CAMPUS BIKEWAY SYSTEM – FUTURE CONDITIONS

This section describes the future campus bikeway network once the West Village and other campus developments envisioned in the 2003 Long Range Development Plan (LRDP) and in the soon-to-be-released Centennial Plan are constructed. The improvements that the BTNS recommends to the campus bikeway network are intended to accommodate this future use and are described in this section.

Future Development

In 2003, UC Davis released its LRDP, a comprehensive land plan to guide the physical development on campus through the 2015-16 academic year. The LRDP identifies the areas of campus to be further developed, as well as the types of new uses that should be included in each location. Specifically, the LRDP identifies the West Village as the future location for faculty/staff and student housing as well as limited education, commercial and administrative uses. The LRDP also identifies numerous locations throughout the campus where uses could be intensified.

The UC Davis Centennial Plan, which is being developed in parallel with the BTNS, establishes a longer range vision for the Central Campus development. The Centennial Plan identifies new buildings to be constructed, as well as the general location of new alignments for roadways, bikeways, transit routes, and pedestrian paths. Among the most significant improvements envisioned by the Centennial Plan:

- The extension of A Street to Old Davis Road accompanied by new buildings between this new roadway and the Arboretum
- A new quad south of the current Biological Sciences Building, which would be surrounded by new buildings
- Additional development and connections to the Medical Science district
- Realignment of the shared bicycle-pedestrian path on California Avenue south of Hutchinson Drive
- Construction of bicycle lanes along Orchard Road to facilitate travel between the West Village and Central Campus

These future improvements will influence the way the campus bikeway network is utilized. The BTNS proposes improvements to the campus bikeway network to accommodate future travel demand.

Future Use of Campus Bikeways

Prior to recommending specific improvements, the campus bikeway network was evaluated based on existing and anticipated future travel patterns once the West Village and other planned developments are in place. Essentially, this evaluation entailed identifying which bikeway

facilities are most used today and identifying additional facilities that would carry high bicycle volumes in the future.

Figure 7 categorizes the campus' major bikeway routes and gateways by anticipated future level of use. The gold lines show the routes where the heaviest volumes of cyclists are anticipated, with purple lines representing routes where low to moderate use is expected. This anticipated future level of use is given context by specifying which routes have established bicycle facilities (solid lines) and which routes have either limited or no bicycle facilities (dotted lines).[3]

The figure reveals a few corridors where high demand for cycling is expected, but limited facilities exist:

- Hutchinson Drive between Bioletti Way and California Avenue
- Orchard Park Circle west of Orchard Park Drive
- California Avenue between Russell Avenue and North Quad

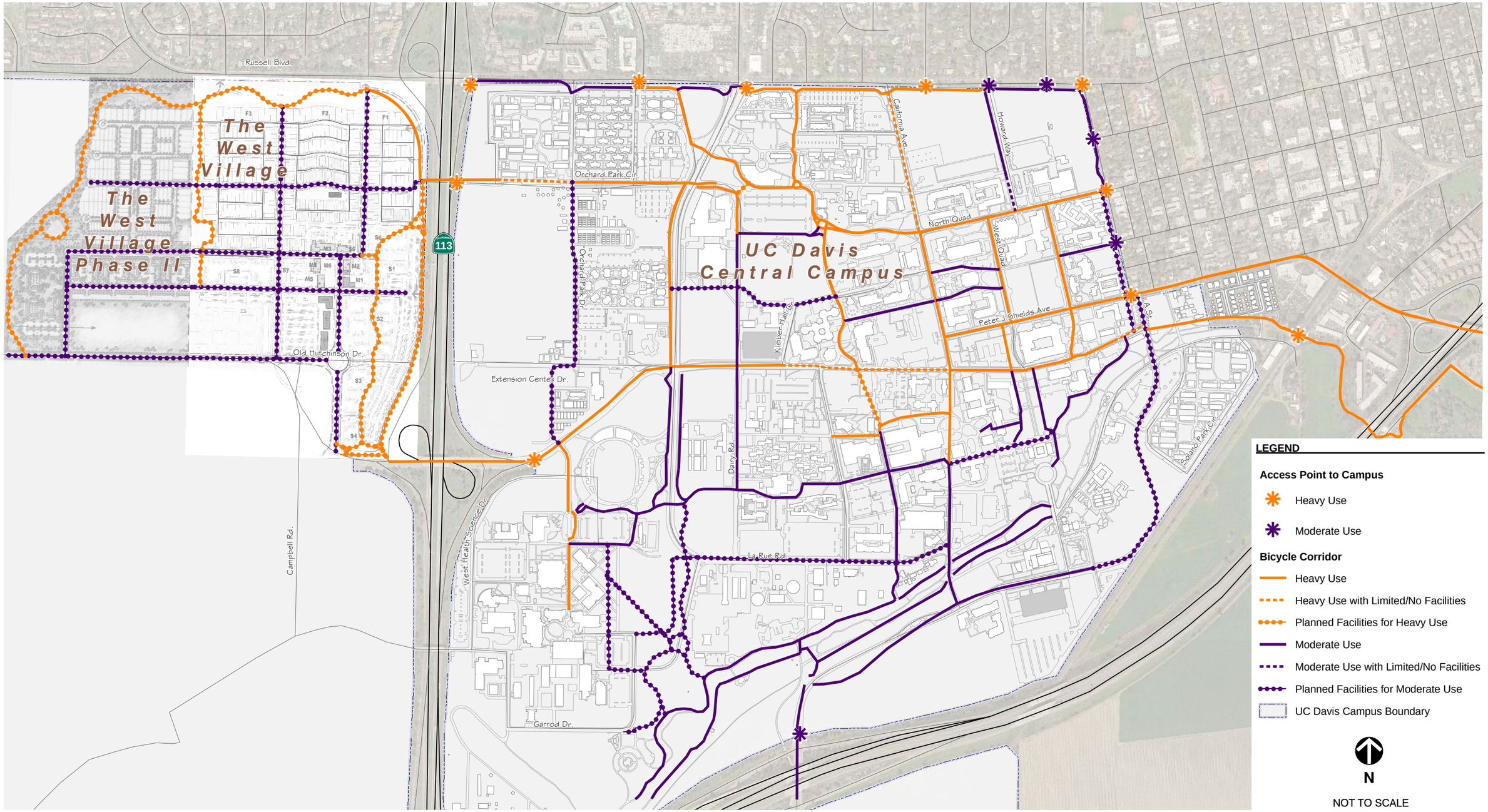
The high demand volumes and corresponding lack of facilities suggest that these should be high priority locations for capital improvement.

Other locations showing bicycle demand, but limited facilities include:

- The southern portion of Howard Way (between the bus terminal and North Quad)
- Walkway south of the Memorial Union
- Walkway north of Mrak Hall
- Visitor Parking Lot 25

Consideration should be made as to whether bicycles should be accommodated or prevented from traveling in these locations (perhaps through design modifications).

[3] This map assumes mostly existing facilities, but does assume the planned West Village bikeway network, since these facilities would likely be provided in the absence of this Plan.



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UC DAVIS BIKE AND TRANSIT NETWORK STUDY - PLANNED BICYCLE FACILITIES STRATIFIED BY ANTICIPATED LEVEL OF USE

FIGURE 7

Recommended Bikeway Improvements

Based on the anticipated future use of campus bikeways and community input regarding concerns about the existing bikeway system and desired improvements, the BTNS recommends a number of capital improvements to the campus bikeway system.

Types of Bikeway Facilities

The BTNS identifies four types of bikeway facilities on campus. Each of these designs addresses the function of the bikeway facility in terms of the specific modes accommodated, the volume of bicycles and pedestrians carried, and the types of trips using the facility. These designs are not new to the campus; however, as bikeway facilities have been constructed gradually over the years, campus bikeway designs have never been formalized.

The four design standards recommended in this BTNS include:

- Bikeway streets – as the widest bikeway facilities, they carry bicycles and select motor vehicles, have parallel pedestrian facilities, and provide room for vehicle parking in some cases. Bikeway streets can accommodate heavy bicycle volumes and relatively high speeds; they serve the majority of through-bike trips and trips entering/exiting campus, but also internal trips.

- Separated, bicycle-only paths – paths that provide exclusive access for bicycles and have parallel pedestrian facilities. The separation of bicycle and pedestrians allows for relatively high bicycle speeds. These paths tend to carry a major portion of trips entering/exiting campus and through trips, but also serve shorter internal trips.

- Bike lane (on-street) – on-street lanes provided on roadways serving primarily motorized vehicles. The lanes, which are located mostly on the periphery of campus, carry a major portion of entering/exiting trips.

- Shared-use paths – these paths serve both bicycles and pedestrians and tend not to include parallel pedestrian facilities. These pathways provide for shorter, low-speed internal campus trips.

Table 2 provides more detail on each of the bikeway designs. The Bicycle Design Guidelines later in this chapter provide the specific cross-sections and standards for each facility type.

TABLE 2: BIKEWAY DESIGNS

Facility Type	Purpose	Trip Type	Level of Bike Usage	Provision of Separate Pedestrian Facility	Access Control
Bikeway Street	Serves majority of through bike trips, and trips entering campus, but also serves internal trips	Serves both short and long trips	Very High to Moderate	Yes	Limited crossings and access
Separated Bike Path	Carries major portion of trips entering and leaving campus. Serves majority of through bike trips	Generally serve longer trips	Very High to Moderate	Yes	Limited crossings and access
Bike Lane (On-Street)	Carries major portion of trips entering and leaving campus	Serves medium and longer trips	High to Moderate	Yes	Limited crossings and access
Shared Use Path	Provides for internal campus trips	Serves shorter trips	Low	No	Few restrictions

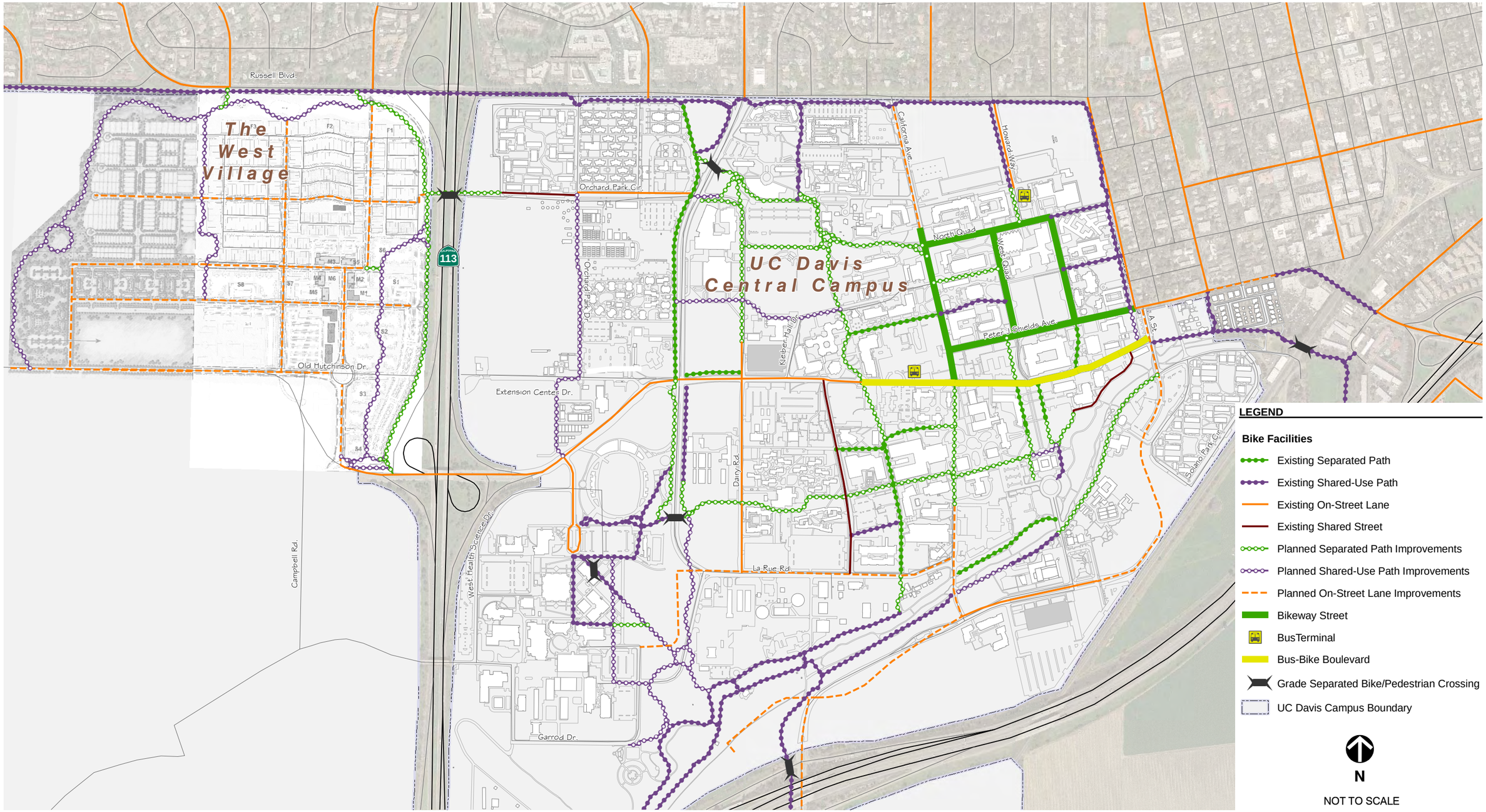
Ultimate System Map

The campus' existing bikeway network was evaluated to determine its ability to accommodate future demand. Based on anticipated future demand, the BTNS recommends that many existing facilities be upgraded in order to accommodate increased volumes resulting from campus development and to reduce modal conflicts, which community members have highlighted as a concern. The BTNS also recommends designs for new bikeway facilities, which will be needed to supplement the existing system to accommodate future demand.

Figure 8 shows the ultimate bikeway system recommended by this BTNS. This figure distinguishes between existing infrastructure (which would remain unchanged) and improvements proposed by the BTNS.

The most significant recommendations include:

- Provision of on-street lanes along the extension of A Street to New Davis Road, creating a new, southerly route for cyclists
- Striping on-street lanes on California Avenue between Russell Boulevard and the northern gates
- Constructing a separated path through the MU bus terminal to connect Howard Way with North Quad
- Converting western portion of Orchard Park Circle into a bikeway road to close gap in bikeway network and enhance connections between Central Campus and West Village
- Constructing shared-use paths connecting the Health Sciences District with the Arboretum and South Campus
- Extending California Avenue south of Hutchinson Drive as a separated path, replacing the jumbled network of shared-use pathways that currently exist
- Providing continuous on-street bicycle lanes on First Street between A Street and D Street and converting existing shared-use path to a pedestrian-only trail
- Converting the following shared-use paths into separated pathways to provide for better modal separation and to reduce congestion:
  - East-west route connecting West Village and North Davis to Central Campus
  - East-west route connecting Segundo Dorms and the ARC with North Quad
  - East-west route connecting the Stadium and Tercero Dorms with Central Campus



LEGEND

Bike Facilities

- Existing Separated Path
- Existing Shared-Use Path
- Existing On-Street Lane
- Existing Shared Street
- Planned Separated Path Improvements
- Planned Shared-Use Path Improvements
- Planned On-Street Lane Improvements
- Bikeway Street
- BusTerminal
- Bus-Bike Boulevard
- Grade Separated Bike/Pedestrian Crossing
- UC Davis Campus Boundary

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UC DAVIS BIKE AND TRANSIT NETWORK STUDY - BIKEWAY SYSTEM MAP (FUTURE CONDITIONS)

FIGURE 8

- East-west route connecting campus eastern edge with South Davis
- North-south route connecting ARC and Segundo Dorms with the Diary Road
- North-south route connecting Housing Services and Regan Dorms with the Biological Sciences and Engineering Districts

Intersection Enhancements

In addition to analyzing linear bikeway faciities, this study evaluated intersections. This study looked at a variety of intersection treatments, including stop-control, yield control, roundabouts, raised crosswalks, HAWK signals, and full signalization. All of these treatments can offer unique advantages and disadvantages:

- **Stop-control:** Inexpensive, low profile, and familiar to users of the system. However, can be cumbersome to cyclists, as stopping loses momentum and can be a waste of energy where a complete stop is unnecessary. Stop signs can also be ineffective, as they are often violated in locations where users do not feel they are necessary.
- **Yield-control:** Inexpensive, low profile, and allows users to proceed through the intersection if stopping is not needed. For this reason, cyclists tend to prefer yield-control to stop-control. However, yield signs are not widely used and would be unfamiliar to some users.
- **Roundabouts:** Allows users to proceed through the intersection without stopping, while serving to slow traffic. For this reason, many cyclists enjoy roundabouts. Roundabouts have the added advantage that they are commonplace on campus, providing a higher degree of user familiarity.
- **Raised Crosswalks:** Provides pedestrians with greater visibility, and slows conflicting vehicle traffic. However, can be cumbersome to cyclists if not designed specifically to accommodate cycling.
- **Pedestrian/Bicycle "HAWK" Signal:** Provides pedestrians and cyclists with controlled crossing either at mid-block locations or at intersections with side-street stop controls.
- **Full Signalization:** Provides pedestrians with greater visibility can provide detectors for cyclists and transit priority. However, full signalization of an intersection is expensive and changes the aesthetic character of an intersection.

The above intersection treatments should be considered and applied where deemed appropriate. Additional study may be necessary to identify locations that would benefit from various treatments.

This study evaluated several of the key intersections on campus and recommends treatments to improve flow through the intersection and reduce conflicts. Many of the recommended intersection enhancements are roundabout treatments, which was a favored option in the community workshops.

New Roundabouts at Intersection of Bicycle Paths:

- Path along California Avenue Southern Extension/East-west path south of Bainer Hall
- Path intersection north of ARC and Lot 25
- Path intersection between ARC and Lot 25
- Path intersection on south side of Russell Boulevard at Sycamore Boulevard
- Path intersection east of Lot 25 (replacement)

New Roundabouts at Intersection of Roundabouts and Bike Facilities:

- Hutchinson Drive/Bioletti Way
- Hutchison Drive/Path along Biological Sciences
- California Avenue/Hutchinson Drive (replacement)

New All-Way Stop:

- Bioletti Way/ East-west path south of Bainer Hall

Figure 9 illustrates the location of each of these recommended intersection treatments.

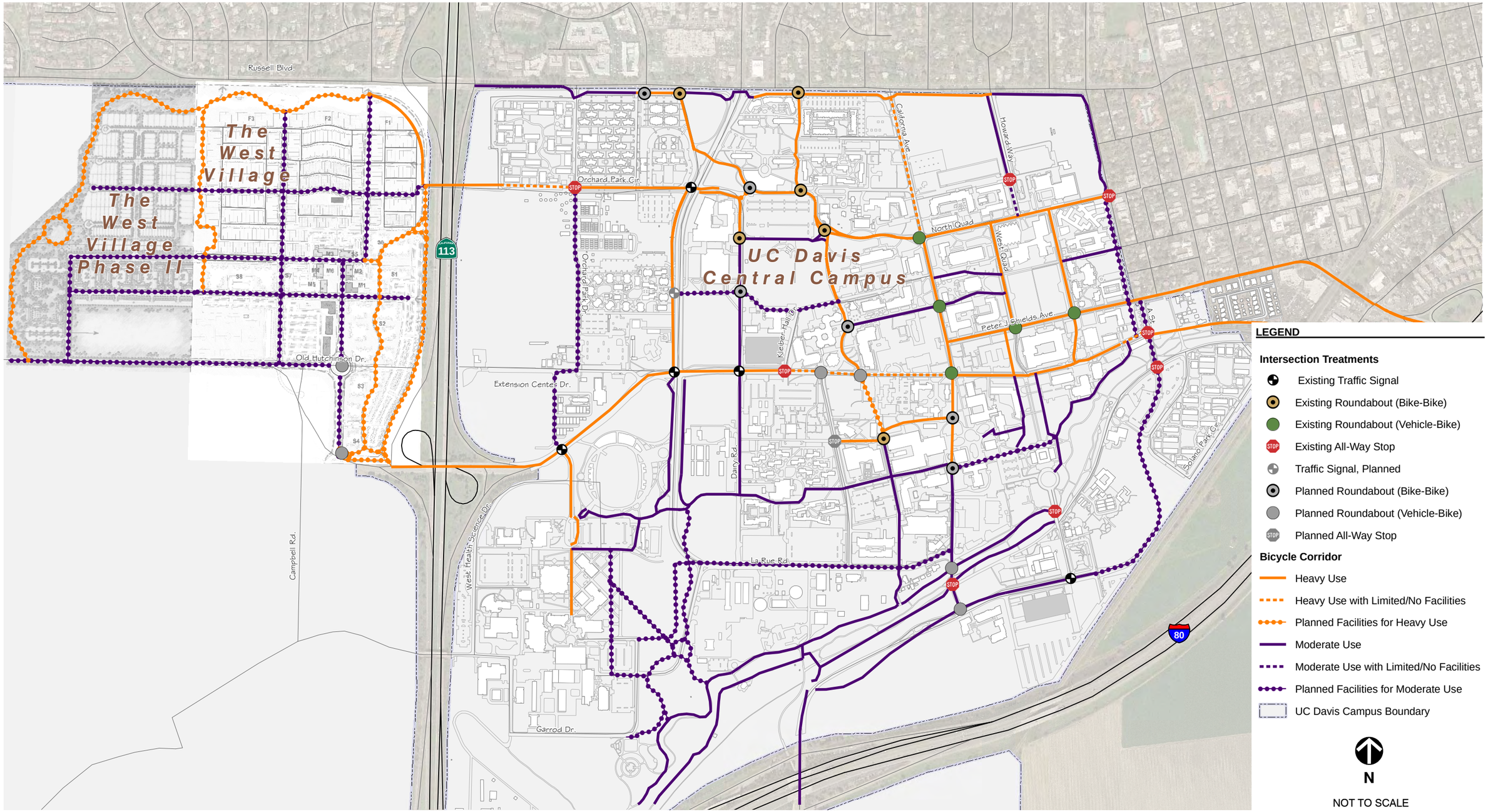
Campus-City Gateways

The following is a description of planned and/or suggested improvements to the three primary gateway corridors.

- Russell Boulevard Corridor – State Route 113 to A Street
- Third Street Corridor – A Street to B Street
- First Street Corridor – A Street to B Street

Russell Boulevard Corridor

Community and campus members requested a number of improvements at intersections along the portion of Russell Boulevard between State Route 113 and A Street that form the northern gateways between campus and the City of Davis. These intersections are managed and maintained by the City of Davis. Improvements include enhancements for bicyclists, pedestrians, and transit users.



LEGEND

Intersection Treatments

- Existing Traffic Signal
- Existing Roundabout (Bike-Bike)
- Existing Roundabout (Vehicle-Bike)
- Existing All-Way Stop
- Traffic Signal, Planned
- Planned Roundabout (Bike-Bike)
- Planned Roundabout (Vehicle-Bike)
- Planned All-Way Stop

Bicycle Corridor

- Heavy Use
- Heavy Use with Limited/No Facilities
- Planned Facilities for Heavy Use
- Moderate Use
- Moderate Use with Limited/No Facilities
- Planned Facilities for Moderate Use
- UC Davis Campus Boundary

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UC DAVIS BIKE AND TRANSIT NETWORK STUDY -
EXISTING AND PLANNED INTERSECTION TREATMENTS
FIGURE 9

This would include modifications to the traffic signals, signing, and striping at each intersection.

It is suggested that UC Davis, the City of Davis, Unitrans, and Yolobus jointly pursue grant funding to comprehensively address these improvements. The grant would provide "Multi-Modal Enhancements for the Russell Boulevard Corridor and the UC Davis-City of Davis Gateways." The purpose of the improvements would be to provide improved bicycle and pedestrian crossing treatments as well as transit signal priority and preemption along the corridor.

Third Street Corridor

The City of Davis is currently developing a corridor plan for the segment of Third Street between A Street and B Street. UC Davis will work with the City of Davis to plan appropriate gateway modifications at the intersection of A Street/Third Street that are consistent with the corridor improvement plan.

First Street Corridor

The Downtown-Campus Connections Concepts and Implementation Plan (March 2006) was a collaborative effort by UC Davis and the City of Davis to improve the physical connections between the Mondavi Center District, the Core Campus Arts District, and downtown Davis. The Plan includes the following improvements to the First Street corridor and the First & A Street Gateway.

- Provide bicycle lanes on First Street between B Street and D Street and designate the southern sidewalk as a pedestrian zone, where bicycles are strongly discouraged by design. This concept requires bicyclists heading westward from the Richards Boulevard undercrossing to cross First Street at D Street to get to the westbound on-street bicycle lane west of D Street.

- The First Street and A Street intersection will be reconfigured to provide one-way movements around a central square. The design facilitates access from all connecting streets, and avoids the need for a signalized intersection.

BICYCLE PARKING

Existing Bicycle Parking

The UC Davis campus provides approximately 20,000 bicycle parking spaces at racks. Bicycle parking spaces are provided at or near every major building on campus.

Existing Bicycle Racks

The campus has four different types of parking racks. The newer, preferred types of bicycle racks are the "lighting bolt" and the "coat hanger" types. The campus has been replacing the older "concrete

pod" and "black loop park-rite" type racks, as funds are available, over the past decade.

In addition to racks, the campus includes 76 bicycle rental lockers and 12 "BikeLid" lockers available on a first-come, first-served basis. These facilities, which constitute a minor component of the campus bicycle parking infrastructure, offer advantages of additional theft-resistance, durability, and weather protection.

Existing Valet Bicycle Parking

TAPS provides free, attended bicycle parking at Aggie home football games. The valet bicycle parking supplements the existing bike racks located at Aggie Stadium.

Proposed Bicycle Parking

The campus goal is to install an additional 2,500 bicycle parking spaces and replace approximately 5,000 of the older bicycle racks. Figure 10 shows the location of the 2,500 new bicycle parking spaces as well as the high-priority locations for replacement of approximately 1,500 older bicycle racks.

Standard Bicycle Racks

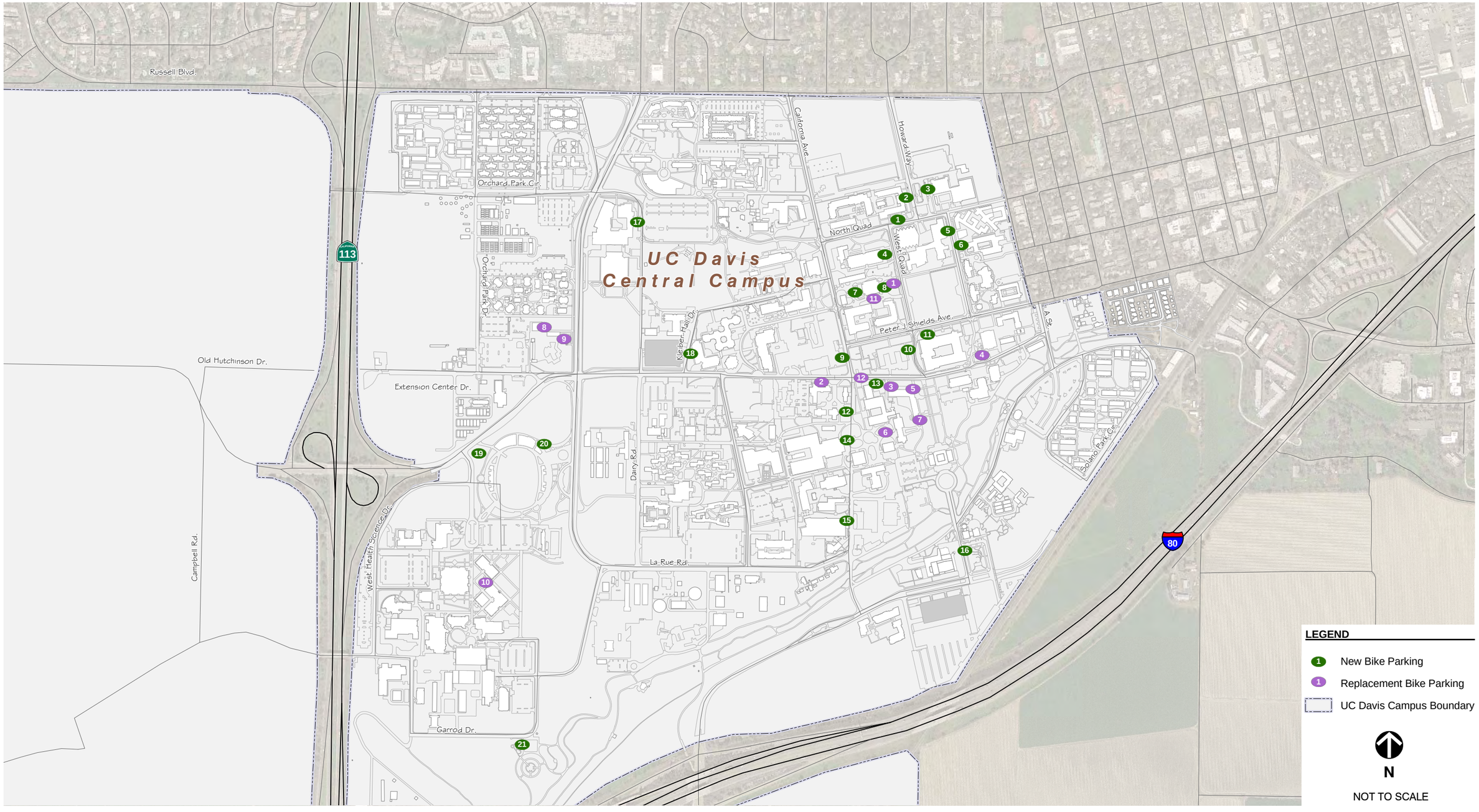
The standard campus bicycle rack for all future installations is the "lighting bolt" type rack. These racks can be installed individually or in a rack form.

Older racks such as the concrete pod or the black loop park-rite type racks should be replaced and new installations should use the lighting bolt type rack.

The Bicycle Design Guidelines later in this c describe the bicycle parking standards.

Future Valet Bicycle Parking

Valet bicycle parking should be used to create additional capacity in special event areas. Valet parking can create the needed capacity for future special events at Aggie Stadium and other locations on campus.



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UC DAVIS BIKE AND TRANSIT NETWORK STUDY -
RECOMMENDED IMPROVEMENTS TO BICYCLE PARKING ON CAMPUS
FIGURE 10

BICYCLE DESIGN GUIDELINES

The design guidelines will assist campus planners and designers in addressing bicycle facilities. These guidelines recognize and seek to protect the unique context of the campus.

The design guidelines address the physical treatments recommended for bikeways on the UC Davis campus, including bike facility design by facility type, intersection treatments, roadway crossing treatments, bollards, signage and markings, lighting, bicycle parking, and innovative treatments.

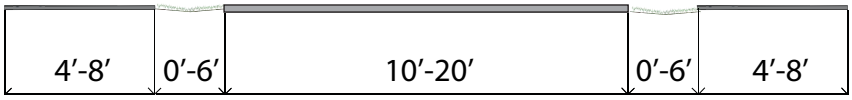
The following sources were referenced in the preparation of the guidelines.

- UC Davis Long Range Development Plan, 2003
- West Village EIR, Neighborhood Master Plan, Site Plan, Implementation Plan, and Faculty Staff Housing Policy, 2003-2006
- UC Davis Bicycle Plan, 2002
- Draft Alternative Transportation and Parking Investment Study, 2007
- California Building Code, Title 24, Part 2, 2001
- California Department of Transportation, Bikeway Planning and Design, July 1990
- California Department of Transportation, Highway Design Manual, Chapter 1000
- California Manual on Uniform Traffic Control Devices, Part 9 – Traffic Control for Bicycle Facilities, April 2006
- Guide for the Development of Bicycle Facilities, AASHTO, 1999
- UC Berkeley Campus Bicycle Plan, 2006

Campus Bikeway Design by Facility Type

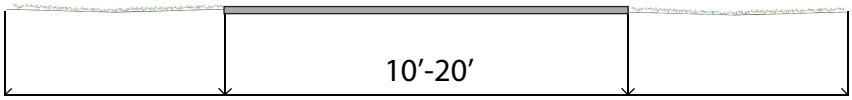
Figure 11 shows typical cross-sections for the four bikeway facility types that comprise the planned future bikeway network. Figure 8 shows the location of different bikeway facilities. A description of key design features for each bikeway facility type is provided below.

Path - Separated

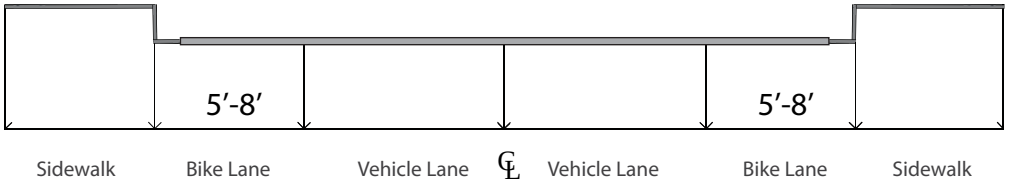


* In locations where right-of-way is available

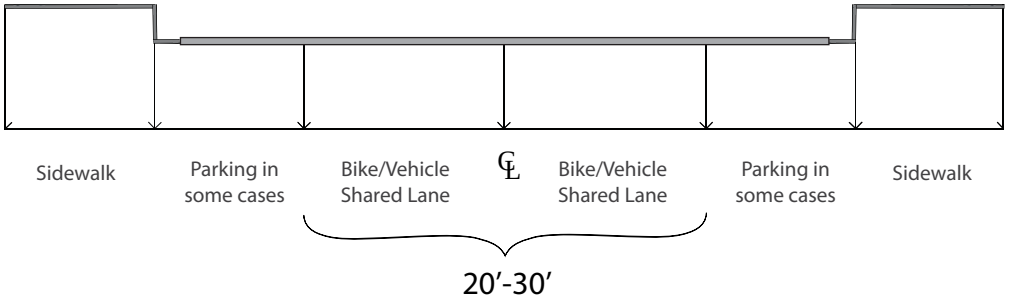
Shared Use Path



Bike Lane (On-Street)



Bikeway Road



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TYPICAL SECTIONS
FIGURE 11

Bike Path – Separated

Separated bike paths are bikeway facilities on exclusive right-of-way that have a central section reserved for bicycle use only. This central portion should be 16-20 feet wide, with a minimum width of 10 feet. Sidewalks located at the edge of the bicycle path, separated from the bike path by a landscaped area or fencing where sufficient space is available, are provided for use by pedestrians. The sidewalks should be 6-8 feet wide, with a minimum width of four feet.

Separated paths are designed to serve high volumes and/or longer distance bicycle travel. Shared use paths are planned for routes that have a combination of moderate to high bicycle volumes (e.g., one way bicycle volumes ranging from 300 to 600 vehicles per hour) and moderate pedestrian volumes (e.g., pedestrian volumes greater than 100 per hour). These paths are shown on Figure 8.

Although the campus has several existing separated bike paths, pedestrians frequently walk on the central bike lane and avoid the sidewalks. This results in conflicts between cyclists and pedestrians, and limits the effective capacity of these paths. A key element of this plan is to implement new separated bike paths, improved sidewalks, enhanced signage and pavements markings, and enforcement programs that will force pedestrians to use the parallel sidewalks.

Shared Use Path

Shared use paths are facilities on exclusive right-of-way that are used by both cyclists and pedestrians. The shared use paths are planned for areas where lower bicycle and pedestrian volumes occur, and/or unobstructed space is severely restricted. The path should be 16-20 feet wide, with a minimum width of 10 feet.

Bike Lane (On Street)

Bike lanes are used to separate cyclists from motor vehicles on higher volume and higher speed roadways. They are planned for roadways that carry 2,000 or more vehicles per day per lane or have posted speeds of 35 mph or more. This includes portions of Hutchison Drive, LaRue Road, New Davis Road, Dairy Road, Orchard Park Circle, California Avenue, Howard Way, and A Street. Bike lanes should be 7-8 feet wide, particularly for roadways with high bicycle volume and/or high auto travel speeds, with a minimum width of five feet.

Bikeway Street

A bikeway street is a primary bikeway that is located on a vehicular road within the campus. These internal campus roads have low speeds and low traffic volumes, allowing bicyclists and motorists to share the road. These bikeway streets, located at the core of the campus, form the backbone of the bikeway network.

Intersection Treatments

The largest number of accidents typically occurs at intersections. The following design guidelines are intended to enhance safety at these locations.

Junction of Bike Paths (Roundabouts, Stop, Yield control)

The standard intersection control at the intersection of all major bike paths shall be a single large roundabout or dual roundabouts where path intersections are slightly offset. Landscaping should be placed in the median and corners of new roundabout installations to encourage pedestrians to use the approach crosswalks. Directional signage should be placed at all existing and new roundabouts, indicating the flow of bicycle traffic.

Stop or yield control should be applied on the minor path approach to a major bike path.

Intersections – Bike Lanes

Caltrans provides recommended intersection treatments in Chapter 1000 of the *Highway Design Manual,* including bike lane "pockets" and loop detectors. Bicycle loop detectors should be installed on the roadway system at all actuated traffic signals. The presence of loop detectors that detect cyclists should be designated with a pavement marking.

Roadway Crossing Treatments – Bike Paths

Where separated or shared use bikeway paths cross roadways, special design treatments should be applied depending on the relative volume of motor vehicle and bicycle traffic. The following treatments are suggested for application, depending on specific conditions at the crossings.

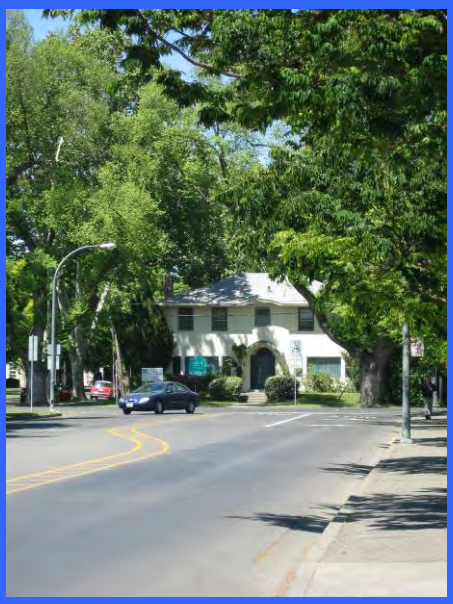
- Bicycle-Pedestrian Traffic Signal – for mid-block crossings of higher volume roadways, where the crossing is located a sufficient distance from adjacent signalized intersections.

- Roundabout – standard roundabout design on the motor vehicle approaches, with modified design for the bike path approaches.

- Raised Path – maintains the grade of the path across the roadway. This application may not be desirable if bicycle volumes along the roadway are high.

Multi-Way Stop Control – requires all approaches to stop, which can be desirable in locations with limited sight distance. This application may not be desirable if bicycle volumes along the roadway are high, as cyclists find stop control cumbersome.

Bollards



Bollards are currently used to provide a physical barrier at junctions of bikeway paths and roadways to prevent unauthorized vehicles from using the facilities. When more than one post is used, adding posts at 5.5 to 6-foot spacing is desirable. Posts or bollards should be set back beyond the clear zone on the crossing roadway or be of a breakaway design. The post should be permanently reflectorized for nighttime visibility and painted a bright color for improved daytime visibility.

Two design options are suggested where bollards are used.

- Widen the path at the junction with the roadway and provide a median to separate both directions of bicycle travel. Place a bollard in the median (as needed) and at the outside edge of each 5-foot bicycle lane.
- Where unobstructed space is not available to widen the path at the junction with the roadway, stripe a diamond-shaped envelope around the post using a 4-inch yellow stripe as an extension of the path center line stripe.

In locations where maintenance vehicle access is not mandatory or where the possibility of unauthorized vehicle access is limited, an alternative approach would be to eliminate bollards and place a small median with signage and landscaping as appropriate.

Signage and Markings

Bikeway Sign Plan

A Bikeway Sign Plan should be developed that provides a comprehensive wayfinding system along and at crossings of the bicycle network. The Sign Plan should identify sign types, materials, and location. The signs should be consistent with the overall family of signs on the campus.

Bike Path – Separated

Extensive signage and pavement markings should be installed on the separated bike paths to indicate the exclusive nature of bikeway and pedestrian facilities.

Shared Roadway Bicycle Marking

Shared roadway bicycle markings should be placed in the middle of the travel lanes at key points on bikeway roads, typically at the far side of intersections and at the entry gates to the restricted campus roadways.

Bike Lanes

Bike lanes should be marked with a bike lane symbol and a straight directional arrow to reinforce the one-way travel flow of the bike lane.

Lighting

Fixed-source lighting improves visibility along bikeway facilities and at intersections. It allows cyclists to see the path direction, surface conditions, and obstacles.

Lighting priorities for the campus bikeway network are the primary bikeways, key intersections, and bicycle parking. Lighting should also be provided through underpasses.

Bicycle Parking

Bicycle parking should be accessible and convenient. Because of visual, spatial, and maintenance concerns, bicycle lockers are not appropriate for the campus. All new campus buildings and parking garages should provide bicycle parking. New bicycle parking installations shall include a bicycle area parking pad with a pervious surface. A clear space of three feet should be provided between the edge of the bicycle area parking pad and adjacent roadways or sidewalks.

The dimensions for a typical bike parking bay are provided below. This illustrative parking bay provides 10 parking spaces on each side, with a center aisle.

Rack Type

The standard campus bicycle rack for all future installations is the "lighting bolt" type rack. These racks can be installed individually or in a rack form. A minimum clear space of two feet should be provided between the bicycle rack and any building wall or other obstruction.

Innovative Treatments

The following innovations appear in *Innovative Bicycle Treatments, An Informational Report*, published by the Institute of Transportation Engineers. Each one responds to problems that are typical in cities or institutions that want to retrofit existing streets for bicycle lanes. Each of the devices has been used somewhere in California or in the United States, although most of them do not appear in state or national standards.

Advance Stop Line (ASL)/Bicycle Box

The bicycle box has two primary benefits. It can improve the visibility of cyclists at intersections and it enables bicyclists to correctly position themselves for turning movements during the red signal phase by allowing them to proceed to the front of the queue at a signalized intersection. As a secondary benefit, it also provides a transition from a left-side or median bike lane to a right-side lane.

The bicycle box is useful at intersections with high motor vehicle and bicycle volumes, frequent turning conflicts, and/or intersections with a high percentage of turning movements by both cyclists and motorists. The bike lane leading up to a bicycle “reservoir” is located between the motor vehicle stop line and the crosswalk. The bike box should be four to five meters deep. To increase its effectiveness, a bicycle stencil should be placed in the bike box and a contrasting surface color is strongly recommended for the reservoir and the approaching bicycle lane. Instructional signs and separate cyclists signal heads can be installed in conjunction with the bike box. Encroachment and violation of the bike box must be enforced by campus and/or city police.

Colored Bike Lane Treatment Through a Conflict Area

Colored bike lanes, typically blue, can be used in high conflict areas to alert drivers to the presence of bicyclists and bicycle lanes. These areas can be painted or treated with a thermoplastic finish. Potential applications include freeway ramp merge areas (e.g., particularly at angles where motorist sight distance may be impaired), angled intersections or driveways where heavy right turn movements cross a bike lane, and bike-only left-turn pockets.

V. TRANSIT

EXISTING TRANSIT SERVICE

Unitrans is the primary transit service provider for the UC Davis campus. Unitrans was founded in 1968 as the University Transport System, when the Associated Students of UC Davis purchased two vintage London double-decker buses to operate on two routes. In 1972, Unitrans was opened to the general public, with partial funding from the City of Davis. Since that time, the ASUCD/City of Davis partnership has continued, and now Unitrans provides public transportation service to the entire city, with 49 buses on 14 routes, carrying over three million passengers each year (about 20,000 on a typical day). Approximately 91 percent of riders are undergraduate students, five percent are graduate students/faculty/staff, and four percent are general public.

Each day, Davis residents ride buses to get to destinations throughout the City. Many riders are students going to/from UCD, but the system is also used extensively for trips to places such as downtown, junior and senior high schools, library, hospital, neighborhood shopping centers, medical offices, senior center, theaters, and the Farmers' Market. Buses serve these locations every weekday from 7:00 AM to 11:00 PM, and on Saturday from 9:00 AM to 6:00 PM. Buses run more frequently during the UCD academic year when ridership is higher, and less frequently during the summer and breaks.

Anyone can ride Unitrans for one dollar cash fare, and many types of prepaid discounted tickets and passes are available. One special fare category includes UCD undergraduate students, who can show a valid undergrad ID instead of a cash fare, because they pay a portion of their quarterly ASUCD fee to Unitrans.

Unitrans is well-known for their fleet of historic London double-decker buses. These buses run on four lines (B, E, F, G) in regular service during the academic year. One of the double-decker buses has been converted from a diesel engine to run on clean natural gas. Unitrans' CNG double-decker is unique in North America, and perhaps in the world. Although the double-decker buses are a symbol of Unitrans, about 90 percent of their service is provided by modern buses fueled by CNG (with one even-cleaner prototype bus operating on a Hydrogen-Natural Gas blend).

All Unitrans drivers and supervisors, as well as most support staff, are UC Davis students working part-time. A total of 225 student employees work in all areas of the operation, including administration, maintenance, operations and support services. All 175 drivers are UC Davis students working part-time. Unitrans drivers undergo extensive training and testing prior to going into service. Unitrans safety record is among the best among public transit systems in the United States.

Unitrans connects with several transit systems. Yolobus provides service to Sacramento, Woodland, the Sacramento Airport, as well as within Davis and throughout Yolo County. Yolobus connects with

Unitrans at the Memorial Union and at many common stop locations throughout Davis. Davis Community Transit provides demand responsive service within Davis, including ADA complementary paratransit service. Unitrans also connects with Amtrak/Capitol Corridor trains in downtown Davis, and a special shuttle operates on Sundays when regular Unitrans service does not run. Other inter-city services available on the UCD campus include Fairfield Transit, the UCD Med Center Shuttle, and the UC Berkeley Shuttle.

Figure 12 shows the various transit routes operated by the following providers through and around the central Davis campus:

- Unitrans
- Yolobus
- Fairfield Transit

Campus Transit Terminals

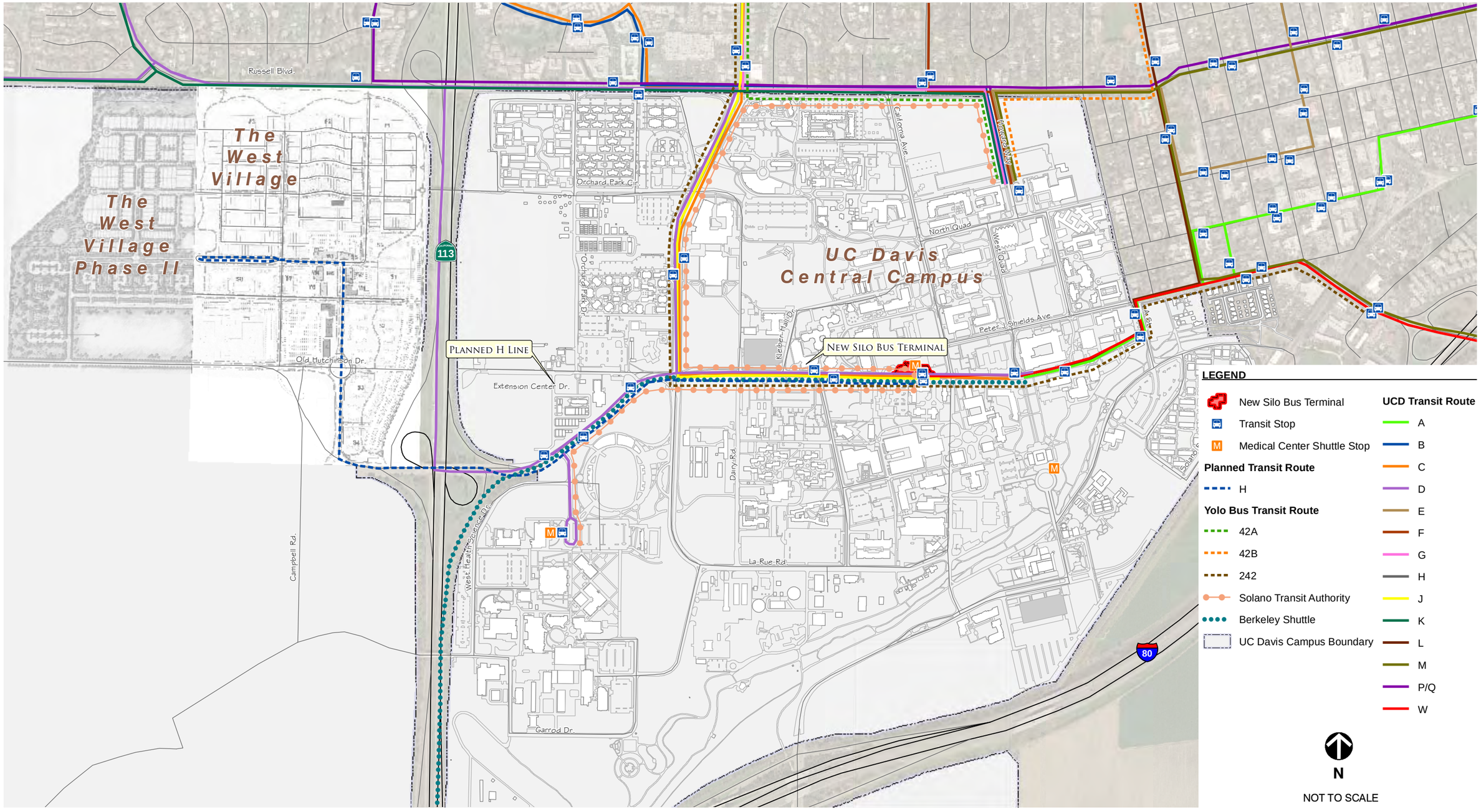
The campus has two major transit terminals located in the central portion of campus: the Memorial Union and the Silo terminals. Eight of the 14 Unitrans routes stop at the Memorial Union terminal, while the remaining six stop at the Silo terminal. The Memorial Union terminal is accessed via the Russell Boulevard/Howard Way intersection. The Silo terminal, located along Hutchison Drive just north of the Silo building, recently underwent a major renovation.

Bicycle Parking at Transit Terminals

Unitrans and other transit providers do not allow bicycles on buses, given the large number of students who travel to campus via bicycle and the limited capacity on buses. Many students who travel to campus by bus leave a bicycle parked overnight at one of the two transit terminals and use that bicycle to travel around campus.

PROPOSED TRANSIT IMPROVEMENTS

The renovation of the Memorial Union (MU) Terminal is the primary transit improvement anticipated in the BTNS. The objective of the renovation is to provide additional bus bays, separate bicycle traffic from buses in the terminal area, relocate the existing information booth, provide transit signal priority at the Russell Boulevard/Howard Way intersection, and provide additional bicycle parking.



FEHR & PEERS
TRANSPORTATION CONSULTANTS

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UC DAVIS BIKE AND TRANSIT NETWORK STUDY - PLANNED TRANSIT FACILITIES

FIGURE 12