

EXECUTIVE SUMMARY

INTRODUCTION

This Executive Summary is provided in accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15123, and contains an overview of the project-level analysis of West Village Expansion component of the University of California, Davis (UC Davis) 2018 Long Range Development Plan (LRDP). As stated in the State CEQA Guidelines Section 15123(a), “[a]n EIR shall contain a brief summary of the proposed actions and its consequences. The language of the summary should be as clear and simple as reasonably practical.” State CEQA Guidelines Section 15123(b) states, “[t]he summary shall identify: (1) each significant effect with proposed mitigation measures and alternatives that would reduce or avoid that effect; (2) areas of controversy known to the Lead Agency, including issues raised by agencies and the public; and (3) issues to be resolved including the choice among alternatives and whether or how to mitigate the significant effects.” Accordingly, this summary includes a brief synopsis of the proposed West Village Expansion component and West Village Expansion alternatives, environmental impacts and mitigation, areas of known controversy, and issues to be resolved during environmental review. Table WVE ES-1 (at the end of this section) presents the summary of potential environmental impacts, their level of significance without mitigation measures, the mitigation measures, and the levels of significance following the implementation of mitigation measures.

SUMMARY DESCRIPTION OF THE 2018 LRDP WEST VILLAGE EXPANSION

The West Village Expansion component of the 2018 LRDP is located within the 5,300-acre UC Davis campus. The 48-acre West Village Expansion site is located within west campus in Yolo County and consists of farmland under dry agricultural production and open space. The West Village Expansion site is bounded by Hutchison Drive to the south, existing residences in West Village to the east, and undeveloped agricultural land to the west and north. The proposed West Village Expansion component also includes a remote parking area located on approximately 20 acres immediately south and east of I-80 and adjacent to Old Davis Road.

The 48-acre West Village Expansion site and remote parking area have historically been utilized either as agricultural land and/or teaching fields. UC Davis initially considered development of the West Village Expansion site as part of the Neighborhood Master Plan (NMP), which was evaluated in Volume III of the 2003 LRDP PEIR. A portion of the NMP was built and now is referred to as the existing West Village student housing area.

The West Village Expansion component would provide housing for a total of 3,800 students, of which 1,200 would be transfer students. Approximately 1,323,000 square feet (sf) of new student housing would be constructed for a total of 1,300 units. Structures would be between four and six stories. Development at the West Village Expansion site would include a one-acre park with active and passive recreational resources for students. Approximately 1,000 student parking spaces would be provided at the West Village Expansion site with additional parking available to student residents at the remote parking area. Approximately 3,800 bicycle parking spaces would be provided and project-related roads would include dedicated sidewalks and bicycle lanes as well as metered surface street parking.

OBJECTIVES OF THE WEST VILLAGE EXPANSION COMPONENT

UC Davis has identified the following objectives for the proposed West Village Expansion component:

- ▲ optimize an underutilized site within existing UC Davis property based on the current needs of the campus;
- ▲ create an affordable and accessible residential community for students;
- ▲ provide basic amenities and high-quality design to foster the creation of a vibrant, convenient, and well-served community;
- ▲ integrate open space and bicycle, pedestrian, and transit facilities to reduce the need for residents to bring vehicles to campus;
- ▲ enhance the sense of community enjoyed by current campus and community residents; and
- ▲ provide opportunities for members of the campus to participate fully in the life of the campus and community.

SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Pursuant to State CEQA Guidelines Section 15382, a significant effect on the environment is defined as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the plan, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.” Chapter 3 of this volume of the Draft EIR describes in detail the significant environmental impacts that would result from implementation of the proposed West Village Expansion component. Table WVE ES-1 summarizes the environmental impacts and mitigation measures discussed in these chapters. Chapters 4 and 5 of Volume 1 of the Draft EIR provide a discussion of cumulative and growth-inducing impacts, respectively.

SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL IMPACTS

Section 21100(b)(2)(A) of the State CEQA Guidelines provides that an EIR shall include a detailed statement setting forth “in a separate section: any significant effect on the environment that cannot be avoided if the project is implemented.” Accordingly, this section provides a summary of significant environmental impacts of the West Village Expansion component that cannot be mitigated to a less-than-significant level.

Chapter 3, “Existing Environmental Setting, Impacts, and Mitigation,” of this volume of the Draft EIR provides a description of the potential environmental impacts of the West Village Expansion component and recommends various mitigation measures to reduce impacts, to the extent feasible. Chapter 4, “Cumulative Impacts,” of the 2018 LRDP Draft EIR (Volume 1) determines whether the incremental effects of this component are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects. After implementation of the recommended mitigation measures, most of the impacts associated with development of the West Village Expansion component would be reduced to a less-than-significant level. The following impacts are considered significant and unavoidable; that is, no feasible mitigation is available or the mitigation measures available were not enough to reduce the component’s impacts to a less-than-significant level. Note, this is only a summary of those impacts; it is important to review the discussions in Chapters 3 and 4 of this EIR to understand the full context of the impact determinations.

Implementation of the West Village Expansion component would result in the following significant unavoidable environmental impacts, following implementation of feasible mitigation measures:

- ▲ Impact 3.1-1: Result in a substantial adverse effect on a scenic vista.
- ▲ Impact 3.2-1: Convert agricultural uses, including lands designated as Important Farmlands, to non-agricultural use or involve changes in the existing environment that could result in conversion of Important Farmland to non-agricultural use.
- ▲ Impact 3.16-1: Freeway level of service impacts.
- ▲ Impact 3.16-2: Intersection level of service impacts.
- ▲ Impact 3.16-4: Impacts to bicycle facilities.

The West Village Expansion component is part of the growth program analyzed in the 2018 LRDP. Accordingly, the West Village Expansion component would contribute to the cumulative impacts associated with the 2018 LRDP and other projected regional growth. All of the cumulative impacts of the 2018 LRDP are analyzed in the technical sections of Volume 1 of this EIR and are not specifically addressed in the impact sections that follow.

ALTERNATIVES TO THE WEST VILLAGE EXPANSION COMPONENT

State CEQA Guidelines Section 15126.6, as amended, mandates that all EIRs include a comparative evaluation of the proposed project with alternatives to the project that are capable of attaining most of the project's basic objectives but would avoid or substantially lessen any of the significant effects of the project. CEQA requires an evaluation of a "range of reasonable" alternatives, including the "no project" alternative. The following alternatives are under consideration for the West Village Expansion component:

- ▲ **Alternative 1: No Project.** Under this alternative, the West Village Expansion site would not be developed, and the site would continue as undeveloped open space.
- ▲ **Alternative 2: Reduced Development.** Under this alternative, UC Davis would develop the West Village Expansion site with student housing for up to 1,875 additional student beds, which would be consistent with the initial housing concept for the site identified in May 2017.
- ▲ **Alternative 3: Higher Density Student Housing.** This alternative would include additional development of the site to provide 1,800 additional student beds for a total of 5,600 student beds at the West Village Expansion site. This alternative would be consistent with Alternative 4 identified in Volume 1 for the 2018 LRDP.

The State CEQA Guidelines section 15126.6 states that an EIR should identify the "environmentally superior" alternative. "If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." Consistent with State CEQA Guidelines (California Code of Regulations Section 15126.6 [e][2]), because the environmentally superior alternative was identified as the No Project Alternative, another environmentally superior alternative shall be identified. Based on the environmental analysis contained in this Draft EIR, the environmentally superior alternative would be either the proposed West Village Expansion or Alternative 2, depending on decisions about the priority of types of environmental benefits and adverse effects by UC Davis. In essence, decision-makers must weigh the relative importance of construction-related impacts associated with the West Village Expansion component, compared to the greater impacts to population and housing associated with Alternative 2. Nonetheless, each of the alternatives considered would result in long-term, significant and unavoidable environmental impacts. Therefore, the environmental impact differences between these two alternatives are not substantial enough that one is clearly superior over the others.

MITIGATION MONITORING AND REPORTING PROGRAM

CEQA and the State CEQA Guidelines (PRC Section 21081.6 and State CEQA Guidelines Sections 15091[d] and 15097) require public agencies “to adopt a reporting and monitoring program for changes to the project which it has adopted or made a condition of project approval to mitigate or avoid significant effects on the environment.” A Mitigation Monitoring and Reporting Program (MMRP) is required and has been prepared for the West Village Expansion component because the EIR identifies potential significant adverse impacts related to the project implementation, and mitigation measures have been identified to reduce those impacts. The MMRP, as presented in Table WVE ES-2 and in Volume 4 of the Final EIR, has been prepared to ensure that all required mitigation measures are implemented and completed in a satisfactory manner before and during project construction and operation as applicable. Unless otherwise specified, UC Davis is responsible for taking all actions necessary to implement the mitigation measures under its jurisdiction according to the specifications provided for each measure and for demonstrating that the action has been successfully completed. UC Davis, at its discretion, may delegate implementation responsibility or portions thereof to a licensed contractor or other designated agent. Section 21081.6 of the Public Resources Code, requires the lead agency to identify the “custodian of documents and other material” which constitutes the “record of proceedings” upon which the action on the project was based. The UC Davis Office of Campus Planning and Environmental Stewardship, or designee, is the custodian of such documents for the West Village Expansion component.

Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
3.1 Aesthetics			
<p>Impact 3.1-1: Result in a substantial adverse effect on a scenic vista. Development of the West Village Expansion could alter scenic vistas from the existing West Village development and surrounding areas across agricultural lands to the Coast Range, located west of UC Davis. However, new construction would be consistent with, and immediately adjacent to, existing development which has already altered long-distance views. Development of the remote parking area would not impede any views of a scenic vista. Therefore, this impact would be significant.</p>	S	No feasible mitigation measures are available.	SU
<p>Impact 3.1-2: Degrade existing visual character or quality. Development of the West Village Expansion would change the visual character of the West Village site and its surroundings from agricultural to an urban condition. However, the proposed West Village Expansion would generally be consistent with the existing character and quality of the existing, adjacent West Village development and would be subject to Design Review Committee approval. This impact is considered less than significant.</p>	LTS	No mitigation measures are necessary.	LTS
<p>Impact 3.1-3: Create a new source of light or glare. Development of the West Village Expansion would create new sources of substantial light or glare that could adversely affect day or nighttime views in the area. This impact is considered potentially significant.</p>	PS	<p>WVE Mitigation Measure 3.1-3a: Building surfaces. Implement 2018 LRDP Mitigation Measure 3.1-3a. 2018 LRDP Mitigation Measure 3.1-3a: Building surfaces. UC Davis shall require the use of textured, non-reflective exterior surfaces and non-reflective (mirrored) glass during design review of all new/redeveloped structures.</p> <p>WVE Mitigation Measure 3.1-3b: Lighting fixtures. Implement 2018 LRDP Mitigation Measure 3.1-3b. 2018 LRDP Mitigation Measure 3.1-3b: Lighting fixtures. UC Davis shall require all new outdoor lighting to utilize directional lighting methods with shielded and cutoff type light fixtures to minimize glare and upward directed lighting such that light spillover onto adjacent structures does not occur. Verification of inclusion in project design shall be provided at the time of design review.</p>	LTS
3.2 Agriculture and Forestry Resources			
<p>Impact 3.2-1: Convert agricultural uses, including lands designated as Important Farmlands, to non-agricultural use or involve changes in the existing environment that could result in conversion of Important Farmland to non-agricultural use. Development of the West Village Expansion would result in conversion of Important Farmland to non-agricultural uses. Because the West Village Expansion would result in a conversion of Important Farmland, this impact is considered significant.</p>	S	<p>WVE Mitigation Measure 3.2-1: Preservation of other campus agricultural land. Implement 2018 LRDP Mitigation 3.2-1. 2018 LRDP Mitigation Measure 3.2-1: Preservation of other campus agricultural land. Prior to conversion of Important Farmland to non-agricultural uses for individual projects proposed under the 2018 LRDP, UC Davis shall preserve, in perpetuity, an</p>	SU
<p style="text-align: center;">NI = No impact B = Beneficial LTS = Less than significant PS = Potential significant S = Significant SU = Significant and unavoidable</p>			

Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		equivalent acreage (up to 166 total acres for the 2018 LRDP) of Important Farmland within either Russell Ranch or lands adjacent to UC Davis west or south campus for agricultural purposes (including agricultural teaching and research). If acreage preserved through implementation of this mitigation measure is to also be considered in fulfillment of Mitigation Measure 3.5-4b (Compensation for loss of Swainson's hawk foraging habitat), it shall not be used as vineyards or orchards in perpetuity.	
<p>Impact 3.2-2: Result in other loss or conversion of existing agricultural uses. Development of the West Village Expansion could result in changes to existing agricultural uses. However, because the West Village Expansion is located near existing urban areas and would include an open space buffer between remaining agricultural land and the proposed development, it is unlikely that conversion of land outside of UC Davis campus boundaries would occur. This impact is considered less than significant.</p>	LTS	No mitigation measures are necessary.	LTS
3.3 Air Quality			
<p>Impact 3.3-1: Construction-generated emissions of ROG, nitrogen oxides, respirable particular matter, and fine particular matter. Construction-generated emissions would potentially exceed YSAQMD's significance thresholds during construction of the West Village Expansion component. Therefore, this impact would be potentially significant.</p>	PS	<p>WVE Mitigation Measure 3.3-1: Reduce construction-generated emissions of ROG, NO_x, and PM₁₀. Implement 2018 LRDP Mitigation Measure 3.3-1. Although prior to mitigation the West Village Expansion component would result in construction-related emissions that do not exceed ROG and NO_x emissions thresholds, the implementation of 2018 LRDP Mitigation Measure 3.3-1 would further reduce ROG and NO_x emissions along with PM₁₀ emissions under the construction engine and dust mitigation requirements. Engines with a minimum of a Tier 3 final rating or better are anticipated to decrease ROG, NO_x, and PM emissions compared to the default engine rating which includes a mix of lower tiered engines.</p> <p>2018 LRDP Mitigation Measure 3.3-1: Reduce construction-generated emissions of ROG, NO_x, and PM₁₀. Land use development project implemented under the 2018 LRDP shall require its prime construction contractor to implement the following measures:</p> <ol style="list-style-type: none"> 1) Use construction equipment with engines rated at Tier 3 or better prior to 2025 and Tier 4 or better beginning in 2025. 2) Use no- or low-solids content (i.e., no- or low-VOC) architectural coatings with a maximum VOC content of 50 g/L. 3) Limit passenger vehicles (i.e., non-vendor and non-hauling vehicles) from being driven on extended unpaved portions of project construction sites. UC Davis shall 	SU

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Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>provide off-site paved parking and compliant site-transport arrangements for construction workers, as needed.</p> <ol style="list-style-type: none"> 4) Water all active construction sites at least twice daily. 5) Plant vegetative ground cover in disturbed areas as soon as possible. 6) Apply soil stabilizers on unpaved roads and inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days). 7) Establish a 15 mile-per-hour speed limit for vehicles driving on unpaved portions of project construction sites. <p>UC Davis shall ensure that the implementation of this mitigation measure is consistent with the UC Davis stormwater program and the California Stormwater Quality Association <i>Stormwater BMP Handbook for New Development/Redevelopment</i> and does not result in off-site runoff as a result of watering for dust control purposes.</p>	
<p>Impact 3.3-2: Operational emissions of criteria air pollutants and precursor emissions. Routine activities at the West Village Expansion site would result in increased operational emissions of criteria air pollutants, but would not exceed YSAQMD thresholds. This impact would be less than significant.</p>	<p>LTS</p>	<p>WVE Mitigation Measure 3.3-2: Reduce emissions of ROG and NO_x. Implement 2018 LRDP Mitigation Measure 3.3-2. Although the project-level impact of operational emissions is less than significant, the WVE is still subject to 2018 LRDP Mitigation Measure 3.3-2 because the West Village Expansion component is part of the 2018 LRDP and the plan-level emissions are potentially significant under 2018 LRDP Impact 3.3-2. Reduction of project-level operational emissions will help reduce the impact of plan-level operational emissions.</p> <p>2018 LRDP Mitigation Measure 3.3-2: Reduce emissions of ROG and NO_x. UC Davis shall implement the following measures to reduce operational emissions to the extent feasible:</p> <ol style="list-style-type: none"> 1) Implement a program that incentivizes employees and students living off-campus to carpool, use EVs, or use public transit to commute to and from the campus. This program shall provide preferential parking to carpool vehicles, vanpool vehicles, and EVs. At a minimum, the program shall include a virtual or real “ride board” for employees and students to organize carpools and incentives for employees using public transit to commute to and from campus. The program shall include, but is not limited to, the following features. <ol style="list-style-type: none"> a) Limit parking capacity to meet on-site demand. Provide no more on-site parking spaces than necessary to accommodate the number of employees 	<p>LTS</p>

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Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>working at a project site and/or the number of residents living at a project site, as determined by the project size and design.</p> <p>b) Non-residential land uses with 20 or more on-site parking spaces shall dedicate preferential parking spaces to vehicles with more than one occupant and Zero Emission Vehicles (including battery electric vehicles and hydrogen fuel cell vehicles). The number of dedicated spaces should be no less than two spaces or 5 percent of the total parking spaces on the project site, whichever is greater. These dedicated spaces shall be in preferential locations such as near the main entrances to the buildings served by the parking lot and/or under the shade of a structure or trees. These spaces shall be clearly marked with signs and pavement markings. This measure shall not be implemented in a way that prevents compliance with requirements in the California Vehicle Code regarding parking spaces for disabled persons or disabled veterans.</p> <p>2) Work with Unitrans to convert natural gas buses to electric or lower-emission fuels or implement emission control technologies to reduce criteria air pollutant emissions from existing conditions.</p> <p>3) Implement a program that incentivizes vendors to reduce the emissions associated with vehicles and equipment serving the campus. The goal of the program is to reduce ROG and NO_x emissions from vendors trip by at least 50 percent by 2030 as compared to existing conditions. The program shall implement the following sub-measures to reduce vendor-related, mobile-source emissions.</p> <p>a) Incentivize the use of EVs or other clean fuels in their trucks and equipment to reduce ROG and NO_x emissions.</p> <p>b) Work with vendors, especially those using trucks, to reduce the number of vendor trips made to the campus through trip chaining, reducing the number of shipments, or other methods.</p> <p>4) Convert landscaping equipment to electric or alternatively-fueled equipment.</p>	
<p>Impact 3.3-3: Short-term construction emissions of toxic air contaminants. Construction-related activities would result in temporary, short-term project-generated emissions of TACs, particularly diesel particulate matter (PM). Sensitive receptors are located over 1,000 feet from any construction activity that would occur on the West Village Expansion site. Additionally, overall diesel PM emissions from construction would</p>	<p>LTS</p>	<p>WVE Mitigation Measure 3.3-3: Reduce short-term construction-generated TAC emissions. Implement 2018 LRDP Mitigation Measure 3.3-4. Although prior to mitigation the West Village Expansion component would result in less-than-significant impacts related to TAC emissions during construction, the implementation of 2018 LRDP Mitigation Measure 3.3-4 would further reduce construction-related TAC emissions under the construction engine and idling requirements. Engines with a</p>	<p>LTS</p>

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
<p>not exceed YSAQMD health risk thresholds associated with TACs. This impact would be less than significant.</p>		<p>minimum of a Tier 3 final rating or better are anticipated to decrease PM emissions, which include TACs, compared to the default engine rating which includes a mix of lower tiered engines. Construction activity would already be located over 150 feet from the nearest sensitive receptor and outdoor recreational facilities.</p> <p>2018 LRDP Mitigation Measure 3.3-4: Reduce short-term construction-generated TAC emissions. UC Davis shall require construction activities under the 2018 LRDP to follow YSAQMD recommended mitigation measures for construction exhaust emissions. To ensure sensitive receptors are not exposed to substantial TAC concentrations, UC Davis shall require its prime construction contractor to implement the following measures prior to project approval:</p> <ol style="list-style-type: none"> 1) Locate operation of diesel-powered construction equipment as far away from sensitive receptors as possible; 2) Limit excess equipment idling to no more than 5 minutes; 3) Use construction equipment with engine ratings of Tier 3 or better (included in Mitigation Measure 3.3-1); and 4) Use electric, compressed natural gas, or other alternatively fueled construction equipment instead of the diesel counterparts, where available. <p>In addition, for any construction site located within 150 feet of a childcare center or park/recreation field, UC Davis shall schedule the use of heavy construction equipment to times when children are not present. Alternatively, UC Davis shall arrange for temporary relocation of childcare facilities to areas outside of a 150-foot buffer or temporarily close available park space within the 150-foot buffer during operation of heavy construction equipment.</p>	

3.4 Archaeological, Historical, and Tribal Cultural Resources

<p>Impact 3.4-1: Impacts to unique archaeological resources. Although the pedestrian surveys conducted for the existing West Village site and the remote parking area revealed no known archaeological sites, two sites were revealed in the archaeological records search. In addition, ground-disturbing activities could result in discovery or damage of as yet undiscovered archaeological resources as defined in CEQA Guidelines Section 15064.5. This would be a potentially significant impact.</p>	<p>PS</p>	<p>WVE Mitigation Measure 3.4-1: Identify and protect archaeological resources. Implement 2018 LRDP Mitigation Measure 3.4-1a(1) and 2018 LRDP Mitigation Measure 3.4-1a(3). If the site is determined to contain a unique archaeological resource(s), implement 2018 LRDP Mitigation Measure 3.4-1(b).</p> <p>2018 LRDP Mitigation Measure 3.4-1a: Identify and protect unknown archaeological resources. During project-specific environmental review of development under the 2018 LRDP, the campus shall define each project's area of effect for archaeological resources.</p>	<p>LTS</p>
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Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>The campus shall determine the potential for the project to result in cultural resource impacts, based on the extent of ground disturbance and site modification anticipated for the proposed project. The campus shall determine the level of archaeological investigation that is appropriate for the project site and activity, as follows:</p> <p>Minimum: excavation less than 18 inches deep and less than 1,000 sf of disturbance (e.g., a trench for lawn irrigation, tree planting, etc.). Implement Mitigation Measure 3.4-1a(1).</p> <p>Moderate: excavation below 18 inches deep and/or over a large area on any site that has not been characterized as sensitive and is not suspected to be a likely location for archaeological resources. Implement Mitigation Measure 3.4-1a(1) and (2).</p> <p>Intensive: excavation below 18 inches and/or over a large area on any site that is within the zone of archaeological sensitivity identified in Exhibit 3.4-1, or that is adjacent to a recorded archaeological site. Implement Mitigation Measure 3.4-1a(1), (2), and (3).</p> <p>UC Davis shall implement the following steps to identify and protect archaeological resources that may be present in the project's area of effects:</p> <ol style="list-style-type: none"> 1) For project sites at all levels of investigation, contractor crews shall be required to attend a training session prior to the start of earth moving, regarding how to recognize archaeological sites and artifacts and what steps shall be taken to avoid impacts to those sites and artifacts. In addition, campus employees whose work routinely involves disturbing the soil shall be informed how to recognize evidence of potential archaeological sites and artifacts. Prior to disturbing the soil, contractors shall be notified that they are required to watch for potential archaeological sites and artifacts and to notify the UC Davis Office of Campus Planning and Environmental Stewardship if any are found. In the event of a find, the campus shall implement item (5), below. 2) For project sites requiring a moderate or intensive level of investigation, a surface survey shall be conducted by a qualified archaeologist once the area of ground disturbance has been identified and prior to soil disturbing activities. For sites requiring moderate investigation, in the event of a surface find, intensive investigation will be implemented, as per item (3), below. Irrespective of findings, the qualified archaeologist shall, in consultation with the UC Davis Office of Campus Planning and Environmental Stewardship, develop an archaeological monitoring plan to be implemented during the construction phase of the project. 	

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Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>If the project site is located within the zone of archaeological sensitivity or it is recommended by the archaeologists, the campus shall notify the appropriate Native American tribe and extend an invitation for monitoring. The frequency and duration of monitoring shall be adjusted in accordance with survey results, the nature of construction activities, and results during the monitoring period. A written report of the results of the monitoring will be prepared and filed with the appropriate Information Center of the California Historical Resources Information System. In the event of a discovery, the campus shall implement item (5), below.</p> <p>3) For project sites requiring intensive investigation, irrespective of surface finds, the campus shall retain a qualified archaeologist to conduct a subsurface investigation of the project site, to ascertain whether buried archaeological materials are present and, if so, the extent of the deposit relative to the project's area of effects. If an archaeological deposit is discovered, the archaeologist will prepare a site record and a written report of the results of investigations and filed with the appropriate Information Center of the California Historical Resources Information System.</p> <p>If it is determined that the resource extends into the project's area of effects, the resource will be evaluated by a qualified archaeologist, who will determine whether it qualifies as a historical resource or a unique archaeological resource under the criteria of CEQA Guidelines § 15064.5. If the resource does not qualify, or if no resource is present within the project's area of effects, this will be noted in the environmental document and no further mitigation is required unless there is a discovery during construction. In the event of a discovery item (5), below shall be implemented.</p> <p>4) If archaeological material within the project's area of effects is determined to qualify as an historical resource or a unique archaeological resource (as defined by CEQA), the UC Davis Office of Campus Planning and Environmental Stewardship shall consult with the qualified archaeologist to consider means of avoiding or reducing ground disturbance within the site boundaries, including minor modifications of building footprint, landscape modification, the placement of protective fill, the establishment of a preservation easement, or other means that will permit avoidance or substantial preservation in place of the resource. If avoidance or substantial preservation in place is not possible, the campus shall implement Mitigation Measure 3.4-1b.</p>	

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		<p>5) If archaeological material is discovered during construction (whether or not an archaeologist is present), all soil disturbing work within 100 feet of the find shall cease. The UC Davis Office of Campus Planning and Environmental Stewardship shall contact a qualified archaeologist to provide and implement a plan for survey, subsurface investigation as needed to define the deposit, and assessment of the remainder of the site within the project area to determine whether the resource is significant and would be affected by the project. Mitigation Measure 3.4-1a, steps (3) and (4) shall be implemented.</p> <p>2018 LRDP Mitigation Measure 3.4-1b: Protect known unique archaeological resources.</p> <p>For an archaeological site that has been determined by a qualified archaeologist to qualify as a unique archaeological resource through the process set forth under Mitigation Measure 3.4-1a, and where it has been determined under Mitigation Measure 3.4-1a that avoidance or preservation in place is not feasible, a qualified archaeologist, in consultation with the UC Davis Office of Campus Planning and Environmental Stewardship, and Native American tribes as applicable, shall:</p> <ol style="list-style-type: none"> 1) Prepare a research design and archaeological data recovery plan for the recovery that will capture those categories of data for which the site is significant, and implement the data recovery plan prior to or during development of the site. 2) Perform appropriate technical analyses, prepare a full written report and file it with the appropriate information center, and provide for the permanent curation of recovered materials. 3) If, in the opinion of the qualified archaeologist and in light of the data available, the significance of the site is such that data recovery cannot capture the values that qualify the site for inclusion on the CRHR, the UC Davis Office of Campus Planning and Environmental Stewardship shall reconsider project plans in light of the high value of the resource, and implement more substantial modifications to the proposed project that would allow the site to be preserved intact, such as project redesign, placement of fill, or project relocation or abandonment. If no such measures are feasible, the campus shall implement Mitigation Measure 3.4-1c. 	

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation																																																																						
3.5 Biological Resources																																																																									
<p>Impact 3.5-1: Disturbance or loss of special-status plants. Implementation of the West Village Expansion component would result in the conversion of approximately 38 acres of agricultural land and ruderal/annual grassland habitat potentially suitable for special-status plants. Loss of special-status plants would be a potentially significant impact.</p>	PS	<p>WVE Mitigation Measure 3.5-1a: Special-status plant surveys. Implement 2018 LRDP Mitigation Measures 3.5-1a.</p> <p>2018 LRDP Mitigation Measure 3.5-1a: Special-status plant surveys. Prior to approval of specific projects under the 2018 LRDP, UC Davis shall have a qualified biologist evaluate the potential for special-status plant habitat at sites containing undeveloped, ruderal grassland habitat. Should suitable habitat for any of the species identified in Table 3.5-4 occur, a qualified botanist, at UC Davis's direction, shall conduct protocol-level surveys for the potentially occurring special-status plants that could be removed or disturbed by project activities during the blooming period for the plant(s) that could be present on-site. Protocol-level surveys will be conducted in accordance with Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2009). If special-status plants are not found, the botanist will document the findings in a letter report to CDFW and further mitigation will not be required.</p>	LTS																																																																						
<p>Table 3.5-4 Normal Blooming Period for Special-Status Plants with Potential to Occur within the Plan Area</p>																																																																									
<table border="1"> <thead> <tr> <th data-bbox="1100 950 1354 982">Species</th> <th data-bbox="1354 950 1402 982">Feb</th> <th data-bbox="1402 950 1451 982">Mar</th> <th data-bbox="1451 950 1499 982">Apr</th> <th data-bbox="1499 950 1547 982">May</th> <th data-bbox="1547 950 1596 982">Jun</th> <th data-bbox="1596 950 1644 982">Jul</th> <th data-bbox="1644 950 1692 982">Aug</th> <th data-bbox="1692 950 1740 982">Sep</th> <th data-bbox="1740 950 1822 982">Oct</th> </tr> </thead> <tbody> <tr> <td data-bbox="1100 982 1354 1079">Ferris' milk-vetch <i>Astragalus tener</i> var. <i>ferrisiae</i></td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td data-bbox="1100 1079 1354 1144">alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i></td> <td></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td data-bbox="1100 1144 1354 1242">heartscale <i>Atriplex cordulata</i> var. <i>cordulata</i></td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <td data-bbox="1100 1242 1354 1307">brittlescale <i>Atriplex depressa</i></td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <td data-bbox="1100 1307 1354 1372">round-leaved filaree <i>California macrophylla</i></td> <td></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td data-bbox="1100 1372 1354 1442">palmate-bracted bird's beak <i>Cordylanthus palmatus</i></td> <td></td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> </tr> </tbody> </table>				Species	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Ferris' milk-vetch <i>Astragalus tener</i> var. <i>ferrisiae</i>										alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>										heartscale <i>Atriplex cordulata</i> var. <i>cordulata</i>										brittlescale <i>Atriplex depressa</i>										round-leaved filaree <i>California macrophylla</i>										palmate-bracted bird's beak <i>Cordylanthus palmatus</i>									
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Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures										Significance after Mitigation				
		San Joaquin spearscale <i>Extriplex joaquinana</i>			■	■	■	■	■	■	■	■	■	■	■	
		Northern California black walnut <i>Juglans hindsii</i>			■	■										
		Heckard's pepper-grass <i>Lepidium latipes</i> var. <i>heckardii</i>		■	■	■										
		Baker's navarretia <i>Navarretia leucocephala</i> ssp. <i>bakeri</i>			■	■	■	■	■							
		California alkali grass <i>Puccinellia simplex</i>		■	■	■										
		Solano grass or Crampton's tuctoria <i>Tuctoria mucronata</i>			■	■	■	■	■	■						
Source: Data compiled by Ascent Environmental in 2017																
<p>WVE Mitigation Measure 3.5-1b: Special-status plant avoidance. Implement 2018 LRDP Mitigation Measures 3.5-1b.</p> <p>2018 LRDP Mitigation Measure 3.5-1b: Special-status plant avoidance. If special-status plant species are found on a particular project site and are located outside of the permanent footprint of any proposed structures/site features and can be avoided, UC Davis will establish and maintain a 40-foot protective buffer around special-status plants to be retained to ensure avoidance.</p> <p>WVE Mitigation Measure 3.5-1c: Special-status plant avoidance. Implement 2018 LRDP Mitigation Measures 3.5-1c.</p> <p>Mitigation Measure 3.5-1c: Special-status plant impact minimization measures. If special-status plants are found during rare plant surveys and cannot be avoided, UC Davis will consult with CDFW and USFWS, as appropriate depending on species status, to determine the appropriate compensation to achieve no net loss of occupied habitat or individuals. Mitigation measures may include, but are not limited to, preserving and enhancing existing populations, creating off-site populations on</p>																

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Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>mitigation sites through seed collection or transplantation at a 1:1 ratio, and restoring or creating suitable habitat in sufficient quantities to achieve no net loss of occupied habitat or individuals. Potential mitigation sites could include suitable locations within or outside of the campus. UC Davis will develop and implement a site-specific mitigation strategy describing how unavoidable losses of special-status plants will be compensated. Success criteria for preserved and compensatory populations will include:</p> <ol style="list-style-type: none"> 1) The extent of occupied area and plant density (number of plants per unit area) in compensatory populations will be equal to or greater than the affected occupied habitat. 2) Compensatory and preserved populations will be self-producing. Populations will be considered self-producing when: <ol style="list-style-type: none"> i) plants reestablish annually for a minimum of five years with no human intervention such as supplemental seeding; and ii) reestablished and preserved habitats contain an occupied area and flower density comparable to existing occupied habitat areas in similar habitat types in the project vicinity. 3) If off-site mitigation includes dedication of conservation easements, purchase of mitigation credits, or other off-site conservation measures, the details of these measures will be included in the mitigation plan, including information on responsible parties for long-term management, conservation easement holders, long-term management requirements, success criteria such as those listed above and other details, as appropriate to target the preservation of long term viable populations. 	
<p>Impact 3.5-2: Impacts to Swainson’s hawk and other nesting raptors. Construction activities such as ground disturbance, construction vehicles, and presence of construction crews could disturb nesting Swainson’s hawks or other raptors potentially resulting in nest abandonment or failure, and mortality of chicks and eggs. This impact would be potentially significant.</p>	<p>PS</p>	<p>WVE Mitigation Measure 3.5-2a: Avoidance of Swainson’s hawk and other nesting raptors. Implement 2018 LRDP Mitigation Measures 3.5-4a.</p> <p>2018 LRDP Mitigation Measure 3.5-4a: Avoidance of Swainson’s hawk and other nesting raptors. For any projects implemented under the 2018 LRDP that would require the removal of mature trees, the following measures will be implemented prior to initiation of construction to avoid, minimize, and fully mitigate impacts to Swainson’s hawk, as well as other special-status raptors:</p> <ol style="list-style-type: none"> 1) Before tree removal occurs, a qualified biologist will determine whether it has been previously recorded or used as a Swainson’s hawk or other special-status 	<p>LTS</p>

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Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>raptors nest tree. If it is not known to have supported Swainson’s hawks or other special-status raptors in the past, the tree will be removed when no active nests are present, generally between September 2 and February 14 if feasible. If the tree to be removed is known to have supported nesting Swainson’s hawk or other special-status raptors in the past, UC Davis will implement measures to prevent the potential the net loss of Swainson’s hawk or other special-status raptors territories, which may include providing alternative nest trees or protected habitat. UC Davis will consult with CDFW prior to removal of the nest tree and obtain take authorization under Section 2081 of the Fish and Game Code if needed.</p> <p>2) For construction activities, including tree removal, that begin between February 15 and September 1, qualified biologists will conduct preconstruction surveys for Swainson’s hawk and other nesting raptors to identify active nests on and within 0.5 mile of the project site. The surveys will be conducted before the beginning of any construction activities between February 15 and September 1.</p> <p>3) Impacts to nesting Swainson’s hawks and other raptors will be avoided by establishing appropriate buffers around active nest sites identified during preconstruction raptor surveys. Project activity will not commence within the buffer areas until a qualified biologist has determined, in coordination with CDFW, that the young have fledged, the nest is no longer active, or that reducing the buffer would not likely result in nest abandonment. CDFW guidelines recommend implementation of 0.25-mile-wide buffer for Swainson’s hawk and 500 feet for other raptors, but the size of the buffer may be adjusted if a qualified biologist and UC Davis, in consultation with CDFW, determine that such an adjustment would not be likely to adversely affect the nest. Monitoring of the nest by a qualified biologist during and after construction activities will be required if the activity has potential to adversely affect the nest.</p> <p>4) Trees will not be removed during the breeding season for nesting raptors unless a survey by a qualified biologist verifies that there is not an active nest in the tree.</p> <p>WVE Mitigation Measure 3.5-2b: Compensation for loss of Swainson’s hawk foraging habitat. Implement 2018 LRDP Mitigation Measures 3.5-4b.</p>	

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Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>2018 LRDP Mitigation Measure 3.5-4b: Compensation for loss of Swainson’s hawk foraging habitat. Project implementation under the 2018 LRDP includes conversion of up to approximately 270 acres of suitable foraging habitat for Swainson’s hawk, including 128 acres of agricultural land and 143 acres of ruderal grassland. UC Davis shall mitigate the loss of 270 acres of suitable foraging habitat through establishment of mitigation lands (grassland habitat or agricultural land) near existing mitigation land, potentially at Russell Ranch, at a 1:1 ratio. Surplus acreage post-implementation of mitigation under the 2003 LRDP may be credited towards development under the 2018 LRDP in fulfillment of this mitigation. This mitigation plan is consistent with the Yolo Habitat Conservancy’s Swainson’s Hawk Interim Mitigation Fee Program which requires a 1:1 replacement ratio of foraging habitat acreage.</p>	
<p>Impact 3.5-3: Impacts to burrowing owl. Construction activities, such as ground disturbance, construction vehicles, and presence of construction crews, could disturb nesting burrowing owls (<i>Athene cunicularia</i>), potentially resulting in nest abandonment or failure or mortality of chicks and eggs. Implementation of this component includes conversion of approximately 39 acres of undeveloped ruderal grassland to urban uses, thus would result in the permanent loss of suitable habitat for burrowing owl. This impact would be potentially significant.</p>	<p>PS</p>	<p>WVE Mitigation Measure 3.5-3: Burrowing owl surveys and mitigation for loss of occupied habitat. Implement 2018 LRDP Mitigation Measures 3.5-5a and 3.5-5b.</p> <p>2018 LRDP Mitigation Measure 3.5-5a: Burrowing owl avoidance and compensation. For any construction projects implemented under the 2018 LRDP, the following measures will be implemented prior to initiation of construction to reduce impacts on burrowing owl:</p> <ol style="list-style-type: none"> 1) UC Davis will retain a qualified biologist to conduct focused breeding and nonbreeding season surveys for burrowing owls in areas of suitable habitat (e.g., ruderal grassland, annual grassland, agricultural land, roadsides) on and within 1,500 feet of pending construction activities for a project under the 2018 LRDP. Surveys will be conducted prior to the start of construction activities and in accordance with Appendix D of CDFW’s <i>Staff Report on Burrowing Owl Mitigation</i> (CDFW 2012). 2) If no occupied burrows are found, a letter report documenting the survey methods and results will be submitted to CDFW and no further mitigation will be required. 3) If an active burrow is found within 1,500 feet of pending construction activities that would occur during the nonbreeding season (September 1 through January 31), UC Davis will consult with CDFW regarding protection buffers to be established around the occupied burrow and maintained throughout construction. If occupied burrows are present that cannot be avoided or 	<p>LTS</p>

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Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>adequately protected with a no-disturbance buffer, a burrowing owl exclusion plan will be developed, as described in Appendix E of CDFW's 2012 Staff Report. Burrowing owls will not be excluded from occupied burrows until the project's burrowing owl exclusion plan is approved by CDFW. The exclusion plan will include a plan for creation, maintenance, and monitoring of artificial burrows in suitable habitat.</p> <p>4) If an active burrow is found during the breeding season (February 1 through August 31), occupied burrows will not be disturbed and will be provided with a protective buffer unless a qualified biologist verifies through noninvasive means that either: (1) the birds have not begun egg laying, or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. The size of the buffer will depend on the time of year and level disturbance as outlined in the CDFW Staff Report (CDFW 2012). The size of the buffer may be reduced if a broad-scale, long-term, monitoring program acceptable to CDFW is implemented so that burrowing owls are not detrimentally affected. Once the fledglings are capable of independent survival, the owls can be evicted and the burrow can be destroyed per the terms of a CDFW-approved burrowing owl exclusion plan developed in accordance with Appendix E of CDFW's 2012 Staff Report.</p> <p>5) If active burrowing owl nests are found on the project site and are destroyed by project implementation, UC Davis will mitigate the loss of occupied habitat in accordance with guidance provided in the CDFW 2012 Staff Report, which states that permanent impacts to nesting, occupied and satellite burrows, and burrowing owl habitat will be mitigated such that habitat acreage and number of burrows are replaced through permanent conservation of comparable or better habitat with similar vegetation communities and burrowing mammals (e.g., ground squirrels) present to provide for nesting, foraging, wintering, and dispersal. UC Davis will retain a qualified biologist to develop a burrowing owl mitigation and management plan that incorporates the following goals and standards:</p> <p>a) Mitigation lands will be selected based on comparison of the habitat lost to the compensatory habitat, including type and structure of habitat, disturbance levels, potential for conflicts with humans, pets, and other wildlife, density of burrowing owls, and relative importance of the habitat to the species range wide. Mitigation for loss of burrowing owl habitat under the 2003 LRDP</p>	

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Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>included establishment of mitigation lands within Russell Ranch, which is a feasible option for future mitigation under the 2018 LRDP.</p> <p>b) If feasible, mitigation lands will be provided adjacent or proximate to the project site (e.g. Russell Ranch) so that displaced owls can relocate with reduced risk of take. Feasibility of providing mitigation adjacent or proximate to the project site depends on availability of sufficient suitable habitat to support displaced owls that may be preserved in perpetuity.</p> <p>c) If suitable habitat is not available for conservation adjacent or proximate to the project site, mitigation lands will be focused on consolidating and enlarging conservation areas outside of urban and planned growth areas and within foraging distance of other conservation lands. Mitigation may be accomplished through purchase of mitigation credits at a CDFW-approved mitigation bank, if available. If mitigation credits are not available from an approved bank and mitigation lands are not available adjacent to other conservation lands, alternative mitigation sites and acreage will be determined in consultation with CDFW.</p> <p>d) If mitigation is not available through an approved mitigation bank and will be completed through permittee-responsible conservation lands, the mitigation plan will include mitigation objectives, site selection factors, site management roles and responsibilities, vegetation management goals, financial assurances and funding mechanisms, performance standards and success criteria, monitoring and reporting protocols, and adaptive management measures. Success will be based on the number of adult burrowing owls and pairs using the site and if the numbers are maintained over time. Measures of success, as suggested in the 2012 Staff Report, will include site tenacity, number of adult owls present and reproducing, colonization by burrowing owls from elsewhere, changes in distribution, and trends in stressors.</p> <p>2018 LRDP Mitigation Measure 3.5-5b: Compensation for loss of burrowing owl habitat Implement 2018 LRDP Mitigation Measure 3.5-4b.</p>	
<p>Impact 3.5-4: Impacts to other special-status birds. Implementation of the West Village Expansion component would include conversion of approximately 28 acres of agricultural habitat (grain fields). Additionally, approximately 39 acres of ruderal grassland would be converted to urban uses. If tricolored blackbird</p>	<p>PS</p>	<p>WVE Mitigation Measure 3.5-4: Tricolored blackbird and other bird nest survey. Implement 2018 LRDP Mitigation Measure 3.5-6.</p>	<p>LTS</p>

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
<p>(<i>Agelaius tricolor</i>) or other birds are nesting in these habitats at the time of implementation of this component, nests could be destroyed, resulting in loss of eggs, young, or adults. This impact would be potentially significant.</p>		<p>2018 LRDP Mitigation Measure 3.5-6: Tricolored blackbird avoidance. With respect to any construction activities undertaken for a particular project under the 2018 LRDP, the following measures will be implemented to avoid or minimize loss of active tricolored blackbird or other bird nests:</p> <ol style="list-style-type: none"> 1) To minimize the potential for loss of tricolored blackbird or other bird nests, vegetation removal activities will commence during the nonbreeding season (September 1 - January 31). If all suitable nesting habitat is removed during the nonbreeding season, no further mitigation would be required. 2) Prior to removal of any vegetation, or any ground-disturbing activities between February 1 and August 31, a qualified biologist will conduct preconstruction surveys for nests on any or vegetation slated for removal, as well as for potential tricolored blackbird nesting habitat. The surveys will be conducted no more than 14 days before construction commences. If no active nests or tricolored blackbird colonies are found during focused surveys, no further action under this measure will be required. If active nests are located during the preconstruction surveys, the biologist will notify CDFW. If necessary, modifications to the project design to avoid removal of occupied habitat while still achieving project objectives will be evaluated and implemented to the extent feasible. If avoidance is not feasible or conflicts with project objectives, construction will be prohibited within a minimum of 100 feet of the outer edge of the nesting colony to avoid disturbance until the nest colony is no longer active. 	
<p>Impact 3.5-5: Impacts to valley elderberry longhorn beetle. Construction activities associated with the West Village Expansion component, such as vegetation removal, could result in the loss of elderberry shrubs, which are the primary habitat for the federally threatened valley elderberry longhorn beetle (<i>Desmocerus californicus dimorphus</i>). Removal of or damage to elderberry shrubs occupied by valley elderberry longhorn beetle would be a significant impact.</p>	<p>S</p>	<p>WVE Mitigation Measure 3.5-5: Valley elderberry longhorn beetle avoidance. Implement 2018 LRDP Mitigation Measure 3.5-7.</p> <p>2018 LRDP Mitigation Measure 3.5-7: Valley elderberry longhorn beetle avoidance. The following measures will be implemented to avoid or minimize loss of elderberry shrubs, and valley elderberry longhorn beetle as a result of construction activities associated with the 2018 LRDP:</p> <ol style="list-style-type: none"> 1) Prior to initiation of construction activities for a particular project under the 2018 LRDP, a qualified biologist will conduct surveys for valley elderberry longhorn beetle according to the protocol outlined in USFWS <i>Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle</i> (USFWS 2017b). The biologist will determine if there is a riparian area, elderberry shrubs, or known valley elderberry longhorn beetle records within 800 meters (2,526 feet) of the project site, and whether the project site is continuous with a historical riparian corridor. 	<p>LTS</p>

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Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>If the project site does not contain riparian habitat and does not contain elderberry shrubs within 50 feet, then no further action is required.</p> <p>2) If the project site does not contain riparian habitat, but does contain elderberry shrubs, then the elderberry shrubs will be inspected for valley elderberry longhorn beetle exit holes. If exit holes are not present the project applicant will consult with USFWS to discuss project details and potential impacts to elderberry shrubs, and will consider additional information, including occurrences of valley elderberry longhorn beetle within 800 meters of the project site, and proximity of the project site to existing and historic riparian corridors.</p> <p>3) If riparian habitat is present within the project site and elderberry shrubs are present within 50 feet, then it is likely that the site is occupied by valley elderberry longhorn beetle. If the project site contains riparian habitat and elderberry shrubs are not present within 50 feet, the project applicant will consult with USFWS to discuss project details and potential impacts to elderberry shrubs, as presence of riparian habitat is indicative of historic valley elderberry longhorn beetle occupancy.</p> <p>4) Impacts to valley elderberry longhorn beetle will be avoided and minimized by following the Conservation Measures outlined in the USFWS 2017 Framework for cases where elderberry shrubs can be retained and protected within 165 feet of the project footprint.</p> <p>5) If elderberry shrubs are 165 feet or more from project activities, direct or indirect impacts are not expected. Shrubs will be protected during construction by establishing and maintaining a high visibility fence at least 165 feet from the drip line of each elderberry shrub.</p> <p>6) If elderberry shrubs can be retained within the project footprint, project activities may occur up to 20 feet from the dripline of elderberry shrubs if precautions are implemented to minimize the potential for indirect impacts. Specifically, these minimization measures include:</p> <ul style="list-style-type: none"> a) All areas to be avoided during construction activities will be fenced or flagged as close to construction limits as possible. b) A minimum avoidance area of at least 20 feet from the dripline of each elderberry plant will be maintained to avoid direct impacts that could damage or kill the plant. c) A qualified biologist will provide training for all contractors, work crews, and any on-site personnel on the status of valley elderberry longhorn beetle, its 	

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Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>host plant and habitat, the need to avoid damaging the elderberry shrubs, and the possible penalties for non-compliance.</p> <p>d) A qualified biologist will monitor the work area at project-appropriate intervals to assure that all avoidance and minimization measures are implemented. The amount and duration of monitoring will depend on the project specifics and will be discussed with a USFWS biologist.</p> <p>e) As much as feasible, all activities that could occur within 165 feet of an elderberry shrub will be conducted outside of the flight season of the valley elderberry longhorn beetle (March - July).</p> <p>f) Trimming of elderberry shrubs will occur between November and February and will avoid removal of any branches or stems that are greater than or equal to 1 inch in diameter to avoid and minimize adverse effects to valley elderberry longhorn beetle.</p> <p>g) Project activities, such as truck traffic or other use of machinery, will not create excessive dust on the project site, such that the growth or vigor of elderberry shrubs is adversely affected. Enforcement of a speed-limit and watering dirt roadways are potential methods to minimize excessive dust creation.</p> <p>h) Herbicides will not be used within the drip-line of any elderberry shrub. Insecticides will not be used within 98 feet of any elderberry shrub. All chemicals will be applied using a backpack sprayer or similar direct application method. Mechanical weed removal within the drip-line of any elderberry shrub will be limited to the season when adults are not active (August - February) and will avoid damaging the elderberry.</p> <p>i) Erosion control will be implemented, and the affected area will be re-vegetated with appropriate native plants.</p> <p>7) If elderberry shrubs cannot be avoided, compliance with the ESA and consultation with USFWS is required and may involve acquiring an incidental take permit through Section 10, or a take exemption through Section 7. All elderberry shrubs with stems greater than 1 inch in diameter that cannot be avoided or have been adversely affected by indirect damage to stems of the entire shrub will be transplanted.</p> <p>8) No elderberry shrub will be removed or transplanted until authorization has been issued by USFWS and the project applicant has abided by all pertinent conditions of the incidental take permit or biological opinion.</p>	

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		9) Relocation of existing elderberry shrubs and planting of new elderberry seedlings and associated riparian species will be implemented according to the Framework (USFWS 2017b). The Framework uses presence or absence of exit holes, and whether the affected elderberry shrubs are located in riparian habitat to determine the number of elderberry seedlings or cuttings and associated riparian vegetation that would need to be planted as compensatory mitigation for affected valley elderberry longhorn beetle habitat. Compensatory mitigation may include purchasing credits at a USFWS-approved conservation bank, providing on-site mitigation, or establishing and protecting habitat for valley elderberry longhorn beetle.	
<p>Impact 3.5-6: Impacts to American badger. Construction activities, including conversion of agricultural land to urban uses, could result in direct loss of American badger (<i>Taxidea taxus</i>) if occupied dens are on either the West Village Expansion site or remote parking area. This impact would be potentially significant.</p>	PS	<p>WVE Mitigation Measure 3.5-6: Preconstruction survey for American badger and establishment of appropriate buffers. Implement 2018 LRDP Mitigation Measure 3.5-8a.</p> <p>2018 LRDP Mitigation Measure 3.5-8a: American badger preconstruction surveys and avoidance. Prior to the commencement of construction within suitable grassland or agricultural habitat, a qualified wildlife biologist will conduct surveys of the ruderal grassland habitat and grain fields slated for conversion on-site to identify any American badger burrows/dens. These surveys will be conducted not more than 30 days prior to the start of construction. If occupied burrows are not found, further mitigation will be not required. If occupied burrows are found, impacts to active badger dens will be avoided by establishing exclusion zones around all active badger dens, within which construction related activities will be prohibited until denning activities are complete or the den is abandoned. A qualified biologist will monitor each den once per week to track the status of the den and to determine when a den area has been cleared for construction.</p>	LTS
<p>Impact 3.5-7: Impacts to special-status mammal species. Construction activities, including removal of large walnut trees, could result in direct loss of pallid bat (<i>Antrozous pallidus</i>), if present within trees in the remote parking area. This impact would be potentially significant.</p>	PS	<p>WVE Mitigation Measure 3.5-7: Bat preconstruction surveys, exclusion, and mitigation. Implement 2018 LRDP Mitigation Measure 3.5-8b.</p> <p>2018 LRDP Mitigation Measure 3.5-8b: Bat preconstruction surveys, exclusion, and mitigation. The following mitigation measure will apply to construction of the project to reduce impacts on bats:</p>	LTS

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Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		1) Before commencing any structure or tree removal activities, a qualified biologist will conduct surveys for roosting bats. If evidence of bat use is observed, the species and number of bats using the roost will be determined. Bat detectors may be used to supplement survey efforts. If no evidence of bat roosts is found, then no further study and no mitigation will be required. 2) If pallid bats are found, bats will be excluded from the roosting site before the tree or structure is removed. Exclusion efforts may be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young). Once, it is confirmed that bats are not present in the original roost site, the tree or structure may be removed. A mitigation program identifying exclusion methods and roost removal procedures will be developed by a qualified biologist in consultation with CDFW before implementation.	
3.6 Energy			
<p>Impact 3.6-1: Result in unnecessary, inefficient, and wasteful use of energy. Although development of new student housing at the West Village Expansion site would result in energy consumption during construction and operation, the proposed development would exceed the most current energy-efficient standard (i.e., Title 24) by over 20 percent and generate 93 percent of electricity demand through on-site solar photovoltaic panels. Therefore, the West Village Expansion would not result in wasteful, inefficient, and unnecessary consumption of energy. Thus, the impact would be less than significant.</p>	LTS	No mitigation measures are necessary.	LTS
3.7 Geology, Soils, and Seismicity			
<p>Impact 3.7-1: Potential for soil erosion associated with long-term operations and maintenance activities. Development and occupancy of the West Village Expansion site and the remote parking area could change the pattern of surface runoff or stormwater management such that areas that are susceptible to erosion are exposed to more runoff and experience increased rates of erosion. Large quantities of overland flow could result in rill or gully erosion and decrease soil stability and productivity. This would be a potentially significant impact.</p>	PS	<p>WVE Mitigation Measure 3.7-1: Manage runoff to reduce soil erosion. Implement 2018 LRDP Mitigation Measure 3.7-4.</p> <p>2018 LRDP Mitigation Measure 3.7-4: Manage stormwater flows to reduce soil erosion. Prior to approval of individual projects proposed under the 2018 LRDP, UC Davis shall conduct a drainage study in the vicinity of the site proposed for development to determine if the development could produce additional runoff that may exceed the capacity of campus stormwater infrastructure, cause localized ponding to worsen, or increase the potential for property damage from flooding. Recommendations identified in the drainage study shall be incorporated into project design such that any projected increase in surface water runoff is detained/retained in accordance with</p>	LTS

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Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		applicable requirements and does not exceed current flow rates. Measures may include, but are not limited to, installation of detention/retention basins to capture and manage water, installation of water-retaining landscaping or green-roof features, modifications to existing stormwater capture/conveyance systems, and/or other measures at project-level or campus-wide to capture and manage stormwater.	
3.8 Greenhouse Gas Emissions and Climate Change			
Consistent with the GHG analysis in Volume 1 of this EIR, there are no potentially significant impacts identified related to greenhouse gas emissions for the West Village Expansion component of the 2018 LRDP. No project-specific mitigation is necessary.			
3.9 Hazards and Hazardous Materials			
<p>Impact 3.9-1: Result in the release of hazardous materials from a site of known or potential contamination.</p> <p>Due to the proximity of documented contamination sites, historical land use, and proximity to a major roadway, there is potential for contamination to be encountered during construction. Because the project site could be affected by undocumented contamination that has not been characterized or remediated, this would be a potentially significant impact.</p>	PS	<p>WVE Mitigation Measure 3.9-1a: Minimize the site-specific risk of an accidental release of hazardous substances. Implement 2018 LRDP Mitigation Measures 3.9-2a.</p> <p>2018 LRDP Mitigation Measure 3.9-2a: Site-specific investigation and work plan implementation. Where initial investigations indicate the potential for contamination, UC Davis shall conduct soil sampling within the boundaries of the plan area prior to initiation of grading or other groundwork. This investigation will follow the American Society for Testing and Materials standards for preparation of a Phase II Environmental Site Assessment and/or other appropriate testing guidelines. If the results indicate that contamination exists at levels above regulatory action standards, then the site will be remediated in accordance with recommendations made by applicable regulatory agencies, including YCEHD, RWQCB, and DTSC. The agencies involved shall depend on the type and extent of contamination. Based on the results and recommendations of the investigation described above, UC Davis shall prepare a work plan that identifies any necessary remediation activities, including excavation and removal of on-site contaminated soils, and redistribution of clean fill material within the plan area. The plan shall include measures that ensure the safe transport, use, and disposal of contaminated soil removed from the site.</p> <p>WVE Mitigation Measure 3.9-1b: Hazardous materials contingency plan. Implement 2018 LRDP Mitigation Measures 3.9-2b.</p>	LTS

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Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>2018 LRDP Mitigation Measure 3.9-2b: Hazardous materials contingency plan. Prior to initiation of grading or other groundwork, UC Davis shall provide a hazardous materials contingency plan to Campus Safety Services and YCEHD, as appropriate. The plan will describe the necessary actions that would be taken if evidence of contaminated soil or groundwater is encountered during construction. The contingency plan shall identify conditions that could indicate potential hazardous materials contamination, including soil discoloration, petroleum or chemical odors, and presence of underground storage tanks or buried building material. If at any time during the course of construction, evidence of soil and/or groundwater contamination with hazardous material is encountered, UC Davis shall immediately halt construction and contact Campus Safety Services and YCEHD. Work shall not recommence until the discovery has been assessed/treated appropriately (through such mechanisms as soil or groundwater sampling and remediation if potentially hazardous materials are detected above threshold levels) to the satisfaction of YCEHD, RWQCB, and DTSC (as applicable).</p>	
<p>Impact 3.9-2: Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. Implementation of the West Village Expansion component of the 2018 LRDP could result in short-term, temporary impacts to street traffic because of roadway improvements and potential extension of construction activities into the right-of-way. This could result in a reduction in the number of lanes or temporary closure of certain street segments. Any such impacts would be limited to the construction period and would affect only adjacent streets or intersection. This would be a potentially significant impact.</p>	PS	<p>WVE Mitigation Measure 3.9-2: Prepare and implement site-specific construction traffic management plan. Implement 2018 LRDP Mitigation Measure 3.9-6.</p> <p>2018 LRDP Mitigation Measure 3.9-6. Prepare and implement site-specific construction traffic management plans. UC Davis shall prepare and implement site-specific construction traffic management plans for any construction effort that would require work within existing roadways. To the extent feasible, the campus shall maintain at least one unobstructed lane in both directions on campus roadways during construction activities. At any time only a single lane is available due to construction-related road closures, the campus shall provide a temporary traffic signal, signal carriers (i.e., flag persons), or other appropriate traffic controls to allow travel in both directions. If construction activities require the complete closure of a roadway, the campus shall provide appropriate signage indicating alternative routes. To ensure adequate access for emergency vehicles when construction projects would result in temporary lane or roadway closures, the campus shall inform emergency services, including the UC Davis Police Department, UC Davis Fire Department, and American Medical Response, of the closures and alternative travel routes.</p>	LTS

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Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
3.10 Hydrology and Water Quality			
<p>Impact 3.10-1: Impacts to the deep aquifer groundwater supply and recharge. Development and occupancy of the West Village Expansion site would increase the amount of water extracted from the deep aquifer. However, this increase in demand is not anticipated to result in a net deficit in the aquifer or a continued lowering of the groundwater table. This impact would be less than significant impact.</p>	LTS	No mitigation measures are necessary.	LTS
<p>Impact 3.10-2: On-site and off-site flood-related impacts. Development and occupancy of the West Village Expansion site would result in an overall increase in impervious surfaces and produce changes to site-specific stormwater infrastructure. If new stormwater infrastructure is not appropriately designed to accommodate site runoff, or existing campus infrastructure cannot accommodate increased flows, impacts related to local and off-site flooding would be significant.</p>	S	<p>WVE Mitigation Measure 3.10-2: Implement project-level stormwater controls. Implement 2018 LRDP Mitigation Measure 3.7-4.</p>	LTS
3.11 Land Use and Planning			
<p>Impact 3.11-1: Conflict with applicable land use plans, policies, or existing zoning adopted for the purposes of avoiding or mitigation of an environmental effect. Implementation of the West Village Expansion component would not conflict with existing land use, policies, or zoning. Because UC Davis holds jurisdiction over campus-related projects, projects carried out by UC Davis would be consistent with the 2018 LRDP, including the West Village Expansion component. Therefore, impacts associated with land use, policies, or zoning would be considered less than significant.</p>	LTS	No mitigation measures are necessary.	LTS
3.12 Noise			
<p>Impact 3.12-1: Short-term construction noise. Implementation of the West Village Expansion component would result in construction-related noise at the West Village Expansion site from the use of heavy-duty construction equipment during the development of the West Village Expansion component. Construction noise modeling conducted for this found that noise levels during the loudest construction phase would be 85.1 dBA maximum noise level (L_{max}) at 100 feet, which is the location of the nearest sensitive receptor. If construction were to occur during the more sensitive nighttime hours, nearby receptors could be exposed to disruptive noise levels. This impact would be considered significant.</p>	S	<p>WVE Mitigation Measure 3.12-1: Reduce construction noise. Implement 2018 LRDP Mitigation Measure 3.12-1.</p> <p>2018 LRDP Mitigation Measure 3.12-1: Reduce construction noise. For all construction activities, UC Davis shall implement or incorporate the following noise reduction measures into construction specifications for contractor(s) implementation during project construction:</p> <ol style="list-style-type: none"> 1) Construction activity shall be limited to the daytime hours between 7:00 a.m. and 7:00 p.m. on weekdays and between 8:00 a.m. and 8:00 p.m. on weekends and holidays, where possible. 2) All construction equipment and equipment staging areas shall be located as far as possible from nearby noise-sensitive land uses, and/or located to the extent 	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>feasible such that existing or constructed noise attenuating features (e.g., temporary noise wall or blankets) block line-of-site between affected noise-sensitive land uses and construction staging areas.</p> <ol style="list-style-type: none"> 3) All construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturer recommendations. Equipment engine shrouds shall be closed during equipment operation. 4) Individual operations and techniques shall be replaced with quieter procedures (e.g., using welding instead of riveting, mixing concrete off-site instead of on-site) where feasible and consistent with building codes and other applicable laws and regulations. 5) Stationary noise sources such as generators or pumps shall be located 100 feet away or more from noise-sensitive land uses, as feasible. 6) Loud construction activity (i.e., construction activity such as jackhammering, concrete sawing, asphalt removal, and large-scale grading operations) shall not be scheduled during finals week and preferably during holidays, summer/winter break, Thanksgiving break, and spring break. 7) No less than one week prior to the start of construction activities at a particular location, notification shall be provided to academic, administrative, and residential uses located within 100 feet of the construction site. 8) When construction would occur within 100 feet of sensitive receptors and may result in temporary noise levels in excess of 86 dBA L_{max} at the exterior of the adjacent receptor, temporary noise barriers (e.g., noise-insulating blankets or temporary plywood structures) shall be erected that reduce construction-related noise levels to less than 86 dBA L_{max} at the receptor. 9) For any construction activity that must extend beyond the daytime hours of 7:00 a.m. and 7:00 p.m. on weekdays and between 8:00 a.m. and 8:00 p.m. on weekends and occur within 1,120 feet of a building where people sleep, UC Davis shall ensure that interior noise levels of 45 dBA L_{max} are not exceeded at any receiving land use by not exceeding 65 dBA L_{max} at the receiving land use property line. Typical residential structures with windows closed achieve a 25-30 dBA exterior-to-interior noise reduction (Caltrans 2002). Thus, using the lower end of this range, an exterior noise level of 70 dBA L_{max} would ensure interior noise levels do not result in an increased risk for sleep disturbance. To achieve this performance standard, the following measures shall be implemented: 	

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Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		a) Use of noise-reducing enclosures and techniques around stationary noise-generating equipment (e.g., concrete mixers, generators, compressors). b) Installation of temporary noise curtains installed as close as possible to the boundary of the construction site within the direct line of sight path of the nearby sensitive receptor(s) and consist of durable, flexible composite material featuring a noise barrier layer bounded to sound-absorptive material on one side. The noise barrier layer shall consist of rugged, impervious, material with a surface weight of at least one pound per square foot. c) Retain a qualified noise specialist to conduct noise monitoring to ensure that noise reduction measures are achieved the necessary reductions such that levels at the receiving land uses do not exceed exterior noise levels of 70 dBA L_{max} . Exceedances of noise standards shall result in immediate halt of construction until additional noise-reduction measures are implemented.	
<p>Impact 3.12-2: Increase in non-transportation noise sources. Implementation of this component would result in the development of apartment buildings that would include new stationary sources such as heating, ventilation, and air condition (HVAC) equipment and emergency backup generators that could subject existing residents within West Village to elevated noise levels. This impact would be significant.</p>	<p>S</p>	<p>WVE Mitigation Measure 3.12-2: Reduce noise exposure from new stationary noise sources. Implement 2018 LRDP Mitigation Measure 3.12-2.</p> <p>2018 LRDP Mitigation Measure 3.12-2: Reduce noise exposure from new stationary noise sources. During project design of individual projects proposed under the 2018 LRDP, UC Davis shall review and ensure that external mechanical equipment, including HVAC units associated with new/renovated buildings, incorporates features designed to reduce noise to below 63 dB L_{eq} at any nearby building where people sleep. Design features may include, but are not limited to, locating equipment within equipment rooms or enclosures that incorporate noise reduction features, such as acoustical louvers, and exhaust and intake silencers. Equipment enclosures shall be oriented so that major openings (i.e., intake louvers, exhaust) are directed away from nearby noise-sensitive receptors.</p>	<p>LTS</p>
<p>Impact 3.12-3: Exposure of sensitive receptors to existing noise levels. Implementation of the West Village Expansion component would result in the siting of new sensitive receptors which could potentially be exposed to existing noise sources, including the University Airport. However, based on a review of existing noise sources and noise levels that could be experienced at the West Village Expansion site, noise levels occurring at the site would be below applicable significance thresholds. This impact would be less than significant.</p>	<p>LTS</p>	<p>No mitigation measures are necessary.</p>	<p>LTS</p>

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Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
<p>Impact 3.12-4: Exposure of new and existing sensitive receptors to operational project-generated traffic noise. Implementation of the 2018 LRDP would result in new vehicle trips generated from increases in the student, faculty, and staff population on the UC Davis campus. As a result of these new trips, traffic-related noise levels would increase along roadways near the West Village Expansion site, specifically along Russell Boulevard directly north of the site. Based on traffic noise modeling conducted for the 2018 LRDP, traffic-related noise increases would remain below established roadway noise thresholds. This impact would be less than significant.</p>	LTS	No mitigation measures are necessary.	LTS
<p>3.13 Population and Housing</p>			
<p>There are no potentially significant impacts identified related to population and housing for the West Village Expansion component of the 2018 LRDP beyond those identified and addressed as part of the LRDP's analysis in Volume 1. No additional project-specific mitigation is required.</p>			
<p>3.14 Public Services</p>			
<p>Impact 3.14-1: Impacts on fire facilities. Increased population and development at the West Village Expansion site could increase demand for fire services. However, this development would not increase response times and thus is not anticipated to increase the demand for additional fire protection facilities, the construction of which could result in environmental impacts. Therefore, this impact would be less than significant.</p>	LTS	No mitigation measures are necessary.	LTS
<p>Impact 3.14-2: Impacts on police facilities. The increase in population that is expected to occur at the West Village Expansion site could result in an increased demand for police officers, however, it is not expected to result in the need for new or expanded police facilities, the construction of which could result in environmental impacts. This increase in demand is covered as part of the 2018 LRDP and the campus's capital planning process. Therefore, this impact would be less than significant.</p>	LTS	No mitigation measures are necessary.	LTS
<p>3.15 Recreation</p>			
<p>Impact 3.15-1: Impacts on-campus recreation facilities. The proposed project at West Village would increase demand for on-campus recreation facilities. The West Village Expansion component would provide one acre of recreational</p>	LTS	No mitigation measures are necessary.	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
<p>resources. In addition, maintenance of existing on-campus recreation facilities would be increased as needed, and several new recreation facilities would be constructed as part of the 2018 LRDP to off-set increases in demand for recreational facilities. Therefore, this impact would be less than significant.</p>			
<p>3.16 Transportation, Circulation, and Parking</p>			
<p>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.</p>	<p>S</p>	<p>WVE Mitigation Measure 3.16-1: Implement TDM strategies to reduce peak hour vehicle trips on I-80. Implement 2018 LRDP Mitigation Measure 3.16-1.</p> <p>2018 LRDP Mitigation Measure 3.16-1: Implement TDM strategies to reduce peak hour vehicle trips on I-80. UC Davis shall use the 2016-2017 academic year as the baseline by which to determine 2018 LRDP-related growth in peak hour student and employee commute vehicle trips on I-80. During the 2018-2019 academic year and every two years thereafter, UC Davis shall determine the number of peak hour student and employee commute vehicle trips that utilize I-80. In instances where this figure exceeds baseline levels, UC Davis shall institute TDM strategies to reduce campus-related peak hour vehicle trips on I-80. This figure could be estimated from the results of the annual Campus Travel Survey administered by the UC Davis Institute of Transportation Studies. The implementation of TDM strategies shall reduce peak hour student and employee commute vehicle trips on I-80 equal to or below baseline levels.</p> <p>TDM strategies that would reduce peak hour vehicle trips on I-80 include strategies to reduce commute and business vehicle trips to and from campus using I-80. Specific potential TDM strategies include, but are not limited to, the following:</p> <ul style="list-style-type: none"> ▲ expand public transit service, including additional regional service for UC Davis students and employees living off-campus and outside of Davis, ▲ support alternative congestion management policies/projects on I-80, including a toll for all vehicles utilizing I-80 across the Yolo Causeway, ▲ implement a fair value commuting program, where fees charged to SOV commuters (e.g., through parking pricing) are tied to UC Davis vehicle trip reduction targets and fee revenue is rebated to non-SOV commuters, or other pricing of vehicle travel and parking, ▲ provide carpool and/or vanpool incentive programs, 	<p>SU</p>

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<ul style="list-style-type: none"> ▲ allow flexible work hours and schedule classes to reduce arrivals/departures during peak hours, and ▲ offer remote working options. <p>The TDM strategies implemented to reduce peak hour vehicle trips on I-80 will be consistent with existing and planned TDM programs on campus, including the UC Davis TDM Plan currently in development. If these TDM strategies are not sufficient to reduce peak hour trips to baseline levels, additional TDM measures or adjustments to the measures above shall be implemented, as needed to reduce peak hour trips to baseline levels.</p>	
<p>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.</p>	<p>S</p>	<p>WVE Mitigation Measure 3.16-2a: Implement TDM strategies to reduce peak hour vehicle delay at the Hutchison Drive/SR 113 NB Ramps intersection. Implement 2018 LRDP Mitigation Measure 3.16-2a.</p> <p>2018 LRDP Mitigation Measure 3.16-2a: Implement TDM strategies to reduce peak hour vehicle delay at the Hutchison Drive/SR 113 NB Ramps intersection. During the 2018-2019 academic year and every two years thereafter, UC Davis shall monitor and analyze traffic conditions at the Hutchison Drive/SR 113 NB Ramps intersection. Additionally, during its standard environmental review process, UC Davis shall forecast and analyze traffic conditions at the Hutchison Drive/SR 113 NB Ramps intersection for individual development projects proposed under the 2018 LRDP that are expected to affect operations at the intersection. When operations at the Hutchison Drive/SR 113 NB Ramps intersection are found to reach an intersection level of service F and the 2018 LRDP represents 10 percent of the total volume or overall intersection delay, or when a project-level analysis indicates the same, UC Davis shall institute TDM strategies to reduce peak hour vehicle trips and, in turn, vehicle delay at the Hutchison Drive/SR 113 NB Ramps intersection. The implementation of TDM strategies shall reduce peak hour average intersection delay caused by the 2018 LRDP to acceptable levels in accordance with the intersection level of service significance criteria, including the level of service thresholds established by Caltrans or the Yolo County CMP. Since the 2018 LRDP would cause intersection operations at Hutchison Drive/SR 113 NB Ramps to degrade from an acceptable LOS to an unacceptable LOS, TDM strategies would be required to reduce peak hour intersection delay to an acceptable LOS. According to the Yolo County CMP, LOS E or better, or 50 seconds or less, is acceptable for the Hutchison Drive/SR 113 NB Ramps stop-controlled intersection.</p>	<p>SU</p>

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>The growth at West Village accounts for most of the increase (approximately 280 trips) in the stop-controlled northbound left-turn volume during the p.m. peak hour between 2030 no project and 2030 plus 2018 LRDP conditions. This movement is largely responsible for the high intersection delays. These trips tend to be longer distance commute trips using SR 113 and I-80. As such, TDM strategies that would reduce peak hour intersection delay at this location include strategies to reduce commute and business vehicle trips utilizing the Hutchison Drive/SR 113 interchange as well as strategies to reduce peak hour vehicle trip use of Hutchison Drive between the central campus and west campus. Specific potential TDM strategies include, but are not limited to, the following:</p> <ul style="list-style-type: none"> ▲ expand public transit service, including additional service connecting West Village and the central campus, ▲ shift UC Davis service vehicles to use the Garrod Drive overcrossing of SR 113, ▲ promote bicycle use between West Village and the central campus, ▲ implement a fair value commuting program or other pricing of vehicle travel and parking, ▲ provide carpool and/or vanpool incentive programs, ▲ allow flexible work hours and schedule classes to reduce arrivals/departures during peak hours, and ▲ offer remote working options. <p>The TDM strategies implemented to reduce peak hour intersection delay at this location will be consistent with existing and planned TDM programs on campus, including the UC Davis TDM Plan currently in development. If these TDM strategies are not sufficient to reduce peak hour intersection delay consistent with the significance criteria, additional TDM measures or adjustments to the measures above shall be implemented, as needed to reduce peak hour intersection delay consistent with the significance criteria.</p> <p>WVE Mitigation Measure 3.16-2b: Modify SR 113/Hutchison Drive interchange. Implement 2018 LRDP Mitigation Measure 3.16-2b.</p> <p>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</p>	

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		<p>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.</p> <p>2018 LRDP Mitigation Measure 3.16-2b: Modify SR 113/Hutchison Drive interchange. During the 2018-2019 academic year and every two years thereafter, UC Davis shall monitor and analyze traffic conditions at the SR 113/Hutchison Drive interchange. Additionally, during its standard environmental review process, UC Davis shall forecast and analyze traffic conditions at the SR 113/Hutchison Drive interchange for individual development projects proposed under the 2018 LRDP that are expected to affect operations at the interchange. When operations at the SR 113/Hutchison Drive ramp terminal intersections are found to reach an intersection level of service F and the 2018 LRDP represents 10 percent of the total volume or overall intersection delay criteria, or when a project-level analysis indicates the same, the SR 113/Hutchison Drive interchange shall be modified to increase the capacity of the ramp terminal intersections and to modify uncontrolled turning movements that conflict with bicycle and pedestrian movements as specified in WVE Mitigation Measure 3.16-4a. Potential modifications include ramp widening and alignment changes plus the addition of ramp approach turn lanes, traffic signals, or roundabouts. Both ramp terminal intersections meet peak hour signal warrants with the project. Implementation of signals alone would be sufficient to provide acceptable peak hour traffic operations. Since the interchange is owned and operated by Caltrans, any improvements will be subject to Caltrans review, project development procedures, and approval.</p>	
<p>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</p>	<p>S</p>	<p>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</p>	<p>LTS</p>

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<p>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.</p>		<p>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.</p>	
<p>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.</p>	<p>S</p>	<p>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</p>	<p>SU</p>

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Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>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.</p> <p>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.</p> <p>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.</p>	

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Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>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.</p> <p>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.</p> <p>5) Close Orchard Park Circle to vehicle traffic. Remove the existing speeds humps and convert Orchard Park Circle to bicycle-only.</p> <p>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.</p> <p>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.</p> <p>WVE Mitigation Measure 3.16-4d: Improve the Russell Boulevard shared-use path between Arthur Street and La Rue Road.</p> <p>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:</p> <ol style="list-style-type: none"> 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 	

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Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>reconfiguration should maintain horizontal curves to slow bicyclists approaching Orchard Park Drive.</p> <p>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.</p> <p>WVE Mitigation Measure 3.16-4e: Analyze site access and circulation at the proposed Old Davis Road remote parking area.</p> <p>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:</p> <ul style="list-style-type: none"> ▲ 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. <p>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.</p>	
<p>Impact 3.16-5: Impacts to pedestrian facilities.</p> <p>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.</p>	S	<p>WVE Mitigation Measure 3.16-5: Modify the SR 113/Hutchison Drive interchange.</p> <p>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:</p> <ul style="list-style-type: none"> ▲ northbound diagonal on-ramp, ▲ northbound loop on-ramp, ▲ northbound slip off-ramp, ▲ southbound diagonal on-ramp, and 	LTS

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Table WVE ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		<p>▲ southbound loop on-ramp.</p> <p>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.</p>	
3.17 Utilities and Service Systems			
<p>Impact 3.17-1: Require construction of new/expanded wastewater infrastructure.</p> <p>Development and occupancy of the West Village Expansion site would increase the amount of wastewater generated in the immediate area. Certain elements of the existing wastewater collection system, including the existing sewer lift station in West Village and the existing sewer pipe located within Celadon Street, have limited available capacity to accommodate additional wastewater flows under peak conditions. This would be a potentially significant impact.</p>	PS	<p>WVE Mitigation Measure 3.17-1a: Upsize Sewer Line within Celadon Street.</p> <p>Prior to operation of student housing at the West Village Expansion site, UC Davis shall replace the existing 8-inch sewer line segment currently within the northern portion of Celadon Street with either a 10-inch or 12-inch sewer line. The length of the line to be replaced is approximately 400 feet and extends between the West Village site and the 12-inch sewer line segment within Celadon Road, beginning at Jade Street.</p> <p>WVE Mitigation Measure 3.17-1b: Improve Existing Sewer Lift Station (SSLS-12A).</p> <p>Prior to operation of student housing at the West Village Expansion site, UC Davis shall replace the existing sewer pumps at Sewer Lift Station SSLS-12A such that the station is capable of pumping up to approximately 2,000 gallons per minute (gpm), a 300 gpm increase above existing capacity.</p>	LTS

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Table ES-2 West Village Expansion Mitigation Monitoring and Reporting Program

Impact	Mitigation Measure	Monitoring and Reporting Procedure	Timing	Verification	
<p>Project stage at which implementation of the measure is required - SS=site selection; DE=detailed project planning or project design prior to project approval; CO=construction; OC=prior to occupancy; OP=operation</p>					
<p>3.1 Aesthetics and Visual Resources</p>					
<p>Impact 3.1-3: Create a new source of light or glare.</p>	<p>WVE Mitigation Measure 3.1-3a: Building surfaces. Implement 2018 LRDP Mitigation Measure 3.1-3a. 2018 LRDP Mitigation Measure 3.1-3a: Building surfaces. UC Davis shall require the use of textured, non-reflective exterior surfaces and non-reflective (mirrored) glass during design review of all new/redeveloped structures.</p>	<p>Review project design for use of non-reflective exterior surfaces and glass. Revise design, if necessary.</p>	<p>DE</p>	<p>Prior to final design approval.</p>	<p>UC Davis Design Review Committee; UC Davis Campus Planning and Environmental Stewardship</p>
	<p>WVE Mitigation Measure 3.1-3b: Lighting fixtures. Implement 2018 LRDP Mitigation Measure 3.1-3b. 2018 LRDP Mitigation Measure 3.1-3b: Lighting fixtures. UC Davis shall require all new outdoor lighting to utilize directional lighting methods with shielded and cutoff type light fixtures to minimize glare and upward directed lighting such that light spillover onto adjacent structures does not occur. Verification of inclusion in project design shall be provided at the time of design review.</p>	<p>Review project design for use of directional lighting.</p>	<p>DE</p>	<p>Prior to final design approval.</p>	<p>UC Davis Design Review Committee; UC Davis Campus Planning and Environmental Stewardship</p>
<p>3.2 Agriculture and Forest Resources</p>					
<p>Impact 3.2-1: Convert agricultural uses, including lands designated as Important Farmlands, to non-agricultural use or involve changes in the existing environment that could result in conversion of Important Farmland to non-agricultural use.</p>	<p>WVE Mitigation Measure 3.2-1: Preservation of other campus agricultural land. Implement 2018 LRDP Mitigation 3.2-1. 2018 LRDP Mitigation Measure 3.2-1: Preservation of other campus agricultural land. Prior to conversion of Important Farmland to non-agricultural uses for individual projects proposed under the 2018 LRDP, UC Davis shall preserve, in perpetuity, an equivalent acreage (up to 166 total acres for the 2018 LRDP) of Important Farmland within either Russell Ranch or lands adjacent to UC Davis west or south campus for agricultural purposes (including agricultural teaching and research). If acreage preserved through implementation of this mitigation measure is to also be considered in fulfillment of Mitigation Measure 3.5-4b (Compensation for loss of Swainson’s hawk foraging habitat), it shall not be used as vineyards or orchards in perpetuity.</p>	<p>Designate land to be preserved for agricultural purposes in quantities no less than the ratio identified through overlay on the 2018 LRDP Land Use Diagram. Land will be preserved by recording agricultural conservation easement/deed restriction or other equivalent mechanism.</p>	<p>CO</p>	<p>Before initiation of construction of a specific project that converts agricultural land. Mitigation acreage will be established commensurate with area converted from agricultural use.</p>	<p>UC Davis Campus Planning and Environmental Stewardship</p>
<p>3.3 Air Quality</p>					
<p>Impact 3.3-1: Construction-generated emissions of ROG, NO_x, and PM₁₀.</p>	<p>WVE Mitigation Measure 3.3-1: Reduce construction-generated emissions of ROG, NO_x, and PM₁₀. Implement 2018 LRDP Mitigation Measure 3.3-1.</p>	<p>Incorporation of measures as part of construction specifications</p>	<p>CO</p>	<p>Regular intervals throughout construction period.</p>	<p>UC Davis Design and Construction Management</p>

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	<p>Although prior to mitigation the West Village Expansion component would result in construction-related emissions that do not exceed ROG and NO_x emissions thresholds, the implementation of 2018 LRDP Mitigation Measure 3.3-1 would further reduce ROG and NO_x emissions along with PM₁₀ emissions under the construction engine and dust mitigation requirements. Engines with a minimum of a Tier 3 final rating or better are anticipated to decrease ROG, NO_x, and PM emissions compared to the default engine rating which includes a mix of lower tiered engines.</p> <p>2018 LRDP Mitigation Measure 3.3-1: Reduce construction-generated emissions of ROG, NO_x, and PM₁₀.</p> <p>Land use development project implemented under the 2018 LRDP shall require its prime construction contractor to implement the following measures:</p> <ol style="list-style-type: none"> 1) Use construction equipment with engines rated at Tier 3 or better prior to 2025 and Tier 4 or better beginning in 2025. 2) Use no- or low-solids content (i.e., no- or low-VOC) architectural coatings with a maximum VOC content of 50 g/L. 3) Limit passenger vehicles (i.e., non-vendor and non-hauling vehicles) from being driven on extended unpaved portions of project construction sites. UC Davis shall provide off-site paved parking and compliant site-transport arrangements for construction workers, as needed. 4) Water all active construction sites at least twice daily. 5) Plant vegetative ground cover in disturbed areas as soon as possible. 6) Apply soil stabilizers on unpaved roads and inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days). 7) Establish a 15 mile-per-hour speed limit for vehicles driving on unpaved portions of project construction sites. <p>UC Davis shall ensure that the implementation of this mitigation measure is consistent with the UC Davis stormwater program and the California Stormwater Quality Association <i>Stormwater BMP Handbook for New Development/Redevelopment</i> and does not result in off-site runoff as a result of watering for dust control purposes.</p>	<p>documentation and inspect construction site at regular intervals during construction to verify compliance with specified construction-generated emissions reduction measures.</p>			
<p>Impact 3.3-2: Operational emissions of criteria air pollutants and precursor emissions.</p>	<p>WVE Mitigation Measure 3.3-2: Reduce emissions of ROG and NO_x from mobile sources.</p> <p>Implement 2018 LRDP Mitigation Measure 3.3-2.</p> <p>Although the project-level impact of operational emissions is less than significant, the WVE is still subject to 2018 LRDP Mitigation Measure 3.3-2 because the West Village Expansion component is part of the 2018 LRDP and the plan-level emissions are potentially significant</p>	<p>Develop and implement program in conjunction with TDM strategies to incentivize alternative fuel usage and</p>	<p>OP</p>	<p>Implemented on a continuing basis.</p>	<p>UC Davis Campus Planning and Environmental Stewardship</p>

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<p>Project stage at which implementation of the measure is required - SS=site selection; DE=detailed project planning or project design prior to project approval; CO=construction; OC=prior to occupancy; OP=operation</p>					
	<p>under 2018 LRDP Impact 3.3-2. Reduction of project-level operational emissions will help reduce the impact of plan-level operational emissions.</p> <p>2018 LRDP Mitigation Measure 3.3-2: Reduce emissions of ROG and NO_x. UC Davis shall implement the following measures to reduce operational emissions to the extent feasible:</p> <ol style="list-style-type: none"> 1) Implement a program that incentivizes employees and students living off-campus to carpool, use EVs, or use public transit to commute to and from the campus. This program shall provide preferential parking to carpool vehicles, vanpool vehicles, and EVs. At a minimum, the program shall include a virtual or real “ride board” for employees and students to organize carpools and incentives for employees using public transit to commute to and from campus. The program shall include, but is not limited to, the following features. <ol style="list-style-type: none"> a) Limit parking capacity to meet on-site demand. Provide no more on-site parking spaces than necessary to accommodate the number of employees working at a project site and/or the number of residents living at a project site, as determined by the project size and design. b) Non-residential land uses with 20 or more on-site parking spaces shall dedicate preferential parking spaces to vehicles with more than one occupant and Zero Emission Vehicles (including battery electric vehicles and hydrogen fuel cell vehicles). The number of dedicated spaces should be no less than two spaces or 5 percent of the total parking spaces on the project site, whichever is greater. These dedicated spaces shall be in preferential locations such as near the main entrances to the buildings served by the parking lot and/or under the shade of a structure or trees. These spaces shall be clearly marked with signs and pavement markings. This measure shall not be implemented in a way that prevents compliance with requirements in the California Vehicle Code regarding parking spaces for disabled persons or disabled veterans. 	<p>alternative transportation use.</p>			
	<ol style="list-style-type: none"> 2) Work with Unitrans to convert natural gas buses to electric or lower-emission fuels or implement emission control technologies to reduce criteria air pollutant emissions from existing conditions. 	<p>Coordinate with and contribute funds to Unitrans re: conversion of existing fleet to electric or other clean fuel.</p>	<p>OP</p>	<p>On a continuing basis with annual reporting.</p>	<p>UC Davis Campus Planning and Environmental Stewardship</p>

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Project stage at which implementation of the measure is required - SS=site selection; DE=detailed project planning or project design prior to project approval; CO=construction; OC=prior to occupancy; OP=operation					
	<p>3) Implement a program that incentivizes vendors to reduce the emissions associated with vehicles and equipment serving the campus. The goal of the program is to reduce ROG and NO_x emissions from vendors trip by at least 50 percent by 2030 as compared to existing conditions. The program shall implement the following sub-measures to reduce vendor-related, mobile-source emissions.</p> <p>a) Incentivize the use of EVs or other clean fuels in their trucks and equipment to reduce ROG and NO_x emissions.</p> <p>b) Work with vendors, especially those using trucks, to reduce the number of vendor trips made to the campus through trip chaining, reducing the number of shipments, or other methods.</p>	Develop and implement program in conjunction with vendors and appropriate UC Davis campus services to reduce/consolidate vendor trips and incentivize the use of alternative fuel vehicles.	OP	Adoption within one-year of approval of 2018 LRDP; Implemented on a continuing basis.	UC Davis Campus Planning and Environmental Stewardship
	4) Convert landscaping equipment to electric or alternatively-fueled equipment.	Transition from gasoline/diesel-powered landscaping equipment to electric/alternative-fueled equipment by 2025 or sooner.	OP	On a continuing basis with annual reporting.	UC Davis Campus Planning and Environmental Stewardship
Impact 3.3-3: Short-term construction emissions of toxic air contaminants.	<p>WVE Mitigation Measure 3.3-3: Reduce short-term construction-generated TAC emissions.</p> <p>Implement 2018 LRDP Mitigation Measure 3.3-4. Although prior to mitigation the West Village Expansion component would result in less-than-significant impacts related to TAC emissions during construction, the implementation of 2018 LRDP Mitigation Measure 3.3-4 would further reduce construction-related TAC emissions under the construction engine and idling requirements. Engines with a minimum of a Tier 3 final rating or better are anticipated to decrease PM emissions, which include TACs, compared to the default engine rating which includes a mix of low tiered engines. Construction activity would already be located over 150 feet from the nearest sensitive receptor and outdoor recreational facilities.</p> <p>2018 LRDP Mitigation Measure 3.3-4: Reduce short-term construction-generated TAC emissions.</p> <p>UC Davis shall require construction activities under the 2018 LRDP to follow YSAQMD recommended mitigation measures for construction exhaust emissions. To ensure sensitive receptors are not exposed to substantial TAC concentrations, UC Davis shall require its prime construction contractor to implement the following measures prior to project approval:</p>	Inspect construction site at regular intervals during construction to verify compliance with specified construction-generated emissions reduction measures.	CO	Regular intervals throughout construction period.	UC Davis Campus Planning and Environmental Stewardship; UC Davis Design and Construction Management

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<p>Project stage at which implementation of the measure is required - SS=site selection; DE=detailed project planning or project design prior to project approval; CO=construction; OC=prior to occupancy; OP=operation</p>					
	<p>1) Locate operation of diesel-powered construction equipment as far away from sensitive receptors as possible; 2) Limit excess equipment idling to no more than 5 minutes; 3) Use construction equipment with engine ratings of Tier 3 or better (included in Mitigation Measure 3.3-1); and 4) Use electric, compressed natural gas, or other alternatively fueled construction equipment instead of the diesel counterparts, where available. In addition, for any construction site located within 150 feet of a childcare center or park/recreation field, UC Davis shall schedule the use of heavy construction equipment to times when children are not present. Alternatively, UC Davis shall arrange for temporary relocation of childcare facilities to areas outside of a 150-foot buffer or temporarily close available park space within the 150-foot buffer during operation of heavy construction equipment.</p>				
<p>3.4 Archaeological, Historical, and Tribal Cultural Resources</p>					
<p>Impact 3.4-1: Impacts to unique archaeological resources.</p>	<p>WVE Mitigation Measure 3.4-1: Identify and protect archaeological resources. Implement 2018 LRDP Mitigation Measure 3.4-1a(1) and 2018 LRDP Mitigation Measure 3.4-1a(3). If the site is determined to contain a unique archaeological resource(s), implement 2018 LRDP Mitigation Measure 3.4-1(b). 2018 LRDP Mitigation Measure 3.4-1a: Identify and protect unknown archaeological resources. During project-specific environmental review of development under the 2018 LRDP, the campus shall define each project's area of effect for archaeological resources. The campus shall determine the potential for the project to result in cultural resource impacts, based on the extent of ground disturbance and site modification anticipated for the proposed project. The campus shall determine the level of archaeological investigation that is appropriate for the project site and activity, as follows: ▲ Minimum: excavation less than 18 inches deep and less than 1,000 sf of disturbance (e.g., a trench for lawn irrigation, tree planting, etc.). Implement Mitigation Measure 3.4-1a(1). ▲ Moderate: excavation below 18 inches deep and/or over a large area on any site that has not been characterized as sensitive and is not suspected to be a likely location for archaeological resources. Implement Mitigation Measure 3.4-1a(1) and (2).</p>	<p>Define area of potential effects. Determine appropriate level of archaeological investigation. Include specified avoidance and control measures in construction specifications. Contractors and employees shall be notified when they are required to watch for potential archaeological sites and attend a training session to be provided by a qualified archaeologist.</p>	<p>DE</p>	<p>During project design, prior to construction.</p>	<p>UC Davis Campus Planning and Environmental Stewardship</p>

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	<p>▲ Intensive: excavation below 18 inches and/or over a large area on any site that is within the zone of archaeological sensitivity identified in Exhibit 3.4-1, or that is adjacent to a recorded archaeological site. Implement Mitigation Measure 3.4-1a(1), (2), and (3).</p>				
	<p>UC Davis shall implement the following steps to identify and protect archaeological resources that may be present in the project's area of effects: 1) For project sites at all levels of investigation, contractor crews shall be required to attend a training session prior to the start of earth moving, regarding how to recognize archaeological sites and artifacts and what steps shall be taken to avoid impacts to those sites and artifacts. In addition, campus employees whose work routinely involves disturbing the soil shall be informed how to recognize evidence of potential archaeological sites and artifacts. Prior to disturbing the soil, contractors shall be notified that they are required to watch for potential archaeological sites and artifacts and to notify the UC Davis Office of Campus Planning and Environmental Stewardship if any are found. In the event of a find, the campus shall implement item (5), below.</p>				
	<p>2) For project sites requiring a moderate or intensive level of investigation, a surface survey shall be conducted by a qualified archaeologist once the area of ground disturbance has been identified and prior to soil disturbing activities. For sites requiring moderate investigation, in the event of a surface find, intensive investigation will be implemented, as per item (3), below. Irrespective of findings, the qualified archaeologist shall, in consultation with the UC Davis Office of Campus Planning and Environmental Stewardship, develop an archaeological monitoring plan to be implemented during the construction phase of the project. If the project site is located within the zone of archaeological sensitivity or it is recommended by the archaeologists, the campus shall notify the appropriate Native American tribe and extend an invitation for monitoring. The frequency and duration of monitoring shall be adjusted in accordance with survey results, the nature of construction activities, and results during the monitoring period. A written report of the results of the monitoring will be prepared and filed with the appropriate Information Center of the California Historical Resources Information System. In the event of a discovery, the campus shall implement item (5), below.</p>	<p>A surface survey shall be conducted by a qualified archaeologist. <i>If resources are discovered, the archaeologist shall prepare/implement a monitoring plan.</i></p>	<p>DE</p>	<p>During project design, prior to construction.</p>	<p>UC Davis Campus Planning and Environmental Stewardship</p>

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	<p>3) For project sites requiring intensive investigation, irrespective of surface finds, the campus shall retain a qualified archaeologist to conduct a subsurface investigation of the project site, to ascertain whether buried archaeological materials are present and, if so, the extent of the deposit relative to the project's area of effects. If an archaeological deposit is discovered, the archaeologist will prepare a site record and a written report of the results of investigations and filed with the appropriate Information Center of the California Historical Resources Information System.</p> <p>If it is determined that the resource extends into the project's area of effects, the resource will be evaluated by a qualified archaeologist, who will determine whether it qualifies as a historical resource or a unique archaeological resource under the criteria of CEQA Guidelines § 15064.5. If the resource does not qualify, or if no resource is present within the project's area of effects, this will be noted in the environmental document and no further mitigation is required unless there is a discovery during construction. In the event of a discovery item (5), below shall be implemented.</p>	<p>A qualified archaeologist shall conduct a subsurface investigation for projects needing intensive investigation. If resources are encountered, the archeologist shall file a site record/report.</p>	DE	<p>During project design, prior to construction.</p>	<p>UC Davis Campus Planning and Environmental Stewardship</p>
	<p>4) If archaeological material within the project's area of effects is determined to qualify as an historical resource or a unique archaeological resource (as defined by CEQA), the UC Davis Office of Campus Planning and Environmental Stewardship shall consult with the qualified archaeologist to consider means of avoiding or reducing ground disturbance within the site boundaries, including minor modifications of building footprint, landscape modification, the placement of protective fill, the establishment of a preservation easement, or other means that will permit avoidance or substantial preservation in place of the resource. If avoidance or substantial preservation in place is not possible, the campus shall implement Mitigation Measure 3.4-1b.</p>	<p>Coordination by UC Davis with a qualified archaeologist regarding appropriate treatment methods that will be incorporated into project design and construction.</p>	DE	<p>During project design, prior to construction.</p>	<p>UC Davis Campus Planning and Environmental Stewardship</p>
	<p>5) If archaeological material is discovered during construction (whether or not an archaeologist is present), all soil disturbing work within 100 feet of the find shall cease. The UC Davis Office of Campus Planning and Environmental Stewardship shall contact a qualified archaeologist to provide and implement a plan for survey, subsurface investigation as needed to define the deposit, and assessment of the remainder of the site within the project area to determine whether the resource is significant and would be affected by the project. Mitigation Measure 3.4-1a, steps (3) and (4) shall be implemented.</p>	<p>If archaeological material is discovered during construction (whether or not an archaeologist is present), all soil disturbing work within 100 feet of the find shall cease.</p>	CO	<p>During construction activities</p>	<p>UC Davis Campus Planning and Environmental Stewardship</p>

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	<p>2018 LRDP Mitigation Measure 3.4-1b: Protect known unique archaeological resources. For an archaeological site that has been determined by a qualified archaeologist to qualify as a unique archaeological resource through the process set forth under Mitigation Measure 3.4-1a, and where it has been determined under Mitigation Measure 3.4-1a that avoidance or preservation in place is not feasible, a qualified archaeologist, in consultation with the UC Davis Office of Campus Planning and Environmental Stewardship, and Native American tribes as applicable, shall:</p> <ol style="list-style-type: none"> 1) Prepare a research design and archaeological data recovery plan for the recovery that will capture those categories of data for which the site is significant, and implement the data recovery plan prior to or during development of the site. 2) Perform appropriate technical analyses, prepare a full written report and file it with the appropriate information center, and provide for the permanent curation of recovered materials. 3) If, in the opinion of the qualified archaeologist and in light of the data available, the significance of the site is such that data recovery cannot capture the values that qualify the site for inclusion on the CRHR, the UC Davis Office of Campus Planning and Environmental Stewardship shall reconsider project plans in light of the high value of the resource, and implement more substantial modifications to the proposed project that would allow the site to be preserved intact, such as project redesign, placement of fill, or project relocation or abandonment. If no such measures are feasible, the campus shall implement Mitigation Measure 3.4-1c. 	Retain qualified archaeologist who shall perform work as specified.	DE	During project design.	UC Davis Campus Planning and Environmental Stewardship
3.5 Biological Resources					
Impact 3.5-1: Disturbance or loss of special-status plants.	<p>WVE Mitigation Measure 3.5-1a: Special-status plant surveys. Implement 2018 LRDP Mitigation Measures 3.5-1a. 2018 LRDP Mitigation Measure 3.5-1a: Special-status plant surveys. Prior to approval of specific projects under the 2018 LRDP, UC Davis shall have a qualified biologist evaluate the potential for special-status plant habitat at sites containing undeveloped, ruderal grassland habitat. Should suitable habitat for any of the species identified in Table 3.5-4 occur, a qualified botanist, at UC Davis's direction, shall conduct protocol-level surveys for the potentially occurring special-status plants that could be removed or disturbed by project activities during the blooming period for the plant(s) that could be present on-site. Protocol-level surveys will be conducted in accordance with Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2009). If special-status plants are</p>	Ensure that rare plant survey of proposed and any alternate site is conducted, and findings documented, by qualified biologist.	SS DE	During appropriate season, as specified in measure, prior to final project design approval.	UC Davis Campus Planning and Environmental Stewardship

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	<p>not found, the botanist will document the findings in a letter report to CDFW and further mitigation will not be required.</p> <table border="1" data-bbox="468 391 1220 1349"> <caption>Table 3.5-4 Normal Blooming Period for Special-Status Plants with Potential to Occur within the Plan Area</caption> <thead> <tr> <th>Species</th> <th>Feb</th> <th>Mar</th> <th>Apr</th> <th>May</th> <th>Jun</th> <th>Jul</th> <th>Aug</th> <th>Sep</th> <th>Oct</th> </tr> </thead> <tbody> <tr> <td>Ferris' milk-vetch <i>Astragalus tener</i> var. <i>ferrisiae</i></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>heartscale <i>Atriplex cordulata</i> var. <i>cordulata</i></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>brittlescale <i>Atriplex depressa</i></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>round-leaved filaree <i>California macrophylla</i></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>palmate-bracted bird's beak <i>Cordylanthus palmatus</i></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>San Joaquin spearscale <i>Extriplex joaquinana</i></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Northern California black walnut <i>Juglans hindsii</i></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Heckard's pepper-grass <i>Lepidium latipes</i> var. <i>heckardii</i></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Baker's navarretia <i>Navarretia leucocephala</i> ssp. <i>bakeri</i></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>California alkali grass <i>Puccinellia simplex</i></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Solano grass or Crampton's tuctoria <i>Tuctoria mucronata</i></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Source: Data compiled by Ascent Environmental in 2017</p>	Species	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Ferris' milk-vetch <i>Astragalus tener</i> var. <i>ferrisiae</i>										alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>										heartscale <i>Atriplex cordulata</i> var. <i>cordulata</i>										brittlescale <i>Atriplex depressa</i>										round-leaved filaree <i>California macrophylla</i>										palmate-bracted bird's beak <i>Cordylanthus palmatus</i>										San Joaquin spearscale <i>Extriplex joaquinana</i>										Northern California black walnut <i>Juglans hindsii</i>										Heckard's pepper-grass <i>Lepidium latipes</i> var. <i>heckardii</i>										Baker's navarretia <i>Navarretia leucocephala</i> ssp. <i>bakeri</i>										California alkali grass <i>Puccinellia simplex</i>										Solano grass or Crampton's tuctoria <i>Tuctoria mucronata</i>													
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Project stage at which implementation of the measure is required - SS=site selection; DE=detailed project planning or project design prior to project approval; CO=construction; OC=prior to occupancy; OP=operation					
	<p>WVE Mitigation Measure 3.5-1b: Special-status plant avoidance. Implement 2018 LRDP Mitigation Measures 3.5-1b.</p> <p>2018 LRDP Mitigation Measure 3.5-1b: Special-status plant avoidance. If special-status plant species are found on a particular project site and are located outside of the permanent footprint of any proposed structures/site features and can be avoided, UC Davis will establish and maintain a 40-foot protective buffer around special-status plants to be retained to ensure avoidance.</p>	Monitor implementation of avoidance measures if any through inspection of the project site during and after construction.	CO	Periodically during construction.	UC Davis Design and Construction Management; UC Davis Campus Planning and Environmental Stewardship
	<p>WVE Mitigation Measure 3.5-1c: Special-status plant avoidance. Implement 2018 LRDP Mitigation Measures 3.5-1c.</p> <p>2018 LRDP Mitigation Measure 3.5-1c: Special-status plant impact minimization measures. If special-status plants are found during rare plant surveys and cannot be avoided, UC Davis will consult with CDFW and USFWS, as appropriate depending on species status, to determine the appropriate compensation to achieve no net loss of occupied habitat or individuals. Mitigation measures may include, but are not limited to, preserving and enhancing existing populations, creating off-site populations on mitigation sites through seed collection or transplantation at a 1:1 ratio, and restoring or creating suitable habitat in sufficient quantities to achieve no net loss of occupied habitat or individuals. Potential mitigation sites could include suitable locations within or outside of the campus. UC Davis will develop and implement a site-specific mitigation strategy describing how unavoidable losses of special-status plants will be compensated. Success criteria for preserved and compensatory populations will include:</p> <ol style="list-style-type: none"> 1) The extent of occupied area and plant density (number of plants per unit area) in compensatory populations will be equal to or greater than the affected occupied habitat. 2) Compensatory and preserved populations will be self-producing. Populations will be considered self-producing when: <ol style="list-style-type: none"> i) plants reestablish annually for a minimum of five years with no human intervention such as supplemental seeding; and ii) reestablished and preserved habitats contain an occupied area and flower density comparable to existing occupied habitat areas in similar habitat types in the project vicinity. 3) If off-site mitigation includes dedication of conservation easements, purchase of mitigation credits, or other off-site conservation measures, the details of these 	Monitor on-site avoidance and minimization if any for a minimum of five years following completion of construction.	OP	Annually.	UC Davis Campus Planning and Environmental Stewardship

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	measures will be included in the mitigation plan, including information on responsible parties for long-term management, conservation easement holders, long-term management requirements, success criteria such as those listed above and other details, as appropriate to target the preservation of long term viable populations.				
<p>Impact 3.5-2: Impacts to Swainson’s hawk and other nesting raptors.</p>	<p>WVE Mitigation Measure 3.5-2a: Avoidance of Swainson’s hawk and other nesting raptors. Implement 2018 LRDP Mitigation Measures 3.5-4a.</p> <p>2018 LRDP Mitigation Measure 3.5-4a: Avoidance of Swainson’s hawk and other nesting raptors. For any projects implemented under the 2018 LRDP that would require the removal of mature trees, the following measures will be implemented prior to initiation of construction to avoid, minimize, and fully mitigate impacts to Swainson’s hawk, as well as other special-status raptors:</p> <ol style="list-style-type: none"> 1) Before tree removal occurs, a qualified biologist will determine whether it has been previously recorded or used as a Swainson’s hawk or other special-status raptors nest tree. If it is not known to have supported Swainson’s hawks or other special-status raptors in the past, the tree will be removed when no active nests are present, generally between September 2 and February 14 if feasible. If the tree to be removed is known to have supported nesting Swainson’s hawk or other special-status raptors in the past, UC Davis will implement measures to prevent the potential the net loss of Swainson’s hawk or other special-status raptors territories, which may include providing alternative nest trees or protected habitat. UC Davis will consult with CDFW prior to removal of the nest tree and obtain take authorization under Section 2081 of the Fish and Game Code if needed. 2) For construction activities, including tree removal, that begin between February 15 and September 1, qualified biologists will conduct preconstruction surveys for Swainson’s hawk and other nesting raptors to identify active nests on and within 0.5 mile of the project site. The surveys will be conducted before the beginning of any construction activities between February 15 and September 1. 3) Impacts to nesting Swainson’s hawks and other raptors will be avoided by establishing appropriate buffers around active nest sites identified during preconstruction raptor surveys. Project activity will not commence within the buffer areas until a qualified biologist has determined, in coordination with CDFW, that the young have fledged, the nest is no longer active, or that reducing the buffer would not likely result in nest abandonment. CDFW guidelines recommend implementation of 	<p>Conduct survey of potential active nest trees on and adjacent to the project site during breeding season, prior to construction. If active nests are found in a tree that must be removed, document findings. Remove the tree outside of the nesting season.</p>	<p>SS DE CO</p>	<p>During breeding season, prior to commencement of construction; and outside of nesting season.</p>	<p>UC Davis Campus Planning and Environmental Stewardship</p>

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	<p>0.25-mile-wide buffer for Swainson's hawk and 500 feet for other raptors, but the size of the buffer may be adjusted if a qualified biologist and UC Davis, in consultation with CDFW, determine that such an adjustment would not be likely to adversely affect the nest. Monitoring of the nest by a qualified biologist during and after construction activities will be required if the activity has potential to adversely affect the nest.</p> <p>4) Trees will not be removed during the breeding season for nesting raptors unless a survey by a qualified biologist verifies that there is not an active nest in the tree.</p>			
	<p>WVE Mitigation Measure 3.5-2b: Compensation for loss of Swainson's hawk foraging habitat. Implement 2018 LRDP Mitigation Measures 3.5-4b.</p> <p>2018 LRDP Mitigation Measure 3.5-4b: Compensation for loss of Swainson's hawk foraging habitat. Project implementation under the 2018 LRDP includes conversion of up to approximately 270 acres of suitable foraging habitat for Swainson's hawk, including 128 acres of agricultural land and 143 acres of ruderal grassland. UC Davis shall mitigate the loss of 270 acres of suitable foraging habitat through establishment of mitigation lands (grassland habitat or agricultural land) near existing mitigation land, potentially at Russell Ranch, at a 1:1 ratio. Surplus acreage post-implementation of mitigation under the 2003 LRDP may be credited towards development under the 2018 LRDP in fulfillment of this mitigation. This mitigation plan is consistent with the Yolo Habitat Conservancy's Swainson's Hawk Interim Mitigation Fee Program which requires a 1:1 replacement ratio of foraging habitat acreage</p>	<p>Establish mitigation land and commit on-going funding for the preservation and management of the mitigation area.</p>	<p>OP</p>	<p>Before construction of a specific project that converts Swainson's hawk foraging habitat. Habitat mitigation areas will be established commensurate with area converted from habitat.</p>
<p>Impact 3.5-3: Impacts to burrowing owl.</p>	<p>WVE Mitigation Measure 3.5-3: Burrowing owl surveys and mitigation for loss of occupied habitat. Implement 2018 LRDP Mitigation Measures 3.5-5a and 3.5-5b.</p> <p>2018 LRDP Mitigation Measure 3.5-5a: Burrowing owl avoidance and compensation. For any construction projects implemented under the 2018 LRDP, the following measures will be implemented prior to initiation of construction to reduce impacts on burrowing owl:</p> <p>1) UC Davis will retain a qualified biologist to conduct focused breeding and nonbreeding season surveys for burrowing owls in areas of suitable habitat (e.g., ruderal grassland, annual grassland, agricultural land, roadsides) on and within 1,500 feet of pending construction activities for a project under the 2018 LRDP. Surveys will be conducted prior to the start of construction activities and in</p>	<p>Conduct survey. Verify survey was conducted and document results. Include mitigation specifications in construction specifications as necessary.</p>	<p>DE CO</p>	<p>Prior to start of construction or of each construction phase.</p>

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	<p>accordance with Appendix D of CDFW's <i>Staff Report on Burrowing Owl Mitigation</i> (CDFW 2012).</p> <ol style="list-style-type: none"> 2) If no occupied burrows are found, a letter report documenting the survey methods and results will be submitted to CDFW and no further mitigation will be required. 3) If an active burrow is found within 1,500 feet of pending construction activities that would occur during the nonbreeding season (September 1 through January 31), UC Davis will consult with CDFW regarding protection buffers to be established around the occupied burrow and maintained throughout construction. If occupied burrows are present that cannot be avoided or adequately protected with a no-disturbance buffer, a burrowing owl exclusion plan will be developed, as described in Appendix E of CDFW's 2012 Staff Report. Burrowing owls will not be excluded from occupied burrows until the project's burrowing owl exclusion plan is approved by CDFW. The exclusion plan will include a plan for creation, maintenance, and monitoring of artificial burrows in suitable habitat. 4) If an active burrow is found during the breeding season (February 1 through August 31), occupied burrows will not be disturbed and will be provided with a protective buffer unless a qualified biologist verifies through noninvasive means that either: (1) the birds have not begun egg laying, or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. The size of the buffer will depend on the time of year and level disturbance as outlined in the CDFW Staff Report (CDFW 2012). The size of the buffer may be reduced if a broad-scale, long-term, monitoring program acceptable to CDFW is implemented so that burrowing owls are not detrimentally affected. Once the fledglings are capable of independent survival, the owls can be evicted and the burrow can be destroyed per the terms of a CDFW-approved burrowing owl exclusion plan developed in accordance with Appendix E of CDFW's 2012 Staff Report. 5) If active burrowing owl nests are found on the project site and are destroyed by project implementation, UC Davis will mitigate the loss of occupied habitat in accordance with guidance provided in the CDFW 2012 Staff Report, which states that permanent impacts to nesting, occupied and satellite burrows, and burrowing owl habitat will be mitigated such that habitat acreage and number of burrows are replaced through permanent conservation of comparable or better habitat with similar vegetation communities and burrowing mammals (e.g., ground squirrels) present to provide for nesting, foraging, wintering, and dispersal. UC Davis will retain a 			

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	<p>qualified biologist to develop a burrowing owl mitigation and management plan that incorporates the following goals and standards:</p> <ul style="list-style-type: none"> a) Mitigation lands will be selected based on comparison of the habitat lost to the compensatory habitat, including type and structure of habitat, disturbance levels, potential for conflicts with humans, pets, and other wildlife, density of burrowing owls, and relative importance of the habitat to the species range wide. Mitigation for loss of burrowing owl habitat under the 2003 LRDP included establishment of mitigation lands within Russell Ranch, which is a feasible option for future mitigation under the 2018 LRDP. b) If feasible, mitigation lands will be provided adjacent or proximate to the project site (e.g. Russell Ranch) so that displaced owls can relocate with reduced risk of take. Feasibility of providing mitigation adjacent or proximate to the project site depends on availability of sufficient suitable habitat to support displaced owls that may be preserved in perpetuity. c) If suitable habitat is not available for conservation adjacent or proximate to the project site, mitigation lands will be focused on consolidating and enlarging conservation areas outside of urban and planned growth areas and within foraging distance of other conservation lands. Mitigation may be accomplished through purchase of mitigation credits at a CDFW-approved mitigation bank, if available. If mitigation credits are not available from an approved bank and mitigation lands are not available adjacent to other conservation lands, alternative mitigation sites and acreage will be determined in consultation with CDFW. d) If mitigation is not available through an approved mitigation bank and will be completed through permittee-responsible conservation lands, the mitigation plan will include mitigation objectives, site selection factors, site management roles and responsibilities, vegetation management goals, financial assurances and funding mechanisms, performance standards and success criteria, monitoring and reporting protocols, and adaptive management measures. Success will be based on the number of adult burrowing owls and pairs using the site and if the numbers are maintained over time. Measures of success, as suggested in the 2012 Staff Report, will include site tenacity, number of adult owls present and reproducing, colonization by burrowing owls from elsewhere, changes in distribution, and trends in stressors. 			

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	<p>2018 LRDP Mitigation Measure 3.5-5b: Compensation for loss of burrowing owl habitat. Implement 2018 Mitigation Measure 3.5-4b.</p>	See WVE Mitigation Measure 3.5-2b	See WVE Mitigation Measure 3.5-2b	See WVE Mitigation Measure 3.5-2b.	See WVE Mitigation Measure 3.5-2b
<p>Impact 3.5-4: Impacts to other special-status birds.</p>	<p>Mitigation Measure 3.5-4 Tricolored blackbird avoidance. Implement 2018 LRDP Mitigation Measure 3.5-6. 2018 LRDP Mitigation Measure 3.5-6: Tricolored blackbird avoidance. With respect to any construction activities undertaken for a particular project under the 2018 LRDP, the following measures will be implemented to avoid or minimize loss of active tricolored blackbird or other bird nests:</p> <ol style="list-style-type: none"> 1) To minimize the potential for loss of tricolored blackbird or other bird nests, vegetation removal activities will commence during the nonbreeding season (September 1 - January 31). If all suitable nesting habitat is removed during the nonbreeding season, no further mitigation would be required. 2) Prior to removal of any vegetation, or any ground-disturbing activities between February 1 and August 31, a qualified biologist will conduct preconstruction surveys for nests on any or vegetation slated for removal, as well as for potential tricolored blackbird nesting habitat. The surveys will be conducted no more than 14 days before construction commences. If no active nests or tricolored blackbird colonies are found during focused surveys, no further action under this measure will be required. If active nests are located during the preconstruction surveys, the biologist will notify CDFW. If necessary, modifications to the project design to avoid removal of occupied habitat while still achieving project objectives will be evaluated and implemented to the extent feasible. If avoidance is not feasible or conflicts with project objectives, construction will be prohibited within a minimum of 100 feet of the outer edge of the nesting colony to avoid disturbance until the nest colony is no longer active. 	<p>Conduct survey. Verify survey was conducted and document results. Include mitigation specifications in construction specifications as necessary.</p>	<p>DE CO</p>	<p>During the breeding season prior to start of construction or of each construction phase.</p>	<p>UC Davis Campus Planning and Environmental Stewardship; UC Davis Design and Construction Management</p>
<p>Impact 3.5-5: Impacts to valley elderberry longhorn beetle.</p>	<p>WVE Mitigation Measure 3.5-5: Valley elderberry longhorn beetle avoidance. Implement 2018 LRDP Mitigation Measure 3.5-7. 2018 LRDP Mitigation Measure 3.5-7: Valley elderberry longhorn beetle avoidance. The following measures will be implemented to avoid or minimize loss of elderberry shrubs, and valley elderberry longhorn beetle as a result of construction activities associated with the 2018 LRDP:</p>	<p>Conduct survey and document findings as specified. Consult with USFWS, as necessary</p>	<p>SS DE</p>	<p>During project siting or design state, prior to final project approval and construction.</p>	<p>UC Davis Campus Planning and Environmental Stewardship</p>

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	<ol style="list-style-type: none"> 1) Prior to initiation of construction activities for a particular project under the 2018 LRDP, a qualified biologist will conduct surveys for valley elderberry longhorn beetle according to the protocol outlined in USFWS <i>Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle</i> (USFWS 2017b). The biologist will determine if there is a riparian area, elderberry shrubs, or known valley elderberry longhorn beetle records within 800 meters (2,526 feet) of the project site, and whether the project site is continuous with a historical riparian corridor. If the project site does not contain riparian habitat and does not contain elderberry shrubs within 50 feet, then no further action is required. 2) If the project site does not contain riparian habitat, but does contain elderberry shrubs, then the elderberry shrubs will be inspected for valley elderberry longhorn beetle exit holes. If exit holes are not present the project applicant will consult with USFWS to discuss project details and potential impacts to elderberry shrubs, and will consider additional information, including occurrences of valley elderberry longhorn beetle within 800 meters of the project site, and proximity of the project site to existing and historic riparian corridors. 3) If riparian habitat is present within the project site and elderberry shrubs are present within 50 feet, then it is likely that the site is occupied by valley elderberry longhorn beetle. If the project site contains riparian habitat and elderberry shrubs are not present within 50 feet, the project applicant will consult with USFWS to discuss project details and potential impacts to elderberry shrubs, as presence of riparian habitat is indicative of historic valley elderberry longhorn beetle occupancy. 				
	<ol style="list-style-type: none"> 4) Impacts to valley elderberry longhorn beetle will be avoided and minimized by following the Conservation Measures outlined in the USFWS 2017 Framework for cases where elderberry shrubs can be retained and protected within 165 feet of the project footprint. 5) If elderberry shrubs are 165 feet or more from project activities, direct or indirect impacts are not expected. Shrubs will be protected during construction by establishing and maintaining a high visibility fence at least 165 feet from the drip line of each elderberry shrub. 6) If elderberry shrubs can be retained within the project footprint, project activities may occur up to 20 feet from the dripline of elderberry shrubs if precautions are implemented to minimize the potential for indirect impacts. Specifically, these minimization measures include: 	<p>Prepare and implement a plan to avoid and protect potential VELB habitat within open space where feasible. Consult with USFWS, as necessary.</p>	<p>CO OP</p>	<p>Prior to and during construction; If relocation is required, monitoring during operation may be necessary pending consultation with USFWS</p>	<p>UC Davis Campus Planning and Environmental Stewardship</p>

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	<ul style="list-style-type: none"> a) All areas to be avoided during construction activities will be fenced or flagged as close to construction limits as possible. b) A minimum avoidance area of at least 20 feet from the dripline of each elderberry plant will be maintained to avoid direct impacts that could damage or kill the plant. c) A qualified biologist will provide training for all contractors, work crews, and any on-site personnel on the status of valley elderberry longhorn beetle, its host plant and habitat, the need to avoid damaging the elderberry shrubs, and the possible penalties for non-compliance. d) A qualified biologist will monitor the work area at project-appropriate intervals to assure that all avoidance and minimization measures are implemented. The amount and duration of monitoring will depend on the project specifics and will be discussed with a USFWS biologist. e) As much as feasible, all activities that could occur within 165 feet of an elderberry shrub will be conducted outside of the flight season of the valley elderberry longhorn beetle (March – July). f) Trimming of elderberry shrubs will occur between November and February and will avoid removal of any branches or stems that are greater than or equal to 1 inch in diameter to avoid and minimize adverse effects to valley elderberry longhorn beetle. g) Project activities, such as truck traffic or other use of machinery, will not create excessive dust on the project site, such that the growth or vigor of elderberry shrubs is adversely affected. Enforcement of a speed-limit and watering dirt roadways are potential methods to minimize excessive dust creation. h) Herbicides will not be used within the drip-line of any elderberry shrub. Insecticides will not be used within 98 feet of any elderberry shrub. All chemicals will be applied using a backpack sprayer or similar direct application method. Mechanical weed removal within the drip-line of any elderberry shrub will be limited to the season when adults are not active (August – February) and will avoid damaging the elderberry. i) Erosion control will be implemented, and the affected area will be re-vegetated with appropriate native plants. 7) If elderberry shrubs cannot be avoided, compliance with the ESA and consultation with USFWS is required and may involve acquiring an incidental take permit through Section 10, or a take exemption through Section 7. All elderberry shrubs with stems 			

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	<p>greater than 1 inch in diameter that cannot be avoided or have been adversely affected by indirect damage to stems of the entire shrub will be transplanted.</p> <p>8) No elderberry shrub will be removed or transplanted until authorization has been issued by USFWS and the project applicant has abided by all pertinent conditions of the incidental take permit or biological opinion.</p> <p>9) Relocation of existing elderberry shrubs and planting of new elderberry seedlings and associated riparian species will be implemented according to the Framework (USFWS 2017b). The Framework uses presence or absence of exit holes, and whether the affected elderberry shrubs are located in riparian habitat to determine the number of elderberry seedlings or cuttings and associated riparian vegetation that would need to be planted as compensatory mitigation for affected valley elderberry longhorn beetle habitat. Compensatory mitigation may include purchasing credits at a USFWS-approved conservation bank, providing on-site mitigation, or establishing and protecting habitat for valley elderberry longhorn beetle.</p>				
<p>Impact 3.5-6: Impacts to American badger</p>	<p>WVE Mitigation Measure 3.5-6: Preconstruction survey for American badger and establishment of appropriate buffers. Implement 2018 LRDP Mitigation Measure 3.5-8a. 2018 LRDP Mitigation Measure 3.5-8a: American badger preconstruction surveys and avoidance. Prior to the commencement of construction within suitable grassland or agricultural habitat, a qualified wildlife biologist will conduct surveys of the ruderal grassland habitat and grain fields slated for conversion on-site to identify any American badger burrows/dens. These surveys will be conducted not more than 30 days prior to the start of construction. If occupied burrows are not found, further mitigation will be not required. If occupied burrows are found, impacts to active badger dens will be avoided by establishing exclusion zones around all active badger dens, within which construction related activities will be prohibited until denning activities are complete or the den is abandoned. A qualified biologist will monitor each den once per week to track the status of the den and to determine when a den area has been cleared for construction.</p>	<p>Conduct survey and document findings. Prepare and implement a plan to avoid and protect potential American badger burrows/dens with exclusion zones.</p>	<p>SS DE</p>	<p>During project siting or design state, prior to final project approval not more than 30 days prior to the start of construction. Weekly monitoring if occupied burrows are found.</p>	<p>UC Davis Campus Planning and Environmental Stewardship</p>
<p>Impact 3.5-7: Impacts to special-status mammal species.</p>	<p>WVE Mitigation Measure 3.5-7: Bat preconstruction surveys, exclusion, and mitigation. Implement 2018 LRDP Mitigation Measure 3.5-8b. 2018 LRDP Mitigation Measure 3.5-8b: Bat preconstruction surveys, exclusion, and mitigation.</p>	<p>Conduct survey and document findings. Prepare and implement a plan to avoid and protect</p>	<p>SS DE</p>	<p>During project siting or design state, prior to final project approval not more than 30</p>	<p>UC Davis Campus Planning and Environmental Stewardship</p>

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	<p>The following mitigation measure will apply to construction of the project to reduce impacts on bats:</p> <ol style="list-style-type: none"> 1) Before commencing any structure or tree removal activities, a qualified biologist will conduct surveys for roosting bats. If evidence of bat use is observed, the species and number of bats using the roost will be determined. Bat detectors may be used to supplement survey efforts. If no evidence of bat roosts is found, then no further study and no mitigation will be required. 2) If pallid bats are found, bats will be excluded from the roosting site before the tree or structure is removed. Exclusion efforts may be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young). Once, it is confirmed that bats are not present in the original roost site, the tree or structure may be removed. A mitigation program identifying exclusion methods and roost removal procedures will be developed by a qualified biologist in consultation with CDFW before implementation. 	potential bat roosting sites.		days prior to the start of construction.	
3.7 Geology, Soils, and Seismicity					
<p>Impact 3.7-1: Potential for soil erosion associated with long-term operations and maintenance activities.</p>	<p>WVE Mitigation Measure 3.7-1: Manage runoff to reduce soil erosion. Implement 2018 LRDP Mitigation Measure 3.7-4.</p> <p>2018 LRDP Mitigation Measure 3.7-4: Manage stormwater flows to reduce soil erosion. Prior to approval of individual projects proposed under the 2018 LRDP, UC Davis shall conduct a drainage study in the vicinity of the site proposed for development to determine if the development could produce additional runoff that may exceed the capacity of campus stormwater infrastructure, cause localized ponding to worsen, or increase the potential for property damage from flooding. Recommendations identified in the drainage study shall be incorporated into project design such that any projected increase in surface water runoff is detained/retained in accordance with applicable requirements and does not exceed current flow rates. Measures may include, but are not limited to, installation of detention/retention basins to capture and manage water, installation of water-retaining landscaping or green-roof features, modifications to existing stormwater capture/conveyance systems, and/or other measures at project-level or campus-wide to capture and manage stormwater.</p>	Prepare drainage study and document findings. If runoff would exceed capacity of existing campus storm drainage system, implement necessary and feasible improvements.	DE	During project design and prior to project approval.	UC Davis Design and Construction Management; UC Davis Campus Planning and Environmental Stewardship
3.9 Hazards and Hazardous Materials					
<p>Impact 3.9-1: Result in the release of hazardous materials</p>	<p>WVE Mitigation Measure 3.9-1a: Minimize the site-specific risk of an accidental release of hazardous substances. Implement 2018 LRDP Mitigation Measures 3.9-2a.</p>	Conduct survey and document findings.	SS DE	During project siting or planning phase.	UC Davis Campus Planning and Environmental
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from a site of known or potential contamination.	<p>2018 LRDP Mitigation Measure 3.9-2a: Site-specific investigation and work plan implementation.</p> <p>Where initial investigations indicate the potential for contamination, UC Davis shall conduct soil sampling within the boundaries of the plan area prior to initiation of grading or other groundwork. This investigation will follow the American Society for Testing and Materials standards for preparation of a Phase II Environmental Site Assessment and/or other appropriate testing guidelines. If the results indicate that contamination exists at levels above regulatory action standards, then the site will be remediated in accordance with recommendations made by applicable regulatory agencies, including YCEHD, RWQCB, and DTSC. The agencies involved shall depend on the type and extent of contamination.</p> <p>Based on the results and recommendations of the investigation described above, UC Davis shall prepare a work plan that identifies any necessary remediation activities, including excavation and removal of on-site contaminated soils, and redistribution of clean fill material within the plan area. The plan shall include measures that ensure the safe transport, use, and disposal of contaminated soil removed from the site.</p>	Conduct remediation activities as necessary.	Remediation prior to ground-disturbing construction.		Stewardship; UC Davis Safety Services
	<p>WVE Mitigation Measure 3.9-1b: Hazardous materials contingency plan. Implement 2018 LRDP Mitigation Measures 3.9-2b.</p> <p>2018 LRDP Mitigation Measure 3.9-2b: Hazardous materials contingency plan.</p> <p>Prior to initiation of grading or other groundwork, UC Davis shall provide a hazardous materials contingency plan to Campus Safety Services and YCEHD, as appropriate. The plan will describe the necessary actions that would be taken if evidence of contaminated soil or groundwater is encountered during construction. The contingency plan shall identify conditions that could indicate potential hazardous materials contamination, including soil discoloration, petroleum or chemical odors, and presence of underground storage tanks or buried building material.</p> <p>If at any time during the course of construction, evidence of soil and/or groundwater contamination with hazardous material is encountered, UC Davis shall immediately halt construction and contact Campus Safety Services and YCEHD. Work shall not recommence until the discovery has been assessed/treated appropriately (through such mechanisms as soil or groundwater sampling and remediation if potentially hazardous materials are detected above threshold levels) to the satisfaction of YCEHD, RWQCB, and DTSC (as applicable).</p>	Prepare hazardous materials contingency plan.	DE	Prior to Construction	UC Davis Campus Planning and Environmental Stewardship; UC Davis Safety Services
		Monitor construction site, perform testing, and consult with Campus Safety Services and YCEHD to comply with hazardous materials contingency plan.	CO	Inspect construction site during earth moving activities.	UC Davis Campus Planning and Environmental Stewardship; UC Davis Safety Services; UC Davis Design and Construction Management

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	The plan, and obligations to abide by and implement the plan, shall be incorporated into the construction and contract specifications of the project.				
Impact 3.9-2: Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.	<p>WVE Mitigation Measure 3.9-2: Prepare and implement site-specific construction traffic management plan. Implement 2018 LRDP Mitigation Measure 3.9-6.</p> <p>2018 LRDP Mitigation Measure 3.9-6. Prepare and implement site-specific construction traffic management plans. UC Davis shall prepare and implement site-specific construction traffic management plans for any construction effort that would require work within existing roadways. To the extent feasible, the campus shall maintain at least one unobstructed lane in both directions on campus roadways during construction activities. At any time only a single lane is available due to construction-related road closures, the campus shall provide a temporary traffic signal, signal carriers (i.e., flag persons), or other appropriate traffic controls to allow travel in both directions. If construction activities require the complete closure of a roadway, the campus shall provide appropriate signage indicating alternative routes. To ensure adequate access for emergency vehicles when construction projects would result in temporary lane or roadway closures, the campus shall inform emergency services, including the UC Davis Police Department, UC Davis Fire Department, and American Medical Response, of the closures and alternative travel routes.</p>	Develop and implement a traffic management plan.	DE CO	Prior to construction.	UC Davis Design and Construction Management; UC Davis Campus Planning and Environmental Stewardship
3.10 Hydrology and Water Quality					
Impact 3.10-6: On-site and off-site flood-related impacts.	<p>Mitigation Measure 3.10-6: Implement project-level stormwater controls. Implement 2018 LRDP Mitigation Measure 3.7-4.</p>	See WVE Mitigation Measure 3.7-1.	See WVE Mitigation Measure 3.7-1.	See WVE Mitigation Measure 3.7-1.	See WVE Mitigation Measure 3.7-1.
3.12 Noise					
Impact 3.12-1: Construction noise.	<p>WVE Mitigation Measure 3.12-1: Reduce construction noise. Implement 2018 LRDP Mitigation Measure 3.12-1.</p> <p>2018 LRDP Mitigation Measure 3.12-1: Reduce construction noise. For all construction activities, UC Davis shall implement or incorporate the following noise reduction measures into construction specifications for contractor(s) implementation during project construction:</p>	Include measures in contract specifications. Inspect construction site to verify that measures are being implemented.	CO	During construction.	UC Davis Design and Construction Management; UC Davis Campus Planning and Environmental Stewardship

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	<ol style="list-style-type: none"> 1) Construction activity shall be limited to the daytime hours between 7:00 a.m. and 7:00 p.m. on weekdays and between 8:00 a.m. and 8:00 p.m. on weekends and holidays, where possible. 2) All construction equipment and equipment staging areas shall be located as far as possible from nearby noise-sensitive land uses, and/or located to the extent feasible such that existing or constructed noise attenuating features (e.g., temporary noise wall or blankets) block line-of-site between affected noise-sensitive land uses and construction staging areas. 3) All construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturer recommendations. Equipment engine shrouds shall be closed during equipment operation. 4) Individual operations and techniques shall be replaced with quieter procedures (e.g., using welding instead of riveting, mixing concrete off-site instead of on-site) where feasible and consistent with building codes and other applicable laws and regulations. 5) Stationary noise sources such as generators or pumps shall be located 100 feet away or more from noise-sensitive land uses, as feasible. 6) Loud construction activity (i.e., construction activity such as jackhammering, concrete sawing, asphalt removal, and large-scale grading operations) shall not be scheduled during finals week and preferably during holidays, summer/winter break, Thanksgiving break, and spring break. 7) No less than one week prior to the start of construction activities at a particular location, notification shall be provided to academic, administrative, and residential uses located within 100 feet of the construction site. 8) When construction would occur within 100 feet of sensitive receptors and may result in temporary noise levels in excess of 86 dBA L_{max} at the exterior of the adjacent receptor, temporary noise barriers (e.g., noise-insulating blankets or temporary plywood structures) shall be erected that reduce construction-related noise levels to less than 86 dBA L_{max} at the receptor. 9) For any construction activity that must extend beyond the daytime hours of 7:00 a.m. and 7:00 p.m. on weekdays and between 8:00 a.m. and 8:00 p.m. on weekends and occur within 1,120 feet of a building where people sleep, UC Davis shall ensure that interior noise levels of 45 dBA L_{max} are not exceeded at any receiving land use by not exceeding 70 dBA L_{max} at the receiving land use property line. Typical residential 			

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	<p>structures with windows closed achieve a 25-30 dBA exterior-to-interior noise reduction (Caltrans 2002). Thus, using the lower end of this range, an exterior noise level of 70 dBA L_{max} would ensure interior noise levels do not result in an increased risk for sleep disturbance. To achieve this performance standard, the following measures shall be implemented:</p> <ul style="list-style-type: none"> a) Use of noise-reducing enclosures and techniques around stationary noise-generating equipment (e.g., concrete mixers, generators, compressors). b) Installation of temporary noise curtains installed as close as possible to the boundary of the construction site within the direct line of sight path of the nearby sensitive receptor(s) and consist of durable, flexible composite material featuring a noise barrier layer bounded to sound-absorptive material on one side. The noise barrier layer shall consist of rugged, impervious, material with a surface weight of at least one pound per square foot. c) Retain a qualified noise specialist to conduct noise monitoring to ensure that noise reduction measures are achieved the necessary reductions such that levels at the receiving land uses do not exceed exterior noise levels of 70 dBA L_{max}. Exceedances of noise standards shall result in immediate halt of construction until additional noise-reduction measures are implemented. 				
<p>Impact 3.12-2: Increases in non-transportation noise sources.</p>	<p>WVE Mitigation Measure 3.12-2: Reduce noise exposure from new stationary noise sources. Implement 2018 LRDP Mitigation Measure 3.12-2. 2018 LRDP Mitigation Measure 3.12-2: Reduce noise exposure from new stationary noise sources. During project design of individual projects proposed under the 2018 LRDP, UC Davis shall review and ensure that external mechanical equipment, including HVAC units associated with new/renovated buildings, incorporates features designed to reduce noise to below 63 dB L_{eq} at any nearby building where people sleep. Design features may include, but are not limited to, locating equipment within equipment rooms or enclosures that incorporate noise reduction features, such as acoustical louvers, and exhaust and intake silencers. Equipment enclosures shall be oriented so that major openings (i.e., intake louvers, exhaust) are directed away from nearby noise-sensitive receptors.</p>	<p>Review project design for compliance with standards.</p>	<p>DE</p>	<p>Prior to final project approval.</p>	<p>UC Davis Design and Construction Management; UC Davis Campus Planning and Environmental Stewardship</p>

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<p>3.16 Transportation and Circulation</p>					
<p>Impact 3.16-1: Freeway level of service impacts.</p>	<p>WVE Mitigation Measure 3.16-1: Implement TDM strategies to reduce peak hour vehicle trips on I-80. Implement 2018 LRDP Mitigation Measure 3.16-1. 2018 LRDP Mitigation Measure 3.16-1: Implement TDM strategies to reduce peak hour vehicle trips on I-80. UC Davis shall use the 2016-2017 academic year as the baseline by which to determine 2018 LRDP-related growth in peak hour student and employee commute vehicle trips on I-80. During the 2018-2019 academic year and every two years thereafter, UC Davis shall determine the number of peak hour student and employee commute vehicle trips that utilize I-80. In instances where this figure exceeds baseline levels, UC Davis shall institute TDM strategies to reduce campus-related peak hour vehicle trips on I-80. This figure could be estimated from the results of the annual Campus Travel Survey administered by the UC Davis Institute of Transportation Studies. The implementation of TDM strategies shall reduce peak hour student and employee commute vehicle trips on I-80 equal to or below baseline levels. TDM strategies that would reduce peak hour vehicle trips on I-80 include strategies to reduce commute and business vehicle trips to and from campus using I-80. Specific potential TDM strategies include, but are not limited to, the following:</p> <ul style="list-style-type: none"> ▲ expand public transit service, including additional regional service for UC Davis students and employees living off-campus and outside of Davis, ▲ support alternative congestion management policies/projects on I-80, including a toll for all vehicles utilizing I-80 across the Yolo Causeway, ▲ implement a fair value commuting program, where fees charged to SOV commuters (e.g., through parking pricing) are tied to UC Davis vehicle trip reduction targets and fee revenue is rebated to non-SOV commuters, or other pricing of vehicle travel and parking, ▲ provide carpool and/or vanpool incentive programs, ▲ allow flexible work hours and schedule classes to reduce arrivals/departures during peak hours, and ▲ offer remote working options. <p>The TDM strategies implemented to reduce peak hour vehicle trips on I-80 will be consistent with existing and planned TDM programs on campus, including the UC Davis TDM Plan currently in development. If these TDM strategies are not sufficient to reduce</p>	<p>Document implementation of campus TDM strategies and progress. Detail any needed improvements to program.</p>	<p>OP</p>	<p>Prior to project occupancy.</p>	<p>UC Davis Transportation and Parking Services; UC Davis Campus Planning and Environmental Stewardship</p>

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	peak hour trips to baseline levels, additional TDM measures or adjustments to the measures above shall be implemented, as needed to reduce peak hour trips to baseline levels.				
Impact 3.16-2: Intersection level of service impacts.	<p>WVE Mitigation Measure 3.16-2a: Implement TDM strategies to reduce peak hour vehicle delay at the Hutchison Drive/SR 113 NB Ramps intersection. Implement 2018 LRDP Mitigation Measure 3.16-2a. 2018 LRDP Mitigation Measure 3.16-2a: Implement TDM strategies to reduce peak hour vehicle delay at the Hutchison Drive/SR 113 NB Ramps intersection. During the 2018-2019 academic year and every two years thereafter, UC Davis shall monitor and analyze traffic conditions at the Hutchison Drive/SR 113 NB Ramps intersection. Additionally, during its standard environmental review process, UC Davis shall forecast and analyze traffic conditions at the Hutchison Drive/SR 113 NB Ramps intersection for individual development projects proposed under the 2018 LRDP that are expected to affect operations at the intersection. When operations at the Hutchison Drive/SR 113 NB Ramps intersection are found to reach an intersection level of service F and the 2018 LRDP represents 10 percent of the total volume or overall intersection delay, or when a project-level analysis indicates the same, UC Davis shall institute TDM strategies to reduce peak hour vehicle trips and, in turn, vehicle delay at the Hutchison Drive/SR 113 NB Ramps intersection.</p> <p>The implementation of TDM strategies shall reduce peak hour average intersection delay caused by the 2018 LRDP to acceptable levels in accordance with the intersection level of service significance criteria, including the level of service thresholds established by Caltrans or the Yolo County CMP. Since the 2018 LRDP would cause intersection operations at Hutchison Drive/SR 113 NB Ramps to degrade from an acceptable LOS to an unacceptable LOS, TDM strategies would be required to reduce peak hour intersection delay to an acceptable LOS. According to the Yolo County CMP, LOS E or better, or 50 seconds or less, is acceptable for the Hutchison Drive/SR 113 NB Ramps stop-controlled intersection.</p> <p>The growth at West Village accounts for most of the increase (approximately 280 trips) in the stop-controlled northbound left-turn volume during the p.m. peak hour between 2030 no project and 2030 plus 2018 LRDP conditions. This movement is largely responsible for the high intersection delays. These trips tend to be longer distance commute trips using SR 113 and I-80. As such, TDM strategies that would reduce peak hour intersection delay at this location include strategies to reduce commute and</p>	Document implementation of campus TDM strategies and progress as it relates to the Hutchison Drive/SR 133 interchange. Detail any needed improvements to program.	OP	Prior to project occupancy.	UC Davis UC Davis Campus Planning and Environmental Stewardship

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	<p>business vehicle trips utilizing the Hutchison Drive/SR 113 interchange as well as strategies to reduce peak hour vehicle trip use of Hutchison Drive between the central campus and west campus. Specific potential TDM strategies include, but are not limited to, the following:</p> <ul style="list-style-type: none"> ▲ expand public transit service, including additional service connecting West Village and the central campus, ▲ shift UC Davis service vehicles to use the Garrod Drive overcrossing of SR 113, ▲ promote bicycle use between West Village and the central campus, ▲ implement a fair value commuting program or other pricing of vehicle travel and parking, ▲ provide carpool and/or vanpool incentive programs, ▲ allow flexible work hours and schedule classes to reduce arrivals/departures during peak hours, and ▲ offer remote working options. <p>The TDM strategies implemented to reduce peak hour intersection delay at this location will be consistent with existing and planned TDM programs on campus, including the UC Davis TDM Plan currently in development. If these TDM strategies are not sufficient to reduce peak hour intersection delay consistent with the significance criteria, additional TDM measures or adjustments to the measures above shall be implemented, as needed to reduce peak hour intersection delay consistent with the significance criteria.</p>				
	<p>WVE Mitigation Measure 3.16-2b: Modify SR 113/Hutchison Drive interchange. Implement 2018 LRDP Mitigation Measure 3.16-2b.</p> <p>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</p>	<p>Construct necessary intersection improvements. Monitor projects for impacts that would cause operations to fall below the intersection level of service significance threshold.</p>	<p>OC</p>	<p>Prior to project occupancy when project would cause operations to fall below the intersection level of service significance threshold.</p>	<p>UC Davis Campus Planning and Environmental Stewardship</p>

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	<p>that conflict with bicycle and pedestrian movements as specified in WVE Mitigation Measure 3.16-4a.</p> <p>2018 LRDP Mitigation Measure 3.16-2b: Modify SR 113/Hutchison Drive interchange. During the 2018-2019 academic year and every two years thereafter, UC Davis shall monitor and analyze traffic conditions at the SR 113/Hutchison Drive interchange. Additionally, during its standard environmental review process, UC Davis shall forecast and analyze traffic conditions at the SR 113/Hutchison Drive interchange for individual development projects proposed under the 2018 LRDP that are expected to affect operations at the interchange. When operations at the SR 113/Hutchison Drive ramp terminal intersections are found to reach an intersection level of service F and the 2018 LRDP represents 10 percent of the total volume or overall intersection delay criteria, or when a project-level analysis indicates the same, the SR 113/Hutchison Drive interchange shall be modified to increase the capacity of the ramp terminal intersections and to modify uncontrolled turning movements that conflict with bicycle and pedestrian movements as specified in WVE Mitigation Measure 3.16-4a. Potential modifications include ramp widening and alignment changes plus the addition of ramp approach turn lanes, traffic signals, or roundabouts. Both ramp terminal intersections meet peak hour signal warrants with the project. Implementation of signals alone would be sufficient to provide acceptable peak hour traffic operations. Since the interchange is owned and operated by Caltrans, any improvements will be subject to Caltrans review, project development procedures, and approval.</p>				
<p>Impact 3.16-3: Impacts to transit service and facilities.</p>	<p>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</p>	<p>Monitor transit ridership and document results; confer with providers to identify necessary improvements.</p>	<p>OP</p>	<p>As needed.</p>	<p>Unitrans; UC Davis Transportation and Parking Services; UC Davis Campus Planning and Environmental Stewardship</p>
		<p>Increase service as needed.</p>	<p>OP</p>	<p>As needed.</p>	<p>Unitrans; UC Davis Transportation and Parking Services;</p>

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Table ES-2 West Village Expansion Mitigation Monitoring and Reporting Program

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	<p>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.</p>			<p>UC Davis Campus Planning and Environmental Stewardship</p>
<p>Impact 3.16-4: Impacts to bicycle facilities.</p>	<p>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:</p> <ul style="list-style-type: none"> ▲ northbound diagonal on-ramp, ▲ northbound loop on-ramp, ▲ northbound slip off-ramp, ▲ southbound diagonal on-ramp, and ▲ southbound loop on-ramp. <p>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.</p>	<p>Construct specified modifications to the SR 113/Hutchison Drive interchange.</p>	<p>OC</p> <p>Prior to the occupancy of new West Village Expansion dwelling units.</p>	<p>UC Davis Campus Planning and Environmental Stewardship with Assistance from UC Davis Design and Construction Management; Caltrans</p>
	<p>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</p>	<p>Construct specified improvements to the bike roundabout at the west side of the SR 113</p>	<p>OC</p> <p>Prior to the occupancy of new West Village Expansion dwelling units.</p>	<p>UC Davis Campus Planning and Environmental Stewardship with Assistance from UC</p>

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	<p>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.</p>	<p>bike/pedestrian overcrossing</p>		<p>Davis Design and Construction Management; Caltrans</p>	
	<p>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:</p> <ol style="list-style-type: none"> 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 speed 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 	<p>Construct specified improvements the east-west bicycle connection across the Orchard Park site between the SR 113 bike/pedestrian overcrossing and Orchard Park Drive</p>	<p>OC</p>	<p>Prior to occupancy of new West Village Expansion dwelling units</p>	<p>UC Davis Campus Planning and Environmental Stewardship; UC Davis Design and Construction Management</p>

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	<p>utilizing shared-space design principles to encourage low vehicle speeds and activate use of the roadways as a communal space.</p> <p>5) Close Orchard Park Circle to vehicle traffic. Remove the existing speed humps and convert Orchard Park Circle to bicycle-only.</p> <p>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.</p>				
	<p>WVE Mitigation Measure 3.16-4d: Improve the Russell Boulevard shared-use path between Arthur Street and La Rue Road.</p> <p>1) 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: 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.</p> <p>2) Physically separate bicyclists and pedestrians by constructing a new pedestrian pathways parallel to the existing shared-use path.</p> <p>3) Install pedestrian-scale lighting to improve visibility.</p> <p>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.</p> <p>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.</p>	<p>Construct improvements to the Russell Boulevard shared-use path between Arthur Street and La Rue Road</p>	<p>OC</p>	<p>Prior to the occupancy of new West Village Expansion dwelling units.</p>	<p>UC Davis Campus Planning and Environmental Stewardship; UC Davis Design and Construction Management</p>

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	<p>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:</p> <ul style="list-style-type: none"> ▲ 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. <p>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.</p>	Conduct a project-level site assessment and circulation analysis for the remote parking area.	OC Prior to construction of Old Davis Road remote parking area.		UC Davis Campus Planning and Environmental Stewardship; UC Davis Design and Construction Management
<p>Impact 3.16-5: Impacts to pedestrian facilities.</p>	<p>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:</p> <ul style="list-style-type: none"> ▲ northbound diagonal on-ramp, ▲ northbound loop on-ramp, ▲ northbound slip off-ramp, ▲ southbound diagonal on-ramp, and ▲ southbound loop on-ramp. <p>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</p>	Construct modifications to SR 113/Hutchison Drive interchange	OC Prior to occupancy of new West Village Expansion dwelling units.		UC Davis Campus Planning and Environmental Stewardship with Assistance from UC Davis Design and Construction Management

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	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.				
3.17 Utilities and Service Systems					
Impact 3.17-1: Require construction of new/expanded wastewater infrastructure	<p>WVE Mitigation Measure 3.17-1a: Upsize Sewer Line within Celadon Street. Prior to operation of student housing at the West Village Expansion site, UC Davis shall replace the existing 8-inch sewer line segment currently within the northern portion of Celadon Street with either a 10-inch or 12-inch sewer line. The length of the line to be replaced is approximately 400 feet and extends between the West Village site and the 12-inch sewer line segment within Celadon Road, beginning at Jade Street.</p> <p>WVE Mitigation Measure 3.17-1b: Improve Existing Sewer Lift Station (SSLS-12A). Prior to operation of student housing at the West Village Expansion site, UC Davis shall replace the existing sewer pumps at Sewer Lift Station SSLS-12A such that the station is capable of pumping up to approximately 2,000 gallons per minute (gpm), a 300 gpm increase above existing capacity.</p>	Replace existing sewer line with upsized line.	DE OC	Prior to occupancy of new West Village Expansion dwelling units	UC Davis Campus Planning and Environmental Stewardship; UC Davis Design and Construction Management
Notes: Project stage at which implementation of the measure is required: SS=during site selection; DE=during detailed project planning or project design prior to project approval; CO=during construction; OC=prior to occupancy; OP=during operation					

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