



CHAPTER 5

CARROLL CANYON CREEK ENHANCEMENT

5 CARROLL CANYON CREEK ENHANCEMENT

A major component of *Stone Creek's* park and open space system will be the enhancement of Carroll Canyon Creek and the creek corridor. As the various phases and neighborhoods within *Stone Creek* are developed, Carroll Canyon Creek will be improved and enhanced to create an urban open space system with varied physical environments integrated into the *Stone Creek* park experience. This design will address the hydrology and biology of the creek in a natural setting while providing visual and recreational amenities to local residents, employees, and visitors alike. Native riparian vegetation will be prevalent along the bottom of the Carroll Canyon Creek corridor, transitioning to include native upland plants along the canyon slopes; native and ornamental plantings will occur within the public parks, gardens, and open space areas.

Planned pedestrian and bicycle trails will interconnect the various neighborhoods within *Stone Creek* to and through the creek corridor, with linkages to the surrounding community, inviting residents, employees, and visitors of *Stone Creek* to explore and enjoy the creek experience.

In keeping with the overall Vision of *Stone Creek*, the enhancement of Carroll Canyon Creek is a vital open space element in the creation of a lush and vibrant live-work-play community within Mira Mesa. An asset to residents of *Stone Creek* and the surrounding community as a whole, the enhanced Carroll Canyon Creek corridor will provide a respite of natural beauty for exploration and enjoyment.



5.1 OVERVIEW

Carroll Canyon Creek is an existing intermittent stream course that extends east-west through the southern portion of *Stone Creek*. The creek and two tributary channels emerge from storm drain pipes on the east end of *Stone Creek* and flow westerly, exiting *Stone Creek* within the southwestern portion of the Westside Neighborhood.

Stone Creek is one of several development areas located within the Carroll Canyon Master Plan area of the Mira Mesa Community Plan. The Community Plan recognizes the importance of enhancing Carroll Canyon Creek as an integral element of developments within Carroll Canyon and in improving the creek's hydrological and habitat functions. The Carroll Canyon Master Plan Element of the Mira Mesa Community Plan includes specific development criteria to be used in the preparation and evaluation of development proposals in the Carroll Canyon Master Plan area. As presented in this chapter, *Stone Creek* has been designed to be consistent with the Master Plan Development Criteria contained in the Community Plan and successfully implements the intent of the Carroll Canyon Master Plan Element.

Consistent with the Mira Mesa Community Plan, *Stone Creek* includes an enhancement plan for Carroll Canyon Creek. The floodway of Carroll Canyon Creek will be recreated as a contiguous riparian habitat through the planting of native riparian plant species. In accordance with guidelines for the Carroll Canyon Master Plan Area included within the Mira Mesa Community Plan, enhancement of Carroll Canyon Creek will provide a creek corridor that "shall vary in width using 200 feet as a minimum standard." Additionally, a "50-foot minimum buffer shall be provided on each side of the creek channel." (See Figure 5-1, *Carroll Canyon Creek Corridor*.) Park elements will be incorporated through most of the creek's length including landscaping and trails.

The design for Carroll Canyon Creek considers three primary functions for the creek:

- ❧ The creek as an urban open space element.
- ❧ The creek as part of a larger flood control system.
- ❧ The creek as a viable habitat.

Created as an urban open space, the enhanced Carroll Canyon Creek will establish one of the essential elements for *Stone Creek* - a linear park with bicycle and pedestrian trails occurring along the entire length of the creek corridor. Integrated as a recreational amenity within *Stone Creek* Central Park and Westside Gardens, Carroll Canyon Creek will be easily accessible by a wide variety of users. Recreational facilities such as walkways, bicycle paths, and seating and picnic areas along the creek edge or at the top of the creek bank will further emphasize the park experience. Pedestrian and bicycle paths will connect with pathways linking to other neighborhoods within *Stone Creek* and the surrounding community.

The design of the creek enhancement plan addresses the creek's hydrology and hydraulic constraints. In order to slow the velocity of seasonal flows, a wider channel design with hydraulic features constructed within the creek will moderate changes in creek speed. These features, such as boulder crossings, will appear as natural elements and will be planted to integrate with adjacent creek enhancements.

Figure 5-1. Carroll Canyon Creek Corridor



Legend :

- 200' Average Creek Corridor
- 50' Buffer
- Creek

For the portion of the creek east of Camino Ruiz, bank protection is to be placed where necessary to prevent scouring by flood waters. For the creek corridor west of Camino Ruiz, bank protection is to reflect the style and type (i.e. riprap) installed on the southern bank by the adjacent existing development and will be planted with native plant species to give a more natural character. Channel banks are designed with varying slope ratios to appear as natural as is feasible, to reflect the native character of the creek corridor, and will be terraced to accommodate the movement of wildlife and pedestrians.

Enhancement of the creek will result in creating a viable wildlife habitat that promotes biodiversity. In its current condition, the creek is sparsely vegetated and supports limited floristic range. The channel bottom will be planted with groupings of riparian trees native to San Diego's coastal canyons including willow, sycamore, and cottonwood trees. This riparian habitat will transition to restored upland habitat within the floodplain, including native tree species such as oaks, native shrubs, and open grass areas allowing for passive recreation.

Other features of the creek enhancement plan highlight a landscape element that includes large riparian trees such as sycamores, cottonwoods, and alders grouped near adjacent neighborhoods and park turf areas where irrigation will be provided. Drought-tolerant native trees, shrubs, and ground covers will be used to landscape the remainder of the creek channel. Ornamental plantings may occur outside the creek channel within the landscape buffer acting as a transition between the natural creek corridor and more formal neighborhood parks.

5.2 DESIGN OBJECTIVES

Enhancement of Carroll Canyon Creek should meet the following design objectives:

General Design Objectives

- ❧ Create a creek channel that varies in width using 200 feet as a minimum standard with 50-foot buffers on either side of the creek channel. The buffer may include a bicycle and pedestrian trail on one side of the creek. (Portions of Carroll Canyon Creek channel may be less than 200 feet if the Planning Director determines that future right-of-way widths required to construct Carroll Canyon Road and transit reservation make the 200-foot minimum infeasible.)
- ❧ Design channel banks with varying slope ratios to enhance natural appearance and accommodate the movement of wildlife.
- ❧ Orient buildings toward the creek, where appropriate, to maximize views and pedestrian access.
- ❧ Screen loading and storage areas, and/or other similar uses, sited within the viewshed of the creek and associated open space.
- ❧ Provide a sensitive transition of plant materials from native species in the creek corridor to adjacent landscaped areas.
- ❧ Provide a supplemental irrigation system within the creek corridor to facilitate establishment of the plant material.
- ❧ Use reclaimed water, wherever feasible, for irrigation purposes to reduce the project's potable water demands.

Human Scale/Urban Open Space Recreation Objectives

- ❧ Provide a linear park with bicycle and pedestrian trails occurring along the creek corridor.
- ❧ Connect pedestrian and bicycle paths with pathways linking to other areas within the site and the surrounding community.

Hydrology/Hydraulic Objectives

- ❧ Create a creek channel with a stable profile requiring minimal grade control structures.
- ❧ Ensure that grade control structure heights be minimized, except when creating a specific design feature; be constructed of natural appearing materials; and be planted.
- ❧ Design bank protection east of Camino Ruiz where necessary to prevent scouring by flood waters. West of Camino Ruiz, design bank protection along the northern bank similar and compatible to that which is installed on the southern bank by the adjacent existing development (i.e. riprap). Plant riprap with native plant materials within Stone Creek.

Habitat Creation Objectives

- ❧ Design the creek channel bottom with multi-stage flood terraces to further support biodiversity.
- ❧ Plant the creek channel bottom with groupings of riparian trees native to San Diego's coastal canyons including willow, sycamore, and cottonwood trees, which will transition to upland plantings.

- ❧ Plant creek channel banks with native riparian trees and shrubs.

Landscape Objectives

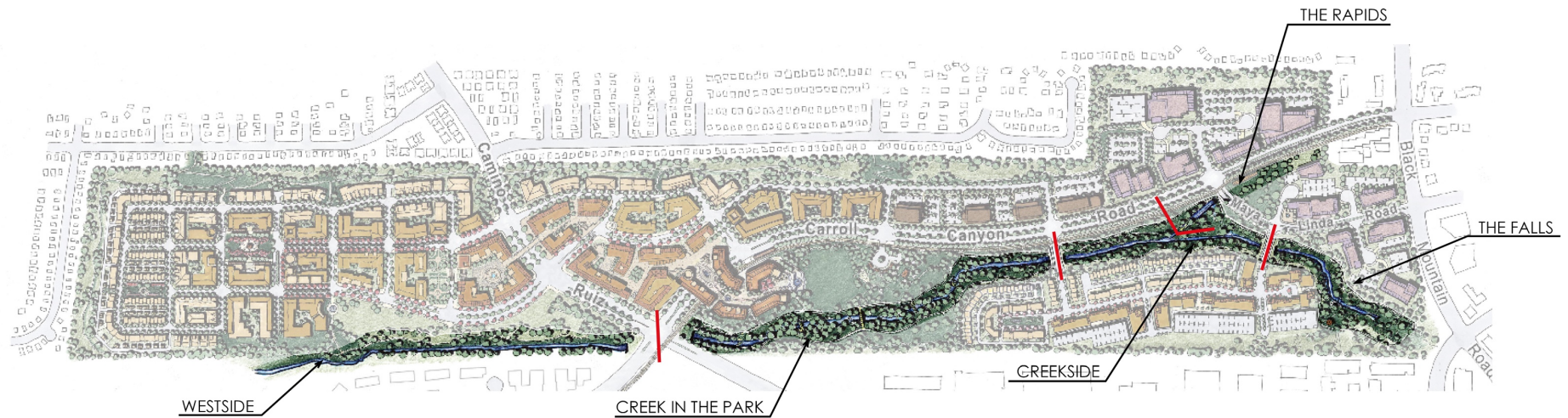
- ❧ Utilize large riparian trees such as sycamores, cottonwoods, and alders, grouped near turf areas where irrigation will be provided.
- ❧ Use drought-tolerant native trees, shrubs, and ground covers to landscape the remainder of the creek channel.

5.3 CREEK ENHANCEMENT PLAN

The *Design Objectives* presented in Section 5.2 have been integrated within the physical site planning process to create an environment suitable to support diverse native plant and animal species, while affording visual relief from the surrounding neighborhoods. The following sections provide conceptual designs and cross section illustrations of the creek corridor. The conceptual design and cross section illustrations are for illustrative purposes only. Actual design and plant selection may vary, provided that the enhancement goals for Carroll Canyon Creek are addressed.

In order to accomplish the Design Objectives for Carroll Canyon Creek, five distinct zones are envisioned: The Falls, The Rapids, Creekside, Creek in the Park, and Westside. Each of these zones is described in more detail below (See Figure 5-2, *Carroll Canyon Creek Corridor Illustrative Plan*).

❧ Figure 5-2. Carroll Canyon Creek Corridor Illustrative Plan ❧



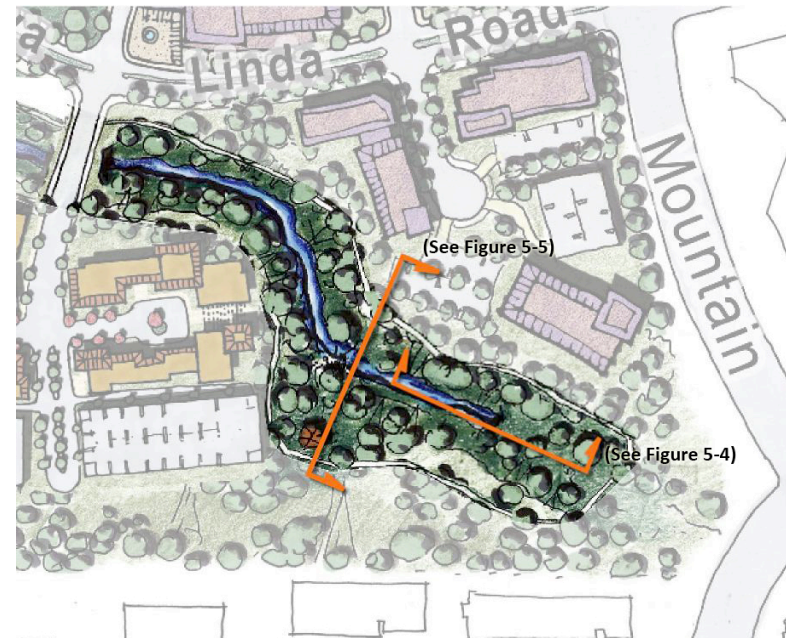
Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.

5.3.1 The Falls Zone

The Falls zone represents the headwaters of Carroll Canyon Creek and is named for the creek's series of vertical drops from the existing storm drain pipe at the east end of Stone Creek, tumbling to the enhanced creek bed. From the storm drain outfall, the zone continues downstream to the vehicular bridge crossing at Maya Linda Road into the Creekside Neighborhood (Figure 5-3, *The Falls Zone Illustrative*). As represented in Figure 5-4, *The Falls Zone*, Carroll Canyon Creek makes a dramatic entrance into the project site as a series of inter-connected boulder pools that descend 15 feet vertically, affording trail and park users visual and audio experiences of The Falls and the creek flowing beyond.

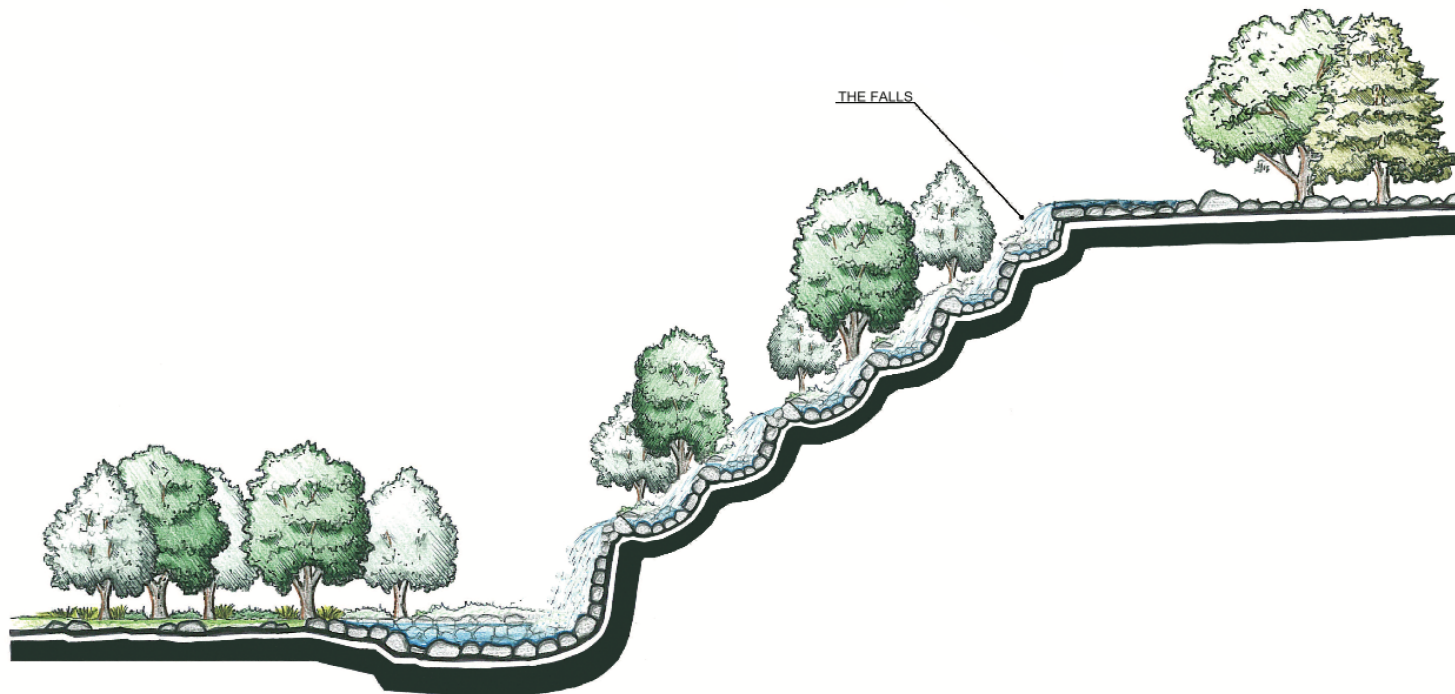
The creek corridor within this zone is defined by a meandering creek channel. The side slopes of the creek corridor will vary in height along the southern and northern edge. The varied side slope height allows view opportunities into the enhanced creek corridor, while creating scenic vistas for the existing uses to the south of Stone Creek. To emulate a naturally occurring creek, the creek channel will incorporate low, natural boulder crossings.

Figure 5-3. The Falls Zone Illustrative



Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.

Figure 5-4. The Falls Zone



Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.

As shown in Figure 5-5, *Typical The Falls Zone Enhancement*, landscaping in this zone will feature oak woodland, sycamore and willow riparian, and oak groves with vegetation on the northern creek slope. Land uses within the Eastside Neighborhood occur at the top of

the slope, affording pedestrians, employees and visitors within this neighborhood views and access into the Carroll Canyon Creek open space system.

Figure 5-5. Typical The Falls Zone Enhancement



Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.

5.3.2 The Rapids Zone

Entering the site as a separate tributary from the primary creek channel and intersecting The Falls zone, The Rapids zone (Figure 5-6, *The Rapids Zone Illustrative*) begins at the storm drain outfall on the south side of Carroll Canyon Road east of the intersection with Maya Linda Road.

The Rapids zone proceeds in a southwesterly direction under Maya Linda Road to the confluence with Carroll Canyon Creek. This tributary is approximately one-third the width of the main creek corridor.

Figure 5-6. The Rapids Zone Illustrative

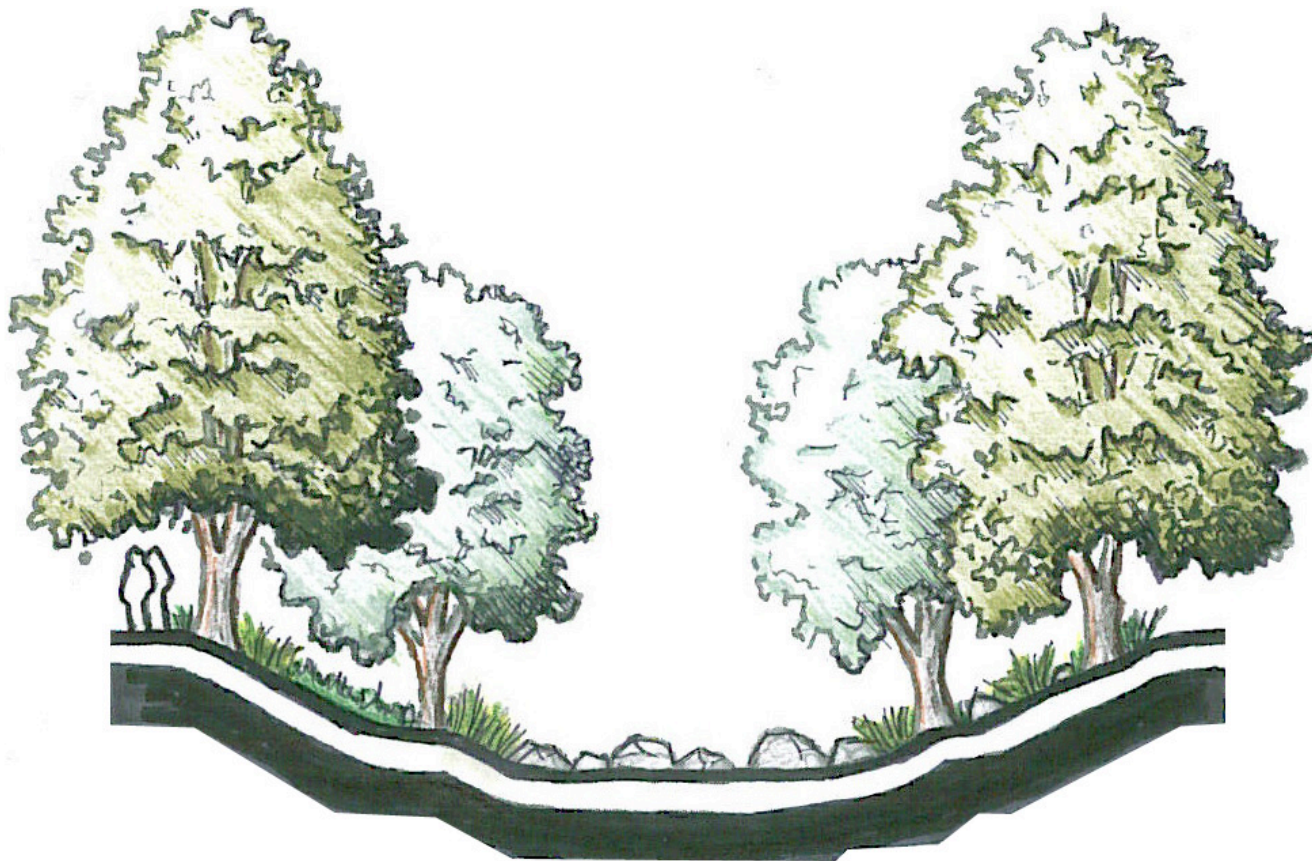


Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.

The Rapids zone will be framed along the north by a low stone wall. Additional boulder grade crossings occur within this zone. Pedestrian and recreational linkages also occur through this zone including

sidewalks along Carroll Canyon Road and Maya Linda Road, and a trail between the transit corridor and the top of the slope (see Figure 5-7, *Typical The Rapids Zone Enhancement*).

Figure 5-7. Typical The Rapids Zone Enhancement

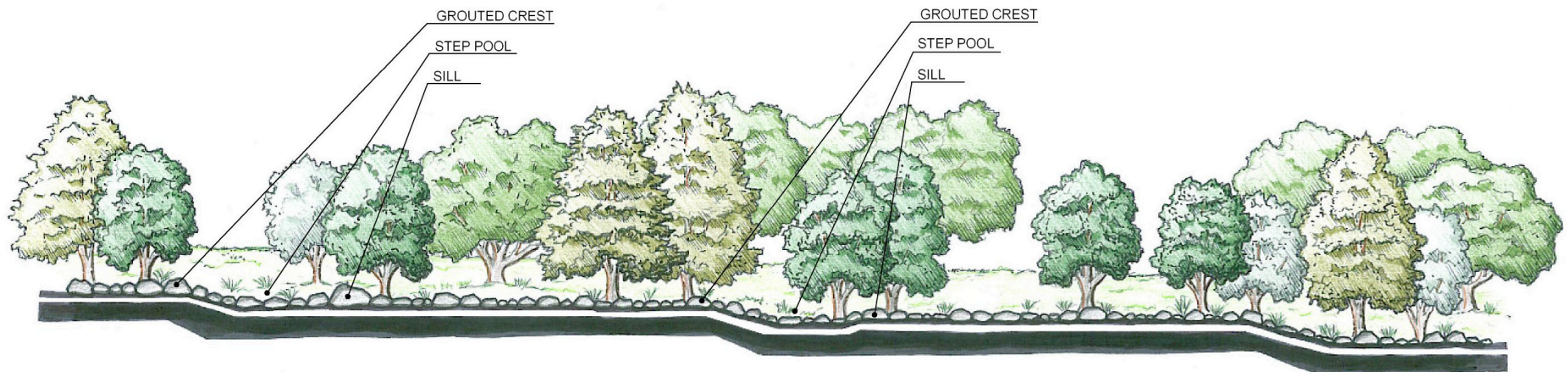


Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.

Sycamore and cottonwood will be planted in this area, and boulder outcrops will occur on the northern slope. The boulder grade crossings, boulder outcrops, and tree plantings in this zone will create a dynamic

stream environment that differs dramatically from the other zones of the creek (see Figure 5-8, *The Rapids Zone Boulder Enrichment*).

Figure 5-8. The Rapids Zone Boulder Enrichment



Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.

5.3.3 The Creekside Zone

The Creekside zone (Figure 5-9, *Creekside Zone Illustrative*) begins at the eastern vehicular bridge crossing from Maya Linda Road into the Creekside Neighborhood and continues downstream to the western vehicular bridge from Carroll Canyon Road into the Creekside Neighborhood (Figure 5-10, *Typical Creekside Zone Enhancement*). Through this zone, the creek corridor is well-defined by a meandering channel. The side slopes of the creek corridor are approximately the same height along both sides. The creek channel within the Creekside zone will incorporate boulder-grade crossings.

The Creekside zone will be framed with a low stone wall, placed at the edge of development within the Creekside Neighborhood, providing a

formal separation between development and the natural creek corridor. This area will be planted with sycamore, oak riparian, and willow riparian species which occur in a natural creek environment. The southern creek slope will be planted with oak woodland, whereas the northern creek slope will be planted with small groves of oak woodland species.

The Stone Creek Master Plan and Vesting Tentative Map will establish a backbone pedestrian and bicycle circulation system. As development occurs, additional trails and linkages are anticipated to be added to supplement the main circulation network. Several of these linkages occur throughout the Creekside zone.

Figure 5-9. Creekside Zone Illustrative



Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.

Figure 5-10. Typical Creekside Zone Enhancement



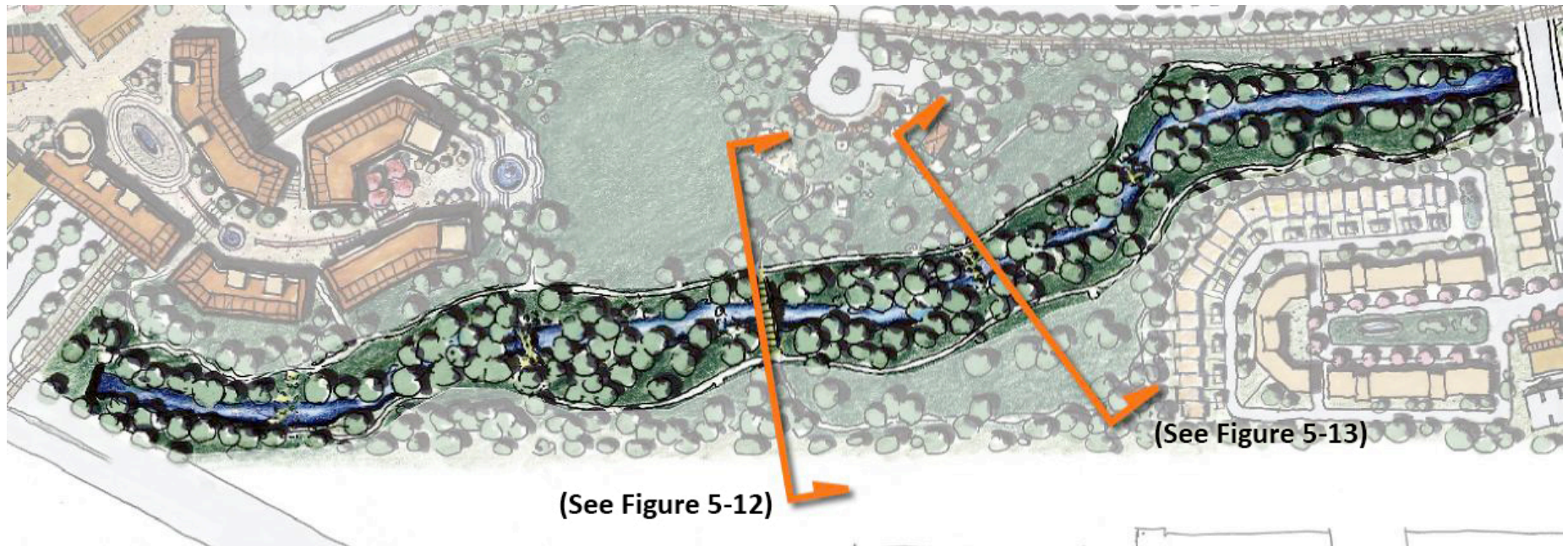
Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.

5.3.4 Creek in the Park Zone

The Creek in the Park zone (Figure 5-11, *Creek in the Park Zone Illustrative*) begins at the western vehicular bridge crossing from Carroll Canyon Road into the Creekside Neighborhood and continues downstream to Camino Ruiz. The creek corridor through this zone has well-defined boundaries, with a meandering creek channel. The side slopes of the creek corridor are approximately the same height along both sides.

As the creek flows west through this zone, it enters the heart of Stone Creek Central Park. Plantings in this area are intended to be low in scale to allow open turf areas to transition into creekside plantings. As the creek moves through the center of Stone Creek Central Park to the area south of the Village Center, the creek corridor again becomes more defined.

Figure 5-11. Creek in the Park Zone Illustrative



Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.

The creek channel will incorporate boulder-grade crossings within the Creek in the Park zone. The eastern and western ends of this zone will be planted with sycamore, oak riparian species, and willow riparian species. The northern and southern creek slopes will be planted with oak woodland species. Within the Stone Creek Central Park portion of the zone, the creek channel will be planted with native riparian tree species with limited understory plantings, and the adjacent parkland will be landscaped with a variety of tree species with large areas of turf.

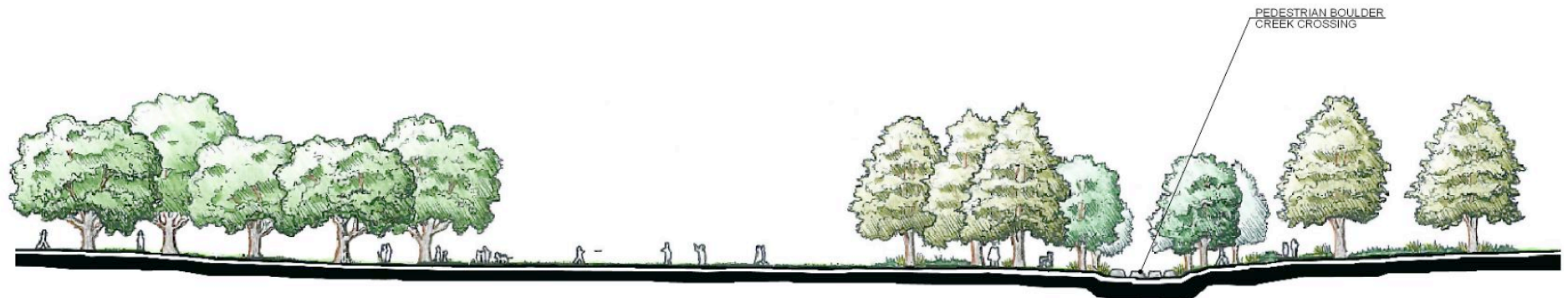
Several pedestrian and recreational linkages occur throughout the Creek in the Park zone. A sidewalk will be constructed along Carroll Canyon Road. Additionally, trails within Stone Creek Central Park will provide pedestrian connectivity. Pedestrian connectivity will be facilitated through a boulder crossing, reflecting the natural state of the creek. Pedestrian bridges will allow for nearly all-weather access across the creek. (See Figure 5-12, *Creek in the Park Zone Enhancement with Pedestrian Bridge Crossing*, and Figure 5-13, *Creek in the Park Zone Enhancement with Boulder Creek Crossing*.)

Figure 5-12. Creek in the Park Zone Enhancement with Pedestrian Bridge Crossing



Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.

Figure 5-13. Creek in the Park Zone Enhancement with Boulder Creek Crossing



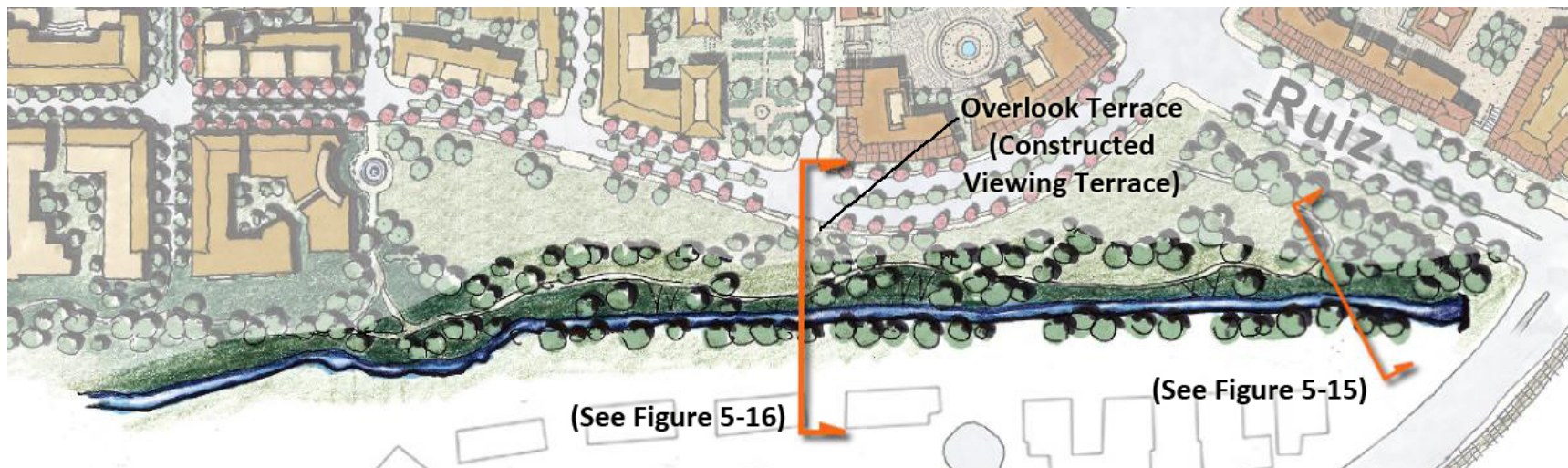
Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.

5.3.5 The Westside Zone

The Westside zone (Figure 5-14, *Westside Trail Zone Illustrative*) begins west of Camino Ruiz and continues downstream to where Carroll Canyon Creek turns south and flows out of Stone Creek. With only a portion of the creek corridor occurring within Stone Creek in this section, and the remaining portion already developed, the creek enhancement through this zone is not as varied as within other zones. The creek channel flows mostly straight, rather than meandering; and there are no adjacent flood terraces.

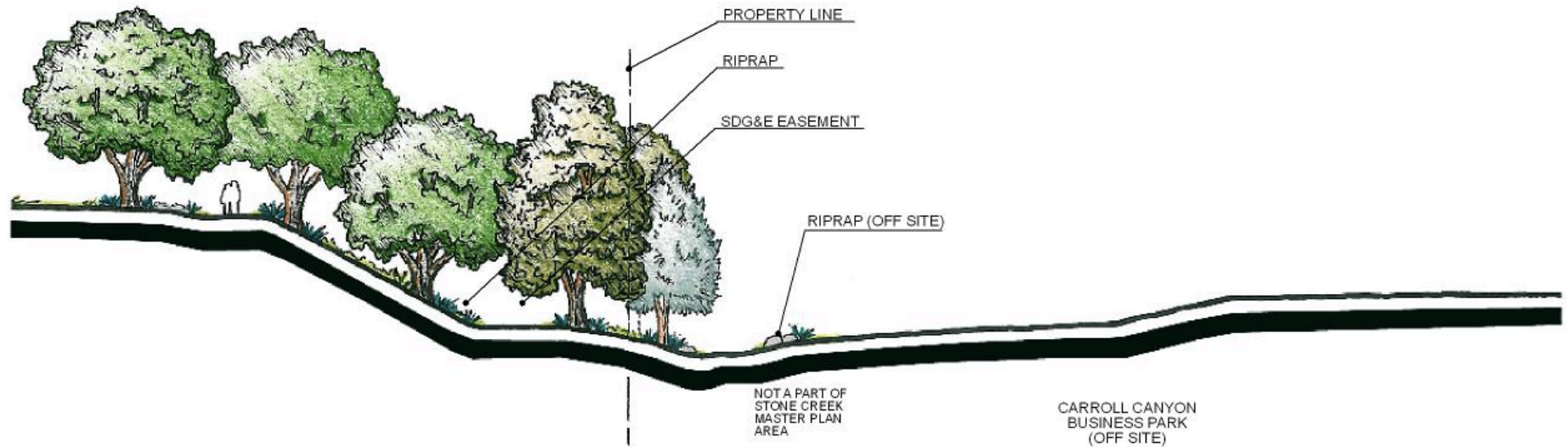
The southern half of the creek corridor through this area occurs outside the Stone Creek Master Plan and within the boundaries of the adjacent Carroll Canyon Business Park, where the creek slopes to a utility access road and then rises up to the edge of the developed building pads (Figure 5-15, *Typical Westside Zone Enhancement*). Westside Gardens runs along approximately two-thirds the length of this northern slope and expands the overall scale of the enhanced creek corridor and vista opportunities.

Figure 5-14. Westside Zone Illustrative



Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.

Figure 5-15. Typical Westside Zone Enhancement



Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.

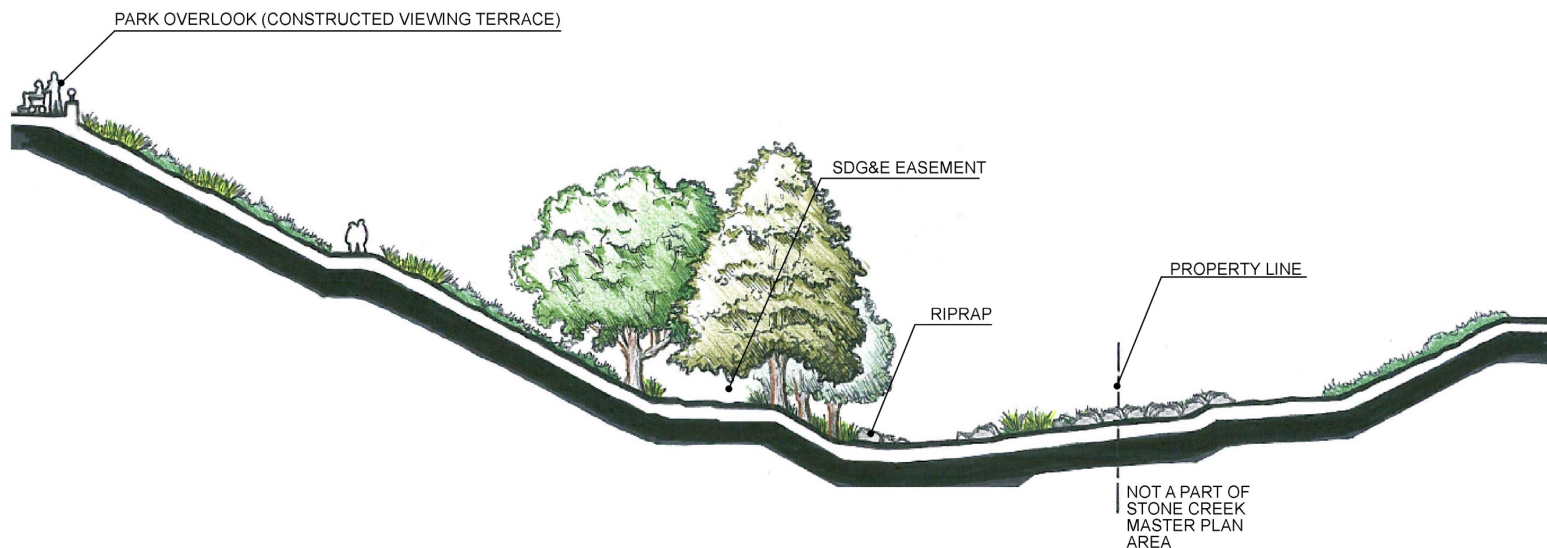
The creek channel and immediate side slope in this zone will be planted with sycamore and willow riparian species. The remainder of the northern creek slope will be planted with small groves of oak woodland species. Planted riprap will be used to stabilize the side slope of the creek channel within this area.

Pedestrian and recreational linkages occur throughout the Westside zone. The primary linkage is a trail that traverses the northern creek slope from east to west within Westside Gardens. The trails within Westside Gardens and the sidewalk along the adjacent street provide additional pedestrian and recreational linkages to the western portion of the project.

A unique element contained within the Westside Zone is the terracing of the landform, through the use of hardscape, as the zone transitions from the primary internal loop street within the Westside Neighborhood to the steep creek slopes. The hardscape terrace places the enhanced creek at a human level and allows for pedestrian access – visual and physical – while expanding the overall park experience through this zone (see Figure 5-16, *Landform Terracing in the Westside Zone*).

Landscape planting through this portion of the creek channel includes sycamore and willow riparian across the low-flow creek channel and at the bottom of the northern creek slope and groves of oak woodland on the northern creek slope.

Figure 5-16. Landform Terracing in the Westside Zone



Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.



CHAPTER 6

TRANSPORTATION AND MOBILITY

6 TRANSPORTATION AND MOBILITY

Stone Creek's Vision emphasizes the walkable scale of European villages and traditional American communities, where convenient amenities are located near homes and businesses. As a Transit-Oriented Development (TOD) with a transit corridor and two planned transit stops, *Stone Creek's* increased mobility options will multiply the benefits of a walkable environment.

Construction of Carroll Canyon Road and improvements to Camino Ruiz will serve the greater Mira Mesa community and *Stone Creek*. Although essential to the community circulation network, these major thoroughfares will bisect *Stone Creek's* neighborhoods and could discourage internal pedestrian flow. To meet this need and tie *Stone Creek's* neighborhoods together as a walkable, cohesive community, pedestrians will be bridged over Camino Ruiz and Carroll Canyon Road.

Stone Creek's interwoven network of streets and walkways will provide multiple routes to go from one block to the next, making it easy to travel by foot, bicycle, auto, or public transit. Compact block sizes, a hierarchy of tree-lined internal streets (which are only as wide as necessary) and subterranean parking will all contribute to the pedestrian-friendly experience at *Stone Creek*.

While fully accommodating all modes of travel, including bicycles and automobiles, *Stone Creek* will be first-and-foremost a walkable, pedestrian-friendly TOD. Pedestrians will be able to travel unimpeded from one end of *Stone Creek* to the other – nearly a two-mile distance – along tree-lined sidewalks, meandering trails, and through a variety of parks and piazzas.



6.1 OVERVIEW

Stone Creek is located in the heart of eastern Mira Mesa, an established community. Local streets and freeways exist to serve development within Mira Mesa. All land uses planned for *Stone Creek* will be tied together by the project's circulation elements, including the construction of Carroll Canyon Road through the project as a requirement of the Mira Mesa Community Plan's circulation network.

The *Stone Creek* circulation system will be pedestrian-friendly and public transit-oriented, while fully accommodating vehicle and bicycle travel needs. A varied and active street scene will make it both easy and inviting to walk between destinations at *Stone Creek*. The hierarchy of internal streets will draw residents, employees, and visitors toward important outdoor gathering places. Streets will highlight vista terminations and direct pedestrians to the creek corridor beyond. Creative topography will allow for pleasant pedestrian connections above the major arterial roadways and, in doing so, create a unique sense of place.

Carroll Canyon Road is an important circulation element for the community, connecting to Black Mountain Road and I-15 on the east, traveling through Carroll Canyon, and eventually tying into I-805 and Sorrento Valley Road on the west. In addition, the project will construct Maya Linda Road between Black Mountain Road and Carroll Canyon Road and will widen Camino Ruiz to its full circulation classification. With the project's construction of Carroll Canyon Road, extension of Maya Linda Road, and improvements to Camino Ruiz, *Stone Creek* will have access to a well-defined street network. These major thoroughfares through *Stone Creek* will be heavily landscaped, punctuated with design elements such as low stone walls, and will have non-contiguous sidewalks.

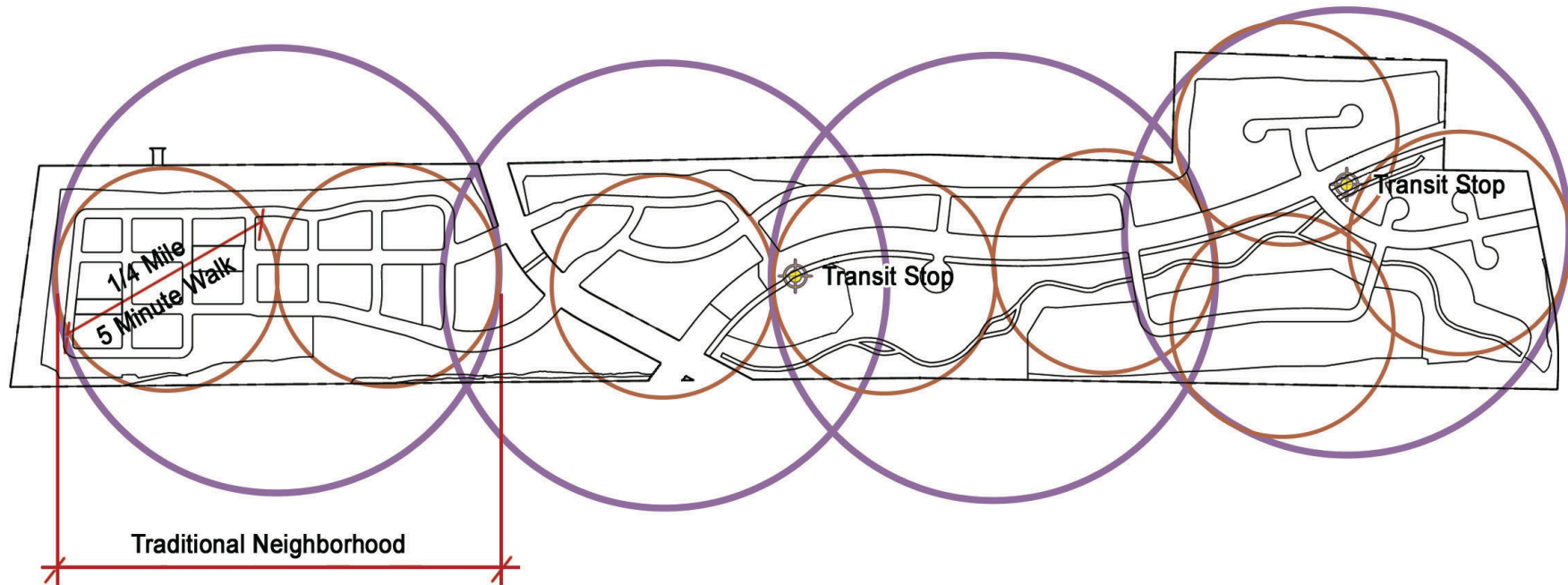
Adding to the existing and planned circulation element streets, *Stone Creek* will construct an interconnected grid of streets to provide for vehicular, pedestrian, and bicycle access within the various neighborhoods of *Stone Creek*. Like the major thoroughfares through *Stone Creek*, *Stone Creek*'s internal streets will also be heavily landscaped and include non-contiguous sidewalks. To further enhance the pedestrian and vehicular experiences, streetscape plantings should include elements of olfactory, visual, and auditory stimulation – such as fragrant trees, vibrant colors, and rustling leaves.

Additionally, transit opportunities, are planned through the project site and the greater Carroll Canyon corridor. *Stone Creek* is planned to include two transit stops to provide access to the future transit and serve residents, employees, and visitors within *Stone Creek*.

As shown in Figure 6-1, *Neighborhood Radius Map*, *Stone Creek*'s transit stops, as well as the other amenities planned for *Stone Creek* (the various outdoor gathering spaces, *Stone Creek* Central Park, Westside Gardens, and the variety of commercial/retail services located in the mixed-use Village Center), are located according to the traditional five-minute, quarter-mile walking radius which allows for easy pedestrian access.

Stone Creek's interconnected network of streets and walkways will provide multiple routes to move from one block to the next, making it easy to travel by foot, bicycle, auto, or public transit. Where possible, the auto-dominated world will be visually and physically distinguished from the pedestrian-oriented realm, creating a greater sense of neighborhood and place.

Figure 6-1. Neighborhood Radius Map



6.2 EXISTING CIRCULATION NETWORK

As shown in Figure 6-2, *Existing Circulation System*, Stone Creek will be served by a network of existing and planned public streets which connect to and through the Master Plan area. The primary elements of the existing circulation system in the vicinity of Stone Creek include: Mira Mesa Boulevard, Miramar Road, Carroll Canyon Road, Black Mountain Road, Camino Ruiz, and Maya Linda Road. A brief description of these existing roadways, their classifications and functions, is provided below.

Mira Mesa Boulevard. Mira Mesa Boulevard is primarily an east-west six-lane divided roadway. Additional lanes are provided at the I-805 and I-15 interchanges. The posted speed limit is 50 miles per hour (mph) between the I-805 interchange and Aderman Road, generally 45 mph between Aderman Road and Black Mountain Road, and 35 mph between Black Mountain Road and the eastern terminus at Scripps Ranch Boulevard. There are buffered bike lanes on both sides of Mira Mesa Boulevard, with the exception of a short distance between Parkdale and Camino Ruiz.

Miramar Road. Miramar Road is classified in the Mira Mesa Community Plan as a Six-Lane Primary Arterial from Eastgate Mall to Camino Santa Fe, a Six-Lane Major Street from Camino Santa Fe to Camino Ruiz, and a Six-Lane Primary Arterial from Camino Ruiz to the I-15 interchange. It is constructed as a six-lane facility through Mira Mesa. Bike lanes are provided along Miramar Road. There are intermittent sections where the bike lanes are not present; however, signage for a bike route is used in lieu. Curbside parking is prohibited along Miramar Road, bus stops are provided, and the posted speed limit is 50 mph west of Carroll Road and 45 mph east of Carroll Road.

Carroll Canyon Road. Carroll Canyon Road is currently a non-continuous roadway, with portions built in the western and eastern portions of the community. The Mira Mesa Community Plan shows the future alignment of Carroll Canyon Road as joining these two sections as a continuous thoroughfare running between I-805 and I-15. Carroll Canyon Road is classified in the Mira Mesa Community Plan as a Four-Lane Collector between Sorrento Valley Road and Scranton Road, as a Four-Lane Major Street between Scranton Road and Camino Santa Fe, as a Six-Lane Primary Arterial between Camino Santa Fe and Camino Ruiz, as a Six-Lane Major Arterial between Camino Santa Fe and Camino Ruiz, as a six-lane Major street between Camino Ruiz and Maya Linda Road, and as a four-lane Major street between Maya Linda Road and I-15. The existing western section of Carroll Canyon Road, between Scranton Road and Pacific Heights Boulevard, is a two-lane undivided roadway with a two-way left-turn lane. Parking is allowed, bike route signs are present, and the posted speed limit is 45 mph. The existing eastern section of Carroll Canyon Road, between the I-15 interchange and Black Mountain Road, is a four-lane undivided roadway. Parking is generally allowed, and the posted speed limit is 35 mph.

Figure 6-2. Existing Circulation System



Black Mountain Road. Black Mountain Road is classified as a Six-Lane Primary Arterial north of Kearny Villa Road and a Four-Lane Major Street from Kearny Villa Road to its terminus at Miramar Road in the Mira Mesa Community Plan. Black Mountain Road is built to its classification between Mercy Road and Galvin Avenue (six-lane divided roadway) and between Kearny Villa Road and Miramar Road (four-lane divided roadway). The remainder of Black Mountain Road is built as a four-lane roadway. Black Mountain Road becomes a four-lane divided roadway north of Mira Mesa Boulevard. Bike lanes are provided, and parking is generally prohibited. The posted speed limit is 50 mph, lowering to 45 mph north of Mercy Road. South of Mira Mesa Boulevard, bike lanes and bus stops are provided. Parking is generally allowed, except in the vicinity of the Hourglass Field Community Park.

Camino Ruiz. Camino Ruiz is classified as a Four-Lane Major Street north of Gold Coast Drive, and a Six-Lane Major Street south of Gold Coast Drive in the Mira Mesa Community Plan. Camino Ruiz is a four-lane divided roadway within the project area. Bike lanes are provided north of Gold Coast Drive with a posted speed limit of 40 mph. Bike lanes are not provided and the posted speed limit is 45 mph south of Gold Coast. Curbside parking is generally prohibited.

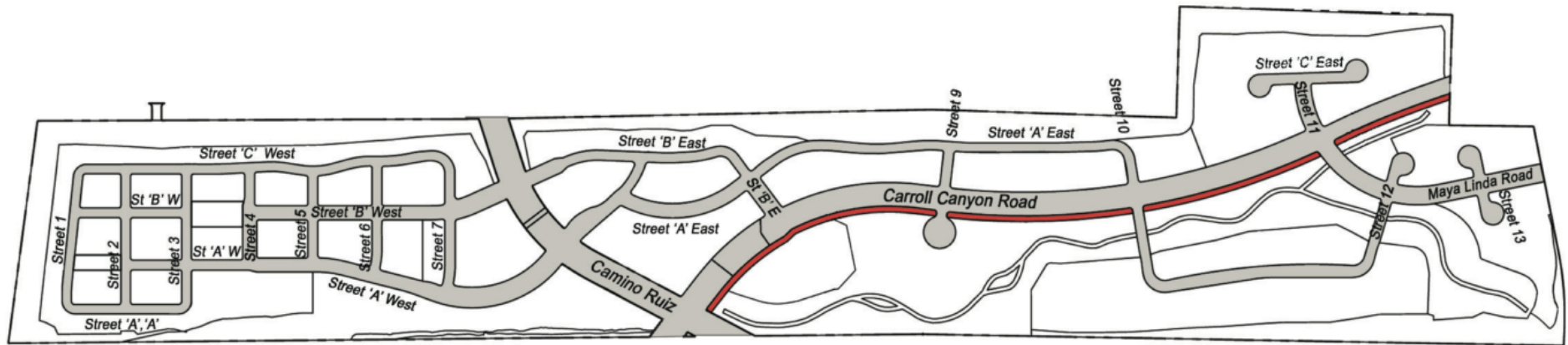
Maya Linda Road. Maya Linda Road is classified as a Two-Lane Collector. It is constructed as a two-lane undivided roadway from Black Mountain Road to its terminus just north of Gold Coast Road where it forms a cul-de-sac. The posted speed limit is 25 mph, and curbside parking is generally allowed.

6.3 STONE CREEK CIRCULATION NETWORK

Vehicular circulation within *Stone Creek* is achieved through connections to existing City streets surrounding the project site and an internal street system of connected public streets. This circulation network will provide multiple linkages within and between *Stone Creek*'s neighborhoods and the community at large. The internal street system will connect the five neighborhoods of *Stone Creek* with additional internal drives connecting the sub-neighborhoods. Figure 6-3, *Stone Creek Vehicular Circulation Plan*, illustrates the circulation plan for *Stone Creek* and designates the classification of roads designed to serve development within the Master Plan area. Buildings oriented toward the streets will create safer circulation with more active eyes watching the streets and efficient street design will be constructed to minimize the environmental and neighborhood impacts of circulation.

Figure 6-4, *Stone Creek Street Section Key Map*, identifies the various street section types that will occur in *Stone Creek*. Following this key map are descriptions of each street section. Street sections may be modified as required by the approved *Stone Creek Vesting Tentative Map*. Such modifications will not require an amendment to this Master Plan.

Figure 6-3. Stone Creek Vehicular Circulation Plan



Legend



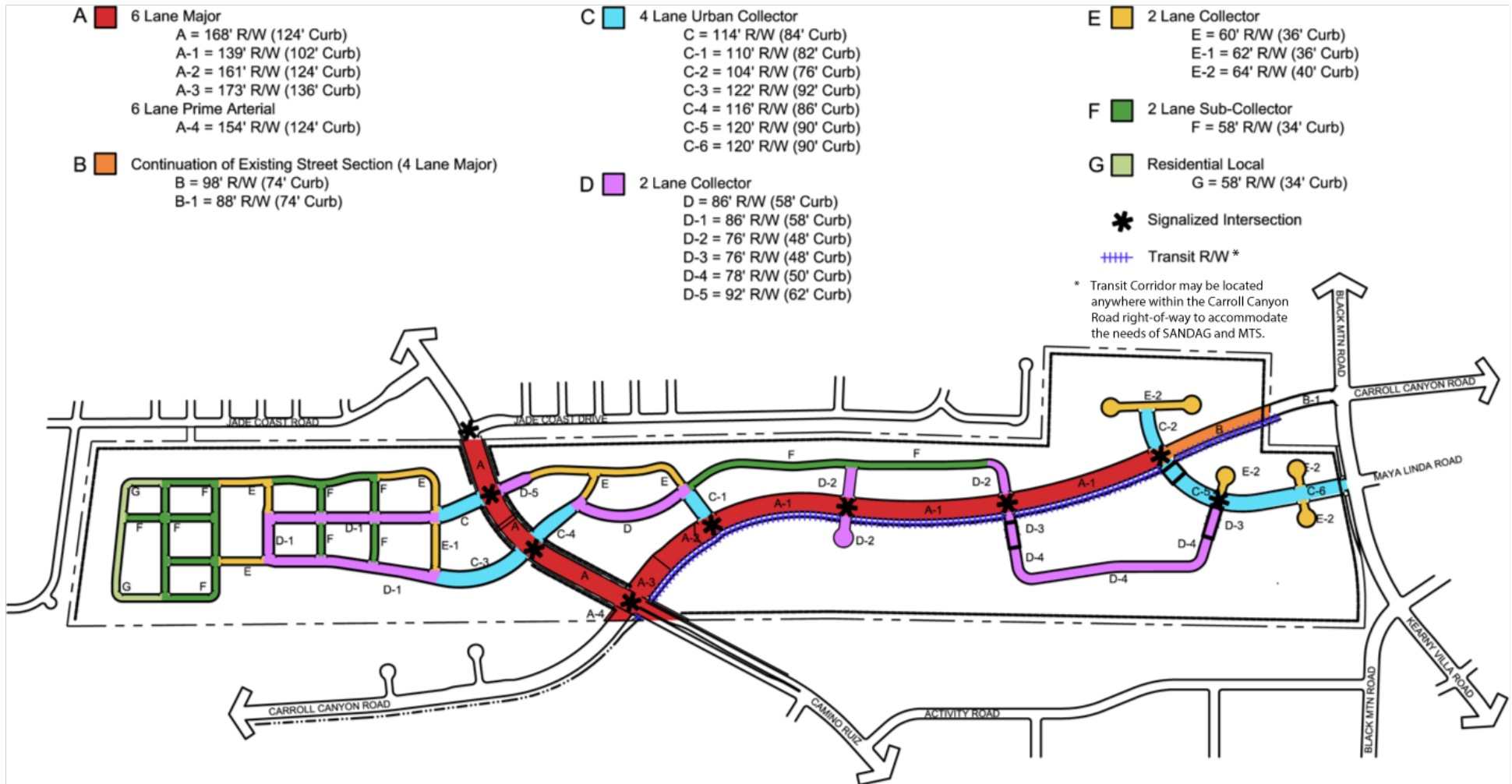
Public Streets



Transit Corridor*

* Transit Corridor may be located anywhere within the Carroll Canyon Road right-of-way to accommodate the needs of SANDAG and MTS.

Figure 6-4. Stone Creek Street Section Key Map



6.3.1 Carroll Canyon Road and Camino Ruiz (Street Sections A, A-1, A-2, A-3, A-4, B, and B-1)

Carroll Canyon Road will be constructed as a Six-Lane Major through the site from Maya Linda Road to Camino Ruiz. East of Maya Linda Road, Carroll Canyon Road will be constructed as a Four-Lane Major; and west of Camino Ruiz, it will be constructed as a Six-Lane Prime Arterial. As such, the right-of-way for this roadway will vary in width from 154 feet wide (Street Section A-4) west of Camino Ruiz; to 173 feet wide (Street Section A-3) just east of Camino Ruiz; to 139 feet wide through the central portion of *Stone Creek* (Street Section A-1); and 98 feet wide (Street Section B) where it will connect off-site on the east to the existing right-of-way, which is 88 feet. Curb-to-curb widths will be 124 feet (Street Section A-4) west of Camino Ruiz, 136 feet for Street Section A-3 just east of Camino Ruiz, 102 feet (Street Section A-1) through the central portion of *Stone Creek*, and 74 feet (Street Section B) east of Maya Linda Road. Where it connects to the existing off-site right-of-way, the curb-to-curb width will also be 74 feet (Street Section B).

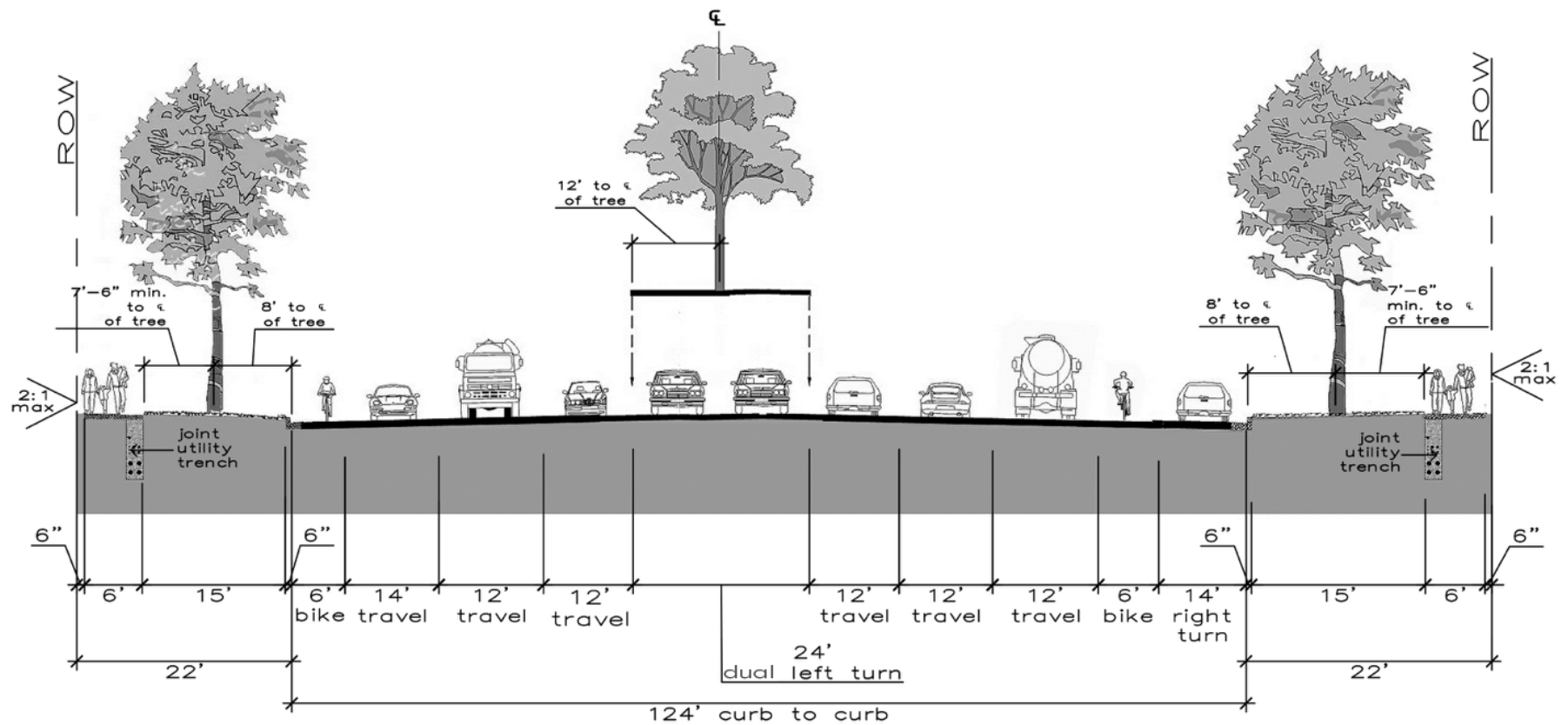
Landscape treatment along Carroll Canyon Road will also vary. The parkway on the north side of Carroll Canyon Road will consist of a six-foot wide non-contiguous sidewalk and a 15-foot wide planting area between the curb and sidewalk. The 15-foot wide parkway on the south side of Carroll Canyon Road will consist of an eight-foot wide planting area from the curb to the sidewalk and a six-foot wide sidewalk that meanders between the planting area and the adjacent 35-foot transit corridor (Sections A-1 through A-4).

Camino Ruiz will be widened to its full improvements as a Six-Lane Major Street, with a 168-foot wide right-of way and a curb-to-curb width of 124 feet (Street Section A).

STREET SECTION 'A'

168' ROW

6 Lane Major



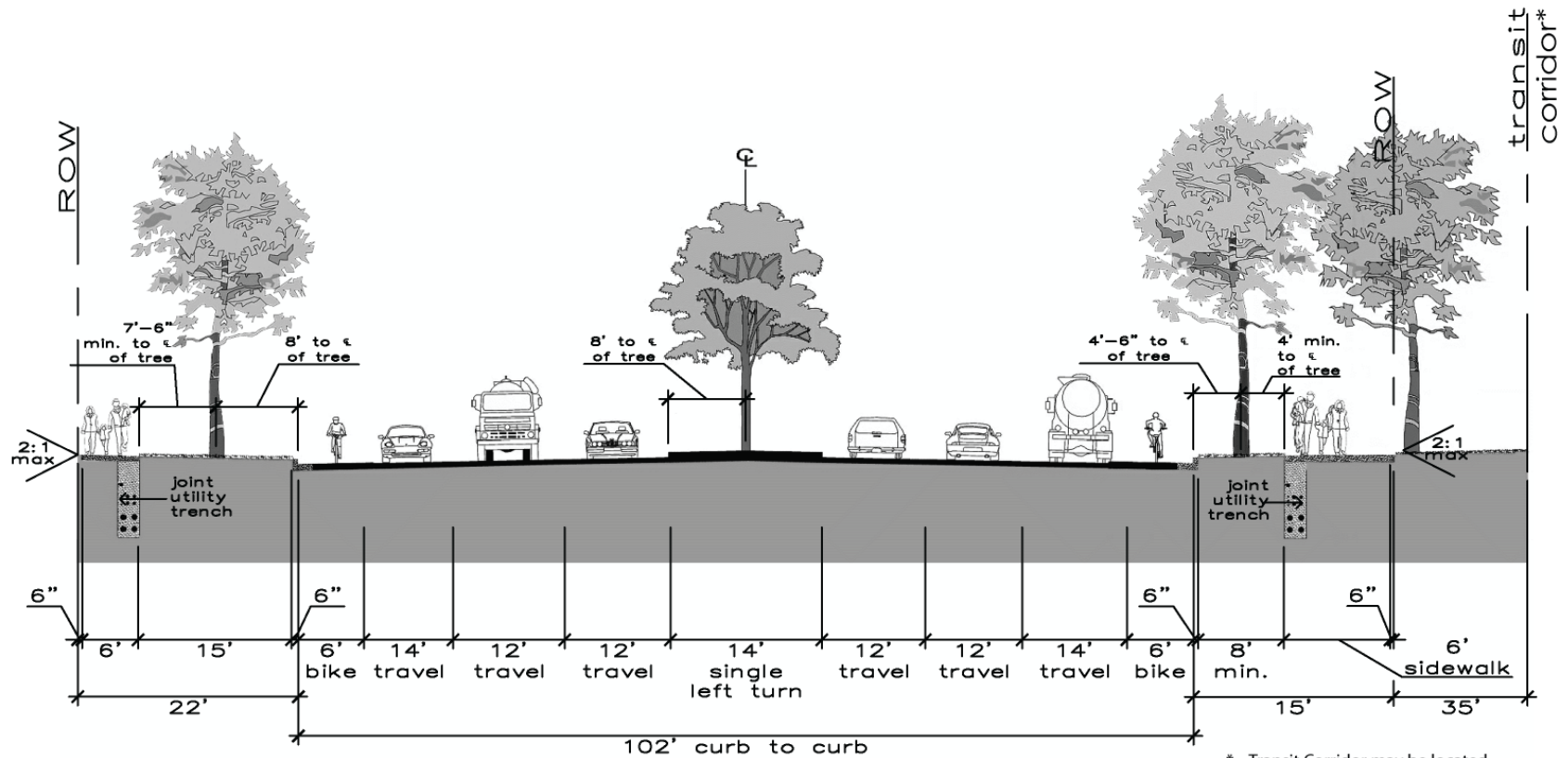
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STREET SECTION 'A-1'

139' ROW

6 Lane Major



* Transit Corridor may be located anywhere within the Carroll Canyon Road right-of-way to accommodate the needs of SANDAG and MTS for the BRT.

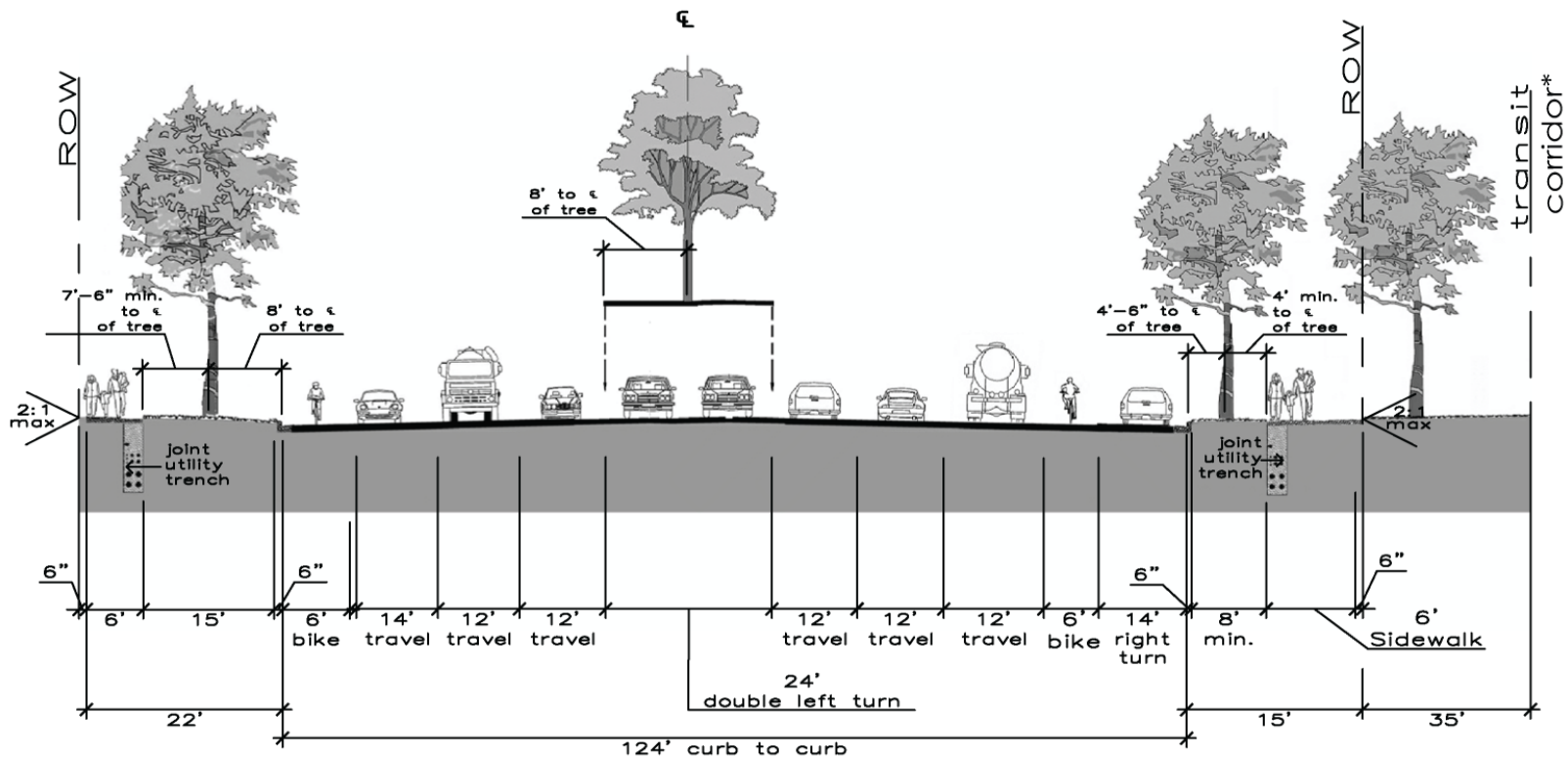
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STREET SECTION 'A-2'

161' ROW

6 Lane Major



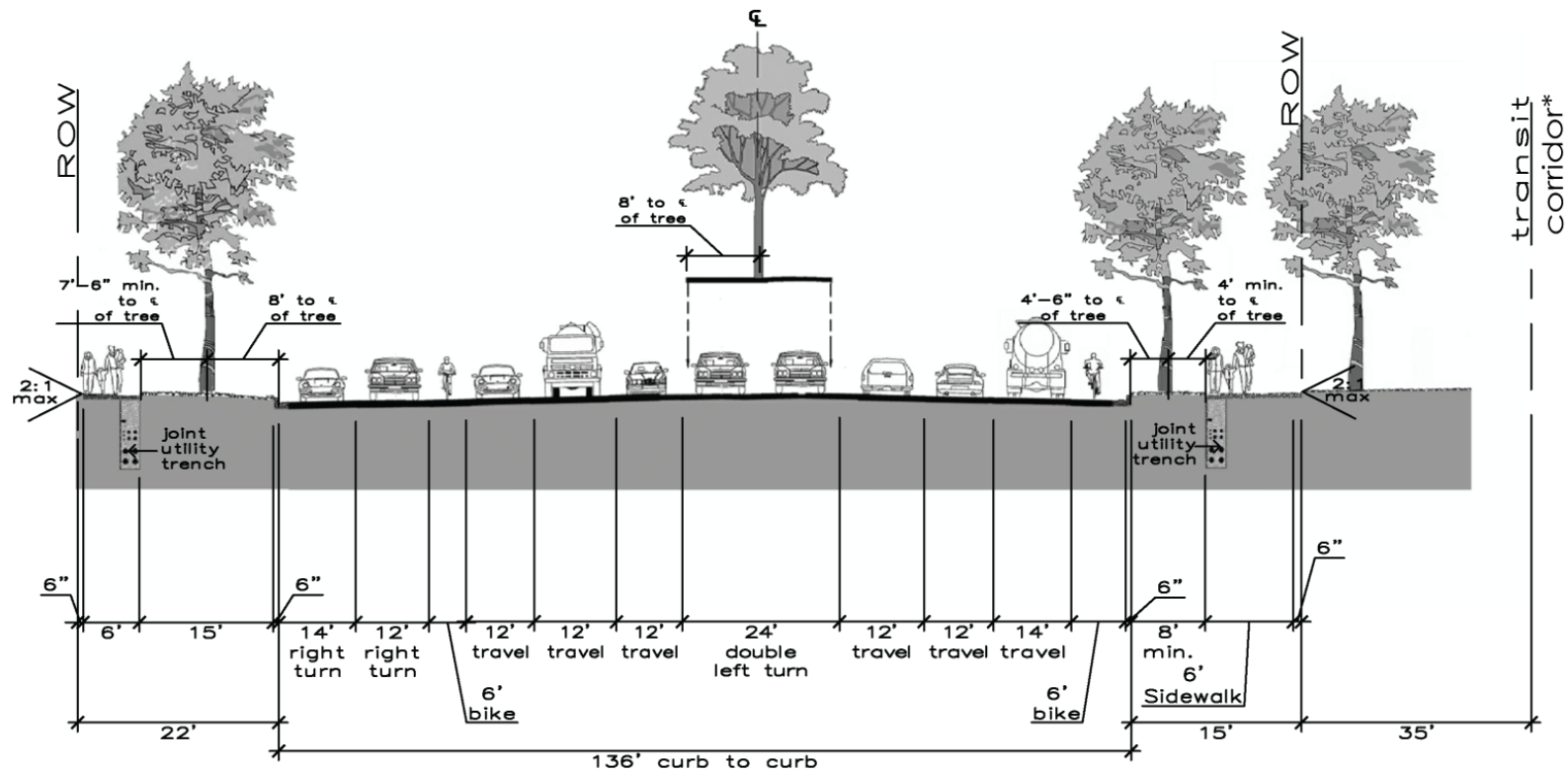
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* Transit Corridor may be located anywhere within the Carroll Canyon Road right-of-way to accommodate the needs of SANDAG and MTS.

173' ROW

6 Lane Major



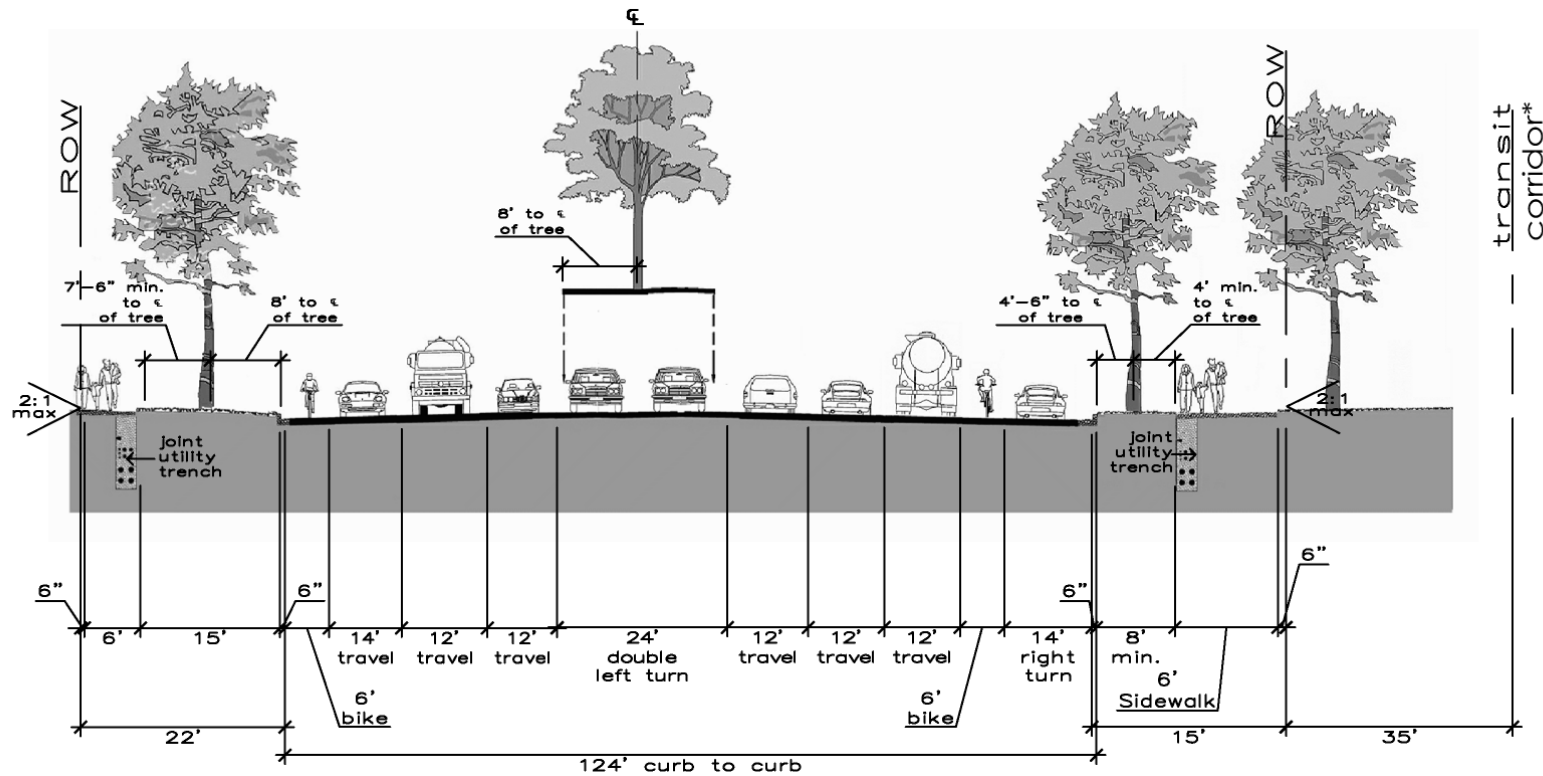
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* Transit Corridor may be located anywhere within the Carroll Canyon Road right-of-way to accommodate the needs of SANDAG and MTS.

STREET SECTION 'A-4'

154' ROW

6 Lane Major



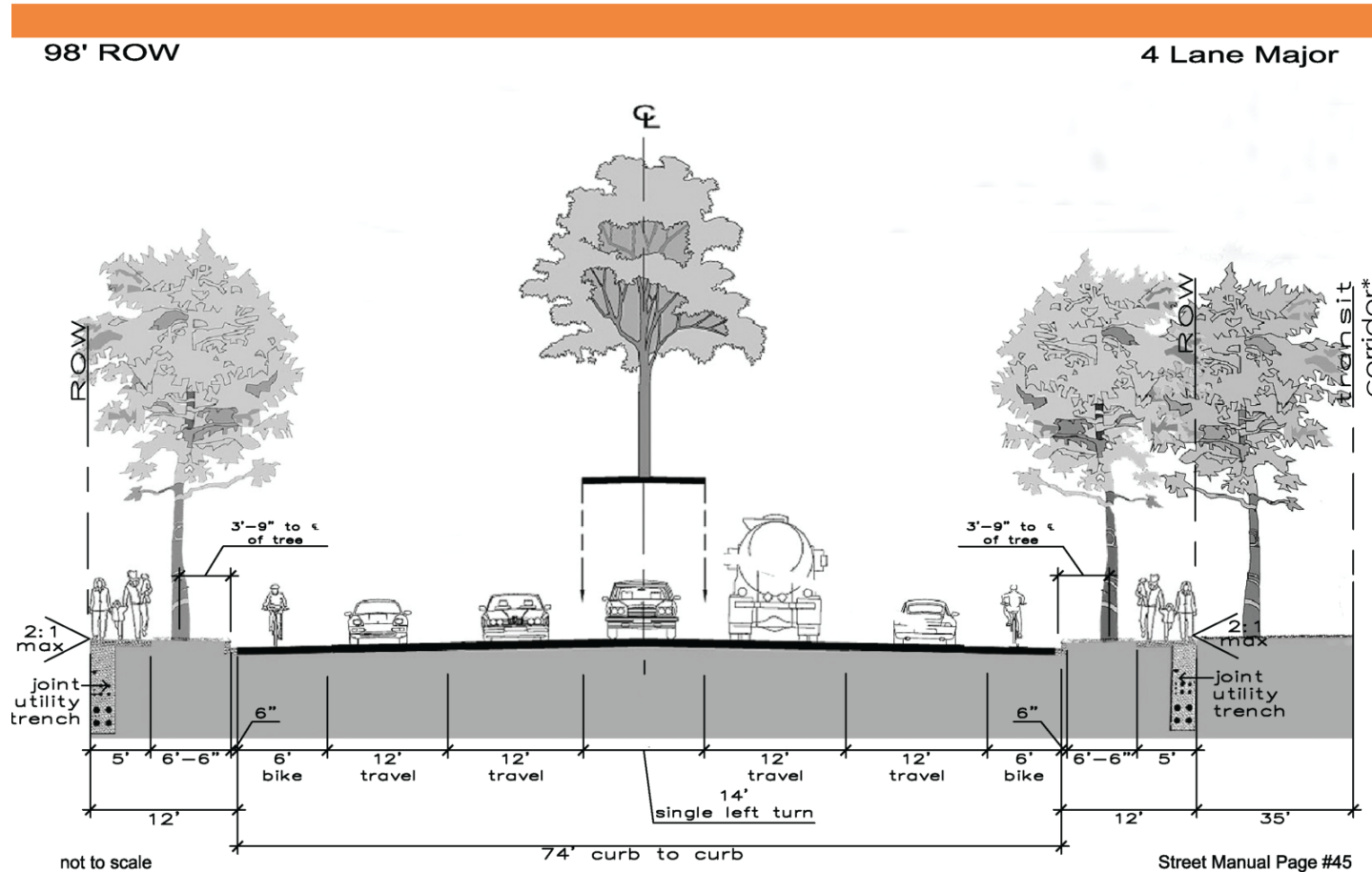
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* Transit Corridor may be located anywhere within the Carroll Canyon Road right-of-way to accommodate the needs of SANDAG and MTS.

The east end of Carroll Canyon Road (Section B) will merge with the off-site existing conditions (Section B-1), consisting of an 11.5-foot-wide

parkway on both sides of the street (five-foot-wide non-contiguous walks and six-foot-six-inch planting areas).

STREET SECTION 'B'



* Transit Corridor may be located anywhere within the Carroll Canyon Road right-of-way to accommodate the needs of SANDAG and MTS.

6.3.2 Urban Collector (Street Sections C, C-1, C-2, C-3, C-4, C-5, and C-6)

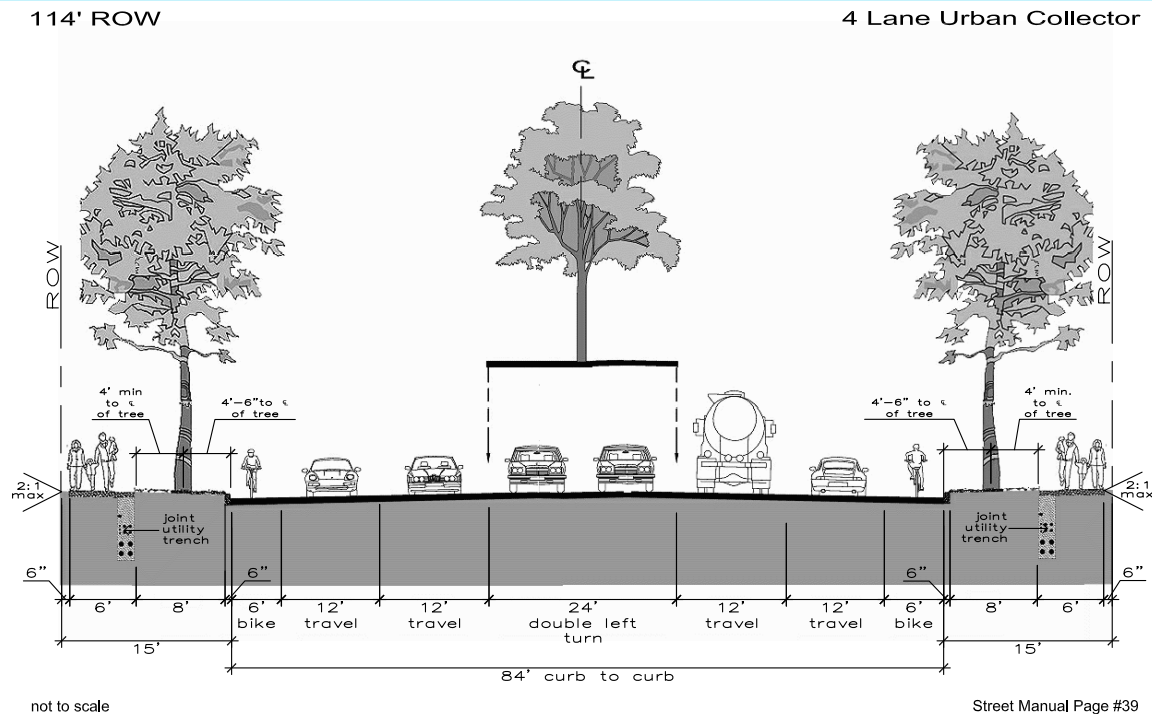
Several streets in Stone Creek will be constructed as Four-Lane Urban Collectors. Maya Linda Road will be extended into Stone Creek from Black Mountain Road to Carroll Canyon Road as a Four-Lane Urban Collector with 90-foot curb-to-curb widths within a 120-foot right-of-way (Sections C-5 and C-6). Within the Eastside Neighborhood, Urban Collectors will provide primary access into the business park and light industrial areas. North of Carroll Canyon Road, the curb-to-curb width will be 76 feet within a 104-foot-wide right-of-way (Section C-2).

Four-Lane Urban Collectors will also occur within the Village Center Neighborhood and will be 82 feet within a 110-foot-wide right-of-way

(Section C-1) north of Carroll Canyon Road and will be 86 feet within a 116-foot-wide right-of-way (Section C-4) east of Camino Ruiz.

Four-Lane Urban Collectors will also provide the primary access into the Westside Neighborhood and will be constructed as 84 feet curb-to-curb within a 114-foot-wide right-of-way (Section C) west of Carroll Canyon Road as the northern entry into the Westside Neighborhood and as 92 feet curb-to-curb within a 122-foot-wide right-of-way (Section C-3) west of Carroll Canyon Road as the southern entry into the Westside Neighborhood.

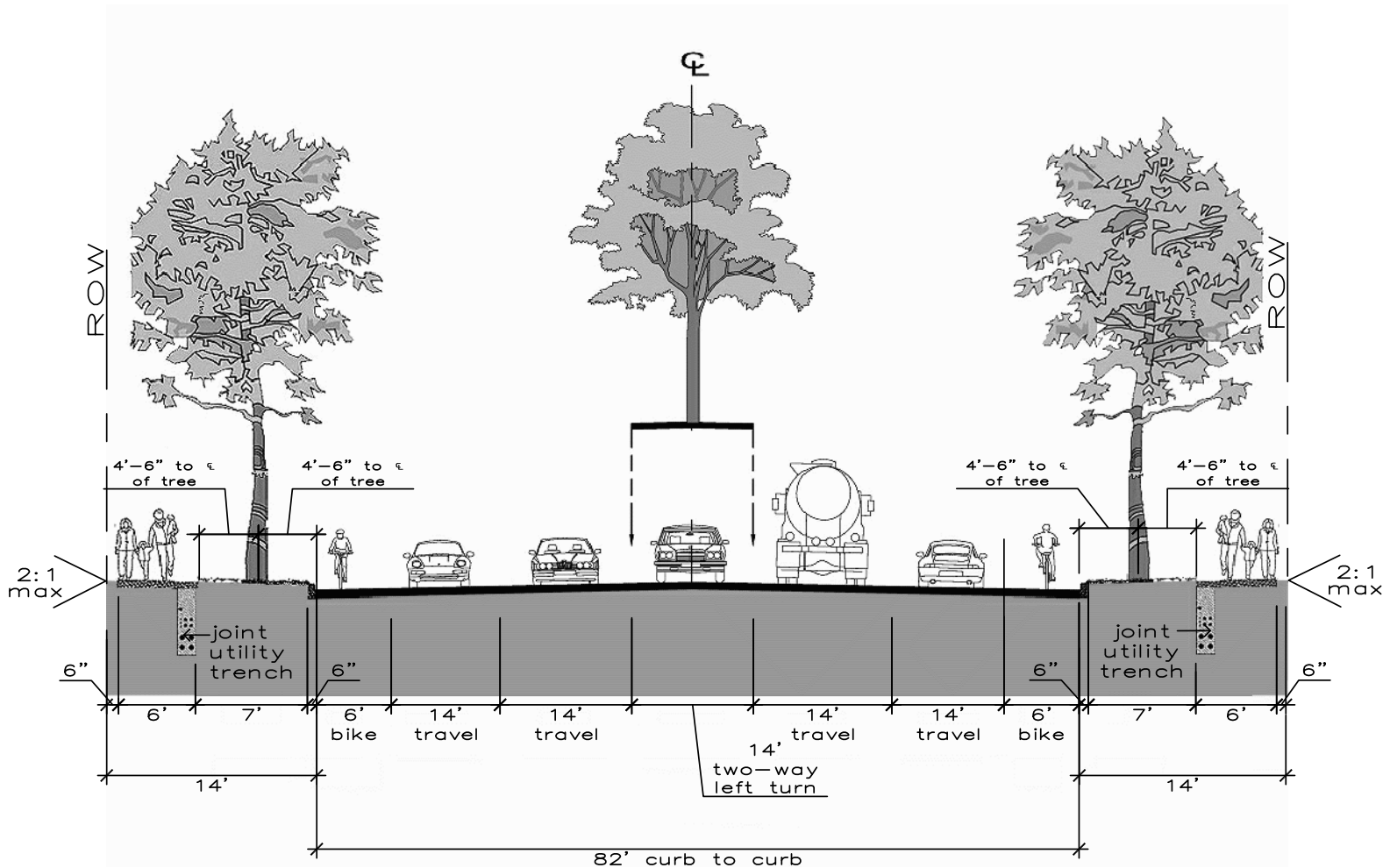
STREET SECTION 'C'



STREET SECTION 'C-1'

110' ROW

4 Lane Urban Collector



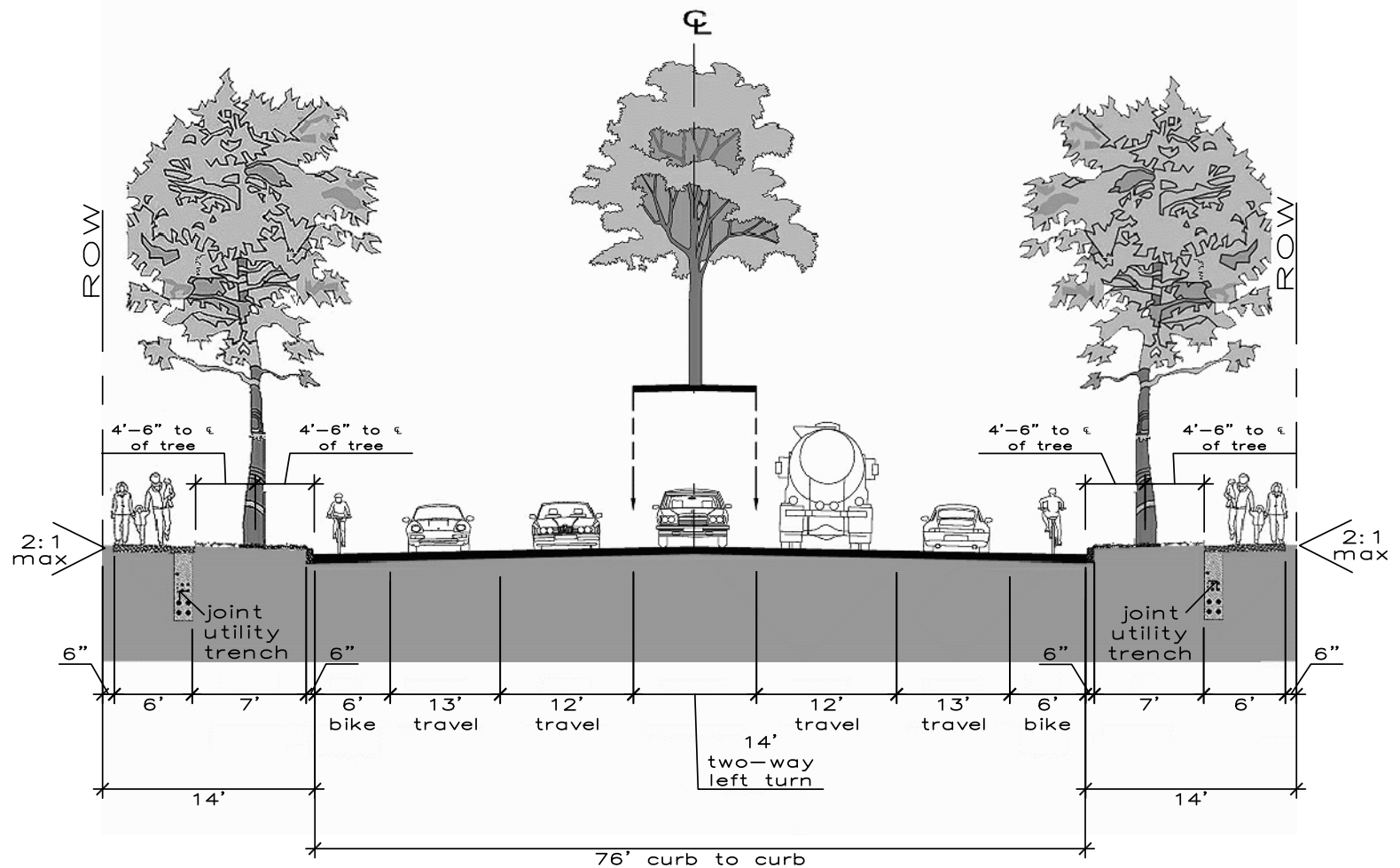
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STREET SECTION 'C-2'

104' ROW

4 Lane Urban Collector



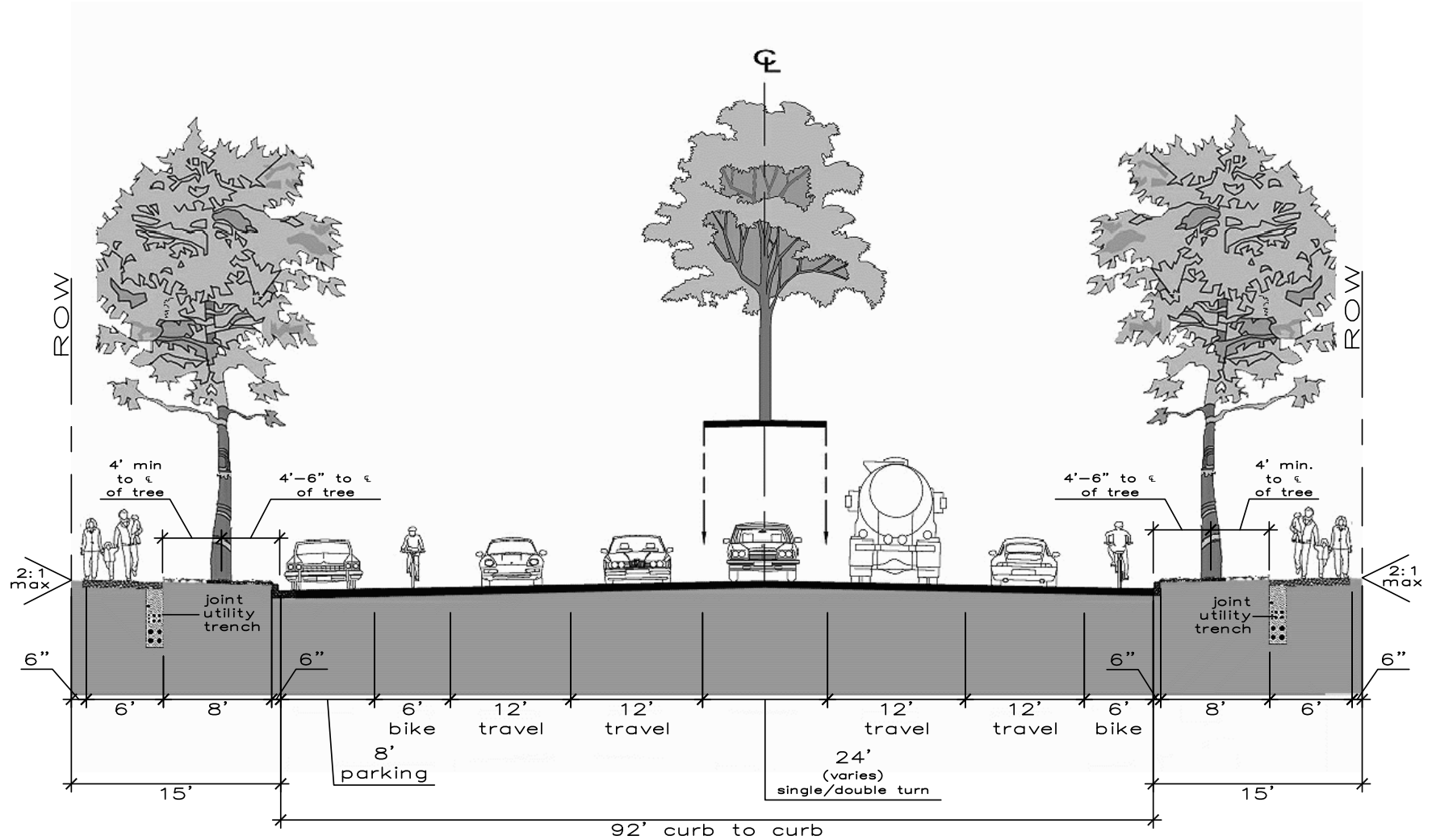
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STREET SECTION 'C-3'

122' ROW

4 Lane Urban Collector



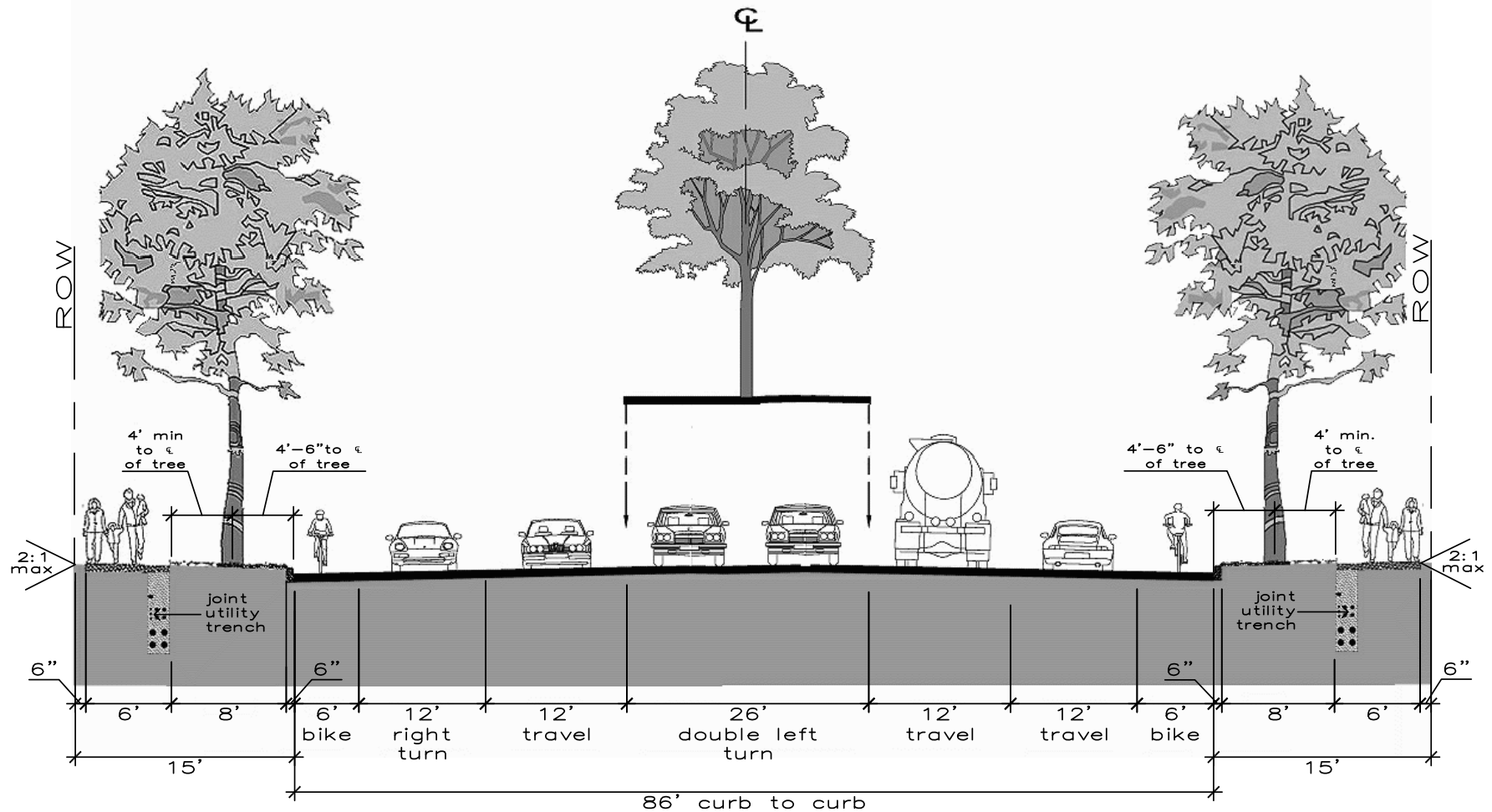
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STREET SECTION 'C-4'

116' ROW

4 Lane Urban Collector



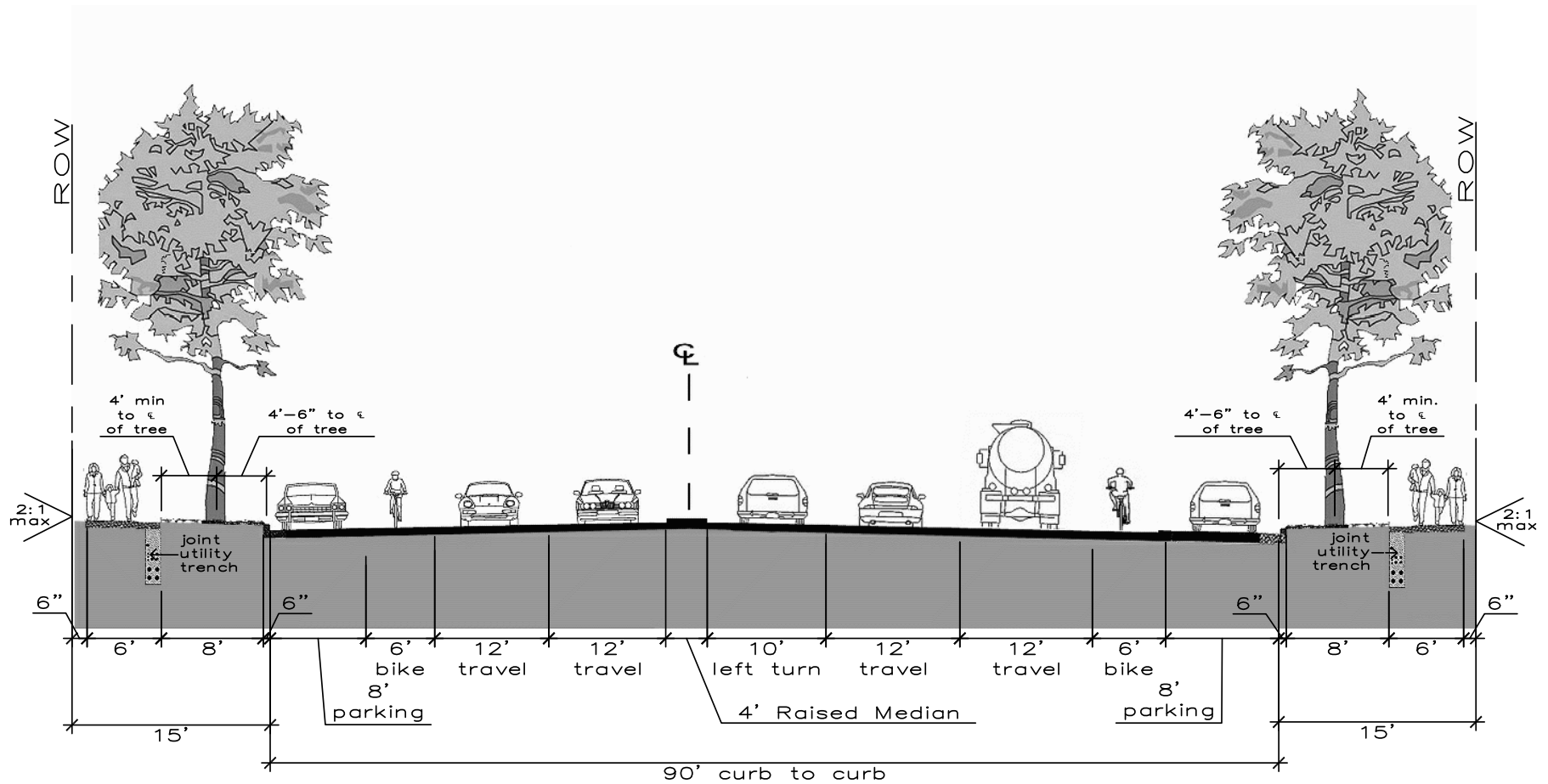
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STREET SECTION 'C-5'

120' ROW

4 Lane Urban Collector



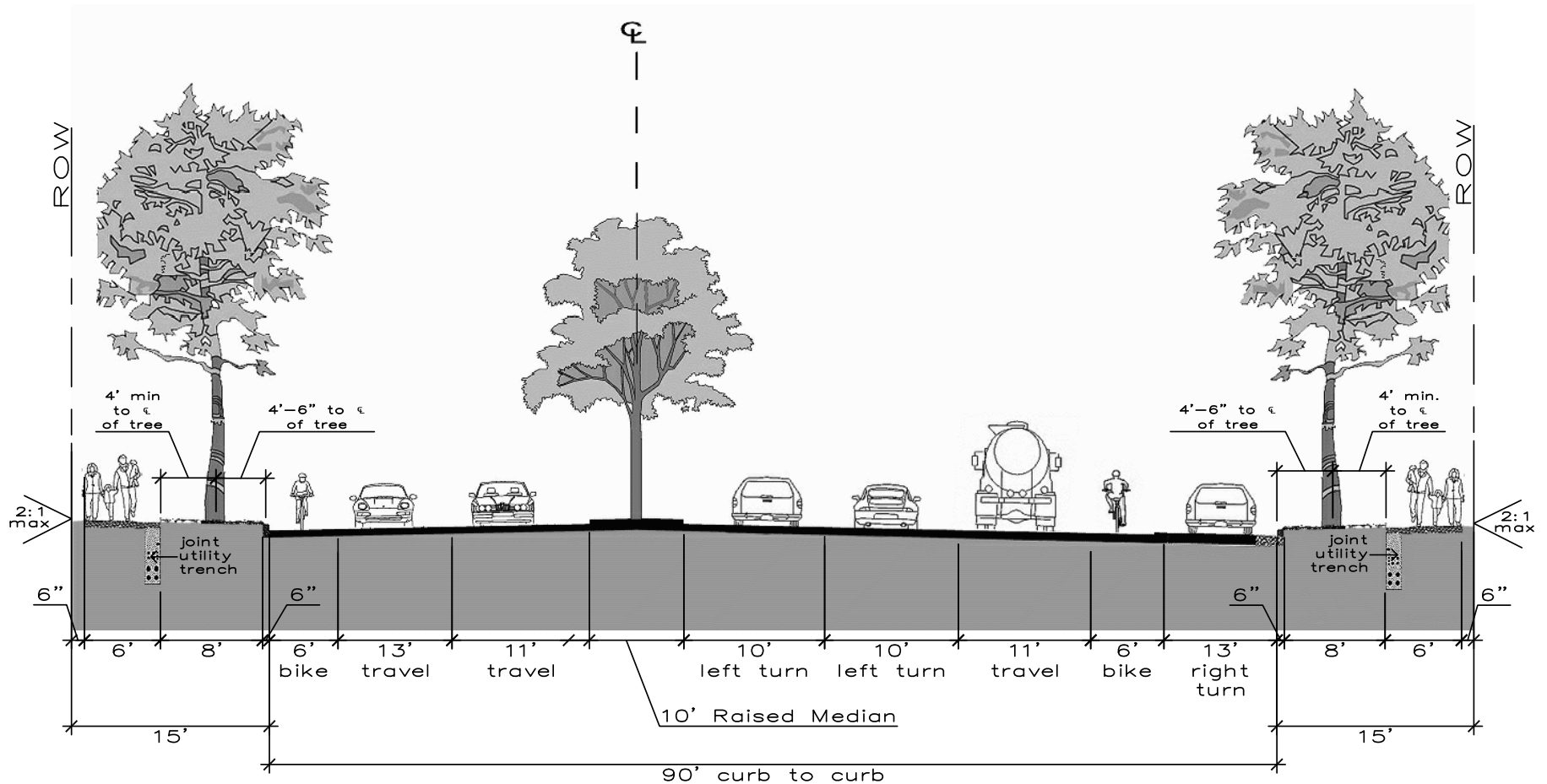
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STREET SECTION 'C-6'

120' ROW

4 Lane Urban Collector



not to scale

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6.3.3 Two-Lane Collector with Two-Way Left Turn Lane (Street Sections D, D-1, D-2, D-3, D-4, and D-5)

A Two-Lane Collector, with a center left turn lane and planted median, occurs as the main boulevard within the Stone Creek Village Center (Section D). A Two-Lane Collector also provides the northern access into the Village Center Neighborhood from Carroll Canyon Road and will be 62 feet within a 92-foot right-of-way (Section D-5).

Within the Westside Neighborhood, a planted median, rather than a left turn lane, creates an internal loop road (Street Section D-1).

Two-Lane Collectors will provide the primary access into the Parkside neighborhood from Carroll Canyon Road, as well as the primary

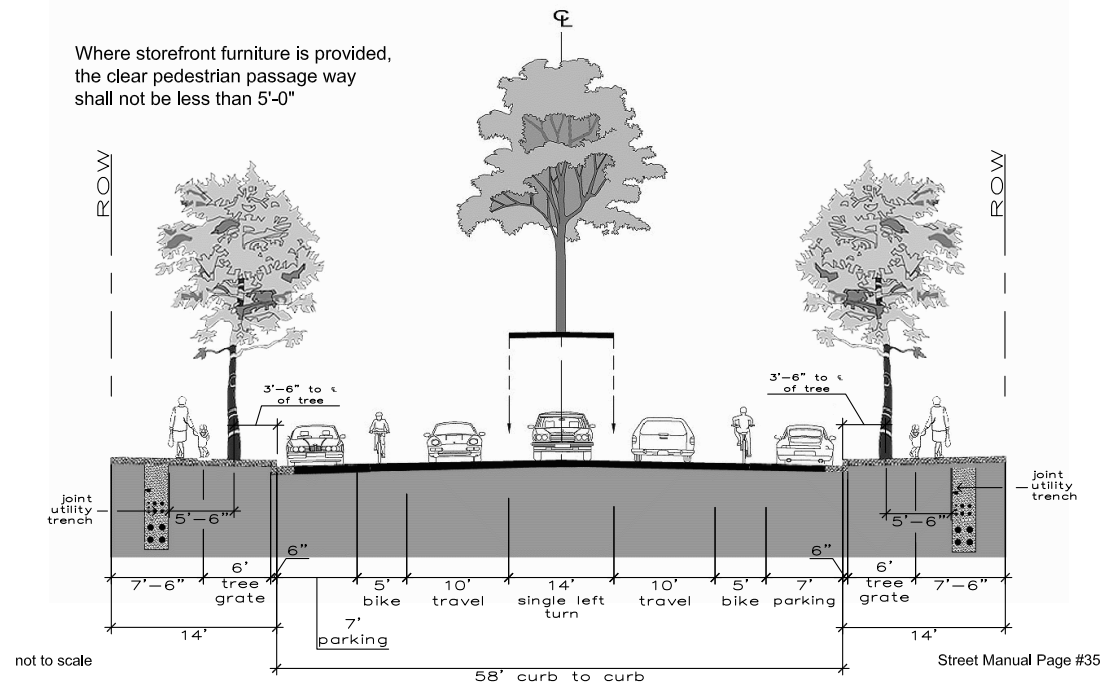
vehicular access into Stone Creek Central Park, and will be constructed as 48 feet within a 76-foot right-of-way (Section D-2).

The Creekside Neighborhood will also be served by a Two-Lane Collector. Short sections of Two-Lane Connectors extend south of Carroll Canyon Road (Street Section D-3) as bridges over Carroll Canyon Creek. These bridge sections will feature a 14-foot-wide urban parkway and 6-foot-wide bike lanes. The primary roadway through the Creekside Neighborhood will be a Two-Lane Collector featuring a 14-foot-wide landscaped parkway with noncontiguous sidewalk within a 78-foot-wide right-of-way (50 feet curb-to-curb) (Street Section D-4).

STREET SECTION 'D'

86' ROW

2 Lane Collector

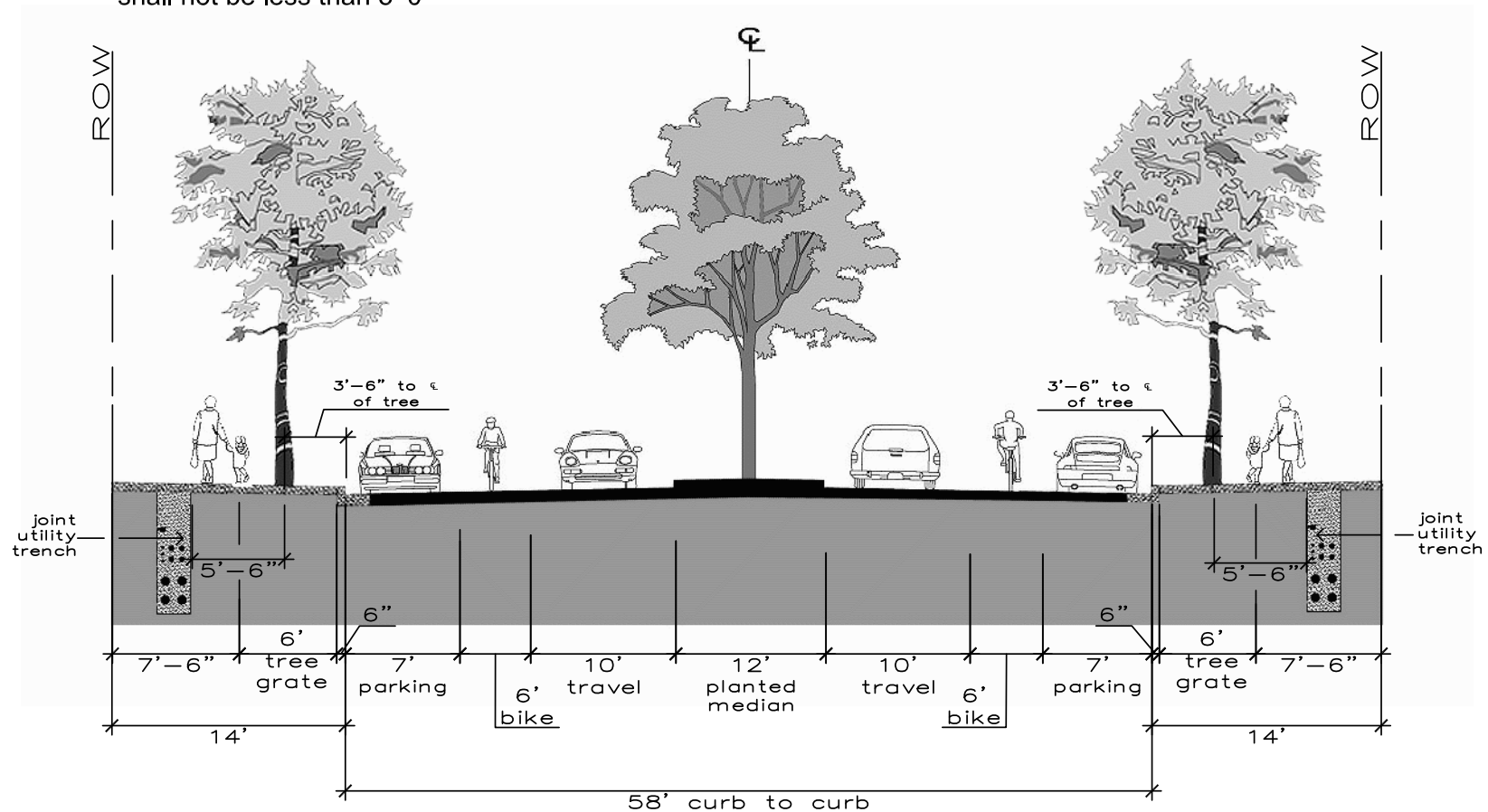


STREET SECTION 'D-1'

86' ROW

2 Lane Collector

Where storefront furniture is provided,
the clear pedestrian passage way
shall not be less than 5'-0"



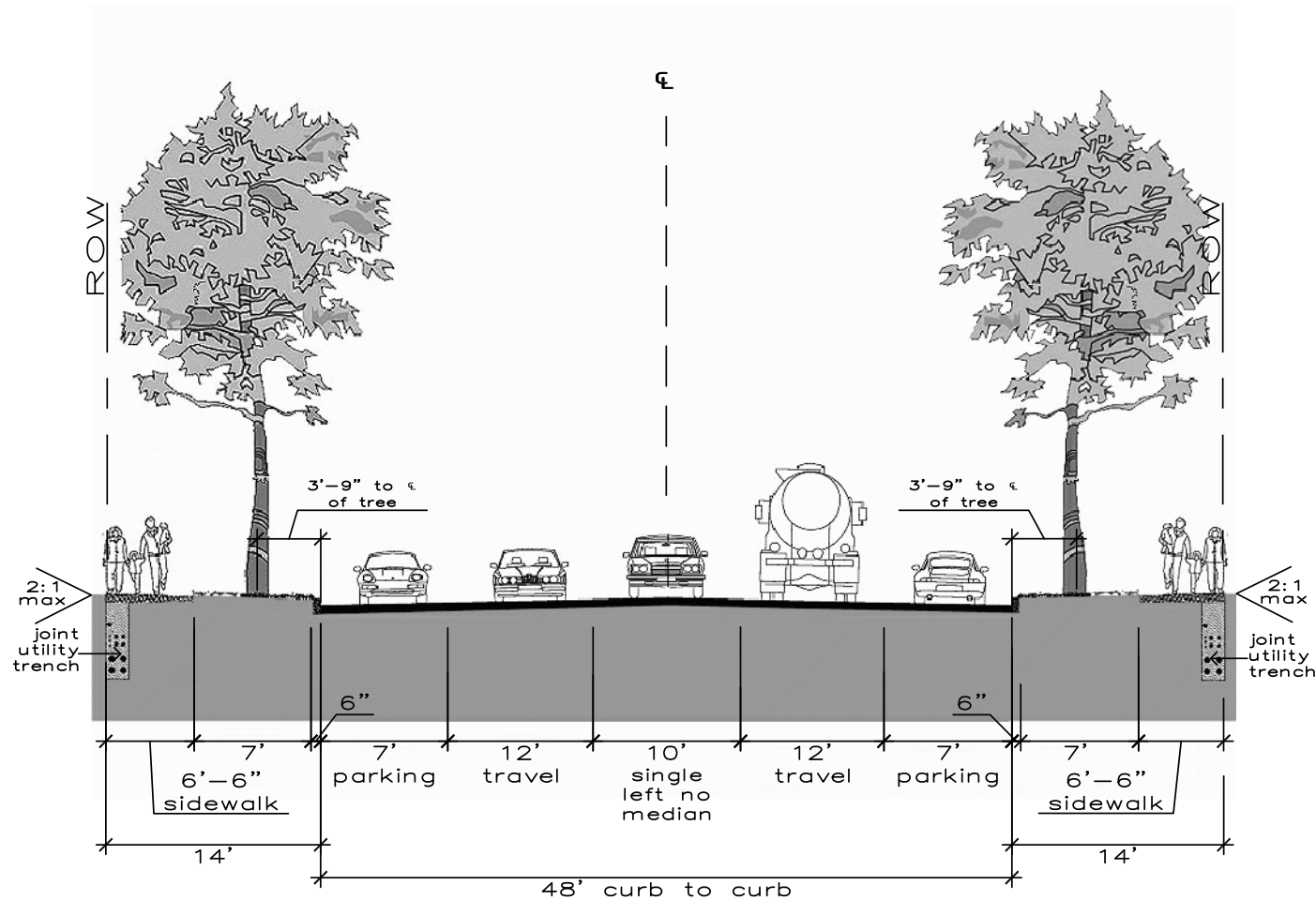
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STREET SECTION 'D-2'

76' ROW

2 Lane Collector



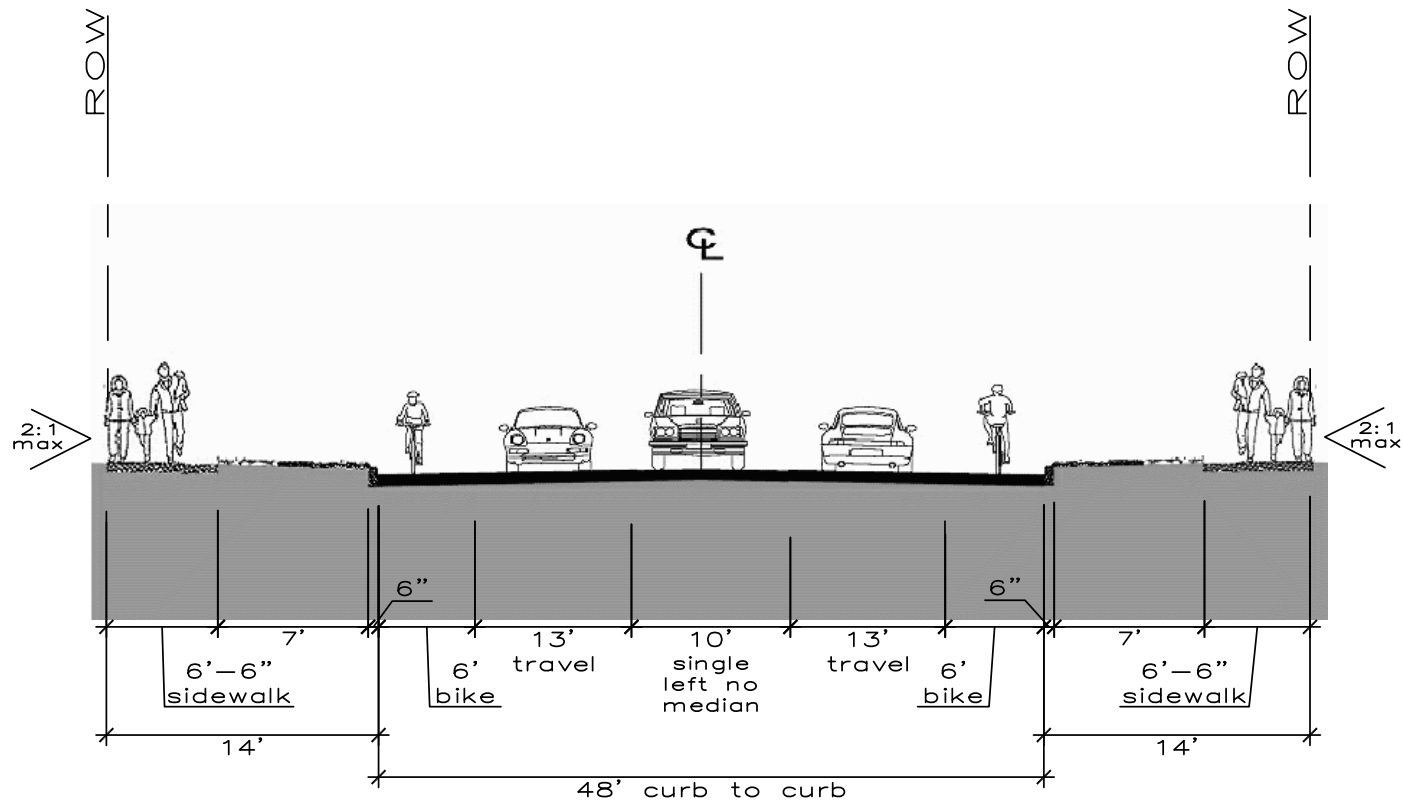
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STREET SECTION 'D-3'

76' ROW

2 Lane Collector at Bridge



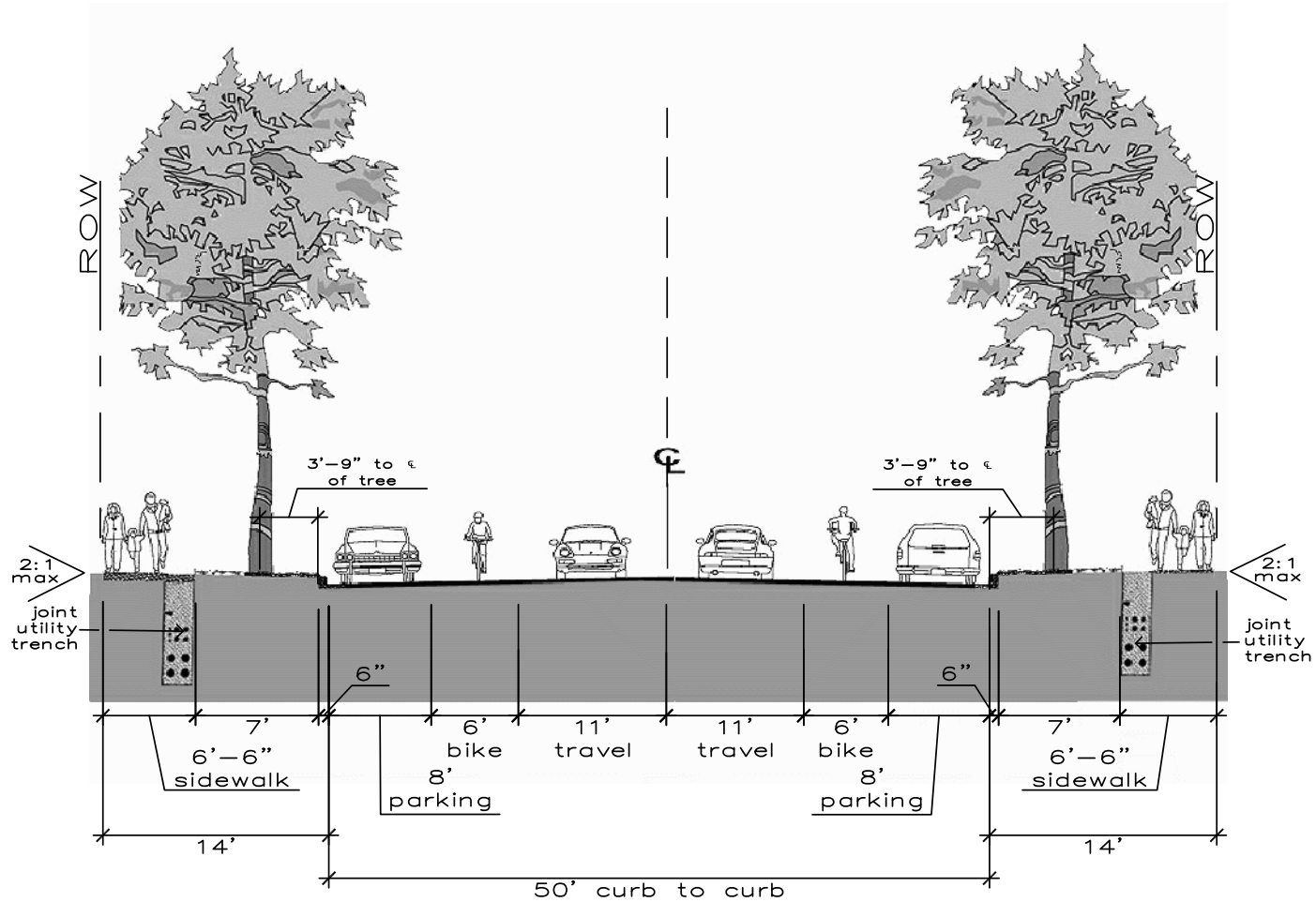
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STREET SECTION 'D-4'

78' ROW

2 Lane Collector



not to scale

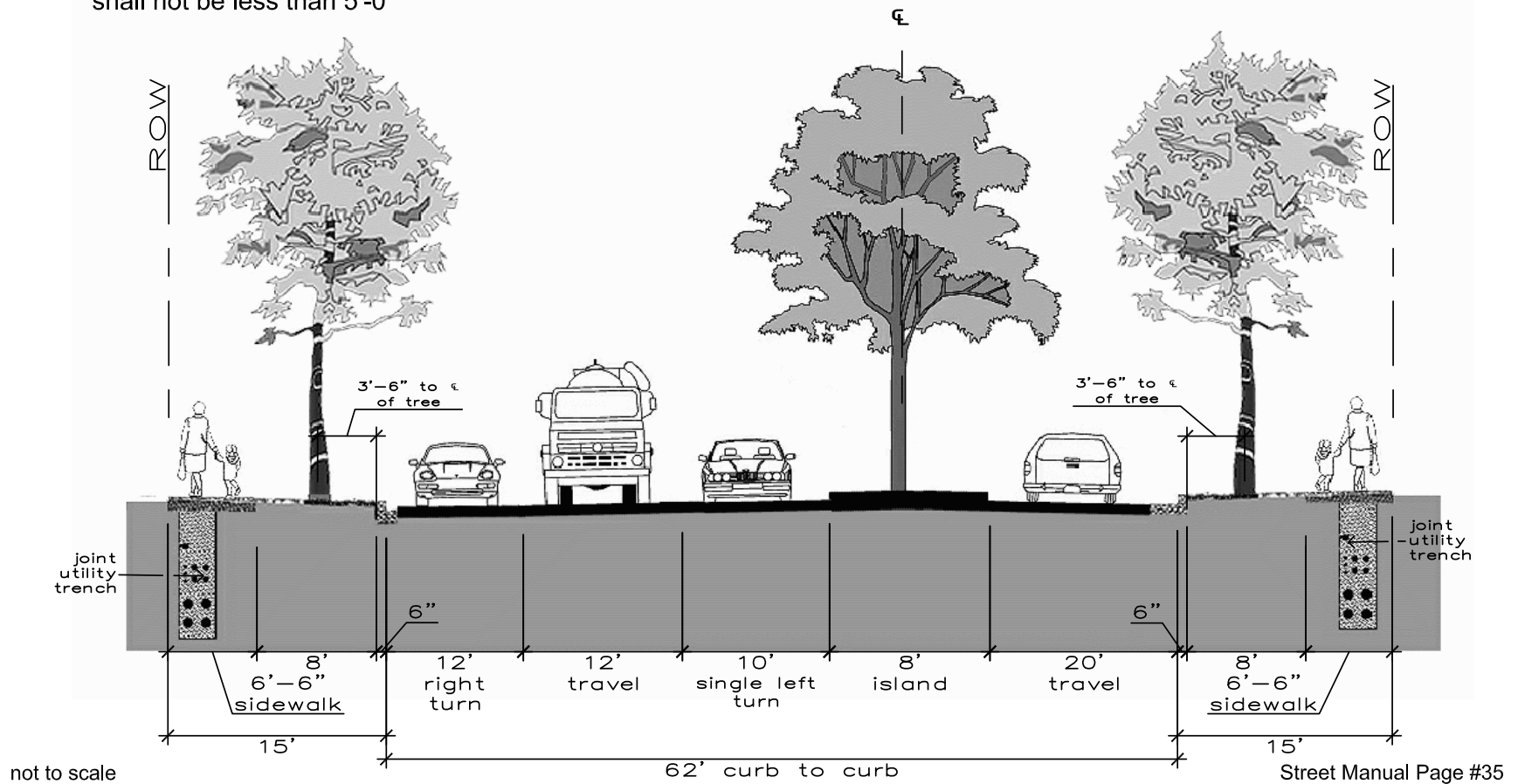
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STREET SECTION 'D-5'

92' ROW

2 Lane Collector

Where storefront furniture is provided,
the clear pedestrian passage way
shall not be less than 5'-0"



6.3.4 Two-Lane Collector (Street Sections E, E-1, and E-2)

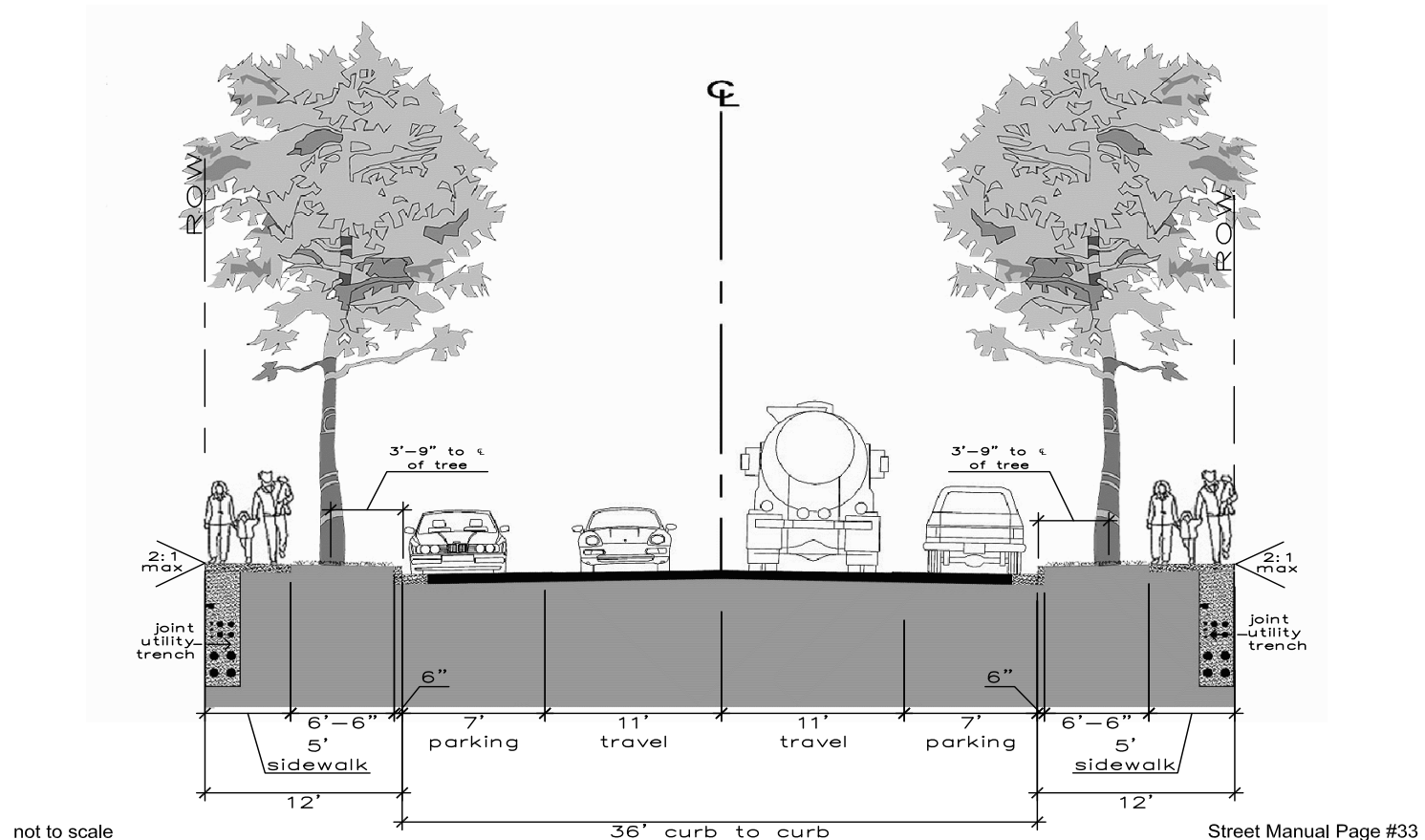
Two-Lane Collectors occur in the Village Center, the Westside Neighborhood, and the Eastside Neighborhood. Rights-of-way for Two-Lane Collectors will vary from 60 feet in width (Street Section E) to 64 feet in width (Street Section E-2). Curb-to-curb, the Two-Lane

Collectors will have 36 feet to 40 feet of pavement width. The streetscape at the Two-Lane Collectors (Sections E and E-2) will include a 12-foot wide parkway on both sides of the street.

STREET SECTION 'E'

60' ROW

2 Lane Collector



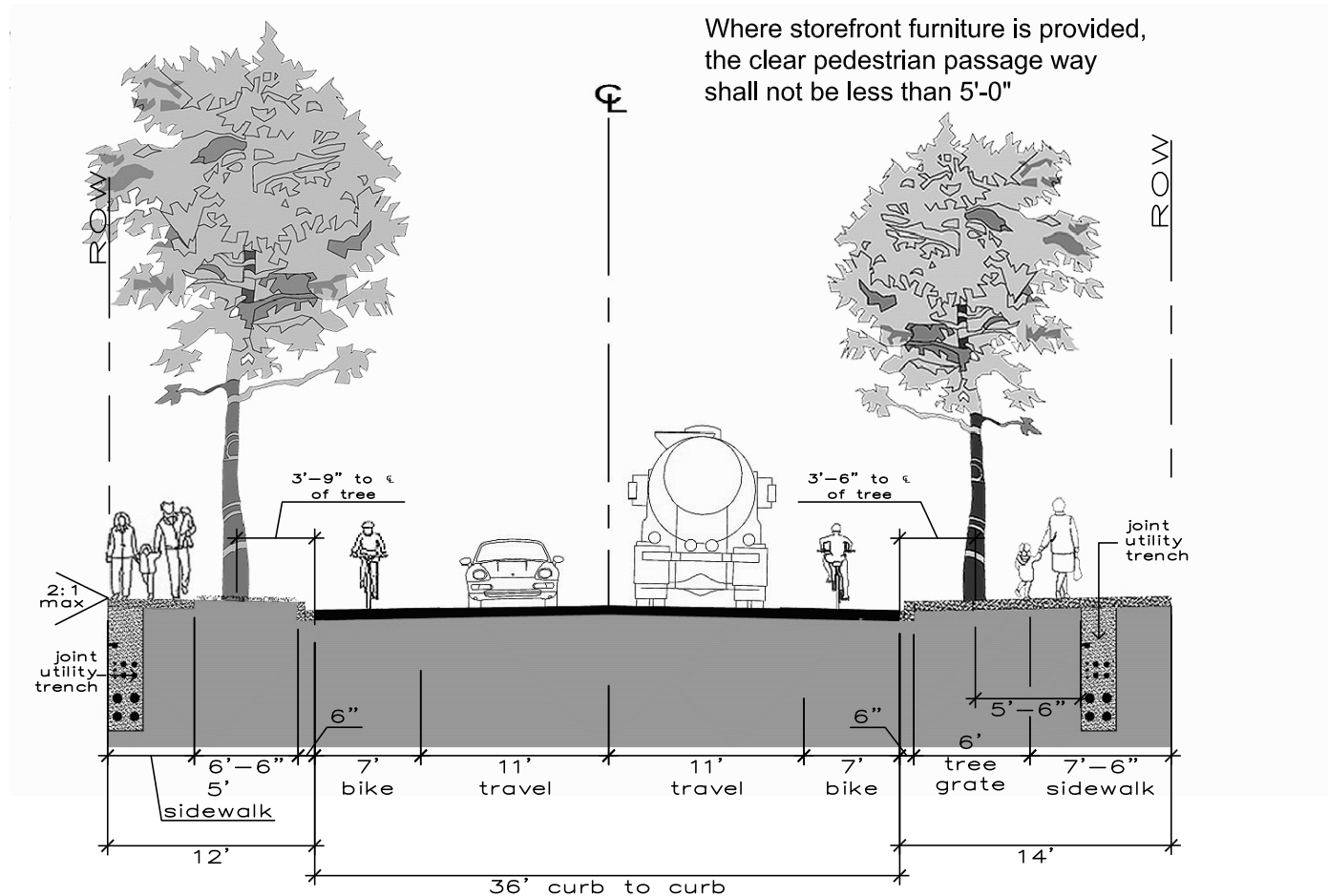
The east side of the Two-Lane Connector at the Westside Terrace (Section E-1) will be defined by a 14-foot-wide urban parkway with

enhanced paving throughout and street trees planted in six-foot square tree wells with grates adjacent to the curb.

STREET SECTION 'E-1'

62' ROW

2 Lane Collector



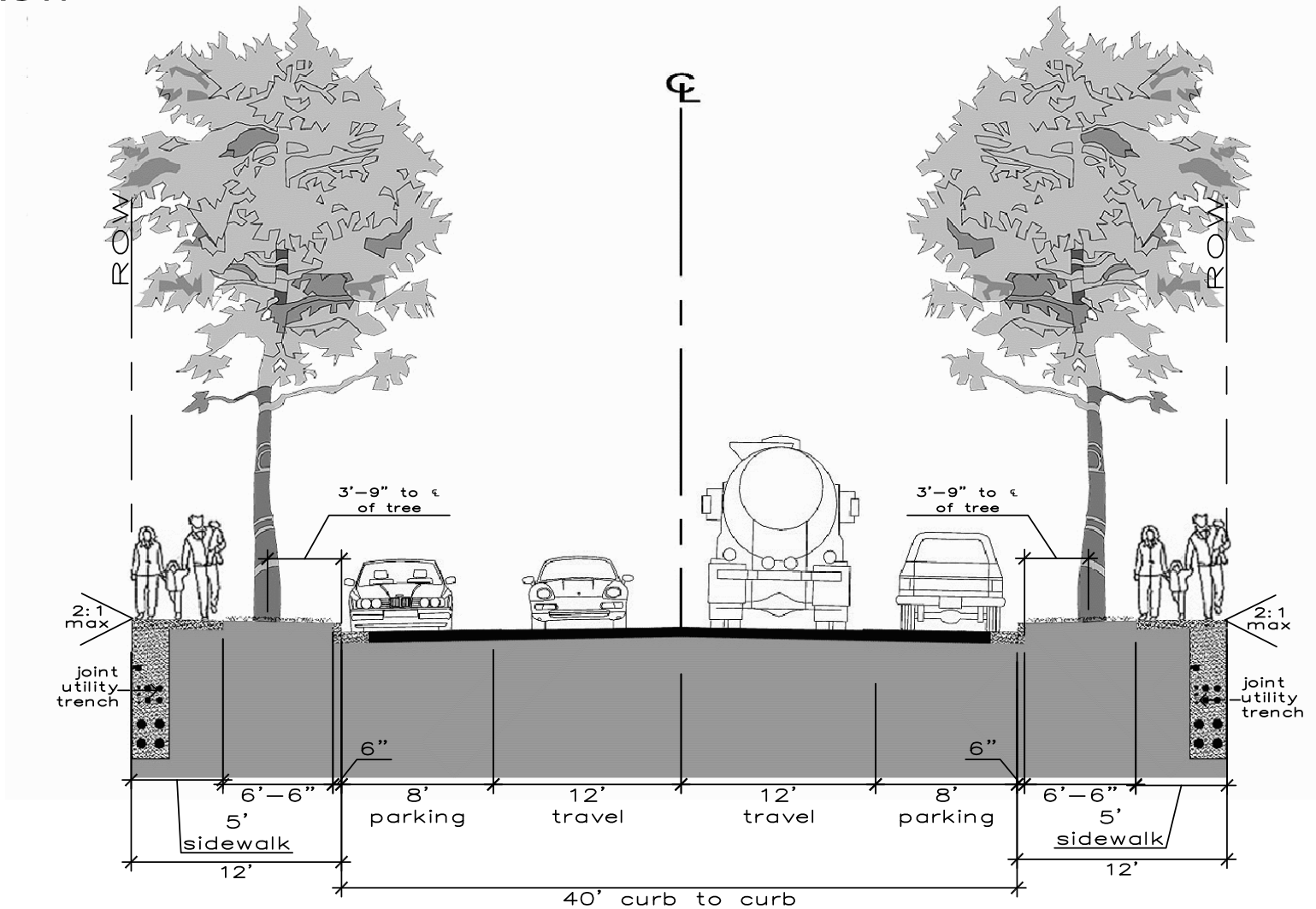
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Street Manual Page #33

STREET SECTION 'E-2'

64' ROW

2 Lane Collector



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Street Manual Page #33

6.3.5 Two-Lane Subcollector (Street Section F)

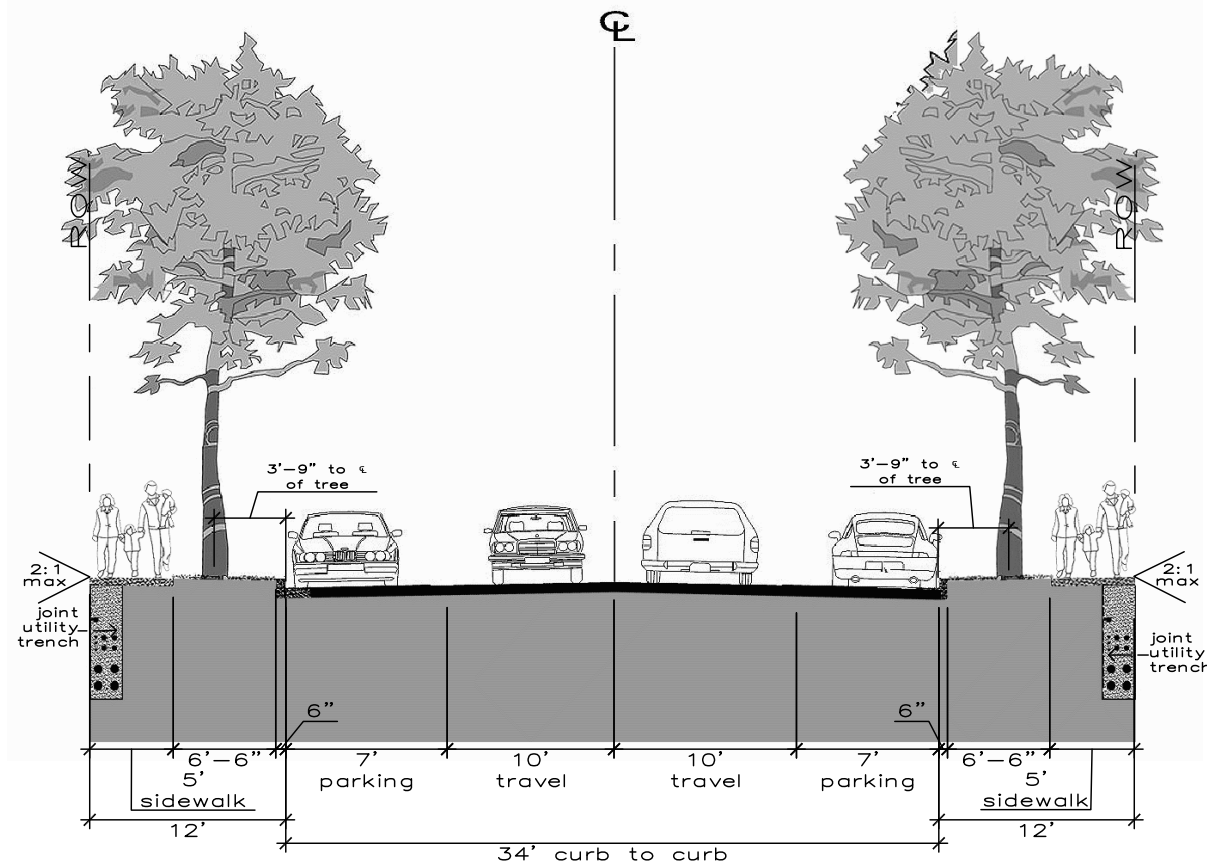
Two-Lane Subcollectors occur within the sub-neighborhoods of the Westside Neighborhood and will be constructed as 34 feet wide curb-to-curb, within a right-of-way of 58 feet wide. The Two-Lane

Subcollectors will feature a 12-foot wide parkway on both sides of the street. A six-foot-six-inch wide planting area will separate the curb from the five-foot wide non-contiguous sidewalk.

STREET SECTION 'F'

58' ROW

2 Lane Sub-Collector



not to scale

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6.3.6 Residential Local Streets (Street Section G)

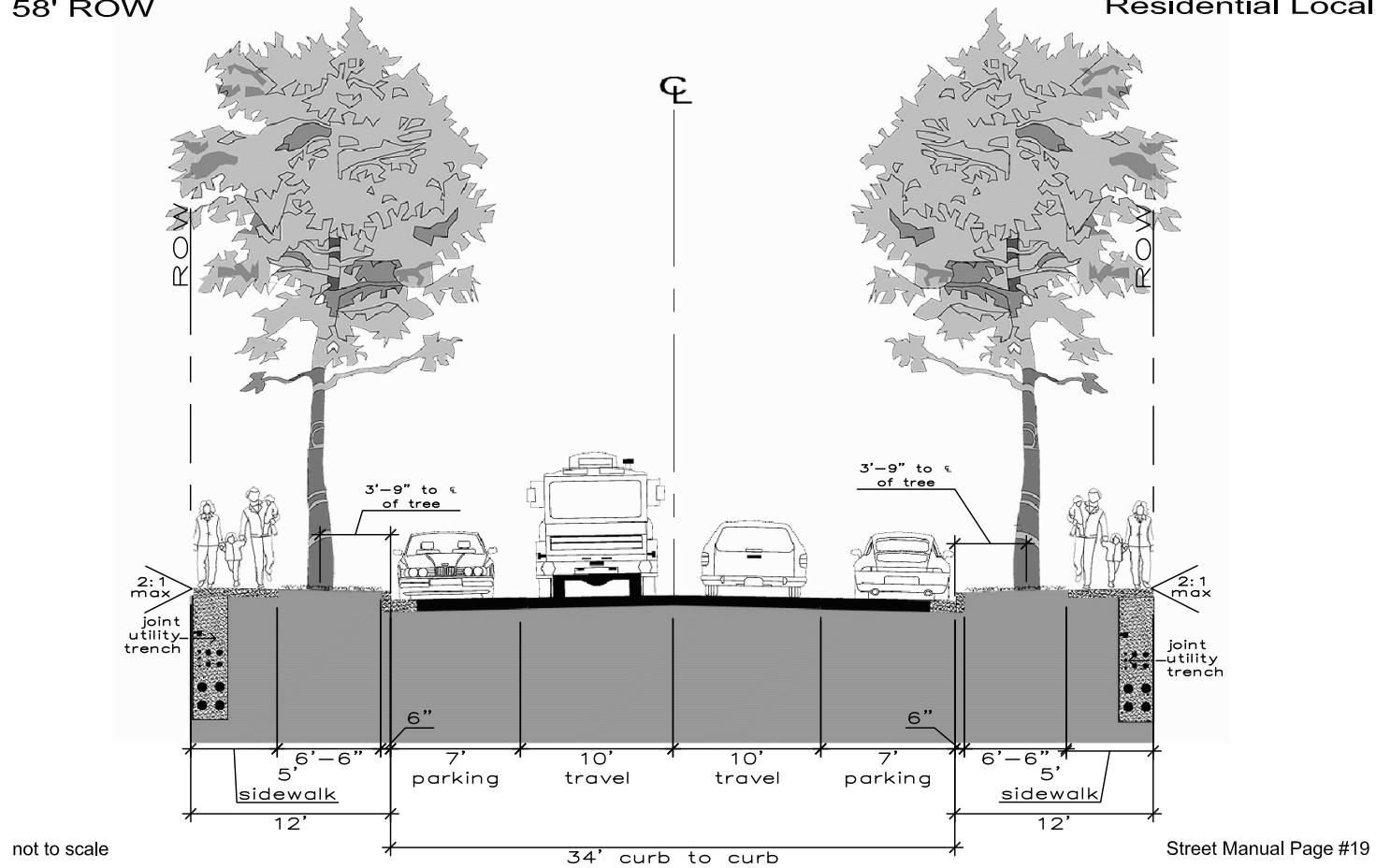
Residential Local Streets will occur in the Westside Neighborhood and will be constructed with a curb-to-curb width of 34 feet within a 58-foot wide right-of-way. The Residential Local Streetscape (Section G) will

consist of a 12-foot wide parkway on both sides of the street. Six-foot-six-inch wide planting areas separate the five-foot wide non-contiguous sidewalk from the curb.

STREET SECTION 'G'

58' ROW

Residential Local



6.3.7 Local Streets and Private Drives

Local streets and private drives may be utilized to provide access from the primary roadways described above through individual residential neighborhoods and commercial developments. Local streets and private drives will be designed in accordance with the City of San Diego Street Design Manual (November 2002) as part of the individual development plans for those areas.

6.3.8 Intersections-Traffic Control

Intersection control in Stone Creek will be designed to facilitate safe pedestrian and bicycle crossings throughout the project while enhancing the experience of these non-vehicular travelers. Intersection controls will include traffic signals, all-way stops, and approach stops as shown in Figure 6-5, *Stone Creek Intersection and Traffic Control Plan*. Stop sign locations have been specifically identified with a focus on pedestrian accessibility and to calm traffic flow. Additionally, in areas where interaction between land uses is a vitally important aspect of the connectivity, enhanced paving will identify travel ways and safe crossings for pedestrians (see Figure 6-7, *Conceptual Trail and Walkway Plan*).

Figure 6-5. Stone Creek Intersection and Traffic Control Plan



Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.

6.4 ALTERNATIVE CIRCULATION SYSTEMS/MOBILITY OPTIONS

An integral component of *Stone Creek's* multi-modal design is the integration of Complete Streets. The term "Complete Streets" describes a comprehensive approach to mobility planning. The Complete Streets concept recognizes that transportation corridors have multiple users with different abilities and travel preferences ranging from vehicular travel (driving and taking transit) to self-motorized travel (walking and bicycling). Adjacent land use influences the functionality and character of the street environment. A well-integrated street system considers the complementary relationship between land use, local and regional travel needs, and the context that it serves. Complete Streets apply equally throughout a community and consider a range of users, including children, the disabled, and seniors. *Stone Creek* incorporates the principles and concepts of Complete Streets to create a dynamic, engaging, safe, and pleasant environment for all modes of travel.

In addition to roadways for vehicular use, the circulation system for *Stone Creek* accommodates transit services and provides a network for pedestrian and bicycle travel to serve as a safe and convenient alternative to personal motor vehicle use. Alternative circulation and mobility options for *Stone Creek* include bus service and a future transit system, pedestrian trails and linkages, and bicycle access. *Stone Creek's* Vision provides expanded travel options for improved personal mobility. These alternative modes of transportation are described below.

6.4.1 Mass Transit

With an attractive and convenient mass transit system, transit will be an appealing choice of travel for *Stone Creek's* residents, employees, and

visitors. The Metropolitan Transit System (MTS) provides bus service to the Mira Mesa area. Currently, within the project area, bus routes 20 and 210 provide north-south bus service along Black Mountain Road, connecting to I-15. Route 210 also travels along Mira Mesa Boulevard, with a connection to Route 210 and I-805. Route 31 travels from University Towne Centre mall to I-805 and Miramar Road, servicing the project site area along Black Mountain Road. Routes 921A, 964, and 964A provide east-west service along Carroll Canyon Road (Route 964A) and Gold Coast Drive (Routes 921A and 964) north of *Stone Creek*, with connections to regional bus routes as well as I-805 and I-15. A bus rapid transit (BRT) system is planned for I-15, with an east-west BRT connection through the Mira Mesa community to the High-Occupancy Vehicle (HOV) lanes on I-15.

SANDAG and MTS have identified Carroll Canyon Road as the location for the transit corridor through Mira Mesa. *Stone Creek* includes a 35-foot wide transit corridor along the south side of Carroll Canyon Road through the Master Plan area to accommodate future transit. The transit corridor can be relocated to the center or the north side of Carroll Canyon Road, depending on the needs of SANDAG and MTS, as long as selection of the preferred location occurs before improvement plans for Carroll Canyon Road have been submitted to the City for approval. Access across the transit reservation and future transit network to adjacent streets will be facilitated through signalized crossings, depending on the actual location of the transit corridor. If the transit corridor is located in the center of Carroll Canyon Road, additional pedestrian access will be provided for safe access.

6.4.2 Transit Stops

Stone Creek has been designed to maximize access to the planned transit stops for users within Stone Creek, as well as the adjacent business parks and residential areas and includes two new transit stops: one in the Village Center and one in the Eastside Neighborhood. Transit stops should be designed as neighborhood focal points, highlighting and accentuating Stone Creek's Vision of well-integrated public transportation. These transit stops are integral components of Stone Creek in architectural style and treatments.

The transit stop at the Stone Creek Village Center (Figure 6-6, *Village Center Transit Stop*) is envisioned to address a grand staircase that opens onto an open piazza. Design elements of the transit stop may include a shelter with a stone façade, benches to offer transit passengers a shaded waiting place, and ornate light posts consistent in style with lighting in the Village Center. Similarly, the transit stop in the Eastside Neighborhood A could reflect the character of Stone Creek's employment districts in design and could include low stone wall elements. This transit stop will provide easy access to adjacent Eastside Park and other employment neighborhoods.

Figure 6-6. Village Center Transit Stop



Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.

6.4.3 Pedestrian Circulation and Linkages

Stone Creek is designed to be a community where walking is an attractive and inviting travel choice. Special attention has been paid to the design of the pedestrian system in Stone Creek to make the most of pedestrian opportunities for residents, employees, and visitors to Stone Creek. Pedestrian connectivity is not only promoted through a complete, functional, and interconnected pedestrian network, but also through the creation of a comfortable, pedestrian-friendly experience that appeals to the senses. Additionally, the Master Plan provides convenient pedestrian access into Stone Creek from the existing residential neighborhoods to the north and employment neighborhoods to the east.

Stone Creek's pedestrian experience will be highlighted through the placement of theme trees throughout the project, selected for their olfactory characteristics, vivid colors, or seasonal leaf changes. The smell of sycamores, striking green of olive trees, and rustle of oaks will draw the pedestrian pleasantly through one space to another, adding to the experience of Stone Creek's parks and open spaces.

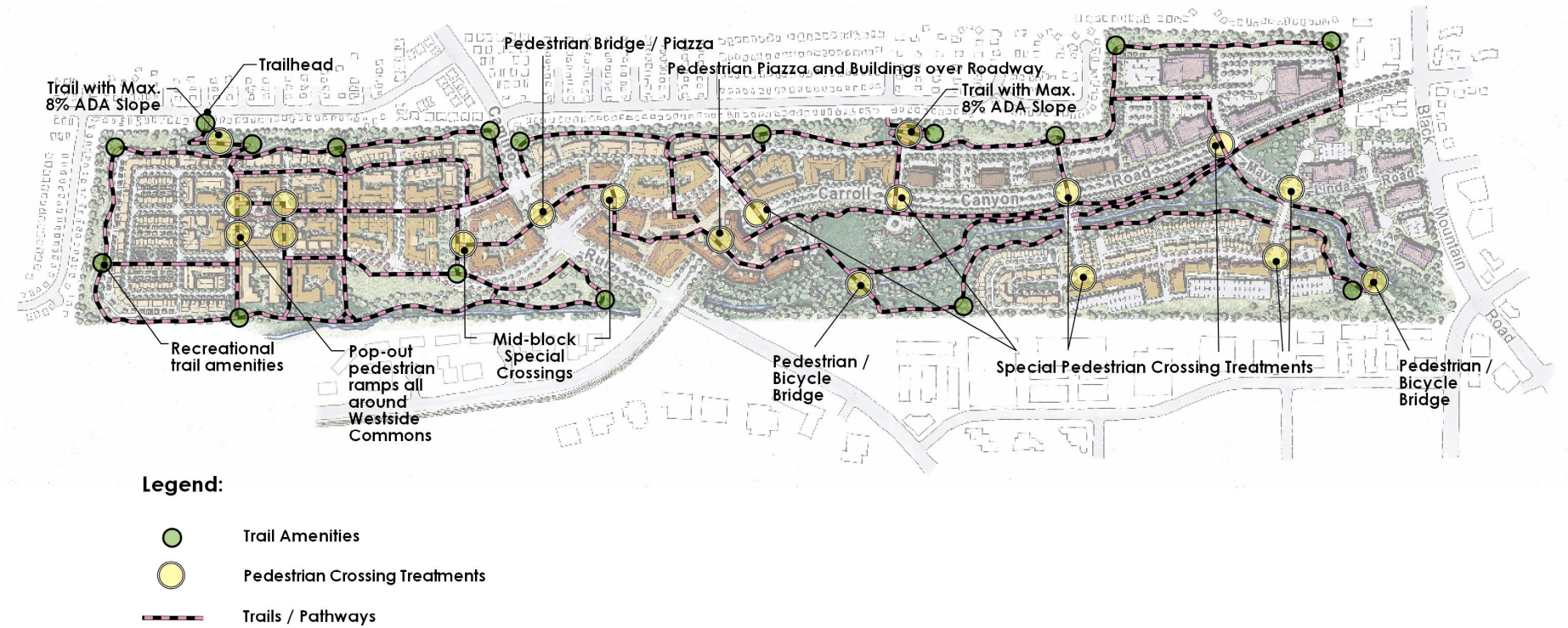
Pedestrian access in Stone Creek will be provided by the integrated trail system and sidewalks along roadways (see Figure 6-7, *Conceptual Trail and Walkway Plan*). Sidewalks will be non-contiguous and provided at a width that accommodates active travel (a minimum width of five feet on at least one side of private drives and a minimum width of eight feet on both sides of any public street). The pedestrian system is comprised of a variety of walkway types, including mid-block crossing and special pedestrian crossings strategically located throughout Stone Creek. (All mid-block crossing must meet Council Policy CP-200-07.) Low stone walls will be incorporated into the design of the Rim Trail, particularly at trail entrances, to emulate this cohesive design element in Stone Creek and to signify connection to a larger pedestrian circulation network (see Figure 6-8, *Location of Wall*

Elements within Stone Creek). In order to promote walkability, all sidewalks shall be non-contiguous and be a minimum of five feet wide on at least one side of any private drive, and a minimum of eight feet wide on both sides of any public street. In addition, gates and/or fencing that restrict access along public rights-of-way are prohibited. (Access to public parks may be limited during evening hours for security purposes.)

Walkway types may be modified to best serve individual neighborhoods provided that the network of integrated pedestrian accessibility is maintained and walkway surface is consistent with requirements of this Master Plan. Such modifications will not require an amendment to this Master Plan. Walkway types are intended to be conceptual and to imply a hierarchy to the pedestrian system. Actual walkway type and design will be determined in conjunction with each development plan.



Figure 6-7. Conceptual Trail and Walkway Plan



Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.

Figure 6-8. Location of Wall Elements within Stone Creek



Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.

Stone Creek's Rim Trail

A Rim Trail is planned along the perimeter of *Stone Creek* within the project's landscaped slopes. This Rim Trail begins at the southwest corner of the Westside Neighborhood and extends north along the periphery of the neighborhood. The trail then meanders east, passing through the Village Center, Parkside Neighborhood, and Eastside Neighborhood to its terminus at Carroll Canyon Road. Trail connections to the single-family neighborhoods located north of *Stone Creek* will be provided at Westonhill Drive at Trailhead Park in the Westside Neighborhood. The trail connection from the Westside Neighborhood will be enhanced to serve as an invitation to neighboring community members to come and enjoy the many amenities of *Stone Creek*. An easement over lots within the western portion of Eastside Neighborhood B shall be provided to allow for a pedestrian/bicycle connection through these lots, linking street sidewalks to the Rim Trail. This will enable easy access to the trail system from employment uses in eastern *Stone Creek*. Special enhanced paving materials or paving patterns shall be used to identify this walkway connection. Additionally, low stone walls will occur at trail entrances, to emulate this cohesive design element in *Stone Creek* and to signify connection to a larger pedestrian circulation network (see Figure 6-8, *Location of Wall Elements within Stone Creek*).

The Rim Trail should incorporate recreational amenities for ease of trail users (see Figure 6-9, *Trail Amenities Illustrative*). Clearly marked trailheads and directional signage at trail intersections will allow for navigational clarity. Additionally, lighting should be provided at appropriate intervals to facilitate trail use. Scenic overlook benches and picnic tables are amongst the trail amenities to be considered to create a complete trail experience.

The Rim Trail will include security lighting to allow for use in early morning and evening hours. Walkway lighting on poles, as well as lower level landscape lighting, may be used. Lighting shall be designed in keeping with architectural elements of nearby neighborhoods and shall occur at intervals to provide safety for trail users. Use of solar lighting shall be encouraged, where possible.

Figure 6-9. Trail Amenities Illustrative



Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.

Stone Creek's Central Park and Westside Gardens Trails

Stone Creek's trails through Stone Creek Central Park and along Carroll Canyon Creek begin west of the Carroll Canyon Road/Camino Ruiz intersection at the western edge of Westside Gardens and continue easterly through the project site. A special pedestrian crossing in the form of a trail bridge will occur within Stone Creek Central Park, allowing users of the trail to cross to the southern side of Carroll Canyon Creek. The trail continues on both the northern and southern sides of Carroll Canyon Creek to the eastern end of Stone Creek Central Park. Similar to Stone Creek's Rim Trail, low stone walls will occur as design elements within Stone Creek's parks to provide a visual connection to the thematic design element resonating through Stone Creek and to signify connection to a larger pedestrian circulation network (see Figure 6-8, *Location of Wall Elements within Stone Creek*).

Piazas and Neighborhood Sidewalks

Open piazas will link together to form the primary pedestrian thoroughfare for the Village Center. The piazas provide access from the western boundary of the Village Center and connect to Stone Creek Central Park and the trail system throughout Carroll Canyon Creek.

In addition, neighborhood walks will be provided as off-set sidewalks along streets with on-street parking. These tree-lined walkways run throughout the project site, connecting the perimeter Rim Trail in the westernmost portion of the site to Black Mountain Road adjacent to the eastern project boundary.

Pedestrian Crossings

To facilitate project walkability, a hierarchy of pedestrian crossings exist throughout Stone Creek (Figure 6-10, *Pedestrian Crossings within Stone Creek*). Major crossings and secondary crossing will be controlled by signals or stop signs with demarcated crosswalks, as applicable. At mid-block crossings, pedestrian alert signage and lighting will facilitate crossing (per Council Policy CP-200-07).

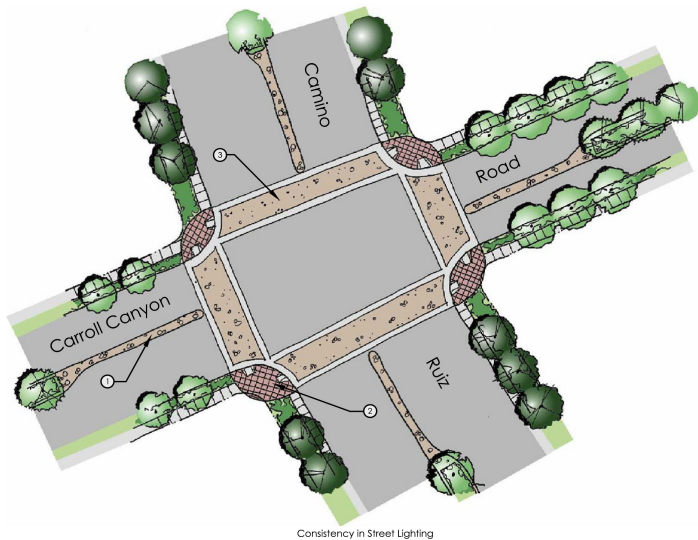
While maintaining a consistent, high level of design standards throughout Stone Creek, pedestrian crosswalks should respond to roadway and traffic configurations specific to each location. Individual pedestrian crosswalk design may also relate to the surrounding roadway paving and nearby building design. Crosswalks may use enhanced paving which relates to nearby sidewalks but is clearly different from adjacent roadway material. Materials which have a traditional, natural appearance, such as brick or stone paving patterns may be used. White-striped crosswalks, painted or thermoplastic, may be also considered. Crosswalk edges should be clearly defined either with painted borders or a distinct paving material. Intersections at project entries may also be treated with pavement enhancements as each development occurs. Crosswalks must have detectable warning strips where the sidewalk curb ramps meet the street crosswalk. (Pedestrian crossing features which are non-standard are required to obtain an Encroachment Removal Agreement and shall be privately maintained.)

Figure 6-10. Pedestrian Crossings within Stone Creek



Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.

In addition to enhanced crosswalks at designated pedestrian pathways, there are specific treatments that will occur at three intersection types. Major crossings will occur at primary intersections controlled by either a signal or stop sign. These crossings will feature enhanced paving at the corners and differentiated crosswalk materials to facilitate walkability and pedestrian safety. While all intersections are expected to be constructed of materials consistent in design and style with this Master Plan and the Vision for *Stone Creek*, the three major signalized intersections along Camino Ruiz through the project site are to be consistent in character with their lighting, street furniture, and other materials. This will give those passing through the project site along Camino Ruiz a cohesive sense of the character of *Stone Creek*.

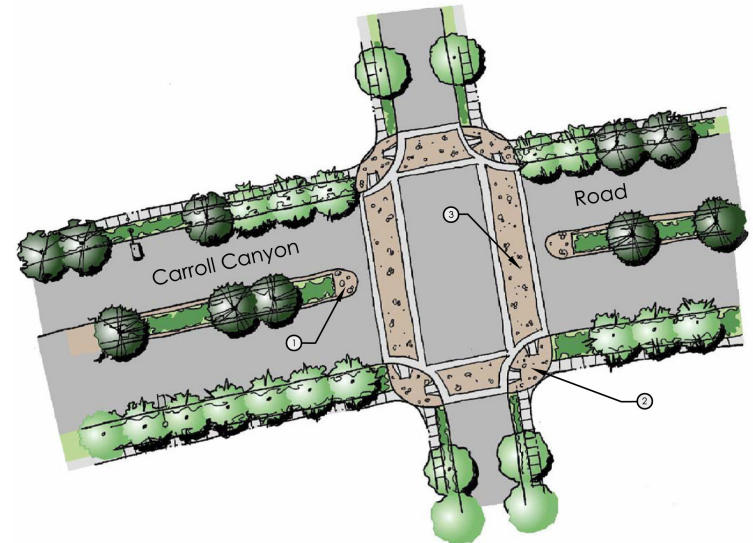


Legend:

- ① Enhanced Paving @ Medians
- ② Enhanced Paving @ Corners
- ③ Enhanced Paving @ Crosswalks

Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.

Secondary – or minor – crossings occur within *Stone Creek*'s subneighborhoods, primarily within the Westside Neighborhood. These non-signalized crossings include enhanced paving at the street corners and marked crosswalks at signalized intersections to inform motorists of pedestrian crossings, while allowing pedestrians to discern where a safe and desirable crossing point occurs. Landscaping should be utilized to create a pleasant environment for the pedestrian, further promoting walkability throughout *Stone Creek*.

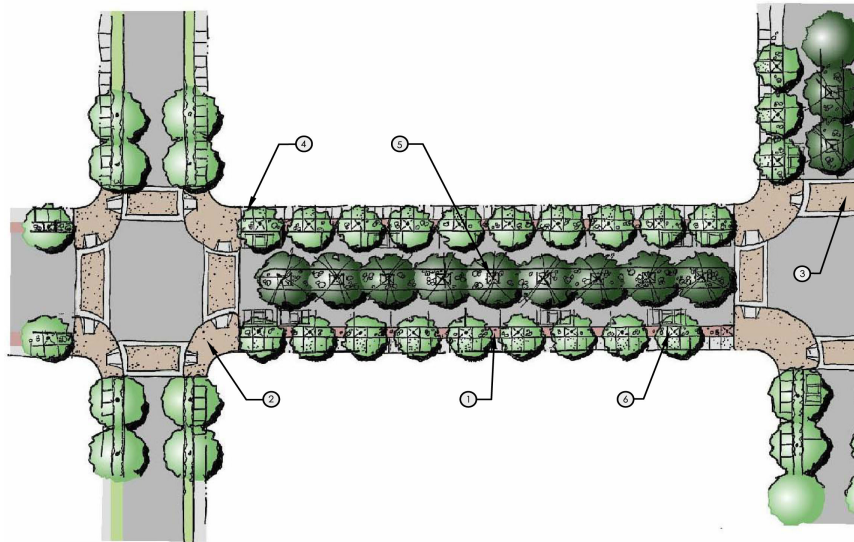


Legend:

- ① Enhanced Paving @ Medians
- ② Enhanced Paving @ Corners
- ③ Enhanced Paving @ Crosswalks

Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.

In the Village Center, where landscaped parkways and formal medians draw the pedestrian to focal points such as *Stone Creek Central Park* and the piazzas, enhanced paving at street corners will provide pedestrians with a place to cross at non-signalized intersections.



Legend:

- | | |
|--------------------------------|---|
| ① Enhanced Paving | ④ Enhanced Paving with Tree Grates |
| ② Enhanced Paving @ Corners | ⑤ 6' sq. Planter Cutouts w/ Understory Planting |
| ③ Enhanced Paving @ Crosswalks | ⑥ 6' sq. Tree Grates |

Conceptual design for illustrative purposes only. Actual design may vary from this typical representation.

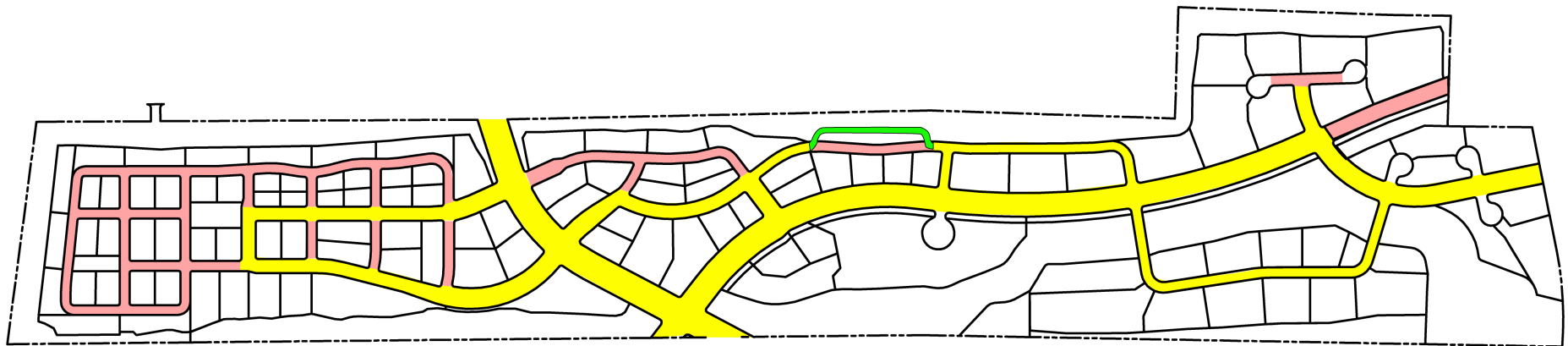
6.4.4 Bicycle Access

The *Stone Creek Master Plan* area will accommodate bicycle travel along roadways and trails, making bicycling a viable travel choice. The City of San Diego classifies bikeways into three general categories based on the degree or extent of their improvements, as described below.

- ❧ **Bicycle Path.** A completely separate right-of-way for the exclusive use of bicycles (Class I).
- ❧ **Bicycle Lane.** A restricted right-of-way located on the paved road surface of the traffic lane nearest the curb and identified by special signs, lane striping, and other pavement markings (Class II).
- ❧ **Bicycle Route.** A shared right-of-way designated by signs only, with bicycle travel sharing the roadway with pedestrian and motor vehicles (Class III).

Figure 6-11, *Stone Creek Bicycle Circulation Plan*, shows bike routes within *Stone Creek*. Class II bikeways will be located on *Stone Creek's* main circulation element roadways. Class III bikeways will occur within each neighborhood. A separated Class I bikeway will be provided within the slopes adjacent to residential development within the Village Center Neighborhood.

Figure 6-11. Stone Creek Bicycle Circulation Plan



Legend:

- Class I Bike Path
- Class II Bike Lane
- Class III Bike Route

Where bikeways share public streets, demarcations such as painted arrows or arrows designed with contrasting paving may be used to inform roadway users of the presence of bicycle traffic. Bicycles will also be accommodated on a Class I Bicycle Path within the Parkside Neighborhood. This Class I Bicycle Path shall be developed with a hard surface such as asphalt or concrete.

In order to support bicycle travel as an alternate mode of transportation, bicycle facilities will be provided where appropriate throughout the Stone Creek project. Bicycle parking facilities could include bicycle racks, bicycle lockers, or a combination of the two as specified in the Land Development Code. Additionally, innovative bicycle parking solutions, such as bicycle corrals or a bicycle oasis, should be considered to facilitate higher volumes of potential bike ridership in neighborhood centers, such as Village Center A and Westside Neighborhood B near Westside Commons.

6.4.5 Grid Pattern Streets and Curve Radii Deviations

Stone Creek is planned as a mixed-use, Transit-Oriented Development (TOD). As described in this chapter, the street network for the Stone Creek project has been designed to encourage alternative transportation, enhance mobility options, and create pedestrian/bicycle friendly streets. Throughout Stone Creek, connectivity is essential to encourage walking and biking to employment and other project amenities. As such, Stone Creek has been designed with a grid street pattern with walkable-sized blocks.

All street curve radii meet City requirements with the exception of two locations in the Westside Neighborhood, one location in the Village Center, one location in the Parkside/Eastside Neighborhood, and two locations in the Creekside Neighborhood. These locations are shown in Figure 6-12, *Locations for Curve Radii Deviations*. The tighter street grid deviates from the City's standard curve radius requirements. The project's grid-pattern design cannot be achieved without this deviation. Using the standard curve radius for these streets would result in wide-sweeping curves, which conflict with creating smaller, walkable blocks that encourage pedestrian use.

In order to allow for curve radii that do not meet minimum City Street Design Manual standards and still provide safe streets, the Stone Creek VTM incorporates modified "T" intersections at the locations shown in Figure 6-12. Driveways at these locations will "T" into public streets. Shared driveways can occur at the modified "T" intersections and will be designed to more efficiently balance the expected traffic volumes at these locations. Additionally, special traffic control treatments, such as restricting parking on the approaches and providing larger visibility triangles, will be provided as appropriate and as approved by the City Engineer.

Figure 6-12. Locations for Curve Radii Deviations





CHAPTER 7

PUBLIC SERVICES AND UTILITIES

7 PUBLIC SERVICES AND UTILITIES

The addition of *Stone Creek* not only carries out the *Mira Mesa* Community Plan objectives, but also brings a distinctive new focal point to the region. Employing a comprehensive long-range Vision that is responsive to and enhances the existing built environment, *Stone Creek* will transform the Carroll Canyon mining and reclamation site into a series of interconnected neighborhoods and parks.

As a true “community within a community,” *Stone Creek*'s public services and utility needs will engage in a symbiotic, mutually beneficial relationship with the larger *Mira Mesa* community. Ultimately, *Stone Creek* will offer new amenities to *Mira Mesa*, while also supplementing and/or drawing from *Mira Mesa*'s existing facilities.



7.1 OVERVIEW

This chapter describes the public services and utilities necessary to serve *Stone Creek*. Public services are institutional responses to basic human needs, such as health, safety, welfare, and education. Public service needs are based on an area's population. The buildout population for *Stone Creek* is estimated at 11,024, based on the maximum residential development of 4,445 dwelling units and the City's population projection of 2.48 persons per household for multi-family dwellings in the Mira Mesa community. Public utilities include those services provided to a development through other agencies and private entities: electricity, gas, sewer and water facilities, storm water runoff and control, and opportunities to utilize recycled water.

7.2 PUBLIC SERVICES

7.2.1 Libraries

The City of San Diego Libraries Department recommends a new branch library when there are at least 18,000 to 20,000 residents in the community. The nearest library to the project site is the Mira Mesa Branch Library located at 8405 New Salem Street, approximately 1.5 miles north of the project site. The library is 20,278 square feet in size and owns approximately 124,416 items (books, periodicals, DVDs, CDs, etc.). The Mira Mesa Branch also provides library materials, references, and children's services (programs, story hours, etc.), as well as meeting room space and a computer lab that provides public access to the internet.

7.2.2 Schools

Schools located within the San Diego Unified School District (SDUSD) provide elementary and secondary public education to students generated by residential development in *Stone Creek*. For the 2018-2019 school year, the portion of the project site east of Camino Ruiz is within the service boundaries for Mason Elementary School (grades K-5), and Wangenheim Middle School (grades 6-8). The portion of the

site west of Camino Ruiz is within the service boundaries for Salk Elementary School (grades K-5) and Challenger Middle School (grades 6-8). The entire project site is within the service boundaries for Mira Mesa High School (grades 9-12). Transportation to schools serving the project area is not provided by the school district.

A school facilities fee, which provides funding for school construction, has been authorized by Senate Bill (SB) 1287. Developers of residential projects within *Stone Creek* will be responsible for the payment of fees associated with public school service based on size of residential units and as established by the school district in accordance with SB 1287. Present City policy requires that verification of payment of school fees be made prior to the issuance of building permits. Additionally, a portion of the property taxes generated by the project will be allocated to the school district.

Additionally, based on current student generation rates, SDUSD has determined that an additional school might be needed in the future to serve students residing in *Stone Creek* and other portions of Mira Mesa, as well as other areas served by the SDUSD. Therefore, this Master Plan allows for the development of a school facility within the Westside Neighborhood, adjacent to Westside Gardens. (See Figure 2-1, *Stone Creek Land Use Map*.) This Master Plan identifies an approximately 10-acre site for SDUSD to purchase for development of a school facility, should one be needed. SDUSD shall determine that a school site is required, as necessitated by student generation rates as *Stone Creek* and other developments in Mira Mesa are built and occupied, prior to the submittal of residential building permit applications to the City for the Westside Neighborhood. The potential school site located within *Stone Creek* is designated for residential land uses, as shown in Figure 2-1, *Stone Creek Land Use Map*. Should SDUSD choose to acquire a site in the Westside Neighborhood, based on the provisions for

alternative land use types and intensities of Chapter 9, *Implementation*, a transfer of dwelling units from the school site to another residentially designated site or sites within the Westside Neighborhood shall be allowed without requiring an amendment to this Master Plan. The approximately 10-acre school site shown in Figure 2-1 is conceptual. The precise location and site area will be determined if/when SDUSD determines a school within *Stone Creek* is required and acquires the property to construct a school. This Master Plan also allows the flexibility for SDUSD to acquire a different site within the Westside Neighborhood and the school to be constructed at that location with the agreement of the SDUSD and without an amendment to this Master Plan. Should a school be built by SDUSD adjacent to Westside Gardens, the Master Plan allows for joint use facilities for recreational opportunities with a joint use agreement between the City of San Diego and the SDUSD.

The Mira Mesa community also includes a community college. San Diego Miramar College is located in eastern Mira Mesa, west of I-15, south of Mira Mesa Boulevard, north of Miramar Road, and east of Black Mountain Road. It is one of three comprehensive community colleges in the San Diego Community College District.

7.2.3 Fire Service

Stone Creek is located within the service area of the City of San Diego Fire Department. According to the City of San Diego General Plan, the main objective of providing fire service to City residents is to prevent fires from occurring and to suppress fires when they do occur. Provision of fire protection service depends on adequate equipment, numbers of qualified personnel, effective alarm systems, and the proposed siting of fire stations. Guidelines for providing the optimum degree of security against fire loss include locating fire stations to provide rapid response times within urbanized areas.

Fire service to *Stone Creek* would be provided by Fire Station 41, located at 4914 Carroll Canyon Road and Fire Station 44, located at 10011 Black Mountain Road. Fire Station 38, located at 8441 New Salem Street, and Fire Station 35, located at 4285 Eastgate Mall, serve as secondary responders. Additionally, the community's Public Facilities Financing Plan calls for an additional future fire station in the vicinity of Camino Santa Fe and Miramar Road, west of *Stone Creek* and between Stations 41 and 44.

7.2.4 Police Service

The City of San Diego Police Department provides police protection and enforcement for the Mira Mesa community. The mission of the Police Department is to maintain peace and order by providing the highest quality police services in response to community needs by apprehending criminals, developing partnerships, and respecting individuals. The Northeastern Division, located at 13396 Salmon River Road, currently serves the Mira Mesa community, including *Stone Creek*.

7.2.5 Solid Waste

The City of San Diego has a system of franchised haulers that would serve the *Stone Creek* project. These haulers would transport waste and recyclable materials to the facilities of their choosing; the two nearest landfills are the City-operated Miramar Landfill and Republic's Sycamore Landfill in San Diego. The County of San Diego Siting Element provides information on landfill capacity. County documents stress the importance of solid waste management reaching beyond collecting and burying waste. Sorting, composting, and other programs and processes are essential to compliance with State mandates.

7.2.6 Public Parks and Recreation

The City's General Plan guidelines recommend a minimum 2.8-acre neighborhood park for every 1,000 residents, to serve a population of

5,000 residents located within a one-mile service radius. Neighborhood parks within a one-mile service radius of *Stone Creek* include Maddox Park (4.5 acres), Mesa Verde Park (5 acres), Carroll Park (11 acres), McAuliffe (Winterwood, 4 acres), and Wagenheim Junior High Sports Field. Future neighborhood parks include Carroll Canyon (Rattlesnake) Park and Parkdale Neighborhood Park. Community parks must be a minimum of 13 acres. Two community parks currently serve the Mira Mesa community: Hourglass Community Park (30 acres) and Mira Mesa Community Park (17 acres).

Stone Creek will develop nearly 67 acres of park area, which will serve residents in *Stone Creek* and in eastern Mira Mesa. In addition, piazzas and plazas will provide opportunities for outdoor gatherings and meetings, strolling along shops, and enjoying the lively Village Center.

For the projected population of *Stone Creek*, based on full build-out of 4,445 residential units as presented in this Master Plan, the *Stone Creek* project is required to provide 30.87 acres of population-based park space. While final acreages may vary with final mapping and actual build-out, the *Stone Creek* project will meet its population-based park requirements on-site with development of Westside Gardens and *Stone Creek* Central Park. As part of the PFFP, developers within *Stone Creek* will also contribute payment towards the community recreation center and swimming pool with issuance of building permits. Payment of park fees toward the community recreation center and swimming pool will be commensurate with the actual number of units built within *Stone Creek* and may vary depending on final build-out.

Park designs are graphically rendered in this Master Plan to represent conceptual designs for illustrative purposes only. *Stone Creek* Central Park and Westside Gardens are identified as addressing the project's population-based park requirements, in accordance with City requirements. The development of these park spaces shall follow

Council Policy 600-33, *Community Notification and Input for City-Wide Park Development Projects*, which requires a public input process and Park and Recreation Board approval for the park's design. As part of the City's park development process, guidelines presented in Chapter 3 of this Master Plan, as well as the specific Master Plan guidelines for *Stone Creek* Central Park and Westside Gardens found in Chapter 8, Sections 8.6.2 and 8.6.6, of the Master Plan, shall be considered

7.3 PUBLIC UTILITIES

Public utilities which serve development in *Stone Creek* are addressed in this element. *Stone Creek* is located within the urbanized community of Mira Mesa. As such, public utilities, including water, sewer, gas, and electricity, are readily available to serve *Stone Creek*. Development within *Stone Creek* will provide the necessary connections, extensions, and upgrades to the existing utilities.

7.3.1 Water Service and Facilities

The City of San Diego Water Utilities Department provides water to the site as part of the Metropolitan System. The *Stone Creek* project is within the Mira Mesa 625 Zone for water service. Pressure reducing stations exist in the area to supply water to the 625 Zone from the Miramar 712 Zone. Existing pipelines in the vicinity of the project consist of a 16-inch 625 Zone pipeline located in Camino Ruiz, a 12-inch 712 Zone pipeline in Camino Ruiz to a point just north of Miralani Drive, a 16-inch 625 Zone pipeline located in Carroll Canyon Road and Black Mountain Road, and a 12-inch 625 Zone at Maya Linda Road and Carroll Canyon Road.

Figure 7-1, *Stone Creek Water Facilities*, illustrates the planned water distribution system for the project. Water facilities have been designed to serve build-out of the project with considerations to offsite water demand. Construction of water facilities will be phased in

accordance with the Vesting Tentative Map and the phasing plan described in Chapter 9, *Implementation*, of this Master Plan.

It is anticipated that the development will use recycled water where it is available. Figure 7-2, *Stone Creek Reclaimed Water Facilities*, shows the location of recycled water lines that will serve Stone Creek.

7.3.2 Sewer Service and Facilities

Sewer service will be provided by the City of San Diego. Figure 7-3, *Stone Creek Sewer Facilities*, depicts the planned sewer facilities and connections that will be necessary to serve development in Stone Creek. The flows from the project will discharge into the existing 21-inch Carroll Canyon Trunk Sewer at the southwesterly end of the project.

7.3.3 Storm Water System and Drainage

As part of the Stone Creek Vesting Tentative Map, a drainage plan and storm water control plan have been developed to control runoff and carry storm water. Implementation of the storm water and drainage system is a condition of the Vesting Tentative Map.

The Stone Creek project will connect to an existing storm drain system located at the southeast corner of the project site. Storm drains which will be constructed as part of the project are shown in Figure 7-4, *Stone Creek Drainage Plan*. All drainage facilities must be designed in accordance with the City's Storm Water Standards Manual and hydromodification requirements.

The project will result in an increase in the amount of runoff associated with urban development of the site. Due to the increased discharge, permanent detention basins have been designed throughout the site which are sized to control peak water flow and improve the quality of runoff as it leaves the site. Temporary basins will also be used until future development takes place. Additionally, underground detention systems are planned within Stone Creek Central Park.

7.3.4 Storm Water Quality

Urban runoff discharged from municipal storm water conveyance systems has been identified by local, regional, and national research programs as one of the principal causes of water quality problems in most urban areas. The City's Storm Water Standards Manual provides information to applicants for projects processed through the Development Services Department on how to comply with the permanent and construction storm water quality requirements for new development projects in the City of San Diego. To address water quality for Stone Creek, best management practices (BMPs) and low impact design measures (LIDs) will be implemented during construction and post-construction activities, in accordance with City requirements, which implement the Regional Water Quality Control Board requirements.

7.3.5 Natural Gas and Electricity

Gas and electric services are provided by San Diego Gas and Electric Company (SDG&E). Several SDG&E electric and gas lines are located along Black Mountain Road, which will be the best source of energy for the project site.

Figure 7-1. Stone Creek Water Facilities

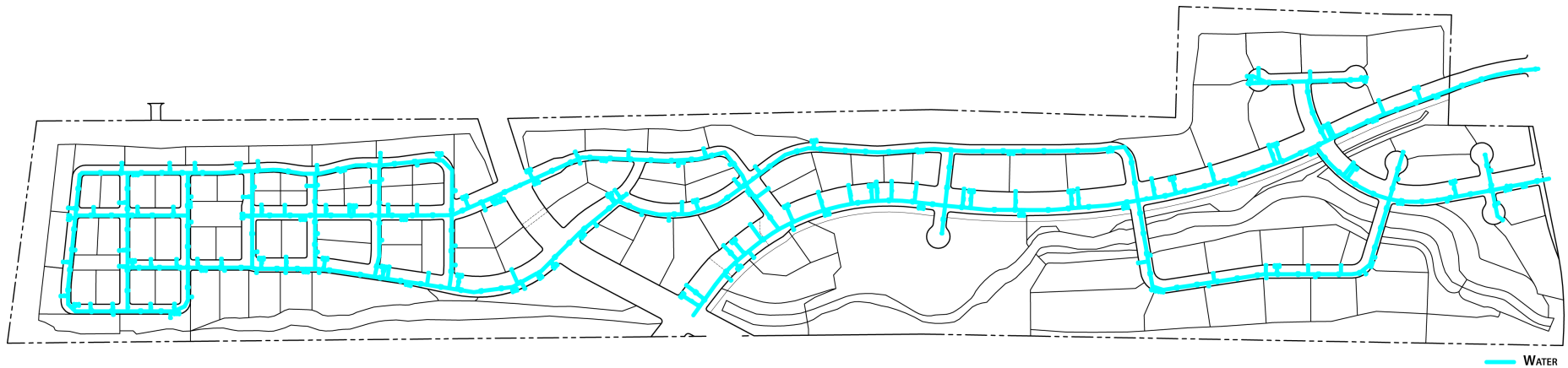


Figure 7-2. Stone Creek Reclaimed Water Facilities

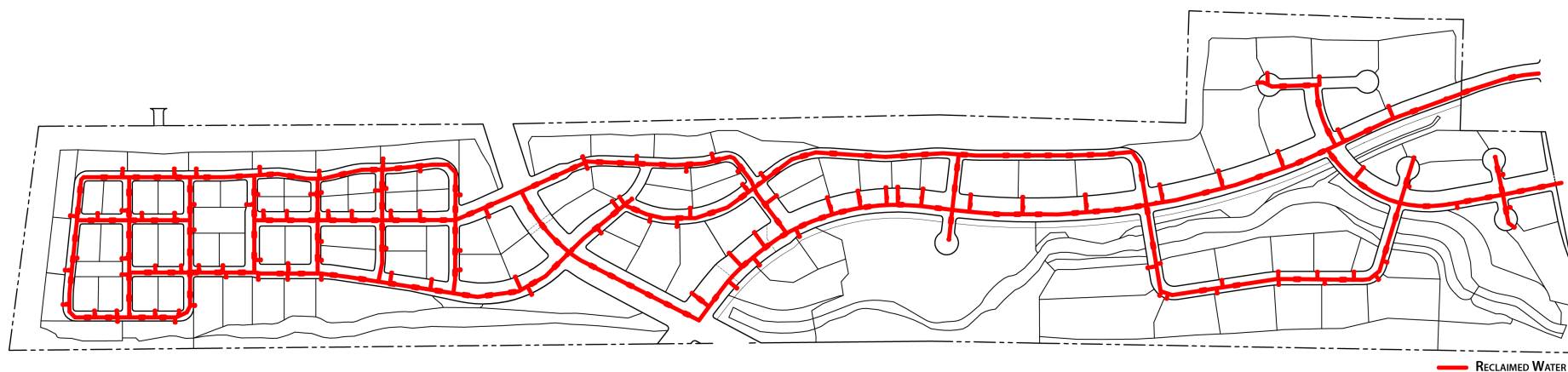


Figure 7-3. Stone Creek Sewer Facilities

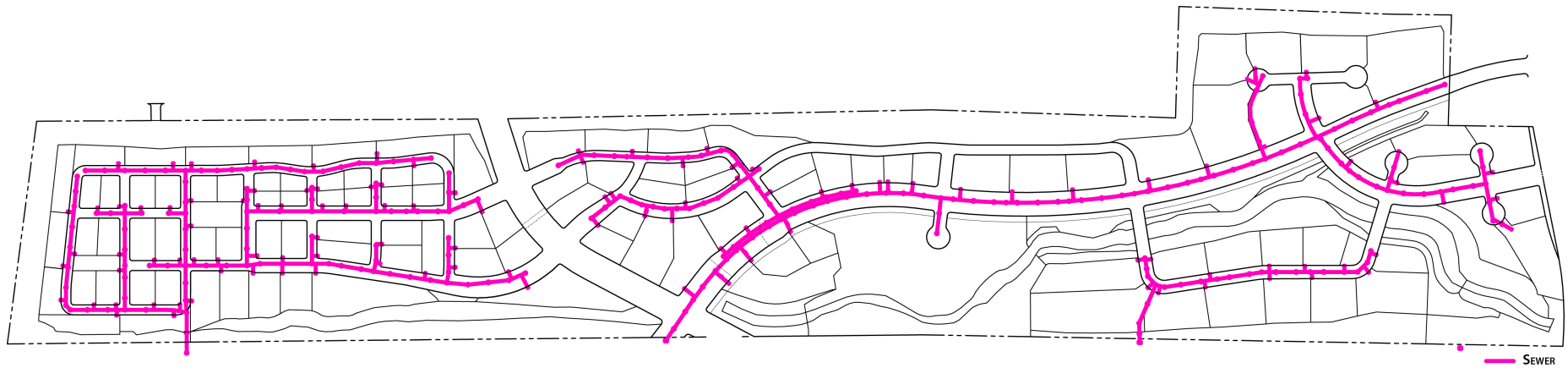


Figure 7-4. Stone Creek Drainage Plan

