6 ALTERNATIVES

6.1 INTRODUCTION

Environmental impact reports (EIRs) are required to consider alternatives to the project that are capable of reducing or avoiding significant environmental impacts. Section 15126.6(f) of the California Environmental Quality Act (CEQA) Guidelines states:

> Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

Section 15126.6(a) of the Guidelines requires EIRs to describe "… a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. An EIR is not required to consider alternatives that are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason." (See also CEQA Guidelines Section 15126.6[f].) This section of the CEQA Guidelines also provides guidance regarding what the alternatives analysis should consider.

The Guidelines require that an EIR include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the project. If an alternative would cause one or more significant effects in addition to those that would be caused by the project, the significant effects of the alternative must be discussed, but in less detail than the significant effects of the project as proposed (CEQA Guidelines Section 15126.6[d]). The Guidelines further require that the "no project" alternative be considered (CEQA Guidelines Section 15126.6[e]).

In defining "feasibility" (e.g.," … feasibly attain most of the basic objectives of the project …"), CEQA Guidelines Section 15126.6(f)(1) states, in part:

> Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

6.2 PROJECT OVERVIEW

The 2018 LRDP involves modifications to the campus land use plan, established as part of the 2003 LRDP, to support potential growth. UC Davis anticipates that under the 2018 LRDP, the on-campus population could grow over the next 10 or more years to include approximately 39,000 students, 14,500 UC Davis faculty and staff, and 1,230 students associated with the Los Rios Davis Community College Center (part of Los Rios Community College), located in West Village. To accommodate the increased population, the 2018 LRDP proposes facility renewal and capacity for an additional 2 million square feet of academic and administrative building space and 9,050 additional student beds on campus. To accomplish this, the proposed land plan would involve a reduction in Teaching & Research Fields (approximately 130 acres) and Undeveloped Open Space (approximately 140 acres). The 2018 LRDP does not address planning or growth for UC Davis facilities outside of the Davis area, such as at the UC Davis Sacramento Medical Center, Tahoe Environmental Research Center, or Bodega Marine Laboratory.

6.2.1 Project Objectives

In determining what alternatives should be considered in the EIR, the objectives of the project must be considered, as attainment of most of the basic objectives forms one of the tests of whether an alternative is feasible (see discussion above). UC Davis identified the following project objectives, as previously described (see Chapter 2, "Project Description"):

- Create a dynamic environment for learning and discovery.
- Promote compact and clustered development of academic/administrative facilities where possible.
- Provide agricultural and environmental field research facilities close to the UC Davis central campus.
- Maintain a compact and connected academic core with a generous open space network.
- Maintain flexibility to accommodate new or expanded initiatives and programs.
- Promote compact and clustered development of housing facilities where possible.
- Increase on-campus housing opportunities and the proportion of students living on-campus.
- Promote affordable and accessible student and faculty/staff residential communities.
- Protect natural areas, including the Arboretum waterway and Putah Creek Reserve.
- Provide an environment to enrich campus life and serve the greater community.
- Further UC Davis as a leader in sustainability and efforts to meet the goals of the UC Sustainable Practices Policy.
- Foster long-term resiliency in response to climate change and the uncertainties of other social, economic, and environmental factors.
- Maximize transit, bike, and pedestrian access to the campus.
- Provide a healthy and interconnected natural and built environment.
- Monitor and adaptively manage future development on campus to reduce temporary construction and long-term impacts on any one particular area on or off campus.

6.2.2 Summary of 2018 LRDP Impacts

The Executive Summary chapter of this volume presents a detailed summary of the potential environmental impacts of implementation of the 2018 LRDP. Please refer to Table ES-1 for a summary of impacts associated with development of the project. Overall, the 2018 LRDP would result in significant and unavoidable impacts with respect to aesthetics, agricultural resources; air quality; historic resources; biological resources; population and housing; and transportation and circulation.

6.3 ALTERNATIVES CONSIDERED BUT DISMISSED

In addition to factors described previously, CEQA Guidelines state that an EIR should also identify any alternatives that were considered by the lead agency but were rejected during the planning or scoping process and briefly explain the reasons underlying the lead agency's determination. This section addresses these alternatives.

CENTRAL CAMPUS INFILL

Based on public input received during the NOP public review period and subsequent coordination with local agencies, UC Davis evaluated several alternatives that involved an increase in student housing beyond what was proposed in January 2017. Under this alternative, UC Davis would focus additional campus development beyond what is contemplated in the current draft 2018 LRDP within the core campus (east of State Route [SR] 113 and north of Interstate 80 [I-80].) This alternative would involve infill and redevelopment, with dense student housing projects up to 4,000 additional beds, of Orchard Park and the proposed expansion of West Village (the same as the project), as well as the student farm, Gateway Vineyards, and teaching field space within the central campus. This alternative would result in a reduction in potential academic and administrative space compared to the 2018 LRDP, as well as loss of the student farm and field space adjacent to Mondavi Institute for Wine and Food Science. Due to the densification of uses within the central campus, there would be a potential for loss of connection between some academic programs and research/field space. The student farm is also viewed as an essential campus academic use, much like Russell Field. Although this alternative would result in additional housing opportunities within the central campus, it would represent a greater level of development and disturbance within UC Davis, thereby resulting in potentially greater impacts to air quality (construction-related); noise (construction-related); historic, archaeological and historic resources; and even, aesthetic impacts depending on the placement of structures in the western portion of central campus. Furthermore, this alternative could result in impacts of greater severity associated with agricultural resources. Finally, it would achieve some of the objectives stated in Section 6.2, but would not achieve the balance of uses, including locating/maintain agricultural and environmental field research facilities close to the central campus, maintaining generous open space within the academic core, and maintaining flexibility for future academic initiatives and programs. Thus, because this alternative would not meet most of the basic project objectives and would not reduce or eliminate an environmental impact, relative to the proposed plan, this alternative is not feasible and is not considered in further detail.

TARGETED SOUTH OR WEST CAMPUS DEVELOPMENT

Under this alternative, UC Davis would pursue development of Orchard Park Redevelopment and the West Village Expansion with additional student housing, but would also shift student housing, which under the 2018 LRDP would occur within central campus, to the south or west campus. The two most likely areas for student housing development under this alternative would include the area

south of I-80 and west of Old Davis Road and/or the area north of I-80 and west of SR 113. Such development would replace planned student housing increases within the central campus (specifically Segundo, Tercero, Solano Gateway, and Academic Core). Implementation of this alternative would result in reduced localized impacts (air quality during construction, construction noise, etc.) due to lack of existing receptors at the alternate student housing sites within south and west campus compared to the 2018 LRDP. However, this alternative would not reduce at least one significant impact associated with the 2018 LRDP as it would represent the same overall level of development and result in further development of Teaching & Research Fields and Undeveloped Open Space than the 2018 LRDP. This alternative would achieve some of the objectives stated in Section 6.2 (above), but it would remove essential academic/administrative space (located within the south campus) and/or teaching field space (located within the west campus) close to the core campus (a project objective). Potential increases in VMT and operational air emissions would also occur as a result of increased travel distance between student housing and the central campus. This alternative would also have greater impacts on agricultural lands. Thus, because this alternative would not meet most of the basic project objectives and would not reduce or eliminate an environmental impact, relative to the proposed plan, this alternative is not feasible and is not considered in further detail.

4-YEAR HOUSING GUARANTEE

Under a 4-year housing guarantee alternative, UC Davis would extend the opportunity for all students (graduates and undergraduates) to live on campus. Using 2016-2017 three-quarter-average enrollment numbers (33,825) and assuming up to 70 percent of students would pursue guaranteed housing, UC Davis would need to provide approximately 23,700 beds on campus. That would represent an increase of approximately 13,882 student beds from existing conditions and a 4,800-bed increase above the on-campus beds anticipated under the 2018 LRDP. If all housing was to occur within the planning horizon, implementation of this alternative would require the construction of approximately 2.9 million square feet of additional student housing. This alternative would involve a greater level of development within UC Davis property and additional land uses changes (likely conversion of teaching field/agricultural space to student housing). As a result, this alternative would result in greater impacts than the 2018 LRDP. Further, this alternative would resemble Alternative 4 (see below) in terms of total development and is not considered materially different such that it would contribute to a "reasonable range" of alternatives. As such, this alternative is not considered necessary to meet CEQA requirements for an alternative to be considered. As a result, this alternative is not considered in further detail.

6.4 ALTERNATIVES CONSIDERED IN DETAIL

The following alternatives are under consideration for this project:

- **Alternative 1: No Project.** This alternative would involve the continued implementation of the 2003 LRDP. Planned growth as expressed in the 2003 LRDP would continue up to its planned capacity, primarily associated with new academic/administrative space.
- **Alternative 2: Reduced Development Program.** Under this alternative, UC Davis would implement a long-range campus plan with an overall reduction in planned campus development. Under this alternative, housing for approximately 8,000 students and 500,000 square feet (sf) of new academic/administrative space would be provided, compared to 9,050 student beds and 2,000,000 sf of new academic/administrative space under the 2018 LRDP.

- **Alternative 3: Net Student Growth Only.** Similar to Alternative 2, UC Davis would implement a long-range campus plan that reduces the anticipated level of development, compared to the 9,050 student beds and 2,000,000 sf of new academic/administrative space of the 2018 LRDP. This alternative would provide up to 5,200 student beds, which would correspond to the projected increase in student enrollment at UC Davis, and up to 500,000 sf of new academic/administrative space.
- **Alternative 4: 2018 LRDP with Additional Student Housing.** This alternative would include development of the campus similar to the 2018 LRDP with additional student housing development (approximately 2,200 beds) at the Nishi site, located southeast of the central campus, and additional beds at the West Village Expansion (1,800 beds) and Orchard Park Redevelopment (500 beds). In total, implementation of this alternative would result in approximately 23,400 total student beds within the UC Davis campus, compared to the 18,868 total student beds with implementation of the 2018 LRDP.

6.4.1 Evaluation of Alternatives

ALTERNATIVE 1: NO PROJECT

CEQA Guidelines Section 15126.6(e)(1) requires that the 'no project' alternative be described and analyzed "to allow decision makers to compare the impacts of approving the project with the impacts of not approving the project." The no project analysis is required to discuss "the existing conditions at the time the notice of preparation is published…as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services" (Section 15126.6[e][2]). "If the project is…a development project on identifiable property, the 'no project' alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this 'no project' consequence should be discussed. In certain instances, the no project alternative means 'no build' wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment" (Section 15126[e][3][B]).

The 2003 LRDP is the existing long-range plan for the campus, and as such, continued implementation of the current plan would continue if UC Davis does not adopt and begin implementation of the 2018 LRDP or other long-term plan for campus. Within the context of the current plan, additional planned growth of the campus would occur, primarily associated with increases in academic and administrative space. Compared to the 2018 LRDP, on-campus development and growth would be very limited (likely to just the central campus) and is assumed to not exceed 500,000 sf of academic/administrative space development beyond existing conditions.

Aesthetics

Changes to existing visual conditions on the UC Davis campus would be limited to development of academic and administrative buildings within the central campus. By comparison, the 2018 LRDP would involve greater development along the periphery of campus, West Village, Orchard Park, and along Old Davis Road. Under Alternative 1, changes in existing visual conditions would be much more limited than the 2018 LRDP and less than significant because the development would not encroach upon vistas or created visually incompatible views. New development, such as the West Village

Expansion, which could affect some long-distance views of vistas under the 2018 LRDP, would not occur. Therefore, aesthetic impacts associated with Alternative 1 would be less than the proposed plan. *(Less Impact)*

Agriculture and Forestry Resources

Under Alternative 1, there would likely be no conversion of agricultural lands to non-agricultural use. As a result, impacts associated with the 2018 LRDP, including conversion of up to 175 acres of Important Farmland, would not occur. Because there would be no physical changes to the campus that could affect agricultural resources under Alternative 1, it would result in lesser impacts than under the 2018 LRDP. *(Less Impact; significant unavoidable impact to agriculture avoided)*

Air Quality

Alternative 1 would result in less development than under the 2018 LRDP, and thus, would generate less construction and operations-related air emissions. Compared to the 2018 LRDP, this alternative would result in no more than 10 percent of the construction effort anticipated with implementation of the 2018 LRDP. Implementation of Alternative 1 would also result in decreased operational emissions, associated with the 2018 LRDP, due to decreased vehicle trips and activities within the UC Davis campus. Furthermore, due to the lack of housing that would occur under this alternative, the No Project alternative would avoid potential impacts associated with adjacency to I-80. Because of the limited amount of new development and campus growth anticipated under this alternative, air quality impacts would likely be less than significant. *(Less Impact; significant unavoidable impacts to air quality likely avoided)*

Archaeological, Historical, and Tribal Cultural Resources

Earth-moving activities within the UC Davis campus have the potential to disturb archaeological, tribal cultural, and/or historic resources or result in accidental discovery of human remains. Under the project, ground-disturbing activities (e.g., grading, excavation) could result in discovery of archaeological resources, tribal cultural resources, or human remains; however, feasible mitigation measures and regulatory requirements/procedures would reduce these impacts to a less-than-significant level. Additionally, on-campus development within or near potentially historic structures under both this alternative and the 2018 LRDP would result in potentially significant and unavoidable impacts, especially within the central campus. Because there would be lesser earth-moving activities under Alternative 1, there would be a lesser degree of potential impacts on cultural resources. *(Less Impact)*

Biological Resources

Under Alternative 1, the UC Davis campus would remain largely similar to existing conditions, except where limited development would occur within the central campus. While the campus contains habitat for special-status plant and animal species, as well as riparian habitat, physical changes associated with implementation of this alternative would likely occur further away from, or less frequently near, potentially sensitive habitat (especially within west campus and near the Putah Creek Riparian Reserve); and, thus, impacts to biological resources would be substantially reduced under Alternative 1 compared to the 2018 LRDP. Due to the potential for removal of protected trees within the central campus under both this alternative and the proposed plan, the respective impacts would be significant and unavoidable and similar under both the 2018 LRDP and Alternative 1. Overall, compared to the 2018 LRDP, Alternative 1 would result in reduce severity of impacts to biological resources. *(Less Impact)*

Energy

Under this alternative lesser development would occur, including the development of more energy-efficient structures and facilities. Less construction activities would correspond to less fuel consumption, due to a less populated campus. However, energy efficiency per person would likely be less under Alternative 1 compared to the 2018 LRDP because less energy efficient buildings would be constructed on campus and students would be located further from campus. Therefore, impacts would be less than significant under this alternative and less than the 2018 LRDP due to the lesser overall demand for energy generated by UC Davis. *(Less Impact)*

Geology, Soils, and Seismicity

Earth-moving activities associated with construction have the potential to affect geology, soils, and mineral resources. The types of impacts that could occur from development on campus, include: geotechnical issues, increased erosion, and exposure of buildings and people to seismic hazards. Existing regulations and permitting requirements, such as California Building Code (CBC) requirements, National Pollutant Discharge Elimination System (NPDES) permit conditions, and best management practices (BMPs), would minimize potential impacts to a less-than-significant level. While both this alternative and the 2018 LRDP would result in less-than-significant impacts, Alternative 1 would be lesser because there would be less development. *(Less Impact)*

Greenhouse Gas Emissions and Climate Change

Due to the lesser level of on-campus development under this alternative, there would be less construction-related greenhouse gas (GHG) emissions compared to the 2018 LRDP. However, consistent with the UC Sustainable Practices Policy and actions outlined in the UC Davis Climate Action Plan (CAP), UC Davis emissions would be required to be net zero for Scopes 1 and 2 in 2025 and net zero for Scopes 1, 2, and 3 in 2050 under both this alternative and the 2018 LRDP. While implementation of the 2018 LRDP would involve the placement of new energy efficient structures within available land and adjusting land use patterns to capture efficiencies related to alternative transportation (transit, bicycle, and pedestrian travel), Alternative 1 would emit lesser GHG emissions overall because it would result in less development. *(Less Impact)*

Hazards and Hazardous Materials

Under the 2018 LRDP and Alternative 1, on-campus construction activities would entail the transport, use, and storage of hazardous materials; and release of hazardous materials from a site of known or potential contamination. In addition, disruption of area roadways during construction may hinder traffic flow and affect emergency response. However, feasible mitigation measures are available to reduce these impacts to a less-than-significant level. Similar types of impacts would occur under this alternative although to a lesser degree as a result of the reduced construction effort. *(Less Impact)*

Hydrology and Water Quality

Earth-moving activities associated with construction under the 2018 LRDP and this alternative have the potential to affect hydrology and water quality within UC Davis. The types of impacts that could occur from development under the 2018 LRDP include: adverse effects on water quality, reduced groundwater recharge, alterations to existing drainage systems, and effects on the 100-year floodplain. Existing regulations and permitting requirement, such as NPDES permit conditions, a storm water pollution prevention plan (SWPPP), and a Stormwater Quality Control Plan (SWQCP) would reduce potentially significant impacts to a less-than-significant level. In addition, development of additional academic/administrative space would be required to comply with existing regulations and implement similar mitigation measure that would reduce impacts to a less-than-significant level.

Because this alternative would require less development, the severity of impacts would be lesser when compared to the 2018 LRDP. *(Less Impact)*

Land Use and Planning

Under Alternative 1, there would be no changes associated with existing land use and planning, and conversion of land designated Undeveloped Open Space and Agricultural land would not occur as under the 2018 LRDP. This alternative would involve a continuation of the existing land use plan and similar considerations with on-campus development adjacent to the City of Davis. Further, as development would likely occur within the central campus and adjacent to existing academic/administrative space, the potential for impacts would be less under this alternative due to a decreased potential for conflicts between new academic/administrative uses and existing land uses. However, impacts would remain less than significant due to the existence of similar academic/administrative uses within the central campus already. It is worth noting that implementation of this alternative would conflict with resolutions adopted by the City of Davis and Yolo County with respect to the need for UC Davis to provide additional on-campus housing; however, because UC Davis is not subject to local rules and regulations, this would not constitute a new significant impact or greater severity of impact under CEQA. *(Less Impact)*

Noise

Earth-moving activities within campus (e.g., grading, excavation) under both this alternative and the 2018 LRDP would result in noise and vibration impacts. Feasible mitigation measures are available to reduce these impacts to a less-than-significant level, as described in Section 3.12, "Noise." Compared to the 2018 LRDP, there would be less construction-generated noise or vibration under Alternative 1 due to less overall construction-related activities. *(Less Impact)*

Population and Housing

Under Alternative 1, there would be no new residential units provided on campus. This alternative would not increase the percentage of students living on campus compared to students living off campus. In comparison, the 2018 LRDP would add approximately 4,000 additional student beds in excess of the anticipated growth in student enrollment allowing for students who might otherwise seek residences off campus to stay on campus. Under this alternative, on-campus employment could incrementally increase up to the amount previously anticipated in the 2003 LRDP, provided total campus population does not exceed the 2003 projections. While new employees under the 2003 LRDP are not anticipated to necessitate additional housing beyond current projections of local jurisdiction, it may increase the number of employees living off campus relative to the 2018 LRDP. This alternative would also not improve the ratio of students living on campus compared to students living off campus. Therefore, Alternative 1 would increase the need for off-campus housing as a result of increased employment and would not increase the ratio of students living on campus, thereby resulting in potentially greater and significant, impacts than the 2018 LRDP. *(Greater Impact)*

Public Services

Alternative 1 would result in an incremental increase in demand for public services as a result of increased campus employment, although not to the degree of the 2018 LRDP due to the substantially lesser level of anticipated development. Under the 2018 LRDP, impacts were determined to be less than significant because the campus is currently located within the service area of, and served by, local public service providers. Alternative 1 would also result in less-than-significant public service impacts similar to the 2018 LRDP but to a lesser degree. *(Less Impact)*

Recreation

Alternative 1 would not increase on-campus population such that additional recreational facilities would be necessary, nor would it provide the additional recreation/open space identified in the 2018 LRDP. Under the 2018 LRDP, impacts were determined to be less than significant because new student housing would include additional recreational facilities as part of new student housing development (refer to Chapter 2, "Project Description" in Volumes 2 and 3). Impacts would be less than significant under this alternative because existing recreational facilities would adequately accommodate any incremental increase in demand associated with potential new faculty/staff. Thus, recreation impacts under Alternative 1 would be similar to those discussed for the 2018 LRDP. (*Similar Impact*)

Transportation, Circulation, and Parking

Under Alternative 1, there could be some additional vehicles trips associated with potential incremental increases in employees and fewer vehicles trips associated with students, compared to the 2018 LRDP. In addition, although the 2018 LRDP would result in greater number of students living on campus, compared to Alternative 1, they would be anticipated to generate trips and at a greater rate due to greater population levels. As a result, overall impacts on intersections, freeways, or local neighborhood traffic would be less under this alternative than the 2018 LRDP as a result of fewer vehicle trips. *(Less Impact)*

Utilities and Service Systems

Under Alternative 1, there would be less additional demand on utilities or requirements to alter or expand infrastructure compared to the 2018 LRDP because population levels would be lower. In general, impacts would be less under this alternative but remain less than significant. *(Less Impact)*

Achievement of Project Objectives

Under Alternative 1, new student housing would not be provided on campus, which would not achieve several of the objectives identified under UC Davis' goal for enriching community life. Additionally, no increases in student enrollment are anticipated under this alternative, which would be considered counter to the overarching goal of the UC to provide a dynamic learning environment for residents of California. It would also not achieve the same degree of efficiencies associated with locating additional student housing on campus, thereby maximizing potential bicycle and pedestrian traffic by students. Additionally, because this alternative would provide a lesser degree of academic/administrative space, it would limit the ability for UC Davis to continue to create a dynamic environment for learning and discovery through the provision of new academic programs and disciplines. Thus, Alternative 1 would not meet most of the basic project objectives.

ALTERNATIVE 2: REDUCED DEVELOPMENT PROGRAM

Under this alternative, UC Davis would implement a long-range campus plan with an overall reduction in planned campus development compared to 2018 LRDP. Under this alternative, housing for approximately 8,000 students and 500,000 sf of new academic/administrative space would be provided. Redevelopment of the Orchard Park site and further development of West Village would likely be necessary in order to accommodate the additional student needs on campus. The same projected increase in student enrollment and on-campus employees that would occur under the 2018 LRDP would occur with implementation of this alternative. Compared to the anticipated growth under the 2018 LRDP, this alternative would represent a reduction in on-campus housing for students of 1,050 beds, a reduction of on-campus housing for employees of 485 beds, and a reduction in new academic/administrative space of 1,500,000 sf. In terms of total net reduction in square footage, this alternative would involve the construction of roughly

2,500,000 sf less than the 2018 LRDP. On-campus housing would remain the focus of the long-range campus plan, but with less overall construction.

Aesthetics

The changes from existing visual conditions that would occur within the UC Davis campus would be similar under this alternative to the 2018 LRDP, but the degree of change would be less. Alternative 2 would result in less development than the 2018 LRDP within the central campus, primarily associated with additional academic/administrative space, compared to the 2018 LRDP. Under Alternative 2, changes in existing visual conditions would be similar to the 2018 LRDP and less than significant because the development would not encroach upon vistas or created visually incompatible views. Land use changes under this alternative would involve the development of additional university-related uses within a university campus, such that the overall aesthetic condition of the campus would be similar to that of the 2018 LRDP and would be less than significant. *(Similar Impact)*

Agriculture and Forestry Resources

Under Alternative 2, the conversion of some agricultural lands to non-agricultural use would be necessary to accommodate buildings under this alternative, especially within west campus. However, due to the lesser degree of on-campus student housing and academic/administrative space under this alternative, the acreage required for construction, and thus conversion of farmland to other uses would likely be less than the 2018 LRDP. As a result, the same types of impacts would occur under Alternative 2 as under the 2018 LRDP, including conversion of farmland, but to a lesser degree (i.e., less acreage). Nonetheless, because physical changes to the campus that could affect agricultural resources would still occur under Alternative 2, impacts would remain significant and unavoidable. *(Less Impact)*

Air Quality

Alternative 2 would include less development (approximately 2,500,000 sf less) than the 2018 LRDP, and thus, would emit less overall air emissions during construction. However, during operations, the 2018 LRDP would provide on-campus housing opportunities for approximately 4,000 UC Davis students beyond the anticipated growth in student enrollment, compared to almost 3,000 under this alternative. This could result in more students (up to 1,050) commuting to and from campus on a daily basis in personal vehicles than under the 2018 LRDP and result in a corresponding greater level of criteria air pollutants as a result of the daily vehicle commute. Therefore, operational impacts under Alternative 2 would be similar to those described for the 2018 LRDP, but of greater magnitude than the 2018 LRDP. *(Less Impact during construction; Greater Impact during operation)*

Archaeological, Historical, and Tribal Cultural Resources

Earth-moving activities within the UC Davis campus have the potential to disturb archaeological, tribal cultural, and/or historic resources or result in accidental discovery of human remains. Under the 2018 LRDP, ground-disturbing activities (e.g., grading, excavation) could result in the discovery of archaeological resources, tribal cultural resources, or human remains; however, feasible mitigation measures and regulatory requirements/procedures would reduce these impacts to a less-than-significant level. Additionally, on-campus development within or near potentially historic structures under both this alternative and the 2018 LRDP would result in potentially significant and unavoidable impacts, especially within the central campus. Although the overall level of campus development would be less under this alternative, the area required for development would likely be similar and result in similar potential impacts to archaeological, historical, and tribal cultural resources. *(Similar Impact)*

Biological Resources

Under Alternative 2, the UC Davis campus would be developed in a manner similar to but with less overall development than under the 2018 LRDP, including within the central campus adjacent to existing academic/administrative development. Due to the presence of habitat for special-status plant and animal species, as well as riparian habitat, within certain areas of campus, physical changes associated with implementation of this alternative could result in significant impacts; however, mitigation measures, described for the 2018 LRDP would reduce these impacts to a less-than-significant level. Due to the potential for removal of protected trees within the central campus under both this alternative and the 2018 LRDP, implementation of either alternative would result in a significant and unavoidable impact. Impacts would be similar to the 2018 LRDP. *(Similar Impact)*

Energy

Under this alternative, lesser development would occur, including the development of more energy efficient structures and facilities. While lesser development would involve lesser fuel consumption during construction, energy efficiency per person would likely be less under this alternative than would be accomplished with the 2018 LRDP, which would construct more energy efficient structures on campus and locate more students closer to campus such that the proportion of students driving to and from campus each day may decrease. However, the degree to which that would occur is speculative. Therefore, impacts would be less than significant under this alternative and less than the 2018 LRDP due to the lesser overall demand for energy generated by UC Davis. *(Less Impact)*

Geology, Soils, and Seismicity

Earth-moving activities associated with construction, have the potential to affect geology, soils, and mineral resources. The types of impacts that could occur from development on campus, include: geotechnical issues, increased erosion, and exposure of buildings and people to seismic hazards. Existing regulations and permitting requirements, such as CBC requirements, NPDES permit conditions, and BMPs, would minimize potential impacts to a less-than-significant level. Similarly, this alternative would result in less than significant impacts. Even though this alternative involves a lesser overall level of development, the general areas where development would occur would be subject to similar geologic impacts. Thus impacts would be of similar type and magnitude. *(Similar Impact)*

Greenhouse Gas Emissions and Climate Change

Due to the lesser level of development on-campus under this alternative, there would be fewer GHG emissions associated with new development during construction. With respect to operation, this alternative, similarly to the 2018 LRDP, involves the placement of new energy efficient structures within available land and adjusting land use patterns to capture efficiencies related to alternative transportation. As a result, a relatively small carbon footprint for a project of its size, with very low building energy use, particularly with respect to fossil fuels, but that would not occur to such a degree under this alternative. Additionally, this alternative would not reduce the number of current students living off campus to the extent of the 2018 LRDP, such that additional emissions associated with up 1,050 students commuting to and from campus could occur. This would result in potentially greater operational emissions as a result of implementation of Alternative 2. However, consistent with the UC Sustainable Practices Policy and actions outlined in the UC Davis CAP, UC Davis emissions would be required to be net zero for Scopes 1 and 2 in 2025 and net zero for Scopes 1, 2, and 3 in 2050 under this alternative, similar to the 2018 LRDP. Thus, this alternative would also result in less than significant impacts, similar to the 2018 LRDP. *(Less Impact during construction; Similar Impact during operation)*

Hazards and Hazardous Materials

Under Alternative 2 and the 2018 LRDP, on-campus construction activities would entail the transport, use, and storage of hazardous materials; and release of hazardous materials from a site of known or potential contamination. In addition, disruption of area roadways during construction may hinder traffic flow and affect emergency response. However, feasible mitigation measures are available to reduce these impacts to a less-than-significant level. The types of hazards and hazardous materials impacts described for Alternative 2 would be of similar type and magnitude as the 2018 LRDP. *(Similar Impact)*

Hydrology and Water Quality

Earth-moving activities associated with construction under the 2018 LRDP and this alternative have the potential to affect hydrology and water quality within UC Davis. The types of impacts that could occur from development under the 2018 LRDP include: adverse effects on water quality, reduced groundwater recharge, alterations to existing drainage systems, and effects on the 100-year floodplain. Existing regulations and permitting requirement, such as NPDES permit conditions, a SWPPP, and a SWQCP would reduce potentially significant impacts to a less-than-significant level. Similarly, under this alternative, development of additional on-campus structures and facilities would be required to comply with existing regulations and similar mitigation measures as to the 2018 LRDP would be available to reduce potentially significant impacts to a less-than-significant level. Impacts under this alternative would, therefore, be less than significant with mitigation and similar to the 2018 LRDP. *(Similar Impact)*

Land Use and Planning

Under Alternative 2, there would be changes to the existing campus land use pattern, similar to the 2018 LRDP. Additional academic/administrative space would be developed within the central campus and involve a densification of existing land uses. Development along the periphery of campus, where potential land use conflicts may occur, would still be needed for student housing, similar to the 2018 LRDP. As a result, the potential for land use conflicts would be similar to the 2018 LRDP and less than significant. It is worth noting that implementation of this alternative would not be as responsive to the resolutions adopted by the City of Davis and Yolo County with respect to the need for UC Davis to provide additional housing on-campus, however because UC Davis is not subject to local rules and regulations, this would not constitute a new significant impact or impacts of greater severity under CEQA. (*Similar Impact*)

Noise

Earth-moving activities within campus (e.g., grading, excavation) under both this alternative and the 2018 LRDP would result in noise and vibration impacts. Feasible mitigation measures are available to reduce these impacts to a less-than-significant level, as described in Section 3.12, "Noise." Although the overall level of development would be less under this alternative, the land area required for plan implementation would likely be similar and result in similar impacts compared to the 2018 LRDP. *(Similar Impact)*

Population and Housing

Under Alternative 2, there would be 8,000 new student beds provided on-campus, which would exceed the projected increase in student enrollment under the 2018 LRDP. However, this alternative would not increase the percentage of students living on-campus compared to students living off campus to the degree of the 2018 LRDP. Under the 2018 LRDP, approximately 4,000 additional student beds would be provided in excess of the anticipated growth in student enrollment, whereas this alternative would provide approximately 3,000 student beds in excess of projected growth in student enrollment. Nonetheless, Alternative 2 would accommodate the projected increase in

student enrollment anticipated with implementation of the 2018 LRDP, however it would not provide on-campus housing for employees. Further, a similar growth in employees would be anticipated under the alternative as under the 2018 LRDP. While adequate housing is considered to be available in surrounding communities for new faculty/staff, impacts would be greater under this alternative due to lesser on-campus housing for both students and employees. Nonetheless, due to the anticipated level of campus population growth under this alternative, like the 2018 LRDP, impacts would be significant. *(Greater Impact)*

Public Services

Alternative 2 would result in an increase in demand for public services similar to the 2018 LRDP. Under the 2018 LRDP, impacts were determined to be less than significant because the campus is currently located within the service area of, and served by, local public service providers. Alternative 2 would also result in less-than-significant public service impacts as neither alternative would involve an increase in service area boundaries or introduce uses that would require special consideration by public service providers. *(Similar Impact)*

Recreation

Alternative 2 would increase on-campus population and recreational needs but would, similarly to the 2018 LRDP, provide additional on-site recreational opportunities proximate to new student housing such that additional recreational facilities would not be necessary. Because new student housing would include recreational facilities where appropriate, impacts under Alternative 2 would be of similar type and magnitude as the 2018 LRDP. (*Similar Impact*)

Transportation, Circulation, and Parking

Under Alternative 2, development of new student housing and academic/administrative space would increase the level of on-campus activity such that new vehicle commute trips would occur on a daily basis, similar to the 2018 LRDP. However, under this alternative, UC Davis would not provide additional student housing in excess of projected student enrollment growth to the degree that it would with implementation of the 2018 LRDP. This could result in additional vehicle commute trips associated with the 1,000 students that would otherwise live on-campus under the 2018 LRDP. As a result, traffic congestion could be greater under this alternative than the 2018 LRDP *(Greater Impact)*

Utilities and Service Systems

Under Alternative 2, development of the UC Davis campus with additional student housing, academic/administrative space, and supporting uses would occur, placing greater demand on utilities and service system that under the existing conditions. While the overall demand for utilities would likely be incrementally less than the 2018 LRDP's demand due to the lesser degree of on-campus structures, the existing utilities and service systems provided by UC Davis would generally be sufficient to meet the additional demands associated with this alternative. In general, impacts would be of similar type and magnitude under Alternative 2 as the 2018 LRDP. *(Similar Impact)*

Achievement of Project Objectives

Under Alternative 2, new student housing would be provided on-campus, but to a lesser degree than the 2018 LRDP. As a result, this alternative would achieve most of the project objectives identified under UC Davis's goal for enriching community life but not to the degree of the 2018 LRDP. Additionally, because this alternative would provide a less academic/administrative space, it would limit the ability for UC Davis to continue to create a dynamic environment for learning and discovery through the provision of new academic programs and disciplines. The primary mission of the University is to provide teaching, research, and public service for the higher education needs of California. Alternative 2, which would provide less academic building space, would impair the ability

of the University to achieve this mission and would conflict with portions of the key project objectives related to supporting academic efforts.

ALTERNATIVE 3: NET STUDENT GROWTH ONLY ALTERNATIVE

Similar to Alternative 2, Alternative 3 would implement a long-range campus plan that reduces the anticipated level of development, compared to the 2018 LRDP. Under this alternative, new on-campus housing would focus solely on the net increase in student population anticipated by UC Davis and could be satisfied through the construction and operation of the West Village Expansion and Orchard Park Redevelopment components alone. This alternative would provide up to 5,200 student beds on-campus, which would accommodate the projected increase in student enrollment at UC Davis above 2016-2017 conditions, and up to 500,000 sf of new academic/administrative space. The same projected increase in student enrollment and on-campus employees that would occur under the 2018 LRDP would occur with implementation of this alternative. This would represent a reduction in on-campus housing to be provided for students of 3,850 beds, on-campus housing for employees of 485 beds, and a reduction in new academic/administrative space of 1,500,000 sf compared to the 2018 LRDP. In terms of total net reduction in square footage, this alternative would involve the construction of roughly 3,200,000 sf less than the 2018 LRDP.

Aesthetics

Changes in existing visual conditions would occur within the UC Davis campus similar to the 2018 LRDP but to a lesser degree. The 2018 LRDP would involve greater development than Alternative 3 within the central campus, primarily associated with additional academic/administrative space. However, land use changes would still occur throughout UC Davis, including along the periphery of campus, such that changes in existing visual conditions are anticipated to be similar to those of the 2018 LRDP. Development under this alternative would involve the construction and operation of structures of similar mass and scale to existing UC Davis structures on-campus and would not encroach upon vistas or created visually incompatible views. Therefore, land use changes under this alternative alter the overall aesthetic condition of the campus in a manner similar to the 2018 LRDP; thus impacts would be of similar type and magnitude. *(Similar Impact)*

Agriculture and Forestry Resources

Under Alternative 3, there would likely be changes in land use that would involve the conversion of agricultural lands to non-agricultural use, especially related to the West Village Expansion. However, due to the lesser overall degree of on-campus student housing and academic/administrative space under this alternative, the acreage required and resulting impact to farmland would likely be less than the 2018 LRDP. As a result, impacts associated with the 2018 LRDP, including conversion of farmland, would occur with this alternative but to a lesser degree (i.e., less acreage). Nonetheless, because physical changes to the campus that could affect agricultural resources would still occur under Alternative 3, impacts would remain significant and unavoidable. *(Less Impact)*

Air Quality

Alternative 3 would not include new on-campus development to the extent of the 2018 LRDP, and thus, would generate lesser air emissions during construction. However, from an operational perspective, the 2018 LRDP would provide on-campus housing opportunities for approximately 4,000 UC Davis students beyond the anticipated growth in student enrollment, whereas this alternative would not. This could result in more students commuting to and from campus on a daily basis in personal occupancy vehicles than under the 2018 LRDP and result in a corresponding greater level of criteria air pollutants as a result of the daily vehicle commute. Therefore, operational impacts would be potentially greater than those of the 2018 LRDP. However, mitigation identified for

the 2018 LRDP would likely still be required, and certain air quality impacts would likely remain significant. *(Less Impact during construction; Greater Impact during operation)*

Archaeological, Historical, and Tribal Cultural Resources

Earth-moving activities within the UC Davis campus have the potential to disturb archaeological, tribal cultural, and/or historic resources or result in accidental discovery of human remains. Under the 2018 LRDP, ground-disturbing activities (e.g., grading, excavation) could result in discovery of archaeological resources, tribal cultural resources, or human remains; however, feasible mitigation measures and regulatory requirements/procedures would reduce these impacts to a less-than-significant level. Additionally, development on-campus within or near potentially historic structures under both this alternative and the 2018 LRDP would result in potentially significant and unavoidable impacts, especially within the central campus. Although the overall level of campus development would be less under this alternative, the area required for development would likely be similar and result in similar potential impacts to archaeological, historical, and tribal cultural resources. *(Similar Impact)*

Biological Resources

Under Alternative 3, the UC Davis campus would be developed in a manner similar to but less intense than under the 2018 LRDP, including within the central campus adjacent to existing academic/administrative development. Due to the presence of habitat for special-status plant and animal species, as well as riparian habitat, within certain areas of campus, physical changes associated with implementation of this alternative would likely trigger the need for implementation of mitigation measures, similar to the 2018 LRDP, in order to reduce impacts to less than significant. Nonetheless, due to the potential for removal of protected trees within the central campus under both this alternative and the 2018 LRDP, implementation of either alternative would result in a significant and unavoidable impact. Impacts would be similar to the 2018 LRDP. *(Similar Impact)*

Energy

Under this alternative, lesser development would occur, including the development of more energy efficient structures and facilities. While lesser development would involve lesser fuel consumption during construction, energy efficiency per person would likely be less under this alternative than would be accomplished with the 2018 LRDP, which would construct more energy efficient structures on-campus and locate more students closer to campus such that the proportion of students driving to and from campus each day may decrease. However, the degree to which that would occur is speculative. Therefore, impacts would be less than significant under this alternative and less than the 2018 LRDP due to the lesser overall demand for energy generated by UC Davis. *(Less Impact)*

Geology, Soils, and Seismicity

Earth-moving activities associated with construction have the potential to affect geology, soils, and mineral resources. The types of impacts that could occur from development on campus, include: geotechnical issues, increased erosion, and exposure of buildings and people to seismic hazards. Existing regulations and permitting requirements, such as CBC requirements, NPDES permit conditions, and BMPs, would minimize potential impacts to a less-than-significant level. Similarly, this alternative would result in less than significant impacts. Even though this alternative involves a lesser overall level of development, the general areas where development would occur would be subject to similar geologic impacts. Thus impacts would be of similar type and magnitude. *(Similar Impact)*

Greenhouse Gas Emissions and Climate Change

Due to the lesser level of development on-campus under this alternative, there would be fewer GHG emissions associated with new development during construction. With respect to operation, this

alternative, like the 2018 LRDP, involves the placement of new energy efficient structures within available land and adjusting land use patterns to capture efficiencies related to alternative transportation. As a result, the 2018 LRDP has a relatively small carbon footprint for a project of its size, with very low building energy use, particularly with respect to fossil fuels, but that would not occur to such a degree under this alternative. Additionally, this alternative would not reduce the number of current students living off campus to the degree of the 2018 LRDP, thus there would be greater levels of emissions associated with student vehicle commute under Alternative 3. However, consistent with the UC Sustainable Practices Policy and actions outlined in the UC Davis CAP, UC Davis emissions would be required to be net zero for Scopes 1 and 2 in 2025 and net zero for Scopes 1, 2, and 3 in 2050 under this alternative, similar to the 2018 LRDP. Thus, this alternative would also result in less than significant impacts, similar to the 2018 LRDP. *(Less Impact during construction; Similar Impact during operation)*

Hazards and Hazardous Materials

Under the 2018 LRDP, on-campus construction activities would entail the transport, use, and storage of hazardous materials; and release of hazardous materials from a site of known or potential contamination. In addition, disruption of area roadways during construction may hinder traffic flow and affect emergency response. However, feasible mitigation measures are available to reduce these impacts to a less-than-significant level. Thus, impacts under Alternative 3 would be of similar types and magnitude as under the 2018 LRDP. *(Similar Impact)*

Hydrology and Water Quality

Earth-moving activities associated with construction under the 2018 LRDP and this alternative have the potential to affect hydrology and water quality within UC Davis. The types of impacts that could occur from development under the 2018 LRDP include: adverse effects on water quality, reduced groundwater recharge, alterations to existing drainage systems, and effects on the 100-year floodplain. Existing regulations and permitting requirement, such as NPDES permit conditions, a SWPPP, and a SWQCP would reduce potentially significant impacts to a less-than-significant level. Similarly, under this alternative, development of additional on-campus structures and facilities would be required to comply with existing regulations and implement similar mitigation to the 2018 LRDP. Although a lesser level of development would occur under this alternative than the 2018 LRDP, the degree to which these measures would need to be implemented would likely be similar. Impacts under this alternative would, therefore, be less than significant with mitigation and similar to the 2018 LRDP. *(Similar Impact)*

Land Use and Planning

Under Alternative 3, there would be changes to the existing campus land use pattern. Additional academic/administrative space would likely occur within the central campus and involve a densification of existing land uses. Development along the periphery of campus, where potential land use conflicts may occur, would likely be related to student housing, similar to the 2018 LRDP. As a result, the potential for land use conflicts would be similar to the 2018 LRDP and less than significant. It is worth noting that implementation of this alternative would not be responsive to the resolutions adopted by the City of Davis and Yolo County with respect to the need for UC Davis to provide additional housing on-campus, however because UC Davis is not subject to local rules and regulations, this would not constitute a new significant impact or impact of greater severity under CEQA. *(Similar Impact)*

Noise

Earth-moving activities within campus (e.g., grading, excavation) under both this alternative and the 2018 LRDP would result in noise and vibration impacts. Feasible mitigation measures are available to reduce these impacts to a less-than-significant level, as described in Section 3.12, “Noise.”

Although the overall level of development would be less under this alternative, the land area required for plan implementation would likely be similar and result in similar impacts compared to the 2018 LRDP. *(Similar Impact)*

Population and Housing

Under Alternative 3, there would be 5,175 new student beds provided on-campus, which would provide on-campus housing for only the projected increase in student enrollment under the 2018 LRDP. This alternative would not increase the percentage of students living on-campus compared to students living off campus to the degree of the 2018 LRDP. Under the 2018 LRDP, approximately 4,000 additional student beds would be provided in excess of the anticipated growth in student enrollment, whereas this alternative would not provide additional student beds on-campus.

However, Alternative 3 would accommodate the projected increase in student enrollment anticipated with implementation of the 2018 LRDP, as well as include 485 employee residences. Further, a similar growth in employees would be anticipated under the alternative as under the 2018 LRDP, thereby resulting in a similar demand for off-campus housing for those employees. While adequate housing is considered to be available in surrounding communities for new faculty/staff, impacts would be greater under this alternative due to lesser on-campus housing for both students and employees. Nonetheless, due to the anticipated level of campus population growth under this alternative, like the 2018 LRDP, impacts would be significant. *(Greater Impact)*

Public Services

Alternative 3 would result in an increase in demand for public services similar to the 2018 LRDP. Under the 2018 LRDP, impacts were determined to be less than significant because the campus is currently located within the service area of, and served by, local public service providers. Alternative 3 would also result in less-than-significant public service impacts as neither alternative would involve an increase in service area boundaries or introduce uses that would require special consideration by public service providers. Thus, public services impacts under Alternative 3 would be of similar type and magnitude as under the 2018 LRDP *(Similar Impact)*

Recreation

Alternative 3 would increase on-campus population and recreational needs but would, similar to the 2018 LRDP, provide additional on-site recreational opportunities proximate to new student housing such that additional recreational facilities would not be necessary. Under the 2018 LRDP, impacts were determined to be less than significant because new student housing would include recreational facilities where appropriate. Impacts would similarly remain less than significant under this alternative. (*Similar Impact*)

Transportation, Circulation, and Parking

Under Alternative 3, development of new student housing and academic/administrative space would increase the level of on-campus activity such that new vehicle commute trips would occur on a daily basis, similar to the 2018 LRDP. However, under this alternative, UC Davis would not provide additional student housing in excess of projected student enrollment growth to the degree that it would with implementation of the 2018 LRDP or Alternative 2. This could result in additional vehicle commute trips associated with the students that would otherwise live on-campus under the 2018 LRDP and Alternative 2. As a result, vehicle congestion could be greater under this alternative than the 2018 LRDP. *(Greater Impact)*

Utilities and Service Systems

Under Alternative 3, development of the UC Davis campus with additional student housing, academic/administrative space, and supporting uses would occur, similar to the 2018 LRDP. While the overall demand for utilities would likely be less than the 2018 LRDP's demand due to the lesser degree of on-campus structures, the existing utilities and service systems provided by UC Davis would generally be sufficient to meet the additional demands associated with this alternative, similar to the 2018 LRDP. In general, impacts would be similar under this alternative but remain less than significant. *(Similar Impact)*

Achievement of Project Objectives

Alternative 3 would meet most of the basic project objectives associated with the plan but would not meet them to the same extent as the 2018 LRDP. Under Alternative 3, new student housing would be provided on-campus, but would only satisfy the projected increase in student enrollment and to a lesser degree than the 2018 LRDP or Alternative 2. As a lesser development alternative, it would maintain more existing agricultural and environmental field research close to the central campus and maintain the existing academic core to a greater degree. However, it would not achieve the objectives related to promoting a dynamic learning environment or maintaining flexibility for new/expanded initiatives and programs to the extent of the 2018 LRDP. It would also not improve the ratio of students living on-campus compared to students living off campus. In general, this alternative would achieve the objectives related to maintaining a rich, academic environment, including natural areas, but would not achieve project objectives related to improving upon existing opportunities to the extent of the 2018 LRDP.

ALTERNATIVE 4: 2018 LRDP WITH ADDITIONAL STUDENT HOUSING ALTERNATIVE

This alternative would include development of campus similar to the 2018 LRDP with additional student housing development (approximately 2,200 beds) at a property known as the Nishi site, located southeast of the central campus, and additional beds at the West Village Expansion (1,800) and Orchard Park Redevelopment (500 beds) beyond the 2018 LRDP. In total, implementation of this alternative would result in approximately 23,400 total student beds within the UC Davis campus, compared to the 18,868 total student beds with implementation of the 2018 LRDP. This alternative would likely increase anticipated housing-related development by approximately 2,000,000 sf, compared to the 2018 LRDP. This estimate is based on the previous square footages estimated by the City of Davis for housing at the Nishi site and anticipated square footages for the West Village Expansion and Orchard Park Redevelopment components evaluated in Volumes 2 and 3. Similar to Alternatives 2 and 3, the same projected increase in student enrollment that would occur under the 2018 LRDP would occur with implementation of this alternative.

With respect to this alternative and over the past several years, the Nishi site has been subject to consideration for development and annexation (from Yolo County) by the City of Davis. The initial design of the Nishi Gateway project, as considered by the City of Davis, included both residential (primarily student-oriented) and commercial space and was approved by the City Council in 2016, but due to a local measure concerning annexation, was subject to a subsequent popular vote by City of Davis residents in June 2016. The initial Nishi project was narrowly defeated (48.5 percent approved, 51.5 percent opposed) in the popular vote. In late 2017, the project applicant proposed a modified Nishi Gateway project to the City, which was approved by the City Council in January 2018. The revised Nishi Gateway project is scheduled for a popular vote in June 2018. Should the project succeed in the popular vote, UC Davis will work with the City of Davis and the Nishi landowner to provide access to campus via a planned, primary connection from the Nishi site to Old Davis Road. Under this Alternative 4, should the project not succeed in the popular vote, UC Davis could consider development of the site as a UC Davis project. CEQA allows a lead agency to consider alternatives on

off-site lands, even if they do not control those lands, for the purposes of improving the disclosure of environmental impacts and potential alternatives to a project. UC Davis has not considered whether the Nishi landowner or City of Davis would agree with consideration of the Nishi site for future development as a UC Davis project. As a current land use approval under consideration by the City of Davis, UC Davis respects the authority of the City of Davis to evaluate the appropriateness of the Nishi site for future development.

Aesthetics

Changes in existing visual conditions would occur within the UC Davis campus similar to the 2018 LRDP but to a greater degree. This alternative would focus additional development within three specific areas: Orchard Park, West Village, and the Nishi site. Due to the additional level of development, potential aesthetic impacts would also be greater, although likely remain less than significant. Due to the increase number of student beds at Orchard Park Redevelopment and West Village Expansion, the height of on-site structures would likely increase by one to two stories (up to eight under this alternative), which could affect long distance views and result in significant environmental impacts. Additionally, new development within the Nishi site by UC Davis would also alter exiting visual character and conditions at the Nishi site and from I-80, although (as noted in the EIR prepared for the Nishi Gateway project by the City of Davis) impacts are not anticipated to be significant. In general, the increase in density and height under this alternative may result in new significant impacts, and impacts would be greater than the 2018 LRDP. *(Greater Impact)*

Agriculture and Forestry Resources

Under Alternative 4, additional development would be focused within three areas, as noted above. Under the 2018 LRDP, the conversion of agricultural lands to non-agricultural use, especially within west campus, would occur. Under this alternative, a similar conversion of agricultural lands within west campus and elsewhere as predicted for the 2018 LRDP would occur. However, this alternative would also include the conversion of additional agricultural land (approximately 40 acres) at the Nishi site, a 33 percent increase beyond the acreage impact of the 2018 LRDP. As a result, impacts associated with this alternative would be greater than those anticipated under the 2018 LRDP, and impacts would be significant and unavoidable. *(Greater Impact)*

Air Quality

Alternative 4 would not include a greater level of development than the 2018 LRDP or other alternatives, and thus, would generate greater air emissions during construction. However, from an operational perspective, the 2018 LRDP would provide on-campus housing opportunities for approximately 4,000 UC Davis students beyond the anticipated growth in student enrollment, whereas this alternative would provide 8,500 additional beds beyond the projected increase in enrollment for UC Davis students. Based on information provided in Table 3.16-20 of Section 3.16, "Transportation, Circulation, and Parking," this could result in fewer students commuting to and from campus on a daily basis in personal occupancy vehicles than under the 2018 LRDP and result in a corresponding lesser level of criteria air pollutants as a result of daily vehicle commute. Therefore, operational impacts would be potentially less than those of the 2018 LRDP. However, mitigation identified for the 2018 LRDP would likely still be required, especially air monitoring and potential filtration requirements for student housing located proximate to I-80, and certain air quality impacts would likely remain significant. *(Greater Impact during construction; Less Impact during operation)*

Archaeological, Historical, and Tribal Cultural Resources

Earth-moving activities within the UC Davis campus have the potential to disturb archaeological, tribal cultural, and/or historic resources or result in accidental discovery of human remains. Under the 2018 LRDP, ground-disturbing activities (e.g., grading, excavation) could result in discovery of archaeological resources, tribal cultural resources, or human remains; however, feasible mitigation

measures and regulatory requirements/procedures would reduce these impacts to a less-than-significant level. Additionally, development on-campus within or near potentially historic structures under both this alternative and the 2018 LRDP would result in potentially significant and unavoidable impacts, especially within the central campus. Although the overall area of campus development would be greater under this alternative due to the addition of the Nishi site, the potential impacts and mitigation requirements are anticipated to be similar. *(Similar Impact)*

Biological Resources

Under Alternative 4, the UC Davis campus would be developed in a manner similar to but more intense than under the 2018 LRDP, including within the central campus adjacent to existing academic/administrative development. Due to the presence of habitat for special-status plant and animal species, as well as riparian habitat, within certain areas of campus, physical changes associated with implementation of this alternative would likely trigger the need for implementation of mitigation measures, similar to the 2018 LRDP, in order to reduce impacts to less than significant. Due to the potential for removal of protected trees within the central campus under both this alternative and the 2018 LRDP, implementation of either alternative would result in a significant and unavoidable impact. Overall, impacts would be similar to the 2018 LRDP. *(Similar Impact)*

Energy

Under this alternative, a greater level of development would occur, including the development of more energy efficient structures and facilities. While a greater level of development of student housing would likely increase energy efficiency per person on-campus, the overall level of energy consumption would increase. However, the additional energy use, including fuel consumption and electricity and natural gas use, would not result in the wasteful or inefficient use of energy in a manner inconsistent with applicable plans, policies, and regulations pertaining to energy efficiency. Therefore, impacts would be less than significant under this alternative but greater than the 2018 LRDP due to the greater overall demand for energy generated by UC Davis. *(Greater Impact)*

Geology, Soils, and Seismicity

Earth-moving activities associated with construction, have the potential to affect geology, soils, and mineral resources. The types of impacts that could occur from development on campus, include: geotechnical issues, increased erosion, and exposure of buildings and people to seismic hazards. Existing regulations and permitting requirements, such as CBC requirements, NPDES permit conditions, and BMPs, would minimize potential impacts to a less-than-significant level. Similarly, this alternative would result in less than significant impacts through regulatory compliance. Even though this alternative involves a lesser overall level of development, the general areas where development would occur would be subject to similar geologic impacts. Thus impacts would be of similar type and magnitude. *(Similar Impact)*

Greenhouse Gas Emissions and Climate Change

Due to the greater level of development on-campus under this alternative, there would be more GHG emissions associated with new development during construction. With respect to operation, this alternative, like the 2018 LRDP, involves the placement of new energy efficient structures within available land and adjusting land use patterns to capture efficiencies related to alternative transportation. As a result, the 2018 LRDP has a relatively small carbon footprint for a project of its size, with very low building energy use, particularly with respect to fossil fuels. This would also occur under this alternative. Additionally, this alternative would further reduce the number of current students living off campus to the degree of the 2018 LRDP, such that additional emissions associated with student vehicle commute may not occur. This would result in potentially greater efficiencies related to operational emissions. However, consistent with the UC Sustainable Practices Policy and actions outlined in the UC Davis CAP, UC Davis emissions would be required to be net zero

for Scopes 1 and 2 in 2025 and net zero for Scopes 1, 2, and 3 in 2050 under this alternative, similar to the 2018 LRDP. Thus, this alternative would also result in less than significant impacts, similar to the 2018 LRDP. *(Greater Impact during construction; Similar Impact during operation)*

Hazards and Hazardous Materials

Under the 2018 LRDP, on-campus construction activities would entail the transport, use, and storage of hazardous materials; and release of hazardous materials from a site of known or potential contamination. In addition, disruption of area roadways during construction may hinder traffic flow and affect emergency response. However, feasible mitigation measures are available to reduce these impacts to a less-than-significant level. With respect to development of the Nishi site and the potential undercrossing of the existing rail line, development of the Nishi site and undercrossing would not alter the existing rail line alignment such that additional hazards or risk of accident conditions would occur. Overall, similar types of impacts would occur under this alternative. *(Similar Impact)*

Hydrology and Water Quality

Earth-moving activities associated with construction under the 2018 LRDP and this alternative have the potential to affect hydrology and water quality within the area. The types of impacts that could occur from development under the 2018 LRDP include: adverse effects on water quality, reduced groundwater recharge, alterations to existing drainage systems, and effects on the 100-year floodplain. Existing regulations and permitting requirement, such as NPDES permit conditions, a SWPPP, and a SWQCP would reduce potentially significant impacts to a less-than-significant level. Similarly, under this alternative, development of additional on-campus structures and facilities would be required to comply with existing regulations and implement similar mitigation to the 2018 LRDP. Although a greater level of development would occur under this alternative than the 2018 LRDP, the degree to which these measures would need to be implemented would likely be similar. Impacts under this alternative would, therefore, be less than significant with mitigation and similar to the 2018 LRDP. *(Similar Impact)*

Land Use and Planning

Under Alternative 4, there would be changes to the existing campus land use pattern. Additional academic/administrative space would likely occur within the central campus and involve a further densification of land uses. Development along the periphery of campus, where potential land use conflicts may occur, would likely be related to student housing, similar to the 2018 LRDP. As a result, the potential for land use conflicts would be similar to the 2018 LRDP and less than significant. This alternative would result in the acquisition of additional property (i.e., the Nishi site) by UC Davis, but the Nishi site does not directly border other land uses with which conflicts would be possible. I-80 borders the Nishi site to the south, the Putah Creek channel to the east, and the existing rail line and UC Davis to the north and west. It is worth noting that implementation of this alternative would be responsive to the resolutions adopted by the City of Davis and Yolo County with respect to the need for UC Davis to provide additional housing on-campus, however because UC Davis is not subject to local rules and regulations, this would not constitute a new or more significant impact under CEQA. *(Similar Impact)*

Noise

Earth-moving activities within campus (e.g., grading, excavation) under both this alternative and the 2018 LRDP would result in noise and vibration impacts. Feasible mitigation measures are available to reduce these impacts to a less-than-significant level, as described in Section 3.12, “Noise.” Although the overall level of development would be greater under this alternative, the types of impacts, including location of new/reconstructed student housing proximate to the existing rail line, would likely be similar and result in similar impacts compared to the 2018 LRDP. Of note, although this alternative is anticipated to result in fewer personal occupancy vehicle trips (as noted above),

the level of decrease in vehicle trips is not anticipated to result in a substantial decrease in existing roadway noise levels. *(Similar Impact)*

Population and Housing

Under Alternative 4, there would be additional student beds provided on-campus, which would provide on-campus housing for a greater percentage of UC Davis student enrollment to live on-campus than under the 2018 LRDP. In addition, housing would be provided for faculty/staff. As a result, implementation of this alternative may result in further housing availability within the City of Davis and other nearby communities, however, the degree to which that may occur is speculative. Alternative 4 would accommodate the projected increase in student enrollment anticipated with implementation of the 2018 LRDP. Further, a similar growth in employees would be anticipated under the alternative as under the 2018 LRDP. Similar to the 2018 LRDP, adequate housing is considered to be available in surrounding communities for new faculty/staff. Nonetheless, due to the anticipated level of campus population growth under this alternative, like the 2018 LRDP, impacts would be significant. *(Similar Impact)*

Public Services

Alternative 4 would result in an increase in demand for public services similar to the 2018 LRDP. Under the 2018 LRDP, impacts were determined to be less than significant because the campus is currently located within the service area of, and served by, local public service providers. Although Alternative 4 would increase the service area of local service providers through acquisition of the Nishi site, it would provide multiple emergency access points via the planned undercrossing of the rail line to Old Davis Road and the emergency access connection to Olive Drive. As a result, and consistent with findings of the City's Nishi Gateway Project EIR, less-than-significant public service impacts would be anticipated, similar to the 2018 LRDP. Further, neither alternative would introduce uses that would require special consideration by public service providers. *(Similar Impact)*

Recreation

Alternative 4 would increase on-campus population and recreational needs but would, similarly to the 2018 LRDP, provide additional on-site recreational opportunities proximate to new student housing such that additional recreational facilities would not be necessary. Under the 2018 LRDP, impacts were determined to be less than significant because new student housing would include recreational facilities where appropriate. Impacts would similarly remain less than significant under this alternative. (*Similar Impact*)

Transportation, Circulation, and Parking

Under Alternative 4, development of new student housing and academic/administrative space would increase the level of on-campus activity such that new commute trips would occur on a daily basis, similar to the 2018 LRDP. Under the 2018 LRDP, personal occupancy vehicle trips are anticipated to decrease (refer to Table 3.16-20 of Section 3.16, "Transportation, Circulation, and Parking"). Under this alternative, UC Davis would provide additional student housing beyond that of the 2018 LRDP, which could further reduce vehicle trips associated with student commutes to and from campus. While this alternative may result in additional localized congestion (e.g., along Old Davis Road and proximate to the Orchard Park Redevelopment and West Village Expansion sites), overall congestion would be expected to decrease compared to the 2018 LRDP, although localized impacts would likely still occur. As a result, vehicle congestion could be lesser under this alternative than the 2018 LRDP, but impacts would likely remain significant and unavoidable. *(Less Impact)*

Utilities and Service Systems

Under Alternative 4, a higher level of development would occur within the UC Davis campus due to the additional student housing at Orchard Park Redevelopment and the West Village Expansion sites. Additionally, development of the Nishi site by UC Davis would require extension of infrastructure to an area currently located outside of the UC Davis campus. With respect to water supply, adequate water supplies are anticipated to be available under this alternative but would require the use and pumping of additional groundwater supplies. With respect to infrastructure, additional water/wastewater treatment facilities and solid waste disposal facilities are not anticipated to be required based on available capacity identified in Section 3.17, "Utilities and Services Systems," for the 2018 LRDP. However, new or expanded water distribution and wastewater collection facilities may be necessary, depending on the available capacity of facilities currently located beneath Old Davis Road. Nonetheless, the existing utilities and service systems provided by UC Davis would generally be sufficient to meet the additional demands associated with this alternative, similar to the 2018 LRDP. In general, impacts would be similar under this alternative and remain less than significant. *(Similar Impact)*

Achievement of Project Objectives

Alternative 4 would meet most of the basic project objectives but would not meet them to the same extent as the 2018 LRDP. Under Alternative 4, additional student housing beyond that of the 2018 LRDP would be provided by UC Davis, which would further achieve project objectives related to on-campus student housing and the promotion of compact development, as it would be located proximate to the central campus and the downtown area of the City of Davis. However, this alternative would involve the expansion of campus to the Nishi site, which is currently located outside the current campus boundary and across an existing, active rail corridor, which is not considered to be directly in line with the goal of increasing on-campus housing opportunities. Further, the Nishi site has adequate but limited access (with one primary access point for vehicles at the proposed undercrossing; a secondary access point for bicycle, pedestrian, transit, and emergency vehicles at Olive Drive; and a third access point for bicycle and pedestrian traffic along the Putah Creek channel), and is not considered to achieve the project objectives related to access and provision of a healthy, interconnected natural and built environment to the extent of the 2018 LRDP.

This alternative would require increased housing density at the Orchard Park site and the West Village site and to achieve these higher densities, taller student housing buildings would be needed. Increased building height could result in higher construction costs on a per-square-foot basis. These higher costs may not be affordable for students and consequently, Alternative 4 may conflict with the project objective of providing affordable and accessible student residential communities.

6.5 COMPARISON OF ALTERNATIVES

Table 6-1 summarizes the environmental analyses provided above for the 2018 LRDP alternatives.

Table 6-1 Comparison of the Environmental Impacts of the Alternatives in Relation to the Project

Environmental Topic	Project	Alternative 1 No Project	Alternative 2 Reduced Development Program	Alternative 3 Net Student Growth Only	Alternative 4 2018 LRDP with Additional Student Housing
Aesthetics	SU	<	=	=	>
Agricultural Resources	SU	<	<	<	>
Air Quality	SU	<	< (Construction) > (Operation)	< (Construction) > (Operation)	> (Construction) < (Operation)
Archaeological, Historical, and Tribal Cultural Resources	SU	<	=	=	=
Biological Resources	SU	<	=	=	=
Energy	LTS	<	<	<	>
Geology, Soils, and Seismicity	LTS/M	<	=	=	=
Greenhouse Gas Emissions and Climate Change	LTS	<	< (Construction) = (Operation)	< (Construction) = (Operation)	> (Construction) = (Operation)
Hazards and Hazardous Materials	LTS/M	<	=	=	=
Hydrology and Water Quality	LTS/M	<	=	=	=
Land Use and Planning	LTS	<	=	=	=
Noise	LTS/M	<	=	=	=
Population and Housing	SU	>	>	>	=
Public Services	LTS	<	=	=	=
Recreation	LTS	=	=	=	=
Transportation, Circulation, and Parking	SU	<	>	>	<
Utilities and Service Systems	LTS	<	=	=	=

Impact Status:

LTS = less-than-significant impact
LTS/M = LTS with mitigation
SU = Significant and Unavoidable

= - Impacts would be similar to those of the project.
< - Impacts would be less than those of the project.
> - Impacts would be greater than those of the project.

Source: Data compiled by Ascent Environmental in 2017

6.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

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." As shown in the Executive Summary Chapter of this volume of the EIR, there would be significant and unavoidable impacts associated with the project. These impacts are related to aesthetics,

agricultural resources, air quality, historic resources, biological resources, population and housing, and transportation. Each of the evaluated alternatives would result in lesser environmental impacts than the 2018 LRDP to some environmental resources and greater impacts to others. None of the alternatives presented would only reduce impacts associated with the 2018 LRDP.

When considering objectives, the project would best meet the purpose and need. In contrast, Alternative 1 would not provide additional housing to accommodate any growth in student enrollment, and Alternatives 2 and 3 would not provide additional on-campus housing to the degree of the 2018 LRDP such that the proportion of students living on campus versus off campus would increase. While Alternative 4 would achieve a greater level of on-campus student housing than the 2018 LRDP, it would likely increase the overall scale of campus development, require acquisition of additional property, and further intensify construction activities within UC Davis. Alternative 1 (No Project), which would represent the least amount of development compared to existing conditions and thus, least potential physical environmental impacts, would be considered the environmentally superior alternative.

As required by 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 must be identified among the other alternatives considered. Alternatives 2 and 3 would result in less impacts compared to the 2018 LRDP. However, Alternatives 2 and 3 would result in various environmental effects, some of which would be greater than with implementation of the project. In particular, both would have potentially greater traffic impacts that would contribute to additional operational air quality and GHG emissions compared to the 2018 LRDP. However, when comparing the reductions afforded by Alternative 2 versus Alternative 3 when compared to the 2018 LRDP, Alternative 3 would result in greater impact reductions compared to Alternative 3 due to the overall lesser level of development and is thus considered superior to Alternative 2.

However, on balance, the environmentally superior alternative would be either the 2018 LRDP or Alternative 3, depending on decisions weighing types of environmental benefits and adverse effects by UC Davis. The 2018 LRDP would result in greater construction-related impacts, and Alternative 3 would result in greater operational impacts. In weighing the consideration of the environmentally-superior alternative, decision-makers must weigh the relative importance of greater construction-related impacts associated with the 2018 LRDP, compared to the greater operational impacts associated with Alternative 3. 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 other.

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