University of California, Berkeley

Bechtel Engineering Center Renovation and Addition

Addendum Number 2 to the UC Berkeley 2021 Long Range Development Plan and Housing Projects #1 and #2 Environmental Impact Report

State Clearinghouse Number 2020040078

September 2022

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1. Project Information

Project Title:	Bechtel Engineering Center Renovation and Addition
Location:	University of California, Berkeley Alameda County
LRDP Planning Zone:	Campus Park
Lead Agency:	The Regents of the University of California 1111 Franklin Street, 12th Floor Oakland, CA 94607
Contact Person:	Marissa Cheng, Director of Planning University of California, Berkeley Physical & Environmental Planning planning@berkeley.edu
Project Sponsor:	University of California, Berkeley Capital Strategies Physical and Environmental Planning 200 A&E Building Berkeley, CA 94720-1382
Certified 2021 LRDP Program EIR:	This Addendum documents that none of the conditions described in CEQA Guidelines Section 15162 have occurred and that the Proposed Project will not have any significant effects that were not already disclosed, analyzed and mitigated, as necessary, in the 2021 LRDP EIR (State Clearinghouse No. 2020040078). The 2021 LRDP is a comprehensive land use plan that guides physical development on the UC Berkeley campus to accommodate projected UC Berkeley population increases and expanded and new program initiatives. The 2021 LRDP and associated EIR are available for review at https://lrdp.berkeley.edu.

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2. Introduction

2.1 BACKGROUND, PURPOSE, AND PROJECT OVERVIEW

The University of California (UC) Berkeley 2021 Long Range Development Plan (2021 LRDP) is a comprehensive long-range land use plan that guides physical development on the UC Berkeley campus consistent with UC Berkeley's mission, priorities, strategic goals, and campus population projections through the 2036-37 academic year. On July 22, 2021, the UC Board of Regents (the Regents) certified the 2021 LRDP environmental impact report (2021 LRDP EIR), State Clearinghouse No. 2020040078, and approved the 2021 LRDP. The 2021 LRDP EIR provides a program-level analysis of the overall proposed development and campus population projections in the 2021 LRDP (up to 8,096,249 square feet of new building space for residential, academic life, campus life, and parking facilities and 11,731 new beds), as well as a project-level analysis for two student housing projects. The two student housing projects were approved by the Regents on July 22, 2021, and September 30, 2021, respectively.

The proposed Bechtel Engineering Center Renovation and Addition (Proposed Project) is a project to renovate and expand the existing building to accommodate academic student support programs and student study, collaboration, and interaction spaces. The Proposed Project was identified and analyzed in the 2021 LRDP EIR and is consistent with the land uses and intensities of development contemplated in the 2021 LRDP, which prioritizes development sites on the Campus Park for academic and research space.

This Addendum uses a checklist format to document that project-specific activities are covered by the 2021 LRDP EIR pursuant to CEQA Guidelines Section 15168(c), which states that subsequent activities in a program, "must be examined in the light of the program EIR to determine whether an additional environmental document must be prepared." This Addendum and attached supporting documents have been prepared to document that the Proposed Project is consistent with the 2021 LRDP and that its potential environmental impacts are within the scope of those addressed in the 2021 LRDP EIR, pursuant to CEQA Guidelines Section 15168. This Addendum also documents that none of the conditions described in CEQA Section 21166 or CEQA Guidelines Sections 15162 or 15163 calling for preparation of a subsequent or supplemental EIR have occurred. Pursuant to the provisions of CEQA and the CEQA Guidelines, the Regents, acting as the lead agency, are charged with the responsibility of deciding whether or not to approve the proposed action.

2.2 ENVIRONMENTAL PROCEDURES

Pursuant to CEQA Section 21166 and CEQA Guidelines Section 15162, when an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR or negative declaration shall be prepared for the project unless the lead agency determines that one or more of the following conditions are met:

- Substantial project changes are proposed that will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- Substantial changes would occur with respect to the circumstances under which the project is undertaken that require major revisions to the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- New information of substantial importance that was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified or the negative declaration was adopted shows any of the following:
    - The project will have one or more significant effects not discussed in the previous EIR or negative declaration.
    - Significant effects previously examined will be substantially more severe than identified in the previous EIR.
    - Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives.
    - Mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives.

Where none of the conditions specified in Section 15162[1] are present, the lead agency must determine whether to prepare an Addendum or whether no further CEQA documentation is required (CEQA Guidelines Section 15162[b]). An Addendum is appropriate where some minor technical changes or additions to the 2021 LRDP or the previously certified EIR are necessary, but there are no new or substantially more severe significant impacts (CEQA Guidelines Section 15164).

In accordance with the CEQA Guidelines, as demonstrated in Section 3, *Project Description*, and Section 5, *Environmental Analysis*, UC Berkeley has determined that an Addendum to the 2021 LRDP EIR is appropriate for the Proposed Project.

[1] See also Section 15163 of the State CEQA Guidelines, which applies the requirements of Section 15162 to supplemental EIRs.

3. Project Description

3.1 LOCATION AND SETTING

The site for the Proposed Project is in the City of Berkeley in Alameda County. The site is part of the UC Berkeley campus, which is organized into five zones—the Campus Park, Hill Campus West, Hill Campus East, Clark Kerr Campus, and the City Environs Properties. The site is in the Campus Park. Major regional roadways serving the UC Berkeley campus include Interstate 580, State Route 13, and State Route 24. Hearst Avenue is the main local roadway serving the project site. Figure 1, *2021 LRDP EIR Study Area*, provides a regional location map.

The project site is located in the interior of the Campus Park, inset from Hearst Avenue, and is surrounded by adjacent UC Berkeley buildings including Davis Hall to the north, McLaughlin Hall to the west, Evans Hall to the south, and Hearst Memorial Mining Building to the east. The project site is bounded by Davis Hall to the north, the West Plaza to the west, Evans Hall to the south, and the service drive between Bechtel Engineering Center and Hearst Memorial Mining Building to the east. The project site has been continuously occupied by Bechtel Engineering Center since its construction in 1980. Figure 2, *Aerial View of Project Site and Surroundings*, shows the site vicinity.

3.2 PROPOSED PROJECT

Figure 3, *Site Plan*, shows the site plan for the Proposed Project. The Proposed Project would renovate and expand the existing building to provide additional and reconfigured spaces for student academic support programs and student study and collaboration spaces. The Proposed Project would also address documented existing barriers to accessibility. The area of the project site is approximately 36,170 square feet.

The Proposed Project's goals include the following:

- Enhance the student experience and build community
- Support student academic success
- Create indoor and outdoor spaces for collaboration and interaction
- Address documented barriers to accessibility
- Create a more visible gateway to the College of Engineering precinct, from the Central Glade
- Enhance and reinforce the Central Glade

The Proposed Project would include a two-story addition, covering most of the existing building footprint. The existing exterior staircase towards the west side of the building, the landscaped area in front of the building (located directly above the Kresge Engineering Library), and the majority of the existing rooftop known as Trefethen Terrace, would be removed to accommodate the addition. The Proposed Project would create new outdoor study and collaboration spaces to replace the existing Trefethen Terrace. These outdoor spaces would be shaded by a new roof canopy extending from the roof of the two-story addition.

The exterior staircase on the eastern edge of the existing building would remain. The Proposed Project would not include major renovation of the existing Kresge Engineering Library and Sibley Auditorium, located on the first and second levels, respectively; these spaces were previously renovated. The peak daytime facility occupancy is estimated to be approximately 1,100 people, an increase from the current estimated peak daytime occupancy of 755 people.

The proposed landscape, utility, and circulation plans would require replacement of 14 trees, including two specimen trees. UC Berkeley's Specimen Tree Program requires replacement of specimen trees at a ratio of 3 to 1, so the Proposed Project would be required to plant six new trees at the Proposed Project site, or elsewhere on campus in consultation with the Campus Landscape Architect. The Proposed Project would comply with the Specimen Tree Program by planting fourteen new trees; these new trees would be located at the Proposed Project in planters on the new third-level terrace, as well as to the south of the building on the second level. Relocated or replacement of existing trees would include species such as trident, red, and Japanese maple; arbutus; Tasmanian tree fern; and water gum. Plantings would include drought-tolerant shrubs and grasses. The Proposed Project would comply with the University of California Sustainable Practices Policy.

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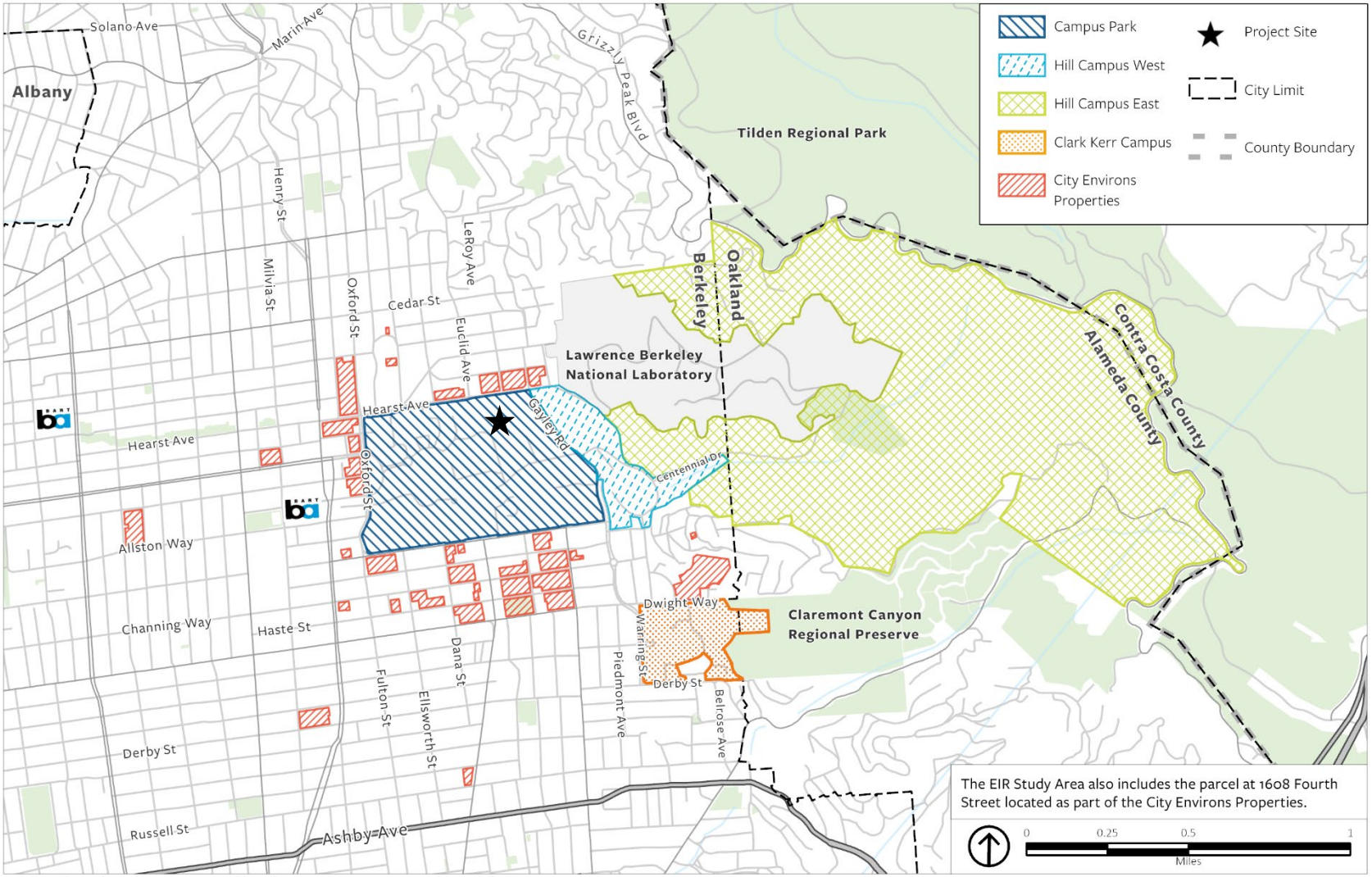
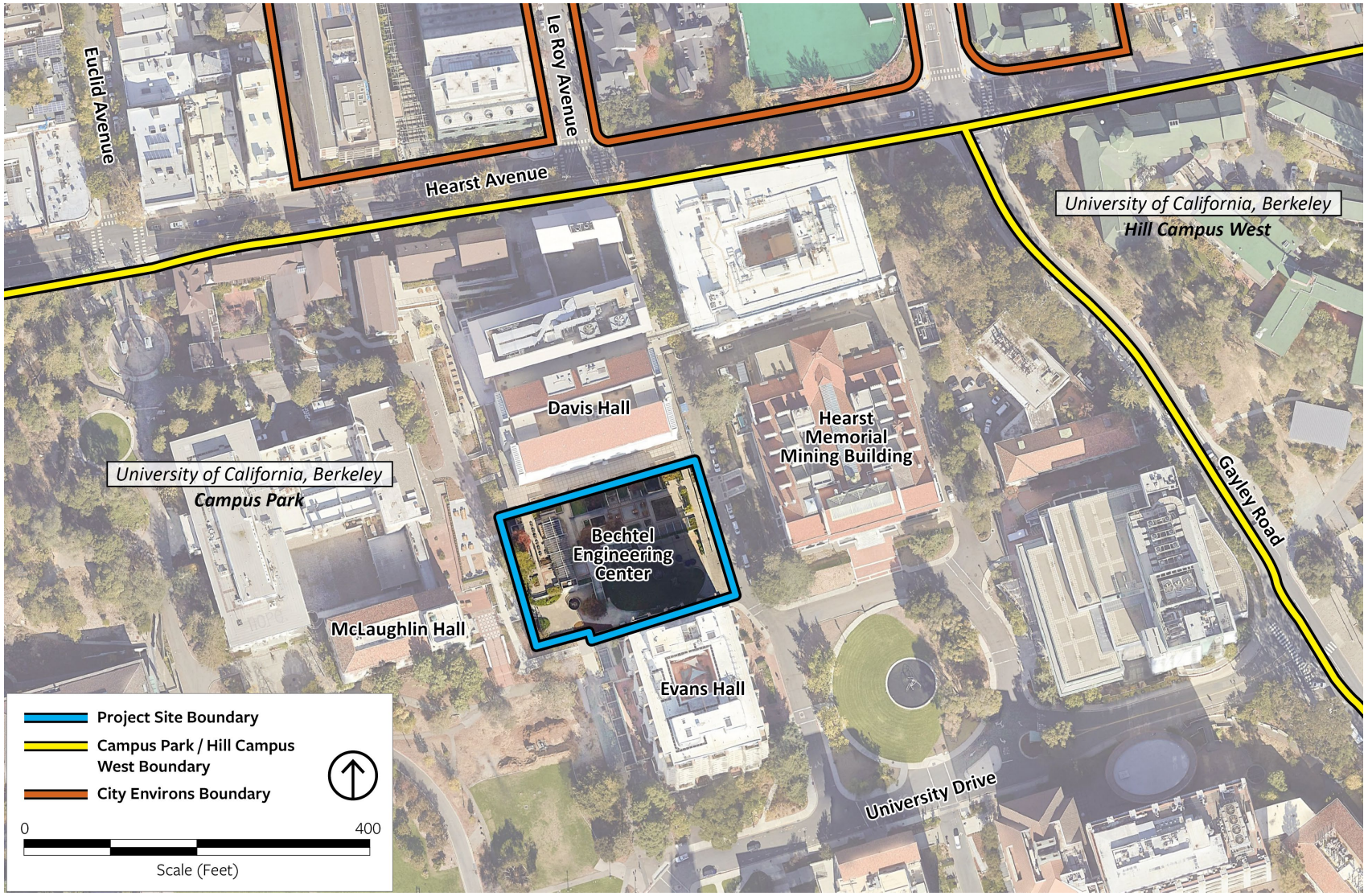
Figure 1 2021 LRDP EIR Study Area



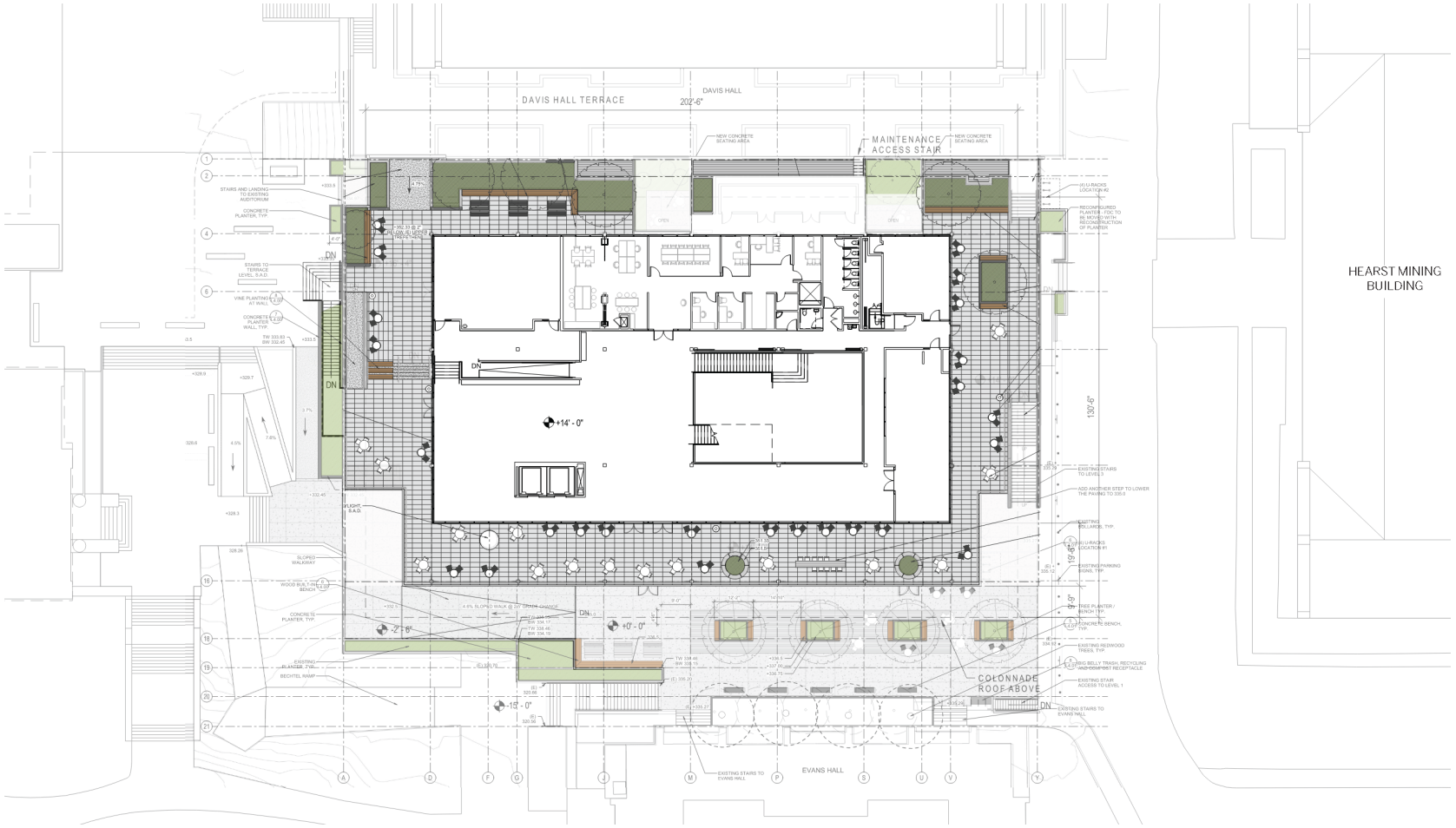
Source: Alameda County, 2019; Sasaki and Page, 2019; ESRI, 2020; PlaceWorks, 2022.

Figure 2 Aerial View of Project Site and Surroundings



Source: Google Earth, 2022 (imagery date: June 6, 2022); UC Berkeley, 2022.

Figure 3 Site Plan



Source: Skidmore, Owings, & Merrill, 2022.

Figure 4 View towards the North

Source: Skidmore, Owings, & Merrill, 2022.

Figure 5 View towards the West

Source: Skidmore, Owings, & Merrill, 2022.

4. Coverage under the 2021 LRDP EIR

To determine the Proposed Project's coverage under the 2021 LRDP EIR, this section addresses the following questions:

1. Is the Proposed Project consistent with the project objectives contained in the 2021 LRDP EIR?
2. Is the Proposed Project consistent with the UC Berkeley land uses evaluated in the 2021 LRDP EIR for the project area?
3. Is the amount of development associated with the Proposed Project within the development program in the 2021 LRDP EIR?
4. Have the conditions described in CEQA Guidelines Section 15162 calling for the preparation of a subsequent EIR occurred?

Questions one through three are addressed in the remainder of this section and question four is addressed in Section 5, *Environmental Analysis*. Section 5 contains a detailed analysis of the Proposed Project's potential environmental impacts and determines that none of the conditions in CEQA Guidelines Section 15162 calling for the preparation of a subsequent EIR have occurred.

4.1 OBJECTIVES CONSISTENCY

The 2021 LRDP EIR contains the following goals and objectives relevant to the Proposed Project.

- Goals:
    - Provide accessible and inclusive indoor and outdoor campus life spaces to create a shared sense of community, interaction, and wellness.
    - Maintain and enhance the image and experience of the physical campus, and support the continuing evolution of the campus's notable and historic landscapes and architecture.
    - Provide adaptable and flexible academic and research space to meet UC Berkeley's physical space needs in support of its mission and Strategic Plan.
    - Enhance wayfinding, using principles of universal design, to make navigation more intuitive and inclusive, and to ensure equitable access to the physical campus by all members of the campus community.
    - Upgrade and modernize buildings and infrastructure to address deferred maintenance and support new development. Meet and strive to exceed UC system and UC Berkeley policies and goals for sustainability, resilience, and seismic safety.
    - Ensure the highest and best use of campus land to serve UC Berkeley's mission.

- Plan every new project – including renovations, additions, and new construction – to support optimal investment of resources, meet space needs, address deferred maintenance, and reduce seismic risk.
- Balance new investments with the renewal of existing facilities to ensure that all campus spaces are functional and well maintained, and to improve space utilization and efficiency in existing facilities to meet program needs.

- Objectives:
  - Modernize and adapt existing buildings through strategic renovation projects that support current and future needs and pedagogies, and to improve space utilization and efficiency. Take advantage of these opportunities to maximize long-term flexibility.
  - Make the highest and best use of each site to employ limited land resources most efficiently. To the extent possible, prioritize utilization of infill or undeveloped sites for facility development to accommodate program needs, taking into consideration site setting and context, adjacent uses, and coordination with existing landscape, infrastructure, and mobility systems.
  - Leverage opportunities to provide active ground floor uses that promote interaction and community.
  - Prioritize land in the Campus Park for academic, research, student life, and student service uses that directly engage students.
  - Enhance and create new spaces for deliberate and informal collaboration and interaction that build community and accelerate discovery, particularly between students and faculty.
  - Prioritize pedestrian and bicycle travel when completing major renovations or siting new buildings. Consider locating uses that attract visitors on the edge of the Campus Park or in the City Environs, and co-locate related academic functions to reduce the need for intercampus travel by modes other than walking or bicycling.
  - Steward historic resources while addressing long-term program needs in support of UC Berkeley's mission. To the extent possible, apply the Secretary of the Interior's *Standards for the Treatment of Historic Properties* to historically significant elements when making building improvements, and integrate flexibility into potential projects to allow buildings to adapt to uses that may evolve over time.
  - Apply best practices when modifications are planned for buildings or landscapes that are listed on the National Register of Historic Places or that are eligible for listing. For modifications to historic resources, utilize the Secretary of the Interior's Standards for the Treatment of Historic Properties. Continue to prepare historic resource evaluations as needed for appropriate buildings and landscapes, including buildings that will be fifty or more years old by the LRDP EIR horizon year of 2036-2037.
  - Preserve the balance between open space and built areas. Reinforce the open space armature of the campus and support new capital projects with complementary landscape and open space features that serve building occupants and the campus as a whole.

- Maintain and enhance the image and experience of the Campus Park as a welcoming and inclusive environment. Enhance key gateways and wayfinding, and reinforce and expand areas that facilitate interaction, recreation, and research in the outdoor environment.
- Continue to preserve, maintain, and reinterpret the Campus Park's landscape heritage, including the Classical Core, campus glades, natural areas, and Strawberry Creek. Respect views towards the Golden Gate across the Central Glade, as well as other vistas and views that reinforce the campus's physical structure.
- Develop legible, convenient, accessible, and safe circulation networks that prioritize pedestrian, bicycle and transit access to the campus, and that are integrated with broader regional transportation networks.
- Incorporate universal design within all capital projects to the greatest extent feasible.
- Support UC system and UC Berkeley goals to reduce energy consumption and achieve carbon neutrality by transitioning to carbon-free energy supply sources and evaluating on-site renewable energy generation.
- Plan building renovations and design new buildings to minimize energy consumption and meet and strive to exceed UC Sustainable Practices Policy energy requirements, through strategies such as passive ventilation, optimal building orientation and landscape design. Consider opportunities for reducing embodied carbon, when aligned with programmatic needs and other improvements.
- Implement water conservation measures designed to reduce potable and non-potable water consumption in campus buildings and landscape to meet and strive to exceed UC Sustainable Practices Policy water conservation requirements. Consider water reuse strategies when non-potable water use is appropriate.

The Proposed Project would support these goals and objectives as follows:

- The Proposed Project would renovate and expand the existing Bechtel Engineering Center, reconfiguring the building to meet current and future needs for student academic support programs; it would also provide study and collaboration space, which is a priority program need campuswide.
- By reusing the existing building, the Proposed Project would reduce the embodied carbon required to construct the project.
- The project would renew an existing historic resource and complement adjacent historic resources, including Hearst Memorial Mining Building and the Central Glade, by reinforcing the edge of the Central Glade, and by renewing the existing building as a contemporary interpretation of the Classical Core's beaux-arts architecture.
- The Proposed Project would improve circulation and wayfinding at the building's primary second level, by improving sightlines and signage. The Proposed Project would also provide a more welcoming and accessible gateway into the College of Engineering precinct.
- The Proposed Project would address documented accessibility barriers within the existing facility.
- The Proposed Project would maintain and renew the tree canopy by relocating and replacing trees that are located within the project area of work.

4.2 UC BERKELEY LAND USE CONSISTENCY

The 2021 LRDP organizes UC Berkeley campus land uses into the following categories: residential, academic life, campus life, parking, and open space. The 2021 LRDP EIR identifies that the highest priority needs for academic life space are classrooms and study space, and that academic life spaces under the 2021 LRDP will be primarily located within the Campus Park. The Proposed Project would not change Bechtel Engineering Center's existing land uses of academic life and campus life. The Proposed Project is therefore consistent with the land uses evaluated in the 2021 LRDP EIR.

4.3 DEVELOPMENT PROGRAM CONSISTENCY

The 2021 LRDP plans for up to 8,096,249 net new gross square feet (GSF) of residential, academic life, campus life, and parking facility space to be developed within the area governed by the 2021 LRDP, including up to 1,936,304 net new GSF of academic life space and 486,722 GSF of campus life space to be located within the Campus Park. The Proposed Project would construct 34,700 net new GSF of academic life and campus life space in the Campus Park, and renovate all of the existing 47,954 GSF of academic life and campus life space within the Bechtel Engineering Center, resulting in a total project area of 82,654 GSF. Therefore, the Proposed Project would result in total development within the levels of development for the Campus Park anticipated in the 2021 LRDP EIR. The 2021 LRDP also projected a total UC Berkeley campus population of 67,200 students and employees. The Proposed Project would provide additional space to house UC Berkeley's existing student academic support programs and would not result in student or employment population growth at UC Berkeley that exceeds levels analyzed in the 2021 LRDP EIR.

With respect to site-specific projections, the Proposed Project was included in the 2021 LRDP EIR as a potential redevelopment project (#CP7 in Table 3-2), conceptually planned for 25,000 GSF of academic life and campus life space with a maximum of four stories above grade. Table 1, *Comparison of 2021 LRDP EIR Buildout and Proposed Project*, compares the Proposed Project to project CP7 in the 2021 LRDP EIR. As shown in Table 1, the Proposed Project, at 82,654 GSF, would have a modestly larger square footage than the 72,954 GSF that was analyzed at the program level in the 2021 LRDP EIR. The Proposed Project's larger square footage than contemplated is a result of refinement in the program and the campus's goal to maximize the site's capacity within its surrounding context, but it would have the same footprint as the existing building and is within the levels of development for the Campus Park anticipated in the 2021 LRDP EIR.

TABLE 1 COMPARISON OF 2021 LRDP EIR BUILDOUT AND PROPOSED PROJECT

Project Description	2021 LRDP EIR Buildout	Proposed Project
Project Characteristics		
Type of Project	Redevelopment	Redevelopment
Uses	Academic Life, Campus Life	Academic Life, Campus Life
Project Dimensions		
Net New Square Footage	25,000	34,700
Beds	0	0
Parking Spaces	0	0
Stories Above Grade	4	4

Note: All numbers represent total buildout numbers, not net new, unless otherwise specified.
Source: UC Berkeley, 2022.

5. Environmental Analysis

5.1 ENVIRONMENTAL EVALUATION OF THE PROPOSED PROJECT

This Addendum documents that the Proposed Project would not result in any new significant environmental impacts, an increase in the severity of significant impacts previously identified and studied in the 2021 LRDP and 2021 LRDP EIR, or require the adoption of any new or considerably different mitigation measures or alternatives. Accordingly, this Addendum is the appropriate form of environmental review for the Proposed Project. This Addendum has been prepared to satisfy the requirements of CEQA Guidelines Sections 15164(a), 15164(d), and 15164(e).

The sections below provide an evaluation of the environmental impacts of the Proposed Project and are organized to correspond with the standards of significance in the 2021 LRDP EIR, consistent with Appendix G, *Environmental Checklist Form*, of the CEQA Guidelines. Each section contains a summary of the findings of the evaluation, organized into the following columns:

- Level of Impact for the 2021 LRDP in the 2021 LRDP EIR presents the level of significance identified for the 2021 LRDP in the 2021 LRDP EIR, using the following acronyms:
  - NI = no impact. For these topics, there is no adverse effect on the environment.
  - LTS = less than significant. These effects are noticeable but do not exceed established or defined thresholds, and no mitigation is required.
  - LTS/M = less than significant with mitigation. For these circumstances, an established or defined threshold would be exceeded and a significant impact would occur; mitigation is required and would reduce the impact to a less-than-significant level.
  - SU = significant and unavoidable. For these topics, a significant impact would occur, and continuing best practices (CBPs) and/or feasible mitigation measures would not diminish these effects to less-than-significant levels.
- Environmental Effects of the Proposed Project presents the level of significance identified for the Proposed Project based on the evaluation in this Addendum, using the following categories:
  - New Less-than-Significant Impact. The Proposed Project would have a noticeable but less-than-significant effect on the environment that was not identified for the 2021 LRDP in the 2021 LRDP EIR.
  - Same Impact as 2021 LRDP. The Proposed Project would create the same level of impact identified for the 2021 LRDP in the 2021 LRDP EIR.
  - Less Impact than 2021 LRDP. The Proposed Project would create a noticeable effect on the environment, with a lesser level of impact than was identified for the 2021 LRDP in the 2021 LRDP EIR.
  - Topic Not Applicable to the Proposed Project. The Proposed Project would not have the potential to create an impact on an environmental topic that was evaluated in the 2021 LRDP EIR.

The Proposed Project is subject to all mitigation measures and continuing best practices (CBPs) in the 2021 LRDP EIR, as applicable. Please see Appendix A, *Applicable Program-Level Mitigation Measures and Continuing Best Practices*, of this Addendum.

5.1.1 AESTHETICS

Would the Proposed Project:

Environmental Issues	Level of Impact for the 2021 LRDP in the 2021 LRDP EIR	Environmental Effects of the Proposed Project			
		New Less-Than-Significant Impact	Same Impact as 2021 LRDP	Less Impact Than 2021 LRDP	Topic Not Applicable to the Proposed Project
Topics Determined to Have No Impact in the 2021 LRDP EIR					
Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	NI		X		
Topics Evaluated in the 2021 LRDP EIR					
AES-1: Have a substantial adverse effect on a scenic vista?	LTS		X		
AES-2: In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	LTS		X		
AES-3: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	LTS/M		X		
AES-4: In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact?	LTS		X		

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable

Summary of Analysis

No new significant or more severe impact than analyzed in the 2021 LRDP EIR.

Discussion

Topics Determined to Have No Impact in the 2021 LRDP EIR

The topic of scenic highways has been screened out from further evaluation in this Addendum because the EIR Study Area is not on or within the viewshed of a State scenic highway.[2] Consequently, there would be no impacts to scenic highways. See Section 7.1.1, *Aesthetics*, of the 2021 LRDP EIR.

Topics Evaluated in the 2021 LRDP EIR

AES-1: The 2021 LRDP EIR identified a less-than-significant impact at the program level for the 2021 LRDP with respect to adverse effects on scenic vistas. Scenic vistas are limited to those accessible by the general public; within the EIR Study Area, these include views from fire roads and vehicle turnouts within the Hill Campus East, which provide views toward the San Francisco Bay from a higher elevation than the rest of the City of Berkeley. The project site is located in an urbanized and relatively level part of the Campus Park and is surrounded on four sides by academic buildings. While the height of the Proposed Project is taller than the existing building, as it includes two new stories, the project site surroundings do not offer any scenic vistas. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

AES-2: The 2021 LRDP EIR identified a less-than-significant impact at the program level for the 2021 LRDP with respect to adverse effects on visual character of the site. The Proposed Project would result in adverse effects related to scenic quality if it were to conflict with applicable zoning or other regulations governing scenic quality. The Proposed Project conforms to the Physical Design Framework, consistent with CBP AES-1. It would reinforce and enhance the Campus Park's unique structure through strategic redevelopment and renovation in the Classical Core; invest in existing programmatic neighborhoods by maintaining the existing College of Engineering precinct; and renew the Central Glade and the Classical Core by contributing to the framing of the Central Glade. The Proposed Project has been reviewed by UC Berkeley's Design Review Committee, and conforms to the project-specific design guidelines prepared by Physical & Environmental Planning, consistent with CBP AES-2. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

AES-3: The 2021 LRDP EIR identified a less-than-significant impact with mitigation at the program level for the 2021 LRDP with respect to new sources of substantial light or glare. The Proposed Project would result in an adverse effect if it created a new source of substantial light or glare which would adversely affect day or nighttime views in the area. The Proposed Project would comply with CBPs AES-6 and AES-7 to include shields and cut-offs that minimize light spillage onto unintended surfaces, minimize atmospheric light pollution, and minimize light and glare in exterior surfaces. The Proposed Project includes exterior lighting that would be directed upwards towards the soffit of the roof overhang, supplemented with secondary downlights illuminating paths of egress. All glass in the building façade would have a high visible light

[2] California Department of Transportation California Scenic Highways Program, Scenic Highway System Lists, List of eligible and officially designated State Scenic Highways, https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways, accessed February 28, 2020.

transmittance value, to minimize reflectivity, and fritted glass would be incorporated where necessary. Interior lighting would be controlled using an adjustable control system. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

AES-4: The 2021 LRDP EIR identified a less-than-significant cumulative impact for the 2021 LRDP with respect to aesthetic impacts. The cumulative setting for the Proposed Project is buildout under the 2021 LRDP, and the Proposed Project would not result in additional development beyond what was analyzed in the 2021 LRDP EIR. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

5.1.2 AGRICULTURE AND FORESTRY RESOURCES

Would the Proposed Project:

Environmental Issues	Level of Impact for the 2021 LRDP in the 2021 LRDP EIR	Environmental Effects of the Proposed Project			
		New Less-Than-Significant Impact	Same Impact as 2021 LRDP	Less Impact Than 2021 LRDP	Topic Not Applicable to the Proposed Project
Topics Determined to Have No Impact in the 2021 LRDP EIR					
Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	NI		X		
Conflict with existing zoning for agricultural use, or a Williamson Act contract?	NI		X		
Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	NI		X		
Result in the loss of forest land or conversion of forest land to non-forest use?	NI		X		
Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	NI		X		

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable

Summary of Analysis

No new significant or more severe impact than analyzed in the 2021 LRDP EIR.

Discussion

Topics Determined to Have No Impact in the 2021 LRDP EIR

The 2021 LRDP EIR did not analyze impacts to agriculture and forestry resources because the EIR Study Area is primarily in an urbanized setting, and approval and implementation of the 2021 LRDP, including the Proposed Project, would have no impact on agriculture and forestry resources. Accordingly, this issue is not discussed further in this Addendum. See Section 7.1.2, *Agricultural and Forestry Resources*, of the 2021 LRDP EIR.

5.1.3 AIR QUALITY

Would the Proposed Project:

Environmental Issues	Level of Impact for the 2021 LRDP in the 2021 LRDP EIR	Environmental Effects of the Proposed Project			
		New Less-Than-Significant Impact	Same Impact as 2021 LRDP	Less Impact Than 2021 LRDP	Topic Not Applicable to the Proposed Project
Topics Evaluated in the 2021 LRDP EIR					
AIR-1: Conflict with or obstruct implementation of the applicable air quality plan?	SU		X		
AIR-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	SU		X		
AIR-3: Expose sensitive receptors to substantial pollutant concentrations?	SU		X		
AIR-4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	LTS		X		
AIR-5: In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact.	LTS		X		

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable

Summary of Analysis

No new significant or more severe impact than analyzed in the 2021 LRDP EIR.

Discussion

Topics Evaluated in the 2021 LRDP EIR

AIR-1 and AIR-2: The 2021 LRDP EIR identified a significant and unavoidable impact at the program level regarding consistency with the Bay Area Air Quality Management District's *2017 Clean Air Plan: Spare the Air, Cool the Climate* (2017 Clean Air Plan) because the 2017 Clean Air Plan does not directly account for UC Berkeley's development program. Because the Proposed Project would not result in additional

development beyond what was analyzed in the 2021 LRDP EIR, the Proposed Project would not increase the development program analyzed in the 2021 LRDP EIR. The Proposed Project would provide an expanded facility for existing student academic support programs and address UC Berkeley's priority need for study and collaboration space. Thus, the Proposed Project would not substantially affect housing, employment, or population projections in the region that are the basis of the 2017 Clean Air Plan projections.

The 2021 LRDP EIR identified significant and unavoidable impacts at the program level associated with the generation of fugitive dust, construction equipment exhaust, and reactive organic gases (ROG) emissions during construction and operation of development under the 2021 LRDP. The Proposed Project would not result in additional development beyond what was analyzed in the 2021 LRDP EIR. Construction and operation of the Proposed Project would result in criteria air pollutant emissions. As required by 2021 LRDP EIR Mitigation Measure AIR-2.1, off-road diesel-powered construction equipment with more than 50 horsepower used for the Proposed Project would meet the United States Environmental Protection Agency Tier 4 Final emissions standards or higher, where commercially available. In addition, construction of the Proposed Project would adhere to CBP AIR-2 and CBP AIR-3, which require control measures for fugitive dust control and to reduce emissions of diesel particulate matter and ozone precursors. The Proposed Project would also adhere to 2020 LRDP Mitigation Measure AIR-2.2, which requires projects to use certified low-Volatile Organic Compound (VOC) paints or, when feasible, no-VOC paints, in order to reduce Reactive Organic Gas emissions for interior architectural coatings. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

AIR-3: The 2021 LRDP EIR identified a significant and unavoidable impact at the program level associated with construction-related health risks. Mitigation Measure AIR-3.1, which requires a construction health risk assessment (HRA) to be prepared, is not applicable to the Proposed Project because the project site is less than one acre. However, as described above, the Proposed Project would comply with Mitigation Measure AIR-2.1, which requires off-road diesel-powered construction equipment with more than 50 horsepower to meet the United States Environmental Protection Agency Tier 4 Final emissions standards or higher, where commercially available. With mitigation, the Proposed Project would not expose off-site sensitive receptors to substantial concentrations of air pollutant emissions during construction. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

AIR-4: The 2021 LRDP EIR identified a less-than-significant impact associated with the generation of substantial odors that would affect a substantial number of people. The type of facilities that are typically considered to have objectionable odors include wastewater treatment plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities. The Proposed Project's uses are not associated with foul odors that constitute a public nuisance. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

AIR-5: The 2021 LRDP EIR identified a less-than-significant cumulative impact for the 2021 LRDP with respect to toxic air contaminants. The cumulative setting for the Proposed Project is buildout under the

2021 LRDP, and the Proposed Project would not result in additional development beyond what was analyzed in the 2021 LRDP EIR. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

5.1.4 BIOLOGICAL RESOURCES

Would the Proposed Project:

Environmental Issues	Level of Impact for the 2021 LRDP in the 2021 LRDP EIR	Environmental Effects of the Proposed Project			
		New Less-Than-Significant Impact	Same Impact as 2021 LRDP	Less Impact Than 2021 LRDP	Topic Not Applicable to the Proposed Project
Topics Determined to Have No Impact in the 2021 LRDP EIR					
Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	NI		X		
Topics Evaluated in the 2021 LRDP EIR					
BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	LTS		X		
BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	LTS		X		
BIO-3: Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	LTS		X		
BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	LTS/M		X		
BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	NI		X		
BIO-6: In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact?	LTS		X		

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable

Summary of Analysis

No new significant or more severe impact than analyzed in the 2021 LRDP EIR.

Discussion

Topics Determined to Have No Impact in the 2021 LRDP EIR

Since the 2021 LRDP was approved and the EIR was certified, no local, regional, or State conservation plans have been approved that encompass the EIR Study Area, including the site of the Proposed Project. Accordingly, no further analysis regarding this standard of significance and the Proposed Project is required, and this issue is not discussed further in this Addendum. See Section 7.1.3, *Biological Resources*, of the 2021 LRDP EIR.

Topics Evaluated in the 2021 LRDP EIR

BIO-1 through BIO-3: The 2021 LRDP EIR identified less-than-significant impacts for the 2021 LRDP with respect to special-status plant species, riparian habitat or other sensitive natural communities, and federally protected wetlands. No special-status plant species, riparian habitat, other sensitive natural communities, or regulated waters occur within the Proposed Project site due to the extent of past development and its location in an urbanized setting. Furthermore, the Proposed Project would adhere to CBP BIO-1 to avoid disturbance or removal of bird nests protected under the federal Migratory Bird Treaty Act and California Department of Fish and Game Code. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

BIO-4: The 2021 LRDP EIR identified a less-than-significant impact with mitigation concerning movement of wildlife species, wildlife corridors, and native wildlife nursery sites. Given the urbanized location of the Proposed Project, no adverse impacts on wildlife movement opportunities are anticipated. However, the new addition proposed could pose the risk of bird collisions. As required by 2021 LRDP EIR Mitigation Measure BIO-4, the proposed addition would be designed to minimize the potential risk of bird collisions. The proposed building is designed to minimize light spillage and light pollution, through its façade materials, a lighting control system, and direction of exterior lighting to illuminate the roof soffit and egress paths. The Proposed Project would use glass in its façade with a high visible light transmittance value, which would minimize the reflectivity of the glass; fritted glass panels would be incorporated where needed. Hazards, such as glass railings, would not be used in the Proposed Project. Furthermore, trees would be limited to the northern half of the site where the façade is primarily opaque. The Proposed Project's roof does not include any mechanical equipment, and thus would not pose a risk for bird collisions. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

BIO-5: The 2021 LRDP EIR identified no conflict with any local policies or ordinances protecting biological resources. The Proposed Project would have no impact in the same regard because UC Berkeley is not subject to local regulations. The Proposed Project would remove 14 existing trees and plant 14 new trees. The existing trees to be removed include two canary island pines; three Italian alders; two red bud trees;

one olive tree; five Japanese maple trees; and one carob tree. The proposed new trees would include four trident maples; one Japanese maple; one red maple; one arbutus tree; one Tasmanian tree fern; and four water gum trees. The two existing canary island pines have been designated as specimen trees, in accordance with the Campus Specimen Tree Program. As required through the implementation of CBP BIO-9, the Proposed Project would comply with the Campus Specimen Tree Program and the Campus Design Standards, which protect sensitive habitat, trees, and waterways on the UC Berkeley campus. Specifically, implementation of CBP BIO-9 requires replacement landscaping where specimen resources are adversely affected, either through salvage and transplanting of existing trees or shrubs or through new horticulturally appropriate replacement plantings, as directed by the Campus Landscape Architect. UC Berkeley's Specimen Tree Program requires that specimen trees be replaced at a ratio of 3 to 1, and the Proposed Project would plant 14 new trees, which is eight more than required by the Specimen Tree Program. Furthermore, the Proposed Project would also adhere to CBP BIO-10 for the implementation of the recommendations of the Landscape Master Plan and subsequent updates; and project-specific design guidelines to improve the important open space characteristics and resilience of the Campus Park. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

BIO-6: The 2021 LRDP EIR identified a less-than-significant cumulative impact for the 2021 LRDP with respect to biological resources. The cumulative setting for the Proposed Project is buildout under the 2021 LRDP, and the Proposed Project would not result in additional development beyond what was analyzed in the 2021 LRDP EIR. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

5.1.5 CULTURAL RESOURCES

Would the Proposed Project:

Environmental Issues	Level of Impact for the 2021 LRDP in the 2021 LRDP EIR	Environmental Effects of the Proposed Project			
		New Less-Than-Significant Impact	Same Impact as 2021 LRDP	Less Impact Than 2021 LRDP	Topic Not Applicable to the Proposed Project
Topics Evaluated in the 2021 LRDP EIR					
CUL-1: Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	SU		X		
CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	LTS/M			X	
CUL-3: Disturb any human remains, including those interred outside of formal cemeteries?	LTS			X	
CUL-4: In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact?	SU		X		

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable

Summary of Analysis

No new significant or more severe impact than analyzed in the 2021 LRDP EIR.

Discussion

Topics Evaluated in the 2021 LRDP EIR

CUL-1: The 2021 LRDP EIR identified a significant and unavoidable impact at the program level for the 2021 LRDP regarding substantial adverse change in the significance of a historical resource. Because of the programmatic nature of the 2021 LRDP, future projects could result in the demolition of one or more historical resources and/or modification of one or more historical resources in a manner not in conformance with the Secretary of the Interior's Standards for Rehabilitation.

The Proposed Project site is the existing Bechtel Engineering Center, constructed in 1980. The 2021 LRDP EIR listed the Bechtel Engineering Center a likely historic resource in Table 5.4-6, and as a potentially eligible resource identified as a potential redevelopment or renovation project in Table 5.4-10. A historic resource evaluation was subsequently completed for the Proposed Project; it determined that the existing building is a historic resource, eligible for state listing. The Proposed Project's new addition is a permanent change to the existing building and would require the removal of the following features: one exterior staircase, the landscape to the south and west of the existing second level, and the majority of the existing roof terrace.

The following existing building features have been identified as character-defining:

- Rectangular footprint with tiered profile at the primary (south) façade
- Two-story partially below-grade height
- Rectangular massing, including dual-carriage elevator tower that rises above the roofline
- Two stair volumes that project from the south façade and provide access to the rooftop terrace
- Concrete exterior finish
- Pattern of fenestration at the south façade including "recessed" dark windows separated by vertical concrete members
- General ratio of solid-to-void at the east and west facades, including large areas of concrete-finished exterior walls and dark, flush windows
- Multi-lite wood doors at the first floor and within the recessed entry courtyard

The following rooftop terrace features have been identified as character-defining:

- One-story height and general footprint and massing of the café
- Low rectangular concrete planting beds with turf
- Integrated concrete planters at walls
- Raised terraced area at the west side of the rooftop terrace
- Wood trellis connecting the elevator tower and café
- Fixed concrete and wood furniture including tables and benches
- Study carrels with associated trellises
- Ceramic tile applied in a rectangular pattern to open areas of concrete paving
- Connection to the podium level of Davis Hall

The following landscape features have been identified as character-defining:

- Oculus and skylight directly south of the second floor, which provide light to the recessed entry courtyard and the interior library
- Six curvilinear planting beds directly west and south of the second floor

The Proposed Project has been analyzed by a historic preservation architect, using the Secretary of the Interior's *Standards for Rehabilitation*. The standards analysis found that the Proposed Project would comply with Standards 1, 3, 4, 6, 7, and 8; and that the Project would not comply with Standards 2, 5, 9, and 10. The analysis is summarized below (see Appendix B):

- *Standard 1: A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.*

  The existing Bechtel Engineering Center houses community functions including study areas, Sibley Auditorium, Kresge Library, and Engineering Student Services. The Proposed Project's new uses, including student support programs, collaboration spaces, and an entrepreneurial hub, are similar to the existing building's historic uses.

- *Standard 2: The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.*

  The Proposed Project would remove a substantial amount of historic material from the existing building, including historic features from the lower level, south façade of the ground level, one of two projecting stair volumes at the ground level, the projecting volume of the elevator tower, the rooftop terrace, and landscape features west and south of the existing building. The Proposed Project would also alter spaces that characterize the existing building, including its two-story height and tiered rectangular footprint. The Proposed Project therefore does not retain and preserve the historic character of the existing building.

- *Standard 3: Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.*

  The Proposed Project would comprise all new material components and would not incorporate conjectural features or architectural elements from other buildings that would create a false sense of historical development.

- *Standard 4: Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.*

  The existing Bechtel Engineering Center does not include any features that have acquired historic significance in their own right; therefore, the Proposed Project does not impact those features.

- *Standard 5: Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.*

  Distinctive features, finishes, construction techniques, and examples of craftsmanship of the existing building are expressed in its two-story height, tiered rectangular footprint, rectangular massing; its projecting stair and elevator volumes, concrete exterior finish, and pattern of fenestration. In the landscape and terrace, they are expressed in the broad mix of larger and fine-grained features ranging from large curvilinear planter beds to fixed tables and benches at the terrace. The Proposed Project would retain some historic features and finishes, including: the

concrete exterior finish and pattern of fenestration at the west and south facades of the lower level, and some concrete exterior finish and fenestration pattern at the east, west, and north facades of the ground level. However, substantial changes would be made to most of the distinctive features and finishes, including: the two-story height, tiered rectangular footprint, rectangular massing, one of two projecting stairs, elevator tower, concrete exterior finish from the south façade of the ground level, multi-lite wood doors at the lower level and ground level, curvilinear planting beds, oculus, skylight, and rooftop terrace. The Proposed Project thus does not preserve the distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize the existing building.

- *Standard 6: Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.*

  The existing Bechtel Engineering Center does not include any deteriorated historic features or missing historic features, nor does the Proposed Project include any scope of work where historic features are replaced.

- *Standard 7: Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.*

  The Proposed Project may include surface cleaning where existing portions of the existing building's concrete façade would be preserved with its original finish, at the lower and ground levels. Surface cleaning, if included, would be undertaken using appropriately gentle methods that would not cause damage to the concrete façade. Cleaning of existing interior shear walls that could be included in the Proposed Project as part of the lateral strengthening of the existing structure would not impact character-defining materials.

- *Standard 8: Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.*

  The Proposed Project would be constructed upon the existing foundation and largely within the footprint of the existing building; the surface area immediately surrounding the existing building has previously been disturbed in the process of constructing the building and landscape. As such, the discovery of significant archeological resources during construction of the Proposed Project is unlikely; however, if this were to occur, the Proposed Project would follow the procedures identified in 2021 LRDP EIR Mitigation Measure CUL-2.

- *Standard 9: New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.*

  As noted in the discussion for Standards 2 and 5, the Proposed Project would remove a substantial amount of historic material that characterizes the existing building. While the Proposed Project's addition would be differentiated from the existing building in its massing and materials, it would not be compatible with the existing historic building because it substantially changes the scale of the building. Also, the Proposed Project's materials, primarily comprising clear glass and aluminum

panels, have no precedent at the existing building. The Proposed Project thus does not comply with Standard 9.

- *Standard 10: New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.*

  As noted in the discussion for Standards 2, 5, and 9, the Proposed Project would remove a substantial amount of historic material that characterizes the existing building. If the Proposed Project were removed in the future, the existing building would not be able to returned to its historic appearance, and the essential form and integrity of the existing building would not be unimpaired.

Because the Proposed Project would not be considered fully compliant with all ten of the Standards, it would result in a significant impact on the ability of the historic resource to continue to convey its historic significance. This impact was identified and analyzed in the 2021 LRDP EIR. The Proposed Project would adhere to 2021 LRDP EIR Mitigation Measures CUL-1.1a, CUL-1.1b, CUL-1.1c, CUL-1.1d, and CUL-1.1e. UC Berkeley has completed a historic resource evaluation for the existing building, in compliance with Mitigation Measure CUL-1.1a. Implementation of Mitigation Measure CUL-1.1b would ensure that UC Berkeley prepares Historic American Building Survey Level II documentation for the Proposed Project and submits it to the appropriate publicly accessible archives. Mitigation Measure CUL-1.1c is applicable to the project and would ensure that if the Campus Architect determined that character-defining features, or features that convey the significance of the historic resource, are planned for demolition, local historic societies and architectural salvage companies would be notified of any available resources for salvage, to be removed within 30 days. Similarly, Mitigation Measure CUL-1.1d is applicable and would require, for projects that would result in demolition of historic resources, a determination from the Campus Architect regarding whether on-site interpretation is merited. Implementation of Mitigation Measure CUL-1.1e would ensure that construction vibration does not negatively affect any nearby historic structures. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

CUL-2: The 2021 LRDP EIR identified a less-than-significant impact with mitigation concerning archaeological resources. While the archaeological sensitivity analysis for the 2021 LRDP EIR identified 55 percent of the Campus Park as moderately to extremely sensitive, the Proposed Project site is considered to have a low sensitivity for subsurface prehistoric-era archaeological resources.[3] Nevertheless, soils beneath the project site could contain potentially significant prehistoric archaeological resources. However, the Proposed Project would not include ground-disturbing activities, since it is a renovation and addition to an existing building, and as a result there would not be any potential impacts to subsurface archaeological resources. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

[3] University of California Berkeley, July 2021, UC Berkeley 2021 Long Range Development Plan and Housing Projects #1 and #2 Environmental Impact Report, State Clearinghouse No. 2020040078, page 5.4-14.

CUL-3: The 2021 LRDP EIR identified a less-than-significant impact with respect to the disturbance of human remains. The Proposed Project does not include any ground-disturbing activities, such as site grading and trenching for utilities, that could result in potential impacts to human remains. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

CUL-4: The 2021 LRDP EIR identified a significant and unavoidable cumulative impact for the 2021 LRDP with respect to cultural resources. The cumulative setting for the Proposed Project is buildout under the 2021 LRDP, and the Proposed Project would not result in additional development beyond what was analyzed in the 2021 LRDP EIR. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

5.1.6 ENERGY

Would the Proposed Project:

Environmental Issues	Level of Impact for the 2021 LRDP in the 2021 LRDP EIR	Environmental Effects of the Proposed Project			
		New Less-Than-Significant Impact	Same Impact as 2021 LRDP	Less Impact Than 2021 LRDP	Topic Not Applicable to the Proposed Project
Topics Evaluated in the 2021 LRDP EIR					
ENE-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	LTS		X		
ENE-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	NI		X		
ENE-3: In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact?	LTS		X		

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable

Summary of Analysis

No new significant or more severe impact than analyzed in the 2021 LRDP EIR.

Discussion

Topics Evaluated in the 2021 LRDP EIR

ENE-1 and ENE-2: The 2021 LRDP EIR identified a less-than-significant impact at the program level for the 2021 LRDP regarding wasteful, inefficient, or unnecessary consumption of energy resources, and no impacts concerning conflicts with State or local plans for renewable energy or energy efficiency. The Proposed Project would comply with the University of California Sustainable Practices Policy, and the building would be designed to achieve or exceed the U.S. Green Building Council's LEED™ Gold certification. Currently, the existing building uses steam from the campus's cogeneration plant for heating, and electricity for electrical

loads. The Proposed Project would fully electrify the existing building and the addition; electricity would be used for heating, cooling, and all other electrical loads. Therefore, the Proposed Project would not use natural gas for building heat or hot water generation, in compliance with the fossil-fuel-free provision of the Sustainable Practices Policy.

During construction, the Proposed Project would use a combination of gas- or diesel-powered and electric equipment. Transportation energy use during construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that use diesel fuel and/or gasoline. Overall, use of all construction equipment would cease upon completion of project construction. Thus, impacts related to electricity and transportation fuel use during construction would be temporary and would not require expanded energy supplies or the construction of new infrastructure. Furthermore, to limit wasteful and unnecessary energy consumption, the construction contractors would minimize nonessential idling of construction equipment, in accordance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9, and as required by CBP AIR-3. Such required practices would limit wasteful and unnecessary energy consumption during construction.

Electrical service to the Proposed Project would be provided through connections to Substation #5. Although the Proposed Project would result in an increase in electricity demand, it would include project design features to minimize energy demand to the extent feasible. The Proposed Project would, at minimum, comply with the current Building Energy Efficiency Standards and the California Green Building Standards Code (CALGreen). In addition, the Proposed Project proposes to obtain a minimum LEED™ Gold rating.[4] Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

ENE-3: The 2021 LRDP EIR identified a less-than-significant cumulative impact for the 2021 LRDP with respect to energy. The cumulative setting for the Proposed Project is buildout under the 2021 LRDP, and the Proposed Project would not result in additional development beyond what was analyzed in the 2021 LRDP EIR. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

[4] Leadership in Energy and Environmental Design or LEED provides a framework for healthy, efficient, carbon and cost-saving green buildings. LEED certified buildings save money, improve efficiency, lower carbon emissions and create healthier places for people.

5.1.7 GEOLOGY AND SOILS

Would the Proposed Project:

Environmental Issues	Level of Impact for the 2021 LRDP in the 2021 LRDP EIR	Environmental Effects of the Proposed Project			
		New Less-Than-Significant Impact	Same Impact as 2021 LRDP	Less Impact Than 2021 LRDP	Topic Not Applicable to the Proposed Project
Topics Determined to Have No Impact in the 2021 LRDP EIR					
Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	NI		X		
Topics Evaluated in the 2021 LRDP EIR					
GEO-1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: a) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. b) Strong seismic ground shaking? c) Seismic-related ground failure, including liquefaction? d) Landslides?	LTS		X		
GEO-2: Result in substantial soil erosion or the loss of topsoil?	LTS		X		
GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	LTS		X		
GEO-4: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	LTS		X		
GEO-5: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	LTS/M				X
GEO-6: In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact?	LTS		X		

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable

Summary of Analysis

No new significant or more severe impact than analyzed in the 2021 LRDP EIR.

Discussion

Topics Determined to Have No Impact in the 2021 LRDP EIR

The topic of alternative wastewater disposal systems has been screened out from further evaluation because the potential future development under the 2021 LRDP, including the Proposed Project, would not include the use of septic tanks or alternative wastewater disposal systems. Therefore, no impact would occur regarding soil capability to adequately support the use of septic tanks or alternative wastewater disposal systems, and this issue is not discussed further in this Addendum. See Section 7.1.4, *Geology and Soils*, of the 2021 LRDP EIR.

Topics Evaluated in the 2021 LRDP EIR

GEO-1 though GEO-4: The 2021 LRDP EIR identified less-than-significant impacts at the program level for the 2021 LRDP with respect to the creation or exacerbation of fault rupture, earthquake ground shaking, liquefaction and related ground failure, and landslides; substantial soil erosion; location on an unstable geologic unit; or location on expansive soil. The Proposed Project site could experience very strong ground shaking during a large earthquake. However, the Proposed Project site has low potential for liquefaction and seismic densification, due to dense and stiff soils. The Proposed Project site is not located within an Earthquake Fault Zone, and has low potential for fault offset from the Hayward-Rodgers Creek fault, which is located approximately 0.5 kilometers from the site. The Proposed Project is located in an urbanized part of the City of Berkeley and would be required to implement construction phase best management practices (BMPs) as well as post-construction site design, source-control, and treatment control measures in accordance with applicable permit requirements, such as low-impact development (LID) measures. The Proposed Project would adhere to CBP GEO-1 through 9. These CBPs require compliance with the California Building Code (CBC) and the UC Seismic Safety Policy; incorporation of recommendations for geotechnical hazard prevention in required site-specific geotechnical studies; review of all seismic and structural engineering designs; use of site-specific seismic ground motions for analysis and design; and implementation of programs and projects in emergency planning, training, response, and recovery. Furthermore, the Proposed Project would be required to comply with the Campus Design Standards, which contain regulatory and other requirements for construction-phase and post-construction stormwater management to reduce erosion, as described in CBP GEO-9.

The expansion potential of the clay soils in the 2021 LRDP EIR Study Area varies from low to critically high.[5] Therefore, the Proposed Project has potential to expose people to hazards associated with expansive soils. However, such impacts would be avoided through compliance with the CBC and the University of California Seismic Safety Policy, as required by CBP GEO-1 and CBP GEO-3. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

[5] University of California Berkeley, July 2021, UC Berkeley 2021 Long Range Development Plan and Housing Projects #1 and #2 Environmental Impact Report, State Clearinghouse No. 2020040078, page 5.6-33.

GEO-5: The 2021 LRDP EIR identified a less-than-significant impact with mitigation concerning paleontological resources. The project site is previously developed, which contributes to the low likelihood of unearthing a paleontological resource. The project site is located in the Franciscan complex, which is characterized as an assemblage of sheared rock that is a highly sensitive geological formation, and dates from the late Cretaceous to late Jurassic periods. In the region of the project site, the bedrock includes greenstone, sandstone, shale, conglomerate, chert, and localized limestone. However, construction of the Proposed Project would not involve any ground-disturbing activities; therefore, there would be no risk to potential paleontological resources and the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact

GEO-6: The 2021 LRDP EIR identified a less-than-significant cumulative impact for the 2021 LRDP with respect to geology and soils. The cumulative setting for the Proposed Project is buildout under the 2021 LRDP, and the Proposed Project would not result in additional development beyond what was analyzed in the 2021 LRDP EIR. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

5.1.8 GREENHOUSE GAS EMISSIONS

Would the Proposed Project:

Environmental Issues		Level of Impact for the 2021 LRDP in the 2021 LRDP EIR	Environmental Effects of the Proposed Project			
			New Less-Than-Significant Impact	Same Impact as 2021 LRDP	Less Impact Than 2021 LRDP	Topic Not Applicable to the Proposed Project
Topics Evaluated in the 2021 LRDP EIR						
GHG-1:	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	LTS		X		
GHG-2:	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	LTS/M		X		
GHG-3:	In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact?	LTS		X		

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable

Summary of Analysis

No new significant or more severe impact than analyzed in the 2021 LRDP EIR.

Discussion

Topics Evaluated in the 2021 LRDP EIR

GHG-1: The 2021 LRDP EIR identified less-than-significant impacts at the program level for the 2021 LRDP regarding the generation of greenhouse gas (GHG) emissions. Construction and operation of the Proposed

Project would generate a temporary increase in GHG emissions from transportation sources (trucks, delivery vehicles) associated with construction of the Proposed Project, and a permanent increase in water use and wastewater generation, and solid waste generation from the operation of the Proposed Project. GHG emissions associated with the Proposed Project are included in the 2021 LRDP emissions forecast, which was determined not to contribute a significant amount of GHG emissions or contribute to existing cumulative emissions impacts. Furthermore, UC Berkeley conducts annual GHG emissions inventories and implements the University of California Office of the President and UC Berkeley sustainability and policy initiative, which would apply to the Proposed Project. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

GHG-2: The 2021 LRDP EIR identified less-than-significant impacts with mitigation concerning conflict with applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions. Such plans include California Air Resources Board's Scoping Plan outlining the State's strategies to reduce GHG emissions in accordance with the targets established under Assembly Bill (AB) 32 and Senate Bill (SB) 32, as well as Metropolitan Transportation Commission/Association of Bay Area Governments' Plan Bay Area 2040 to achieve the passenger vehicle emissions reductions identified under SB 375. The Proposed Project does not include any net new parking, and site users would access the site through current modes of transportation, primarily non-vehicular modes. Vehicle trips during operation would be limited to delivery and maintenance vehicles; therefore, the Proposed Project would generate minimal new vehicle trips. Because the Proposed Project would accommodate existing students, the UC Berkeley campus population would remain within levels analyzed in the 2021 LRDP EIR and the Proposed Project would not be a significant growth-inducing project. Thus, it would be consistent with the overall goals of Plan Bay Area 2040 in concentrating new development in locations where there is existing infrastructure. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

GHG-3: The 2021 LRDP EIR identified a less-than-significant cumulative impact for the 2021 LRDP with respect to GHG emissions. The cumulative setting for the Proposed Project is buildout under the 2021 LRDP, and the Proposed Project would not result in additional development beyond what was analyzed in the 2021 LRDP EIR. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

5.1.9 HAZARDS AND HAZARDOUS MATERIALS

Would the Proposed Project:

Environmental Issues	Level of Impact for the 2021 LRDP in the 2021 LRDP EIR	Environmental Effects of the Proposed Project			
		New Less-Than-Significant Impact	Same Impact as 2021 LRDP	Less Impact Than 2021 LRDP	Topic Not Applicable to the Proposed Project
Topics Determined to Have No Impact in the 2021 LRDP EIR					
For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area?	NI		X		
Topics Evaluated in the 2021 LRDP EIR					
HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	LTS		X		
HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	LTS		X		
HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	LTS		X		
HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	LTS			X	
HAZ-5: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	LTS		X		
HAZ-6: In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact?	LTS		X		
*Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	*See Section 4.1.20, Wildfire, of this Addendum*				

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable

* Note: Impacts related to exposing people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires are fully discussed in the Draft EIR in Chapter 5.18, Wildfire, and in this Addendum in Section 5.1.20, Wildfire. Therefore, this standard is not discussed in this section.

Summary of Analysis

No new significant or more severe impact than analyzed in the 2021 LRDP EIR.

Discussion

Topics Determined to Have No Impact in the 2021 LRDP EIR

The topic of airport-related hazards has been screened out from further evaluation because the EIR Study Area is not within an airport land use plan or within two miles of an airport. The nearest public airport is the Oakland International Airport, roughly ten miles south of the planning area. Therefore, no impact would occur regarding hazards related to the Proposed Project's location within an airport land use plan area or within two miles of a public airport or public use airport. Consequently, this issue is not discussed further in this Addendum. See Section 7.1.5, *Hazards and Hazardous Materials*, of the 2021 LRDP EIR.

Topics Evaluated in the 2021 LRDP EIR

HAZ-1 through HAZ-4: The 2021 LRDP EIR identified less-than-significant impacts at the program level for the 2021 LRDP with respect to the hazards associated with the use, handling, disposal, and release of hazardous materials. The closest sensitive receptors to the Proposed Project are private residences located to the north of the Proposed Project site, across Hearst Avenue; and the Pacific School of Religion, located approximately 1,000 feet to the north of the Proposed Project site. These receptor locations could be potentially exposed to hazardous materials from the proposed construction and operation of the Proposed Project.

Construction activities for the Proposed Project would include the use of materials such as fuels, lubricants, and greases in construction equipment and coatings. The potential exists for these materials to spill or to create hazardous conditions. However, the materials used would not be in such quantities or stored in such a manner as to pose a significant safety hazard to nearby sensitive receptors. Fugitive dust would be generated primarily from ground-disturbing and material-loading activities in addition to vehicles traveling over unpaved surfaces. However, fugitive dust associated with construction activities would not expose off-site sensitive receptors to substantial concentrations of air pollutants because the Proposed Project would adhere to CBP AIR-2, which requires compliance with current Bay Area Air Quality Management District basic control measures for fugitive dust. To prevent hazardous conditions, existing UC Berkeley, State, and federal laws would be enforced at the construction site. Furthermore, these activities would also be short term or one time in nature and would cease upon completion of the construction phases for the Proposed Project.

Operation of the Proposed Project would involve the use of small amounts of hazardous materials, such as cleansers, paints, fertilizers, and pesticides, for cleaning and maintenance purposes. No use of biohazardous materials, radioactive materials, transgenic material, and production of wastes associated with laboratory research activities would occur at the Proposed Project site. However, The Proposed Project would adhere to CBP HAZ-1 during construction, which requires the continued implementation of equivalent health and safety plans, programs, practices, and procedures related to the use, storage, disposal, or transportation of hazardous materials and wastes. Hazardous waste materials stored and handled on the UC Berkeley campus would not exist in quantities sufficient to pose a risk to occupants of nearby sensitive receptors including the Pacific School of Religion, which is within one-quarter mile of the Proposed Project site, in case of an accidental release, and a risk management plan would be prepared in accordance with the State of

California's Accidental Release Prevention program requirements, if necessary. Additionally, the use, storage, transport, and disposal of hazardous materials would be governed by existing regulations of several agencies, including the Environmental Protection Agency, Department of Toxic Substances Control, U.S. Department of Transportation, International Air Transport Association, California Division of Occupational Safety and Health, and UC Berkeley Office of Environmental Health & Safety programs and policies.

The Proposed Project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and would result in no impact to the public or the environment. Regardless, the Proposed Project would adhere to CBP HAZ-4 concerning performing hazardous materials surveys prior to capital projects in existing UC Berkeley buildings, and continuing to comply with federal, State, and local regulations governing the abatement and handling of hazardous building materials. CBP HAZ-5, concerning performing site histories and due diligence assessments to assess the potential for soil and groundwater contamination, is not applicable because the Proposed Project does not include any ground-disturbing construction. The Proposed Project's site has been in use continuously as the Bechtel Engineering Center since its construction in 1980. The existing building has been used for student services and assembly uses since its inception; these uses do not involve the use of hazardous materials. Prior to the construction of the existing building, the site was partially occupied by the Mechanical and Electrical Engineering Building (also called the Mechanics Building), constructed in 1894. The Mechanics Building overlapped the site of the existing building on its western half. As recommended in UC Berkeley's 1962 LRDP, the Mechanics Building was demolished in 1966 to enable more intensive redevelopment. Between 1966 and 1980, the Proposed Project site was used as a surface parking lot. During the subsequent construction of Bechtel Engineering Center in 1980, the Proposed Project site was excavated down to bedrock and existing soil above the bedrock was removed. Therefore, there is little potential for soil and groundwater contamination resulting from past or current land uses at the site or in the immediate vicinity. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

HAZ-5: The 2021 LRDP EIR identified less-than-significant impacts concerning adopted emergency response plans or emergency evacuation plans. The Proposed Project would be required to comply with the provisions of the California Fire Code (CFC) and the CBC, which would ensure that building and life safety measures are incorporated into the Proposed Project and would facilitate implementation of emergency response plans. During construction, the Proposed Project would be required to comply with all applicable provisions of the CFC to ensure fire safety during the construction phase. The Proposed Project would not involve physical components that would interfere with the ability of UC Berkeley, the City of Berkeley, Alameda County, or emergency response service providers to implement emergency response activities within the project site or vicinity. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

HAZ-6: The 2021 LRDP EIR identified a less-than-significant cumulative impact for the 2021 LRDP with respect to hazards and hazardous materials. The cumulative setting for the Proposed Project is buildout under the 2021 LRDP, and the Proposed Project would not result in additional development beyond what was analyzed in the 2021 LRDP EIR. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

5.1.10 HYDROLOGY AND WATER QUALITY

Would the Proposed Project:

Environmental Issues	Level of Impact for the 2021 LRDP in the 2021 LRDP EIR	Environmental Effects of the Proposed Project			
		New Less-Than-Significant Impact	Same Impact as 2021 LRDP	Less Impact Than 2021 LRDP	Topic Not Applicable to the Proposed Project
Topics Evaluated in the 2021 LRDP EIR					
HYD-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	LTS		X		
HYD-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	LTS		X		
HYD-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: a) Result in substantial erosion or siltation on- or off-site? b) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; c) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or d) Impede or redirect flood flows?	LTS		X		
HYD-4: In flood, hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	LTS		X		
HYD-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	LTS		X		
HYD-6: In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact?	LTS		X		

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable

Summary of Analysis

No new significant or more severe impact than analyzed in the 2021 LRDP EIR.

Discussion

Topics Evaluated in the 2021 LRDP EIR

HYD-1 through HYD-5: The 2021 LRDP EIR identified less-than-significant impacts at the program level for the 2021 LRDP with respect to hydrology and water quality. The Proposed Project would not involve the disturbance of more than one acre of land, thus it would not be required to, but would voluntarily comply with the requirements of the Construction General Permit related to water and stormwater, which includes submitting Permit Registration Documents to the State Water Resources Control Board and preparing and implementing a Stormwater Pollution Prevention Plan that includes measures to reduce the potential for erosion, siltation, and pollutants to enter the storm drain system. The UC Berkeley Office of Environment, Health & Safety (EH&S) or a designated third party would also verify that the Proposed Project complies with all applicable requirements and BMPs. Construction dewatering would not be required for the Proposed Project.

The Proposed Project's stormwater management strategy is designed to manage runoff and treat and remove pollutants prior to discharge. Furthermore, East Bay Municipal Utility District (EBMUD) does not use groundwater for water supply, and therefore implementation of the project would not decrease groundwater supplies. The groundwater basin that extends under the Proposed Project site is not currently the local water supply and does not serve local or planned land uses. The Proposed Project site is not in a 100-year floodplain or within a dam or tsunami inundation zone.

The Proposed Project would adhere to CBP HYD-1, HYD-2, CBP HYD-5, CBP HYD-7, and CBP HYD-13. In implementing these CBPs, UC Berkeley reviews each development project to determine whether project runoff would affect rainwater infiltration to groundwater or increase pollutant loading and verify that the Proposed Project complies with all applicable requirements and BMPs. UC Berkeley also continues to manage runoff into storm drain systems to avoid no net increase in runoff over existing conditions, and maintains a campuswide educational program regarding safe use and disposal of facilities maintenance chemicals and laboratory chemicals to prevent the discharge of these pollutants.

Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

HYD-6: The 2021 LRDP EIR identified a less-than-significant cumulative impact for the 2021 LRDP with respect to hydrology and water quality. The cumulative setting for the Proposed Project is buildout under the 2021 LRDP, and the Proposed Project would not result in additional development beyond what was analyzed in the 2021 LRDP EIR. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

5.1.11 LAND USE AND PLANNING

Would the Proposed Project:

Environmental Issues	Level of Impact for the 2021 LRDP in the 2021 LRDP EIR	Environmental Effects of the Proposed Project			
		New Less-Than-Significant Impact	Same Impact as 2021 LRDP	Less Impact Than 2021 LRDP	Topic Not Applicable to the Proposed Project
Topics Evaluated in the 2021 LRDP EIR					
LU-1: Physically divide an established community?	LTS		X		
LU-2: Cause a significant environmental impact due to a conflict with any land use plan, or policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	LTS		X		
LU-3: In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact?	LTS		X		

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable

Summary of Analysis

No new significant or more severe impact than analyzed in the 2021 LRDP EIR.

Discussion

Topics Evaluated in the 2021 LRDP EIR

LU-1: The 2021 LRDP EIR identified less-than-significant impacts at the program level for the 2021 LRDP with respect to established communities. The Proposed Project would be a renovation and expansion of an existing facility within the Campus Park zone, and would not change the layout of existing roadways or create features that would divide established communities. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

LU-2: The 2021 LRDP EIR identified less-than-significant impacts concerning conflict with any land use plan, or policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. UC Berkeley is constitutionally exempt from local regulations whenever using property under its control in furtherance of its educational mission. The Proposed Project is consistent with the land uses and intensities of development contemplated in the 2021 LRDP, which prioritizes development sites on the Campus Park for academic, research, and campus life uses. The Proposed Project would support 2021 LRDP goals by providing accessible and inclusive indoor and outdoor campus life spaces; supporting the continuing evolution of the campus's notable and historic landscapes and architecture in the Central Glade; enhancing wayfinding through the creation of a highly visible gateway to the northeastern precinct of the Campus Park; and by upgrading and modernizing Bechtel Engineering Center to address deferred maintenance and support new development. The Proposed Project would not change the existing land use at the Proposed Project site. The Proposed Project adheres to CBP LU-1, which requires new projects in the Campus Park to

conform to the Physical Design Framework. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

LU-3: The 2021 LRDP EIR identified a less-than-significant cumulative impact for the 2021 LRDP with respect to land use and planning. The cumulative setting for the Proposed Project is buildout under the 2021 LRDP, and the Proposed Project would not result in additional development beyond what was analyzed in the 2021 LRDP EIR. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

5.1.12 MINERAL RESOURCES

Would the Proposed Project:

Environmental Issues	Level of Impact for the 2021 LRDP in the 2021 LRDP EIR	Environmental Effects of the Proposed Project			
		New Less-Than-Significant Impact	Same Impact as 2021 LRDP	Less Impact Than 2021 LRDP	Topic Not Applicable to the Proposed Project
Topics Determined to Have No Impact in the 2021 LRDP EIR					
Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	NI		X		
Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	NI		X		

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable

Summary of Analysis

No new significant or more severe impact than analyzed in the 2021 LRDP EIR.

Discussion

Topics Determined to Have No Impact in the 2021 LRDP EIR

The 2021 LRDP EIR did not analyze impacts to mineral resources because there are no areas in the EIR Study Area, including the Proposed Project site, with development potential that contain mineral resources where there is adequate information indicating significant mineral deposits or the high likelihood of significant mineral deposits. Accordingly, this issue is not discussed further in this Addendum. See Section 7.1.6, *Mineral Resources*, of the 2021 LRDP EIR.

5.1.13 NOISE

Would the Proposed Project:

Environmental Issues	Level of Impact for the 2021 LRDP in the 2021 LRDP EIR	Environmental Effects of the Proposed Project			
		New Less-Than-Significant Impact	Same Impact as 2021 LRDP	Less Impact Than 2021 LRDP	Topic Not Applicable to the Proposed Project
Topics Determined to Have No Impact in the 2021 LRDP EIR					
For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	NI		X		
Topics Evaluated in the 2021 LRDP EIR					
NOI-1: Generate substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	SU		X		
NOI-2: Generate excessive groundborne vibration or groundborne noise levels?	LTS/M		X		
NOI-3: In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact?	SU		X		

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable

Summary of Analysis

No new significant or more severe impact than analyzed in the 2021 LRDP EIR.

Discussion

Topics Determined to Have No Impact in the 2021 LRDP EIR

The topic of airport-related noise has been screened out from further evaluation because the EIR Study Area is not within two miles of an airport. The nearest public airport is the Oakland International Airport, roughly ten miles south of the planning area. Therefore, no impact would occur regarding noise hazards due to proximity to airports. Consequently, this issue is not discussed further in this Addendum. See Section 7.1.7, *Noise*, of the 2021 LRDP EIR.

Topics Evaluated in the 2021 LRDP EIR

NOI-1: The 2021 LRDP EIR identified significant and unavoidable impacts at the program level for the 2021 LRDP with respect to ambient noise levels because construction activities associated with potential future projects may occur near noise-sensitive receptors, and noise disturbances may occur for prolonged periods or during the more sensitive nighttime hours or may exceed UC Berkeley's adopted construction noise

standards, even with project-level mitigation. Two types of short-term noise impacts could occur during construction of the Proposed Project: (1) mobile-source noise from the transport of workers, material deliveries, and debris/soil hauling and (2) stationary-source noise from use of construction equipment. The transport of workers and materials to and from the construction site would incrementally increase noise levels along local roadways. Anticipated construction equipment would include, but is not limited to: excavators, material handling loaders, material hauling trucks, pneumatic equipment, concrete trucks, concrete boom pumps, concrete screed rods, concrete power trowel machines, cranes, telehandlers, telescoping aerial platforms, welding machines, saws, and telescoping forklifts. Construction of the Proposed Project would temporarily increase the noise level of the ambient noise environment and would have the potential to affect noise-sensitive land uses in the vicinity of the Proposed Project site. However, no off-site noise-sensitive receptors exist within 600 feet of the project. Any potentially sensitive receptors beyond 600 feet would have noise attenuated below levels of concern by existing vegetation and buildings. Therefore, the Proposed Project would not require any mitigation or temporary noise barriers to reduce construction noise levels.

Similar to the construction phase, two types of noise impacts could occur during operation of the Proposed Project: (1) mobile-source noise from vehicles traveling to and from the Proposed Project (from visitors and deliveries) and (2) stationary-source noise from people and equipment on the Proposed Project site. Based on the program-level traffic noise analysis conducted for the 2021 LRDP EIR, traffic noise along Hearst Avenue east of Le Roy Avenue under full buildout of the 2021 LRDP is anticipated to increase from 65.4 dBA by up to 0.4 dBA (A-weighted decibels),[6] well under the 1.5 dBA threshold identified in the 2021 LRDP EIR as the minimum level of noise increase considered to represent a significant impact, depending on the ambient noise environment.[7] Moreover, because of the Proposed Project's location within the interior of the Campus Park, no permanent traffic noise increase would be associated with operation of the Proposed Project.

Regarding stationary noise sources, the Proposed Project would adhere to CBPs NOI-1 and NOI-2, which require mechanical equipment selection and building design shielding to be used, as appropriate, to ensure that noise levels from future building operations would not exceed the City of Berkeley Noise Ordinance limits; and which lists required measures to be implemented for all construction projects to minimize site disruptions, respectively. The Proposed Project would include a mechanical air chiller at the terrace level (level three), which would be enclosed in an acoustical enclosure to minimize noise to levels that allow for people to comfortably occupy and converse on the adjacent terrace plaza. The enclosure would include intake louvers, noise-reducing panels, and discharge silencers. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

NOI-2: The 2021 LRDP EIR identified less-than-significant impacts with mitigation concerning groundborne vibration levels associated with construction. Vibration generated by construction equipment has the

[6] University of California Berkeley, July 2021, UC Berkeley 2021 Long Range Development Plan and Housing Projects #1 and #2 Environmental Impact Report, State Clearinghouse No. 2020040078, Table 5.11-11, page 5.11-27.

[7] University of California Berkeley, July 2021, UC Berkeley 2021 Long Range Development Plan and Housing Projects #1 and #2 Environmental Impact Report, State Clearinghouse No. 2020040078, page 5.11-26.

potential to damage or annoy nearby receptors. As required by 2021 LRDP EIR Mitigation Measure NOI-2, the Proposed Project would implement steps concerning the use of vibration-causing construction activities/equipment and, depending on construction activity/equipment and distances to receptors, would implement alternative methods/equipment and a construction vibration monitoring program, as required. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

NOI-3: The 2021 LRDP EIR identified a significant and unavoidable cumulative impact for the 2021 LRDP with respect to noise. The cumulative setting for the Proposed Project is buildout under the 2021 LRDP, and the Proposed Project would not result in additional development beyond what was analyzed in the 2021 LRDP EIR. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

5.1.14 POPULATION AND HOUSING

Would the Proposed Project:

Environmental Issues	Level of Impact for the 2021 LRDP in the 2021 LRDP EIR	Environmental Effects of the Proposed Project			
		New Less-Than-Significant Impact	Same Impact as 2021 LRDP	Less Impact Than 2021 LRDP	Topic Not Applicable to the Proposed Project
Topics Evaluated in the 2021 LRDP EIR					
POP-1: Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	LTS/M			X	
POP-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	LTS/M				X
POP-3: In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts?	LTS		X		

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable

Summary of Analysis

No new significant or more severe impact than analyzed in the 2021 LRDP EIR.

Discussion

Topics Evaluated in the 2021 LRDP EIR

POP-1 and POP-2: The 2021 LRDP EIR identified less-than-significant impacts with mitigation at the program level for the 2021 LRDP with respect to unplanned population growth and displacement of people and housing. The Proposed Project includes offices, meeting rooms, tutoring and training rooms, a public café, an auditorium, a library, and open study and collaboration spaces. The Proposed Project site is

occupied by the existing Bechtel Engineering Center and is planned for nonresidential uses; it would not displace people or housing because the existing Proposed Project site does not house any residents. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

POP-3: The 2021 LRDP EIR identified a less-than-significant cumulative impact for the 2021 LRDP with respect to population and housing. The cumulative setting for the Proposed Project is buildout under the 2021 LRDP, and the Proposed Project would not result in additional development beyond what was analyzed in the 2021 LRDP EIR. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

5.1.15 PUBLIC SERVICES

Would the Proposed Project:

Environmental Issues	Level of Impact for the 2021 LRDP in the 2021 LRDP EIR	Environmental Effects of the Proposed Project			
		New Less-Than-Significant Impact	Same Impact as 2021 LRDP	Less Impact Than 2021 LRDP	Topic Not Applicable to the Proposed Project
Topics Evaluated in the 2021 LRDP EIR					
PS-1: Result in substantial adverse physical impacts associated with the need for new or physically altered police facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police services?	LTS		X		

Would the Proposed Project:

Environmental Issues	Level of Impact for the 2021 LRDP in the 2021 LRDP EIR	Environmental Effects of the Proposed Project			
		New Less-Than-Significant Impact	Same Impact as 2021 LRDP	Less Impact Than 2021 LRDP	Topic Not Applicable to the Proposed Project
PS-2: In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact to police services?	LTS		X		
PS-3: Result in substantial adverse physical impacts associated with the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services?	LTS		X		
PS-4: In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact to fire protection services?	LTS		X		
PS-5: Result in substantial adverse physical impacts associated with the need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable performance objectives for school services?	LTS		X		
PS-6: In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact to schools?	LTS		X		
PS-7: In order to maintain acceptable service ratios or other performance objectives, the Proposed Project would result in the provision of or need for new or physically altered library facilities, the construction or operation of which could cause significant environmental impacts?	LTS		X		

Would the Proposed Project:

Environmental Issues	Level of Impact for the 2021 LRDP in the 2021 LRDP EIR	Environmental Effects of the Proposed Project			
		New Less-Than-Significant Impact	Same Impact as 2021 LRDP	Less Impact Than 2021 LRDP	Topic Not Applicable to the Proposed Project
PS-8: In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact to public services?	LTS		X		

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable

Summary of Analysis

No new significant or more severe impact than analyzed in the 2021 LRDP EIR.

Discussion

Topics Evaluated in the 2021 LRDP EIR

PS-1, PS-3, PS-5, and PS-7: The primary purpose of the public services impact analysis is to examine the impacts associated with physical improvements to public service facilities required to maintain acceptable service ratios, response times, or other performance objectives. Public service facilities need improvements (i.e., construction, renovation, or expansion) as demand for services increases. Increased demand is typically driven by increases in population. A project would have a significant environmental impact if it would exceed the ability of public service providers to adequately serve the population, thereby requiring construction of new facilities or modification of existing facilities.

The 2021 LRDP EIR identified less-than-significant impacts at the program level for the 2021 LRDP with respect to public services. The Proposed Project would accommodate a daytime population that would represent a more intense use of the Proposed Project site when compared to its existing use; the existing building has an estimated peak daytime occupancy of 755 people, compared to 1,100 people for the Proposed Project. However, the Proposed Project would accommodate the existing student, faculty, and staff population, and would not result in an increase to the UC Berkeley campus population beyond levels analyzed in the 2021 LRDP EIR. As described in Section 4.3, Development Program Consistency, the Proposed Project would provide renovated and expanded space to house UC Berkeley's existing College of Engineering student academic support programs, and would not result in student or employment population growth at UC Berkeley beyond the levels analyzed in the 2021 LRDP EIR. Accordingly, the Proposed Project would not require the construction, renovation, or expansion of police services, fire protection services, school services, or library facilities in the project area. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

PS-2, PS-4, PS-6, and PS-8: The 2021 LRDP EIR identified less-than-significant cumulative impacts for the 2021 LRDP with respect to public services. The cumulative setting for the Proposed Project is buildout

under the 2021 LRDP, and the Proposed Project would not result in additional development beyond what was analyzed in the 2021 LRDP EIR. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

5.1.16 PARKS AND RECREATION

Would the Proposed Project:

Environmental Issues	Level of Impact for the 2021 LRDP in the 2021 LRDP EIR	Environmental Effects of the Proposed Project			
		New Less-Than-Significant Impact	Same Impact as 2021 LRDP	Less Impact Than 2021 LRDP	Topic Not Applicable to the Proposed Project
Topics Evaluated in the 2021 LRDP EIR					
REC-1: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered parks facilities, need for new or physically altered parks facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for parks services?	LTS		X		
REC-2: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	LTS		X		
REC-3: Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	LTS		X		
REC-4: In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact related to parks and recreation?	LTS		X		

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable

Summary of Analysis

No new significant or more severe impact than analyzed in the 2021 LRDP EIR.

Discussion

Topics Evaluated in the 2021 LRDP EIR

REC-1 through REC-3: The 2021 LRDP EIR identified less-than-significant impacts at the program level for the 2021 LRDP with respect to parks and recreational facilities. The Proposed Project does not involve housing that would induce population growth and would not remove any existing parks or recreational space. Therefore, implementation of the Proposed Project is not anticipated to create a need for new or altered parks or recreational facilities or increase the use of existing neighborhood or regional parks or

other recreational facilities such that substantial physical deterioration would occur or be accelerated. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

REC-4: The 2021 LRDP EIR identified a less-than-significant cumulative impact for the 2021 LRDP with respect to parks and recreation. The cumulative setting for the Proposed Project is buildout under the 2021 LRDP, and the Proposed Project would not result in additional development beyond what was analyzed in the 2021 LRDP EIR. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

5.1.17 TRANSPORTATION

Would the Proposed Project:

Environmental Issues	Level of Impact for the 2021 LRDP in the 2021 LRDP EIR	Environmental Effects of the Proposed Project			
		New Less-Than-Significant Impact	Same Impact as 2021 LRDP	Less Impact Than 2021 LRDP	Topic Not Applicable to the Proposed Project
Topics Evaluated in the 2021 LRDP EIR					
TRAN-1: Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	**LTS/M**		X		
TRAN-2: Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	**LTS**		**X**		
TRAN-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	**SU**		**X**		
TRAN-4: Result in inadequate emergency access?	**LTS**			**X**	
TRAN-5: In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact?	**SU**		**X**		

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable

Summary of Analysis

No new significant or more severe impact than analyzed in the 2021 LRDP EIR.

Discussion

Topics Evaluated in the 2021 LRDP EIR

TRAN-1: The 2021 LRDP EIR identified less-than-significant impacts with mitigation at the program level for the 2021 LRDP with respect to conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. The Proposed Project would be a renovation and expansion of an existing facility on an infill site within the Campus Park, and would not result

in an increase to the UC Berkeley campus population beyond levels analyzed in the 2021 LRDP EIR. Furthermore, the Proposed Project would adhere to CBP TRAN-1 by maintaining bicycle, pedestrian, and transit access to the facility. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

TRAN-2: Pursuant to CEQA Guidelines Section 15064.3(b)(1), projects within half a mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less-than-significant transportation impact. Accordingly, the 2021 LRDP EIR did not evaluate impacts for projects within this screening distance. Due to its location within half a mile of the AC Transit Line 6 stop at Bancroft Way and Telegraph Avenue, and within half a mile of a TPA, transportation impacts related to vehicle miles traveled (VMT) from the Proposed Project are presumed to be less than significant. Accordingly, no quantified VMT analysis is presented in this Addendum. See Section 7.1.8, *Transportation*, of the 2021 LRDP EIR.

TRAN-3: The 2021 LRDP EIR identified significant and unavoidable impacts in regard to hazards due to a geometric design feature or incompatible uses because of the unknowns of future buildings and structures at the time of analysis. The Proposed Project would be a renovation and expansion of the existing Bechtel Engineering Center, and therefore would not introduce an incompatible use with the potential to create a transportation hazard. The Proposed Project would not modify the City of Berkeley public right-of-way, which is the closest adjacent public roadway. The Proposed Project would not modify adjacent campus roadways. The Proposed Project would improve circulation and wayfinding to and around the existing building, including pedestrian route improvements, additional bicycle parking, and removal of documented accessibility barriers. These improvements would be designed and constructed based on the applicable design standards and guidelines so as not to substantially increase hazards due to a geometric design feature related to roadway or sidewalks.

The 2021 LRDP EIR identifies a significant impact associated with pedestrian (ground) level wind hazards for new buildings that are 100 feet or more in height and includes Mitigation Measure TRAN-3 requiring a wind hazards analysis for buildings of this height. The Proposed Project does not include any development that is 100 feet or more in height; therefore, no mitigation is required.

Furthermore, the Proposed Project would adhere to CBP TRAN-5 through CBP TRAN-7, which require UC Berkeley to manage project schedules to minimize the overlap of excavation or other heavy truck activity periods that have the potential to combine impacts on traffic loads and street system capacity; and require contractors working on major new construction or major renovation projects to develop and implement a Construction Traffic Management Plan.

Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

TRAN-4: The 2021 LRDP EIR identified less-than-significant impacts concerning inadequate emergency access. The Proposed Project would improve the existing emergency access lane at the eastern side of the existing Bechtel Engineering Center, and would make the access lane code-compliant. Therefore, the

Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

TRAN-5: The 2021 LRDP EIR identified a significant and unavoidable cumulative impact for the 2021 LRDP with respect to transportation. The cumulative setting for the Proposed Project is buildout under the 2021 LRDP, and the Proposed Project would not result in additional development beyond what was analyzed in the 2021 LRDP EIR. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

5.1.18 TRIBAL CULTURAL RESOURCES

Would the Proposed Project:

Environmental Issues	Level of Impact for the 2021 LRDP in the 2021 LRDP EIR	Environmental Effects of the Proposed Project			
		New Less-Than-Significant Impact	Same Impact as 2021 LRDP	Less Impact Than 2021 LRDP	Topic Not Applicable to the Proposed Project
Topics Evaluated in the 2021 LRDP EIR					
TCR-1: Cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is: a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of the Public Resource Code Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance to a California Native American tribe?	LTS/M			X	
TCR-2: In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact to tribal cultural resources?	LTS		X		

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable

Summary of Analysis

No new significant or more severe impact than analyzed in the 2021 LRDP EIR.

Discussion

Topics Evaluated in the 2021 LRDP EIR

TCR-1: The 2021 LRDP EIR identified less-than-significant impacts with mitigation at the program level for the 2021 LRDP with respect to tribal cultural resources. The Proposed Project site does not currently contain any known tribal cultural resources, and UC Berkeley did not receive information as a result of the tribal consultation process that the 2021 LRDP would potentially impact a known tribal cultural resource. The Proposed Project does not involve any ground-disturbing activities, therefore it would not disturb any sub-surface resources. Therefore, the Proposed Project would not result in any new or more severe impacts than were identified in the 2021 LRDP EIR, and no new mitigation measures would be required.

TCR-2: The 2021 LRDP EIR identified a less-than-significant cumulative impact for the 2021 LRDP with respect to tribal cultural resources. The cumulative setting for the Proposed Project is buildout under the 2021 LRDP, and the Proposed Project would not result in additional development beyond what was analyzed in the 2021 LRDP EIR. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

5.1.19 UTILITIES AND SERVICE SYSTEMS

Would the Proposed Project:

Environmental Issues		Level of Impact for the 2021 LRDP in the 2021 LRDP EIR	Environmental Effects of the Proposed Project			
			New Less-Than-Significant Impact	Same Impact as 2021 LRDP	Less Impact Than 2021 LRDP	Topic Not Applicable to the Proposed Project
Topics Evaluated in the 2021 LRDP EIR						
UTIL-1:	Require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects?	LTS		X		
UTIL-2:	Not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	LTS		X		
UTIL-3:	In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact related to water supply?	LTS		X		
UTIL-4:	Require or result in the relocation or construction of new or expanded wastewater treatment or facilities, the construction or relocation of which could cause significant environmental effects?	LTS		X		

Would the Proposed Project:

Environmental Issues	Level of Impact for the 2021 LRDP in the 2021 LRDP EIR	Environmental Effects of the Proposed Project			
		New Less-Than-Significant Impact	Same Impact as 2021 LRDP	Less Impact Than 2021 LRDP	Topic Not Applicable to the Proposed Project
UTIL-5: Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	LTS		X		
UTIL-6: In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact related to wastewater?	LTS		X		
UTIL-7: Require or result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects?	LTS		X		
UTIL-8: In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact related to stormwater?	LTS		X		
UTIL-9: Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	LTS		X		
UTIL-10: Not comply with federal, State, and local management and reduction statutes and regulations related to solid waste?	LTS		X		
UTIL-11: In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact related to solid waste?	LTS		X		
UTIL-12: Require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	LTS		X		
UTIL-13: In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact related to electric power, natural gas, or telecommunications?	LTS		X		

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable

Summary of Analysis

No new significant or more severe impact than analyzed in the 2021 LRDP EIR.

Discussion

Topics Evaluated in the 2021 LRDP EIR

UTIL-1 and UTIL-2: The 2021 LRDP EIR identified less-than-significant impacts at the program level for the 2021 LRDP with respect to water facilities and supply. The Orinda Water Treatment Plant has maximum capacity of 200 million gallons per day (MGD). Full implementation of the 2021 LRDP would increase demand by 348 MG/year or approximately 1 MGD, which would amount to less than 1 percent of the plant's capacity and would not have an adverse effect on the plant's operation.[8] With a combination of water conservation measures and acquisition of supplemental supplies, EBMUD would be able to accommodate water demand in normal, single dry years, and multiple dry years. The Proposed Project would adhere to CBP USS-1, CBP USS-3, and CBP USS-4, which require UC Berkeley to continue to evaluate the size of existing distribution lines and the pressure of the specific feed affected by development; incorporate specific water conservation measures into project design; and analyze water and sewer systems on a project-by-project basis. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

UTIL-4 and UTIL-5: The 2021 LRDP EIR identified less-than-significant impacts in regard to wastewater treatment. EBMUD's wastewater treatment plant has a residual capacity of 57 MGD and can accommodate the increase of 0.70 MGD in wastewater generation from the 2021 LRDP.[9] The increased wastewater demand would represent about 0.67 percent of the wastewater treatment plant's excess capacity, and the average annual daily flow is well below the permitted capacity. The Proposed Project has been designed to minimize water consumption and wastewater production. Furthermore, since the Proposed Project would connect to the UC Berkeley sewer system, it is included in UC Berkeley's annual payment of fees to the City of Berkeley. Wastewater discharge would also be required to comply with EBMUD's wastewater control ordinance, EBMUD Wastewater Discharge Permit for UC Berkeley, and the UC Berkeley sewer system management plan. The Proposed Project would adhere to CBP USS-3 and CBP USS-4. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

UTIL-7: The 2021 LRDP EIR identified less-than-significant impacts concerning stormwater facilities. The Proposed Project will occur in an urbanized and developed area. The Proposed Project site comprises impervious surfaces, and the Proposed Project would not increase the amount of impervious surface area. However, the Proposed Project would comply with the requirements of the Phase II MS4 Permit and implement LID BMPs and site design BMPs, which effectively minimize the impact of impervious surfaces by retaining or detaining stormwater on-site, decreasing surface water flows, and slowing runoff rates. In addition, UC Berkeley manages runoff into storm drain systems so that the aggregate effect of new projects creates no net increase in runoff over existing conditions. Therefore, the Proposed Project would not result

[8] University of California Berkeley, July 2021, UC Berkeley 2021 Long Range Development Plan and Housing Projects #1 and #2 Environmental Impact Report, State Clearinghouse No. 2020040078, page 5.17-15.

[9] University of California Berkeley, July 2021, UC Berkeley 2021 Long Range Development Plan and Housing Projects #1 and #2 Environmental Impact Report, State Clearinghouse No. 2020040078, page 5.17-32.

in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

UTIL-9 and UTIL-10: The 2021 LRDP EIR identified less-than-significant impacts regarding solid waste generation and regulation. The Proposed Project would comply with the 2019 CALGreen Building Code Standards, the requirements of AB 341, AB 1826, SB 1383, SB 1335, the State Agency Buy Recycled Campaign, the City of Berkeley's Single Use Foodware Ordinance, and University of California's Sustainable Practices policies. The Keller Canyon Landfill would be able to accommodate projected solid waste from buildout of the 2021 LRDP until its closure date in 2030. If UC Berkeley has not yet met its zero-waste goal at that date, then an alternate landfill, such as Altamont Landfill, would be able to accommodate solid waste from UC Berkeley. Furthermore, the Proposed Project would adhere to CBP USS-6 and CBP USS-7, which require UC Berkley to continue implementing zero waste requirements, and contractors working for UC Berkeley to report their solid waste diversion. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

UTIL-12: The 2021 LRDP EIR identified less-than-significant impacts related to electric power, natural gas, and telecommunications. The 2021 LRDP would result in an increase in electricity consumption. The Proposed Project is a renovation and expansion of an existing facility, and is already served by electrical infrastructure that has sufficient capacity to accommodate the proposed addition. The Proposed Project would not result in the relocation or construction of new or expanded electric power facilities. The 2021 LRDP would result in a net decrease in natural gas usage over the buildout horizon because University of California and UC Berkeley energy policies prohibit new natural gas connections in new construction or large renovation projects on sites that are not in the cogeneration plant system, which currently uses natural gas. The existing building uses steam from the cogeneration plant for heating; however, the Proposed Project would convert the existing building so that both the existing building and the addition use electricity for heating, cooling, and all other electrical loads, without any use of natural gas. UC Berkeley is already served by telecommunications infrastructure, and the Proposed Project is anticipated to connect to existing telecommunication facilities and would not result in the relocation or construction of new or expanded telecommunications facilities off-site. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

UTIL-3, UTIL-6, UTIL-8, UTIL-11, and UTIL-13: The 2021 LRDP EIR identified a less-than-significant cumulative impact for the 2021 LRDP with respect to utilities and service systems. The cumulative setting for the Proposed Project is buildout under the 2021 LRDP, and the Proposed Project would not result in additional development beyond what was analyzed in the 2021 LRDP EIR. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

5.1.20 WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Proposed Project:

Environmental Issues	Level of Impact for the 2021 LRDP in the 2021 LRDP EIR	Environmental Effects of the Proposed Project			
		New Less-Than-Significant Impact	Same Impact as 2021 LRDP	Less Impact Than 2021 LRDP	Topic Not Applicable to the Proposed Project
Topics Evaluated in the 2021 LRDP EIR					
WF-1: Substantially impair an adopted emergency response plan or emergency evacuation plan?	LTS		X		
WF-2: Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	SU			X	
WF-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	SU			X	
WF-4: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	SU			X	
WF-5: In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact related to wildfire?	SU		X		

Key: NI = no impact; LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable

Summary of Analysis

No new significant or more severe impact than analyzed in the 2021 LRDP EIR.

Discussion

Topics Evaluated in the 2021 LRDP EIR

WF-1: The 2021 LRDP EIR identified a less-than-significant impact at the program level for the 2021 LRDP with respect to impairment of an adopted emergency response plan or emergency evacuation plan. The Proposed Project is not in a designated Fire Hazard Severity Zone (FHSZ), California Public Utilities Commission high-fire-threat district, or Wildland Urban Interface (WUI). The Proposed Project is in an urbanized area surrounded by existing development; the Proposed Project site is already developed, and the Proposed Project is the renovation and expansion of an existing facility. The Proposed Project would not alter any of the City of Berkeley's emergency access and evacuation routes. UC Berkeley has its own Emergency Preparedness Program and Emergency Operations Plan and coordinates emergency

preparations, response, and recovery activities, such as those pertaining to wildfire, under its Office of Emergency Management. The Proposed Project would be required to integrate these plans. In addition, the Proposed Project would comply with applicable regulations that involve fire prevention and safety measures, such as the CBC and CFC. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

WF-2 and WF-4: The 2021 LRDP EIR identified significant and unavoidable impacts concerning exacerbation of wildfire risks due to steep terrain and heavy vegetation in the Hill Campus East. The Proposed Project site is within the Campus Park, which is generally flat. Because the project site is an already urbanized area and involves the renovation and expansion of an existing facility, the Proposed Project would not, from prevailing winds or other factors such as vegetation, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. In addition, the project site is not subject to landslide hazards and is not within a flood hazard zone. Under CBP WF-3, UC Berkeley will continue to plan and implement programs to reduce risk of wildland fires. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

WF-3: The 2021 LRDP EIR identified significant and unavoidable impacts concerning installation or maintenance of associated infrastructure in the Very High FHSZ that may exacerbate fire risk due to the potential unknown impacts from future development at the time of analysis. The Proposed Project would not require alteration of existing roadways. The Proposed Project site is currently served by existing utility systems, and the Proposed Project would not require the installation of additional off-site utilities infrastructure. Due to the location of the Proposed Project outside of the fire hazard severity zones and the WUI, the installation of on-site utilities would not exacerbate fire risks. Furthermore, electrical infrastructure associated with the Proposed Project is already undergrounded, and any future electrical infrastructure associated with the Proposed Project would also be undergrounded. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

WF-5: The 2021 LRDP EIR identified a significant and unavoidable cumulative impact for the 2021 LRDP with respect to wildfire. The cumulative setting for the Proposed Project is buildout under the 2021 LRDP, and the Proposed Project would not result in additional development beyond what was analyzed in the 2021 LRDP EIR. Therefore, the Proposed Project would not result in any new significant impacts or a substantial increase in the severity of a previously identified significant impact.

5.2 MANDATORY FINDINGS OF SIGNIFICANCE

Would the Proposed Project:

Environmental Issues	New Less-Than-Significant Impact	Topic Not Applicable to the Proposed Project
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	X	
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	X	
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	X	

Discussion

a) With respect to biological resources and cultural resources, development under the Proposed Project would not change from the 2021 LRDP. The Proposed Project would not increase the 2021 LRDP's development program and boundaries. As discussed throughout this Addendum, the Proposed Project would not result in a new impact or a substantial increase in magnitude of the existing impacts.

b) CEQA Guidelines Section 15355, Cumulative Impacts, defines cumulative impacts as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Cumulative impacts may result from individually minor, but collectively significant projects taking place over a period of time. As described in Section 4.3, *Development Program Consistency*, buildout of the Proposed Project, in addition to past and pending projects since certification of the 2021 LRDP EIR, is within the net new buildout analyzed in the 2021 LRDP EIR.

Section 5.1, *Environmental Evaluation of the Proposed Project*, of this Addendum includes an evaluation of the Proposed Project's potential cumulative impacts. As discussed throughout Section 5.1, the Proposed Project would not create any new significant cumulative impacts. The Proposed Project would incrementally contribute to, but would not exceed, the cumulative impacts analyses in the 2021 LRDP EIR. Therefore, the Proposed Project would not be expected to contribute to significant cumulative impacts when considered along with other projects constructed under the 2021 LRDP.

c) Development under the Proposed Project would not change from the 2021 LRDP with respect to direct and indirect effects on human beings. The Proposed Project would not increase the 2021 LRDP's development program and boundaries. As discussed throughout this Addendum, the Proposed Project would not result in a new impact or a substantial increase in magnitude of existing impacts.

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6. Conclusion

As summarized below, and for the reasons described in Section 5, *Environmental Analysis*, of this Addendum, UC Berkeley has concluded that the Proposed Project would not result in any new significant impacts not previously identified in the 2021 LRDP EIR; nor would it result in a substantial increase in the severity of any significant environmental impact previously identified in the 2021 LRDP EIR. For these reasons, a subsequent EIR is not required, and an Addendum to the 2021 LRDP EIR is the appropriate CEQA document to address the Proposed Project.

6.1 SUBSTANTIAL CHANGES TO THE PROJECT

The Proposed Project is not a substantial change to the 2021 LRDP because it is within the study area described in the 2021 LRDP EIR in Section 3.4, *EIR Study Area*, and shown on Figure 3-2, *EIR Study Area*, and because it is within the buildout and population projections described and evaluated in Section 3.5.1.8, *Development Program*, of the 2021 LRDP EIR. Consequently, there are no substantial changes proposed to the 2021 LRDP that will require major revisions of the 2021 LRDP EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

6.2 SUBSTANTIAL CHANGES IN CIRCUMSTANCES

As described in Section 5, *Environmental Analysis*, of this Addendum, the Proposed Project would not result in new significant environmental impacts beyond those identified in the 2021 LRDP EIR, would not substantially increase the severity of significant environmental effects identified in the 2021 LRDP EIR, and thus would not require major revisions to the 2021 LRDP EIR. The Proposed Project, therefore, is not substantial and does not require major revisions to the 2021 LRDP EIR or preparation of a subsequent EIR. In addition, the physical conditions within the UC Berkeley campus have not changed substantially since the certification of the 2021 LRDP EIR, although some structures have been improved and others have been demolished.

6.3 NEW INFORMATION

No new information of substantial importance, which was not known and could not have been known when the 2021 LRDP EIR was certified in 2021, shows that the Proposed Project would be expected to result in: 1) new significant environmental effects not identified in the 2021 LRDP EIR; 2) substantially more severe environmental effects than shown in the 2021 LRDP EIR; 3) mitigation measures or alternatives previously determined to be infeasible that would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project sponsor declines to adopt the mitigation or alternative; or 4) mitigation measures or alternatives that are considerably different from those identified in the 2021

LRDP EIR that would substantially reduce one or more significant effects of the project, but the project sponsor declines to adopt the mitigation measure or alternative.

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APPENDIX A

APPLICABLE PROGRAM-LEVEL MITIGATION MEASURES AND CONTINUING BEST PRACTICES

Applicable Program-Level Mitigation Measures and Continuing Best Practices

The table below identifies mitigation measures and Continuing Best Practices (CBPs) from the 2021 LRDP EIR that are applicable to the Bechtel Engineering Center Renovation and Addition.

Topic	Type of Measure	Mitigation/ CBP #	Mitigation / Continuing Best Practice Text	Source Document
Air Quality	**Mitigation Measure**	**AIR-2.1**	UC Berkeley shall use equipment that meets the United States Environmental Protection Agency Tier 4 Final emissions standards or higher for off-road diesel-powered construction equipment with more than 50 horsepower, unless it can be demonstrated to UC Berkeley that such equipment is not commercially available. For purposes of this mitigation measure, "commercially available" shall mean the availability of Tier 4 Final engines similar to the availability for other large-scale construction projects in the city occurring at the same time and taking into consideration factors such as (i) potential significant delays to critical-path timing of construction and (ii) geographic proximity to the project site of Tier 4 Final equipment. Where such equipment is not commercially available, as demonstrated by the construction contractor, Tier 4 interim equipment shall be used. Where Tier 4 interim equipment is not commercially available, as demonstrated by the contractor, Tier 3 equipment retrofitted with a California Air Resources Board's Level 3 Verified Diesel Emissions Control Strategy (VDECS) shall be used. The requirement to use Tier 4 Final equipment or higher for engines over 50 horsepower shall be identified in construction bids and the following shall also be completed: ▪ Prior to construction, the project engineer shall ensure that all demolition and grading plans clearly show the requirement for United States Environmental Protection Agency Tier 4 Final or higher emissions standards for construction equipment over 50 horsepower. ▪ During construction, the construction contractor shall maintain a list of all operating equipment in use over 20 hours on the construction site for verification by UC Berkeley. ▪ The construction equipment list shall state the makes, models, and numbers of construction equipment on-site. ▪ To the extent that equipment is available and cost-effective, contractors shall use electric, hybrid, or alternate-fueled off-road construction equipment. ▪ Contractors shall use electric construction tools, such as saws, drills, and compressors, where grid electricity is available. ▪ Construction activities shall be prohibited when the Air Quality Index (AQI), as measured by the closest Bay Area Air Quality Management District monitoring station (e.g., Berkeley Aquatic Center), is greater than 150 for particulates and ozone in the project area. ▪ Contractors shall provide information on transit and ridesharing programs and services to construction employees. Additionally, meal options on-site and/or shuttles between the facility and nearby meal destinations for construction employees shall be provided.	2021 LRDP EIR Table 6-1, Mitigation Monitoring and Reporting Program for the Long Range Development Plan
Air Quality	**Mitigation Measure**	**AIR-2.2**	To reduce Reactive Organic Gas emissions, for interior architectural coatings, UC Berkeley shall utilize certified (e.g., Greenguard or Green Seal) low-Volatile Organic Compound (VOC) paints or, when feasible, no-VOC paints (i.e., less than	2021 LRDP EIR Table 6-1, Mitigation

Topic	Type of Measure	Mitigation/ CBP #	Mitigation / Continuing Best Practice Text	Source Document
			5 grams per liter of VOC). UC Berkeley shall verify that the requirement to use low-VOC (and/or no-VOC) paints is identified in construction bids and on architectural plans.	Monitoring and Reporting Program for the Long Range Development Plan
Biological Resources	**Mitigation Measure**	**BIO-4**	Structures and buildings that are new or are taller than existing structures and buildings shall be designed to minimize the potential risk of bird collisions. This should at a minimum include the following design considerations and management strategies: (1) avoid the use of highly reflective glass as an exterior treatment, which appears to reproduce natural habitat and can be attractive to some birds; (2) limit reflectivity and prevent exterior glass from attracting birds in building plans by utilizing low-reflectivity glass and providing other non-attractive surface treatments; (3) use low-reflectivity glass or other bird safe glazing treatments for the majority of the building's glass surface, not just the lower levels; (4) for office and commercial buildings, interior light "pollution" should be reduced during evening hours through the use of a lighting control system programmed to shut off during non-work hours and between 10 p.m. and sunrise; (5) exterior lighting should be directed downward and screened to minimize illuminating the exterior of the building at night, except as needed for safety and security; (6) untreated glass skyways or walkways, freestanding glass walls, and transparent building corners should be avoided; (7) transparent glass should not be allowed at the rooflines of buildings, including in conjunction with green roofs; and (8) all roof mechanical equipment should preferably be covered by low-profile angled roofing or other treatments so that obstacles to bird flight are minimized. These strategies shall be incorporated at the direction of the Campus Architect during plan review, and the Campus Architect shall confirm the incorporation of these strategies into architectural plans prior to building construction. The Campus Architect shall incorporate additional strategies to avoid or reduce avian collisions that are indicated by the best available science.	2021 LRDP EIR Table 6-1, Mitigation Monitoring and Reporting Program for the Long Range Development Plan
Cultural Resources	**Mitigation Measure**	**CUL-1.1a**	If a project could cause a substantial adverse change in features that convey the significance of a historical resource that is designated or has been found eligible or potentially eligible for designation, or has not been evaluated but is more than 45 years of age, UC Berkeley shall engage the services of a professional meeting the Secretary of the Interior's Professional Qualification Standards in Architectural History to complete a historic resource assessment, overseen by the UC Berkeley Office of Physical & Environmental Planning. The assessment shall provide background information on the history and development of the resource and, in particular, shall evaluate whether the resource appears to be eligible for National Register, California Register, or local landmark listing. The assessment shall also evaluate whether the proposed treatment of the historical resource is in conformance with the Secretary of the Interior's Standards for Rehabilitation (the Standards). If the proposed project is found to not be in conformance with the Standards, this assessment shall include recommendations for how to modify the project design so as to bring it into conformance. The Campus Architect shall verify compliance with this measure prior to the initiation of any site or building demolition or construction activities.	2021 LRDP EIR Table 6-1, Mitigation Monitoring and Reporting Program for the Long Range Development Plan
Cultural Resources	**Mitigation Measure**	**CUL-1.1b**	For projects that would cause a substantial adverse change in features that convey the significance of a historical resource that is designated or has been found eligible for designation, UC Berkeley shall have Historic American Building Survey Level II documentation completed for the historical resource and its setting. UC Berkeley shall submit digital copies of the documentation to an appropriate historical repository, including UC Berkeley's Bancroft Library, UC	2021 LRDP EIR Table 6-1, Mitigation Monitoring and

Topic	Type of Measure	Mitigation/ CBP #	Mitigation / Continuing Best Practice Text	Source Document
			Berkeley Environmental Design Archives, or the California Historical Resources Information System Northwest Information Center. This documentation shall include a historical narrative, photographs, and/or drawings: ▪ **Historical Overview:** A professional meeting the Secretary of the Interior's Professional Qualification Standards in Architectural History or History shall assemble historical background information relevant to the historical resource. ▪ **Photographs:** Photo-documentation of the historical resource will be prepared to Historic American Building Survey standards for archival photography, prior to demolition. Historic American Building Survey standards require large-format black-and-white photography, with the original negatives having a minimum size of four inches by five inches. Digital photography, roll film, film packs, and electronic manipulation of images are not acceptable. All film prints, a minimum of four inches by five inches, must be hand-processed according to the manufacturer's specifications and printed on fiber-base, single-weight paper and dried to a full gloss finish. A minimum of 12 photographs shall be taken, detailing the site, building exterior, building interior, and character-defining features. Photographs must be identified and labeled using Historic American Building Survey standards. **Drawings:** Existing historic drawings of the historical resource, if available, will be digitally scanned or photographed with large-format negatives. In the absence of existing drawings, full-measured drawings of the building's plan and exterior elevations shall be prepared prior to demolition. The Campus Architect shall verify compliance with this mitigation measure prior to the initiation of any site or building demolition or construction activities.	Reporting Program for the Long Range Development Plan
Cultural Resources	**Mitigation Measure**	**CUL-1.1c**	Based on Mitigation Measure CUL-1.1b, if any project could result in alteration of features of a historical resource that are character-defining or convey the significance of a resource, UC Berkeley shall give local historical societies or local architectural salvage companies the opportunity to salvage character-defining or significant features from the historical resource for public information or reuse in other locations. UC Berkeley shall contact local historical societies and architectural salvage companies and notify them of the available resources and make them available for removal. If, after 30 days, no organization is able and willing to salvage the significant materials, demolition can proceed. The Campus Architect shall verify compliance with this measure prior to the initiation of any demolition activities that could affect the resources.	2021 LRDP EIR Table 6-1, Mitigation Monitoring and Reporting Program for the Long Range Development Plan
Cultural Resources	**Mitigation Measure**	**CUL-1.1d**	For projects that would result in demolition of historic resources, prior to demolition the Campus Architect shall determine which resources merit on-site interpretation, with consideration of available historic resource assessments and other relevant materials. For historic resources that will be demolished that the Campus Architect has determined to be culturally significant, UC Berkeley shall incorporate an exhibit or display of the resource and a description of its historical significance into a publicly accessible portion of any subsequent development on the site. The display shall be developed with the assistance of the Campus Architect and one or more professionals experienced in creating such historical exhibits or displays.	2021 LRDP EIR Table 6-1, Mitigation Monitoring and Reporting Program for the Long Range Development Plan
Cultural Resources	**Mitigation Measure**	**CUL-1.1e**	Implement Mitigation Measure NOI-2.	2021 LRDP EIR Table 6-1, Mitigation Monitoring and Reporting

<table>
<tr><th>Topic</th><th>Type of Measure</th><th>Mitigation/ CBP #</th><th>Mitigation / Continuing Best Practice Text</th><th>Source Document</th></tr>
<tr><td></td><td></td><td></td><td></td><td>Program for the Long Range Development Plan</td></tr>
<tr><td>Noise</td><td>Mitigation Measure</td><td>NOI-2</td><td>If any vibration causing construction activities/equipment are anticipated to be used for future development projects, UC Berkeley shall implement the following steps to ensure impacts from vibration causing construction activities/equipment will be less than significant.

▪ Step 1 (Activity/Equipment Screening Distances): UC Berkeley shall use the construction vibration screening standards shown below based on Federal Transit Administration criteria to determine if the construction activity/equipment is within the vibration screening distances that could cause building damage/human annoyance or sensitive equipment disturbance. If the construction activity/equipment is within the screening distance, then Step 2 (Alternative Methods/Equipment) shall be implemented.

▪ Step 2 (Alternative Methods/Equipment): When the anticipated vibration-causing construction activity/equipment
<table>
<tr><th colspan="4">Screening Distances to PPV in/sec Threshold: Building Damage</th></tr>
<tr><th>Activity/Equipment</th><th>Reference Vibration Levels (in/sec PPV) at 25 feet</th><th>Screening Level Distance in feet for 0.20 in/sec PPV [a]</th><th>Screening Level Distance in feet for 0.12 in/sec PPV [b]</th></tr>
<tr><td>Pile Driving</td><td>1.518</td><td>97</td><td>136</td></tr>
<tr><td>Caisson Drilling</td><td>0.089</td><td>15</td><td>21</td></tr>
<tr><td>Vibratory Roller</td><td>0.21</td><td>26</td><td>37</td></tr>
<tr><td>Large Bulldozer</td><td>0.089</td><td>15</td><td>21</td></tr>
<tr><th colspan="4">Screening Distance to VdB Threshold: Human Annoyance and Sensitive Equipment Disturbance</th></tr>
<tr><th>Activity/Equipment</th><th>Reference Vibration Levels (VdB) at 25 feet</th><th>Screening Level Distance in feet for 72 VdB [c]</th><th>Screening Level Distance in feet for 65 VdB [d]</th></tr>
<tr><td>Pile Driving</td><td>112</td><td>520</td><td>890</td></tr>
<tr><td>Caisson Drilling</td><td>87</td><td>80</td><td>140</td></tr>
<tr><td>Vibratory Roller</td><td>94</td><td>140</td><td>240</td></tr>
<tr><td>Large Bulldozer</td><td>87</td><td>80</td><td>140</td></tr>
</table>
Notes: Peak Particle Velocity inches per second (PPV in/sec); Vibration Decibel (VdB).
a. FTA Building Category III, Non-engineered timber and masonry buildings (residential).
b. FTA Building Category IV, Buildings extremely susceptible to vibration damage (historic).
c. FTA Land Use Category 2, Residences and buildings where people normally sleep.
d. FTA Land Use Category 1, Buildings where vibration would interfere with interior operations.
Source: Federal Transit Administration, 2018, Transit Noise and Vibration Impact Assessment.
is within the screening standards in Step 1 (Activity/Equipment Screening Distances), UC Berkeley shall consider whether alternative methods/equipment are available and shall verify that the alternative method/equipment is shown on the construction plans prior to the beginning of construction. Alternative methods/equipment may include, but are not limited to:
▪ For pile driving, the use of caisson drilling (drill piles), vibratory pile drivers, oscillating or rotating pile installation methods, pile pressing, “silent” piling, and jetting or partial jetting of piles into place using a water injection at the tip of the pile shall be used, where feasible.
▪ For paving, use of a static roller in lieu of a vibratory roller shall be implemented.
▪ For grading and earthwork activities, off-road equipment shall be limited to 100 horsepower or less.</td><td>2021 LRDP EIR
Table 6-1, Mitigation Monitoring and Reporting Program for the Long Range Development Plan</td></tr>
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Topic	Type of Measure	Mitigation/ CBP #	Mitigation / Continuing Best Practice Text	Source Document
			Where alternative methods/equipment to vibration causing activities/equipment are not feasible, then Step 3 (Construction Vibration Monitoring Program) shall be implemented. ▪ **Step 3 (Construction Vibration Monitoring Program):** Prior to any project-related excavation, demolition or construction activity for projects within the screening distances listed in Step 1 (Activity/Equipment Screening Distances) and where alternative methods/equipment to vibration causing activities/equipment are not feasible pursuant to Step 2 (Alternative Methods/Equipment), UC Berkeley shall prepare a construction vibration monitoring program. The program shall be prepared and implemented by a qualified acoustical consultant or structural engineer. Where the vibration sensitive receptors are historic resources, the program shall be prepared and implemented by a structural engineer with a minimum of five years of experience in the rehabilitation and restoration of historic buildings and a historic preservation architect meeting the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, Professional Qualifications Standards. The program shall include the following: ▪ Prepare an existing conditions study to establish the baseline condition of the vibration sensitive resources in the form of written descriptions with a photo survey, elevation survey, and crack-monitoring survey for the vibration-sensitive building or structure. The photo survey shall include internal and external crack monitoring in the structure, settlement, and distress, and document the condition of the foundation, walls and other structural elements in the interior and exterior of the building or structure. Surveys will be performed prior to, in regular intervals during, and after completion of all vibration-generating activity. Where receptors are historic resources, the study shall describe the physical characteristics of the resources that convey their historic significance. ▪ Determine the number, type, and location of vibration sensors and establish a vibration velocity limit (as determined based on a detailed review of the proposed building), method (including locations and instrumentation) for monitoring vibrations during construction, and method for alerting responsible persons who have the authority to halt construction should limits be exceeded or damaged observed. ▪ Perform monitoring surveys prior to, in regular intervals during, and after completion of all vibration-generating activity and report any changes to existing conditions, including, but not limited to, expansion of existing cracks, new spalls, other exterior deterioration, or any problems with character-defining features of a historic resource are discovered. UC Berkeley shall establish the frequency of monitoring and reporting, based upon the recommendations of the qualified acoustical consultant or structural engineer or if there are historic buildings, the historic architect and structural engineer. Monitoring reports shall be submitted to UC Berkeley's designated representative responsible for construction activities. ▪ Develop a vibration monitoring and construction contingency plan, which shall identify where monitoring would be conducted, establish a vibration monitoring schedule, define structure-specific vibration limits, and require photo, elevation, and crack surveys to document conditions before and after demolition and construction activities. Construction contingencies would be identified for when vibration levels approach the limits. If vibration levels approach limits, suspend construction and implement contingencies to either lower vibration levels or secure the affected structure. ▪ Report substantial adverse impacts to vibration sensitive buildings including historic resources related to construction activities that are found during construction to UC Berkeley's designated representative responsible for construction activities. UC Berkeley's designated representative shall adhere to the monitoring team's recommendations for corrective measures, including halting construction or using different methods, in situations	

Topic	Type of Measure	Mitigation/ CBP #	Mitigation / Continuing Best Practice Text	Source Document
			where demolition, excavation/construction activities would imminently endanger historic resources. UC Berkeley's designated representative would respond to any claims of damage by inspecting the affected property promptly, but in no case more than five working days after the claim was filed and received by UC Berkeley's designated representative. Any new cracks or other damage to any of the identified properties will be compared to pre-construction conditions and a determination made as to whether the proposed project could have caused such damage. In the event that the project is demonstrated to have caused any damage, such damage would be repaired to the pre-existing condition. Site visit reports and documents associated with claims processing would be provided to the relevant government body with jurisdiction over the neighboring historic resource, as necessary. ▪ Conduct a post-survey on the structure where either monitoring has indicated high levels or complaints of damage and make appropriate repairs where damage has occurred as a result of construction activities. ▪ Prepare a construction vibration monitoring report that summarizes the results of all vibration monitoring and submit the report after the completion of each phase identified in the project construction schedule. The vibration monitoring report shall include a description of measurement methods, equipment used, calibration certificates, and graphics as required to clearly identify vibration-monitoring locations. An explanation of all events that exceeded vibration limits shall be included together with proper documentation supporting any such claims. The construction vibration monitoring report shall be submitted to UC Berkeley within two weeks upon completion of each phase identified in the project construction schedule. Designate a person responsible for registering and investigating claims of excessive vibration. The contact information of such person shall be clearly posted in one or more locations at the construction site	

Topic	Type of Measure	Mitigation/ CBP #	Mitigation / Continuing Best Practice Text	Source Document
Aesthetics	**Continuing Best Practice**	**AES-1**	New projects will as a general rule conform to the Physical Design Framework. While the guidelines in the Physical Design Framework would not preclude alternate design concepts when such concepts present the best solution for a particular site, UC Berkeley will not depart from the Physical Design Framework except for solutions of extraordinary quality.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Aesthetics	**Continuing Best Practice**	**AES-2**	Major new campus projects will continue to be reviewed at each stage of design by the UC Berkeley Design Review Committee. The provisions of the LRDP, as well as project-specific design guidelines prepared for each such project, will guide these reviews.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Aesthetics	**Continuing Best Practice**	**AES-6**	Lighting for new development projects will be designed to include shields and cut-offs that minimize light spillage onto unintended surfaces and minimize atmospheric light pollution. The only exception to this principle will be in those areas where such features would be incompatible with the visual and/or historic character of the area.	Table 7-1, Continuing Best Practices Implementation and Monitoring
Aesthetics	**Continuing Best Practice**	**AES-7**	As part of UC Berkeley's design review procedures, light and glare will be given specific consideration and measures will be incorporated into the project design to minimize both. In general, exterior surfaces will not be reflective; architectural screens and shading devices are preferable to reflective glass.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Air Quality	**Continuing Best Practice**	**AIR-2**	UC Berkeley will continue to comply with the current Bay Area Air Quality Management District basic control measures for fugitive dust control. The requirement to comply with the basic control measures will be identified in construction bids. The Bay Area Air Quality Management District's current basic control measures include: ▪ Water all active construction areas at least twice daily, or as often as needed to control dust emissions. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water will be used whenever possible. ▪ Pave, apply water twice daily or as often as necessary to control dust, or apply (nontoxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites. ▪ Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer). ▪ Sweep daily (with water sweepers using reclaimed water if possible) or as often as needed all paved access roads, parking areas and staging areas at the construction site to control dust. ▪ Sweep public streets daily (with water sweepers using reclaimed water if possible) in the vicinity of the project site, or as often as needed, to keep streets free of visible soil material. ▪ Hydroseed or apply nontoxic soil stabilizers to inactive construction areas. ▪ Enclose, cover, water twice daily, or apply nontoxic soil binders to exposed stockpiles (dirt, sand, etc.). ▪ Limit vehicle traffic speeds on unpaved roads to 15 miles per hour.	Table 7-1, Continuing Best Practices Implementation and Monitoring

Topic	Type of Measure	Mitigation/ CBP #	Mitigation / Continuing Best Practice Text	Source Document
			▪ Replant vegetation in disturbed areas as quickly as possible.	
Air Quality	**Continuing Best Practice**	**AIR-3**	UC Berkeley will continue to implement the following control measures to reduce emissions of diesel particulate matter and ozone precursors from construction equipment exhaust: ▪ Equipment will be properly serviced and maintained in accordance with the manufacturer's recommendations. ▪ Construction contractors will also ensure that all nonessential idling of construction equipment is restricted to five minutes or less, in compliance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Biological Resources	**Continuing Best Practice**	**BIO-1**	Avoid disturbance or removal of bird nests protected under the federal Migratory Bird Treaty Act and California Department of Fish and Game Code when in active use. This will be accomplished by taking the following steps. ▪ If tree removal and initial construction is proposed during the nesting season (February 1 to August 31), a focused survey for nesting raptors and other migratory birds will be conducted by a qualified biologist within 14 days prior to the onset of tree and vegetation removal in order to identify any active nests on the site and surrounding area within up to 500 feet of proposed construction, with the distance to be determined by a qualified biologist based on project location. The site will be resurveyed to confirm that no new nests have been established if vegetation removal and demolition has not been completed or if construction has been delayed or stopped for more than seven consecutive days during the nesting season. ▪ If no active nests are identified during the construction survey period, or development is initiated during the non-breeding season (September 1 to January 31), tree and vegetation removal and building construction may proceed with no restrictions. ▪ If bird nests are found, an adequate setback will be established around the nest location and vegetation removal, building demolition, and other construction activities shall be restricted within this no-disturbance zone until the qualified biologist has confirmed that birds have either not begun egg-laying and incubation, or that the juveniles from those nests are foraging independently and capable of survival outside the nest location. Required setback distances for the no-disturbance zone will be based on input received from the California Department of Fish and Wildlife and may vary depending on species and sensitivity to disturbance. As necessary, the no-disturbance zone will be fenced with temporary orange construction fencing if construction is to be initiated on the remainder of the site. ▪ A report of findings will be prepared by the qualified biologist and submitted to the UC Berkeley's Office of Physical & Environmental Planning for review and approval prior to initiation of vegetation removal, building demolition and other construction activities during the nesting season. The report will either confirm absence of any active nests or confirm that any young are located within a designated no-disturbance zone and construction can proceed. No report of findings is required if vegetation removal and other construction activities are initiated during the non-nesting season and continue uninterrupted according to the above criteria.	Table 7-1, Continuing Best Practices Implementation and Monitoring
Biological Resources	**Continuing Best Practice**	**BIO-9**	Adverse effects to specimen trees and plants will be avoided. UC Berkeley will continue to implement the Campus Specimen Tree Program to reduce effects to specimen trees and flora. Replacement landscaping will be provided where specimen resources are adversely affected, either through salvage and transplanting of existing trees and shrubs or through new horticulturally appropriate replacement plantings, as directed by the Campus Landscape Architect.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring

Topic	Type of Measure	Mitigation/ CBP #	Mitigation / Continuing Best Practice Text	Source Document
Biological Resources	**Continuing Best Practice**	**BIO-10**	Implementation of the recommendations of the Landscape Master Plan and subsequent updates, and project-specific design guidelines, will provide for stewardship of existing landscaping, and use of replacement and expanded tree and shrub plantings to improve the important open space characteristics and resilience of the Campus Park. Native plantings and horticulturally appropriate species will continue to be used in future landscaping, serving to partially replace any trees lost as a result of development.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Geology and Soils	**Continuing Best Practice**	**GEO-1**	UC Berkeley will continue to comply with the California Building Code and the University of California Seismic Safety Policy.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Geology and Soils	**Continuing Best Practice**	**GEO-2**	Site-specific geotechnical studies will be conducted under the supervision of a California Registered Certified Engineering Geologist or licensed geotechnical engineer and UC Berkeley will incorporate recommendations for geotechnical hazard prevention and abatement into project design.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Geology and Soils	**Continuing Best Practice**	**GEO-3**	The UC Berkeley Seismic Review Committee will continue to review all seismic and structural engineering design for new and renovated existing buildings on campus.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Geology and Soils	**Continuing Best Practice**	**GEO-4**	UC Berkeley will continue to use site-specific seismic ground motions for analysis and design of campus projects. Site-specific ground motions provide more current geo-seismic data than the U.S. Geological Survey (USGS) and are used for performance-based analyses.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Geology and Soils	**Continuing Best Practice**	**GEO-5**	UC Berkeley will continue to comply with the UC Seismic Safety Policy. Through this program, UC Berkeley will continue to identify buildings in need of upgrades and include seismic improvements as part of its Capital Financial Plan.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Geology and Soils	**Continuing Best Practice**	**GEO-6**	UC Berkeley will continue to implement programs and projects in emergency planning, training, response, and recovery. Each campus Building Coordinator will prepare, and update as needed, building response plans and coordinate education and planning for all building occupants.	2021 LRDP EIR Table 7-1, Continuing Best Practices

Topic	Type of Measure	Mitigation/ CBP #	Mitigation / Continuing Best Practice Text	Source Document
				Implementation and Monitoring
Geology and Soils	**Continuing Best Practice**	**GEO-7**	As stipulated in the UC Seismic Safety Policy, the design parameters for specific site peak acceleration and structural reinforcement will be determined by the geotechnical and structural engineer for each new or rehabilitation project proposed under the LRDP. The acceptable level of actual damage that could be sustained by specific structures will be calculated based on geotechnical information obtained at the specific building site.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Geology and Soils	**Continuing Best Practice**	**GEO-8**	Site-specific geotechnical studies will include an assessment of landslide hazard, including seismic vibration and other factors contributing to slope stability.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Geology and Soils	**Continuing Best Practice**	**GEO-9**	Campus construction projects must comply with the Campus Design Standards, which contain regulatory and other campus requirements for construction-phase and post-construction stormwater management.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Hazards and Hazardous Materials	**Continuing Best Practice**	**HAZ-1**	UC Berkeley will continue to implement the same (or equivalent) health and safety plans, programs, practices, and procedures related to the use, storage, disposal, or transportation of hazardous materials and wastes (including chemical, radioactive, and biohazardous materials and waste) during the LRDP planning horizon. These include, but are not limited to: ▪ Requirements for safe transportation of hazardous materials ▪ UC Berkeley Office of Environment, Health & Safety training programs and oversight ▪ The Hazard Communication Program ▪ Publication and promulgation of the Water Protection Policy, the drain disposal guidelines, the Wastewater Toxics Management Plan, and the Slug Control Plan ▪ Requirements that laboratories have Chemical Hygiene Plans and a chemical inventory database ▪ The Aboveground Storage Tank Spill Prevention Control and Countermeasure Plan and monitoring of underground storage tanks ▪ Implementation of the hazardous waste disposal program and policies ▪ The Green Labs Program ▪ The Biosafety Program ▪ The Medical Waste Management Program ▪ The Laser Safety Program ▪ The Radiation Safety Program ▪ The Drain Disposal Restrictions	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring

Topic	Type of Measure	Mitigation/ CBP #	Mitigation / Continuing Best Practice Text	Source Document
			These programs may be subject to modification as regulations or UC Berkeley policies are developed or if the programs become obsolete through replacement by other programs that incorporate similar or more effective health and safety protection measures. However, any modifications must incorporate similar or more effective health and safety protection measures.	
Hazards and Hazardous Materials	**Continuing Best Practice**	**HAZ-4**	UC Berkeley will continue to perform hazardous materials surveys prior to capital projects in existing UC Berkeley buildings. UC Berkeley will continue to comply with federal, State, and local regulations governing the abatement and handling of hazardous building materials and each project will address this requirement in all construction.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Hydrology and Water Quality	**Continuing Best Practice**	**HYD-1**	During the plan check review process and construction phase monitoring, UC Berkeley Office of Environment, Health & Safety will review each development project to determine whether project runoff would increase pollutant loading and verify that the proposed project complies with all applicable requirements (e.g., Regional Water Quality Control Board and Campus Design Standards requirements) and best management practices (e.g., those described in the California Stormwater Quality Association's Construction BMP Handbook).	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Hydrology and Water Quality	**Continuing Best Practice**	**HYD-2**	UC Berkeley will continue implementing an urban runoff management program containing best management practices, as published in the Strawberry Creek Management Plan, and as developed through the Stormwater Permit Annual Reports completed for the Phase II municipal separate storm sewer system (MS4) permit. UC Berkeley will continue to comply with the MS4 stormwater permitting requirements by implementing construction and post-construction control measures and best management practices required by project-specific Stormwater Pollution Prevention Plans (SWPPPs) and by the Phase II MS4 permit to control pollution. SWPPPs will be prepared by the project contractor as required to prevent discharge of pollutants and to minimize sedimentation resulting from construction and the transport of soils by construction vehicles.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Hydrology and Water Quality	**Continuing Best Practice**	**HYD-5**	Landscaped areas of development sites will be designed to absorb runoff from rooftops and walkways. Open or porous paving systems will be included in project designs, where feasible, to minimize impervious surfaces and absorb runoff.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Hydrology and Water Quality	**Continuing Best Practice**	**HYD-7**	UC Berkeley will continue to review each development project, to determine whether rainwater infiltration to groundwater is affected. If it is determined that existing infiltration rates would be adversely affected, UC Berkeley will design and implement the necessary improvements to retain and infiltrate stormwater. Such improvements could include retention basins to collect and retain runoff, grassy swales, infiltration galleries, planter boxes, permeable pavement, or other retention methods. The goal of the improvement should be to ensure that there is no net decrease in the amount of water recharged to groundwater that serves as freshwater replenishment to Strawberry Creek. The improvement should maintain the volume of flows and times of concentration from any given site at pre-development conditions.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Hydrology and Water Quality	**Continuing Best Practice**	**HYD-13**	UC Berkeley will continue to manage runoff into storm drain systems such that the aggregate effect of projects implemented pursuant to the LRDP creates no net increase in runoff over existing conditions.	2021 LRDP EIR Table 7-1, Continuing Best

Topic	Type of Measure	Mitigation/ CBP #	Mitigation / Continuing Best Practice Text	Source Document
				Practices Implementation and Monitoring
Land Use	**Continuing Best Practice**	**LU-1**	New projects in the Campus Park will, as a general rule, conform to the Physical Design Framework. The Physical Design Framework includes specific provisions to ensure projects at the city interface consider the transition from campus to city.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Noise	**Continuing Best Practice**	**NOI-1**	Mechanical equipment selection and building design shielding will be used, as appropriate, so that noise levels from future building operations would not exceed the City of Berkeley Noise Ordinance limits for commercial areas or residential zones as measured on any commercial or residential property in the area surrounding a project proposed to implement the LRDP. Controls typically incorporated to attain this outcome include selection of quiet equipment, sound attenuators on fans, sound attenuator packages for cooling towers and emergency generators, acoustical screen walls, and equipment enclosures.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Noise	**Continuing Best Practice**	**NOI-2**	UC Berkeley will require the following measures for all construction projects: ▪ Construction activities will be limited to a schedule that minimizes disruption to uses surrounding the project site as much as possible. Construction outside the Campus Park will be scheduled within the allowable construction hours designated in the noise ordinance of the local jurisdiction to the full feasible extent, and exceptions will be avoided except where necessary. As feasible, construction equipment will be required to be muffled or controlled. ▪ The intensity of potential noise sources will be reduced where feasible by selection of quieter equipment (e.g., gas or electric equipment instead of diesel powered, low noise air compressors). ▪ Functions such as concrete mixing and equipment repair will be performed off-site whenever possible. ▪ Stationary equipment such as generators and air compressors will be located as far as feasible from nearby noise-sensitive uses. ▪ At least 10 days prior to the start of construction activities, a sign will be posted at the entrance(s) to the job site, clearly visible to the public, that includes contact information for UC Berkeley's authorized representative in the event of a noise or vibration complaint. If the authorized contractor's representative receives a complaint, they will investigate, take appropriate corrective action, and report the action to UC Berkeley. ▪ During the entire active construction period and to the extent feasible, the use of noise-producing signals, including horns, whistles, alarms, and bells, will be for safety warning purposes only. The construction manager will use smart back-up alarms, which automatically adjust the alarm level based on the background noise level, or switch off back-up alarms and replace with human spotters in compliance with all safety requirements and laws. For projects requiring pile driving: ▪ With approval of the project structural engineer, pile holes will be pre-drilled to minimize the number of impacts necessary to seat the pile. ▪ Pile driving will be scheduled to have the least impact on nearby sensitive receptors.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring

Topic	Type of Measure	Mitigation/ CBP #	Mitigation / Continuing Best Practice Text	Source Document
			▪ Pile drivers with the best available noise control technology will be used. For example, pile driving noise control may be achieved by shrouding the pile hammer point of impact, by placing resilient padding directly on top of the pile cap, and/or by reducing exhaust noise with a sound-absorbing muffler. ▪ Alternatives to impact hammers, such as oscillating or rotating pile installation systems, will be used where feasible.	
Transportation	**Continuing Best Practice**	**TRAN-1**	UC Berkeley will implement bicycle, pedestrian, and transit access and circulation improvements as part of new building projects, major renovations, and landscape projects. Improvements will address the goal of increasing non-vehicular commuting and safety; improving access from adjacent campus or city streets and public transit; reducing multi-modal conflict; providing bicycle parking; and providing commuter amenities.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Transportation	**Continuing Best Practice**	**TRAN-5**	UC Berkeley will require contractors working on major new construction or major renovation projects to develop and implement a Construction Traffic Management Plan that reduces construction-period impacts on circulation and parking within the vicinity of the project site. The Construction Traffic Management Plan will address job-site access, vehicle circulation, bicycle and pedestrian safety, and be coordinated with the City of Berkeley Public Works Department when projects require temporary modifications to city streets.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Transportation	**Continuing Best Practice**	**TRAN-6**	For each construction project, UC Berkeley will require the prime contractor to prepare a Construction Traffic Management Plan which will include the following elements: ▪ Proposed truck routes to be used, consistent with the City truck route map. ▪ Construction hours, including limits on the number of truck trips during the morning (AM) and evening (PM) peak traffic periods (7:00 to 9:00 a.m. and 4:00 to 6:00 p.m.), if conditions demonstrate the need. ▪ Proposed employee parking plan (number of spaces and planned locations). ▪ Proposed construction equipment and materials staging areas, demonstrating minimal conflicts with circulation patterns. ▪ Expected traffic detours needed, planned duration of each, and traffic control plans for each. ▪ Identifying bicycle and pedestrian detours and safety plan, including solutions to address impacts to accessible routes.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Transportation	**Continuing Best Practice**	**TRAN-7**	UC Berkeley will manage project schedules to minimize the overlap of excavation or other heavy truck activity periods that have the potential to combine impacts on traffic loads and street system capacity, to the extent feasible.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Utilities and Service Systems	**Continuing Best Practice**	**USS-1**	For development that increases water demand, UC Berkeley will continue to evaluate the size of existing distribution lines as well as pressure of the specific feed affected by development on a project-by-project basis, and necessary improvements will be incorporated into the scope of work for each project to maintain current service and performance levels. The design of the water distribution system, including fire flow, for new buildings will be coordinated among UC Berkeley, the East Bay Municipal Utility District, and the City of Berkeley Public Works Department and Fire Department.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring

Topic	Type of Measure	Mitigation/ CBP #	Mitigation / Continuing Best Practice Text	Source Document
Utilities and Service Systems	**Continuing Best Practice**	**USS-3**	UC Berkeley will continue to incorporate specific water conservation measures into project design to reduce water consumption and wastewater generation. This could include the use of special air-flow aerators, water-saving shower heads, flush cycle reducers, low-volume toilets, weather-based or evapotranspiration irrigation controllers, drip irrigation systems, and the use of drought resistant plantings in landscaped areas, and collaboration with the East Bay Municipal Utility District to explore suitable uses of recycled water.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Utilities and Service Systems	**Continuing Best Practice**	**USS-4**	UC Berkeley will analyze water and sewer systems on a project-by-project basis to determine specific capacity considerations for both UC Berkeley systems and off-site municipal systems in the planning of any project proposed under the LRDP.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Utilities and Service Systems	**Continuing Best Practice**	**USS-6**	UC Berkeley will continue to implement the Zero Waste requirements of the UC Sustainability Policy designed to reduce the total quantity of campus solid waste that is disposed of in landfills.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Utilities and Service Systems	**Continuing Best Practice**	**USS-7**	In accordance with the CalGreen Code, and as required for Leadership in Energy and Environmental Design certification, contractors working for UC Berkeley will be required under their contracts to report their solid waste diversion according to UC Berkeley's waste management reporting requirements.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring
Wildfire	**Continuing Best Practice**	**WF-3**	UC Berkeley will continue to plan and implement programs to reduce risk of wildland fires, including plan review and construction inspection programs that ensure that its projects incorporate fire prevention measures.	2021 LRDP EIR Table 7-1, Continuing Best Practices Implementation and Monitoring

APPENDIX B

BECHTEL ENGINEERING CENTER RENOVATION AND ADDITION STANDARDS ANALYSIS

Architectural
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Memorandum

To: UC Berkeley Capital Projects
Attn: Marissa Cheng
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Cc: Kase Macosko
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Project: Bechtel Engineering Center Renovation and Addition Standards Analysis (Final)
ARG Project #: 210317
Date: 7/22/2022
Via: Email

Introduction

Architectural Resources Group, Inc. (ARG) is pleased to provide the following *Secretary of the Interior's Standards* (Standards) Compliance Analysis for a proposed project including renovation and an addition at the Bechtel Engineering Center on the campus of UC Berkeley. This memorandum uses the Standards to assess whether the proposed project would be considered to have a significant impact on the Bechtel Engineering Center, a building which is currently considered a historic resource for the purposes of the California Environmental Quality Act (CEQA).

Methodology

To prepare this analysis, ARG staff reviewed the Bechtel Engineering Center Historic Resource Evaluation prepared by ARG in June 2021; reviewed the UC Berkeley Bechtel Engineering Center Addition and Renovation 100% Schematic Design In-Progress Drawings and Narratives prepared by Skidmore, Owings & Merrill LLP in May 2022; reviewed U. S. Department of the Interior's Technical Preservation Series publication regarding application of the Standards; and reviewed the State of California's Office of Historic Preservation Technical Assistance Series publication regarding historic resources and CEQA. ARG staff involved in preparing the Standards Analysis includes Stacy Farr, Architectural Historian, who meets the Secretary of the Interior's Professional Qualifications Standards in Architectural History.

Historic Status Summary

ARG evaluated the potential historic significance of the Bechtel Engineering Center in June 2021. Summary findings of the evaluation are as follows:

> The Bechtel Engineering Center appears to be eligible for listing in the California Register of Historical Resources under Criterion 3 as a property that embodies Brutalist architecture, skillfully adapted to meet site specific demands and conditions, and as the design of master architect George Matsumoto and master landscape architecture firm Royston, Hanamato, Beck & Abey. The period of significance for this finding is 1980, the year that construction was complete, all major components of the rooftop terrace were installed, and the building was publicly dedicated. The Bechtel Center has not undergone any significant alterations to its exterior or to the rooftop terrace, and retains all seven aspects of integrity, enabling it to convey its historic appearance based on its 1980 period of significance. For these reasons, the Bechtel Center appears to be eligible for listing in the California Register and would be considered a historical resource for the purposes of CEQA.

Based on those findings of historic significance and California Register-eligibility, the following features were found to be character-defining, meaning that they would be considered aspects of the building's design, construction, or detail that are representative of its function, type, or architectural style. In order for a historic resource to retain its significance, its character-defining features must be retained to the greatest extent possible.

Character-defining features of the Bechtel Engineering Center include those pertaining to the exterior features of the building as well as the rooftop terrace and surrounding landscape design.

Character-defining features of the building include:

- Rectangular footprint with tiered profile at the primary (south) façade;
- Two-story partially below-grade height;
- Rectangular massing, including dual-carriage elevator tower that rises above the roofline;
- Two stair volumes that project from the south façade and provide access to the rooftop terrace;
- Concrete exterior finish;
- Pattern of fenestration at the south façade including "recessed" dark windows separated by vertical concrete members;
- General ratio of solid-to-void at the east and west facades, including large areas of concrete-finished exterior walls and dark, flush windows; and
- Multi-lite wood doors at the first floor and within the recessed entry courtyard.

Character-defining features of the rooftop terrace include:

- One-story height and general footprint and massing of the café;
- Low rectangular concrete planting beds with turf;
- Integrated concrete planters at walls;
- Raised terraced area at the west side of the rooftop terrace;
- Wood trellis connecting elevator tower and café;
- Fixed concrete and wood furniture including tables and benches;
- Study carrels with associated trellises;
- Ceramic tile applied in a rectangular pattern to open areas of concrete paving; and
- Connection to the podium level of Davis Hall.

Character-defining features of the landscape around the building include:

- Oculus and skylight directly south of the second floor, which provide light to the recessed entry courtyard and the interior library; and
- Six curvilinear planting beds directly west and south of the second floor.

Project Description

As designed by Skidmore, Owings & Merrill, the proposed project meets the College of Engineering's Master Plan guiding principles of enhancing the student experience, building community, and improving college connectivity, and will create a welcoming "front door" at the threshold of the College of Engineering. The following project description summarizes relevant information contained in the UC Berkeley Bechtel Engineering Center Addition and Renovation 100% Schematic Design Drawings and Narrative, submitted by Skidmore, Owings & Merrill LLP in May 2022.

The proposed project will renovate and alter the existing two-story building and construct a two-story addition atop the existing building, resulting in approximately 35,500 GSF of new program space. The proposed project seeks to leverage the existing building's reinforced concrete structural system as the basis for the renovation and addition; to this end, the proposed project includes limited structural demolition at the lower level and at existing interiors. Exterior concrete walls and integrated concrete planters will be retained at the south and west façades of the lower level, and at the east, west, and north (light wells) façades at the ground level. The pattern of fenestration at these areas will be retained, and existing windows will be removed and replaced with new insulated glazing units. An existing concrete stair at the east end of the south façade which provides access between the ground level and the rooftop terrace will be retained and fitted with new handrails.

At the lower level, demolition of exterior (or otherwise publicly accessible) features includes removal of the multi-lite wood doors and wood sidelites at the entrance and recessed entry courtyard; removal of the hanging sculpture entitled *Standing Waves* by artist Jerome Kirk and storage for reinstallation; and removal of recessed entry courtyard flooring, including stone tiles and concrete. The dual-carriage elevator and its tower enclosure which currently extends from the lower level to the rooftop terrace will also be demolished. New construction at the lower level includes new fully glazed aluminum doors and sidelites accessing the recessed entry courtyard; new terrazzo flooring at the recessed entry courtyard; new insulated glazing units at south façade windows; and a new, relocated dual-carriage elevator enclosure.

At the ground level, demolition of exterior building features includes removal of all façade materials and features at the south façade with the exception of the concrete stair at the east side of the south façade; and removal of existing handrails at the east façade entrance and replacement with new handrails.

Demolition of landscape features around the building include removal of the six curvilinear planting beds west and south of the south façade; removal of paving in the lightwells; removal of all paving and planted material south of the south façade; removal of the half-height concrete walls surrounding the oculus and the skylight; and removal of concrete planters at the east façade. New construction at the ground level will extend the massing of the building to the south, creating a more uniform rectangular footprint for the building. New wall surfaces will including glazed aluminum doors, fully glazed and fritted glass exterior walls, full height aluminum louver and aluminum panel infill, and GFRC rainscreen fascia panels. A new steel stair will be constructed at the exterior of the west façade to provide access between the ground level and the terrace level. Lightwells will receive new concrete paving. The footprint of the oculus will be retained and located within the new footprint of the building; new treatment of the oculus includes a glazed skylight surrounded by a circular wood bench. The skylight will be removed and not replaced. New landscape features located south of the south façade will include square planters with wood benches, concrete benches, and colored concrete paving.

All character-defining features at the rooftop terrace will be removed with the exception of four concrete planters along the north side of the terrace, and guardrails along the east and west sides, which will be retained and refinished to match new guardrails installed elsewhere at this level. Existing wood louvers over the intake shafts along the north façade will be removed and replaced with new metal louvers. Small portions of the floorplate will be demolished, and the floorplate will be extended to the south to match the new footprint of the ground level.

New construction at the terrace level includes the new two-story addition, which will be set back at all sides from the footprint of the ground level. The addition will be fully glazed at the east, west, and south façades; at the north façade, glazing will be interspersed with textured metal panels. The floor height of the terrace and upper levels is articulated by a horizontal band of aluminum spandrel panels. New entry doors at the terrace level are fully glazed.

The terrace level will be enclosed at all sides with a new guardrail assembly. Paving at the terrace level will be gridded concrete pavers. A walkable surface skylight will be installed in the approximate location of the oculus. Several new circular and rectangular concrete planters and built-in wood benches will be constructed. Seven double-height square posts arranged along the south perimeter of the terrace level will support a large projecting flat roof; diagonal tension rods will provide additional roof support.

Above the upper level, the roof projects out at all sides of the building and comprises metal panels with louver infills, and a metal panel roof edge. A centrally located clerestory will have a rectangular footprint, operable windows and louvers, and will terminate with a projecting cornice with a metal panel roof edge. The total building height, including lower level, will be 68'.

Standards Compliance Assessment

The Secretary of the Interior's Standards for Rehabilitation

The *Secretary of the Interior's Standards for Rehabilitation* (Standards) are a set of treatment standards for historic buildings developed by the National Park Service. The Standards are used at the federal, state, and often the local level to provide guidance regarding the suitability of a proposed project that could affect a historic resource.

The Standards are as follows:

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.

2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.

4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.

5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.

6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.

8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.

9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Standards Compliance Analysis

The section provides an assessment of the appropriateness of the proposed project based on compliance with the Standards.

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.

Discussion: The existing Bechtel Engineering Center houses community functions including study areas, the Sibley Auditorium, the Kresge Library, and Engineering Student Services offices. The proposed project retains existing uses and adds approximately 35,500 GSF of new space for similar uses, including student support, student collaborative spaces, and an entrepreneurial hub bringing together cross-disciplinary academic programs. New uses are similar to historic uses to a degree that the proposed project would be considered in compliance with Standard 1.

2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

   Discussion: The proposed project will remove a substantial amount of historic material from the existing building, including features (doors and flooring) from the lower level; almost all materials and features from the south façade of the ground level; one of two projecting stair volumes at the ground level; and the projecting volume of the elevator tower which extends from the lower level to the terrace level. Almost all historic material at the rooftop terrace will be removed, as will the landscape features west and south of the existing building. The proposed project will also alter spaces that characterize the existing building, including the two-story height and tiered rectangular footprint. Overall, the proposed project does not adequately retain and preserve the historic character of the existing building, because it includes substantial removal of historic materials and alterations to features and spaces that characterize the property. The proposed project would not be considered in compliance with Standard 2.

3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.

   Discussion: The proposed project comprises all new material components and does not incorporate conjectural features or architectural elements from other buildings that would create a false sense of historical development. The proposed project would be considered in compliance with Standard 3.

4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.

Discussion: The Bechtel Engineering Center has a period of significance of 1980, reflecting the year that construction was complete, major components of the rooftop terrace were installed, and the building was publicly dedicated. No significant changes have been made to the building or rooftop terrace since 1980 that have acquired historic significance in their own right. Because the Bechtel Engineering Center does not include any features that have acquired historic significance in their own right, the proposed project de facto does not impact such changes, and would be considered in compliance with Standard 4.

5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.

   Discussion: The Bechtel Engineering Center is a modestly scaled Brutalist style building, significant not only for its architecture but for master architect George Matsumoto's skillful adaptation of this architectural style to meet site specific demands and conditions. The distinctive features, finishes, construction techniques, and examples of craftsmanship of the building are expressed in its two-story height, tiered rectangular footprint, and rectangular massing, its projecting stair and elevator volumes, concrete exterior finish, and pattern of fenestration. At the rooftop terrace and at the landscape surrounding the building, distinctive features, finishes, construction techniques, and examples of craftsmanship include the broad mix of larger and fine-grained features which master landscape architecture firm Royston, Hanamato, Beck & Abey installed to articulate these spaces, ranging from large curvilinear planter beds at the ground level to fixed tables and benches at the rooftop terrace.

   The proposed project retains some historic features and finishes, including concrete exterior finish and pattern of fenestration at the west and south façades of the lower level, and some concrete exterior finish and fenestration pattern at the sides (east and west) and rear (north) façades of the ground level. However, the proposed project will introduce substantial changes to most of the distinctive features and finishes at the existing building. The two-story height, tiered rectangular footprint, and rectangular massing will be changed; one of two projecting stairs will be removed; and the elevator tower will be removed. Most areas of concrete exterior finish will be removed from the primary (south) façade of the ground level, along with existing fenestration at the lower level (multi-lite wood doors) and ground level. Almost all of the historic features at the rooftop terrace will be removed, as will the oculus, skylight, and six curvilinear planting beds south of the existing building. Overall, the proposed project does not adequately preserve the distinctive features, finishes, and construction techniques or examples of craftsmanship that

characterize the existing building. The proposed project would not be considered in compliance with Standard 5.

6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

   Discussion: The Bechtel Engineering Center does not include any deteriorated historic features or missing historic features, nor does the proposed project include any scope of work where historic features are replaced. The proposed project would be considered in compliance with Standard 6.

7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible. Details of a surface cleaning program were not included in the

   Discussion: Where existing portions of the Bechtel Engineering Center's concrete facade will be preserved in its original finish, namely at the lower and ground levels, the proposed project may include surface cleaning. While a surface cleaning schedule is not currently included in the 100% Schematic Design set for the proposed project, it is presumed that surface cleaning would be undertaken using appropriately gentle methods that do not cause damage to historic materials at the building, namely the concrete façade. Cleaning that is included as part of lateral strengthening in the retrofit of the existing structure is limited to existing interior shear walls and will not impact character-defining materials. Presuming any cleaning of retained areas of the building's concrete façade is conducted using appropriately gentle methods, the project would be considered in compliance with Standard 7.

8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.

   Discussion: The existing building is partially below grade, and the proposed project would be constructed upon the existing foundation and largely within the footprint of the existing building. Minor surface excavation may take place in the installation of the landscaping plan; however, the surface area immediately surrounding the Bechtel Engineering Center has already been disturbed in the process of constructing the existing building and landscape plan. As such, the discovery of

significant archeological resources in the process of constructing the proposed project is unlikely. However, if any archaeological resources are uncovered in the course of construction, project work should be halted and UC and City of Berkeley standard procedures for archaeological resource investigation and protection should be followed. Presuming no archaeological resources will be uncovered, and that standard procedures for the investigation and protection of any uncovered resources are followed, the proposed project would be considered in compliance with Standard 8.

9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

   Discussion: As introduced in the discussion of Standard 2 and Standard 5, the alterations, addition, and related new construction included in the proposed project will destroy a substantial amount of historic material that characterizes the existing building, including doors, sidelites, and flooring at the lower level; façade materials and features at the south façade of the ground level; one of two projecting stair volumes at the ground level; the elevator tower; almost all of the historic material at the rooftop terrace; the oculus and skylight; and the six curvilinear planting beds west and south of the existing building. While the design of the addition is differentiated from the existing building in its massing and materials, the addition would not be considered compatible with the existing historic building for several reasons. The scale of the building adds two new floors and a clerestory to a partially below-grade two story building, substantially changing the scale of the building. The uniform rectangular massing of the addition differs from the tiered rectangular massing with projecting vertical circulation components of the existing building, substantially changing the massing. The addition is constructed almost completely of clear glass and aluminum panels, materials that have no precedent at the existing building. Overall, while new construction included in the proposed project is differentiated from the existing building, the proposed project destroys a substantial amount of historic materials that characterize the property, and would not be considered compatible with the massing, scale, and architectural features of the existing building in a way that would enable the existing building to continue to convey its historic integrity. The proposed project would not be considered in compliance with Standard 9.

10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired

    Discussion: As introduced in the discussions of Standards 2, 5, and 9, the proposed project will destroy a substantial amount of historic material that characterizes the existing building, at the building itself, the rooftop terrace, and the landscape features around the south and west of the building. With this substantial amount of loss of historic material, if the proposed project were removed in the future, existing building would not be able to be returned to its historic appearance, and the essential form and integrity of the exiting building would not be unimpaired. As such, the proposed project would not be considered in compliance with Standard 10.

Conclusion

As detailed above, the proposed project complies with Standards 1, 3, 4, 6, 7, and 8, and does not comply with Standards 2, 5, 9, and 10. Because the proposed project would not be considered fully compliant with all ten of the Standards, the potential impact of the proposed project on the ability of the historic building to continue to convey its historic significance cannot be assumed to be less than significant.