

3.16 TRANSPORTATION, CIRCULATION, AND PARKING

This section assesses the potential for implementation of the West Village Expansion component to result in impacts related to transportation, at the project-specific level, that are not fully addressed in Section 3.16, “Transportation, Circulation, and Parking” of Volume 1 of this EIR.

Comments received on the NOP raised concerns regarding potential increases in congestion on the adjacent roadway network, primarily within the City of Davis. Other concerns included adequate provision of alternative transportation infrastructure, including bicycle, pedestrian, and bus facilities. As they pertain to implementation of the West Village Expansion component of the 2018 LRDP, these impacts are described and addressed within this section.

3.16.1 Regulatory Setting

Plans, policies, regulations, and laws (applicable to and/or considered for the West Village Expansion component) related to transportation are provided in Volume 1 of this EIR. As the regulatory setting provided in Volume 1 considers potential development, including the West Village Expansion component, within the entirety of the UC Davis campus as envisioned through the 2018 LRDP, no additional regulatory setting is provided for the West Village Expansion component.

3.16.2 Environmental Setting

Section 3.16, “Transportation, Circulation, and Parking,” of Volume 1 describes the existing local and regional transportation facilities serving the UC Davis campus, including the West Village Expansion component. The following existing transportation system information specific to the West Village Expansion supplements the environmental setting described in Volume 1.

ROADWAY SYSTEM

Primary vehicular access to and from the West Village Expansion site is available via Hutchison Drive, the lone vehicular crossing of State Route (SR) 113 immediately accessible from the West Village Expansion site. East of the West Village Expansion site, vehicles utilize Hutchison Drive to connect with SR 113 and the UC Davis central campus, as well as off-campus destinations within Davis. The West Village Expansion site is also served by local roadways present within the existing portion of the West Village neighborhood, including Tilia Street, Jade Street, Sage Street, and Celadon Street. Vehicular access is not available immediately north of the West Village Expansion site to/from Russell Boulevard. Vehicle access to the remote parking area is available via Old Davis Road.

BICYCLE AND PEDESTRIAN FACILITIES

The West Village Expansion site is served by an extensive network of bicycle and shared-use facilities. Class II bike lanes are present on all existing roadways adjacent to the West Village Expansion site, including Hutchison Drive, Tilia Street, Jade Street, Sage Street, and Celadon Street. Near SR 113, the Class II bike lanes connect with an off-street network of Class I bike paths linking West Village with destinations within the UC Davis central campus and the City of Davis. A Class I path is also present on the south side of Russell Boulevard between West Davis and the UC Davis

central campus. Three bicycle roundabouts control bike flows in or near West Village, including a bicycle roundabout located at the western approach to the SR 113 bicycle/pedestrian overcrossing, which controls bicycle flows generated by West Village as well as West Davis (via the Russell Boulevard shared-use path).

Three SR 113 crossings serve West Village bicyclists and pedestrians, including the Russell Boulevard overcrossing, the SR 113 bicycle/pedestrian overcrossing (immediately south of Russell Boulevard), and the Hutchison Drive overcrossing. The SR 113 bicycle/pedestrian overcrossing provides the most direct access towards the UC Davis core campus area.

Sidewalks are present on all existing roadways within the West Village neighborhood. Marked crosswalks are provided on all legs of existing intersections internal to the West Village neighborhood. East of the West Village Expansion site, sidewalks and marked crosswalks are provided on the Hutchison Drive overcrossing over SR 113, including marked crosswalks at each of the on- and off-ramps. Adjacent to the remote parking area, there are currently not dedicated sidewalks, but an off-street path on the west side of Old Davis Road provides access for pedestrians and bicyclists to the remote parking area.

TRANSIT SERVICE AND FACILITIES

The West Village Expansion site is served by Unitrans Route V, which operates on 15-minute headways on weekdays and 60-minute headways on weekends. Bus stops served by Route V are provided at several locations throughout the existing West Village neighborhood. The closest existing bus stop to the West Village Expansion site is located at the current western terminus of Tilia Street. No transit stops or service are currently provided adjacent to the remote parking area.

3.16.3 Environmental Impacts and Mitigation Measures

SIGNIFICANCE CRITERIA

Refer to Section 3.16, “Transportation, Circulation, and Parking,” in Volume 1 for a discussion of applicable Significance Criteria.

ANALYSIS METHODOLOGY

Analytical methods for the assessment of potential transportation impacts are detailed in Section 3.16, “Transportation, Circulation, and Parking,” in Volume 1 of this EIR. Details specific to the West Village Expansion component are provided below.

Roadway Operations

The project-level roadway impact analysis relies on a comparison of 2016 Baseline and 2016 Baseline plus West Village Expansion intersection level of service (LOS). For 2016 Baseline plus West Village Expansion conditions, a.m. and p.m. peak hour traffic volumes were developed for each study intersection that would potentially be affected by project-generated traffic. These represent a subset of the study intersections analyzed in Volume 1. The turning movement forecasts for each intersection are contained in Appendix H. These forecasts were used to calculate a.m. and p.m. peak hour vehicle LOS for the twelve study intersections. Table 3.16-1 compares the intersection LOS results for 2016 Baseline and 2016 Baseline plus West Village Expansion conditions.

All study intersections operate within acceptable thresholds, except for the Hutchison Drive/SR 113 Northbound (NB) Ramps, which would operate at LOS F during the p.m. peak hour.

Table 3.16-1 Study Intersection Operations – 2016 Baseline and 2016 Baseline Plus West Village Expansion Conditions

No.	Study Intersection	Control Type	Jurisdiction	2016 Baseline				Baseline Plus West Village Expansion			
				A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
				Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
6	Russell Boulevard/SR 113 Northbound (NB) Ramps	Signal	Caltrans	19	B	35	D	19	B	41	D
9	Russell Boulevard/Anderson Road/La Rue Road	Signal	City of Davis	24	C	27	C	23	C	37	D
17	Hutchison Drive/County Road 98	SSSC	Yolo County	4 (16)	A (C)	5 (14)	A (B)	5 (19)	A (C)	5 (15)	A (B)
18	Hutchison Drive/Hopkins Road	SSSC	Yolo County	3 (10)	A (A)	5 (10)	A (A)	3(10)	A (B)	5(10)	A (B)
19	Hutchison Drive/Sage Street	Roundabout	UC Davis	4	A	4	A	6	A	7	A
20	Hutchison Drive/SR 113 SB Ramps	SSSC	Caltrans	12 (24)	B (C)	2 (15)	A (B)	36 (>120)	E (F)	5 (66)	A (F)
21	Hutchison Drive/SR 113 NB Ramps	SSSC	Caltrans	5 (29)	A (D)	3 (17)	A (C)	25 (>120)	C (F)	51 (>120)	F (F)
22	Hutchison Drive/Health Sciences Drive	Signal	UC Davis	7	A	7	A	9	A	7	A
23	Hutchison Drive/Extension Center Drive	SSSC	UC Davis	2 (30)	A (D)	2 (30)	A (D)	2 (38)	A (E)	2 (53)	A (F)
24	Hutchison Drive/La Rue Road	Signal	UC Davis	16	B	21	C	19	B	31	C
49	Hutchison Drive/Hutchison Drive	Roundabout	UC Davis					8	A	14	B

Notes:

1. Traffic Control: AWSC = all-way stop control; SSSC = side street stop control; Signal = traffic signal.
2. Signals, all-way stops and roundabouts: LOS based on average control delay in seconds. Side street stop controlled intersections: LOS given for the average intersection delay followed by the worst side-street movement in parentheses.

Bold and grey text indicates study intersections that exceed acceptable LOS thresholds.

Source: Modeling conducted by Fehr & Peers in 2018

Bicycle Facilities

The potential impact to bicycle facilities was evaluated based on whether the West Village Expansion component would physically disrupt an existing facility or interfere with the implementation of a planned facility. In addition, the West Village Expansion component was evaluated to determine if it would create potential conflicts with applicable policies, plans, or programs (as defined in the Regulatory Setting in Volume 1) supporting bicycle use such that the conflict could reduce bicycle trips or increase conflicts between bicyclists or other modes.

The West Village Expansion project description states that bicycle lanes would be provided on project-related roadways within the West Village neighborhood. The site plan included in the project description illustrates an off-street bicycle circulation route serving new residential development, eventually connecting bicyclists with the existing bicycle network at Acer Street. Speed table crossings would be installed to facilitate bicycle crossings at the Tilia Street and Acer Street extensions.

Specific facilities that would accommodate new bicycle trips generated by the West Village Expansion component include Orchard Road/Orchard Park Circle (including the SR 113 bicycle/pedestrian overcrossing), Hutchison Drive, Sprocket Bikeway, and Russell Boulevard, as well as internal circulation facilities within the West Village Expansion site. Additional bicycle travel would also be expected on the existing Old Davis Road shared-use path near the remote parking area.

Pedestrian Facilities

The potential impact to pedestrian facilities was evaluated based on whether the West Village Expansion component would physically disrupt an existing facility or interfere with the implementation of a planned facility. In addition, the West Village Expansion component was evaluated to determine if it would create potential conflicts with applicable policies, plans, or programs (as defined in the Regulatory Setting in Volume 1) supporting pedestrian travel such that the conflict could reduce walk trips or increase conflicts with other modes.

The West Village Expansion project description states that sidewalks would be provided on project-related roadways within the West Village neighborhood. Moreover, new intersections constructed as part of the West Village Expansion would have marked crosswalks on all legs of each intersection.

Facilities likely to accommodate project-specific pedestrian demand associated with the West Village Expansion component include Orchard Road/Orchard Park Circle (including the SR 113 bicycle/pedestrian overcrossing), Hutchison Drive, and Russell Boulevard, as well as internal circulation facilities within the West Village Expansion site.

Transit Service and Facilities

The potential impact to transit service or facilities was evaluated based on whether the West Village Expansion component would physically disrupt an existing facility/service or interfere with the implementation of a planned facility/service. In addition, the West Village Expansion component was evaluated to determine if it would create potential conflicts with applicable policies, plans, or programs (as defined in the Regulatory Setting in Volume 1) supporting transit such that the conflict could reduce transit trips or increase conflicts with other modes.

The West Village Expansion component does not propose any new or modified transit service or facilities within the West Village neighborhood. The remote parking area would be served with a new shuttle loop. The site plan for the remote parking area shows a new bus stop located on the internal north-south roadway within the remote parking area.

PROJECT-SPECIFIC IMPACTS AND MITIGATION MEASURES

Impact 3.16-1: Freeway level of service impacts.

Construction of the West Village Expansion would increase local and regional vehicle travel, which would contribute unacceptable LOS F conditions on Interstate 80 (I-80). This impact would therefore be **significant**.

Portions of I-80 through the study area in Yolo and Solano Counties operate at LOS F during peak periods. This has been documented through various Caltrans, SACOG, and MTC studies. Additional on-campus housing growth associated with the West Village Expansion would generate new peak period vehicle trips that would contribute to future LOS F conditions.

WVE Mitigation Measure 3.16-1: Implement TDM strategies to reduce vehicle trips on I-80.

Implement 2018 LRDP Mitigation Measure 3.16-1.

Significance after Mitigation

Implementation of WVE Mitigation Measure 3.16-1 would reduce vehicle travel to and from campus on I-80. However, the level of delay reduction associated with TDM strategies is uncertain. Caltrans has identified the need for carpool lanes on I-80 between Richards Boulevard in Davis and West Sacramento to accommodate regional traffic growth, which includes the employee and student growth associated with UC Davis. The carpool lane project has already been incorporated into the 2016 SACOG MTP/SCS and is a fully funded project expected to be implemented by 2036. Roadway capacity expansion will lead to induced vehicle travel that will likely offset the short-term congestion relief benefits of the I-80 carpool lanes. Furthermore, LOS F conditions will continue to occur during peak periods on portions of I-80 in Yolo and Solano counties. Therefore, this impact would remain **significant and unavoidable**.

Impact 3.16-2: Intersection level of service impacts.

Implementation of the West Village Expansion component would increase local and regional vehicle travel, which would cause unacceptable LOS conditions at a study intersection. This impact would therefore be **significant**.

The West Village Expansion would increase a.m. and p.m. peak hour vehicle traffic at local intersections throughout the study area under 2016 Baseline conditions. At the Hutchison Drive/SR 113 NB Ramps, the traffic volume increase would cause LOS F conditions during the p.m. peak hour. Moreover, the West Village Expansion would increase average intersection delay from three seconds to 51 seconds at this intersection during the p.m. peak hour, an increase in delay in excess of 10 percent. Together, with the LOS F condition, this worsening of delay would constitute a significant impact.

WVE Mitigation Measure 3.16-2a: Implement TDM strategies to reduce vehicle trips at the SR 113/Hutchison Drive interchange.

Implement 2018 LRDP Mitigation Measure 3.16-2a.

WVE Mitigation Measure 3.16-2b: Modify SR 113/Hutchison Drive interchange.

Implement 2018 LRDP Mitigation Measure 3.16-2b.

According to this mitigation measure, the SR 113/Hutchison Drive interchange shall be modified when regular traffic monitoring to be conducted by UC Davis every two years reveals that the ramp terminal intersections operate below the intersection level of service significance thresholds, or when a project-level analysis indicates that an individual development project proposed under the 2018 LRDP would cause operations to fall below the intersection level of service threshold. The project-specific analysis for the West Village Expansion indicates that the project would result in unacceptable LOS conditions at this location. Therefore, the West Village Expansion would necessitate the modification of the interchange. Prior to occupancy, UC Davis shall pursue the SR 113/Hutchison Drive interchange improvements, which include increasing the capacity of the ramp terminal intersections and modifying uncontrolled turning movements that conflict with bicycle and pedestrian movements as specified in WVE Mitigation Measure 3.16-4a.

Significance after Mitigation

Implementation of WVE Mitigation Measures 3.16-2a and 3.16-2b would improve operating conditions at the Hutchison Drive/SR 113 NB Ramps intersection by expanding the interchange ramp terminal intersection capacity to better accommodate vehicle traffic demands and implementing the TDM program. The proposed mitigation also accounts for improving the bicycle and pedestrian crossings of the interchange ramp terminal intersections such that the mitigation does not create new impacts for those travel modes. While UC Davis would propose to fund the design and construction of the SR 113/Hutchison Drive interchange improvements and expects that the improvements would be approved and reduce the identified impact, the improvements or modifications are subject to final approval and actions by other public agencies and their implementation cannot be guaranteed. This condition would cause the impact to remain **significant and unavoidable**.

Impact 3.16-3: Impacts to transit service and facilities.

The West Village Expansion would increase demand for transit, which may require investments in additional transit service and/or facilities to maintain the level and quality of service necessary to retain and expand ridership. Failure to maintain quality service could lead to losses of ridership and increases in travel by other modes (e.g., automobiles) that could result in environmental effects such as increased emissions. This impact would therefore be **significant**.

The West Village Expansion does not include any proposed physical changes to existing transit service or facilities. The West Village Expansion would not interfere with the implementation of planned transit service or facilities identified in the City of Davis General Plan, the City of Davis Short Range Transit Plan, or the YoloBus Short Range Transit Plan. It would also not interfere with planned regional transit projects identified in the SACOG MTP/SCS.

The West Village Expansion site is situated near existing bus stops serving West Village on Sage Street and Tilia Street. It is anticipated that most new passenger demand generated by the West Village Expansion component would be accommodated at existing bus stops, however, additional stops may be warranted if development occurs beyond a reasonable walking distance for new West Village Expansion residents. Development of the remote parking area would include construction of a new bus stop along Old Davis Road.

The buildout of the West Village Expansion component would generate additional transit demand for Unitrans Route V, which operates every 15 minutes between West Village and the Silo terminal. Route V is currently the most productive route in the Unitrans system, generating 91 passenger boardings per hour. This high performance can be attributed to West Village's high-density development patterns coupled with its physical separation from the central campus area because of its location on the west side of SR 113. Together, these factors encourage a greater share of transit trips in place of shorter walk or bike trips to central campus (transit mode share for students commuting from West Village and main campus is nine percent and three percent, respectively). The West Village Expansion component would more than triple the neighborhood's student population, likely generating transit demand that would exceed the available capacity currently provided by Route V. If current travel behavior were to continue with the buildout of the West Village Expansion, new transit demand could total approximately 390 daily passengers.

The West Village Expansion would also include a new shuttle route serving the remote parking area. The project description does not include a description of the shuttle route service characteristics (e.g., alignment, span, frequency) or indicate the entity expected to operate the service.

WVE Mitigation Measure 3.16-3: Expand transit serving West Village and the remote parking area.

Unitrans shall continue to implement its current transit service performance monitoring and service change process as West Village growth occurs. Moreover, Unitrans shall evaluate the appropriate level of transit investment for West Village growth according to new service warrants.

UC Davis shall work with Unitrans staff to identify and support the implementation of transit service and/or facility improvements necessary to adhere to established service standards and, in turn, maintain a high-quality customer experience so as not to deter existing and potential ridership. Potential West Village transit improvements include extended service coverage, adding service capacity (through increased headways and/or larger vehicles with more seats) to prevent chronic overcrowding, extended service spans, new supplemental bus routes, and new service to the remote parking area. Facility improvements, including new or enhanced bus stops, may also be warranted in conjunction with expanded West Village service.

Transit improvements shall result in service performance that meets the capacity standard established in the most up-to-date City of Davis Short Range Transit Plan. Currently, this standard requires Unitrans to maintain acceptable loading conditions (fewer than 150 percent of seated capacity) on more than 95 percent of all bus trips and for more than 90 percent of bus passengers.

Significance after Mitigation

Implementation of WVE Mitigation Measure 3.16-3 would reduce potential significant impacts associated with transit service and facilities to a **less-than-significant** level by ensuring that transit service is sufficient to accommodate demand and minimizing potential adverse effects on transit operations.

Impact 3.16-4: Impacts to bicycle facilities.

The West Village Expansion component would increase bicycle, pedestrian, and automobile trips on the UC Davis campus and within the vicinity of the West Village site, which could generate bicycle volumes that physically disrupt the use of existing facilities, increase the competition for physical space between the modes, and increase the risk of collisions. This impact would therefore be **significant**.

As an optional mitigation action under 2018 LRDP Mitigation Measure 3.16-4, UC Davis may determine that a project-level analysis of potential bicycle facility impacts is appropriate for specific development projects proposed in the 2018 LRDP that may adversely affect the bicycling environment. In the case of the West Village Expansion, the combination of substantial project-related bicycle activity and high volumes of nearby background bicycle traffic justifies additional analysis. As such, this analysis considers the potential for the project to disrupt the bicycling environment in the following key areas:

- ▲ West side of SR 113 at the existing bike/pedestrian overcrossing,
- ▲ East side of SR 113 from the bike/pedestrian overcrossing to Orchard Drive,
- ▲ Russell Boulevard bike path from Arthur Street to La Rue Road, and
- ▲ Hutchison Drive crossing of SR 113.

Student and employee housing growth associated with the West Village Expansion would generate up to approximately 3,300 new bicyclists commuting to the central campus on a daily basis. As discussed in 2018 LRDP Impact 3.16-4, additional on-campus bicycle activity generated by on-campus housing growth (such as the West Village Expansion), together with increased automobile, transit, and pedestrian trips, could result in crowding on existing bicycle facilities and in shared right-of-way environments, particularly during peak travel periods such as the morning commute into the core campus area or passing periods between classes. Crowding would result in the competition for physical space between the modes, which in turn would increase the potential for collisions, including those involving bicyclists.

Immediate access to the campus bicycle network would be available on existing Class II bike lanes on Hutchison Drive, Sage Street, Celadon Street, Tilia Street, and Jade Street, as well as the existing Class I bike path that runs north-south through West Village adjacent to SR 113. In addition to existing bicycle facilities, the proposed expansion of east-west off-street bike paths through the western portion of the West Village Expansion site would provide bicycle access to future West Village residential development. The east-west bike facilities would connect with existing Class II bike lanes on Tilia Street and Jade Street, providing bicycle access to the eastern portion of the West Village Expansion site as well as the SR 113 bike/pedestrian overcrossing.

Similar to existing conditions, new West Village Expansion residents traveling to the core campus area by bike would cross SR 113 at one of three existing locations – the shared-use path on the south side of the Russell Boulevard overcrossing, the bike/pedestrian overcrossing immediately south of Russell Boulevard, or the Class II bike lanes on the Hutchison Drive overcrossing. The majority of new West Village Expansion bicycle trips traveling to the core campus area would likely utilize the SR 113 bike/pedestrian overcrossing because of the directness of the route as well as its exclusive operating environment for bicyclists. As such, substantial additional bike volumes would be expected on the overcrossing and adjoining facilities, including the bicycle roundabout on the west end of the overcrossing. Along this route, existing eastbound bicycle volumes during the morning peak hour measures at 460 bicyclists. With a tripling of the West Village residential population, this volume could reasonably grow commensurately during the morning peak hour. Bicycle volume

growth of this magnitude could cause crowding on existing bicycle facilities, which in turn could increase the potential for bicycle-related collisions.

On the east side of the SR 113 bike/pedestrian overcrossing, existing bicycle facilities on Orchard Road/Orchard Park Circle include Class II bike lanes between the overcrossing and Orchard Park Drive and a Class I bike path from Orchard Park Drive to La Rue Road. Additional bicycle volumes generated by the West Village Expansion component would also increase the potential for bicycle-vehicle conflicts at the bike/pedestrian overcrossing approach from Orchard Park Circle. Bicyclists traveling in the westbound bike lane are currently required to cross Orchard Park Circle at an unmarked crossing to access the bridge on the south side of the roadway. Increased potential for conflicts with bicycles would also occur at this location since the existing bike path approach does not intersect Orchard Park Circle at a 90-degree angle, limiting sight lines for approaching eastbound bicyclists and vehicles, particularly vehicles exiting the proposed resident parking lot to travel eastbound on Orchard Park Circle.

Although the SR 113 bike/pedestrian overcrossing is expected to accommodate most of the new West Village Expansion bicyclists, bicycle volume increases would also be expected on the existing Russell Boulevard shared-use path and Hutchison Drive bike lanes over SR 113. Additional project-related bicycle and pedestrian use of the Russell Boulevard shared-use path would increase the competition for physical space between bicyclists and pedestrians. The affected path segment is from Arthur Street to La Rue Road, where path users would then connect with the extensive on-campus bicycle and pedestrian network. Increased use of this path segment would result in a higher potential for bicycle-bicycle and bicycle-pedestrian collisions.

Increased project-related bicycle volume over the Hutchison Drive interchange would increase the potential for bicycle-vehicle conflicts because of the partial cloverleaf design of the interchange. This design features free right-turn lanes at the northbound and southbound ramps for vehicles, which create multiple mixing zones for bicycles and vehicles while also limiting sight lines for approaching vehicles at bike lane crossings. For the Hutchison Drive crossing of SR 113, the lack of on-street bicycle facilities would conflict with the following planned high priority bicycle improvement identified in the UC Davis Bicycle Plan:

- ▲ Construct network of bike paths and bike lanes in West Village with efficient connections to routes to and from the central campus (e.g., Hutchison Drive, Russell Boulevard, Orchard Drive).

The proposed remote parking area would generate additional bicycle trips utilizing the existing Old Davis Road shared-use path. The path is grade-separated from the eastbound I-80 off-ramp and westbound I-80 on-ramp, eliminating the potential for bicycle-vehicle conflicts at the I-80 ramp terminal intersections. However, the increase in bicycle and vehicle trips to and from the remote parking area would increase the potential for multimodal conflicts at the intersection of the shared-use path and the new remote parking area driveways.

The West Village Expansion would not interfere with the implementation of planned bicycle facilities identified in the City of Davis General Plan or the City of Davis Beyond Platinum Bicycle Action Plan. It would also not interfere with planned regional bicycle projects identified in the SACOG MTP/SCS.

WVE Mitigation Measure 3.16-4a: Modify the SR 113/Hutchison Drive interchange.

The SR 113/Hutchison Drive interchange shall be modified to minimize the potential for conflicts between pedestrians, bicyclists, and vehicles and to provide dedicated space for each mode to the extent feasible. At a minimum, the interchange modifications should remove the

existing channelized vehicular movements and square-up all on- and off-ramps with Hutchison Drive at a 90-degree angle. Specific ramps that should be reconstructed include the following:

- ▲ northbound diagonal on-ramp,
- ▲ northbound loop on-ramp,
- ▲ northbound slip off-ramp,
- ▲ southbound diagonal on-ramp, and
- ▲ southbound loop on-ramp.

New traffic signals or roundabouts should be installed at the northbound and southbound ramp terminal intersections to control pedestrian, bicycle, and vehicular movements. Sidewalks and bike lanes should be provided on both sides of Hutchison Drive between Sage Street and Health Science Drive. Marked crosswalks should be provided across all on- and off-ramps at the northbound and southbound ramp terminal intersections. Since the interchange is owned and operated by Caltrans, any improvements will be subject to Caltrans review, project development procedures, and approval. UC Davis shall pursue the SR 113/Hutchison Drive interchange improvements prior to the occupancy of new West Village Expansion dwelling units.

WVE Mitigation Measure 3.16-4b: Improve the bike roundabout at the west side of the SR 113 bike/pedestrian overcrossing.

UC Davis shall install a northbound right-turn bypass lane at the existing bicycle roundabout at the west approach of the SR 113 bike/pedestrian overcrossing. The additional bypass lane would be necessary to accommodate heavy project-related bicycle volumes anticipated during the morning peak hour as students ride to the core campus area. The bypass lane would minimize potential bicycle-bicycle collisions caused by conflicting northbound right-turn and southbound left-turn movements at the roundabout. The bicycle facility improvements described above should be constructed prior to the occupancy of new West Village Expansion dwelling units.

WVE Mitigation Measure 3.16-4c: Improve the east-west bicycle connection across the Orchard Park site between the SR 113 bike/pedestrian overcrossing and Orchard Park Drive.

UC Davis shall improve the east-west bicycle connection across the Orchard Park site between the SR 113 bike/pedestrian overcrossing and Orchard Park Drive to accommodate project-generated bicycle and vehicle trips. Potential improvement alternatives include:

- 1) Install a shared-use path on the south side of Orchard Park Circle between the SR 113 bike/pedestrian overcrossing and Orchard Park Drive, either as a conversion of the existing sidewalk facility or a new parallel facility south of the existing sidewalk. Realign the east overcrossing approach with the new shared-use path and retrofit the existing overcrossing access at Orchard Park Circle to form a 90-degree angle. Install a new bicycle crossing on Orchard Park Circle to connect the proposed internal north-south bike path with the new Orchard Park Circle shared-use path. Design of the path should consider potential effects on established vegetation on the south side of Orchard Park Circle.
- 2) Provide on-street bicycle facilities (e.g., bike lanes, protected bike lanes, etc.) along Orchard Park Circle. Design the transition of Orchard Park Circle at the west entrance to the proposed parking lot to prioritize bicycle access and safety. Use of a roundabout, slip ramp, t-intersection for cars, or other type of mode separation may be appropriate.

- 3) Replace the existing bike lanes with a two-way Class IV cycletrack on the south side of Orchard Park Circle. This option may require reconstruction of the north or south curb and gutter to ensure adequate right-of-way for two travel lanes and the cycletrack.
- 4) Modify the site plan to close Orchard Park Circle to vehicle traffic. Remove the existing speeds humps and convert Orchard Park Circle to bicycle-only. Restructure the internal circulation network to allow for a centralized vehicle loading and parking access configuration, including an internal east-west vehicle connection between Orchard Park Drive and the proposed large resident parking lot. For internal roadways, consider utilizing shared-space design principles to encourage low vehicle speeds and activate use of the roadways as a communal space.
- 5) Close Orchard Park Circle to vehicle traffic. Remove the existing speeds humps and convert Orchard Park Circle to bicycle-only.
- 6) UC Davis shall modify the existing traffic control along Orchard Road/Orchard Park Circle, including at the Orchard Road/Orchard Park Drive intersection, as the volume and mix of traffic changes to provide a desirable environment for walking and bicycling.

Implementation of any one of alternatives 1 through 5, together with the implementation of alternative 6, would enhance the east-west bicycle connection across the Orchard Park site between the SR 113 bike/pedestrian overcrossing and Orchard Park Drive. New shared-use paths should be sufficiently sized to prevent crowding and minimize the potential for conflicts between bicyclists and pedestrians. The bicycle facility improvements described above should be constructed prior to the occupancy of new West Village Expansion dwelling units.

WVE Mitigation Measure 3.16-4d: Improve the Russell Boulevard shared-use path between Arthur Street and La Rue Road.

UC Davis shall improve the Russell Boulevard shared-use path between Arthur Street and La Rue Road to accommodate project-generated bicycle and pedestrian trips traveling to central campus. Potential improvement alternatives include:

- 1) Widen the existing shared-use path to accommodate bicyclists and pedestrians within a shared facility. Consider installing special pavement treatment or striping to clearly demarcate pedestrian and bicycle zones.
- 2) Physically separate bicyclists and pedestrians by constructing a new pedestrian pathways parallel to the existing shared-use path.
- 3) Install pedestrian-scale lighting to improve visibility.
- 4) Reconfigure the Russell Boulevard bike path east approach to Orchard Park Drive so that the bike path approach intersects Orchard Park Drive at a 90-degree angle. The reconfiguration should maintain horizontal curves to slow bicyclists approaching Orchard Park Drive.

Implementation of any one of alternatives 1 through 3, together with the implementation of alternative 4, would enhance the Russell Boulevard shared-use path between Arthur Street and La Rue Road. New shared-use paths should be sufficiently sized to prevent crowding and minimize the potential for conflicts between bicyclists and pedestrians. The bicycle facility

improvements described above should be constructed prior to the occupancy of new West Village Expansion dwelling units.

WVE Mitigation Measure 3.16-4e: Analyze site access and circulation at the proposed Old Davis Road remote parking area.

Prior to the construction of the proposed Old Davis Road remote parking area, UC Davis shall conduct a project-level site access and circulation analysis for the remote parking area.

Specific items for analysis include:

- ▲ multimodal conflict reduction strategies,
- ▲ Caltrans access control considerations (for northernmost driveway),
- ▲ intersection LOS standards,
- ▲ roadway design standards (e.g., offset driveway spacing),
- ▲ permitted driveway turning movements, and
- ▲ driveway throat depth.

Any necessary site plan modifications resulting from the access and circulation analysis shall be developed in accordance with applicable UC Davis, Solano County, and Caltrans LOS standards and roadway design standards. Modifications shall be incorporated into the final site plan prior to construction.

Significance after Mitigation

Implementation of WVE Mitigation Measure 3.16-4a would reduce potential significant impacts associated with bicycle facilities by supporting bicycling to and from the West Village Expansion site and minimizing conflicts between bicycles and other travel modes. However, some improvements or modifications are subject to final approval and actions by other public agencies and their implementation cannot be guaranteed. This condition would cause the impact to remain significant and unavoidable.

Implementation of WVE Mitigation Measures 3.16-4b, 3.16-4c, and 3.16-4e would reduce potential significant impacts associated with bicycle facilities to a less than significant level by supporting bicycling to and from the West Village Expansion site and minimizing conflicts between bicycles and other travel modes.

Implementation of WVE Mitigation Measure 3.16-4d would address significant impacts associated with bicycle facilities by supporting bicycling to and from the West Village site and minimizing conflicts between bicycles and other travel modes. However, some improvements or modifications could be subject to final approval and actions by the City of Davis and their implementation cannot be guaranteed. This condition would cause the impact to remain significant and unavoidable.

As noted above, due to uncertainties regarding the ability for the aforementioned mitigation measures to reduce impacts to bicycle facilities, bicycle facility impacts on the SR 113/Hutchison Drive interchange and the Russell Boulevard shared-use path between Arthur Street and La Rue Road would be considered **significant and unavoidable**.

Impact 3.16-5: Impacts to pedestrian facilities.

The West Village Expansion component would increase pedestrian travel on and off the UC Davis campus and within the vicinity of the West Village Expansion site, which could generate pedestrian volumes that physically disrupt the use of existing facilities. The West Village Expansion component would increase automobile, bicycle, and pedestrian trips, which would increase the competition for physical space between the modes near the West Village Expansion site, which increases the risk of collisions. This impact would therefore be **significant**.

As an optional mitigation action under 2018 LRDP Mitigation Measure 3.16-5, UC Davis may determine that a project-level analysis of potential pedestrian facility impacts is appropriate for specific development projects proposed in the 2018 LRDP that may adversely affect the pedestrian environment. In the case of the West Village Expansion, the combination of substantial project-related pedestrian activity and high volumes of nearby background pedestrian traffic justifies additional analysis. As such, this analysis considers the potential for the project to disrupt the nearby pedestrian environment.

Student and employee housing growth associated with the West Village Expansion would accommodate approximately 3,800 new on-campus student residents who would generate a variety of walking trips throughout the day. Additional pedestrian activity generated by the Orchard Park Redevelopment component, together with increased automobile, transit, and pedestrian trips, could result in crowding on existing pedestrian facilities and in shared right-of-way environments. Crowding would result in the competition for physical space between the modes, particularly at pedestrian crossing locations, which in turn would increase the potential for collisions, including those involving pedestrians.

The current West Village Expansion project description identifies an extensive network of pedestrian pathways and shared-use paths serving West Village residents and visitors. These would include new sidewalks on all new roadways, crossings on all roadways, and internal walkways providing pedestrian access to new dwelling units and community facilities.

Pedestrian travel to off-site destinations would be accommodated on existing adjacent pedestrian facilities, including the extensive on- and off-street pedestrian network present in the existing portion of West Village. Pedestrians walking towards the core campus area would utilize the existing SR 113 bike/pedestrian bridge, the Russell Boulevard shared-use path, or the Hutchison Drive sidewalks.

As described in WVE Impact 3.16-3, increased project-related trips (from vehicles, bicycles, and pedestrians) on the Hutchison Drive interchange would increase the potential for pedestrian-vehicle conflicts because of the partial cloverleaf design of the interchange. This design features free right-turn lanes for vehicles at the northbound and southbound ramps, which create multiple mixing zones for pedestrians and vehicles while also limiting sight lines for approaching vehicles at pedestrian crossings.

The West Village Expansion would not interfere with the implementation of planned pedestrian facilities identified in the City of Davis General Plan or planned regional pedestrian projects identified in the SACOG MTP/SCS.

WVE Mitigation Measure 3.16-5: Modify the SR 113/Hutchison Drive interchange.

The SR 113/Hutchison Drive interchange shall be modified to minimize the potential for conflicts between pedestrians, bicyclists, and vehicles and to provide dedicated space for each mode to the extent feasible. At a minimum, the interchange modifications should remove the

existing channelized vehicular movements and square-up all on- and off-ramps with Hutchison Drive at a 90-degree angle. Specific ramps that should be reconstructed include the following:

- ▲ northbound diagonal on-ramp,
- ▲ northbound loop on-ramp,
- ▲ northbound slip off-ramp,
- ▲ southbound diagonal on-ramp, and
- ▲ southbound loop on-ramp.

New traffic signals or roundabouts should be installed at the northbound and southbound ramp terminal intersections to control pedestrian, bicycle, and vehicular movements. Sidewalks and bike lanes should be provided on both sides of Hutchison Drive between Sage Street and Health Science Drive. Marked crosswalks should be provided across all on- and off-ramps at the northbound and southbound ramp terminal intersections. Since the interchange is owned and operated by Caltrans, any improvements will be subject to Caltrans review, project development procedures, and approval. UC Davis shall pursue the SR 113/Hutchison Drive interchange improvements prior to the occupancy of new West Village Expansion dwelling units.

Significance after Mitigation

Implementation of WVE Mitigation Measure 3.16-5 would reduce potential significant impacts associated with bicycle facilities by supporting bicycling to and from the West Village Expansion site and minimizing conflicts between bicycles and other travel modes. However, some improvements or modifications are subject to final approval and actions by other public agencies and their implementation cannot be guaranteed. This condition would cause the impact to remain **significant and unavoidable**.