4.0 | Mobility and Circulation

4.1 | OVERVIEW

The mobility and circulation framework for the Plan Area is a modified grid, complete street system that accommodates all modes of travel in a walkable, urban environment. A seamless network of dedicated bike/pedestrian facilities promotes convenient access between commercial centers, residential neighborhoods, and open spaces, and allows employees, residents and patrons to choose from a range of transportation options. The shared mobility hub creates a central point of connection, integrating a range of transportation choices to accommodate emerging technologies. A hierarchy of street types ensures proper performance for vehicle and alternative modes while encouraging shared mobility options. Streetscape design standards establish the Plan Area as a distinctive place, creating an attractive and engaging public realm.

A seamless network of dedicated bike/pedestrian facilities promotes convenient access between commercial centers, residential neighborhoods, and open spaces, and allows employees, residents and patrons to choose from a range of transportation options.

This chapter describes the transportation modes, circulation networks and standards for Plan Area roadways, public transit, bicycle and pedestrian facilities. Roadways have been designed to balance the circulation and flow of vehicular traffic with the provision of safe and accessible facilities for walking, biking and public transit. A modified grid street network provides circulation and access within the Plan Area, to Spring Lake and adjacent areas of the city and distributes Plan Area traffic to support a walkable and bike friendly community. Plan Area roadways provide circulation and connectivity and incorporate landscape elements which provide aesthetics, shade and stormwater management. Specific guidance for bike paths, sidewalk improvements, medians and parkways, landscaping and other streetscape elements are defined in this chapter.

4.2 | NEXT GENERATION MOBILITY

The digital revolution is opening up new technologies and transforming the way goods are purchased and delivered and how people chose to get from place to place. For the past 75 years, the design of communities has been driven primarily from the perspective of the automobile user. The emergence of the shared economy and advent of autonomous vehicles are disrupting the traditional way of thinking about personalized transportation. How cities adapt to and plan for future transportation innovations is a topic of much discussion.

The Plan Area is designed to accommodate current systems while anticipating emerging technologies that will offer an increasing range of transportation options for both personal and commercial use. The Village Center will serve as a social and functional hub of the Plan Area where all modes intentionally intersect at a "shared mobility hub". Supported by the compact and mixed-use nature of the plan, active transportation modes are prioritized throughout the project to promote biking and walking as a preferred mode of choice. Streets and path facilities are designed to provide efficient movement while creating a stronger sense of place, rather than compromising the human experience. Facilities and programs will be implemented to support a shift away from individual vehicle use and toward active and shared mobility options in order to achieve the General Plan goal of 10% reduction in vehicle miles traveled (VMT).

The Plan Area road network is designed to accommodate alternative modes of transportation and as well as future technologies.

This section summarizes the planned facilities, systems and programs that are contemplated in the Plan Area and will be the focus of the transportation demand management (TDM) program, described in Section 4.2.7. Funding sources and mechanisms for the mobility amenities, programs and services described in the following sections are addressed in the Finance Plan and Development Agreement.

4.2.1 Active Transportation

Supported by a fine grain network of pedestrian / bicycle facilities, the WRTP promotes active and more individualized forms of transportation such as biking, boarding, scootering, and walking. The Plan Area mix of residential, employment, services, recreational uses proximate to each other and

transit services make it convenient to choose alternative transportation choices throughout the day. Active transportation facilities or amenities at the beginning and end of the trip destination are incorporated throughout the Plan Area to further encourage active transportation as a primary means of getting around.

4.2.2 Shared Mobility Hub

Located at the Village Center, a shared mobility hub, *The Union*, will at project build out, serve as the nucleus of the alternative transportation system providing integrated access to intra-city as well as inter-city transit service. The Plan Area's seamless network of roads, bike paths, and sidewalks combined with a variety of transportation services will offer multiple choices to support "last mile" connectivity. The Union, in conjunction with the broader Village Center, will be designed to accommodate a range of potential alternative transportation choices such as:

The Plan Area road network is designed to accommodate alternative modes of transportation and as well as future technologies.

1. Fixed route bus and micro-transit
2. Car/vanpool/parking
3. Designated car share spaces
4. Electric vehicle charging stations
5. Ride hailing services
6. Bike/scooter share docking stations

The Union will include design features such as architecturally enhanced covered waiting areas, including distinctive seating areas/benches; scooter/bike share facilities and designated parking areas; covered and uncovered bike parking and where feasible, long term/rentable storage lockers; bike repair station; hydration station/water fountain; wayfinding kiosk; ticketing kiosk as appropriate; enhanced landscaping, shade trees, and landscape features (i.e. rock, decorative fencing, public art) and textured/stamped concrete walkways; and overhead pedestrian scale lighting and bollard lights where appropriate. Services and amenities at the Village Center such as designated car-share/vanpool spaces and EV charging in the parking areas, cafés, a market and co-working spaces will create opportunities to further reduce vehicle miles traveled and GHG emissions, and enhance The Union as a place of connection.

Development of The Union will occur in phases to correspond with service demand generated as the Plan Area builds out. Meanwhile, an increasing number of UC Davis faculty, staff, and students at UC

Davis are choosing to live in Woodland. Campus planners are seeking new ways to promote transit and carpool options for campus-bound commuters and have engaged with the City to explore effective alternatives to single-occupant driving. The Plan Area's strategic location along Highway 113 at the southern-most side of the community, creates a unique opportunity to establish a convenient point of connection for van/carpool and transit services.

Early phases of the Plan Area's shared mobility hub will include park and ride facilities to promote carpooling. An illustrative layout and concept site plan of the shared mobility hub are provided below. As demand grows with the employment and housing development, the full set of transit and shared mobility services will be added at The Union.

Elevated Perspective of the mobility hub "The Union," and Village Center – Artist Rendering

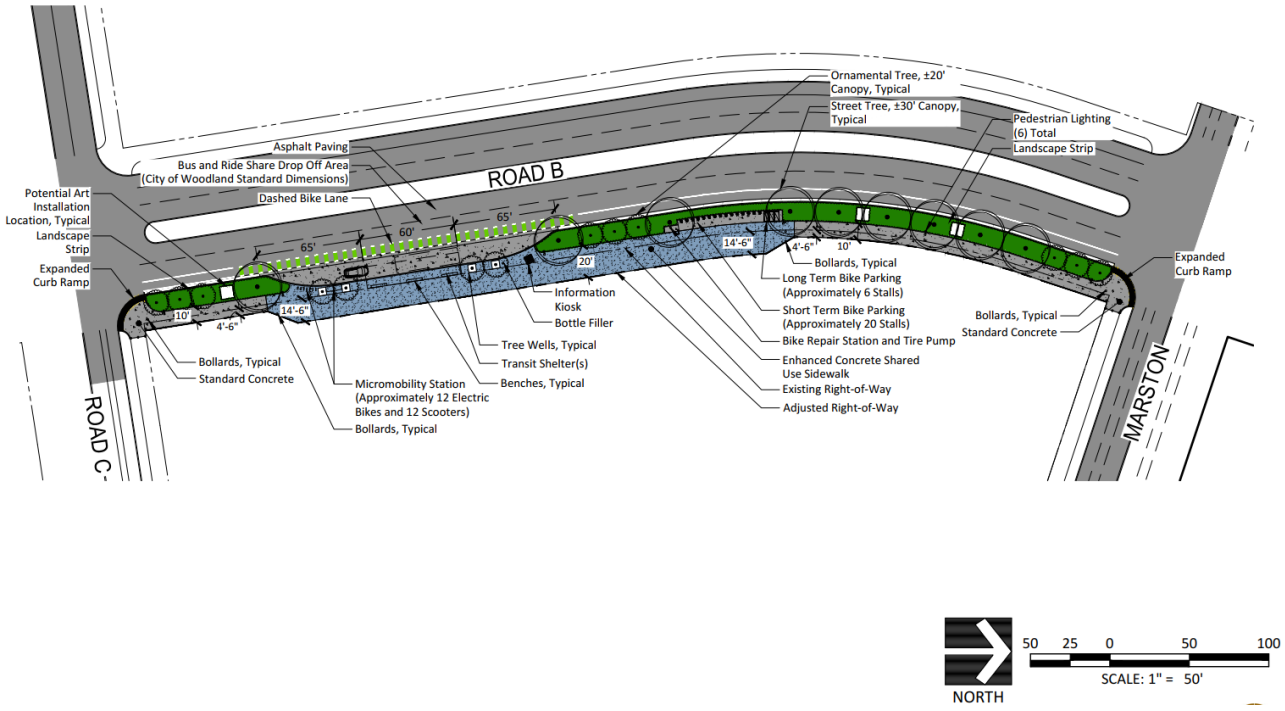


EXHIBIT 4-1: CONCEPT SITE PLAN OF THE MOBILITY HUB "THE UNION."

4.2.3 Fixed Route Transit Service

Development of The Union will be planned and coordinated with local and regional transit service providers including YCTD and UC Davis Transportation and Parking Services/Unitrans. The shared mobility hub will be the primary point of connection for any fixed route bus service with YCTD's YoloBus service. Additionally, a new shuttle/vanpool connection providing frequent connection to and from UC Davis and the Davis Amtrak Depot is planned. This service will link into regional transit services connecting into high employment areas such as downtown Sacramento/UC Davis Med Center and the Bay Area. This service will be evaluated as part of the TDM program.

4.2.4 Micro-Transit Service

On-demand shuttle services are supplementing, and in some cases replacing, intra-city fixed route transit service in communities across the country. Woodland and YCTD will be piloting a micro-transit service in 2023 which will inform the future application and expansion of this transportation amenity in the community. The Plan Area is planned and designed to anticipate this service which will not only offer an additional option for "last mile" connection to the shared mobility hub but also provide residents and employees with the flexibility to choose alternative transportation options for primary commute trips and utilize on-demand services for ancillary trips throughout the day.

4.2.5 Vanpool/Ride Share

To supplement transit services, particularly in the earlier phases of the Plan Area build out when ridership numbers have not reached critical service demand levels, park and ride lots will be utilized to support vanpools and ride sharing. Additionally, dedicated parking spaces for car/vanpool and ridesharing will be required for large employment uses. Supplemental funding may be needed initially to subsidize these services and build ridership demand. Funding from UC Davis and the Plan Area's transportation demand management (TDM) program could be key sources of funding to support these services.

4.2.6 Vehicular Travel

The Plan Area accommodates automobiles yet, is intentionally designed to reduce their use through a combination of a modified grid street network and alternative transportation services/amenities that promote alternate mode choices. To further reduce impacts of automobile use, the plan integrates infrastructure and development standards that support zero emission vehicles and car share programs that will reduce reliance on individual vehicle ownership. The following examples of current, and/or future, innovative transportation solutions will be deployed to help reduce vehicular use and GHG emissions.

To reduce impacts of automobile use, the plan integrates infrastructure and development standards that support zero emission vehicles and car share programs that will reduce reliance on individual vehicle ownership.

1. Electric Vehicles. Every parking lot and garage within the Plan Area will be EV ready for the addition of charging facilities. Dedicated EV parking stalls will be placed near primary entrances, key points of destination, and at park and ride/transit stops.
2. Car Sharing Services. On and off-street parking spaces in key locations will be dedicated to car sharing, or similar services, in cooperation with existing and future successful private car sharing vendors such as ZipCar, GIG Car and City CarShare.
3. Ride Hailing Services – Designated curbside zones for ride hailing (i.e. Uber/Lyft) will be strategically located at the Union and other locations within the Plan Area.
4. Smart Parking – Use of intelligent parking management technologies, such as Woodland-based JAPA, may be employed in high demand parking areas to monitor utilization, inform drivers of available parking spaces, and offer adaptive time limit and permitting options.

4.2.7 Transportation Demand Management

Reduction of personal vehicle use and an overall vehicle miles reduction travelled by 10% will be achieved through a variety of project features and services such as the ones described in this Chapter. A Transportation Demand Management (TDM) program for the project will be adopted prior to the first tentative map to guide the build out of the Plan Area and the phased implementation of enhanced mobility facilities and programs.

4.3 | MOBILITY AND CIRCULATION NETWORK OVERVIEW

Proposed land uses, densities and the individual district character described in Chapters 2 and 3 have a close connection to streetscape design standards described in this chapter. Together, land use patterns and streetscape contribute to a sense of place by ensuring that local streets are not over- or under-designed to accommodate both local and through traffic, and parking demand generated by development. Further, streetscape design, including greenbelts and pedestrian paseos, help create a cohesive community identity, enhanced with landscaping, street furniture and lighting, entryways and public art.

The street and path networks for the Plan Area have been carefully designed to support the distribution and function of various uses within the land use districts while also serving as a primary place making feature. Each district is associated with unique types of travel demand which is served by a highly connected hierarchy of streets and pedestrian / bicycle paths. The envisioned circulation networks and street hierarchy is shown on Exhibit 4-3, followed by the street cross section designs. As the Plan Area develops, specific street sections may require modifications in response to unique or unforeseen circumstances. Modifications to the street sections included in Section 4.5 shall be subject to review and approval by the Community Development Director in consultation with the City Traffic Engineer. Providing all modes of mobility equal consideration while emphasizing active and alternative transportation options is a primary goal of the Specific Plan and the 2035 General Plan. Figure 14-16: Table 3-2 from the 2035 General Plan, summarizes the mode priority.

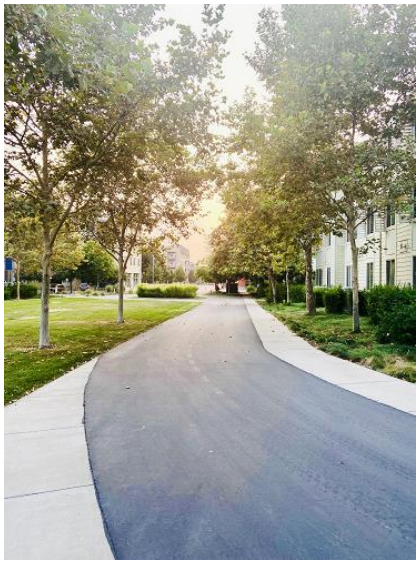
The overall Mobility and Circulation Network and streetscape program consists of the Active Transportation Network and the Roadway Network. The Active Transportation Network includes descriptions of the facilities such as multi use trails, paths, on street bike lanes, shared use marking and pedestrian promenades and sidewalks. The Roadway Networks describes the street hierarchy of Principal Arterial Streets, Minor Arterial Streets, Collector Streets, Local Streets, Alleys as well as Roundabouts / Enhanced Intersections and Streetscape Design Features.

4.4 ACTIVE TRANSPORTATION NETWORK

Dedicated on- and off-street bike facilities will allow both transportation and recreational benefits for Plan Area residents and employees.

The Plan Area's active transportation network is comprised of dedicated on-street and off-street facilities that provide both transportation and recreational benefits, as depicted in Exhibit 4-2, Active Transportation Network. The Plan Area's interconnected system of sidewalks, bike lanes and multi-use trails/paths are intentionally designed to link seamlessly throughout the Plan Area and to the shared mobility hub promoting more active and healthier transportation choices. Enhanced crossing features and roundabouts will be used where the active transportation network intersects with the primary roadway network.

The backbone of the network is the 4.9 miles of Class 1 facilities distributed throughout the Plan Area, creating a system of greenbelt trails and more formal multi-use paths. A primary feature of the network is the north-south greenbelt spine that serves as a key connector of existing and planned trail networks. Abandoned portions of Harry Lorenzo Avenue will be converted to greenbelt and integrated into a linear greenway connecting existing trails that extend east-west along CR 25A, Marston Ave, Parkland Avenue, and Farmer's Central Road.



The planned bike and pedestrian overcrossing at the north boundary of the Plan Area will offer safe and convenient access across HWY 113 and connection to the west side of the community via the Woodland Parkway. The future Parkland Avenue overcrossing will provide an additional Class 1 path creating connection between future development of the Specific Plan 1 Area on the west side of HWY 113. The Plan Area is also a key point of connection to the future Woodland-Davis Bikeway / Alternative Transportation Corridor that is envisioned to provide an off-street path between the two cities.

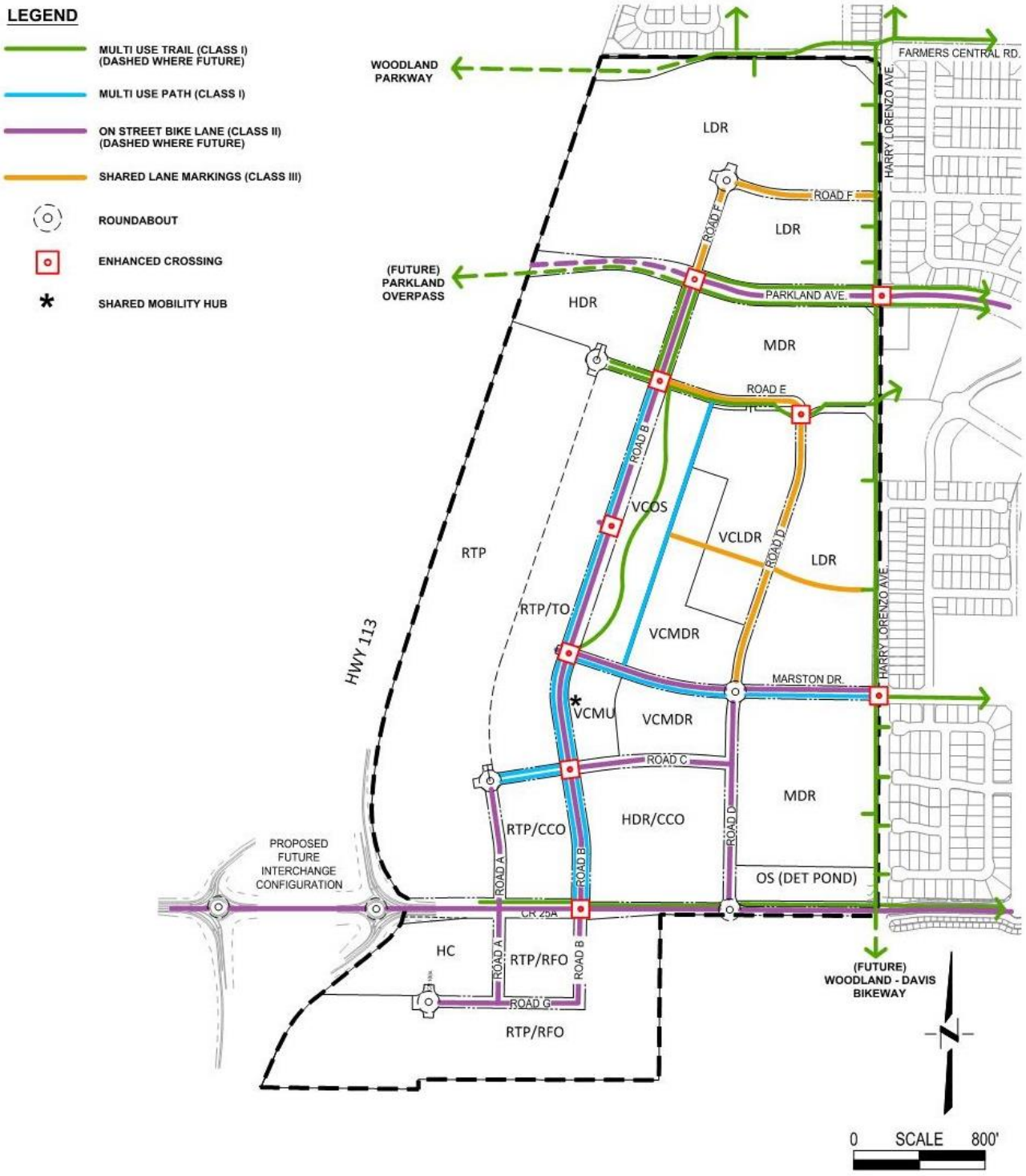


EXHIBIT 4-2: ACTIVE TRANSPORTATION NETWORK

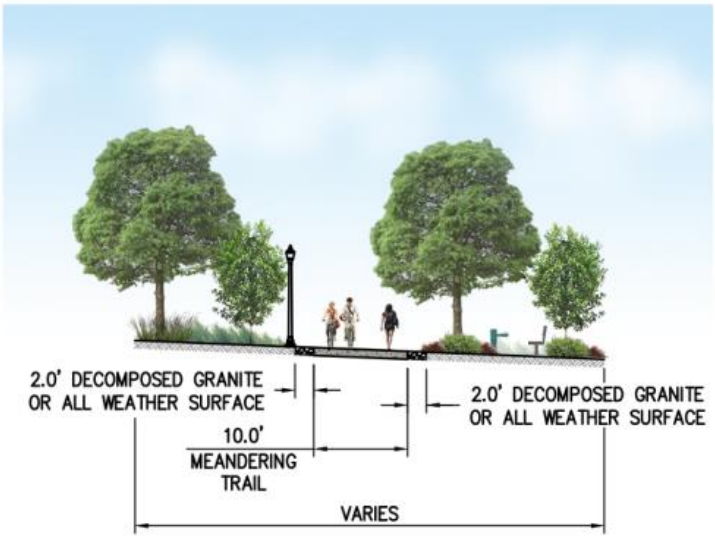
4.4.1 Active Transportation Facility Design

The design of the Plan Area's active transportation facilities have been carefully considered to relate to the street and land use context, reinforcing biking, walking, and other alternative transportation choices as an integral feature of the Plan. The following design standards and section details describe the characteristics of the network's hierarchy of trails, paths, lanes and shared lane markings.

The Plan Area's active transportation network includes 3.1 miles of multi-use trails and greenbelts, allowing residents and employees the ability to travel throughout the plan area comfortably on a bike, walking, or by way of other non-vehicular modes of transportation.

1. MULTI-USE TRAILS

The Plan Area's greenbelt and linear greenway network consists of 3.1 miles of class 1 Multi-Use Trails. These facilities are more informal in nature with a 10-foot wide shared use path that gently meanders through landscaped open spaces. The overall width of the greenbelts and greenways shall vary to reinforce the more informal nature of these spaces. The larger greenbelts are at least 50-feet in width and shall be no less than 24-feet at neighborhood connectors or where located along the street right-of-way. The Multi-Use trails include a 2-foot gravel shoulder or low landscape edge with bi-level motion sensing LED path lighting. Trails will be well shaded with trees and have amenities such as exercise stations, benches, drinking fountains and occasional open turf areas to encourage passive and active recreational use.

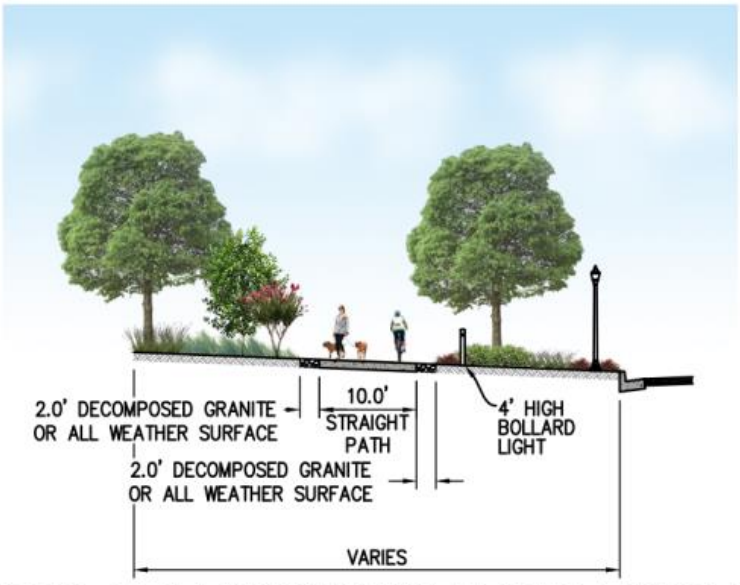


TYPICAL GREENWAY WITH MULTI-USE TRAIL

2. MULTI-USE PATHS

A more formal and linear network of multi-use paths through the Plan Area's active urban areas anticipate higher utilization by bikes, scooters and pedestrians.

The Plan Area's greenbelt and linear greenway network transitions to a more formal path facility within the more active urban areas of the plan. The 1.8 miles of Multi-Use Paths are a linear 10-foot wide shared use path that anticipates a higher utilization by all modes including bikes, scooters, pedestrians, and other forms of active transportation. A 2-foot clear recovery zone shall be maintained on both sides of the path. Where adjacent to private use, the recovery zone may be incorporated within the front setback and may consist of a clear pedestrian zone, free of street furniture or other fixtures, or low landscaping. Lighting will be integrated with the street lighting system and supplemented with pathway or bollard lighting where needed. Bike parking, scooter docs, and transit shelters will be strategically located along the Paths to support utilization of alternative transportation modes.



TYPICAL GREENWAY WITH MULTI-USE PATH

3. THE PROMENADE

The 20-foot wide, tree-lined Multi-Use Path that runs along the east edge of The Yard is called The Promenade. This Path will serve as a connection for bikes and pedestrians between Road E and Marston Drive and as a drivable path for emergency vehicles if needed. Medium and low density residential units in the Village Center will have front entries facing across The Promenade into The Yard to help create an active and more urban open space. The Promenade will have textured concrete pavement, lower level pathway or bollard lighting, and more frequent placement of benches.

4. BIKE LANES

The Active Transportation Network contains 3.5 miles of class II on-street bike lanes. The minimum width of the lanes is 6-feet for designated bike lanes on collector streets. On arterial streets such as Road B, Parkland, and CR 25A where traffic speeds and volumes are higher, bike lanes are 8-feet wide and have a 2-foot buffer on the vehicle lane side. Green lane markings will be used along CR 25A and Road B to further identify the on-street bike facilities.

5. SHARED LANE MARKINGS

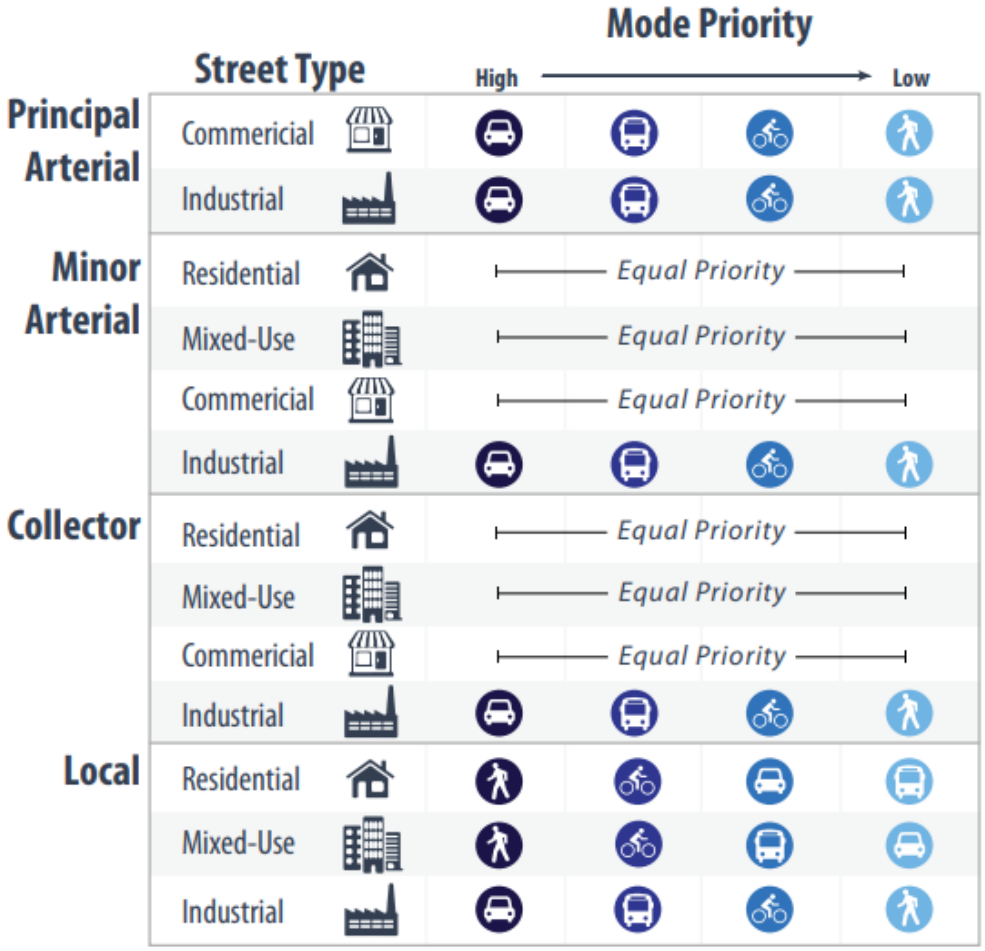
Shared lane markings such as sharrows will be used to accentuate the shared nature of these streets. On collector and local streets within the lower density residential neighborhoods that serve as key bike corridors, shared lane markings consistent with the best practices and standards articulated within the MUTCD will be used.

Class II and III bike facilities will be delineated by street markings using best practices from MUTCD.

4.5 ROADWAY NETWORK AND STREET HIERARCHY

The Plan Area's roadway network is a hierarchy of Principal Arterial, Minor Arterial, Collector, and Local Streets that provide seamless connection into and out of the Plan Area. Roadways are planned to accommodate the specific travel modes prioritized relative to the land uses they serve. Each roadway is also uniquely designed to reinforce the character of each District and support the creation of a distinctive sense of place. The primary roadway network is shown in Exhibit 4-3.

Street Typology | Street typologies expand upon the functional classification and take into account street context, land use context, and travel mode prioritization. This typology ensures that the application of street standards consider a street's relation to surrounding land uses, appropriate travel speeds, and the need to accommodate multiple travel modes and user abilities.



Equal Priority: Recognize the importance of all transportation modes.

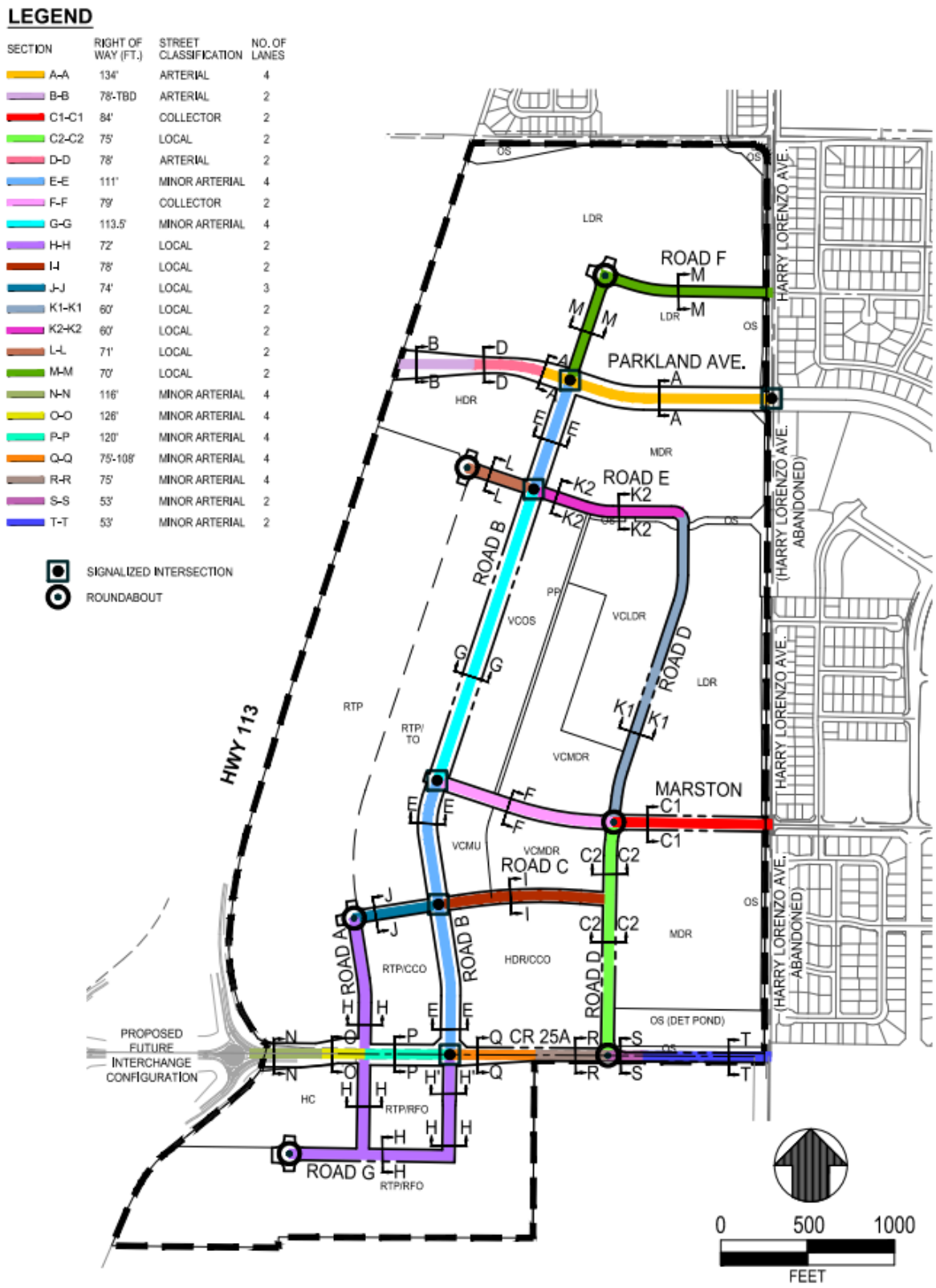


EXHIBIT 4-3: ROAD CIRCULATION DIAGRAM

4.5.1 Principal Arterial Streets

A Principal Arterial Street provides mobility for higher vehicular traffic volumes while maintaining a comfortable bike and pedestrian experience.

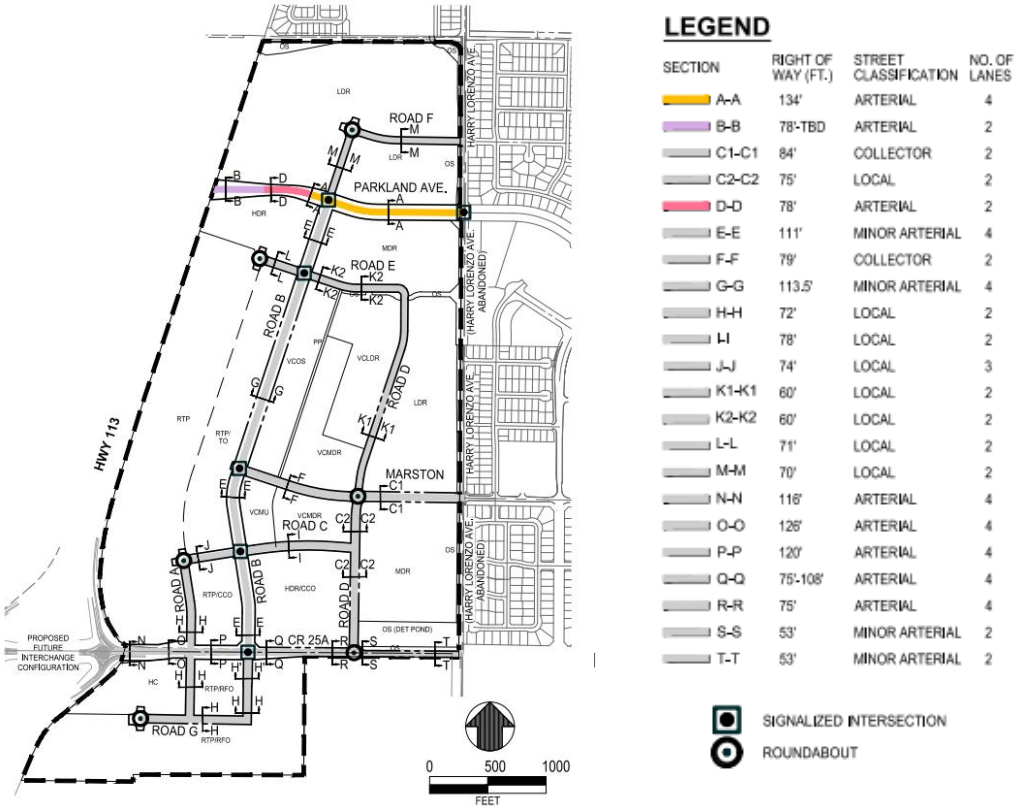


EXHIBIT 4-4: PRINCIPAL ARTERIAL STREETS KEY MAP

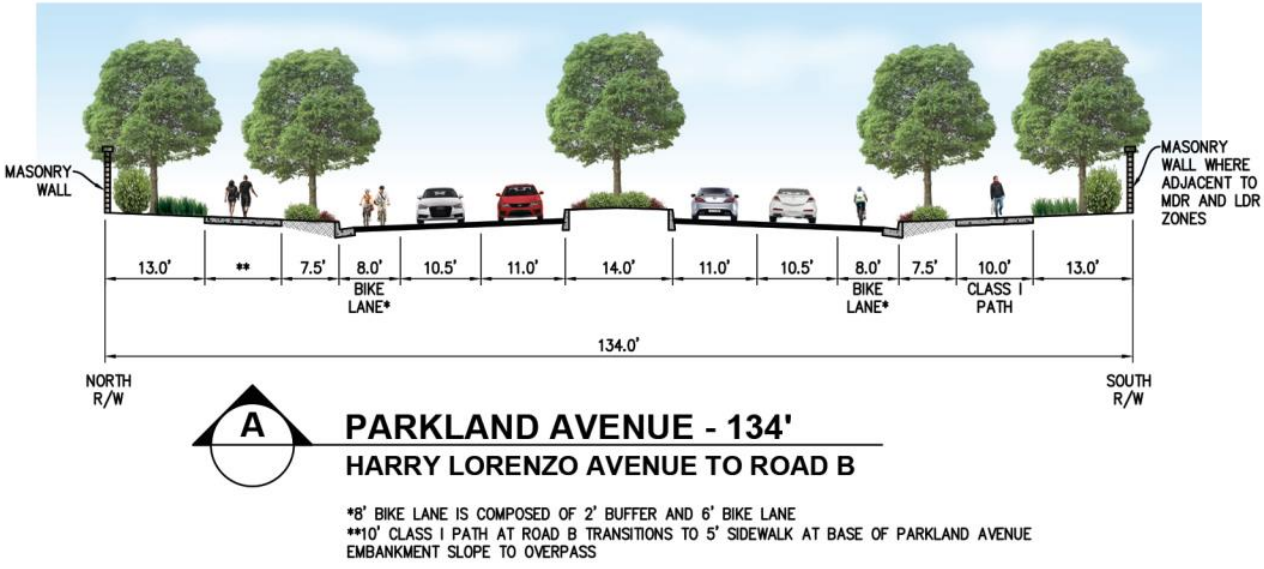
1. PARKLAND AVENUE

Parkland Avenue, depicted on the key map above, is the only principal arterial street within the Plan Area. This street segment is the primary connector into and out of the Plan Area from the north, intersects with Pioneer Avenue and Heritage Parkway at the Spring Lake Village Center, the hub of the arterial network in the Southeast Area.

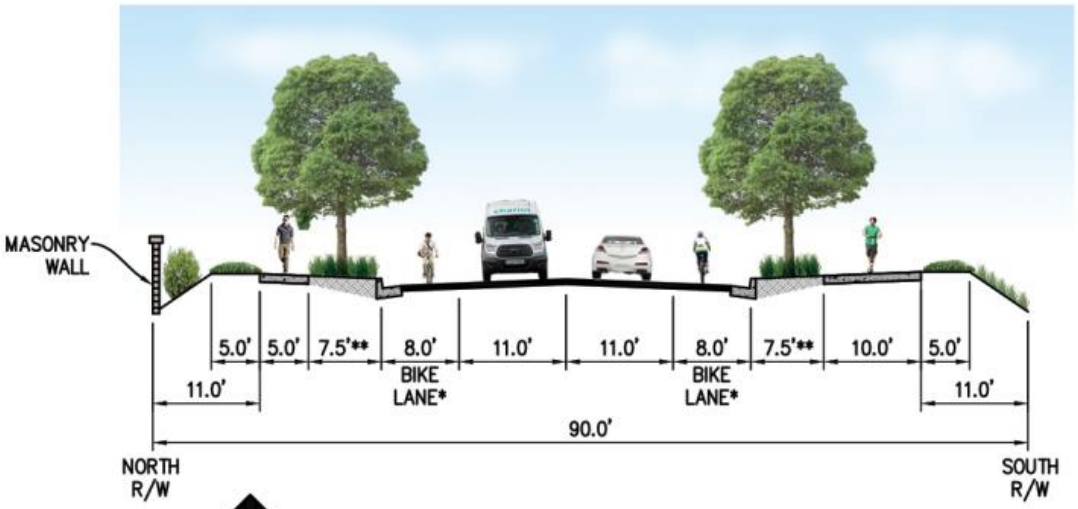
The roadway network will extend Parkland Avenue from Harry Lorenzo Avenue (HLA) to Road B where it will ultimately extend west over Highway 113 (HWY 113). It is anticipated that the segment from Road B to East Street, including the Hwy 113 overpass, will be completed with the build out of General Plan Specific Plan Area 1B, and the necessary right-of-way within the Plan Area will be dedicated as part of the Project infrastructure requirements. Parkland Avenue will continue west from HLA as a 4-lane Principal Arterial with a landscape median, buffered on-street bike lanes, Class 1 bike/pedestrian paths and landscape strips on either side of the paths as illustrated in Section A-A.

Parkland Avenue will serve a primary connector between the existing Spring Lake neighborhood to the east and the Plan Area.

The Parkland Avenue extension will continue with on-street and Class I bike facilities between Harry Lorenzo and the future pedestrian overcrossing.



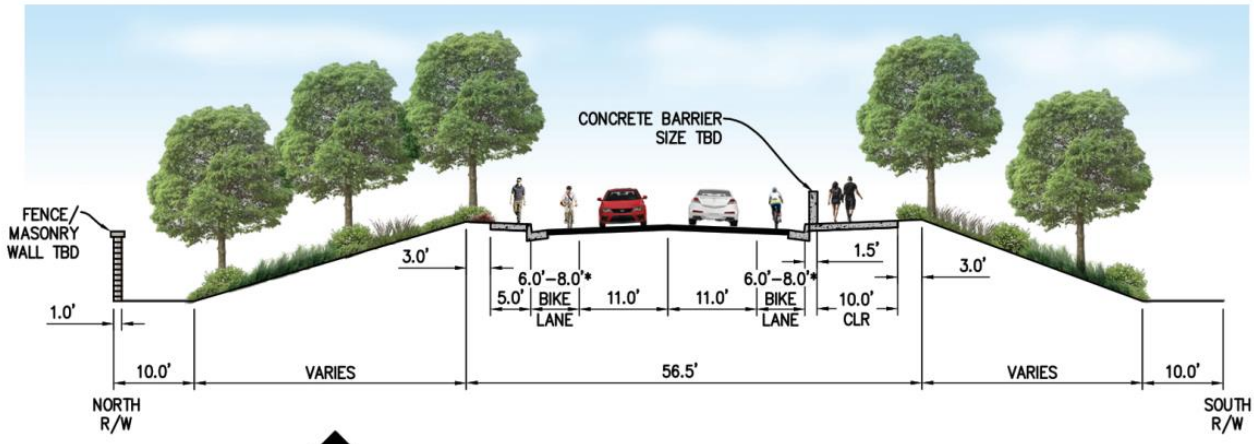
From Road B to HWY 113, Parkland will transition to an overpass, narrowing to two lanes with on-street bike lanes, planting strips and a 10-foot multi-use Class 1 bike/pedestrian path on the south side of the street. This transition is illustrated from east to west via Street Sections D-D and B-B. The western extent of Parkland Avenue and adjacent right-of-way, is designed in anticipation of future extension across HWY 113 to East Street.



D PARKLAND AVENUE - 90'
SECTION A-A TO SECTION B-B

*8' BIKE LANE IS COMPOSED OF 2' BUFFER AND 6' BIKE LANE
**PARKWAY STRIP @ OVERPASS TOE OF ABUTMENT SLOPE

The intersection of HLA and Parkland Avenue will be improved with signalized controls and enhanced bike and pedestrian facilities to provide greater safety and comfort to users of the adjacent north-south greenbelt. The signalized intersection at Road B and Parkland Avenue will be similarly improved with features to enhance safety and comfort for bicycles and pedestrians.



B PARKLAND AVENUE - VARIES
SECTION D-D TO HWY 113

*NARROWS TO 6' BIKE LANES ON BRIDGE

4.5.2 Minor Arterial Streets

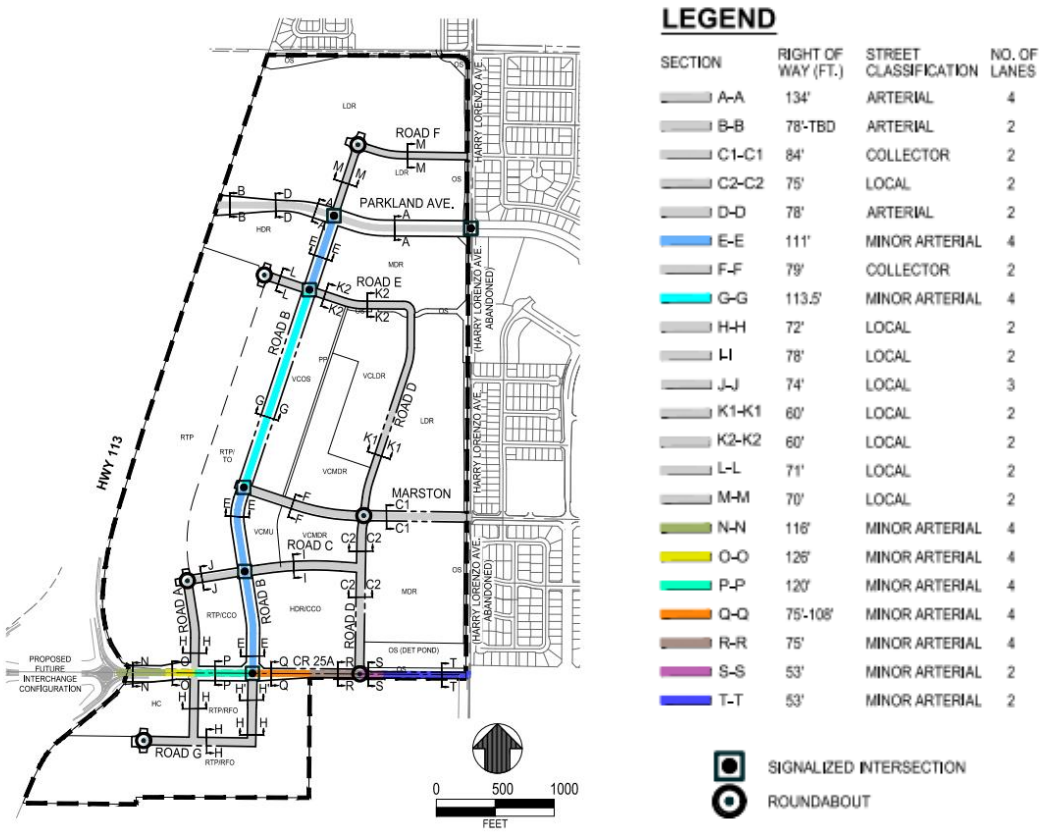


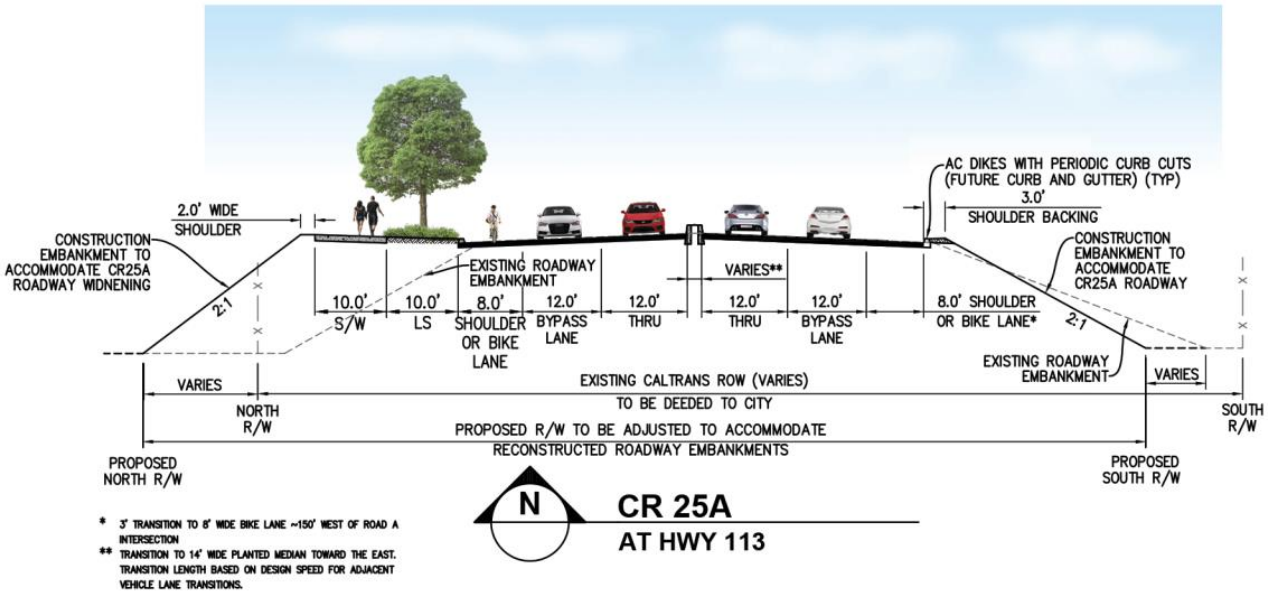
EXHIBIT 4-5: MINOR ARTERIAL STREETS KEY MAP

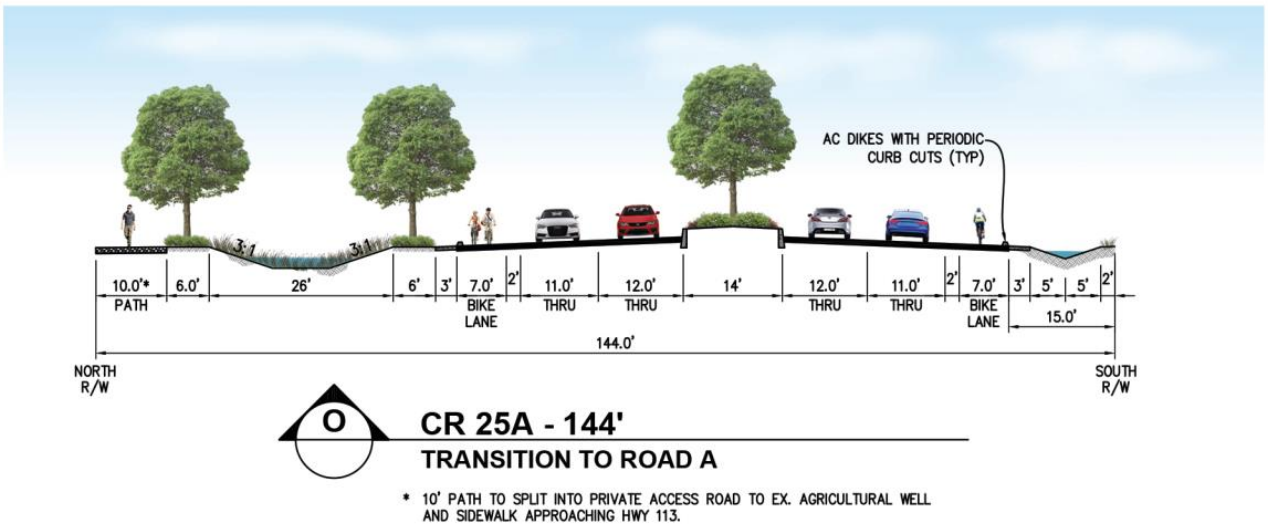
Minor Arterial Streets CR 25A and Road B, as depicted on key map below, provide mobility for higher traffic volumes than local roads, but lower traffic volumes and speeds than Principal Arterial roads. These roadways will serve as critical components of the Alternative Transportation Network, serving as key entryways and placemaking streets as well as the primary transit connections. Access from parcels onto these roadways is limited to reduce points of conflict, smooth the flow of traffic, and enhance urban design.

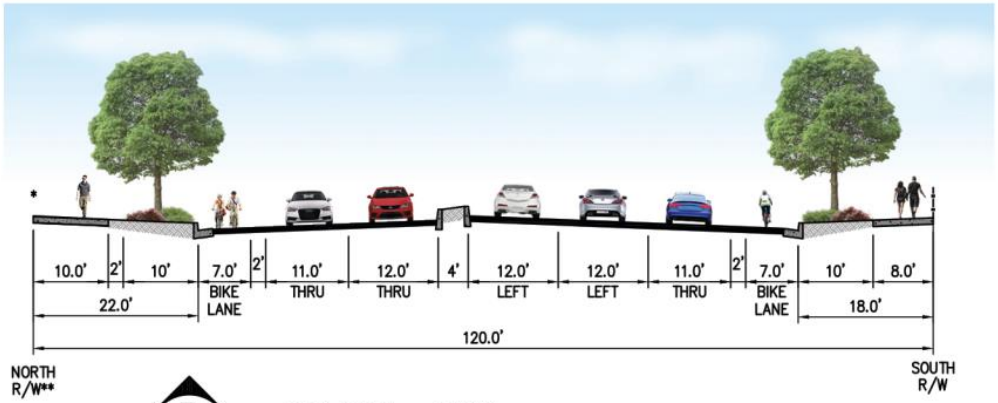
1. COUNTY ROAD 25A

County Road 25A (CR25A) serves a prominent role as the primary entryway into the Research and Technology Park as well as the southernmost gateway to Woodland. As depicted on Exhibit 4-3, Circulation Diagram, roundabouts are proposed on both the east and west sides of the HWY 113 / CR25A interchange to smooth the flow of traffic and create a more distinctive visual entry experience. A Class 1 Multi-Use Trail will be built on the north side of the roadway extending the existing trail in Spring Lake to the embankment approach to the HWY 113 overpass.

The transition from the interchange to CR25A itself will consist of four lanes of traffic with a 16′ wide median as illustrated by Section N-N. Right-of-way for this transition segment is designed to add future pedestrian walkways buffered from the roadway via a tree-lined landscape strip. Between this transition and Road B, CR25A will have four lanes of traffic, turn pockets, buffered on-street bike lanes and a 16′ center median island, illustrated by Sections O-O, P-P, and Q-Q. The signalized intersection of Road B and CR 25A is the main entryway into the Plan Area and will included enhanced pavement and monument features to accentuate its role as a prominent entryway.



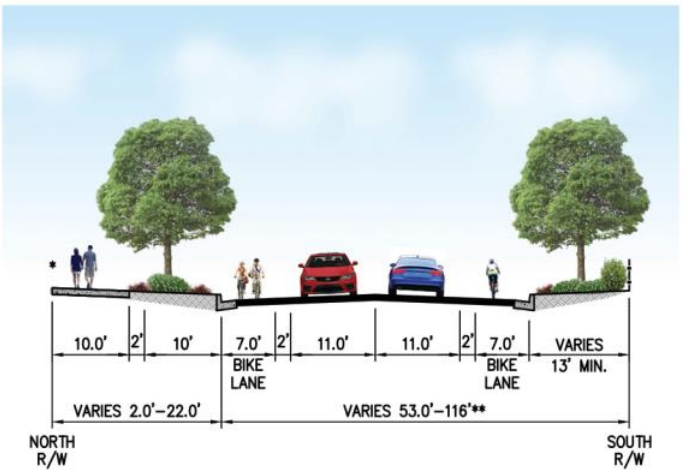




P **CR 25A - 120'**

ROAD A TO ROAD B

*2' CLEAR RECOVERY ZONE WILL BE REQUIRED WITHIN THE PRIVATE LANDSCAPING NORTH OF PATH
**NO DIRECT ACCESS TO CR 25A FROM ABUTTING PROPERTY TO THE NORTH OR SOUTH

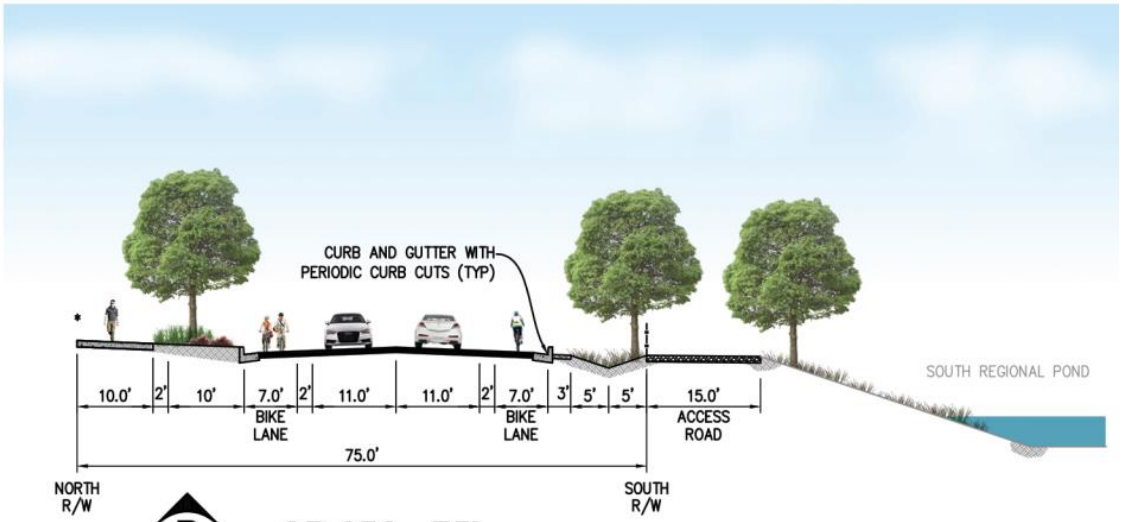


Q **CR 25A - VARIES**

ROAD B TO SOUTH REGIONAL POND - WEST

*2' CLEAR RECOVERY ZONE WILL BE REQUIRED WITHIN THE PRIVATE LANDSCAPING NORTH OF PATH
**ROAD TO INCREASE AT INTERSECTION WITH ROAD B TO ACCOMMODATE THE FOLLOWING LANES: WESTBOUND LEFT TURN, WESTBOUND THROUGH, AND WESTBOUND THROUGH/ RIGHT. TRANSITION LENGTH TO TWO LANES TBD, ESTIMATED TO BE BETWEEN 500–1000'

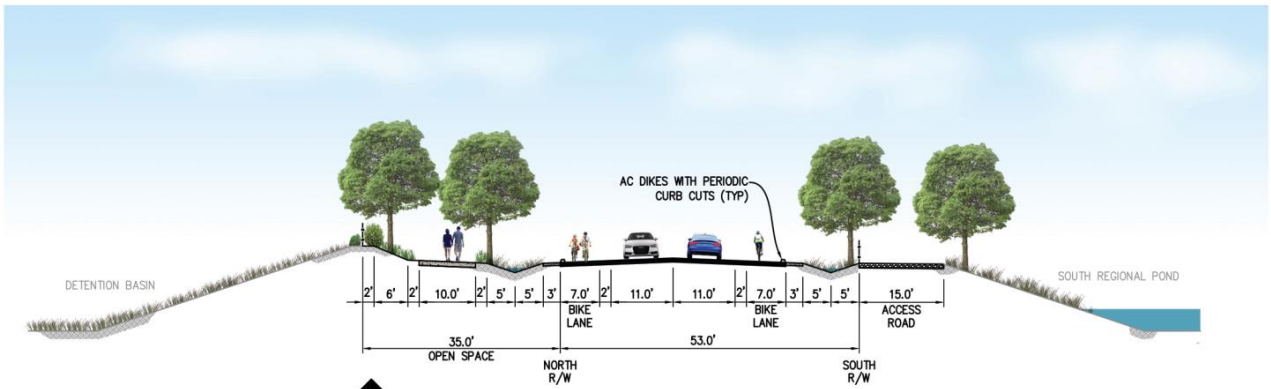
East of Road B, CR 25A will taper to a two-lane road with roundabout intersection control at Road D, where it will continue east and extend to Parkland Avenue. The two-lane segment within the limits of the Plan Area are illustrated in relation to various adjacent storm water collection facilities, as illustrated by Sections R-R, S-S, and T-T below. The Plan Area infrastructure financing plan will include the completion of CR 25A from Hwy 113 to CR 102.



R **CR 25A - 75'**

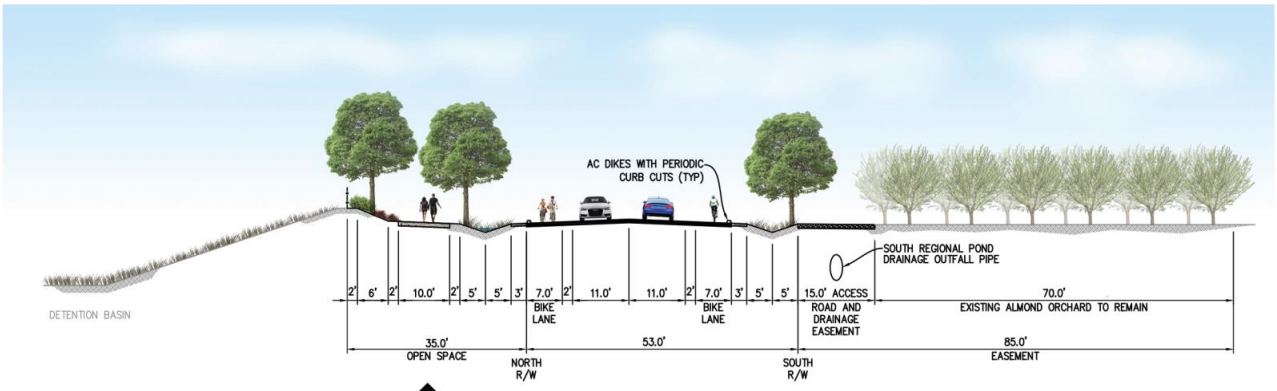
SOUTH REGIONAL POND - WEST TO ROAD D

*2' CLEAR RECOVERY ZONE WILL BE REQUIRED WITHIN THE PRIVATE LANDSCAPING NORTH OF PATH



S **CR 25A - 53' (AND 35' OPEN SPACE)**

ROAD D TO SOUTH REGIONAL POND - EAST



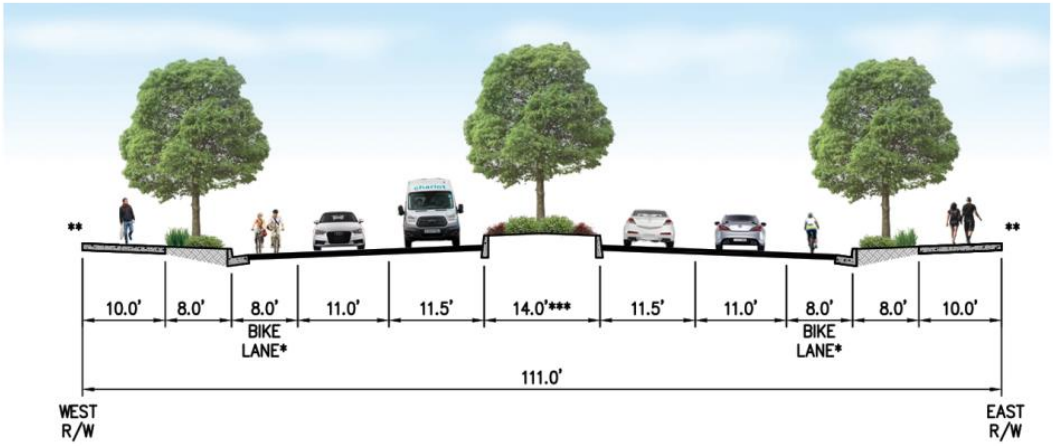
T **CR 25A - 53' (AND 35' OPEN SPACE)**

SOUTH REGIONAL POND - EAST TO HARRY LORENZO AVENUE

2. ROAD B

Road B is a Minor Arterial street that functions as the main spine through the Plan Area linking employment, commercial, residential, and recreational uses. As the most prominent street in the Plan Area, the design and overall experience of Road B for all users is to be distinctive and reinforce, rather than detract from, the sense of place.

All intersections along this roadway are signalized to ensure efficient flow of traffic but also support safe and convenient travel of alternate modes. Enhanced pavement, landscape and aesthetic features will be provided at each of the intersections.



E

ROAD B - 111'

ROAD 25A TO MARSTON DRIVE & ROAD E TO PARKLAND AVE

*8' BIKE LANE IS COMPOSED OF 2' BUFFER AND 6' BIKE LANE
**2' CLEAR RECOVERY ZONE WILL BE REQUIRED WITHIN THE PRIVATE LANDSCAPING
***16' WIDTH AT ROAD B/ CR 25A INTERSECTION, WITH THE LENGTH OF THE WIDENED MEDIAN TO MATCH TURN POCKET LENGTH

CR 25A to Road C. Beginning at the intersection of CR 25A, the primary entryway to the Plan Area, Road B's character is that of a shared use roadway with two vehicle lanes in each direction, buffered on-street bike lanes, and off-street Class 1 Multi Use Paths. A generous 14-foot wide tree lined median extends the length of Road B complemented by 8-foot wide tree lined landscape parkways on both sides of the street separating the roadway from the multi-use path. Driveway access is limited to no more than one right-in and right-out driveways on each side of the road within the block. Left turn access is not allowed between street intersections. See Section E-E.

Road C to Marston Drive. The character of Road B between Road C and Marston is similar to the segment to the south but transitions to a more urban character on the east side adjacent to the Village Center. See Section E-E. The shared mobility hub, The Union, is integrated into the 8' wide planter strip zone and provides accommodations for bus transit and ride hailing services. The multi-use path changes in pavement design and is signed to slow bicycle speeds as it passes through The Union The path merges with the on-street bike lane north of The Union where the sidewalk zone transitions to a pedestrian only zone with outdoor dining and other enhanced streetscape features.

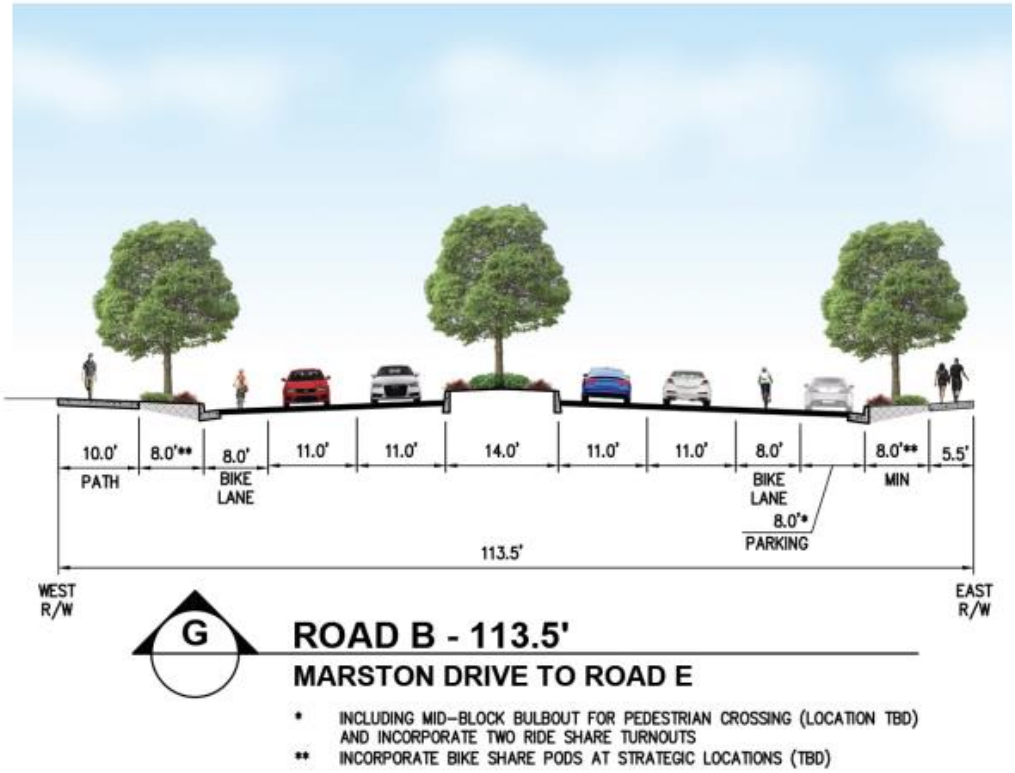
The intersection of Road B and Marston Drive is the heart of the Plan Area plan where the Village Center, The Yard, and the North Campus District meet. Special emphasis on the design of this intersection will be made and will include enhanced pavement treatments to highlight the bike and pedestrian crossings, lighting, landscaping, and architectural/public art features. Driveway access along Road B, from Road C to Marston Drive, is limited to a single right-in and right-out driveway in the southbound direction and no driveways are allowed in the northbound direction.

Marston Drive to Road E. This segment of Road B spans the entire west edge of The Yard and the park facing frontage of the North Campus District. The character of this segment of Road B is significant as it functions as a visual extension of The Yard while maintaining its role as the primary north-south road through the Plan Area. The roadway consists of two vehicle lanes in each direction, buffered on-street bike lanes, and on street parking on the east side. An off-street Class 1 Multi Use Path along the frontage of the North Campus District offers convenient bike and pedestrian access for employees. A 5'6" sidewalk provides pedestrian access along the west side of The Yard which is buffered by 24 feet of bike lane,

An enhanced intersection and mid-block crossings along Road B will offer safer pedestrian access to and from The Yard, Village Center and Tech Park campus.

parking and planter strip. Further enhancing the corridor and visually extending the park is a generous 14-foot wide tree lined median. See Section G-G.

An enhanced intersection is planned midway along this segment of Road B to provide access to the North Campus District and offer controlled access across the roadway for bikes and pedestrians. Additional pedestrian and bike only crossings will be integrated between Marston and Road E to offer safe and convenient access between the North Campus District and The Yard. Driveway access for the Plan Area uses adjacent to this segment of Road B are discouraged and shall be consolidated where needed and restricted to right-in and right-out movements only.

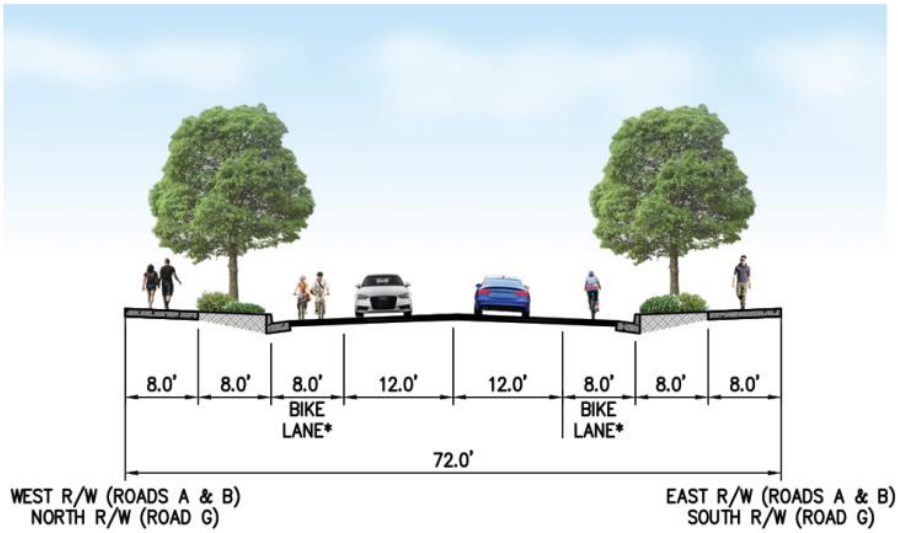


Road E to Parkland Avenue. The segment of Road B from Road E to Parkland Avenue will serve as the primary vehicular access point into the Plan Area from the north. The intersection of Road B and Parkland will be enhanced with pavement markings and gateway features to enhance bike/ pedestrian safety and highlight this location as a point of entry to the Plan Area. To minimize conflicts, no driveways are allowed on this road segment.

The roadway consists of a 4-lane road with on-street buffered bike lanes, similar to Road B between CR25A and Marston (See Section E-E on page 4-22). A Class I Multi-Use Trail connects the trails on Parkland Avenue to Class I facilities that provide access to heavily used destinations of the North

Campus District and The Yard. The design of the roadway is enhanced with a 14-foot wide tree lined median complimented by 8-foot wide tree lined landscape parkways on both sides of the street.

CR 25 A to Road G. South of CR 25A, Road B transitions to a Collector Street with two travel lanes and buffered on-street bike lanes. The initial 250 (+/-) feet south of CR25A will include a 4' wide median and 12' northbound turn pocket at the entry. This segment of Road B serves as the primary entry into the South Campus District where it provides access to Highway commercial and lower intensity research park flex uses. See Section H-H.



H

ROAD A, ROAD B & ROAD G - 72'

SECTION H'- H' (ROAD B, SOUTH OF CR 25A) IS COMPOSED OF THE FEATURES IN SECTION H-H PLUS A 4' WIDE MEDIAN AND A 12' WIDE NORTHBOUND LEFT TURN POCKET FROM CR 25A EXTENDING 250' SOUTH OF THE INTERSECTION - 76'

*** *8' BIKE LANE IS COMPOSED OF 2' BUFFER AND 6' BIKE LANE

4.5.3 Collector Streets

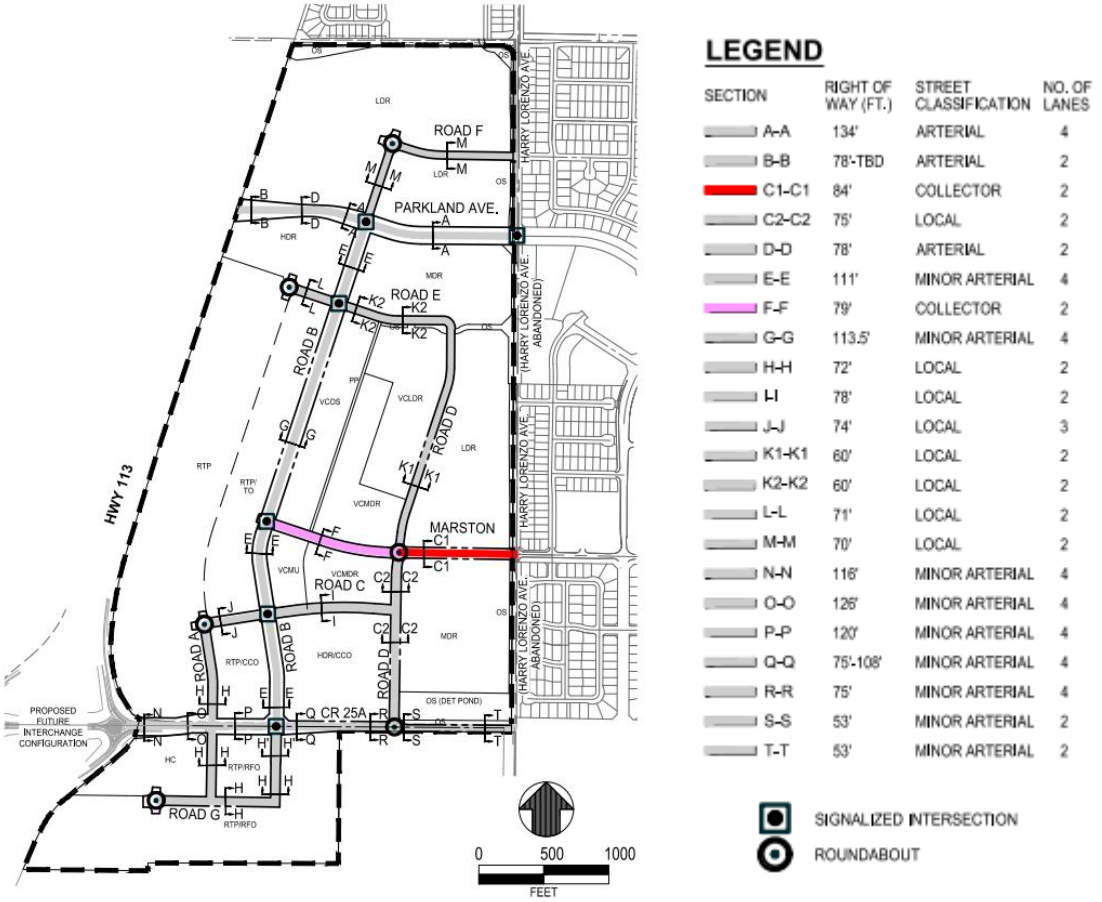


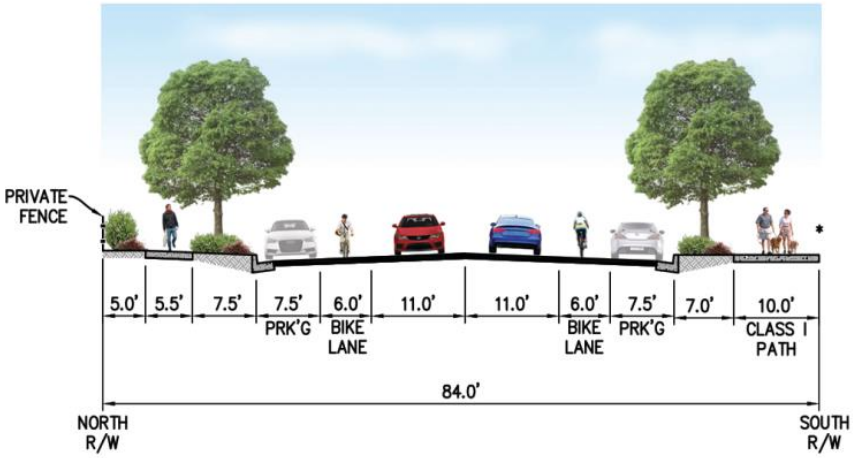
EXHIBIT 4-6: COLLECTOR STREETS KEY MAP

Collector Streets (Marston Drive and Roads A, C, D, E, F, G and B south of CR 25A) provide for relatively short distance travel between and within neighborhoods, and have lower speeds and traffic volumes than arterials. Driveway access to collectors is limited less than on arterials but may still be discouraged on certain segments to limit circulation conflicts. Street design and character of each of the Collector Streets in the Plan Area are described in more detail below.

1. MARSTON DRIVE

Marston Drive connects the Village Center of the Plan Area to Spring Lake neighborhoods and provides convenient access for residents of both areas to employment, retail, services, parks and open spaces. Marston Drive transitions in character from that of a residential street in Spring Lake to an urban mixed-use street at the core of the Plan Area. The segment of Marston Drive from Harry Lorenzo Avenue to Road B includes two travel lanes, parking lanes on each side of the roadway, planting strips, a 10-foot Class 1 Multi-Use trail on the south side and a 5½-foot sidewalk on the

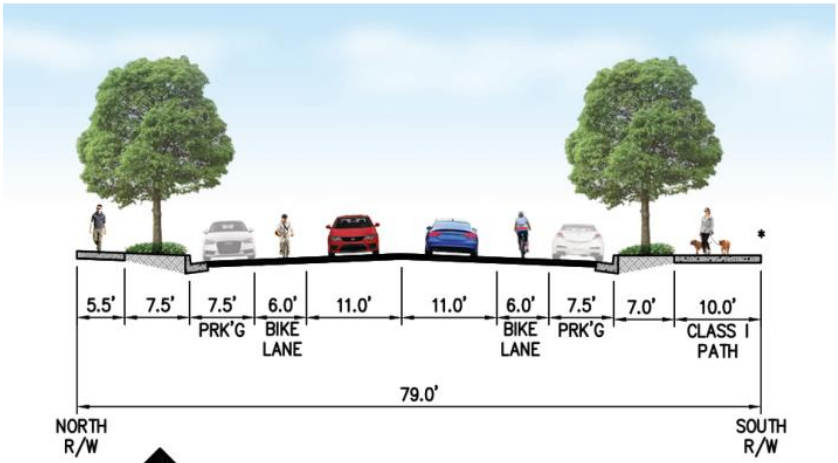
north (Section C1-C1). A roundabout at the intersection of Road D and other traffic calming measures will be utilized to keep speeds low while allowing smooth circulation. Enhanced paving and pedestrian safety features will be installed at the greenbelt crossing at the east edge of the Specific Plan to slow traffic and provide for ease of bike and pedestrian connection across Marston Drive. Driveways for single family will not be permitted and all other driveway access points shall be consolidated to minimize ingress and egress conflicts.



C1 MARSTON DRIVE - 84'

HARRY LORENZO AVENUE TO ROAD D

*2' CLEAR RECOVERY ZONE WILL BE REQUIRED WITHIN THE PRIVATE LANDSCAPING SOUTH OF PATH



F MARSTON DRIVE - 79'

ROAD B TO ROAD D

*2' CLEAR RECOVERY ZONE WILL BE REQUIRED WITHIN THE PRIVATE LANDSCAPING SOUTH OF PATH

Marston Drive at Road B. The intersection of Marston Drive and Road B is the central intersection of the Plan Area and is the primary point of access to the core of the North Campus District. Careful attention to the design of this intersection will be taken to ensure it enhances and does not detract from the sense of place of the Village Center. (See description of intersection features in Minor Arterial - Road B section above)

4.5.4 Local Streets

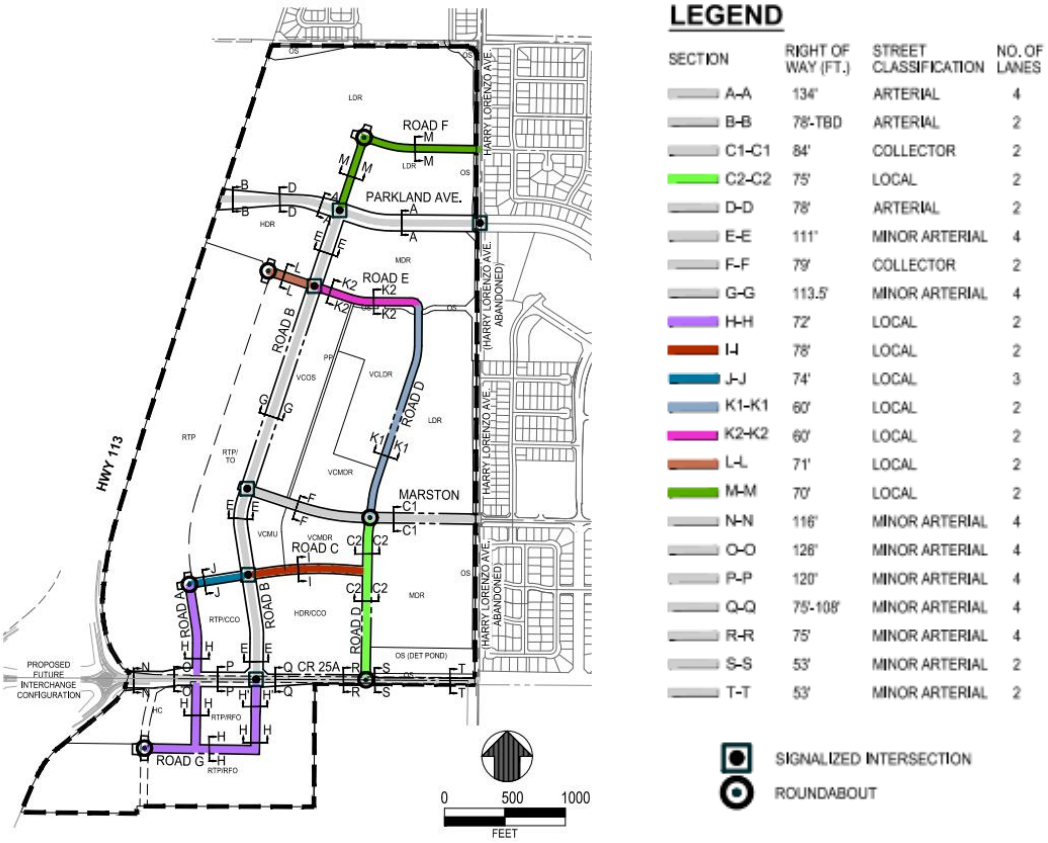


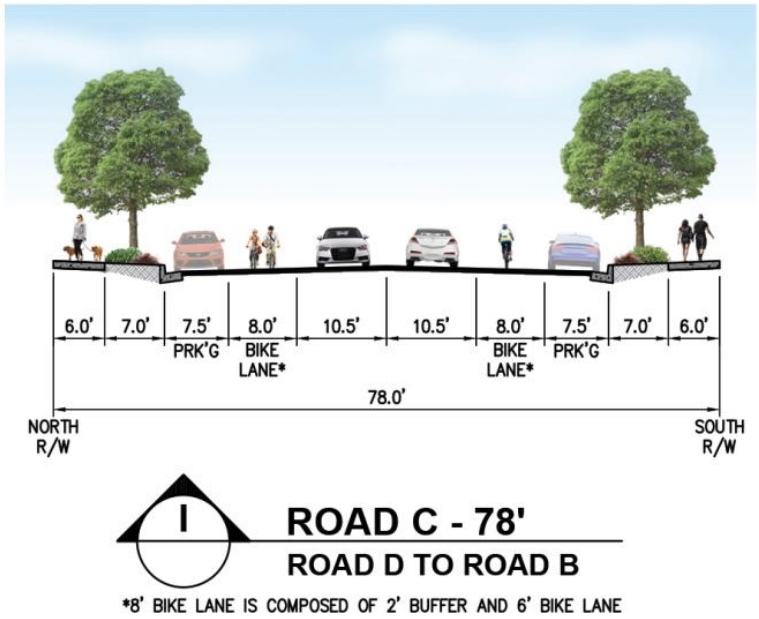
EXHIBIT 4-7: LOCAL STREETS KEY MAP

1. ROAD A

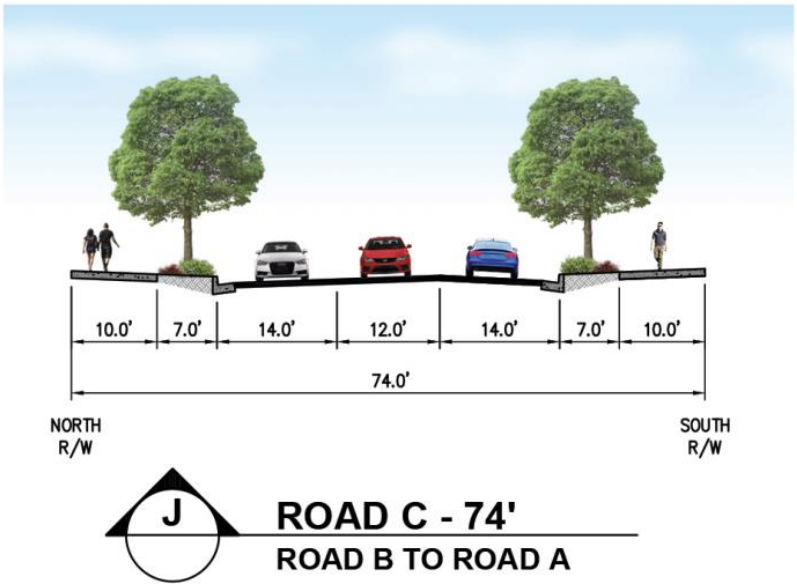
Road A is a local road providing access to the interchange adjacent to portions of the North and South Campus Districts of the Technology Park. North of CR 25A, Road A is designed as a 2-lane street with buffered bike lanes, planting strips, and widened sidewalks (Section H-H on page 4-25). A roundabout is proposed at the intersection of Road C and access is restricted to right-in and right-out turning movements where Road A connects with CR 25A.

2. ROAD C

Road C is a local street that parallels Marston Drive and CR 25A and provides an alternate east-west access between the higher density residential and the Plan Area uses. Between Roads D and B, Road C is designed as a narrower two lane street with on-street parking, bike lanes, planting strips, and 6'-0" wide sidewalks. Multiple driveway access points will be allowed to serve the mixed commercial and residential uses to minimize the need for driveways on the surrounding arterial roadways.

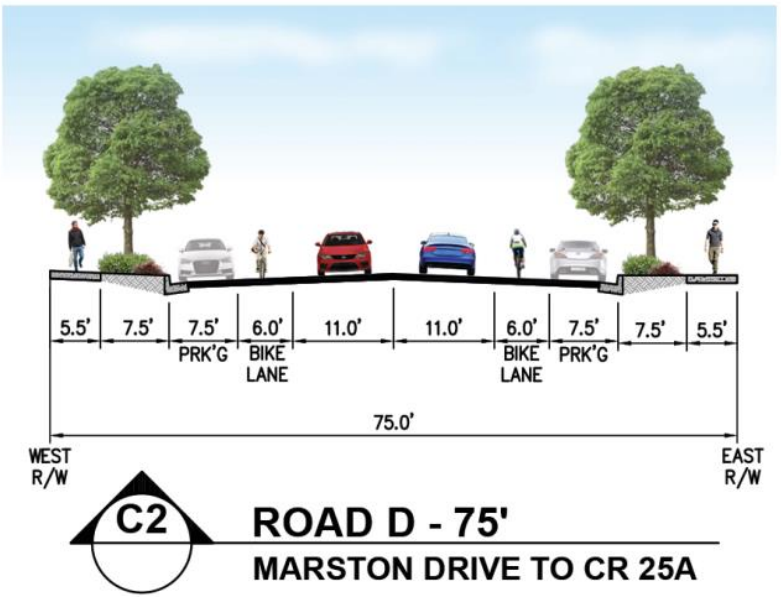


The segment of Road C between Roads A and B provides connection to Plan Area uses in the southern area of the North Campus District. The roadway consists of three travel lanes, two westbound and one eastbound. Due to a center median at CR25A and Road A, prohibiting left turns onto Road A from CR25A, the majority of inbound trips will access the North Campus Plan Area via Road B to westbound Road C; hence the two lane westbound Road C design. See Section J-J below. Full access driveways are permitted but restricted to the mid-section of this segment of Road C to avoid intersections conflicts. Planting strips provide street tree canopy and separation for the Class 1 multi-use paths on both sides of the street. A roundabout is proposed at the intersection of Road A to smooth the flow of traffic.

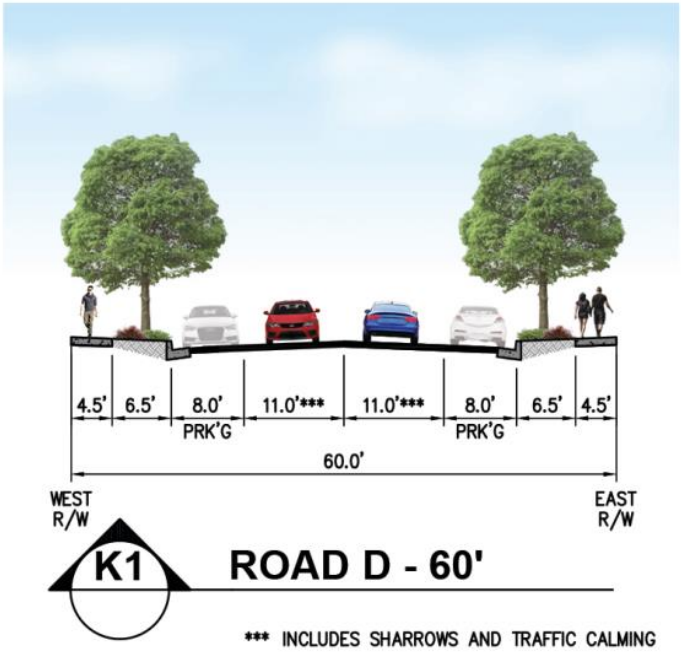


3. ROAD D

Road D parallels Road B through the majority of the Plan Area and is a collector road serving the Village Center District and East Village Districts south of Parkland Avenue. Between CR25A and Marston Drive, Road D is designed as a two lane street with on-street parking, bike lanes, planting strips, and 5'-6" wide sidewalks (Section C2-C2). Multiple driveway access points will be allowed to serve the higher density residential uses and minimize the need for driveways on the surrounding arterial roadways.

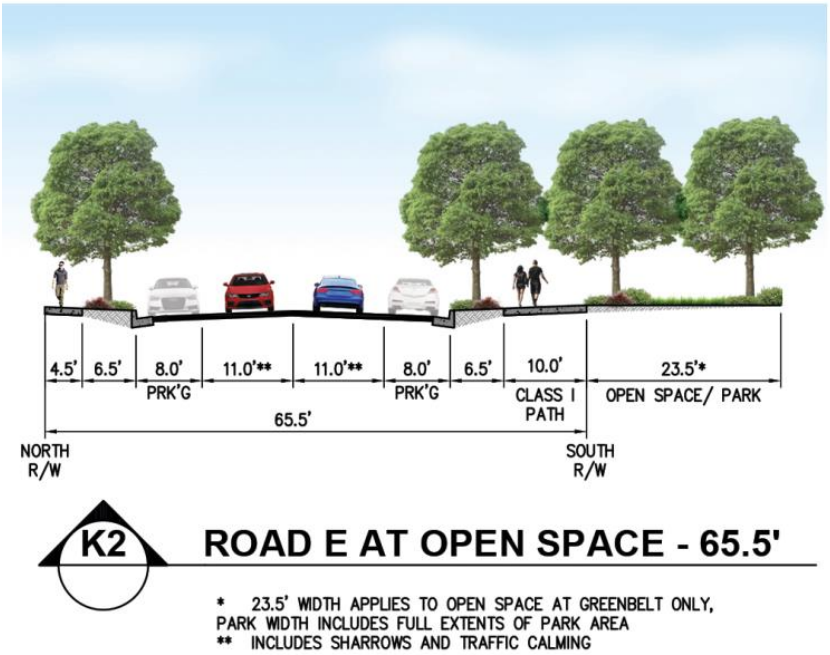


North of the roundabout at Marston Drive, Road D narrows as it transitions into the lower density residential neighborhoods of the Village Center and East Village Districts. The roadway has two travel lanes with on-street parking and detached 4'-6" wide sidewalks. A 6'-6" wide planting strip will provide for a tree lined street that offers generous shade canopy. See Section K1-K1. Traffic calming measures will be integrated into the roadway to keep speeds lower and shared lane markings will be installed to accentuate the shared use nature of the road. Enhanced pavement design and pedestrian safety features will be integrated at the north end of Road D where the multi-use trail crosses. Single-family home driveways accessing Road D are discouraged.

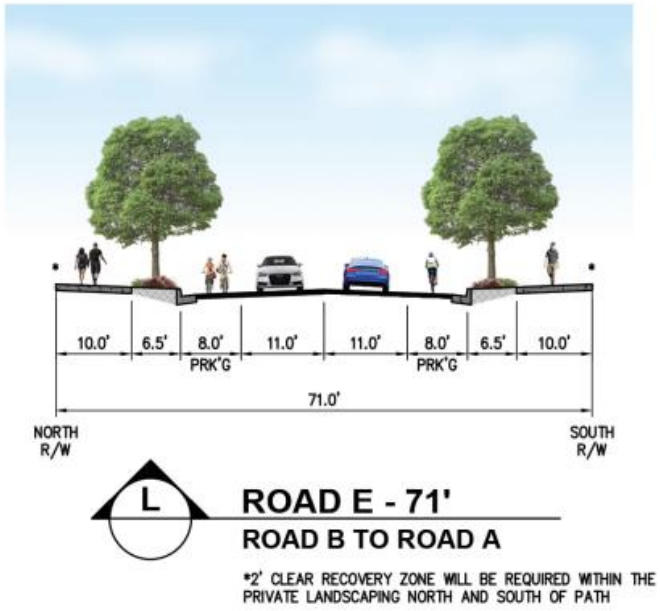


4. ROAD E

Road E runs east-west along the north end of The Yard and connects the Village Center Residential neighborhoods to Road B. Between Road D and Road B, the street consists of a two lane street with on-street parking. A planter strip separates a 4′-6″ wide sidewalk on the north and a 10′ multi-use trail on the south side of the roadway. Single-family home driveways are prohibited on the south side of the road. Access to the medium density residential uses and/or school site on the north side shall be consolidated to reduce the driveways or roadways connecting into this segment of Road E (Section K2-K2).

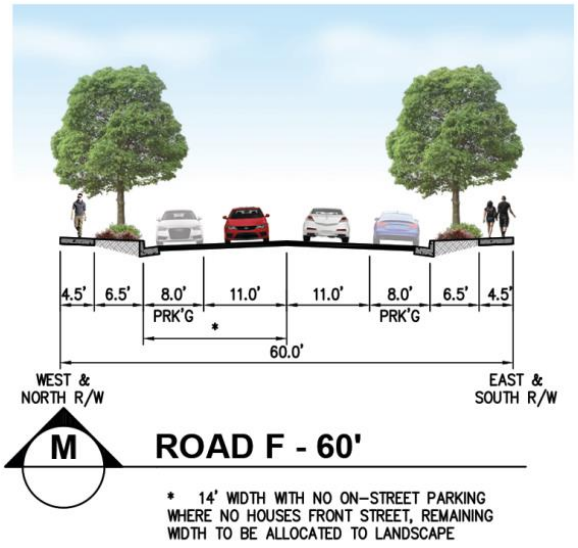


West of Road B, Road E transitions to a more urban mixed character street that serves both high density residential and Plan Area uses. The roadway has two travel lanes with on-street parking and 10 foot wide multi-use paths on both sides of the roadway. A 6′-6″ foot wide planting strip will provide for a tree lined street that offers generous shade canopy. See Section L-L. A roundabout at the end of Road E provides access to both the residential and Plan Area uses.



5. ROAD F

Road F is the primary access for the residential neighborhood at the north end of the Plan Area with connections to both Parkland Avenue and Harry Lorenzo Avenue. Road F consists of a two lane street with on-street parking. A planter strip separates a 4′-6″ wide sidewalk on both sides of the street (Section M-M). Single-family home driveways are discouraged. On street parking may be replaced with on-street bike lanes if lotting patterns result in no driveway access directly onto Road F. An oversized roundabout with a large specimen tree and native plantings provides a focal point of the neighborhood.



An oversized and landscaped roundabout will serve as a focal feature within the North Village similar to the roundabout located in Woodland's historic Beamer Park neighborhood shown here.

6. ROAD G

Road G is an east-west road connecting the south ends of Road A and Road B providing access to the southern most areas of the Plan Area. Road G consists of a two lane street with Class II on-street bike lanes. A planter strip separates an 8' wide sidewalk on both sides of the street (see Section H-H on page 4-25). A roundabout at the west end of Road G provides access to both the Highway Commercial and Plan Area uses and provides a character defining focal point for the South Campus District.

4.5.5 Other Local Streets

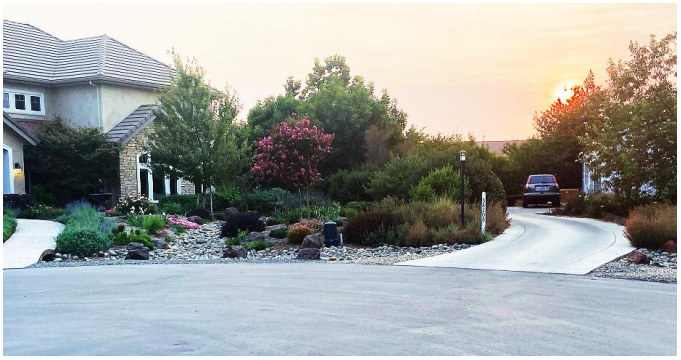
Local Streets in the Village Center residential (VCLDR and VCMDR) and all HDR residential neighborhoods will be traditional in design, have more linear geometry and include 4'6" minimum wide sidewalks separated by a 6' minimum width street tree planted parkway strip. On street parking is required on both sides of the street.

Local streets in the East and North Villages will include on-street parking, shared bike lanes, attractive landscaping and street trees that provide sidewalk share during summer months.

Local Streets within the East Village and North Village LDR neighborhoods may be less uniform in character reflecting the nature and density of the subdivision within they are located. Where utilized in these neighborhoods, sidewalks shall be a minimum of 4'6" in width;. Parkway strips shall be a minimum of 6' in width. With the goal of reducing paved widths, flexibility shall be provided at Tentative Map implementation in regards to on-street parking, use of sidewalks, and the use of drainage swales and alternative parking surfacing in lieu of traditional curbs and gutters, so long as the City is not left with an increased maintenance burden compared to traditional development standards. Right of way cross section design is subject to review and approval by the Community Development Director.

Local Street sections in all neighborhoods shall be developed to support the character of the neighborhoods and consider the proposed house setbacks, lot widths and sizes, and overall density. All local streets shall contribute to a well landscaped, tree shaded pedestrian friendly environment. Travel lane width should be 10 feet and parking lane width shall be 7 feet for a standard curb to curb width of 34 feet. Additional width may be considered for bike lanes if deemed necessary by the City Traffic Engineer.

Local Street sections are subject to the review and approval of the Community Development Director and shall be publicly maintained.



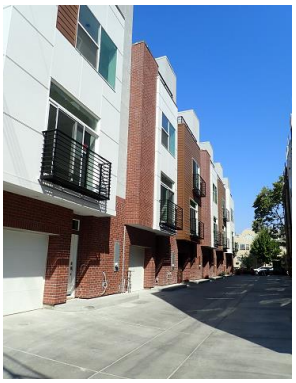
Alternative pavement and drainage design is encouraged in the North Village to achieve a unique and rural character.

4.5.6 Alleys

Alleys or "rear lanes" serve as accessible rights-of-ways for public and private vehicles, bikes, and pedestrians. In commercial areas, alleys are primarily used for access to parking lots and service areas for businesses but may also incorporate outdoor seating and landscaping where appropriate. Alleys in both commercial and residential areas should be at least 20 feet wide and clear of obstruction between structures to allow for emergency vehicles as well as utility and waste collection vehicles. Design details of the alleys in residential neighborhoods will be defined at the time of Tentative Maps and approved by the city's Fire Department.

Landscaping shall be integrated to visually soften the alleys and provide stormwater runoff collection. Windows and balconies on residential units should be oriented toward the alley to help add interest and eyes on the alley.

Well designed alleys are encouraged within the residential zones and in the Village Center as a means of reducing driveways and parking lots along street frontages.



4.5.7 Roundabouts and Enhanced Intersections

Roundabouts and enhanced intersection treatments are planned at key intersections throughout the Plan Area to improve intersection operation and reduce vehicle speeds. Five roundabouts are proposed in the Specific Plan in addition to three along the CR 25A corridor at Road D and the off-ramps of HWY 113. Landscaping and public art will be integrated into the roundabouts to enhance community aesthetics and strengthen sense of place.

Roundabouts at key intersections reduce traffic speeds while improving circulation. Roundabouts in the plan area will include attractive landscaping and/or public art.

Crosswalks along Marston Drive, Road B and other key intersections will include textured paving, flashing lights and/or other features to enhance pedestrian visibility.

Enhanced intersection treatments are proposed at each of the controlled intersections along Road B. Additionally, where the north-south greenbelt crosses Marston Drive and Parkland Avenue, enhanced paving and pedestrian safety features will be installed to slow traffic and provide for ease of bike and pedestrian crossing.

4.5.8 On-street Parking

To maximize utilization of land, the Plan Area development standards require limited amounts of off-street parking, increasing the likely demand for on-street parking. Street designs anticipate the need for on-street parking to support adjacent uses and reinforce the urban character of the project. Managing publicly accessible parking, particularly in the Village Center and commercial areas of the plan, will be important to ensure availability for parking for customers and transit users. Utilization of smart parking management tools such as Woodland based JAPA Parking will be a central part of a Parking Management Plan required to be prepared as part of the Plan Area Transportation Demand Management Plan.

4.5.9 Streetscape Amenities

Streetscape amenities are an essential element to creating a strong a sense of place and are a fundamental feature of the Plan Area streetscape design. The development of a Master Design Manual is required prior to approval of the first Final Map and shall incorporate design standards and construction details for the following features:

1. Gateway / Entry Features

An architectural feature(s) identifying the entryway into the Plan Area on CR 25A and/or at the intersection of Road B, as well as entry features indicating entry points into the North Campus and South Campus Districts shall be integrated into the streetscape design.

2. Public Art

Public art in the form of sculptures or other durable forms of art celebrating creativity, ingenuity, and agricultural heritage. Public art shall be integrated throughout the Plan Area streetscape in center medians, roundabouts, and/or other prominent locations as a way to strengthen community identity and a unique sense of place.

3. Street Trees and Landscape Palette

Street trees and plant palette for all landscape installed within the public right-of-way and greenbelt open spaces. Plants shall be appropriately specified to the climatic and soil conditions of the area. Particularly, use of a variety of native oak tree species as well as water-wise and pollinator friendly plants shall be detailed.

4. Stormwater Management

Streetscape design details identifying the use of bio swales and rain gardens along roadways and greenbelts to aid in the treatment and absorption of rain water. Materials and plant species appropriate to the effective functionality and long-term maintenance of these stormwater management features shall be specified.

5. Walls and Fences

The location and design of various walls and fences facing the public right-of-way. Use of walls and fences should be limited to locations where needed for sound attenuation and/or privacy. The type and style of walls/fencing shall be carefully considered to ensure visually cohesive and/or complementary streetscapes. Where walls or fences are to be maintained by the city, durable masonry materials shall be used. Landscaping shall be used to soften the visual presence of walls and fences throughout the project.

6. Street Furniture and Lighting

A design guide specifying the style, material, color, and finish for all furniture including benches, bike racks, trash receptacles, and street signs installed in public right-of-way and greenbelt spaces shall be provided. In limited application, styles of street furniture may vary and correspond to the District where they are specified to reinforce a particular neighborhood character. Similarly, street and pathway lighting shall be uniform throughout the project. Limited variation in style may be proposed to relate to the particular character of the District/neighborhood.

7. LDR and VCLDR Local Street Section Template

Examples of local street design within the LDR and VCLDR zones shall be provided including alternative storm drain design, particularly where traditional sidewalk design is modified. Further, recommendations shall be provided for sidewalk placement in relation to subdivision design and residential setbacks.