that opportunities to use street trees similar to the existing trees be encouraged. In addition, the Street Tree Master Plan (STMP) identifies three trees that are particularly well suited within the Canyon Interface Zone. See Appendix A. These include:

- Arbutus menziesii (Madrona)
- Platanus racemosa (California sycamore)
- Quercus agrifolia (Coast live oak)

Urban Runoff: Olive Avenue and Menlo Avenue both function as headwater streets in this area. There are no drain inlets diverting urban runoff before in enters the canyon. Integrating urban runoff capture and filtration within the streets will directly benefit the volume and quality of urban runoff entering Swan Canyon.

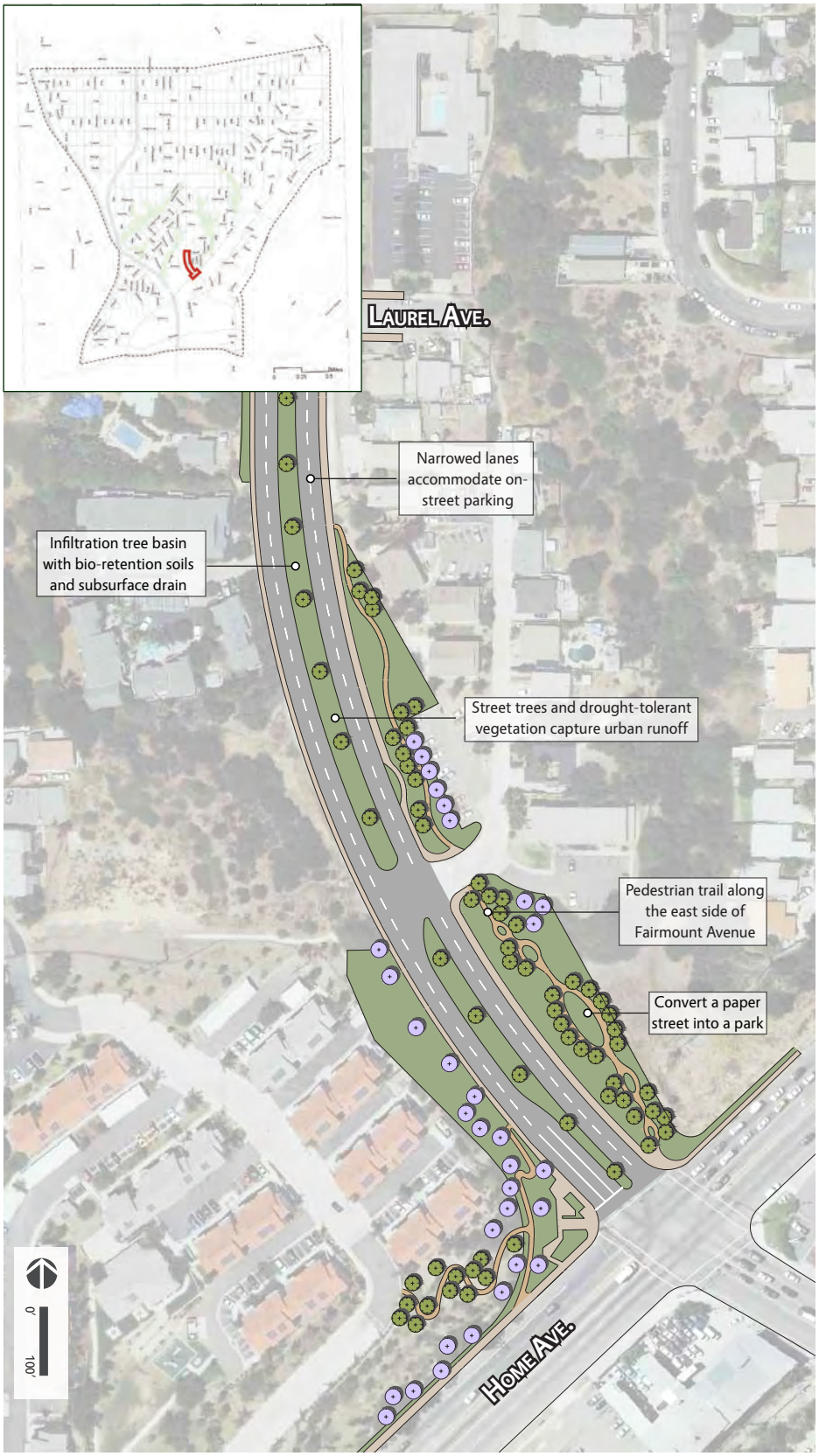
Multi-Modal Connectivity: The streets in this Pilot Project are identified as local streets and do not have any bus routes that run in this area or land uses that suggest commercial street interfaces. Olive Avenue is therefore classified as a Neighborhood Street. Olive Avenue is also a relatively narrow street. East of Swan Canyon, Olive Avenue has a 56 foot ROW and west of the Canyon, it has a 48 foot ROW. However, pedestrian access is a key concern due to topography. It is strongly recommended that a pedestrian connection be identified on Menlo Avenue down to Home Avenue.

Open Space Access: This Pilot Project does not include any additional open space but does include access to Swan Canyon. See SD Canyonlands plans for additional details regarding trailheads.

Cost Estimate for Pilot Project

Total:	$94,612
20% Contingency/Escalation	$18,922
Total with Contingency/Escalation	$113,534

See pages 111-120 for details.



Urban Forestry

Parkway Options

- Medium to large canopy tree
- Native shrubs, succulents, grasses w/ rock mulch

Median Options

- Medium to large canopy trees
- Native shrubs, succulents, grasses w/ rock mulch

Urban Runoff

Parkway Options

- Infiltration basin w/ bio-retention soils & subsurface drain
- Rain garden w/ bio-retention soils and subsurface drain

Median Options

- Tree basin w/ bio-retention soils & subsurface drain

Multi-Modal Connectivity

Travel Lane Options

- Lane diet

Urban Open Space

Walking Zone Options

- Compacted decomposed granite walkway

Parkway Options

- Wayfinding/signage for safe route to parks

Parking Lane Options

- Convert a paper street into a park

Pilot Project 7: Fairmount Ave. between Laurel Ave. and Home Ave.

Pilot Project 7: Fairmount Ave. between Laurel Ave. & Home Ave.

Description: Modify Fairmount Avenue from Laurel to Home Avenue as a key area for pedestrian and transit access. Increase transit amenities and provide new and improved pedestrian connections. Provide street trees for shading and opportunities for urban runoff capture.

Benefits: Increase pedestrian access to the multi-family residential areas in the southern area of City Heights. Increase transit amenities and reduce urban runoff flow.

Previous Planning: The connectivity between the more intensely developed area of City Heights and the more residential end of City Heights is separated by large topographic changes. Although the Azalea Park-Hollywood Park Revitalization Action Program addresses Fairmount Avenue in this area, there are no specific previous planning recommendations for this Pilot Project area.

Community Connectivity: This Pilot Project focuses on connecting the southern area of City Heights to the northern area. Fairmount Avenue is the main north to south thoroughfare in addition to Poplar Street.

Urban Forestry: The Pilot Project area of Fairmount Avenue is an area with significant grade change and a number of transit stops. Because of the high number of transit users, this Pilot Project should be a canopy street. It is recommended that 21 trees be included in this Pilot Project.

Fairmount is a Transit Access Street (See Chapter 3). Fairmount is an important street because of its north to south access through the center of City Heights planning area. In addition, it receives a specific street tree palette (See Appendix A) that includes:

- Theme Tree: Cinnamomum camphora (Camphor Tree)
- Alt. Theme Tree: Arbutus 'Marina' (Marina Madrone)

Assuming a 40 year lifespan, the additional trees on Fairmount Avenue provides $13,440 worth of oxygen, $26,040 worth of air pollution reductions, $15,750 of water retention for adjacent landscapes, and $13,020 of soil erosion control. This is a total value of $68,250 in benefits by planting an additional 21 canopy trees.

Urban Runoff: In this area, Fairmount functions as a conveyor street with urban runoff flows gaining speed and volume as they flow downhill from Laurel Avenue to Home Avenue. Urban runoff diversions in the proposed expanded parkway improvements would enhance capture and filtration opportunities before the runoff reaches Chollas Creek just on the other side of Home Avenue.

Multi-Modal Connectivity: There are two MTS bus stops in the Pilot Project area. There are no specific improvements to either transit stops. This Pilot Project focuses on the pedestrian access to each of these stops. It is recommended that a pedestrian connection be made from Home Avenue up to Laurel Avenue.

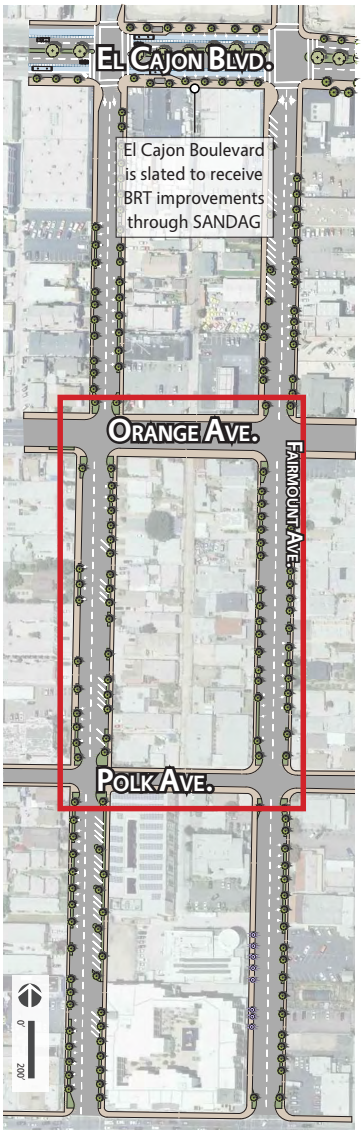
Fairmount Avenue is also excessively wide in this area. There is an opportunity to narrow through a lane diet and break curb and gutter. If appropriate, this solution would allow new urban runoff solutions to be implemented as well. However, if the existing curb and gutter were retained, there is an opportunity to reclaim excess width by adding a new curb that ties into the existing curb.

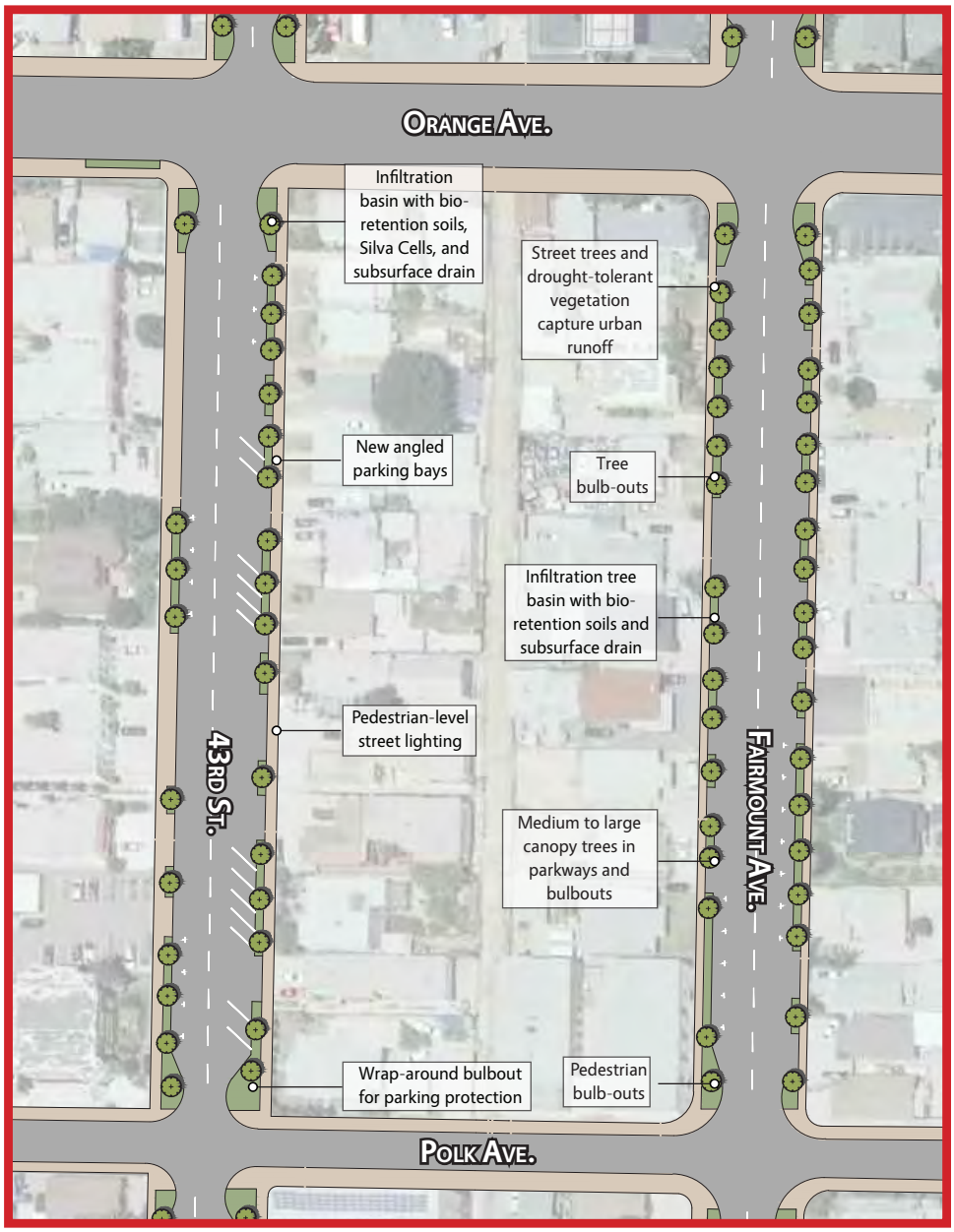
Open Space Access: This Pilot Project recommends repurposing excess ROW on the east of Fairmount Avenue as a linear park area.

Cost Estimate for Pilot Project

Total:	$290,310
20% Contingency/Escalation	$58,062
Total with Contingency/Escalation	$348,372

See pages 111-120 for details.





Urban Forestry

Parkway Options

- Small to large tree w/ grate
- Medium to large canopy trees
- Native shrubs, succulents, grasses w/ rock mulch

Parking Lane Options

- Small open tree
- Native shrubs, succulents, grasses w/ rock mulch

Urban Runoff

Parkway Options

- Tree basin w/ bio-retention soils & subsurface drain
- Subsurface Silva Cells & drain (use w/ permeable pavers)

Parking Lane Options

- Intersection bulb-out w/ bio-retention soils & subsurface drain

Multi-Mod

Walking Zone Optio

- Min. 5 ft. clear

Parking Lane Optio

- Wrap-around
- Angled parkin

Street Crossing Op

- Enhanced mar crosswalks

Bike Facility Option

- Class 3 bike r

Pilot Project 8/9: 43rd St. & Fairmount Ave. between El Cajon Blvd. & University Ave.

Pilot Project 8 & 9 Alt.1: 43rd St. & Fairmount Ave. between El Cajon Blvd. & University Ave.

Description: Modify 43rd Street and Fairmount Avenue as a set of sustainable, one-way streets that provides multi-modal access in City Heights.

Benefits: Increase the canopy cover on these two streets to provide a shaded pedestrian environment. Expand the pedestrian walk way and incorporate a bicycle facility onto both streets.

Previous Planning: The Walk and Shop program identifies this area as the Fairmount/43rd Street Mall district. See the Walk and Shop program for signage, branding, and art recommendations.

The Mid-City Community Plan identifies this area as the International Promenade. The goal for this area is to encourage an international trade center where ethnically oriented goods and services can be offered at a regional scale. Recommendations from the MCCP include:

- Concentrated mixed-use development, with retail or light manufacturing on the ground floor, services, office development and housing on upper floors of ethnically oriented businesses
- Additional street trees to mitigate heat gain resulting from paved surfaces
- Angled parking bays to narrow the street travel way, reduce speed and increase parking capacity for businesses
- Consistent design and function of 43rd Street and Fairmount Avenue. Public improvements, parking layouts, and eventually one-way traffic, should be engineered to encourage pedestrian movement. Encourage wider sidewalks
- Outdoor eating and sales areas, and banners advertising the area's international and ethnic assets. (Walk and Shop Program addresses this)
- Pedestrian-oriented "acorn" streetlights south of Meade Avenue. (Walk and Shop Program addresses this)
- Enhanced paving at intersections to encourage pedestrian crossings, and discourage vehicle speeding, through greater pavement "friction"
- Encourage building facade designs that include architectural detailing, reflective of the various cultures in the community (Walk and Shop Program addresses this)
- Provide gateway structures to enhance the International Promenade at its entrances from the north and south (Walk and Shop Program addresses this)

In addition to these two plans, the intersection of 43rd Street and Fairmount Avenue have been highlighted as a BRT Station by the Mid-City Regional Transportation Planning project through MTS and SANDAG. The Pilot Project incorporates the graphics and design strategy from the previous effort. In addition, this area is in close proximity to the I-15 and El Cajon Boulevard BRT stations.

Community Connectivity: This Pilot Project focuses on creating the infrastructure to support a commercial district and international marketplace concept. El Cajon Boulevard and University Avenue are key east-west streets and 43rd Street and Fairmount Avenue are heavily traversed community connector streets that need to support the businesses that are located on them.

Urban Forestry: The Pilot Project area of Fairmount Avenue and 43rd Street include both community connectors as canopy streets. Both streets should encourage and incorporate 79 new trees.

43rd Street and Fairmount are both Transit Access Streets (See Chapter 3). In addition, they each receive a specific street tree palette (See Appendix A) that includes:

- Theme Tree: Cinnamomum camphora (Camphor Tree)
- Alt. Theme Tree: Arbutus 'Marina' (Marina Madrone)

Assuming a 40 year lifespan, the additional trees on 43rd Street and Fairmount Avenue provides $50,432 worth of oxygen, $97,712 worth of air pollution prevention, $59,100 of water retention for adjacent landscapes, and $48,856 of soil erosion control. This is a total lifespan value of $256,100 in benefits by planting an additional 79 canopy trees.

Urban Runoff: The area between Polk Avenue and University Avenue is the watershed divide between the San Diego River and Chollas Creek. The areas north of Polk Avenue drain to the San Diego River and the areas south to Chollas Creek. Both 43rd Street and Fairmount Avenue function as headwater streets in this area. Improvements north of Polk Avenue can tie into the existing storm drain pipes, so larger volumes of urban runoff can be captured and filtered. South of Polk Avenue improvements will need to focus on flow-through devices capturing and filtering less urban runoff volume.

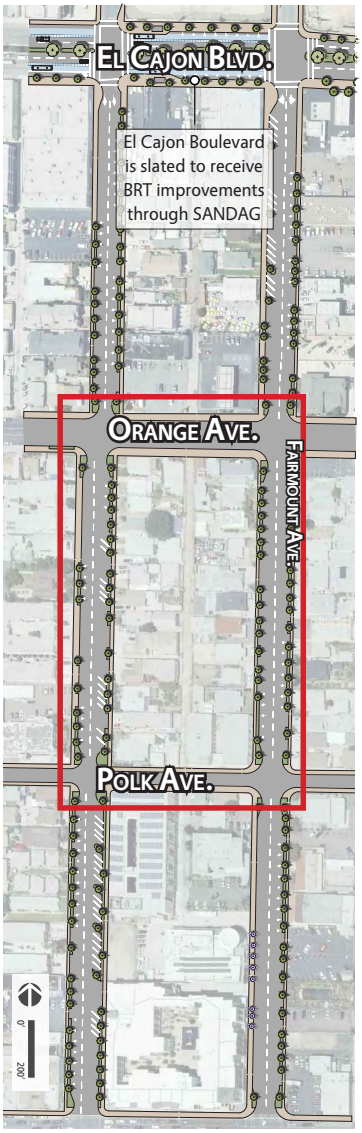
Multi-Modal Connectivity: 43rd Street and Fairmount Avenue are key Community Connectors and are heavily traveled for MTS Bus Routes and are thus also Transit Access Streets. In addition, providing safe pedestrian access is a necessity for these two streets as there is a large student population that traverses this Pilot Project. In addition, the previously mentioned BRT planning effort should be considered.

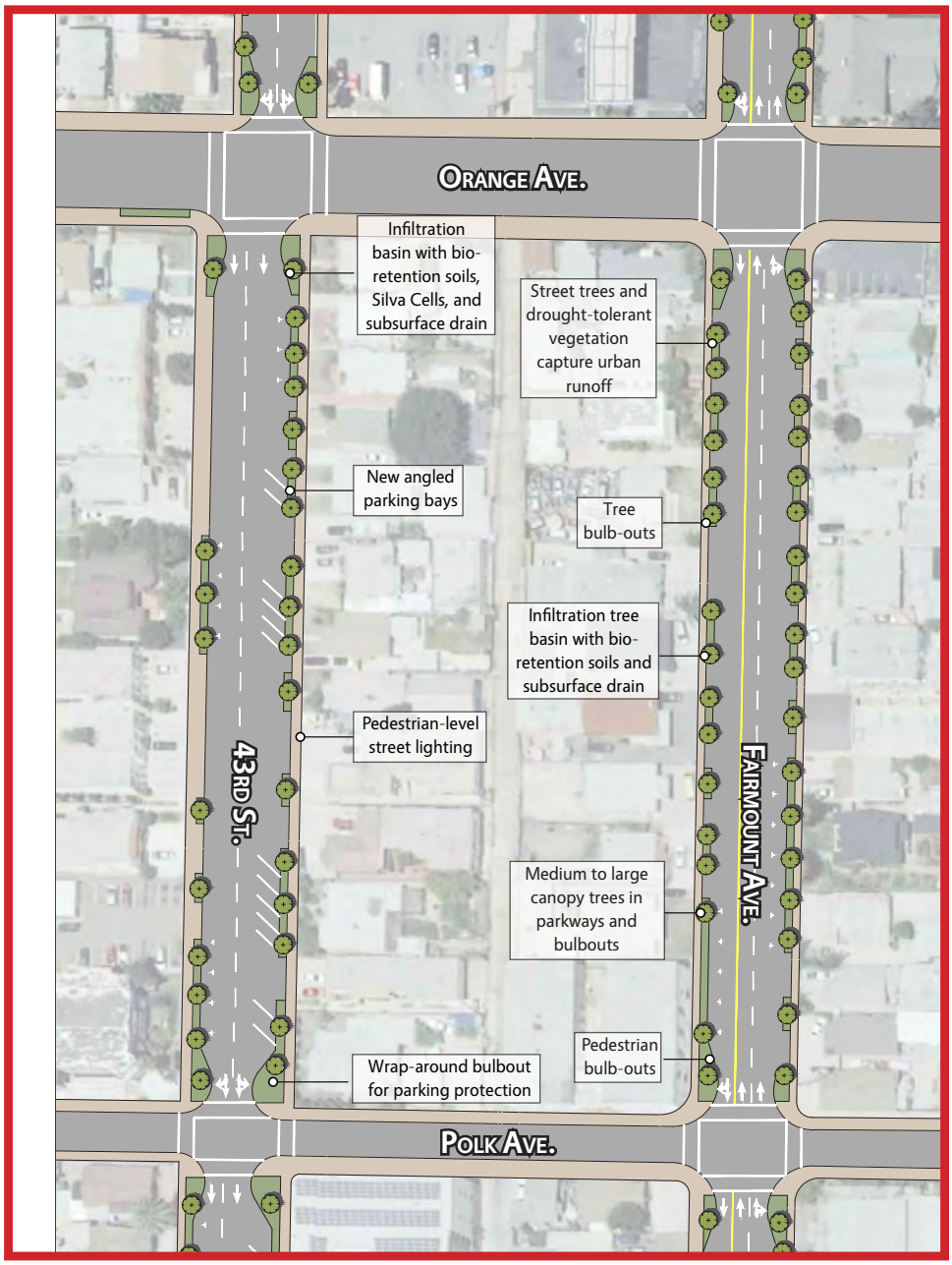
Open Space Access: This Pilot Project does not include any additional open space.

Cost Estimate for Pilot Project

Total:	$671,727
20% Contingency/Escalation	$134,345
Total with Contingency/Escalation	$806,072

See pages 111-120 for details.





Pilot Project 8/9: 43rd St. & Fairmount Ave. between El Cajon Blvd. & University Ave.

Pilot Project 8/9 Alternative 2: 43rd St. & Fairmount Ave. between El Cajon Blvd. & University Ave.

Description: Retains the existing street layout of 43rd Street and Fairmount Avenue but focuses on improving the multi-modal access in City Heights.

Benefits: Increase the canopy cover on these two streets to provide a shaded pedestrian environment. Incorporate a bicycle facility onto both streets.

Previous Planning: See Alternative 1

Community Connectivity: See Alternative 1.

Urban Forestry: See Alternative 1.

Urban Runoff: See Alternative 1.

Multi-Modal Connectivity: The biggest differences between Alternative 1 and Alternative 2 occur in the street environment. Alternative 2 retains the one-way southbound access on 43rd street and two-way access on Fairmount Avenue.

Open Space Access: This Pilot Project does not include any additional open space.

Cost Estimate for Pilot Project

Total:	$656,527
20% Contingency/Escalation	$ 131,305
Total with Contingency/Escalation	$787,832

See pages 111-120 for details.

Urban Forestry

Parkway Options

- Small to large tree w/ grate

Urban Runoff

Parkway Options

- Tree grates w/ permeable pavers

Multi-Modal Connectivity

Parkway Options

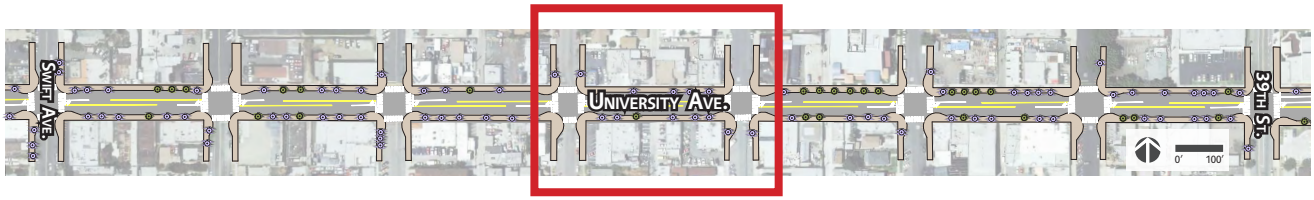
- Meters, waste and recycle bins
- Pedestrian scale lighting
- Transit facilities w/ shelters & seating

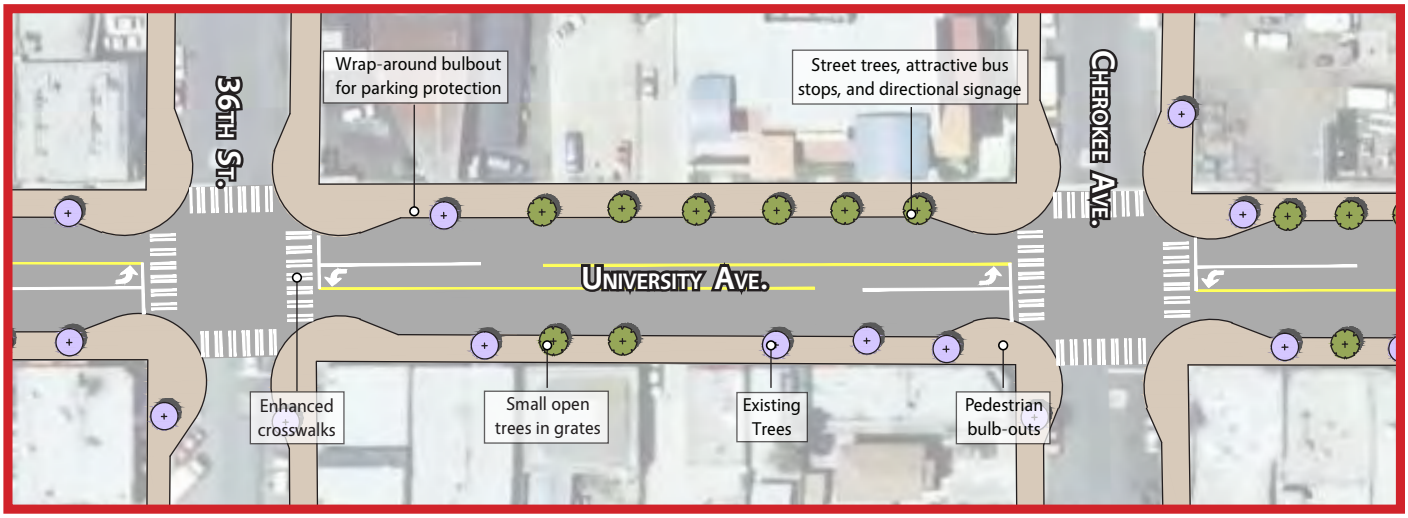
Parking Lane Options

- Wrap-around parking bulb-outs

Street Crossing Options

- Enhanced marked pedestrian crosswalks





Pilot Project 10: University Ave. between 40th St. and 43rd

Pilot Project 10: University Ave. between Swift Ave. to 39th Street

Description: University Avenue in this area is considered the old heart of City Heights. It includes the former East San Diego City Hall, former movie theater, and other significant structures. Today it is a heavy Commercial Corridor but the vision would be to return the character of University Avenue to a Main Street of Commerce.

Benefits: Increase the canopy cover on University Avenue and expand the pedestrian walk way to facilitate new commercial activity.

Action Items: See the Walk and Shop Program for additional details.

Previous Planning: The Walk and Shop program identifies this area as the Historic District. See the Walk and Shop program for signage, branding, and art recommendations.

According to SANDAG's Regional Bikeway Plan, University Avenue is a slated to accommodate a Class II bicycle facility.

The Mid-City Community Plan (MCCP)also includes the City Heights Planning Area. The recommendations are consolidated from the MCCP and include:

- Angled parking and wider sidewalks
- Street trees, attractive bus stops, and direction signage
- Paved alleys, develop urban plazas/mini-parks
- Public acquisition of vacant or under-used land for park/recreation development along the street
- Widened eastbound University Avenue to provide one left-turn, two through, and one right turn lane
- Widened northbound Euclid Avenue to provide one left-turn, one through, and one right-turn lane

Community Connectivity: This Pilot Project focuses on University Avenue as a Main Street of Commerce and Community Connector.

Urban Forestry: While the Walk and Shop program will specifically identify signage, branding, and urban design recommendations, there is an opportunity to add 68 new trees in this Pilot Project area.

University Avenue in this section is identified as a Main Street by this plan and as a historic district by the Walk and Shop Program. It has a specific street tree palette (See Appendix A) including:

- Theme Tree: Koelreuteria bipinatta (Chinese flame tree)
- Alt. Theme Tree: Afrocarpus gracilior (African fern pine)
- Accent Tree: Jacaranda mimosifolia (Jacaranda)

Assuming a 40 year lifespan, the additional trees on University Avenue provides $43,482 worth of oxygen, $84,246 worth of air pollution savings, $50,955 of water retention for adjacent landscapes, and $42,122 of soil erosion control. This is a lifespan total value of $220,805 in benefits by planting an additional 68 canopy trees.

Urban Runoff: University Avenue within this area is positioned as a headwater street and functions as a ` with a series of drain inlets located along its length. Improvements can tie into the existing storm drain pipes, so larger volumes of urban runoff can be captured and filtered.

Multi-Modal Connectivity: University Avenue is multi-modal street that currently is not designed to accommodate pedestrians, cyclists, motorists, and transit users. It should safely accommodate cyclists and enhance pedestrian access by adding facilities.

Open Space Access: This Pilot Project does not include any additional open space.

Cost Estimate for Pilot Project

Total:	$617,128
20% Contingency/Escalation	$123,425
Total with Contingency/Escalation	$740,553

See pages 111-120 for details.

Pilot Project 1 Cost Estimate	Unit	Unit Cost	QTY	Line Item Total
Planting and Hardscape				
Soil Preparation	SF	$0	10500	$3,465
Trees - 36″ Box	EA	$900	66	$59,400
Plant material for bulb-outs, median, and parkway	SF	$3	10500	$31,500
New Tree Grates	EA	$672		$0
Landscape - Groundcover	SF	$2		$0
Landscape - Mulch	CY	$150		$0
Integral Color Paving - Pedestrian	SF	$9		$0
Cobble	SF	$5		$0
Stabilized & Compacted Decomposed Granite	SF	$2		$0
Unit Pavers (including base)	SF	$12	22	$14,784
Tree Pop outs	EA	$1,000	15	$15,000
			Subtotal:	$124,149
Lighting				
High Visibility Pedestrian Beacon/HAWK (3	EA	$5,000	1	$45,000
Demolition				
Demo - Curb & Gutter	LF	$4	440	$1,760
Civil Improvements				
Lane & Parking Stripes, Crosswalks & Lane Markers	LF	$1		$0
Pedestrian Ramps	EA	$2,500	10	$25,000
Construct Concrete Sidewalks	SF	$5		$0
Construct Median Curb	LF	$15	1700	$25,500
Construct 6″ Curb & Gutter	LF	$25		$0
Bulbouts	EA	$12,500	4	$50,000
Bicycle lane paint	SF	$5		$0
			Subtotal:	$100,500
			Total:	$271,409
			20% Contingency/Escalation	$54,282
			Total with Contingency/Escalation	$325,691
Pilot Project 2 Cost Estimate	**Unit**	**Unit Cost**	**QTY**	**Line Item Total**
Planting and Hardscape				
Soil Preparation	SF	$0	1000	$330
Trees - 36″ Box	EA	$900	29	$26,100
Plant material for bulb-outs, median, and parkway	SF	$3	1000	$3,000
New Tree Grates	EA	$672	24	$16,128
Landscape - Groundcover	SF	$2		$0
Landscape - Mulch	CY	$150		$0
Integral Color Paving - Pedestrian	SF	$9		$0
Cobble	SF	$5		$0
Stabilized & Compacted Decomposed Granite	SF	$2		$0
Unit Pavers (including base)	SF	$12		$0
Tree Pop outs	EA	$1,000		$0
			Subtotal:	$45,558
Lighting				
Rectangular Rapid Flashing Beacon/Pedestrian Signal	EA	$5,000	2	$10,000
Demolition				
Demo - Curb & Gutter	LF	$4	1320	$5,280
Civil Improvements				
Lane & Parking Stripes, Crosswalks & Lane Markers	LF	$1		$0
Pedestrian Ramps	EA	$2,500	16	$40,000
Construct Concrete Sidewalks	SF	$5		$0
Construct Median Curb	LF	$15	110	$1,650
Construct 6″ Curb & Gutter	LF	$25		$0
Bulbouts	EA	$12,500	11	$137,500
Bicycle lane paint	SF	$5		$0
			Subtotal:	$179,150
			Total:	$239,988
			20% Contingency/Escalation	$47,998
			Total with Contingency/Escalation	$287,986

Pilot Project 3 Cost Estimate	Unit	Unit Cost	QTY	Line Item Total
Planting and Hardscape				
Soil Preparation	SF	$0	10460	$3,452
Trees - 36" Box	EA	$900	73	$65,700
Plant material for bulb-outs, median, and parkway	SF	$3	3400	$10,200
New Tree Grates	EA	$672	14	$9,408
Landscape - Groundcover	SF	$2	3500	$7,875
Landscape - Mulch	CY	$150		$0
Integral Color Paving - Pedestrian	SF	$9		$0
Cobble	SF	$5		$0
Stabilized & Compacted Decomposed Granite	SF	$2	2600	$5,200
Unit Pavers (including base)	SF	$12	1000	$12,000
Tree Pop outs	EA	$1,000		$0
			Subtotal:	$113,835
Lighting				
Traffic signal	EA	$200,000	2	$400,000
Demolition				
Demo - Curb & Gutter	LF	$4	550	$2,200
Civil Improvements				
Lane & Parking Stripes, Crosswalks & Lane Markers	LF	$1		$0
Pedestrian Ramps	EA	$2,500	10	$25,000
Construct Concrete Sidewalks	SF	$5		$0
Construct Median Curb	LF	$15	370	$5,550
Construct 6" Curb & Gutter	LF	$25		$0
Bulbouts	EA	$12,500	4	$50,000
Bicycle lane paint	SF	$5		$0
			Subtotal:	$85,550
			Total:	$601,585
			20% Contingency/Escalation	$120,317
			Total with Contingency/Escalation	$721,902

Pilot Project 4 & 5 Cost Estimate	Unit	Unit Cost	QTY	Line Item Total
Planting and Hardscape				
Soil Preparation	SF	$0	29600	$9,768
Trees - 36" Box	EA	$900	31	$27,900
Plant material for bulb-outs, median, and parkway	SF	$3	8000	$24,000
New Tree Grates	EA	$672	21600	$48,600
Landscape - Groundcover	SF	$2		$0
Landscape - Mulch	CY	$150		$0
Integral Color Paving - Pedestrian	SF	$9	700	$3,500
Cobble	SF	$5	2600	$5,200
Stabilized & Compacted Decomposed Granite	SF	$2	1200	$14,400
Unit Pavers (including base)	SF	$12		$0
Tree Pop outs	EA	$1,000		$0
			Subtotal:	$133,368
Lighting				
Demolition				
Demo - Curb & Gutter	LF	$4	220	$880
Civil Improvements				
Lane & Parking Stripes, Crosswalks & Lane Markers	LF	$1	1100	$1,100
Pedestrian Ramps	EA	$2,500	7	$17,500
Construct Concrete Sidewalks	SF	$5	10000	$50,000
Construct Median Curb	LF	$15		$0
Construct 6" Curb & Gutter	LF	$25	700	$17,500
Bulbouts	EA	$12,500	3	$37,500
Bicycle lane paint	SF	$5	6000	$30,000
			Subtotal:	$153,600
			Total:	$287,848
			20% Contingency/Escalation	$57,570
			Total with Contingency/Escalation	$345,417

Pilot Project 6 Cost Estimate	Unit	Unit Cost	QTY	Line Item Total
Planting and Hardscape				
Soil Preparation	SF	$0	11400	$3,762
Trees - 36" Box	EA	$900	24	$21,600
Plant material for bulb-outs, median, and parkway	SF	$3		$0
New Tree Grates	EA	$672	11400	$25,650
Landscape - Groundcover	SF	$2		$0
Landscape - Mulch	CY	$150		$0
Integral Color Paving - Pedestrian	SF	$9		$0
Cobble	SF	$5	12800	$25,600
Stabilized & Compacted Decomposed Granite	SF	$2		$0
Unit Pavers (including base)	SF	$12		$0
Tree Pop outs	EA	$1,000		$0
			Subtotal:	$76,612
Lighting				
Demolition				
Demo - Curb & Gutter	LF	$4	1320	$5,280
Civil Improvements				
Lane & Parking Stripes, Crosswalks & Lane Markers	LF	$1		$0
Pedestrian Ramps	EA	$2,500		$0
Construct Concrete Sidewalks	SF	$5	3600	$18,000
Construct Median Curb	LF	$15		$0
Construct 6" Curb & Gutter	LF	$25		$0
Bulbouts	EA	$12,500		$0
Bicycle lane paint	SF	$5		$0
Subtotal:				$18,000
			Total:	$94,612
			20% Contingency/Escalation	$18,922
			Total with Contingency/Escalation	$113,534

Pilot Project 7 Cost Estimate	Unit	Unit Cost	QTY	Line Item Total
Planting and Hardscape				
Soil Preparation	SF	$0	1000	$330
Trees - 36" Box	EA	$900	29	$26,100
Plant material for bulb-outs, median, and parkway	SF	$3	1000	$3,000
New Tree Grates	EA	$672	24	$16,128
Landscape - Groundcover	SF	$2		$0
Landscape - Mulch	CY	$150		$0
Integral Color Paving - Pedestrian	SF	$9		$0
Cobble	SF	$5		$0
Stabilized & Compacted Decomposed Granite	SF	$2		$0
Unit Pavers (including base)	SF	$12		$0
Tree Pop outs	EA	$1,000		$0
			Subtotal:	$252,060
Lighting				
Demolition				
Demo - Curb & Gutter	LF	$4	1320	$5,280
Civil Improvements				
Lane & Parking Stripes, Crosswalks & Lane Markers	LF	$1		$0
Pedestrian Ramps	EA	$2,500		$0
Construct Concrete Sidewalks	SF	$5		$0
Construct Median Curb	LF	$15	2550	$38,250
Construct 6" Curb & Gutter	LF	$25		$0
Bulbouts	EA	$12,500		$0
Bicycle lane paint	SF	$5		$0
			Subtotal:	$38,250
			Total:	$290,310
			20% Contingency/Escalation	$58,062
			Total with Contingency/Escalation	$348,372

Pilot Project 8/9 Alternative A Cost Estimate	Unit	Unit Cost	QTY	Line Item Total
Planting and Hardscape				
Soil Preparation	SF	$0	27900	$9,207
Trees - 36" Box	EA	$900	104	$93,600
Plant material for bulb-outs, median, and parkway	SF	$3	27900	$83,700
New Tree Grates	EA	$672		$0
Landscape - Groundcover	SF	$2		$0
Landscape - Mulch	CY	$150		$0
Integral Color Paving - Pedestrian	SF	$9		$0
Cobble	SF	$5		$0
Stabilized & Compacted Decomposed Granite	SF	$2		$0
Unit Pavers (including base)	SF	$12	25	$16,800
Tree Pop outs	EA	$1,000	8	$8,000
			Subtotal:	$211,307
Lighting				
Demolition				
Demo - Curb & Gutter	LF	$4	2530	$10,120
Civil Improvements				
Lane & Parking Stripes, Crosswalks & Lane Markers	LF	$1	4500	$4,500
Pedestrian Ramps	EA	$2,500	54	$135,000
Construct Concrete Sidewalks	SF	$5		$0
Construct Median Curb	LF	$15	720	$10,800
Construct 6" Curb & Gutter	LF	$25		$0
Bulbouts	EA	$12,500	24	$300,000
Bicycle lane paint	SF	$5		$0
Subtotal:				$450,300
			Total:	$671,727
			20% Contingency/Escalation	$134,345
			Total with Contingency/Escalation	$806,072

Pilot Project 8/9 Alternative B Cost Estimate	Unit	Unit Cost	QTY	Line Item Total
Planting and Hardscape				
Soil Preparation	SF	$0	27900	$9,207
Trees - 36" Box	EA	$900	96	$86,400
Plant material for bulb-outs, median, and parkway	SF	$3	27900	$83,700
New Tree Grates	EA	$672		$0
Landscape - Groundcover	SF	$2		$0
Landscape - Mulch	CY	$150		$0
Integral Color Paving - Pedestrian	SF	$9		$0
Cobble	SF	$5		$0
Stabilized & Compacted Decomposed Granite	SF	$2		$0
Unit Pavers (including base)	SF	$12	25	$16,800
Tree Pop outs	EA	$1,000		$0
			Subtotal:	$196,107
Lighting				
Demolition				
Demo - Curb & Gutter		$4	1320	$5,280
Civil Improvements				
Lane & Parking Stripes, Crosswalks & Lane Markers	LF	$1	4500	$4,500
Pedestrian Ramps	EA	$2,500	54	$135,000
Construct Concrete Sidewalks	SF	$5		$0
Construct Median Curb	LF	$15	720	$10,800
Construct 6" Curb & Gutter	LF	$25		$0
Bulbouts	EA	$12,500	24	$300,000
Bicycle lane paint	SF	$5		$0
			Subtotal:	$450,300
			Total:	$656,527
			20% Contingency/Escalation	$131,305
			Total with Contingency/Escalation	$787,832

Pilot Project 10 Cost Estimate	Unit	Unit Cost	QTY	Line Item Total
Planting and Hardscape				
Soil Preparation	SF	$0		$0
Trees - 36" Box	EA	$900	29	$26,100
Plant material for bulb-outs, median, and parkway	SF	$3		$0
New Tree Grates	EA	$672	29	$19,488
Landscape - Groundcover	SF	$2		$0
Landscape - Mulch	CY	$150		$0
Integral Color Paving - Pedestrian	SF	$9		$0
Cobble	SF	$5		$0
Stabilized & Compacted Decomposed Granite	SF	$2		$0
Unit Pavers (including base)	SF	$12		$0
Tree Pop outs	EA	$1,000		$0
			Subtotal:	$45,588
Lighting				
Demolition				
Demo - Curb & Gutter	LF	$4	1760	$7,040
Civil Improvements				
Lane & Parking Stripes, Crosswalks & Lane Markers	LF	$1	4500	$4,500
Pedestrian Ramps	EA	$2,500	64	$160,000
Construct Concrete Sidewalks	SF	$5		$0
Construct Median Curb	LF	$15		$0
Construct 6" Curb & Gutter	LF	$25		$0
Bulbouts	EA	$12,500	32	$400,000
Bicycle lane paint	SF	$5		$0
			Subtotal:	$564,500
			Total:	$617,128
			20% Contingency/Escalation	$123,426
			Total with Contingency/Escalation	$740,554

6 Street Tree Plan

This section includes:

- Street Tree Palettes
- Community Corridors
- Residential Corridors
- Landscape Districts

6.1 Street Tree Plan Framework

The City Heights Street Tree Plan is designed to provide an optimum range of tree species that have been selected to reinforce community character and reduce future problems and expense. This Plan is intended to be used to facilitate the species selection based on a review of tree size at maturity, as well as physical characteristics.

The street tree framework was developed with an emphasis on choosing the right tree for the right place. Street trees were selected with three major categories in mind: visual aesthetic, function and viability. These factors are interrelated, and although one may stand out as more dominant, all three categories need to be considered.

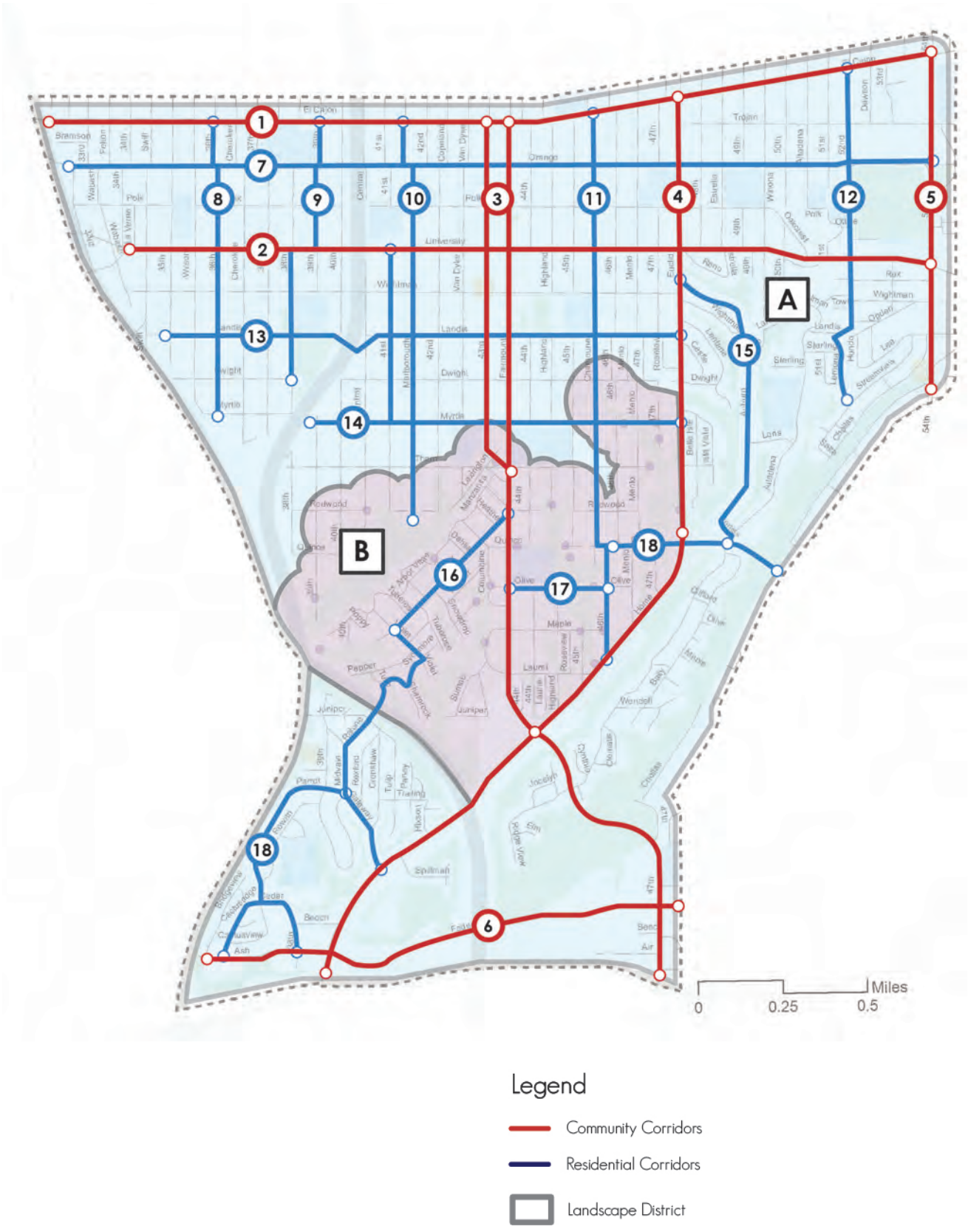
The City of San Diego manages the selection of street trees through an approved Street Tree Plan for a planning area or through the City's Street Tree Selection Guide. City Heights does not have a previous Street Tree Plan, thus the selection guide was the initial starting point for developing this Street Tree Plan. This plan considers the existing tree species in City Heights in conjunction with the City's Guide.

The framework for the Street Tree Plan includes how to use street trees and also establishes the street tree selection criteria. The table below highlights the various criteria. The framework for selecting street trees includes the following qualities:

- Drought tolerance
- Heat tolerance
- Minimal allergy problems (pollen production)
- Native to California
- Minimal root damage potential
- Long life span
- Good branch strength and structure
- No major insect/disease problems
- Good cold tolerance
- Low maintenance
- Shading potential
- Low amount of natural hydrocarbon production
- No messy fruit/other plant parts

			Community Corridors	Residential Corridors	Local Streets
Aesthetic	Scale of Tree	Large canopy: > 25 ft.	✔		
		Medium: 15-25 ft.	✔	✔	✔
		Small / limited <15 ft.		✔	✔
Function	Branching Height	9-12 Ft. clearance	✔	✔	
		Min. 6-9 Ft. clearance	✔	✔	✔
	Transparency	Broad & high branching	✔	✔	✔
		Open & sparse	✔	✔	✔
		Tall & narrow			✔
	Shade	Filtered shade	✔		
		Good shade production		✔	✔
Viability	Maintenance	Fruiting			✔
		No maintenance required for survival			✔
		Annual maintenance required	✔	✔	
	Watering	Regular watering / irrigation required	✔		
		Infrequent watering		✔	✔
	Urban Durability	Trash, tight tree spacing			
		Resistant to water inundation			
		Resilient to compaction	✔	✔	
	Tree Spacing	Uniform spacing	✔	✔	
		Irregular spacing			✔

Figure 6-1: Street Tree Map



6.2 Community Corridors

What is a Community Corridor?

Community Corridors in City Heights are streets that are heavily traveled and have been identified as major thoroughfares. They are identified as streets that should have consistent character due to their high visibility and importance as a connection to City Height's destinations.

Figure 6-2 identifies the community corridors. The community corridors include three different types of Green Streets: Commercial Corridors, Main Street Commercial, and select Transit Access Streets from the Urban Greening Plan. See Chapter 3 for details.

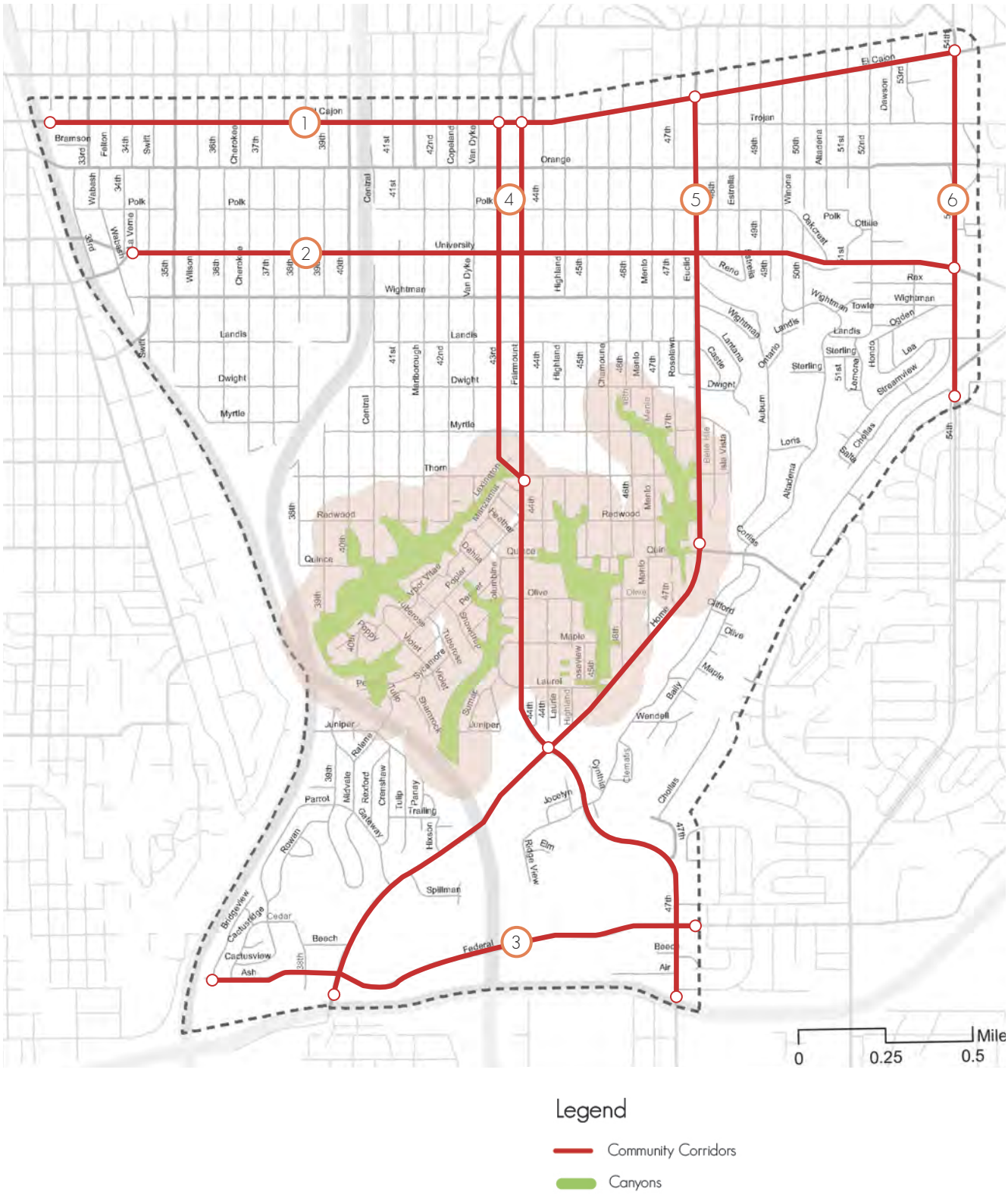
Goals for Trees along Community Corridors

- Highly consistent tree species and consistent tree spacing
- Protect all existing healthy trees
- Replant new trees where existing trees cannot be safely retained, where new development is planned or where other major projects require the removal of existing street trees that are not on the list
- Plant the largest tree size possible (24" box is considered to be the minimum)
- When necessary for removals, perform tree replacements in phases to retain shade and character

Map Key	Community Corridor	Botanical Name	Common Name	Category	Min. Size
1	El Cajon Boulevard	Sygarus Romanzoffianum	Queen Palm	Theme	36" Box
		Lophostemon Confertus	Brisbane Box	Theme	36" Box
		Jacaranda Mimosifolia	Jacaranda	Accent	24" Box
2	University Avenue	Koelreuteria Bipinatta	Chinese Flame Tree	Theme	36" Box
		Afrocarpus Gracilior	African Fern Pine	Theme	36" Box
		Jacaranda Mimosifolia	Jacaranda	Accent	24" Box
3	Federal Boulevard	Plantanus Acerfolia 'Bloodgood'	London Plane	Theme	36" Box
		Quercus Agrifolia	Coast Live Oak	Theme	36" Box
4	43rd Street & Fairmount Avenue	Afrocarpus Gracilior	African Fern Pine	Theme	36" Box
		Arbutus 'Marina'	Marina Madrone	Theme	36" Box
5	Euclid Ave & Home Avenue	Plantanus Racemosa	California Sycamore	Theme	36" Box
		Lophostemon Confertus	Brisbane Box	Theme	36" Box
6	54th Street	Geijera Parvifolia	Australian Willow	Theme	36" Box
		Ulmus Parvifolia	Chinese Elm	Theme	36" Box

See pages 128-130 for details.

Figure 6-2: Community Corridors



6.3 Community Corridors Street Tree Palettes

University Ave. Tree Analysis

Existing Trees

- Jacaranda
- African Fern Pine
- Queen Palm
- Brisbane Box

Planting Recommendations

- Queen Palm is not recommended for future planting due to its lack of significant urban forestry benefits.

Street Tree Palette

Theme Tree: Afrocarpus Gracilior (African fern pine)

Alternate Theme Tree: Koelreuteria Bipinatta (Chinese Flame Tree)

Accent Tree: Jacaranda mimosifolia (Jacaranda)

Koelreuteria Bipinatta (Chinese Flame Tree)

Afrocarpus Gracilior (African Fern Pine)

Ash Street/Federal Boulevard Tree Analysis

Existing Trees

- Acacia
- African Fern Pine
- Brazilian Pepper Tree
- Canary Island Pine
- Carrotwood
- Date Palm
- Evergreen Pear
- Eucalyptus
- Queen Palm
- Red Ironbark

Planting Recommendations

- Brazilian Pepper Tree is not recommended for future planting due to its invasive nature.
- Eucalyptus is not recommended for future planting due to its invasive nature.
- Queen Palm is not recommended for future planting based on community input.

Street Tree Palette

Theme Tree: Pinus Canariensis (Canary Island Pine; Red Ironbark); Eucalyptus Tricarpa (Red Ironbark)

Alternate Theme Tree: Afrocarpus Gracilior (African Fern Pine)

Plantanus Acerfolia 'Bloodgood' (London Plane)

Quercus Agrifolia (Coast Live Oak)

54th Street Tree Analysis

Existing Trees

- Flaxleaf Paperbark
- Cajeput Tree
- Carob
- Eucalyptus

Planting Recommendations

- Eucalyptus is not recommended for future planting due to its invasive nature.

Street Tree Palette

Theme Tree: Geijera parvifolia (Australian Willow)

Alternate Theme Tree: Ulmus Parvifolia (Chinese Elm)

Geijera Parvifolia (Australian Willow)

Ulmus Parvifolia (Chinese Elm)

El Cajon Boulevard Tree Analysis

Existing Trees

- Jacaranda
- African Fern Pine
- Queen Palm
- Eucalyptus

Planting Recommendations

- Eucalyptus is not recommended for future planting due to its invasive nature.
- Community input indicated that Queen Palm was not a desired option future planting. However it is a tree that has been planted along the street. Thus the Queen Palm is included in the street palette but when appropriate could be substituted with the secondary street tree.

Street Tree Palette

Theme Tree: Sygarus Romanzoffianum (Queen Palm)

Alternate Theme Tree: Lophostemon Confertus (Brisbane Box)

Accent Tree: Jacaranda Mimosifolia (Jacaranda)

Sygarus romanzoffianum (Queen Palm)

Lophostemon Confertus (Brisbane Box)

Fairmount Avenue & 43rd Street Tree Analysis

Existing Trees

- Jacaranda
- African Fern Pine
- Queen Palm
- Carrotwood
- Chinese Elm

Planting Recommendations

- Queen Palm is not recommended for future planting due to its potential impact on canyons.

Street Tree Palette

Theme Tree: Cinnamomum Camphora (Camphor Tree); Afrocarpus Gracilior (African Fern Pine)

Alternate Theme Tree: Arbutus 'Marina' (Marina Madrone); Jacaranda mimosifolia (Jacaranda)

Cinnamomum camphora (Camphor Tree)

Arbutus 'Marina' (Marina Madrone)

Euclid Avenue/Home Avenue Tree Analysis

Existing Trees

- Jacaranda
- Brisbane Box
- Queen Palm
- Carrotwood
- Eucalyptus

Planting Recommendations

- Eucalyptus is not recommended for future planting due to its invasive nature.
- Queen Palm is not recommended for future planting due to its potential impact on canyons.

Street Tree Palette

Theme Tree: Plantanus Racemosa (California Sycamore) along Home Avel Quercus Ilex (Holly Oak) along Euclid Ave.

Alternate Theme Tree: Lophostemon Confertus (Brisbane Box)

Plantanus Racemosa (California Sycamore)

Quercus Ilex (Holly Oak)

6.4 Residential Corridors

Residential corridors are key street that have been identified through the public outreach process as critical streets that provide access and connectivity throughout City Heights for residents and visitors.

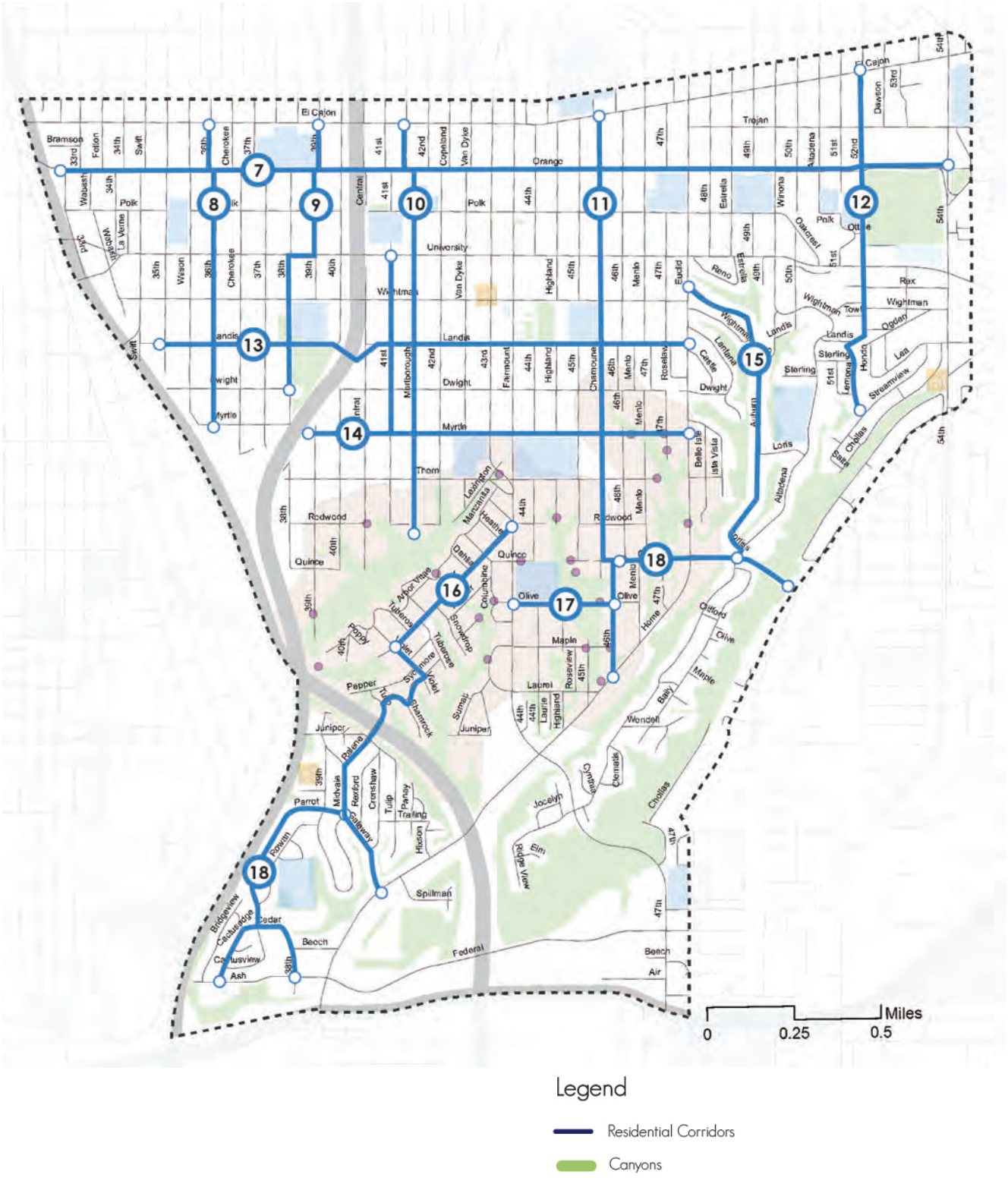
Residential corridors include selected Green Streets including: select Pedestrian Focus and Bicycle Focus Community Connectors. See Chapter 3 for details on Green Streets. The residential corridors are highlighted on Figure 6-3.

Goals for Trees along Residential Corridors:

- Providing a integrated approach to visual wayfinding by using a specific plant palette
- Where feasible, enlarge parkway
- Protect healthy trees
- Replant new trees where existing trees cannot be safely retained
- Maximize shading opportunities through tree species
- Increased ranges of recommended trees achieves a balance between retaining existing desirable trees and offering a choice of trees

Map Key	Residential Corridors	Botanical Name	Common Name	Category
7	Orange Avenue	Cassia Leptophylla	Gold Medallion tree	Theme
8	36th Street	Fraxinus Oxycarpa	Raywood Ash	Theme
		Melaleuca Linarifolia	Flaxleaf Paperbark	Theme
9	38th / 39 Street	Pinus Canariensis	Canary Island Pine	Theme
10	Marlborough Street	Pistachia Chinensis	Chinese Pistache	Theme
		Podocarpus Macrophyllus	Yew Pine	Theme
11	Chamoune Avenue	Tipuanu Tipu	Tipu Tree	Theme
12	52nd Street	Archontophoenix Cunninghamiana	King Palm	Accent
13	Landis Street	Bauhinia Purpurea	Purple Orchid Tree	Accent
		Cupaniopsis Anacardioides	Carrotwood	Accent
14	Myrtle Avenue	Koelreuteria Paniculata	Golden Rain Tree	Accent
		Lagerstroemia Indica	Crape Myrtle	Accent
		Magnolia Grandiflora	St. Mary's Magnolia	Accent
		Pyrus Calleryana	Bradford Pear	Accent

Figure 6-3: Residential Corridors



6.5 Landscape Districts

There are two landscape districts in City Heights: (A) Local Streets & (B) Canyon.

Landscape District A: Local Streets

All local streets are identified in landscape district A. This classification is identified by the Mid-City Community Plan and the City of San Diego Street Design Manual. These are the streets found most commonly throughout City Heights. There is no particular dominant species or theme tree. Any of the recommended species can be established for a particular block or neighborhood street, or area. These species are identified on page 127.

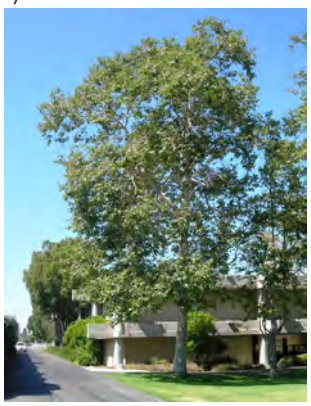
Landscape District B: Canyon Interface

Streets within 500 feet of the canyon edge are identified by landscape district B. This district has a specific palette due to the sensitivity of the canyons to seeds and potential root problems and invasive species. All streets within the district should be sensitive to the impact to the canyon when considering street trees. The table below highlights theme trees that are recommended. Figure 6-3 shows the two districts.

Map Key	Landscape District	Botanical Name	Common Name	Category
A	Local Streets	All species listed in Figure 2-5 are accepted.		
B	Canyon Interface	Arbutus Menziesii	Madrona	Theme
		Platanus Racemosa	California Sycamore	Theme
		Quercus Agrifolia	Coast live Oak	Theme
		Heteromeles Arbutifolia	California Toyon	Theme

Trees for District B: Canyon Interface

Arbutus Menziesii (Madrona)

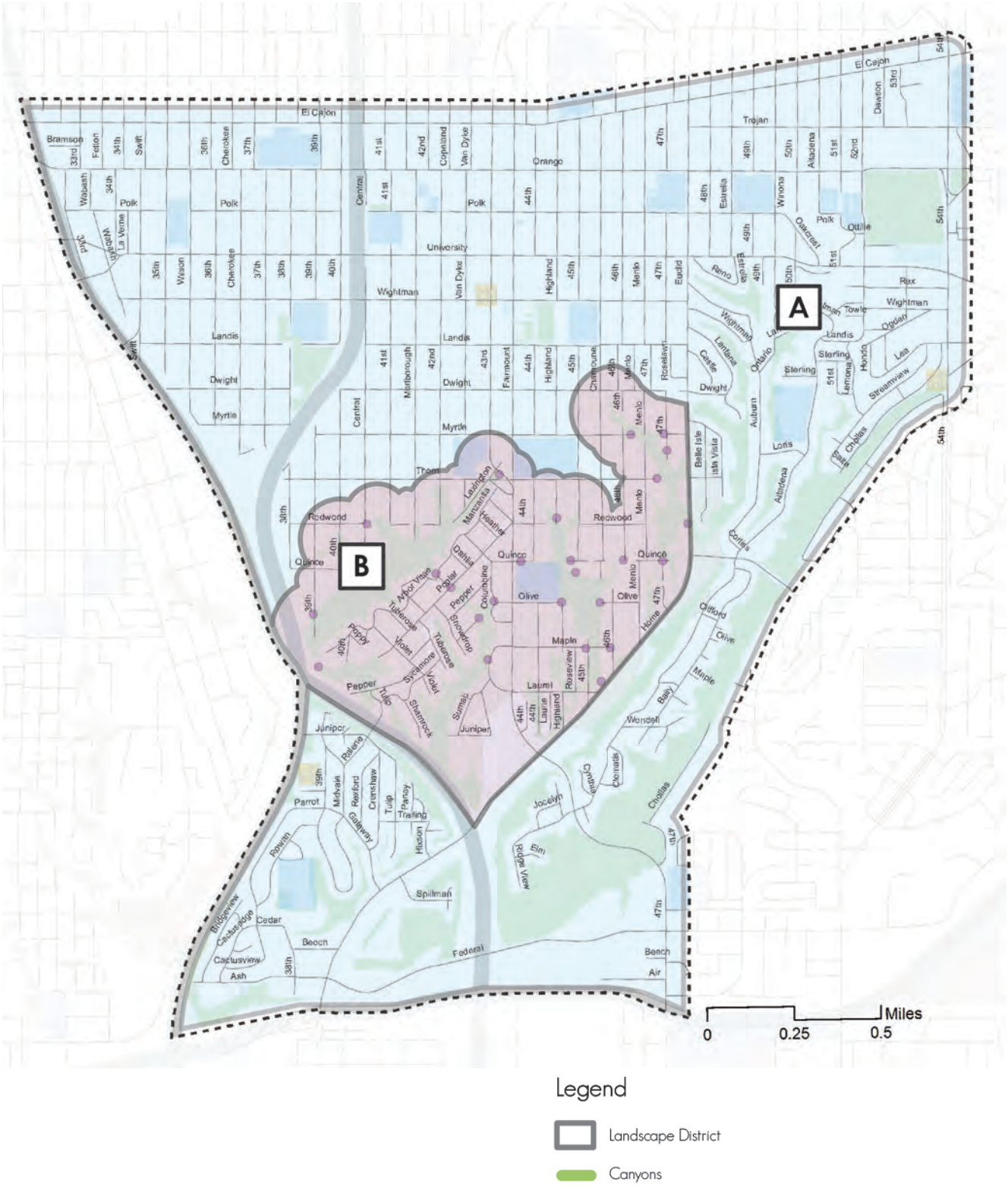


Platanus Racemosa (California Sycamore)

Quercus Agrifolia (Coast Live Oak)

Heteromeles Arbutifolia (California Toyon)

Figure 6-4: Landscape Districts



6.6 Recommended Tree Species

The most effective way to create an urban forest is with trees. A canopy of trees provides a much greater return on the benefits of urban forestry than ground or shrub level plantings. A canopy occupies a much larger 3-D space and has a significantly greater biomass and larger canopies create more shade for pedestrian activities.

City Heights currently has a large range of different tree species. The recommended tree species list below identifies preferred species for City Heights based on the species' existing presence in the planning area and the street tree framework identified in section 6.1

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Afrocarpus Gracilior	African Fern Pine	E.	40+	20-40	30-35	6-8			Yes	?
Arbutus 'Marina	Marina Madrone								Yes	No
Arbutus Genziesii	Madrona	E.	40+	40+	35-40	6-8	Yes	Yes	Yes	No
Archontophoenix Cunninghamiana	King Palm	P.	40+	20-30	25-30	3-4	Yes		Yes	Yes
Bauhinia Blakeana	Hong Kong Archid Tree								Yes	No
Bauhinia Purpurea	Purple Orchid Tree	D.	20-40	-20	25-30	3-4	Yes		Yes	No
Calodendrum Capense	Cape Chestnut	D.	20-40	40+	35-40	8+	Yes		Yes	No
Cassia Leptophylla	Gold Medallion Tree	E.	20-40	20-40	30-35	4-6			Yes	No
Ceratonia Siliqua	Carob Tree								Yes	No
Chionanthus Virgincus	White Fringe Tree								Yes	No
Chitalpa Tashkentensis	Chitalpa	D.	20-40	20-40	25-30	4-6	Yes		Yes	Yes
Cinnamomum camphora	Camphor Tree	E.	20-40	40+	35-40	8+	Yes		Yes	No
Cupaniopsis Anacardioides	Carrotwood								Yes	Yes
Eriobotrya Deflexa	Bronze Loquat	E.	-20	-20	25-30	3-4			Yes	No
Fraxinus Oxycarpa	Raywood Ash								Yes	Yes
Geijera Parvifolia	Australian wWllow	E.	20-40	20-40	30-35	6-8	Yes		Yes	No
Jacaranda Mimosifolia	Jacaranda	D.	20-40	20-40	35-40	6-8			Yes	No
Koelreuteria Bipinnata	Chinese Flame Tree	D.	20-40	20-40	30-35	6-8			Yes	No
Koelreuteria Paniculata	Golden Rain	D.	20-40	20-40	30-35	6-8	Yes		Yes	No
Lagerstroemia Indica	Crape Myrtle	D.	-20	-20	25-30	3-4	Yes		Yes	No
Lophostemon Confertus	Brisbane Box	E.	20-40	20-40	30-35	4-6	Yes		Yes	No
Magnolia Grandiflora	St. Marys Magnolia	E.	-20	-20	25-30	3-4			Yes	Yes
Melaleuca Linarifolia	Flaxleaf Paperbark	E.	20-40	20-40	30-35	4-6	Yes		Yes	No
Metrosideros Excelsus	New Zealand Christmas Tree	E.	-20	-20	25-30	3-4	Yes		Yes	No
Pinus Canariensis	Canary Island Pine	C.	40+	20-40	35-40	6-8	Yes		Yes	No
Pistacia Chinensis	Chinese Pistache	D.	40+	40+	35-40	6-8	Yes		Yes	No
Plantanus Racemosa	California Sycamore	D.	40+	40+	35-40	8-Jun		Yes	Yes	No
Platanus Acerifolia "Bloodgood"	London Plane	D.	40+	40+	35-40	8-Jun			Yes	Yes
Podocarpus Macrophyllus	Yew Pine	E.	20-40	-20	25-30	4-6			Yes	No
Pyrus Calleryana	Bradford Pear	D.	20-40	-20	30-35	3-4			Yes	Yes
Quercus Agrifolia	Coast Live Oak	E.	40+	40+	35-40	8+	Yes	Yes	Yes	No
Quercus Flex	Holly Oak								Yes	No
Stenocarpus Sinuatus	Firewheel Tree	E.	20-40	20-40	30-35	4-6			Yes	No
Syagrus Romanzoffianum	Queen Palm	P.	40+	40+	25-30	3-4	Yes		Yes	No
Tipuana Tipu	Tipu	D.	40+	40+	35-40	8+			Yes	No
Ulmus Parvifolia	Chinese Elm	E.	20-40	20-40	35-40	6-8	Yes		Yes	Yes

7 Implementation

Making a project a reality is a challenge. This section includes:

- How Residents can get involved
- Potential Funding Sources
- Implementation Strategies
- Potential Community Partners
- City of San Diego Processes for planning and construction of streetscape improvements projects

7.1 Implementation Strategies

Implementation will require a variety of elements to be put into place prior to changing the existing environment. Many of these elements will need to be done in sequence, though funding sources found may change the priorities and sequences. It should be noted that this section of the document will be further refined based on further review, comments and coordination with the City of San Diego, including Development Services, Planning and Economic Development sections of the city.

The following is a list of potential steps needed to implement some of the items proposed in this plan:

Implementation Strategies						
No.	Actions	Lead	Implementation			Notes
			No Action	Under-way	Com-plete	
1	Identify items on the city's CIP list that can incorporate recommended improvements and projects outlined in the CHUG Plan	City of San Diego				Major projects are defined as a street reconfiguration of lanes, geometry, curbs, drainage systems or other major utility improvements requiring a substantial percentage of the pavement to be removed and/or replaced.
2	Integrate the recommendations and projects from the CHUG plan into all applicable grant applications	City of San Diego				In some cases, grants could be pursued specifically for only projects identified in this plan, while in others, parts of this plan can be used to strengthen benefits for other projects to take advantage of.
3	Perform an Environmental Review for each project to determine level of impact	City of San Diego				Projects classified as maintenance or replacement can be considered categorical exemptions under CEQA. Major projects affecting traffic, natural areas land, or ROW acquisitions may require full environmental review.
4	Develop design and engineering documents and obtain appropriate permits for each project	City of San Diego				Permitting will be required even for City of San Diego CIP projects.
5	Identify sources of funding for ongoing maintenance of street enhancements	City of San Diego				Ongoing maintenance responsibilities will likely need to be identified prior to implementation.
6	Identify alternate sources of funding including self-taxation programs	City of San Diego				Consider property tax increases, facility benefit assessment districts, maintenance improvement districts, lighting districts, business improvement districts or other funding sources applied to those who will benefit from the improvements.

No.	Actions	Lead	Implementation			Notes
			No Action	Under-way	Com-plete	
7	Develop a volunteer program focused on implementation and sustainment of the CHUG plan	City of San Diego and Local Agencies				Utilize neighborhood residents, community leaders, and volunteers from schools, churches, community organizations and businesses
8	Identify alternative funding sources and fund-raising opportunities	City of San Diego, Local Planners and community activists				Examples include philanthropic offers, donations, endowment funds, corporate sponsorships, capital fund-raising efforts, grants, government sources. Highlight the economic, environmental, health, engagement, urban forestry, safety and connectivity improvements that these projects will bring to City Heights.
9	Develop employment and job creation programs that assist with the installation and maintenance of the projects in the CHUG Plan	City of San Diego				Tasks would include development of a growing grounds for street trees, the installation and ongoing maintenance of trees, maintenance of public realm spaces and ongoing graffiti and trash removal programs.
10	Identify opportunities to incorporate CHUG Plan recommendations and projects into proposed redevelopment projects	City of San Diego, Local Planners and community activists				For major projects, the improvements should go beyond the immediate project parcel boundaries.
11	Integrate the CHUG Plan into all applicable Development Service processes and projects	City of San Diego Development Services Department				Require projects to implement portions of the CHUG plans when relevant

Figure 7-1: Implementation Strategies

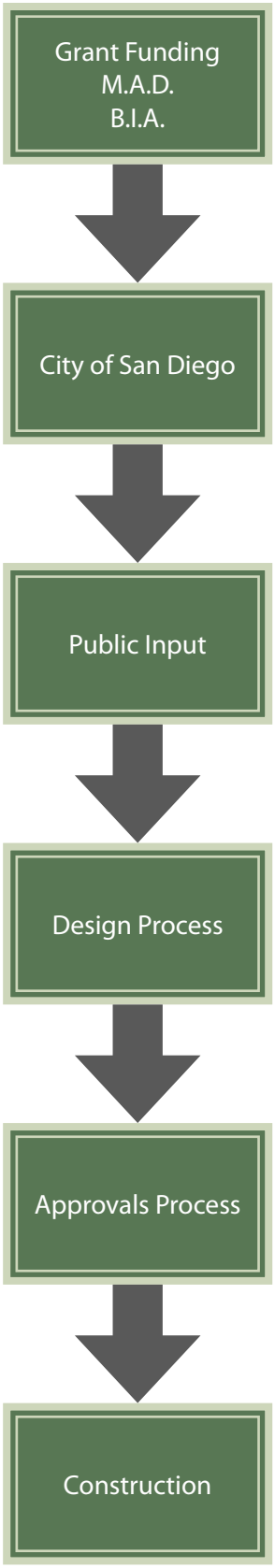


Table-2: Funding Sources provides a list of potential funding opportunities that may be used from the design to maintenance phases of projects in the CHUG Plan. The sources are arranged by Federal, State, Local, and Private, and the uses that the funds may address.

FINDING, FRAMING AND FUNDING A PROJECT		FUNDING USES								
		TYPICAL APPROACHES			ATYPICAL APPROACHES					
FUNDING SOURCE	FUNDING ORIGIN	Park Land Acq.	Park CIP Devel.	Maint. & Ops	URBAN FORESTRY	SAFE & HEALTHY ACCESS	BACK TO NATURE	COMMUNITY GARDENS	LOW IMPACT DEVELOPMENT	CULTURE AND HISTORY
Federal Funding Sources										
Land and Water Conservation Fund (LCWF)	U.S. National Park Service/ California Dept. of Parks and Recreation	✔	✔				✔		✔	
Urban Community Forestry Program	U.S. National Park Service		✔		✔			✔		
EPA Brownfields Clean Up and Assessment Grants	U.S. Environmental Protection Agency		✔			✔			✔	
Sustainable Communities Planning Grant and Incentive Program	U.S. Dept. of Housing and Urban Development (HUD)	✔				✔				
Urban Revitalization and Livable Communities Act	U.S. Dept. of Housing and Urban Development (HUD)	✔				✔		✔		
Community Development Block Grants	U.S. Dept. of Housing and Urban Development (HUD)	✔	✔			✔	✔	✔		✔
ACHIEVE, Communities Putting Prevention to Work, Pioneering Communities	Center for Disease Control & Prevention					✔	✔	✔		
Wildlife Services	Department of Agriculture, Animal and Plant Health Inspection	✔	✔		✔		✔		✔	
Wetlands Reserve Program	Department of Agriculture, Natural Resources and Conservation Service	✔			✔		✔		✔	
Urban and Community Forest Program	Department of Agriculture, Forest Service		✔		✔		✔		✔	
Recovery Act of 2009 Capital Improvement and Maintenance	Department of Agriculture, Forest Service		✔	✔	✔		✔		✔	
Community Forest and Open Space Conservation	Department of Agriculture, Forest Service	✔	✔		✔		✔		✔	
Beach Erosion Control Projects	Department of Defense, Department of the Army, Office of the Chief of Engineers		✔	✔			✔		✔	

FINDING, FRAMING AND FUNDING A PROJECT		FUNDING USES									
		TYPICAL APPROACHES			ATYPICAL APPROACHES						
FUNDING SOURCE	FUNDING ORIGIN	Park Land Acq.	Park CIP Devel.	Maint. & Ops	URBAN FORESTRY	SAFE & HEALTHY ACCESS	BACK TO NATURE	COMMUNITY GARDENS	LOW IMPACT DEVELOPMENT	CULTURE AND HISTORY
Navigation Projects	Department of Defense, Department of the Army, Office of the Chief of Engineers		✔	✔		✔				✔
Donations/Loans of Obsolete DOD Property	Department of Defense, Secretaries of Military Departments		✔	✔		✔				✔
Choice Neighborhoods Implementation Grants	Department of Housing and Urban Development, Office of Public and Indian Housing		✔			✔	✔		✔	
Undesirable/Noxious Plant Species	Department of the Interior, Fish and Wildlife Service			✔	✔		✔			
Recovery Act Funds - Habitat Enhancement, Restoration and Improvement	Department of the Interior, Fish and Wildlife Service		✔	✔	✔		✔		✔	
Cooperative Landscape Conservation	Department of the Interior, Fish and Wildlife Service	✔	✔	✔	✔		✔		✔	
Disposal of Federal Surplus Real Property for Parks, Recreation, and Historic Monuments	Department of the Interior, National Park Service	✔	✔			✔		✔		
Save America's Treasures	Department of the Interior, National Park Service	✔	✔	✔						✔
WATERSMART	U.S. Bureau of Reclamation			✔					✔	
Safe Routes to School, Mini-grants	National Center for Safe Routes to School & Caltrans		✔			✔				
Boating Infrastructure Grant Program	U.S. Department of the Interior		✔	✔		✔	✔			
USFW National Coastal Wetlands Grant	U.S. Fish and Wildlife Service	✔	✔				✔		✔	
Native Place Conservation Initiative	National Fish and Wildlife Foundation with USFW & other Agencies	✔		✔	✔		✔			

FINDING, FRAMING AND FUNDING A PROJECT		FUNDING USES								
		TYPICAL AP-PROACHES			ATYPICAL APPROACHES					
FUNDING SOURCE	FUNDING ORIGIN	Park Land Acq.	Park CIP Devel.	Maint. & Ops	URBAN FORESTRY	SAFE & HEALTHY ACCESS	BACK TO NATURE	COMMUNITY GARDENS	LOW IMPACT DEVELOP-MENT	CULTURE AND HISTORY
State Funding Sources										
Land and Water Conservation Fund (LCWF)	California Department of Parks & Recreation	✔	✔			✔	✔		✔	
Proposition 12 - 2000 Parks Bond Act	California Department of Parks & Recreation	✔	✔				✔	✔		
Proposition 40 - 2002 Resources Bond	California Department of Parks & Recreation	✔	✔				✔	✔		
Prop 84 Stormwater Grant	California Department of Parks & Recreation		✔	✔					✔	
Statewide Park Program Prop 84 Round 2	California Department of Parks & Recreation	✔	✔			✔		✔		
Recreational Trails Program	California Department of Parks & Recreation		✔	✔		✔	✔		✔	
Proposition 117 - Habitat Conser-vation	California Department of Parks & Recreation	✔	✔		✔		✔		✔	
Nature Education Facilities	California Department of Parks & Recreation		✔	✔			✔			✔
Watershed Program	California Department of Water Resources	✔	✔				✔		✔	
Stormwater Flood Management Prop. 1E	California Department of Water Resources		✔		✔		✔		✔	
Boat Launching Facilities	Department of Boating and Waterways		✔			✔				
Aquatic Center Grants	Department of Boating and Waterways		✔			✔				✔
Community Based Transportation Planning, Environmental Justice & Transit Planning	Caltrans		✔			✔			✔	
Traffic Safety Grants	Office of Traffic Safety		✔			✔				

FINDING, FRAMING AND FUNDING A PROJECT		FUNDING USES								
		TYPICAL APPROACHES			ATYPICAL APPROACHES					
FUNDING SOURCE	FUNDING ORIGIN	Park Land Acq.	Park CIP Devel.	Maint. & Ops	URBAN FORESTRY	SAFE & HEALTHY ACCESS	BACK TO NATURE	COMMUNITY GARDENS	LOW IMPACT DEVELOPMENT	CULTURE AND HISTORY
State Funding Sources (continued)										
Coastal Conservancy Grants	CA Coastal Conservancy	✔	✔		✔	✔	✔		✔	✔
Non-point Source Pollution, Watershed Plans, Water Conservation (Props 13, 40, 50 & 84)	State Water Resources Control Board		✔	✔	✔				✔	
Sustainable Communities Planning, Regional SB 375	Strategic Growth Council/ Department of Conservation		✔		✔	✔	✔	✔	✔	✔
Environmental Enhancement & Mitigation (EEMP)	California Natural Resources Agency & Caltrans		✔				✔		✔	
California River Parkways and Urban Streams Restoration Grant	California Natural Resources Agency / Department of Water Resources		✔	✔		✔	✔		✔	
Urban Forestry Program (Leafing Out, Leading Edge and Green Trees Grants)	California Department of Forestry and Fire Protection (CAL FIRE)		✔		✔			✔		
Local Funding Sources										
Special Habitat Conservation Programs	Regional MPOs / Local Jurisdictions	✔			✔		✔		✔	
Special Parks and Recreation Bond Revenues	Regional MPOs / Local Jurisdictions	✔	✔	✔	✔	✔	✔	✔	✔	✔
Special Transportation Bonds and Sales Tax Initiatives	Regional MPOs / Local Jurisdictions	✔	✔	✔	✔	✔	✔	✔	✔	✔
Advertising Sales/Naming Rights	Local Jurisdictions	✔	✔	✔	✔	✔				✔
Business Improvement (BID), Maintenance Districts (MAD), Property Based Improvement Districts (PBID)	Non-profits, business organizations or City		✔	✔	✔	✔		✔	✔	✔
Catering Permits/Concession Contracts	Local Jurisdictions			✔		✔				
Easement Agreements/Revenues	Local Jurisdictions	✔	✔	✔	✔			✔		
Equipment Rental Fees	Local Jurisdictions	✔	✔	✔		✔	✔	✔		✔
Facility Use Permits Fees	Local Jurisdictions	✔	✔	✔		✔	✔	✔		✔
Fees and Charges/Recreation Service Fees	Local Jurisdictions	✔	✔	✔		✔	✔	✔		✔
Food and Beverage Tax	Local Jurisdictions	✔	✔	✔		✔	✔	✔		✔

FINDING, FRAMING AND FUNDING A PROJECT		FUNDING USES								
		TYPICAL APPROACHES			ATYPICAL APPROACHES					
FUNDING SOURCE	FUNDING ORIGIN	Park Land Acq.	Park CIP Devel.	Maint. & Ops	URBAN FORESTRY	SAFE & HEALTHY ACCESS	BACK TO NATURE	COMMUNITY GARDENS	LOW IMPACT DEVELOPMENT	CULTURE AND HISTORY
General Fund	Local Jurisdictions	✔	✔	✔	✔	✔	✔	✔	✔	✔
General Obligation Bonds	Local Jurisdictions	✔	✔	✔	✔	✔	✔	✔	✔	✔
Intergovernmental Agreements	Local Jurisdictions	✔	✔	✔	✔	✔	✔	✔	✔	✔
Landscape and Lighting District	Local Jurisdictions	✔	✔	✔	✔	✔		✔	✔	✔
Lease Revenues	Local Jurisdictions	✔	✔	✔	✔	✔	✔	✔	✔	✔
Mello Roos Districts	Local jurisdictions	✔	✔	✔	✔	✔	✔	✔	✔	✔
Park Dedication Fees	Local Jurisdictions	✔	✔		✔	✔	✔	✔	✔	✔
Park Impact Fees	Local Jurisdictions	✔	✔		✔	✔	✔	✔	✔	✔
Pouring Rights Agreements	Local Jurisdictions	✔	✔		✔	✔	✔	✔	✔	✔
Private Development Agreements	Local Jurisdictions	✔	✔	✔	✔	✔	✔	✔	✔	✔
Surplus Real Estate Sale Revenues	Local Jurisdictions	✔	✔		✔	✔	✔	✔	✔	✔
Redevelopment Tax Increment Financing (TIF)	Redevelopment Agencies or some form of Replacement Funding or Organization	✔	✔		✔	✔	✔	✔	✔	✔
Revenue Bond Revenues	Local Jurisdictions	✔	✔	✔	✔	✔	✔	✔	✔	✔
Sales Tax Revenues	Local Jurisdictions	✔	✔	✔	✔	✔	✔	✔	✔	✔
Transient Occupancy Tax Revenues	Local Jurisdictions	✔	✔	✔	✔	✔	✔	✔	✔	✔
Utility Taxes	Local Jurisdictions	✔	✔	✔	✔	✔	✔	✔	✔	✔
Private Funding Sources										
Community Stories Grant	California Council for the Humanities		✔							✔
Community Impact Grants Program	Home Depot		✔					✔		
California ReLeaf Urban Forestry Grant	California ReLeaf		✔		✔					
Preservation Funding	National Trust for Historic Preservation		✔	✔						✔
Grants for Parks	California State Parks Foundation	✔	✔			✔	✔		✔	
Various Sports Field Grants	Various Agencies, Foundation & Corporations	✔	✔	✔		✔				
America's Historical Planning Grants	National Endowment for the Humanities		✔							✔

FINDING, FRAMING AND FUNDING A PROJECT		FUNDING USES								
		TYPICAL APPROACHES			ATYPICAL APPROACHES					
FUNDING SOURCE	FUNDING ORIGIN	Park Land Acq.	Park CIP Devel.	Maint. & Ops	URBAN FORESTRY	SAFE & HEALTHY ACCESS	BACK TO NATURE	COMMUNITY GARDENS	LOW IMPACT DEVELOP-MENT	CULTURE AND HISTORY
Corporate Sponsorships	Corporate Citizens	✔	✔	✔	✔	✔	✔	✔	✔	✔
Private Sector Partnerships	Private Corporations	✔	✔	✔	✔	✔	✔	✔	✔	✔
Non-Profit Partnerships	Non-Profit Corporations	✔	✔	✔	✔	✔	✔	✔	✔	✔
Foundation Grants	Private Foundations	✔	✔	✔	✔	✔	✔	✔	✔	✔
Private Donations	Private Individuals	✔	✔	✔	✔	✔	✔	✔	✔	✔
Irrevocable Remainder Trusts	Private Individuals	✔	✔	✔					✔	✔
Targeted Fund-raising Activities	Local Jurisdictions	✔	✔	✔	✔	✔	✔	✔	✔	✔
Land Trusts	Non-Profit Corporations	✔	✔		✔		✔		✔	✔

A Recommended Street Trees

This section includes:

- Recommended Street Tree Species
- Detailed information about each species

Afrocarpus gracilior (African Fern Pine)

Botanical Name
Afrocarpus gracilior

Common Name
African fern pine

Height
50'

Canopy Spread
40'

Native
No

Type of Tree
Evergreen

Tree Form
Large Canopy

Clearance:
7'-10' parkways or larger.

Considerations:
Dense, tall, graceful evergreen tree, tolerant of poor soils, less than average litter. Plant in full sun to shade.

Use in Street Tree Palettes:
Community Corridors: University Avenue

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Afrocarpus gracilior	African fern pine	E.	40+	20-40	30-35	6-8			Yes	?

Arbutus 'marina' (Marina Madrone)

Botanical Name
Arbutus 'marina'

Common Name
Marina madrone

Height
35'

Canopy Spread
30'

Native
No

Type of Tree
Evergreen

Tree Form
Medium Canopy

Clearance:
4'-7' parkways or larger.

Considerations:
Handsome, ornamental evergreen tree with striking red copper bark, rosy pink flowers, and edible fruits. Plant in full sun to part shade.

Use in Street Tree Palettes:
Community Corridors: Fairmount Avenue and 43rd Street
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Arbutus 'Marina	Marina madrone								Yes	No

Arbutus menzesii (Madrona)

Botanical Name
Arbutus menzesii

Common Name
Madrona

Height
30'

Canopy Spread
30'

Native
Yes

Type of Tree
Evergreen

Tree Form
Medium Canopy

Clearance:
7-10' parkways or larger

Considerations:
Evergreen California native tree with attractive cinnamon-colored bark, white pink flowers and red berries. Drought and heat tolerant, low maintenance. Plant in full sun with well-drained soils.

Use in Street Tree Palettes:
Canyon Interface District
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Arbutus menziesii	Madrona	E.	40+	40+	35-40	6-8	Yes	Yes	Yes	No

Archontophoenix cunninghamiana (King Palm)

Botanical Name
Archontophoenix cunninghamiana

Common Name
King palm

Height
40'

Canopy Spread
20'

Native
No

Type of Tree
Palm

Tree Form
Vertical/Upright

Clearance:
2' parkways or larger

Considerations:
Elegant, fast-growing ornamental palm with lavender flowers and red fruits. Plant in full sun to partial shade.

Use in Street Tree Palettes:
Residential Corridors
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Archontophoenix cunninghamiana	King Palm	P.	40+	20-30	25-30	3-4	Yes		Yes	Yes

Bauhinia blakeana (Hong Kong Orchid Tree)

Botanical Name
Bauhinia blakeana

Common Name
Hong Kong orchid tree

Height
35'

Canopy Spread
25'

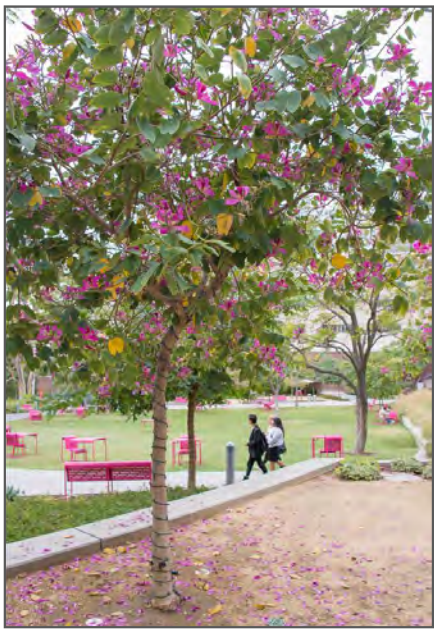
Native
No

Type of Tree
Deciduous/Flowering

Tree Form
Small

Clearance:
2' parkways or larger

Considerations:
Noteworthy, fast-growing tree with heart-shaped foliage Orchid-like magenta blooms appear in winter. Inconspicuous litter, plant in full sun.



Use in Street Tree Palettes:
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Bauhinia blakeana	Hong Kong orchid tree								Yes	No

Bauhinia purpurea (Purple Orchid-Tree)

Botanical Name
Bauhinia purpurea

Common Name
Purple Orchid-Tree

Height
30'

Canopy Spread
20'

Native
No

Type of Tree
Deciduous/Flowering

Tree Form
Small Canopy

Clearance:
4'-7' parkways or larger

Considerations:
Distinguished, fast-growing tree with showy magenta blooms. Drought tolerant and tolerates a variety of soils and well-drained soils. Plant in full sun.

Use in Street Tree Palettes:
Residential Corridors
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Bauhinia purpurea	Purple orchid tree	D.	20-40	-20	25-30	3-4	Yes		Yes	No

Calodendrum capense (Cape Chestnut)

Botanical Name
Calodendrum capense

Common Name
Cape chestnut

Height
30'

Canopy Spread
40'

Native
No

Type of Tree
Deciduous/Flowering

Tree Form
Medium Canopy

Clearance:
4'-7' parkways or larger

Considerations:
Semi-evergreen tree provides year-long interest thanks to its showy lilac flowers that attract birds, bees, and butterflies as well as its foliage that turns an attractive yellow in autumn. Plant in full sun to partial shade.

Use in Street Tree Palettes:
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Calodendrum capense	Cape chestnut	D.	20-40	40+	35-40	8+	Yes		Yes	No

Cassia leptophylla (Gold Medallion Tree)

Botanical Name
Cassia leptophylla

Common Name
Gold medallion tree

Height
30'

Canopy Spread
25'

Native
No

Type of Tree
Deciduous/Flowering

Tree Form
Small Canopy

Clearance:
4'-7' parkways or larger

Considerations:
A handsome, spreading, fast-growing tree with bright, showy yellow flowers that tolerates heat and a variety of soils. Plant in full sun.

Use in Street Tree Palettes:
Residential Corridors
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Cassia leptophylla	Gold medallion tree	E.	20-40	20-40	30-35	4-6			Yes	No

Ceratonia siliqua (Carob Tree)

Botanical Name
Ceratonia siliqua

Common Name
Carob tree

Height
35'

Canopy Spread
25'

Native
No

Type of Tree
Evergreen

Tree Form
Medium Canopy

Clearance:
7'-10' parkways or larger

Considerations:
Slow-growing, evergreen tree with a dense canopy that tolerates pollution and most soils. Plant in full sun.

Use in Street Tree Palettes:
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Ceratonia siliqua	Carob tree								Yes	No

Chionanthus virginicus (White Fringe Tree)

Botanical Name
Chionanthus virginicus

Common Name
White fringe tree

Height
20'

Canopy Spread
15'

Native
No

Type of Tree
Deciduous/Flowering

Tree Form
Small Canopy

Clearance:
4'-7' parkways or larger

Considerations:
Medium-sized tree that provides year long interest with its showy, fragrant white blooms and autumn color. Tolerates air pollution. Plant in full sun to part shade.

Use in Street Tree Palettes:
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Chionanthus virgincus	White fringe tree								Yes	No

Chitalpa tashkentensis (Chitalpa)

Botanical Name
Chitalpa tashkentensis

Common Name
Chitalpa

Height
30'

Canopy Spread
30'

Native
No

Type of Tree
Deciduous/Flowering

Tree Form
Small Canopy

Clearance:
4'-7' parkways or larger

Considerations:
Popular, fast-growing hybrid that performs well in xeriscapes and native plantings. Showy blooms attract hummingbirds, butterflies, bees, and beneficial insects. Tolerates a variety of soils and has less than average liter. Plant in full sun to partial shade.

Use in Street Tree Palettes:
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Chitalpa tashkentensis	Chitalpa	D.	20-40	20-40	25-30	4-6	Yes		Yes	Yes

Cinnamomum camphora (Camphor Tree)

Botanical Name
Cinnamomum camphora

Common Name
Camphor tree

Height
50'

Canopy Spread
40-60'

Native
No

Type of Tree
Evergreen

Tree Form
Large Canopy

Clearance:
7'-10' parkways or larger

Considerations:
Large, aromatic evergreen tree that provides great shade. A hardy tree that tolerates air pollution, variety of soils, poor drainage/compacted soils, and drought. Plant in full sun to partial shade.

Use in Street Tree Palettes:
Community Corridors: Fairmount Ave and 43rd Street
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Cinnamomum camphora	Camphor tree	E.	20-40	40+	35-40	8+	Yes		Yes	No

Cupaniopsis anacardioides (Carrotwood)

Botanical Name
Cupaniopsis anacardioides

Common Name
Carrotwood

Height
35'

Canopy Spread
20'

Native
No

Type of Tree
Evergreen

Tree Form
Medium Canopy

Clearance:
4'-7' parkways or larger

Considerations:
Handsome, fast-growing evergreen tree that provides dense shade. Tolerates poor soils, poor drainage, droughts, and heavy watering. Plant in full sun.

Use in Street Tree Palettes:
Residential Corridors
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Cupaniopsis anacardioides	Carrotwood								Yes	Yes

Eriobotrya deflexa (Bronze Loquat)

Botanical Name
Eriobotrya deflexa

Common Name
Bronze loquat

Height
20'

Canopy Spread
20'

Native
No

Type of Tree
Evergreen

Tree Form
Small Canopy

Clearance:
4'-7' parkways or larger

Considerations:
Attractive, medium-sized evergreen tree that is noted for its copper colored new foliage, fragrant flowers, and small fruit that benefit wildlife. This species bears an oval, orange-yellow inedible fruit. Low maintenance and less than average litter. Plant in full sun to partial shade.

Use in Street Tree Palettes:
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Eriobotrya deflexa	Bronze loquat	E.	-20	-20	25-30	3-4			Yes	No

Fraxinus oxycarpa 'Raywood' (Raywood Ash)

Botanical Name
Fraxinus oxycarpa 'Raywood'

Common Name
Raywood ash

Height
30'

Canopy Spread
25'

Native
No

Type of Tree
Deciduous

Tree Form
Medium Canopy

Clearance:
4'-7' parkways or larger

Considerations:
Attractive, hardy tree that provides excellent shade and autumn color. Easy care, tolerates variety of soils, and less than average litter. Plant in full sun

Use in Street Tree Palettes:
Residential Corridors
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Fraxinus oxycarpa	Raywood ash								Yes	Yes

Geijara parvifolia (Australian Willow)

Botanical Name
Geijara parvifolia

Common Name
Australian willow

Height
35'

Canopy Spread
40'

Native
No

Type of Tree
Evergreen/Flowering

Tree Form
Large Canopy

Clearance:
4'-7' parkways or larger

Considerations:
Graceful evergreen tree noted for its clean look, low maintenance, and less than average litter. Performs well in a variety of soils and watering conditions. Plant in full sun.

Use in Street Tree Palettes:
Community Corridors: 54th Street
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Geijera parvifolia	Australian willow	E.	20-40	20-40	30-35	6-8	Yes		Yes	No

Jacaranda mimosifolia (Jacaranda)

Botanical Name
Jacaranda mimosifolia

Common Name
Jacaranda

Height
35'

Canopy Spread
40'

Native
No

Type of Tree
Deciduous/Flowering

Tree Form
Medium Canopy

Clearance:
4'-7' parkways or larger

Considerations:
Striking, hardy specimen tree renowned for its showy purple blossoms and excellent filtered shade. Performs well in street medians and tolerates a variety of soils. Not as appropriate for parkways because of heavy leaf/ flower litter and sap residue. Plant in full sun.

Use in Street Tree Palettes:
Community Corridors: El Cajon Blvd., University Ave.
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Jacaranda mimosifolia	Jacaranda	D.	20-40	20-40	35-40	6-8			Yes	No

Koelreutaria bipinnata (Chinese Flame Tree)

Botanical Name
Koelreutaria bipinnata

Common Name
Chinese flame tree

Height
40'

Canopy Spread
40'

Native
No

Type of Tree
Deciduous/Flowering

Tree Form
Medium Canopy

Clearance:
7'-10' parkways or larger

Considerations:
Attractive, tough, low maintenance tree that provides year-long interest. Tolerates air pollution, wind, salt, drought, heat and poor soils. Plant in full sun to partial shade.

Use in Street Tree Palettes:
Community Corridor: University Avenue
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Koelreuteria bipinnata	Chinese flame tree	D.	20-40	20-40	30-35	6-8			Yes	No

Koelreutaria paniculata (Golden Rain)

Botanical Name
Koelreutaria paniculata

Common Name
Golden rain

Height
30'

Canopy Spread
40'

Native
No

Type of Tree
Deciduous/Flowering

Tree Form
Medium Canopy

Clearance:
7'-10' parkways or larger

Considerations:
Tough, low maintenance tree with remarkable bright yellow flowers in early Summer. Tolerates air pollution, drought, heat, poor soils and is essentially insect and disease free. Plant in full sun to partial shade.

Use in Street Tree Palettes:
Residential Corridors
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Koelreuteria paniculata	Golden rain	D.	20-40	20-40	30-35	6-8	Yes		Yes	No

Lagerstroemia indica (Crape Myrtle)

Botanical Name
Lagerstroemia indica

Common Name
Crape myrtle

Height
30'

Canopy Spread
30'

Native
No

Type of Tree
Deciduous/Flowering

Tree Form
Small Canopy

Clearance:
2' parkways or larger

Considerations:
Handsome, hardy tree with attractive bark, showy flowers, and great autumn color. Tolerates heat and a variety of soils. Plant in full sun.

Use in Street Tree Palettes:
Residential Corridors
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Lagerstroemia indica	Crape myrtle	D.	-20	-20	25-30	3-4	Yes		Yes	No

Lophostemon confertus (Brisbane Box)

Botanical Name
Lophostemon confertus

Common Name
Brisbane box

Height
60'

Canopy Spread
40'

Native
No

Type of Tree
Evergreen

Tree Form
Large Canopy

Clearance:
4'-7' parkways or larger

Considerations:
Large, reliable tree that tolerates all soil types, high alkalinity, air pollution, drought, and poor drainage. Low maintenance, disease and pest resistant tree. Plant in full sun.

Use in Street Tree Palettes:
Community Corridor: El Cajon Boulevard
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Lophostemon confertus	Brisbane box	E.	20-40	20-40	30-35	4-6	Yes		Yes	No

Magnolia grandiflora (St. Mary Magnolia)

Botanical Name
Magnolia grandiflora

Common Name
St. Mary magnolia

Height
25'

Canopy Spread
20'

Native
No

Type of Tree
Evergreen/Flowering

Tree Form
Medium Canopy

Clearance:
4'-7' parkways or larger

Considerations:
Attractive, evergreen tree noted for its glossy dark green leaves and large, fragrant showy white flowers. Tolerates drought, heat, air pollution, slopes, and wind. Plant in full sun.

Use in Street Tree Palettes:
Residential Corridors
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Magnolia grandiflora	St. Marys magnolia	E.	-20	-20	25-30	3-4			Yes	Yes

Melaleuca linariifolia (Flaxleaf Paperbark)

Botanical Name
Melaleuca linariifolia

Common Name
Flaxleaf paperbark

Height
40'

Canopy Spread
40'

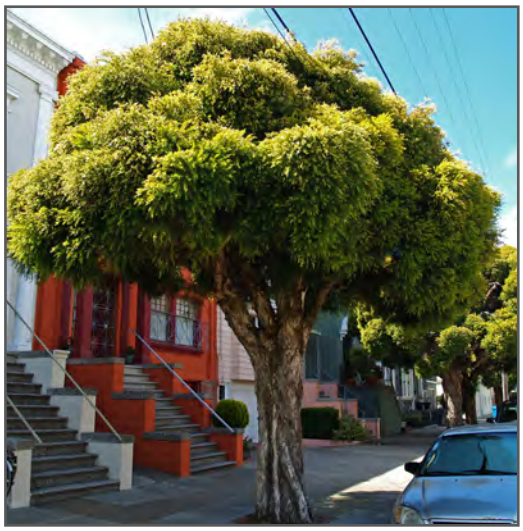
Native
No

Type of Tree
Evergreen/Flowering

Tree Form
Large Canopy

Clearance:
4'-7' parkways or larger

Considerations:
Hardy, fast-growing tree with attractive, unique bark and showy white flowers. Low maintenance, disease resistant tree and drought tolerant. Plant in full sun.



Use in Street Tree Palettes:
Residential Corridors
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Melaleuca linarifolia	Flaxleaf paperbark	E.	20-40	20-40	30-35	4-6	Yes		Yes	No

Metrosideros excelsus (New Zealand Christmas Tree)

Botanical Name
Metrosideros excelsus

Common Name
New Zealand Christmas tree

Height
30'

Canopy Spread
30'

Native
No

Type of Tree
Evergreen/Flowering

Tree Form
Medium Canopy

Clearance:
4'-7' parkways or larger

Considerations:
Large, evergreen tree with striking red blooms in summer that attract hummingbirds and other pollinators. Tolerates a variety of soils and drought. Plant in full sun.

Use in Street Tree Palettes:
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Metrosideros excelsus	New Zealand Christmas tree	E.	-20	-20	25-30	3-4	Yes		Yes	No

Pinus canariensis (Canary Island Pine)

Botanical Name
Pinus canariensis

Common Name
Canary Island Pine

Height
40'

Canopy Spread
25'

Native
No

Type of Tree
Evergreen

Tree Form
Vertical/Upright

Clearance:
7'-10' parkways or larger

Considerations:
Large, graceful, fast growing evergreen conifer that tolerates all soil types, drought, and pollution. Plant in full sun.

Use in Street Tree Palettes:
Residential Corridors
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Pinus canariensis	Canary Island pine	C.	40+	20-40	35-40	6-8	Yes		Yes	No

Pistacia chinensis (Chinese Pistache)

Botanical Name
Pistacia chinensis

Common Name
Chinese pistache

Height
40'

Canopy Spread
40'

Native
No

Type of Tree
Deciduous

Tree Form
Large Canopy

Clearance:
4'-7' parkways or larger

Considerations:
Striking, hardy, reliable tree that provides excellent filtered shade and impressive autumn color. Tolerates heat, variety soils, and drought. Plant in full sun.

Use in Street Tree Palettes:
Residential Corridors
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Pistacia chinensis	Chinese pistache	D.	40+	40+	35-40	6-8	Yes		Yes	No

Platanus racemosa (California Sycamore)

Botanical Name
Platanus racemosa

Common Name
California sycamore

Height
75'

Canopy Spread
45'

Native
Yes

Type of Tree
Deciduous

Tree Form
Large Canopy

Clearance:
7'-10' parkways or larger

Considerations:
Large, stately, towering California native tree with attractive branching pattern and bark. Essential in native planting and ecological corridors. Tolerates a variety of soils, heat and wind resistant. Plant in full to partial sun.

Use in Street Tree Palettes:
Community Corridors: Euclid Ave. and Home Ave.
Canyon Interface District
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Plantanus racemosa	California sycamore	D.	40+	40+	35-40	8-Jun		Yes	Yes	No

Platanus acerifolia 'Bloodgood'(London Plane)

Botanical Name
Platanus acerifolia 'Bloodgood'

Common Name
London plane

Height
40'

Canopy Spread
40'

Native
No

Type of Tree
Deciduous

Tree Form
Medium Canopy

Clearance:
7'-10' parkways or larger

Considerations:
Large, hardy pyramidal tree with attractive bark and maple-like foliage. Will tolerate air pollution, poor drainage, variety of soils, compacted soil, and drought. Plant in full sun.

Use in Street Tree Palettes:
Community Corridors: Ash Street and Federal Boulevard
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Platanus acerifolia "Bloodgood"	London plane	D.	40+	40+	35-40	8-Jun			Yes	Yes

Podocarpus macrophyllus (Yew Pine)

Botanical Name
Podocarpus macrophyllus

Common Name
Yew pine

Height
30'

Canopy Spread
20'

Native
No

Type of Tree
Evergreen

Tree Form
Vertical/Upright

Clearance:
4'-7' parkways or larger

Considerations:
Reliable, upright growing, versatile tree. Drought, heat and air pollution tolerant, disease and pest free. Plant in full sun to partial shade.

Use in Street Tree Palettes:
Residential Corridors
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Podocarpus macrophyllus	Yew pine	E.	20-40	-20	25-30	4-6			Yes	No

Pyrus calleryana (Bradford Pear)

Botanical Name
Pyrus calleryana

Common Name
Bradford pear

Height
30'

Canopy Spread
20'

Native
No

Type of Tree
Deciduous/Flowering

Tree Form
Small Canopy

Clearance:
4'-7' parkways or larger

Considerations:
Popular, charming, medium sized tree noted for its showy white flowers and autumn color. Tolerates a variety of soils, drought and air pollution. Plant in full sun.

Use in Street Tree Palettes:
Residential Corridors
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Pyrus calleryana	Bradford pear	D.	20-40	-20	30-35	3-4			Yes	Yes

Quercus agrifolia (Coast Live Oak)

Botanical Name
Quercus agrifolia

Common Name
Coast live oak

Height
65'

Canopy Spread
50'

Native
Yes

Type of Tree
Evergreen

Tree Form
Large Canopy

Clearance:
10' parkways or larger

Considerations:
Majestic and picturesque California native tree that is essential in native plantings and ecological corridors. Shade tolerant, drought, heat, cold, and fire resistant.

Use in Street Tree Palettes:
Residential Corridors
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Quercus agrifolia	Coast live oak	E.	40+	40+	35-40	8+	Yes	Yes	Yes	No

Quercus ilex (Holly Oak)

Botanical Name
Quercus ilex

Common Name
Holly oak

Height
50'

Canopy Spread
50'

Native
No

Type of Tree
Evergreen

Tree Form
Large Canopy

Clearance:
4'-7' parkways or larger

Considerations:
Large, hardy, evergreen tree that creates deep shade. Grows in a variety of soils, drought and wind tolerant, low maintenance. Plant in full sun to partial shade.

Use in Street Tree Palettes:
Community Corridors: Euclid Avenue and Home Avenue
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Quercus ilex	Holly oak								Yes	No

Stenocarpus sinuatus (Firewheel Tree)

Botanical Name
Stenocarpus sinuatus

Common Name
Firewheel tree

Height
30'

Canopy Spread
15'

Native
No

Type of Tree
Evergreen/Flowering

Tree Form
Vertical/Upright

Clearance:
4'-7' parkways or larger

Considerations:
Upright, slow growing tree with attractive dark green, lobed foliage and stunning, unique red blooms. Drought tolerant once established and less than average litter. Plant in full sun to partial shade.

Use in Street Tree Palettes:
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Stenocarpus sinuatus	Firewheel tree	E.	20-40	20-40	30-35	4-6			Yes	No

Syagrus romanzoffianum (Queen Palm)

Botanical Name
Syagrus romanzoffianum

Common Name
Queen palm

Height
50'

Canopy Spread
15'

Native
No

Type of Tree
Palm

Tree Form
Vertical/Upright

Clearance:
2' parkways or larger

Considerations:
A popular, fast growing, stately, single-trunked palm that requires little maintenance and can tolerate neglect and poor soils. Plant in full sun to partial shade. Generally allow existing to remain and some new to be planted but only with alternating canopy trees.

Use in Street Tree Palettes:
Community Corridor: El Cajon Boulevard
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Syagrus romanzoffianum	Queen palm	P.	40+	40+	25-30	3-4	Yes		Yes	No

Tipuana tipu (Tipu)

Botanical Name
Tipuana tipu

Common Name
Tipu

Height
40'

Canopy Spread
40'

Native
No

Type of Tree
Deciduous/Flowering

Tree Form
Large Canopy

Clearance:
7'-10' parkways or larger

Considerations:
Elegant, reliable, fast growing shade tree with showy apricot-yellow flowers. Tolerates a variety of soils and drought. Plant in full sun.

Use in Street Tree Palettes:
Residential Corridors
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Tipuana tipu	Tipu	D.	40+	40+	35-40	8+			Yes	No

Ulmus parvifolia (Chinese Elm)

Botanical Name
Ulmus parvifolia

Common Name
Chinese elm

Height
40'

Canopy Spread
40'

Native
No

Type of Tree
Deciduous

Tree Form
Large Canopy

Clearance:
4'-7' parkways or larger

Considerations:
Graceful, tough, fast growing tree with bright green foliage and attractive bark. Tolerates air pollution, grows in all soil types, and is resistant to heat and drought. Plant in full sun to partial shade.

Use in Street Tree Palettes:
Community Corridor: 54th Street
Local Streets

Botanical Name	Common Name	Type	Height	Crown Spread	Spacing	Parkway Size	Drought Tolerant	Native	With Drain	Flow Through
Ulmus parvifolia	Chinese elm	E.	20-40	20-40	35-40	6-8	Yes		Yes	Yes