

**Draft Tiered Initial Study Checklist and
Negative Declaration
for the**

**Construction and Operation of
the Guest House Building**

at

Ernest Orlando Lawrence Berkeley National Laboratory

University of California

May 2007



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Construction and Operation of the Guest House

Draft Initial Study/Negative Declaration

Project Description

The Lawrence Berkeley National Laboratory (LBNL) proposes to construct and operate a three-story, 25,000 gross square foot (gsf) Guest House. The proposed Guest House would be composed of 60 guest rooms, common spaces, a reception area, storage areas, an outdoor patio area, and access facilities including stairwells and ADA-compliant ramps. The proposed project, located in Berkeley, California, would be located near the center of the LBNL main hill site between Buildings 2 and 54 and accessible via Lawrence Road. The Guest House would address a lack of convenient, affordable, and short-term accommodations on the LBNL campus for faculty, post doctoral associates, students, and other visitors to affiliated UC Berkeley science facilities.

The 60 rooms within the Guest House would include one or two beds per room and three different room types to best serve the varying needs of guests who are conducting business and research at LBNL. To minimize the variations in unit types all accessible units would be studio suites. The breakdown of unit types is as follows:

The guest rooms are designed to provide for the best mix of quality views, natural ventilation, and solar exposure for energy efficiency, with considerations for cost control. The arrangement of guest rooms and common spaces provides opportunities for interaction and collaboration.

Project Objectives and Characteristics

The proposed Guest House would support the research mission of the University of California by providing convenient and affordable accommodations in close proximity to scientific, engineering, and technological research facilities on the LBNL campus. The proposed Guest House would be in close proximity to the Advanced Light Source facility, the primary user facility at LBNL where approximately 50 percent of the Guest House visitors would be visiting.

In addition to the 60 guest rooms, the facility would also include space for lobbies, corridors, stairways, mechanical/electrical equipment, an elevator, an office, housekeeping, maintenance, storage, laundry, and a fitness center. Minimum room sizes are supported by a variety of common and/or lounge spaces with the aim to promote a sense of collaboration and community within the building.

Environmental Analysis

As a tiered document, the Initial Study/Negative Declaration for the project relies in part on the 1987 LRDP EIR, as amended, for: (1) a discussion of general background and setting information for environmental topic areas; (2) overall growth-related issues; and (3) issues that were evaluated sufficiently in the 1987 LRDP EIR, as amended, for which there is no significant new information or changes in circumstances that would require further analysis. The Tiered Initial Study/Negative Declaration analyzes the potential impacts of the project and the adequacy of the existing

environmental analysis in the 1987 LRDP EIR, as amended, with regard to the following environmental topic areas: 1) aesthetics, 2) agricultural resources, 3) air quality, 4) biological resources, 5) cultural resources, 6) geology and soils, 7) hazards and hazardous materials, 8) hydrology and water quality, 9) land use and planning, 10) mineral resources, 11) noise, 12) population and housing, 13) public service, 14) recreation, 15) transportation and traffic, 16) utilities and service systems.

Based on the Tiered Initial Study/Negative Declaration, the project would not result in any significant impacts that cannot be mitigated to a less-than-significant level through measures set forth in the 1987 LRDP EIR, as amended or LBNL Standard Operating Procedures (SOPs). LBNL found that the project would not result in any impacts not previously identified in the 1987 LRDP EIR, as amended. Based on this analysis, LBNL prepared a Negative Declaration.

Environmental Review Process

The IS/ND was prepared in accordance with CEQA and the University of California Procedures for implementation of CEQA. The Initial Study for the project, in accordance with Section 15168 of the CEQA Guidelines, is tiered from the 1987 LRDP, as amended.

The draft IS/ND will be circulated for a 30-day public review period between May 1, 2007 and May 31, 2007. During this time, agencies and members of the public will have the opportunity to comment on this Tiered Initial Study/Negative Declaration.

Written comments should be directed to the attention of:

Jeff Philliber
LBNL Environmental Planning Coordinator
Lawrence Berkeley National Laboratory
One Cyclotron Road, MS 80-101
Berkeley, California 94720

Comments and Responses

Responses to substantive comments and copies of all comment letters received during the public review period will be provided in the Final Tiered Initial Study/Negative Declaration.

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Environmental Checklist Form

UNIVERSITY OF CALIFORNIA

May 1, 2007

CAMPUS: Lawrence Berkeley National Laboratory

PROJECT NO. FB7100

I. PROJECT INFORMATION:

1. Project title: Berkeley Lab Guest House -
Lawrence Berkeley National Laboratory (LBNL) Guest House Initial Study/Negative Declaration

2. Lead agency name and address:

University of California
Ernest Orlando Lawrence Berkeley National Laboratory
Facilities Division, Design and Construction Department
One Cyclotron Road
Berkeley, CA 94720

3. Contact person and phone number:

Jeff Philliber
LBNL Environmental Planning Coordinator
Lawrence Berkeley National Laboratory
One Cyclotron Road, MS 80-101
Berkeley, California 94720
Telephone: (510) 486-5257

4. Project location:

The proposed project site is currently occupied by Buildings 29A, B, and C and is accessed via Lawrence Road. Building 2 is located immediately adjacent to the east of the proposed project site. Parking lot K is located immediately to the west of the proposed project site across Lawrence Road. A parking lot for Building 2 is located north of the site. Parking lot Z is south of the proposed project site.

5. Project sponsor's name and address: (See #2 & #3)

6. Custodian of the administrative record for this project (if different from response to item 3 above):

See response to item 3.

7. Identification of previous EIRs relied upon for tiering purposes (including all applicable LRDP and project EIRs) and address where a copy is available for inspection.

- *Lawrence Berkeley Laboratory Site Development Plan Environmental Impact Report, August 1987. [SCH 85112610]*
- *Draft and Final Supplemental Environmental Impact Reports for the Proposed Renewal of the Contract Between the United States Department of Energy and The Regents of the University of California for Operation and Management of the Lawrence Berkeley Laboratory (1992). [SCH 91093068]*
- *Supplemental Environmental Impact Report Addendum for the Proposed Renewal of the Contract Between the United States Department of Energy and The Regents of the University of California for Operation and Management of the Ernest Orlando Lawrence Berkeley Laboratory (1997). [SCH 91093068]*

All of these documents are available for inspection at:

Berkeley Public Library
2090 Kittredge Street, 2nd Floor Reference Department
Berkeley, CA 94704

or contact:

Jeff Philliber
LBNL Environmental Planning Coordinator
Lawrence Berkeley National Laboratory
One Cyclotron Road, MS 80-101
Berkeley, California 94720
Phone: 510-486-5257

II. PROJECT DESCRIPTION:

1. Description of project:

This tiered Initial Study (IS)/ Negative Declaration (ND) is being prepared by The University of California (UC or the University) to evaluate potential environmental impacts of the proposed Lawrence Berkeley National Laboratory (LBNL, Berkeley Lab, or the Laboratory) Guest House Building. This facility is proposed due to the need for more convenient and economic accommodations than current lodging options near LBNL. The purpose of the proposed project would be to provide convenient, affordable and short-term accommodations for faculty, post doctoral associates, students and other visitors to LBNL.

The proposed project site is situated on the LBNL main site in Berkeley, California. LBNL is an approximately 200-acre multi-program research national laboratory operated and managed by the University of California, under contract with the U.S. Department of Energy (DOE). The proposed project's location within the region and local vicinity are illustrated in Figures 1 and 2. The proposed project site is located near the center of the LBNL main site; the site is northwest of the Advanced Light Source (ALS) building, west of Building 2, and east of Building 54. The site is immediately west of Buildings 29B and 29C. LBNL examined alternative locations for this project within the boundaries of the LBNL site, however other feasible locations would have been substantially more visible from public viewpoints or involved encroachment into the riparian corridor of Strawberry Creek.

The project site plan is illustrated in Figure 3 and is based on the most current project design information. Although some of the features portrayed may change slightly as a result of final design, such as the location of plantings and stairwells, none of the changes would result in new or significant impacts above and beyond those identified in this

tiered Initial Study/Negative Declaration. As a result, any such changes would not require additional environmental review under CEQA.

The proposed project site is located in close proximity to the Advance Light Source (ALS) facility, the primary user facility at LBNL and the expected user destination of approximately 50 percent of the guest house visitors. It is also central to other LBNL facilities such as the 88-inch Cyclotron, National Center for Electron Microscopy, and the Molecular Foundry. Facilities in close proximity to the project site include the Lab's cafeteria (Building 54), automated teller machine, outdoor meeting areas and parking. The project site is also in close proximity to the proposed User Support Building, which would provide user office and laboratory space at the ALS. Figure 2 shows the location of referenced facilities.

The project site is approximately 43,560 gsf and accessible via Lawrence Road; one of the main arterials on the LBNL campus. The footprint of the Guest House would be approximately 8,000 gross square feet (gsf). The site is currently occupied by Trailer 29A, which would be demolished and removed under a separate DOE Decommissioning Project.¹ Other existing site features are paved and wooden pathways, a paved stairwell, subsurface utilities, a variety of mature trees, and various types of ground-level, ruderal vegetation. There are 21 trees on the site, consisting of three eucalyptus, two Monterrey pines, 11 Oregon white oaks, and five cork oaks. The character defining aspects of the site are the hillside slope and the westerly views to the San Francisco Bay. The proposed Guest House is intended to maximize the views to the west, integrate with the location of existing Building 2, accommodate existing circulation routes across the site, and protect existing trees, where practicable. An effort has also been made during project design to use as much of the existing site infrastructure as possible, such as vehicle access, existing pathways and soil retaining walls.

The proposed project would construct a 25,000 gross square foot (gsf) hotel-type building that would contain 60 guest rooms and 70 beds among three different room types. The average height of the building along its four-story west face would be 35 feet. Because the building would be terraced into the hillside, the eastern face would be approximately 2½ stories and 25-30 feet in height. The 60-room facility would likely operate at an average annual occupancy rate in the 70 to 74 percent range.² A conservative estimate used throughout this analysis is 75 percent average occupancy. Assuming that, on average, 75 percent of the beds would be utilized at one time and that each bed would be occupied by one person, the average number of guests staying at that Guest House at one time would be 53. The three room types feature one or two beds per room to best serve the varying needs of visiting guests. The quantity and summary description of the room types are as follows:

Standard Guest Rooms: 44 units (73 percent of guest rooms)

Larger Guest Rooms: 12 units (20 percent of guest rooms)

Studio Suites (Accessible): 4 units (7 percent of guest rooms)

The interior of the building would include space for a lobby, corridors, stairways, mechanical/electrical equipment, an elevator, an office, house keeping storage areas, engineering, laundry and a fitness center. Guest House rooms would be complemented by a variety of common and/or lounge spaces that would aim to promote a sense of collaboration and community within the building. At peak occupancy, it is estimated that the Guest House would accommodate approximately 73 people. Eight full-time staff would be hired to operate the facility.

¹ NEPA/CEQA review for demolition and removal of Trailer 29A has been completed under a separate project is therefore not analyzed in this Initial Study/Mitigated Negative Declaration.

² *Project Design Requirements for Berkeley Lab Guest House*. Berkeley National Laboratory Facilities Division and Construction Department. Page 5. April 25, 2006.

A drop off area and ADA parking would be located near the entrance of the building. A three-story lobby/ core area would be located on the western side of the building. All floors would be occupied by guest units and a double loaded corridor would divide the guest house for central access to all guest rooms.

A LBNL shuttle service stop is located just across the road from the project site in the cafeteria parking lot. Two main pedestrian walkways (upper and lower) are located immediately adjacent to the project site. The Big C (an electrical substation for the Bevatron) and cafeteria parking lots are located within 100 feet of the project site.

The project would require connections to existing utility lines as well as construction of new lines. A new storm drain lateral, approximately 120-feet long, would be constructed across Lawrence Road. Based on the slope of the site, it is estimated that the pipe would be 8-inches in diameter.³ The end of the pipe closest to the Guest House would be located near the center of the building on the western side. The pipe would extend in a southwesterly direction across a portion of the project site, across Lawrence Road, and tie into the existing storm drain system on the southeastern side of Building 54.⁴ A properly sized mechanical storm water treatment unit (vault) would be placed underground within the new 8-inch diameter storm drain lateral, upstream of the final storm water discharge point. To ensure runoff from the site is treated in accordance with provision C.3 of Regional Water Quality Control Board (RWQCB), all rainwater that falls on the site will be routed through the storm water separator vault. The vault will be entirely below grade.

The site currently has a 6-inch sanitary sewer line stubbed near the northern end of the proposed building. This line runs north to a sanitary sewer manhole. It is anticipated that this line would be sufficient to handle the sewer demand of the Guest House and that the point of connection would be on the north side of the building.⁵ It is also anticipated that a new 6-inch line would need to extend north approximately 30 feet from the Guest House to the existing service line, which would ultimately tie into the Hearst outflow.

Interior building systems that would require exterior ventilation include heating units, air conditioning units, the laundry, and bathroom exhaust fans. Combustion air and flue exhaust vents would be included on the exterior of the building roof for heating and air conditioning units. Disposition of condensate drainage from heat pumps and air conditioners is to be determined. If practical, it would be drained directly to the outdoors. Where not practical, it would be drained to the storm drain system. Exhaust vents for the laundry would be located on an exterior wall near the service entrance at the north end of the building. Bathroom exhaust fans would be vented through the exterior wall of each guest unit. Units with kitchenettes would use recirculated hoods over the kitchenette appliances and would not be exhausted to the outside.

2. Project Objectives:

Refer to Project Description

3. Surrounding land uses and environmental setting: Briefly describe the project's surroundings:

Refer to Project Description

³ Berkeley Lab Guest House Program Statement, Guidelines Specifications, Systems Descriptions, Macdonald Architects, November 10, 2006, pg. 15.

⁴ Berkeley Lab Guest House Program Statement, Guidelines Specifications, Systems Descriptions, Macdonald Architects, November 10, 2006, Exhibit 1, page 17.

⁵ Email communication received from Steve Blair of LBNL, February 14, 2007.

4. Discretionary approval authority and other public agencies whose approval is required (e.g. permits, financing approval, or participation agreement.)

University of California, and the Regents of the University of California
Bay Area Air Quality Management District (BAAQMD)

5. Consistency with the LRDP: (Describe the project's consistency with: the scope of development projected in the LRDP; campus and community population levels projected in the LRDP; LRDP designation for this type of project; and applicable policy objectives and goals of the LRDP).

Refer to Project Description

6. Design Aesthetics

The 2½- to 4-story Guest House would be terraced into the hillside in order to blend in with the surrounding environment and structures. Furthermore, the design of the facility would reflect a balance between the residential nature of the facility and the institutionally-oriented aesthetic that is the dominant architectural style at LBNL. The guest rooms are designed to provide for the best mix of quality views, natural ventilation, and solar exposure for energy efficiency. The arrangements of the guest rooms and common spaces provide opportunities for interaction and collaboration. The design would also take advantage of the site's natural features, such as the views of San Francisco Bay to the southwest, and existing facilities such as pedestrian and vehicular points of connection. In addition, the project design would be consistent with the Design Guidelines set forth in the lab's 1987 LRDP. Adherence to the design guidelines would be ensured through implementation of Mitigation Measure III-G-2 from the 1987 LRDP EIR, as amended. Implementation of this measure as part of this project is further explained below in the Aesthetics section of the checklist.

7. Sustainability

Consistent with University policies for all capital projects, the principles of energy efficiency and sustainability would be incorporated into the planning, financing, design, construction, renewal, maintenance, operation, management, utilization, and eventual decommissioning of the proposed project to the fullest extent possible, consistent with budgetary constraints and regulatory and programmatic requirements.⁶ Environmentally-responsible principles would be incorporated in the design including sensitive siting and orientation (to take advantage of natural elements for heating and cooling), responsible building materials and finishes (low reflectance and low maintenance materials), energy conservation (day lighting and an automated energy management system) as well as water conservation and waste minimization during construction and operational phases. The goal of the project is to meet the requirements of the LEED (Leadership in Energy and Environmental Design) Green Building Rating System™.⁷ The proposed project will be designed to consume 20 percent less energy annually than allowed by California Title 24 for this type of facility.⁸

⁶ *Project Design Requirements for Berkeley Lab Guest House*. Berkeley National Laboratory Facilities Division and Construction Department. Page 7. April 25, 2006.

⁷ The Leadership in Energy and Environmental Design (LEED) Green Building Rating System, developed by the US Green Building Council (USGBC), provides a list of standards for environmentally-sustainable construction. The system offers four levels of accomplishment: LEED Certified, Silver, Gold, and Platinum according to how well the building performs on a checklist including five major areas: Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials & Resources, and Indoor Environmental Quality, plus four checklist items reserved for any innovation above and beyond what is required by the checklist. http://en.wikipedia.org/wiki/Leadership_in_Energy_and_Environmental_Design. Accessed August 4, 2006.

⁸ *Project Design Requirements for Berkeley Lab Guest House*. Berkeley National Laboratory Facilities Division and Construction Department. Page 8. April 25, 2006.

8. Site Preparation

The site is on a hillside which slopes downward from east to west at an average slope of approximately 20 percent. Site preparation would include excavation, grading, fill removal and compaction, and vegetation and tree removal. Two Oregon white oaks and two eucalyptus trees would be removed during site preparation. The Oregon white oaks have a diameter at breast height (dbh) of 12 and 18 inches. The eucalyptus trees have a dbh of 35 and 40 inches. The majority of existing trees on-site would be retained. Diameter at breast height is defined as 4.5 feet (1.37m) above the ground surface.⁹

It is anticipated that there would be approximately 4,180 cubic yards of cut onsite, approximately 150 cubic yards of which would be reused onsite. The excess 4,030 cubic yards of material would be transported and disposed of offsite.¹⁰ Site Preparation is expected to start in October 2007 and continue through March 2008. Actual construction would take place from approximately October 2007 – March 2009.

9. Parking and Site Access

Parking would be accommodated by existing parking facilities; no new long-term parking spaces would be added. As required by law, parking spaces for disabled guests would be provided in existing parking lots in the immediate vicinity of the site; additional short-term parking would be provided for use by delivery vehicles, taxis, and guests during check-in/out. Staff parking would continue to be provided in existing parking lots. Many users of the Guest House would arrive by public transportation, including the LBNL shuttle bus, which features a shuttle stop across Lawrence Road from the site in the parking lot of Building 54 (cafeteria). As provided in LBNL's ongoing Transportation Demand Management Program (TDMP), employees and visitors of the Guest House may also be able to access the site by carpool, vanpool, and bicycle.

The Guest House building would meet American With Disabilities Act (ADA) requirements.¹¹ Disabled access would be provided with a parking space on the east side of the building meeting all requirements of accessible parking. It is not anticipated that there would be other disabled access points for the building.

LBNL guests, employees, and vendors would be provided access to the lodging facility under the currently existing LBNL entrance policies and procedures. No changes to LBNL's existing security and safeguards are anticipated. LBNL's entrance is monitored by security 24 hours a day, 7 days a week, and a security pass is required for site access.

Upon making advanced reservations and checking in, visitors to the Guest House would be informed of options to access the Guest House and the surrounding vicinity through available modes of public transportation, including BART, AC Transit, and the LBNL Shuttle. Reservation staff would inform guests about the connections between these modes of mobility and local airports and the availability of the LBNL shuttle to access destinations within the lab campus or downtown Berkeley.

B. Policy Setting

1. California Environmental Quality Act (CEQA)

Approvals of University projects at LBNL are subject to the requirements of the CEQA. This tiered IS/MND supports the recommendation that a ND be prepared for this project.

⁹ Biology On-Line.org website: http://www.biology-online.org/dictionary/Diameter_at_breast_height, accessed April 26, 2007.

¹⁰ Berkeley Lab Guest House Program Statement, Guidelines Specifications, Systems Descriptions, Macdonald Architects, November 2006, pg. 14.

¹¹ Berkeley Lab Guest House Program Statement, Guidelines Specifications, Systems Descriptions, Macdonald Architects, November 2006, pg. 4.

2. National Environmental Policy Act (NEPA)

Projects funded by federal agencies and/or located on DOE-leased land are also subject to NEPA. The proposed project would neither require federal funding or permitting nor would it occur on a federally-leased parcel. As a result, neither an Environmental Assessment (EA) or Environmental Impact Study (EIS) is required.

3. Tiering of the Negative Declaration

As discussed in Section 15152 of the CEQA Guidelines, “tiering” refers to the use of analysis contained in previously certified, broad-level EIRs (often programmatic EIRs) to support or complement project-specific EIRs or IS/Negative Declarations. This tiered, ND is tiered from LBNL’s 1987 Long Range Development Plan Environmental Impact Report (1987 LRDP EIR), as amended, including the documents listed on pages one and two.

The 1987 LRDP EIR, as amended, consists of the three programmatic, facility-wide CEQA documents listed on pages 1 and 2.

Through a tiered approach, the project-level environmental analysis for this project incorporates by reference the discussions in the LRDP EIR, as amended (the first-tier EIR), and concentrates on project-specific issues. CEQA Guidelines encourage the use of tiered environmental documents to reduce delays and excessive paperwork in the environmental review process. This is accomplished in tiered documents by eliminating repetitive analyses of issues that were adequately addressed in the Program EIR and by incorporating those analyses by reference.

More specifically, tiering allows subsequent environmental review to rely on a Program EIR for the following:

- A discussion of general background and setting information for environmental topic areas.
- Overall growth-related issues.
- Issues that were evaluated sufficiently in the Program EIR and for which there is no significant new information or change in circumstances that would require further analysis.
- Long-term cumulative impacts; and
- Mitigation measures from the 1987 LRDP EIR, as amended, that are applicable to the proposed project.

“Tiering” is a beneficial tool for lead agencies in that it allows for the elimination of repetitive issues which have already been addressed in the first-tier EIR and focuses on issues which are ripe for decision in the second-tier environmental document. This “stream-line” process does not excuse the lead agency from adequately analyzing reasonably foreseeable significant environmental impacts that the project may cause if the impacts were not adequately analyzed in the first-tier EIR.¹²

Under CEQA Guidelines Section 15152 (“Tiering”), significant impacts are considered to have been adequately addressed by a previous EIR where:

- The impacts were mitigated or avoided in connection with a previous EIR.
- The impacts were examined at a sufficient level of detail in the prior EIR to enable the effects to be mitigated or avoided by site-specific revisions, the imposition of conditions, or other means in connection with the approval of the later project.

In the case of the tiered ND undertaken for this project, general discussions from the 1987 LRDP EIR, as amended, are referenced in the CEQA checklist. Mitigation measures identified in the 1987 LRDP EIR, as amended, that apply to this project would be implemented under the project, and have been identified as part of this project review. Other

¹² UC CEQA Handbook. 2.8-Structuring Tiered Documents. <http://www.ucop.edu/facil/pd/CEQA-Handbook/index.html>. Accessed June 14, 2006.

project-specific mitigation measures for potentially significant impacts not addressed in detail in the 1987 LRDP EIR, as amended, may also be implemented as part of this project.

4. Negative Declaration

According to CEQA Statutes Section 21064, a ND is appropriate when an IS has been prepared and a determination can be made that no significant environmental effects will occur because revisions to the project have been made or mitigation measures will be implemented which will reduce all potentially significant impacts to less than significant levels.

5. 1987 Long Range Development Plan (1987 LRDP)

Berkeley Lab's 1987 LRDP was approved in 1987 by The UC Regents. The LRDP organizes LBNL into seven functional planning areas to consolidate related functions, maximize efficiency, and establish a network of roadways, pedestrian paths, and parking.¹³ The project site is in the functional planning area designated in the LRDP as the "Light Source Research and Engineering Area," which is also known as "Old Town" or "the original laboratory site." According to the 1987 LRDP, this area is to be "renovated and reconstructed to allow the efficient and safe conduct of research and the design and fabrication of advanced electrical and mechanical systems."¹⁴

The proposed project would provide accommodations for researchers in the Old Town planning area and thereby be consistent with the 1987 LRDP.

6. City of Berkeley General Plan

The City of Berkeley General Plan is a statement of the City's priorities, which are relied upon to guide public decision making. As a federal facility operated by UC and conducting work within UC's mission, LBNL is generally exempt under federal and State constitutions from compliance with local requirements. However, LBNL seeks to cooperate with local jurisdictions to reduce the physical consequences of its activities to the extent feasible. The General Plan land use designation for the project site is Institutional.¹⁵ Areas of Berkeley designated as institutional are for institutional, government, educational, recreational, open space, natural habitat, woodlands, and public service uses and facilities. Berkeley General Plan Policy LU-35 states that the City of Berkeley shall "develop and foster close working relationships with the UC to ensure and facilitate land use decisions that are mutually beneficial to the institution and the adjoining neighborhoods."¹⁶

7. 2006 Long Range Development Plan (2006 LRDP)

In November 2000 the University issued a Notice of Preparation (NOP) for an LRDP EIR to analyze the effects of growth and development proposed under the Lab's Draft 2006 LRDP. A Revised NOP was issued in October 2003. The Draft 2006 LRDP and LRDP EIR were circulated for public review from January 22, 2007 to March 23 2007. It is expected that the 2006 LRDP and Final EIR would be presented to The Regents for review and consideration at the regularly scheduled July 2007 Regents meeting. If approved, the 2006 LRDP would become final, replacing the 1987 LRDP, and would direct growth and development at LBNL for approximately the next 20 years. The proposed Guest House project is accounted for in the new 2006 Draft LRDP DEIR Illustrative Development Scenario as a planned project and it is included in the cumulative impacts analysis of the 2006 Draft LRDP DEIR.¹⁷

¹³ 1987 LRDP for LBNL. Chapter 5: Functional Planning Areas and the Long Range Development Plan Map.

http://fac.lbl.gov/Facilities/Planning/Publications/lrdp87/lrdp_5.html#RTFToC6. Accessed September 25, 2006.

¹⁴ 1987 LRDP for LBNL. Chapter 5: Functional Planning Areas and the Long Range Development Plan Map.

http://fac.lbl.gov/Facilities/Planning/Publications/lrdp87/lrdp_5.html#RTFToC6. Accessed September 25, 2006.

¹⁵ City of Berkeley General Plan. Land Use Element. 2001. <http://www.ci.berkeley.ca.us/planning/landuse/plans/generalPlan/landUse.html>. Accessed September 25, 2006.

¹⁶ City of Berkeley General Plan. Land Use Element. 2001. <http://www.ci.berkeley.ca.us/planning/landuse/plans/generalPlan/landUse.html>. Accessed May 23, 2006.

¹⁷ As shown in Table III-6 on page III-41 of the 2006 LRDP EIR, the development assumption for the Guest House includes a 25,000 square foot (10,000 sf footprint), 4-story building that would accommodate 70 occupants.

8. Mitigation Measures

The project would not require the implementation of any project-specific mitigation measures. However, the project includes implementation of several mitigation measures from the 1987 LRDP EIR as listed in each topic area of the checklist below and Appendix A of this IS/ND. It is beyond the scope of this document and an IS/ND in general, to specify how particular mitigation measures will be implemented once construction has begun. Pursuant to Section 21081.6 of the California Public Resources Code, this important component of the project is addressed through the development of a Mitigation Monitoring and Reporting Program (MMRP). The MMRP requires lead agencies to adopt a reporting and monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. A MMRP is required for the Guest House project because the IS/ND has identified potentially significant impacts, and measures from the 1987 LRDP EIR, as amended, that are included as part of the project to mitigate those impacts. The MMRP would describe the timing for implementing specific measures, person(s) responsible for implementing the measures, and steps that must be taken to verify compliance with all applicable mitigation measures identified in this IS/ND.

8. Standard Operating Procedures

The Design, Construction and Planning Department at LBNL is required to manage construction project in accordance with the "Design and Construction Procedures Manual." This manual identifies a series of standard operating procedures (SOPs) that Project Managers and subcontractors are required to implement throughout project construction. Each project's Project Manager is responsible for ensuring that the SOPs are being implemented by all project contractors. Throughout this IS/ND, reference is made to several of these SOPs, which are also listed in Appendix A.

III. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

As explained in the checklist below, there are no environmental issues involving a "Potentially Significant Impact."

IV. DETERMINATION: (To be completed by the Lead Agency)

On the basis of the initial evaluation that follows:

 X I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

 I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

 I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

 I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. A TIERED ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

 I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, no further environmental document is required. FINDINGS consistent with this determination will be prepared.

Signature

Date

Printed Name

For

V. EVALUATION OF ENVIRONMENTAL IMPACTS:

General Instructions

- A. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- B. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by information sources cited by the lead agency. (See “No impact” portion of Response Column Heading Definition section below.)
- C. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- D. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
- E. The explanation of each issue should identify:
1. the significance criteria or threshold, if any, used to evaluate each question; and
 2. the mitigation measure identified, if any, to reduce the impact to less than significant.
- F. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g. general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- G. A question has been added at the end of each environmental topic area asking, “Would the project exceed an applicable LRDP/Program EIR standard of significance?” This question is a placeholder for a campus to insert campus specific questions or information relating to their LRDP or program EIR in that topic.

Response Column Heading Definitions

- A. **Potentially Significant Impact** is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
- B. **Less than Significant with Mitigation Incorporated** applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant level (mitigation measures from earlier analyses may be cross-referenced).
- C. **Impact for which LRDP/Program EIR is Sufficient** applies where the impacts of the project were adequately addressed and mitigated to the extent feasible in a certified Long Range Development Plan EIR or in a Program EIR. (See also Tiering section below).
- D. **Less Than Significant Impact** applies where the project creates no significant impacts; or only Less than Significant impacts.
- E. **No Impact** applies where a project does not create an impact in that category. “No Impact” answers do not require an explanation if they are adequately supported by the information sources cited by the lead agency which show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault

rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project will not expose sensitive receptors to pollutants, based on a project specific screening analysis).

Tiering

A. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case a brief discussion should identify the following:

1. Earlier Analysis Used. Identify and state where they are available for review.
2. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to measures based on the earlier analysis.
3. Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
4. The column labeled “Impact for which LRDP/Program EIR is Sufficient” is meant to be used in the following situations:
 - a) The LRDP EIR found the impact to be less than significant for all projects, including this project, assuming implementation of applicable LRDP EIR mitigation measures.
 - b) The LRDP EIR concluded that the impact would be significant for some projects, but would not be significant for the project under review.
 - c) The impact is significant on a cumulative but not a project level, and the LRDP EIR fully addressed the cumulative impact, or
 - d) The impact is significant and unavoidable on a project level, but the LRDP EIR contained an adequate project-level analysis for the impact. This conclusion may also be appropriate where the particular impact and associated mitigation measures are sufficiently generic so that no further analysis is necessary or appropriate (i.e. the LRDP EIR contains all of the analysis that reasonably could be included on the topic with respect to all projects generally, including the project), and where no additional mitigation is feasible.

The guidance set forth in UC CEQA Guidelines 15152 (Tiering) should also be considered in making this determination. Where this column of the checklist is selected, an explanation of the basis for doing so should be included in the discussion. The discussion should also state briefly why the criteria for supplemental environmental review under CEQA section 21166 (project changes, changed circumstances and/or new information) have not been triggered.

1. AESTHETICS

LRDP EIR, as amended:

The following relevant impacts to visual quality and aesthetics have been anticipated and analyzed pursuant to CEQA, as part of the programmatic LRDP EIR, as amended, from which this analysis is tiered:

Impact III-F-1: Continued implementation of the 1987 LRDP will result in a change to the visual quality of LBNL and the surrounding environs.

Impact III-F-2: Some LBNL projects may be visible because trees, which would have screened the building, have been removed and replacement landscaping will take sometime to reach full height.

As a result of anticipated impacts to visual quality, the following mitigation measures, adopted as part of the LRDP EIR, as amended, are already required for the proposed project, and are therefore incorporated as part of the proposed project’s description:

Mitigation Measure III-F-1a: Buildings will occupy as limited a footprint as feasible. They will incorporate features that enhance flexibility and future versatility.

Mitigation Measure III-F-1b: Buildings will be planned to blend with their surroundings and be appropriately landscaped. Planned objectives will be for new buildings to retain and enhance long-distance view corridors and not to compromise views from existing homes. New buildings will generally be low-rise construction.

Mitigation Measure III-F-2: Any new facilities will not use reflective exterior wall materials or reflective glass, to mitigate the potential impacts of light and glare.

Mitigation Measure III-D-2a: Revegetation of disturbed areas, including slope stabilization sites, using native shrubs, trees, and grasses will be included as part of all new projects.

Mitigation Measure III-G-2: Buildings proposed for development at LBNL will follow the design guidelines contained in the LBNL LRDP, as amended.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
1. AESTHETICS – Would the project:					
a) Have a substantial adverse effect on a scenic vista?				X	

The project area is located on the east side of Lawrence Road, between LBNL Buildings 2 and 54. The site slopes downward from east to west, towards Lawrence Road. Views of the project site and surroundings from various vantage points are determined by existing LBNL buildings, roadways, parking lots, and the relatively steep

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	Less Than Significant Impact	No Impact
<p>topography in the site vicinity. The predominant visual and scenic features from these vantage points are the San Francisco Bay and its coastlines, the Bay and Golden Gate Bridges, and the Oakland and San Francisco skylines.</p> <p>Currently, three structures occupy the site, including Buildings 29A, 29B and 29C. Each of these is a vacant, modular, trailer-type unit that is one-story in height, unoccupied, and dilapidated. Building 29A is scheduled to be removed in July 2007 as part of a separate DOE Decommissioning Project. Buildings 29 B and C have also been identified by LBNL for removal from the site in the near future, however the timeline for removal is not yet confirmed. Aside from these structures, the site is undeveloped with the exception of a small asphalt parking area on the northeast portion of the site and a cement stairwell on the western portion of the site. Existing site conditions are illustrated in Figures 4-7.</p> <p>The Guest House would be 4-stories and 35-feet on average on its western face. Because the building would be terraced into the hillside, the eastern face would be approximately 2 ½ stories and 25-30 feet in height. The Guest House would therefore be higher in elevation and larger in mass than the 15-foot Buildings 29A, B, and C. The elevation and mass of the proposed Guest House is illustrated in Figures 8-12. Views to the west from locations immediately east of the project site would be obstructed by the proposed building, however due to the terraced approach and reduced elevation on the eastern side of the Guest House, the effect on scenic vistas would not be significant. A limited range of viewpoints on the eastern side of the Guest House would loose views to the west.</p> <p>The Guest House would be visible from some vantage points to the west where Buildings 29A, B, and C are not currently visible due to their lesser massing and height. Although this would result in a permanent change to the visual setting from such viewpoints, this would not represent a significant adverse change as views of the Berkeley Hills and ridgeline would remain intact. The Berkeley Hills and ridgeline are the predominant natural features contributing to potentially scenic vistas from points west of the site and the larger LBNL campus. In addition, the project site is located in a portion of the LBNL campus that is already heavily developed with other structures and supporting infrastructure (i.e. roadways and parking lots). The project would therefore not substantially alter the existing visual setting of the site and its surroundings. As a result, the project would have a <i>less-than-significant</i> impact on scenic vistas.</p>					
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?					X
<p>The proposed project is located in a portion of the LBNL campus serviced by two-lane roads that provide access to the entire LBNL property. There are no scenic highways located in the vicinity of the proposed project.¹⁸ Thus, <i>no impact</i> to scenic resources within a State scenic highway would occur.</p>					
c) Substantially degrade the existing visual character or quality of the site and its					

¹⁸ California Department of Transportation. Officially Designated State Scenic Highways. <http://www.dot.ca.gov/hq/LandArch/scenic/schwy1.html>. Accessed February 22, 2007.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	Less Than Significant Impact	No Impact
surroundings?				X	
<p>The project site is bordered to the northeast by a surface parking lot and LBNL Building 2, which is a four-story structure of fairly large massing that is terraced into the sloping hillside. Building 2 has an institutional appearance frequently associated with a campus setting. The area immediately to the south of the site is defined by the two-lane Lawrence Road and a parking lot. The area to the west of the site is defined by Lawrence Road and Building 54.</p> <p>The site itself is defined by Buildings 29A, 29B, and 29 C, ground-level ruderal vegetation, and a combination of Oregon White oak, cork oak, eucalyptus, and Monterrey pine trees on the southwestern portion of the site bordering Lawrence Road. As described in response to criteria a) of this section, Buildings 29 A, B, and C are brown, single-story, modular units that are vacant.</p> <p>The proposed Guest House would introduce a more modern design amongst adjacent buildings that have been in existence for several years. In addition, the project would result in the loss of ruderal (ground-level) vegetation and four mature trees on the site. While the project would change the overall visual character of the project area, it would not degrade the character of the site and its surroundings or disrupt the overall visual context of the project site or surrounding area. Rather, the project would introduce greater visual continuity over existing visual conditions and in the process, construct a modern structure that would be a visual improvement over the vacant, modular trailer units that currently occupy the site. Furthermore, the majority of mature trees on-site would be maintained and through the implementation of Mitigation Measure III-D-2a from the 1987 LRDP, as amended, new vegetation would be planted on-site following construction to soften the appearance of the new Guest House and to reduce the effect of visual change associated with the removal of ground-level vegetation and four trees. Lastly, through implementation of Mitigation Measure III-G-2 from the 1987 LRDP EIR, as amended, the project design would adhere to the LBNL design guidelines in the 1987 LRDP.</p> <p>Although the project would result in a visual change in relation to existing conditions, it would not substantially degrade the existing visual character or quality of the site and its surroundings. Therefore, the project would result in a <i>less than significant</i> impact.</p>					
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X	
<p>The project would include the minimum number of exterior lighting sources necessary to ensure the safety and security of residents; on-site, overhead lighting would be downward facing and focused on intended locations through the use of hoods.¹⁹ Furthermore, implementation of Mitigation Measure III-F-2 from the 1987 LRDP, as amended, would ensure minimization of reflective building surfaces (roof and glass siding) that have the potential to cause substantial increases in light or glare. As a result, potential impacts from increased light and glare would be <i>less than significant</i>.</p>					

¹⁹ Personal communication with Kirk Haley of LBNL, March 5, 2007.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
e) Exceed an applicable LRDP or Program EIR standard of significance?					X
<p>The applicable standards of significance from the LRDP Program EIR, as amended, are adequately addressed through the responses included in the checklist above. With the implementation of the 1987 LRDP EIR mitigation measures, the proposed project would not exceed the Standards of Significance identified in the LRDP EIR, as amended.</p>					

Summary of Impacts and Mitigation Measures:

Potentially significant impacts not mitigated by 1987 LRDP EIR, as amended, mitigation measures or LBNL Standard Operating Procedures: None.

The proposed project would incorporate the following 1987 LRDP EIR, as amended, Mitigation Measures III-F-1a, III-F-1b, III-F-2, III-D-2a, and III-G-2.

GH Project-Specific Mitigation Measures: None.

2. AGRICULTURAL RESOURCES

LRDP EIR, as amended:

The LRDP EIR, as amended, did not identify any potential impacts to agricultural resources.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
<p>2. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:</p>					

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
a) 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?					X
<p><i>No impact</i> to agricultural resources would occur, as farmland and agricultural uses do not exist on the proposed project site or in its immediate vicinity.²⁰</p>					
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?					X
<p>The project would not involve or affect any land zoned for agricultural uses or any land currently under Williamson Act contracts. Thus, <i>no impact</i> would occur.</p>					
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?					X
<p>The project would not result in other changes to the existing environment that could result in the conversion of farmland to non-agricultural uses.²¹ Thus, <i>no impact</i> would occur.</p>					
d) Exceed an applicable LRDP or Program EIR standard of significance?					X
<p>The applicable standards of significance from the LRDP Program EIR, as amended, are adequately addressed through the responses included in the checklist above. The proposed project would not exceed an agricultural standard of significance established by the programmatic 1987 LRDP EIR, as amended. The project would not impact agricultural resources and as a result, no project-specific mitigation measures would be required.</p>					

Summary of Impacts and Mitigation Measures:

Potentially significant impacts not mitigated by 1987 LRDP EIR, as amended, mitigation measures or LBNL Standard Operating Procedures: None.

GH Project-Specific Mitigation Measures: None.

²⁰ SEIR 1997 Addendum. Biological Resources. Page III-D-3.

²¹ SEIR 1997 Addendum. Biological Resources. Page III-D-3.

3. AIR QUALITY

LRDP EIR, as amended:

The LRDP EIR, as amended, uses significance thresholds established by the Bay Area Air Quality Management District (BAAQMD). These thresholds were current as of the last amendments to the LRDP (1992 and 1997). Two subsequent changes to the thresholds are the reduction for criteria pollutants reactive organic gases (ROG), oxides of Nitrogen (NO_x), and Particulate Matter₁₀ (PM₁₀) from 150 pounds-per-day to 80 pounds per-day and the addition of a 15 tons/year standard. The LRDP EIR, as amended, demonstrated in its 1997 Addendum that LBNL's collective emissions continue to fall below the new, more stringent standards.

The following relevant impacts to air quality were anticipated and analyzed pursuant to CEQA, as part of the programmatic LRDP EIR, as amended, from which this analysis is tiered:

Impact III-J-1: Construction of new facilities projected in the 1987 LRDP would generate short-term emissions of air pollutants.

Impact III-J-2: The proposed project (LRDP) at LBNL would generate long-term emissions of criteria air pollutants.

As a result of anticipated impacts to air quality, the following mitigation measures, adopted as part of the LRDP EIR, as amended, are already required for the proposed project, and are therefore incorporated as part of the proposed project's description:

Mitigation Measure III-J-1: Construction contract specifications would require that during construction exposed surfaces would be wetted twice daily or as needed to reduce dust emissions. In addition, contract specifications would require covering of excavated materials.

Mitigation Measure III-J-2: LBNL will design building ventilation systems to minimize emission of criteria air pollutants following compliance with all applicable regulatory requirements (e.g. New Source Review).

In addition, the following standard operating procedure is already required for the proposed project, and is therefore incorporated as part of the proposed project's description:

Safety Requirement Section 1.02(A): Subcontractors shall comply with the requirements of Bay Area Air Quality Management District (BAAQMD) Rules, Regulations, and Manual of Procedures, including CEQA Guidelines.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
3. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied					

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
upon to make the following determinations. Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?					X

The *Bay Area 2005 Ozone Strategy*²² is the most recently approved regional Clean Air Plan. It was adopted in January 2006 to address the more stringent requirements of the California Clean Air Act with respect to ozone. This plan includes a comprehensive strategy to reduce emissions from stationary, area, and mobile sources that contribute to ozone formation in the region. Many of these measures are effective in reducing PM₁₀ and PM_{2.5}. The region is not required to have plans for reducing PM₁₀ or PM_{2.5}. However, SB656, required the BAAQMD to review rules adopted by other air pollution control districts in the State and develop an implementation plan for adopting newer rules that would reduce PM₁₀ and PM_{2.5}. The pollution control districts were required to develop implementation schedules by July 31, 2005.²³ The implementation schedules identify a subset of measures from the list that are appropriate to the nature and severity of the PM problem within particular air districts. Air districts are currently working on the evaluation and adoption of these measures. The implementation of these measures, combined with Air Resource Board's (ARB's) ongoing programs, will ensure progress in reducing public exposure to PM and bring the air districts closer to attainment of the State and federal standards. By January 1, 2009, the ARB will prepare a report identifying steps taken to meet the requirements of the legislation as well as recommendations for additional actions to assist in achieving the State PM standards.²⁴

As explained in the project description, the project would provide temporary accommodations for up to a maximum of 70 people on the LBNL campus where no such accommodations currently exist. However, based on the expected average occupancy (75 percent of maximum capacity), it is assumed that 59 people would occupy the Guest House at any one time (53 guests and an average of six staff). This change is not expected to substantially increase the number of vehicle trips to and from the LBNL campus. It is anticipated that most, if not all, of the people who stay at the Guest House would already visit LBNL for work and specialized research functions whether or not the Guest House existed. Furthermore, whereas many visitors to LBNL must currently seek accommodations at off-site lodging facilities, the Guest House would provide an on-site option, thereby likely reducing the need for vehicle trips to and from the LBNL campus. Lastly, guests who are staying at the Guest House would have the option of using LBNL's complementary shuttle for trips from the campus to multiple destinations in downtown Berkeley, including the BART station.

As a result, the project would not trigger a substantial increase in vehicle miles traveled, which could conflict with or obstruct implementation of the *Bay Area 2005 Ozone Strategy*. Furthermore, as discussed in response to other criteria within this section, the construction and operation of the Guest House would not significantly impact air quality. As a result, the project would not conflict with regional clean air plan efforts and a *less-than-significant* impact would occur.

²² *Bay Area 2005 Ozone Strategy*, Metropolitan Transportation Commission, Bay Area Air Quality Management District, and Association of Bay Area Governments, January 4, 2006.

²³ California Air Resources Board, Implementation of Senate Bill 656 Fact Sheet, http://www.baaqmd.gov/pln/pm/sb656_fact_sheet.pdf, accessed on April 6, 2007.

²⁴ California Air Resources Board, ARB and Air District Measures to Reduce PM website, <http://www.arb.ca.gov/pm/pmmeasures/pmmeasures.htm>, accessed on April 6, 2007.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?				X	

Construction Phase

Dust would be generated during project demolition and construction activities. Most of the dust would result during demolition and site grading activities. The amount of dust generated would be based on the size of the area disturbed (approximately 15,000 square feet), amount of activity, soil conditions and meteorological conditions.²⁵ Although demolition and construction activities would be temporary, they would have the potential to cause both nuisance and air quality impacts. PM₁₀ is the pollutant of greatest concern associated with dust. If uncontrolled, PM₁₀ levels downwind of actively disturbed areas could possibly exceed State standards. In addition, dust fall on adjacent properties could be a nuisance. If uncontrolled, dust generated by demolition and site preparation activities represents a potentially significant impact. As discussed below, the project includes implementation of LRDP EIR Mitigation Measure III-J-1 and Provision A (14) in Section 1.02 of LBNL's Safety Requirements to address these potentially significant impacts. With implementation of Mitigation Measure III-J-1 from the 1987 LRDP EIR, as amended, and LBNL's Safety Requirement A (14) in Section 1.02 for subcontractors, as part of the project, these potential impacts would be less than significant.

Construction equipment along with associated heavy-duty truck traffic produces diesel exhaust, which is a known Toxic Air Contaminant (TAC), which are primary sources of PM₁₀ and PM_{2.5}. In addition, off-road construction equipment is a source of nitrogen oxides that can contribute to regional ozone formation. Demolition and construction for this project would involve the use of diesel-powered equipment and heavy-duty trucks. The BAAQMD has not developed any procedures or guidelines for quantifying these impacts from temporary construction activities where emissions are transient. They are typically evaluated for stationary sources (e.g. large compression ignition engines such as generators) in health risk assessments over the course of lifetime exposures (i.e. 24 hours per day over 70 years). Diesel exhaust may pose both a health and nuisance impact to nearby receptors.

The BAAQMD considers any impacts associated with construction that implement appropriate mitigation measures as less than significant.²⁶ Construction activities for this project would comply with Mitigation Measure III-J-1 in the 1987 LRDP EIR, as amended with regard to fugitive dust control measures. In addition, the construction contract for this project would include Provision A (14) in Section 1.02 of LBNL's Safety Requirements, which requires that contractors comply with Bay Area Air Quality Management District (BAAQMD) Rules, Regulations and Manual of Procedures, including CEQA Guidelines. This provision would require that contractors implement appropriate PM₁₀ control measures, which are listed in the December, 1999 BAAQMD CEQA Guidelines.

Specific control measures listed in the Guidelines that would be implemented during project construction would include the following:

²⁵ As explained in the Project Description, the footprint of the Guest House would be approximately 8,000 square feet. It is assumed that an additional 7,000 square feet would be disturbed for project-related activities such as utility trenching.

²⁶ Bay Area Air Quality Management District. 1996. BAAQMD CEQA Guidelines: Assessing the Air Quality Impacts of Projects and Plans, revised December 1999.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	Less Than Significant Impact	No Impact
<ol style="list-style-type: none"> 1. Apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites. 2. Cover all trucks hauling soil, sand, and other loose materials <i>or</i> require all trucks to maintain at least two feet of freeboard 3. Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites. 4. Sweep streets as necessary (with water sweepers) if visible soil material is carried onto adjacent public streets. 5. Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more). 6. Limit traffic speeds on unpaved roads to 15 mph. 7. Replant vegetation in disturbed areas as quickly as possible. <p>Because this project would include implementation of Mitigation Measure III-J-1 from the 1987 LRDP EIR, as amended, and compliance with the BAAQMD CEQA Guidelines, as provided in Provision A (14) in Section 1.02 of LBNL's Safety Requirements for subcontractors, potential construction period impacts on air quality would be <i>less than significant</i>.</p> <p><u>Operational Phase</u></p> <p>Table 2 of the BAAQMD CEQA Guidelines, as shown below in Table AIR-1, includes quantitative thresholds for operational period emissions. Operation of the Guest House would have a significant impact on air quality if the combined emissions exceeded the thresholds for any of the criteria pollutants (ROG, NO_x, PM₁₀). Operational emissions from the Guest House would be those associated with vehicle trips, the operation of interior heating, air conditioning, and laundry equipment, and maintenance and upkeep of the Guest House building and grounds. The interior systems that would require ventilation to the outside are discussed in the project description. While these factors would collectively contribute to emissions of each of the criteria pollutants, staff from LBNL's Environment, Health, and Safety Division determined that the types and aggregate volumes of emissions generated by the Guest House during its operation would not approach or exceed the pounds/day threshold identified in Table AIR-1 below.²⁷</p> <p>This conclusion is supported by a review of the Project Screening section in the BAAQMD CEQA Guidelines. Table 6 in this section identifies the size of different projects likely to generate 80/lb day of NO_x. For a hotel facility, which is comparable to the nature of the proposed Guest House, a project would need to include 460 guest rooms to approach or exceed the 80/lb day threshold, which is 87 percent more rooms than the 60 rooms proposed for the Guest House. Furthermore, based on consultation with the Air Quality Management District, the threshold for NO_x is the most likely of the three criteria pollutants to be exceeded first. Threshold levels for ROG and PM₁₀ are generally less likely to be exceeded.²⁸</p>					

²⁷ Personal communication with Patrick Thorson, LBNL Environment, Health, and Safety Division, March 21, 2007.

²⁸ Greg Tholen, Senior Environmental Planner, Bay Area Air Quality Management District, personal communication with DC&E, April 26, 2007.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact								
<p>Table AIR-1 – BAAQMD Operational Emission Thresholds</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Pounds Per Day Threshold</th> </tr> </thead> <tbody> <tr> <td>Reactive Organic Gases (ROG_y)</td> <td>80</td> </tr> <tr> <td>Nitrogen Oxide (NO_x)</td> <td>80</td> </tr> <tr> <td>Particulate Matter ₁₀ (PM₁₀)</td> <td>80</td> </tr> </tbody> </table> <p>Source: BAAQMD CEQA Guidelines, Table 3, Page 16.</p> <p>As a result, operation of the Guest House would have a <i>less-than-significant</i> impact on air quality.</p>						Pollutant	Pounds Per Day Threshold	Reactive Organic Gases (ROG _y)	80	Nitrogen Oxide (NO _x)	80	Particulate Matter ₁₀ (PM ₁₀)	80
Pollutant	Pounds Per Day Threshold												
Reactive Organic Gases (ROG _y)	80												
Nitrogen Oxide (NO _x)	80												
Particulate Matter ₁₀ (PM ₁₀)	80												
c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				X									
<p><u>Construction Phase</u></p> <p>The BAAQMD does not have quantitative thresholds for judging the significance of construction-period emissions. The application of reasonable control measures to reduce emissions is used to judge project impacts. Adherence to BAAQMD-recommended control measures identified in response to criteria b) above would be sufficient to reduce the impact of these emissions to a less-than-significant level. As a result, the project would not result in a cumulatively considerable net increase of any criteria pollutant during construction. A <i>less-than-significant</i> impact would occur.</p> <p><u>Operational Phase</u></p> <p>The proposed project would not result in a cumulatively considerable net increase in any criteria pollutant, for which the project region is in non-attainment (federal and State ozone and State PM₁₀ and PM_{2.5}.) Criteria pollutants from operational activities at the project site would be well below the quantitative thresholds of significance set by the BAAQMD. Operational emissions from the Guest House would be those associated with vehicle trips, the operation of interior heating, air conditioning, and laundry equipment, and maintenance and upkeep of the Guest House building and grounds.²⁹ Daily or annual emissions would be negligible in relation to the applicable thresholds. Therefore, the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the region is in non-attainment. As a result, a <i>less-than-significant</i> impact would occur.</p>													
d) Expose sensitive receptors to substantial pollutant concentrations?				X									

²⁹ Personal communication with Kirk Haley of LBNL, March 5, 2007.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	Less Than Significant Impact	No Impact
<p><u>Construction Phase</u></p> <p>With implementation of BAAQMD-recommended control measures as part of the project, impacts to sensitive receptors during construction would be <i>less than significant</i>. For additional information on the control measures, please refer to the response provided for Air Quality criteria b) above.</p> <p><u>Operational Phase</u></p> <p>Neither the project itself nor adjacent uses would generate pollutants at substantial concentrations or durations, and it is not expected that sensitive receptors within the vicinity of the project site would be adversely affected by exposure to substantial or even measurable pollutant concentrations. The project would include some stationary sources of air pollutants, including vents at locations on the building's exterior where emissions would be expelled. The vents would be designed and located so as to avoid impacts on adjacent receptors.³⁰ These types of sources are regulated by the BAAQMD. The BAAQMD typically considers permitted sources of air pollution such as these, or exempt sources, to have less than significant air quality impacts. Thus, the project would have a <i>less-than-significant</i> impact.</p>					
e) Create objectionable odors affecting a substantial number of people?					X
<p>The proposed project consists of the construction of a Guest House facility. During operation, the project may include some stationary sources of air pollutants (e.g. natural gas combustion boilers or emergency generators) at levels that would be negligible. This would not consist of any activities during the construction or operation periods that would produce objectionable odors that would affect a substantial number of people. As a result, <i>no impact</i> would occur.</p>					
f) Exceed an applicable LRDP or Program EIR standard of significance?				X	
<p>The applicable standard of significance from the LRDP EIR, as amended, is an 80 pounds per day and 15 tons per year threshold for reactive organic gases (ROG), oxides of Nitrogen (NO_x), and PM₁₀. As explained through the checklist discussion above, with the implementation of standard operating procedures (SOPs) and mitigation measures identified in the 1987 LRDP EIR, as amended, the proposed project would not exceed the Standards of Significance identified in the 1987 LRDP EIR, as amended. The framework that ensures that the specified SOPs are implemented during the project is explained above in the project description.</p>					

Summary of Impacts and Mitigation Measures:

Potentially significant impacts not mitigated by 1987 LRDP EIR, as amended, mitigation measures or LBNL Standard Operating Procedures: None

³⁰ Personal communication with Kirk Haley of LBNL, March 5, 2007.

The proposed project would incorporate the following 1987 LRDP EIR, as amended, Mitigation Measures and LBNL Standard Operating Procedures: Mitigation Measures: III-J-1 and III-J-2. Operating Procedures: Safety Requirement Section 1.02(A).

GH Project-Specific Mitigation Measures: None.

4. BIOLOGICAL RESOURCES

LRDP EIR, as amended:

The following relevant impacts to biological resources have been anticipated and analyzed pursuant to CEQA, as part of the programmatic LRDP EIR, as amended, from which the present analysis is tiered:

Impact III-D-1: Continued University operation of LBNL, including continued implementation of the 1987 LRDP, is not expected to restrict the number or reduce the range of any rare, endangered, or threatened plant or animal species, or to cause existing fish or wildlife populations to drop below self-sustaining levels.

Impact III-D-2: Continued University operation of LBNL, including continued implementation of the LRDP, will result in the loss of some vegetation, including potential loss of mature trees and areas with some habitat for non-critical species.

As a result of anticipated impacts to biological resources, the following mitigation measures, adopted as part of the LRDP EIR, as amended, are already required for the proposed project, and are therefore incorporated as part of the proposed project's description:

Mitigation Measure III-D-2a: Revegetation of disturbed areas, including slope stabilization sites, using native shrubs, trees, and grasses will be included as a part of all new projects.

Mitigation Measure III-D-2b: Invasion of opportunistic colonizer trees and shrubs will be controlled. A maintenance program for controlling further establishment of eucalyptus, green wattle acacia, French broom, cotoneaster, and other opportunistic colonizer shrubs and trees in disturbed areas on-site will be undertaken. Herbicides will not be used for this purpose.

Mitigation Measure III-D-2c: Removal of native trees and shrubs will be minimized. (To the greatest extent possible, the removal of large coast live oak, California bay, and Monterey pine trees will be avoided.)

Mitigation Measure III-D-2f: Periodic monitoring of disturbed areas, fill slopes, and other areas of exposed soil treated under the revegetation program will be conducted and fixed.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
4. BIOLOGICAL RESOURCES – Would the project:					
a) 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?				X	

Roosting Bats: Several of the oak trees on-site contain cavities approximately 1-2 inches in diameter that may provide suitable roosting habitat for individuals of several species of bats, including pallid bat (*Antrozous pallidus*), fringed myotis (*Myotis thysanodes*) and long-eared myotis (*Myotis evotis*). Both the two Oregon white oaks to be removed and the 14 oaks to be retained on-site contain cavities that could be used by bats for roosting. The 14 existing oaks on the site that would be retained include nine Oregon white oaks and five cork oaks.³¹

Pre-construction surveys are not required for construction activities scheduled to occur during the non-breeding season (September 1-February 28). The breeding season is March 1 through August 31. Furthermore, construction activities commencing during the non-breeding season and continuing into the breeding season do not require surveys (as it is assumed that any bats taking up roosts would be acclimated to project-related activities already under way). As explained in the project description, Guest House project construction would start in October 2007, which is during the non-breeding season and continue into the breeding season.³² Furthermore, bat roosts initiated during construction would be presumed to be unaffected by the activity and a buffer would not be necessary. As a result, impacts to roosting bat species would be *less than significant*.

Nesting Birds: The proposed project would result in the removal of two Oregon white oak trees and two eucalyptus trees. Several bird species, including Bewick’s wren (*Thryomanes bewickii*), Pacific slope flycatchers (*Empidonax difficilis*), oak titmouse (*Baelophus inornatus*), and white-breasted nuthatches (*Sitta carolinensis*) among others, may use the cavities in the oaks present on the site. Consequently, impacts to nesting, special status avian species could also result if trees used for nesting are removed or trimmed during the nesting season.

Pre-construction surveys are not required for construction activities scheduled to occur during the non-breeding season (August 1 through January 31). Construction activities commencing during the non-breeding season and continuing into the breeding season do not require surveys (as it is assumed that any breeding birds taking up nests would be acclimated to project-related activities already under way). Furthermore, nests initiated during construction would be presumed to be unaffected by the activity and a buffer zone around such nests would not be necessary.³³ As a result, impacts to nesting bird species would be *less than significant*.

³¹ Wildlife Research Associates, personal communication with DC&E, April 26, 2007.

³² The data and conclusions related to Roosting Bats is based on analysis completed by Environmental Science Associates (ESA) in association with the 2006 Draft LRDP EIR. The data and conclusions were reviewed and supported by Wildlife Research Associates through a peer review completed in March 2007.

³³ The data and conclusions related to Nesting Birds is based on analysis completed by Environmental Science Associates (ESA) in association with the 2006 Draft LRDP EIR. The data and conclusions were reviewed and supported by Wildlife Research Associates through a peer review

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	Less Than Significant Impact	No Impact
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Alameda Whipsnake: Alameda whipsnake (AWS) is State- and federally-listed as a threatened species. Swaim Biological, Inc. completed a Whipsnake Habitat Assessment in July 2006 for the entire LBNL campus. The Assessment identifies three types of areas on the LBNL site, each with varying potential to support occurrences of Alameda Whipsnake (AWS). The Guest House project site is within an area that has the lowest potential for supporting AWS species and the site is not immediately surrounded by any areas that are more likely to support occurrences of the species. Furthermore, based on the most recent USFWS determination of Proposed Critical Habitat for the Alameda Whipsnake (October 18, 2005), the Guest House project site does not overlap with or immediately border the area designated as critical habitat.³⁴ As a result, *no impact* to AWS would occur.

Special Status Plants: Based on research and site surveys completed by Environmental Science Associates as part of the 2006 LRDP Draft EIR, a total of 21 special status plant species have a moderate potential to occur on the LBNL campus. Of these 21 species, five are plant species that require specialized habitats (for example, big-scale balsamroot occurs in woodlands and grasslands on serpentine soils). Although no special-status plants have been observed within the LBNL property during floristic surveys conducted between 1992 and 2003, several species have potential to occur within the woodland and grassland habitats on the LBNL campus. Based on field work completed by Environmental Science Associates as part of the 2006 LRDP Draft EIR, the northern portion of the LBNL campus is defined by grassland habitat and the main portion of the LBNL site is defined by a eucalyptus stand.³⁵

Table BIO-1 identifies the special status plant species that may potentially occur on the LBNL campus and their habitats:

Table BIO-1: Special Status Plant Species With Potential to Occur on LBNL Campus

Species	Period of Identification	Habitat
Big-scale balsamroot	March–June	woodland and grasslands
Diablo helianthella	April–June	woodland, scrub, grasslands
Large-flowered linanthus	April–August	woodland, scrub, grasslands
Oregon meconella	March–April	scrub
Robust monardella	June–July	coastal prairie, scrub, grasslands

Source: Environmental Science Associates.

Based on a single, day-time plant survey completed by certified botanist, Jane Valerius, on April 11, 2007, none of the above listed species or any other special-status plant species were identified as occurring on the site nor did the habitat supportive of such species exist.³⁶ This survey was conducted during the time when all of the potentially occurring special-status species would have been detected, either by flowers or growth.

completed in March 2007.

³⁴ Alameda Whipsnake Habitat Assessment completed for LBNL by Swaim Biological, Inc. July 10, 2006.

³⁵ Environmental Science Associates, Lawrence Berkeley National Laboratory 2006 Long-Range Development Plan Draft Environmental Impact Report. January 22, 2007.

³⁶ CEQA Guidelines Appendix G Checklist, Biological Resources Section (revised). Completed by Wildlife Research Associates, submitted to DC&E on April 19, 2007.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
b) 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 US Fish and Wildlife Service?					X
<p>The proposed project site is partially developed, contains little land that hasn't been previously disturbed and lacks natural surface water bodies. Disturbance in the past has eliminated most native vegetative cover on the project site. Based on the field reconnaissance conducted in February 2007 by Wildlife Research Associates, the proposed project site does not contain any riparian habitats, native grasslands, or other sensitive natural communities.³⁷ Thus, <i>no impact</i> would occur.</p>					
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?					X
<p>Based on the results of the field reconnaissance survey conducted in February 2007 by Wildlife Research Associates, the proposed project site does not contain any state or federal jurisdictional wetlands, vernal pools or streams or such habitats.³⁸ <i>No impact</i> to such resources would occur.</p>					
d) 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?				X	
<p>The project would be constructed on a site located within a highly developed portion of the LBNL campus that does not contain any natural waterbodies. It is not expected that the project would substantially interfere with the movement of any resident or migratory wildlife species because the project site is either already developed or previously disturbed or is surrounded by other existing development, roads, and parking lots. Movement corridors for common species of wildlife may be temporarily impacted during the construction phase, but movement corridors within the area can resume after construction.³⁹ As a result, the project's impact on the movement, movement</p>					

³⁷ CEQA Guidelines Appendix G Checklist, Biological Resources Section. Completed by Wildlife Research Associates, submitted to DC&E on January 31, 2007.

³⁸ CEQA Guidelines Appendix G Checklist, Biological Resources Section. Completed by Wildlife Research Associates, submitted to DC&E on January 31, 2007.

³⁹ CEQA Guidelines Appendix G Checklist, Biological Resources Section. Completed by Wildlife Research Associates, submitted to DC&E on January 31, 2007.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
corridors, or nursery sites of any wildlife species would be <i>less than significant</i> .					
e) Conflict with any local applicable policies protecting biological resources?				X	
<p>LBNL is a federal facility operated by UC and conducting work within UC's mission and as such is generally exempted by the federal and state constitutions from compliance with local land use regulations. However, LBNL seeks to cooperate with local jurisdictions to reduce any physical consequences of potential land use conflicts to the extent feasible.</p> <p>Local plans that are relevant to the management and protection of biological resources include the Berkeley General Plan, the City of Berkeley Coast Live Oak Removal Ordinance, the City of Berkeley Creek Ordinance, the Oakland General Plan, the City of Oakland Tree Ordinance, the City of Oakland Creek Ordinance, the UC Berkeley Strawberry Creek Management Plan, and the UC Berkeley Management Plan for Strawberry and Claremont Canyons.</p> <p>The plans that are most relevant to this project include the City of Berkeley Coast Live Oak Removal Ordinance and UC Berkeley Strawberry Creek Management Plan.</p> <p>The City of Berkeley's Coast Live Oak Removal Ordinance "<i>prohibits the removal of any single-stem coast live oak with a circumference of 18 inches or greater, as measured at a distance of 4 feet above ground level, and the removal of any multi-stemmed coast live oak with an aggregate circumference of 26 inches or greater.</i>" Exceptions may be made if the tree poses a danger to people and/or property and the only reasonable solution is tree removal.</p> <p>The majority of the approximately 21 trees on the site are Oregon white oak (<i>Quercus garryana</i>). Five cork oak (<i>Quercus suber</i>) trees, two Monterey pine (<i>Pinus radiata</i>), and several large eucalyptus trees also occur on the western portion of the site.⁴⁰</p> <p>The four trees on the site identified to be removed include two eucalyptus trees and two Oregon white oaks that range in diameter at breast height (dbh) between 12 inches and 40 inches. The Oregon white oaks to be removed have dbh of 12 and 18 inches. The eucalyptus trees to be removed have a dbh of 35 and 40 inches. Dbh is defined as 4.5 feet above the ground surface.⁴¹</p> <p>Removal of these trees would not conflict with the City's Ordinance because they are not coast live oaks. Several coast live oak saplings and seedlings occur on the western slope near Lawrence Road, however these are outside the proposed project footprint. Furthermore, none of these are protected under Berkeley's Coast Live Oak Removal Ordinance, which only protects species with a dbh of 18 inches or greater. All of these saplings and seedlings are smaller than 18 inches dbh.</p> <p>As discussed in the Hydrology and Water Quality section of the analysis, the project would not result in an adverse, downstream effect on water quality that could impact local water ways (i.e. Strawberry Creek), and thereby</p>					

⁴⁰ Wildlife Research Associates, 2007.

⁴¹ Biology On-Line.org website: http://www.biology-online.org/dictionary/Diameter_at_breast_height, accessed April 26, 2007.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
<p>possibly impact aquatic species. Thus, no conflict with the UC Berkeley Strawberry Creek Management Plan would occur and no impacts are anticipated.</p> <p>As a result, a <i>less-than-significant</i> impact would occur in relation to consistency with local plans.</p>					
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other applicable habitat conservation plan?					X
<p>The proposed project site is not located in an area of LBNL that falls under the jurisdiction of a Habitat Conservation Plan or a Natural Community Conservation Plan. The project site is located outside the Critical Habitat for Alameda whipsnake (<i>Masticophis lateralis euryxanthus</i>), as designated by the USFWS (USFWS 2006). A draft <i>Recovery Plan for Chaparral and Scrub Community Species East of San Francisco Bay, California</i> was prepared by the USFWS for public review and comment in 2003. The Plan includes a description and general policies for Recovery Unit 6 (Caldecott Tunnel Corridor), which includes portions of the LBNL campus but does extend over the Guest House project site. This Plan has not been formally adopted and it remains as a draft document. Because no conservation plans have been adopted which encompass the Guest House project site, <i>no impact</i> would occur.</p>					
g) Exceed an applicable LRDP or Program EIR standard of significance?		X			
<p>The applicable standards of significance from the LRDP Program EIR, as amended, are adequately addressed through the responses included in the checklist above. As noted in the discussion above, with the incorporation of the LRDP EIR, as amended, Mitigation Measures III-D-2a, 2b, 2c, 2d, and 2f as part of the proposed project, the proposed project would not exceed the Standard of Significance established for determining potential environmental effects to biological resources.</p>					

Summary of Impacts and Mitigation Measures:

Potentially significant impacts not mitigated by the 1987 LRDP EIR, as amended, mitigation measures or LBNL Standard Operating Procedures: Potential impacts to special status plant species.

The proposed project would incorporate the following 1987 LRDP EIR, as amended, Mitigation Measures: Mitigation Measures: III-2a, 2b, 2c, 2d, 2f.

GH Project-Specific Mitigation Measures: None.

5. CULTURAL RESOURCES

LRDP EIR, as amended:

The following relevant impacts to cultural resources have been anticipated and analyzed pursuant to CEQA, as part of the programmatic LRDP EIR, as amended, from which this analysis is tiered:

Impact III-E-1: Continued University operation of LBNL, including continued implementation of the 1987 LRDP, while resulting in removal of substandard buildings, is not expected to adversely impact any significant prehistoric, archaeological, or paleontological site, or any property of historic or cultural significance, other than the Laboratory itself.

As a result of anticipated impacts on cultural resources, the following standard operating procedures are required for the proposed project, and are therefore incorporated as part of the proposed project's description:

Archaeological Resources

In the event of a discovery of archaeological resources or human remains on the project site, project managers and project contractors shall comply with the provisions set forth in Sections 15064.5 (c) or (e) of the CEQA Guidelines, depending on the type of resource encountered.

In the event that an archaeological resource is discovered during project construction activities (e.g. excavation, grading), the following provisions of Section 15064.5 (c) of the CEQA Guidelines are to be followed.

- (1) A lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).
- (2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.
- (3) If an archaeological site does not meet the criteria defined in subdivision (a), but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c-f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.
- (4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

(d) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:

- (1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).

(2) The requirements of CEQA and the Coastal Act.

Human Remains

In the event that any human remains are discovered during project construction activities (e.g. excavation, grading), the following provisions of Section 15064.5 (e) of the CEQA Guidelines are to be followed.

(1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

(A) The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and

(B) If the coroner determines the remains to be Native American:

1. The coroner shall contact the Native American Heritage Commission within 24 hours.
2. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
3. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or

(2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.

(A) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.

(B) The descendant identified fails to make a recommendation; or

(C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	Less Than Significant Impact	No Impact
5. CULTURAL RESOURCES – Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?					X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
<p>There are no historical structures on the project site and there are no structures of historical significance adjacent to the site that would be adversely affected by the project.⁴² Therefore, <i>no impact</i> would occur.</p>					
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?				X	
<p>Based on a review of the 1987 LRDP EIR, as amended, there are no known archaeological resources located within the proposed project area.⁴³ In addition, as stated in Impact III-E-1 above, continued University operation of LBNL, including continued implementation of the 1987 LRDP, while resulting in removal of substandard buildings, is not expected to adversely impact any archaeological site. As a result, no impacts to archaeological resources are expected. However, in the unlikely event that archaeological artifacts are discovered during construction (including grading, excavation, and other earthmoving activities), compliance with the provisions of Section 15064.5 (c) of the CEQA Guidelines, which is included as part of the LBNL's standard operating procedures, shall be implemented.</p> <p>With implementation of this procedure as part of the project, the potential impact would be <i>less than significant</i>.</p>					
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?					X
<p>As stated in the 1987 LRDP EIR, as amended, it is not anticipated that paleontological resources would be encountered on-site during project construction.⁴⁴ In addition, as stated in Impact III-E-1 above, continued University operation of LBNL, including continued implementation of the 1987 LRDP, while resulting in removal of substandard buildings, is not expected to adversely impact any significant prehistoric site. As a result, <i>no impact</i> to paleontological resources is expected.</p>					
d) Disturb any human remains, including those interred outside of formal cemeteries?				X	
<p>Based on a review of the 1987 LRDP EIR, as amended, it is not anticipated that human remains would be encountered on-site during project construction.⁴⁵ In addition, as stated in Impact III-E-1 above, continued University operation of LBNL, including continued implementation of the 1987 LRDP, while resulting in removal of substandard buildings, is not expected to adversely impact any significant property of historic or cultural significance, other than the Laboratory itself. As a result, no impacts to human remains are expected. However, in the unlikely event that human remains are discovered during construction (including grading, excavation, and other earthmoving activities), compliance with the provisions of Section 15064.5 (e) of the CEQA Guidelines, which is</p>					

⁴² DSEIR for LBNL, Historical and Archaeological Resources Chapter, Page III-E-1, April 1992.

⁴³ DSEIR for LBNL, Historical and Archaeological Resources Chapter, Page III-E-1, April 1992.

⁴⁴ DSEIR for LBNL, Historical and Archaeological Resources Chapter, Page III-E-1, April 1992.

⁴⁵ DSEIR for LBNL, Historical and Archaeological Resources Chapter, Page III-E-1, April 1992.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
included as part of the LBNL's standard operating procedures, shall be implemented. Through implementation of this procedure as part of the project, the potential impact would be <i>less than significant</i> .					
e) Exceed an applicable LRDP or Program EIR standard of significance?				X	
The applicable standards of significance from the LRDP Program EIR, as amended, are adequately addressed through the responses included in the checklist above. As explained in the checklist discussion, through the implementation of standard operating procedures, the proposed project would not exceed the Standards of Significance identified in the LRDP EIR, as amended.					

Summary of Impacts and Mitigation Measures:

Potentially significant impacts not mitigated by 1987 LRDP EIR, as amended, mitigation measures or LBNL Standard Operating Procedures: None.

The proposed project would incorporate the following 1987 LRDP EIR, as amended, mitigation measures: None. Operating Procedures: In the event of a discovery of archaeological resources or human remains on the project site, project managers and project contractors shall comply with the provisions set forth in Sections 15064.5(c) or (e) of the CEQA Guidelines, depending on the type of resource encountered.

GH Project-Specific Mitigation Measures: None.

6. GEOLOGY AND SOILS

LRDP EIR, as amended:

The following relevant impacts, resulting from exposure to unstable geologic or soil conditions, have been anticipated and analyzed pursuant to CEQA, as part of the programmatic LRDP EIR, as amended, from which this analysis is tiered:

Impact III-B-1: There could be significant impacts on people or property due to continued operation and the development of LBNL facilities in areas susceptible to surface rupture. There may be potential adverse impacts to people and property at the site caused by groundshaking, landsliding, lurching, and differential compaction during a seismic event.

Impact III-B-2: Soil erosion, sedimentation and landsliding caused by construction work may adversely affect the stability of LBNL buildings placed on the site.

As a result of anticipated exposure to geologic and/or unstable soil conditions, the following mitigation measures, adopted as part of the LRDP EIR, as amended, are already required for the proposed project, and are therefore part of the proposed project’s description:

Mitigation Measure III-B-1: Geologic and soils studies will be undertaken during the design phase of each LBNL building project. Recommendations contained in those studies would be followed to ensure that the effects of landsliding, lurching, and liquefaction potential will not represent a significant adverse impact during a seismic event.

Mitigation Measure III-B-2a: Excavation and earth moving will be designed for stability, and accomplished during the dry season when feasible. Drainage will be arranged to minimize silting, erosion, and landsliding. Upon completion, all land will be restored, covering exposed earth with planting.

Mitigation Measure III-B-2b: Foundations for proposed structures will be designed in accordance with geologic and soils engineering recommendations to minimize the long-term possibilities of landslide.

Mitigation Measure III-B-2c: Excavations will be shored as required by law to preclude minor short-term landslides during construction.

Mitigation Measure III-B-2d: Revegetation of disturbed areas, including slope stabilization sites, using native shrubs, trees, and grasses will be included as part of all new projects.

In addition, the following standard operating procedure is already required for the proposed project, and is therefore incorporated as part of the proposed project’s description:

General Requirement Section, Part 1.03(A): Applicable provisions of Public Law 91-54, the Constitution and Laws of the State of California and the codes and regulations of the Department of Energy are hereby referred to and made a part of this Subcontract and all work performed shall be in accordance with such laws, regulations and the latest edition or supplement or amendment thereto in effect at the time of submittal of bid shall be considered to be the issue in effect (unless shown otherwise) of all applicable codes including, but not limited to, California Building Code (CBC).

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
6. GEOLOGY AND SOILS – Would the project:					
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) 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 California Geological Survey Special Publication 42.					X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	Less Than Significant Impact	No Impact
<p>The proposed project site is not located within an Earthquake Fault Zone as defined by the California Geologic Survey.⁴⁶ The project site is therefore is not susceptible to ground surface rupture during an earthquake. <i>No impact</i> would occur.</p>					
ii) Strong seismic ground shaking?				X	
<p>The proposed project site is located in a region that is prone to seismic events. Although not located along an active fault, the proposed project site could experience strong ground shaking during a seismic event. The nearest known fault is the Hayward fault, located approximately one kilometer west of the site. Moderate to major earthquakes generated on the Hayward fault can be expected to cause strong ground shaking at the site. In addition, strong ground shaking can be expected at the site as a result of moderate to major earthquakes generated on other faults in the region such as the Concord-Green Valley fault (20 km east of the site), the Calaveras fault (19.5 km east of the site), the San Andreas fault (30 km west of the site), and the Healdsburg-Rodgers Creek fault (26 km north of the site). The intensity of future shaking at the project site would depend on the distance between the site and the earthquake epicenter, the magnitude of the earthquake, and the response of the underlying soil and bedrock⁴⁷. It is reasonable to assume that during the life of the proposed project, it would be subjected to at least one moderate to severe earthquake that could produce potentially damaging ground shaking at the site.</p> <p>In accordance with Section 1.03 (A) (Codes) of LBNL's Facilities Master Specifications, General Requirements, the Guest House would be constructed in accordance with the provisions of the most current version of the California Building Code (CBC). Compliance with the 2001 CBC Geotechnical Parameters would ensure that potential impacts caused by strong seismic ground shaking are <i>less than significant</i>.</p>					
iii) Seismic-related ground failure, including liquefaction?				X	
<p>According to the United States Geologic Survey's (USGS) Liquefaction Hazard Map for Berkeley, the vicinity in which the project site is located is not designated as a Seismic Hazard Zone for liquefaction.⁴⁸ However, as discussed below in response to item c) of this section of the checklist, the Geotechnical Study determined that the fill that underlies the project site has medium to high expansion potential.⁴⁹</p> <p>Discussions with LBNL personnel indicated that backfilling a previous building pad and basement resulted in areas of fill on the site. Soil borings indicate that the eastern and northern portions of the site are blanketed with approximately 3 to 6 feet of fill. There is no documentation verifying placement, compaction, or uniformity of the fill. Therefore, there is potential that the forces of a seismic event could cause ground failure at the site, which could include, but may not be limited to, lurching or subsidence. As stated in the Geotechnical Study, foundations</p>					

⁴⁶ *Geotechnical Investigation Report, User Hostel Building, Lawrence Berkeley National Laboratory, Berkeley, California.* Kleinfelder, Inc., September 28, 2006.

⁴⁷ *Geotechnical Investigation Report, User Hostel Building, Lawrence Berkeley National Laboratory, Berkeley, California.* Kleinfelder, Inc., September 28, 2006.

⁴⁸ USGS Liquefaction Hazard Map for Berkeley. http://pubs.usgs.gov/of/2002/of02-296/of02-296_2liq-sg.pdf. Accessed March 6, 2007.

⁴⁹ *Geotechnical Investigation Report, User Hostel Building, Lawrence Berkeley National Laboratory, Berkeley, California.* Kleinfelder, Inc., September 28, 2006, page 4.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
<p>that are supported on undocumented fill should be considered generally unsuitable for the support of the Guest House.⁵⁰</p> <p>Consistent with Mitigation Measure III-B-1 from the 1987 LRDP EIR, as amended, LBNL sought consultation from a professional geotechnical firm, Kleinfelder, Inc. Kleinfelder completed a <i>Geotechnical Investigation Report</i> in September, 2006 to identify potential geological hazards on the project site and recommended measures that should be incorporated into the project to address these hazards. Recommendations set are forth in Chapter 5 of the report to address the potential for liquefaction and other seismic-related risks. The recommendations include, but are not limited to, the following:</p> <ol style="list-style-type: none"> (1) remove the undocumented fill on the site and other unstable native soils; (2) reinstall engineered fill beneath proposed buildings; and (3) spread engineered fill in thin lifts, moisture condition the fill to near optimum moisture content and compact the fill per the compaction standards in Table 1 of the September, 2006 <i>Geotechnical Investigation Report</i>.⁵¹ <p>Consistent with Mitigation Measure III-B-1, the lab will require contractors to follow these and other recommendations in the <i>Geotechnical Investigation Report</i> during final design and construction of the Guest House. Through adherence to these measures, potential impacts related to seismic-induced ground failure, including liquefaction, would be <i>less than significant</i>.</p>					
iv) Landslides?				X	
<p>According to the USGS’s Seismic Landslide Hazard Map for the City of Berkeley, the area in which the proposed project site is located has a “Moderate to Very High” probability for experiencing landslides during a seismic event.⁵² In addition, the official California Geologic Survey map for this area shows the nearest earthquake-induced land sliding zones to be on the opposite side of Lawrence Road to the south and west of the Guest House site.⁵³</p> <p>Potential landslide impacts during the construction phase would be less than significant through implementation of mitigation measures III-B-2a and III-B-2c from the 1987 LRDP EIR, as amended, as part of the project. Mitigation Measure III-B-2a and III-B-2c are identified in the LRDP EIR section above.</p> <p>Potential landslide impacts during the operational phase of the project would also be less than significant, through implementation of Mitigation Measure III-B-1 and III-B-2b from the 1987 LRDP EIR, as amended. Measure III-B-1 requires that contractors follow the design recommendations in the <i>Geotechnical Investigation</i></p>					

⁵⁰ *Geotechnical Investigation Report, User Hostel Building, Lawrence Berkeley National Laboratory, Berkeley, California.* Kleinfelder, Inc., September 28, 2006, page 12.

⁵¹ *Geotechnical Investigation Report, User Hostel Building, Lawrence Berkeley National Laboratory, Berkeley, California.* Kleinfelder, Inc., September 28, 2006, page 19.

⁵² USGS Seismic Landslide Hazard map for the City of Berkeley, California. <http://geopubs.wr.usgs.gov/map-mf/mf2378/> Accessed March 6, 2007.

⁵³ Geotechnical Study for the User Support Building. Alan Kropp & Associates. Page 6. August 23, 2006.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
<p>Report to ensure that the effects of landsliding will not represent a significant adverse impact during a seismic event. Measure III-B-2b ensures foundations for proposed structures are designed in accordance with geologic and soils engineering recommendations to minimize the long-term possibilities of a landslide. Implementation of this measure would rely upon recommendations set forth in the September 2006 <i>Geotechnical Investigation Report</i>.</p> <p>Through adherence to these measures, potential impacts related to seismic-induced ground failure, including landslides, would be <i>less than significant</i>.</p>					
b) Result in substantial soil erosion or the loss of topsoil?				X	
<p>During construction activities it is possible that soil erosion or the loss of topsoil could occur, particularly during pre-construction site preparation (i.e. grading). This impact would be reduced to a <i>less-than-significant</i> level through the implementation of Mitigation Measures III-B-2a, c and d from the 1987 LRDP EIR, as amended, as part of the project. These mitigation measures are identified in the LRDP EIR section above.</p>					
c) 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?				X	
<p>The proposed project site is underlain by sedimentary bedrock of the late Cretaceous period. The geology of the area has been described as unnamed sedimentary rocks of the Great Valley Complex that are characterized as massive to distinctly bedded, biotite-bearing, brown-weathering, coarse- to fine-grained greywacke and lithic wacke, siltstone, and mudstone.⁵⁴ Bedrock encountered in all site borings consisted predominately of siltstone that is highly to moderately weathered, friable to medium strong, and crushed. Bedrock in the vicinity can vary and has been reported as claystone, sandstone, or mudstone, but in most cases it has been found to be of similar quality.⁵⁵</p> <p>Through test borings, fill of varying thicknesses was encountered over bedrock. The clayey near-surface soils and undocumented fills located across the site are moderately expansive. According to the Geotechnical Report, these soils should be considered generally unsuitable as foundations for the support of the Guest House, as they would likely undergo detrimental and erratic movement during a seismic event.</p> <p>Consistent with Mitigation Measures III-B-1 and III-B-2b, contractors would follow the design recommendations set forth in the September 2006 <i>Geotechnical Investigation Report</i> during final design and construction of the Guest House. Three of the recommendations are listed in response to criteria a) iii above. Through adherence to these measures, potential impacts related to on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse would be <i>less than significant</i>.</p>					

⁵⁴ Kleinfelder, Inc., Geotechnical Investigation Report, User Hostel Building, Page 5, September 28, 2006.

⁵⁵ Kleinfelder, Inc., Geotechnical Investigation Report, User Hostel Building, Page 5, September 28, 2006.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X	
<p>According to the September 2006 <i>Geotechnical Investigation Report</i>, the clayey near-surface soils and undocumented fills located across the site are moderately expansive. Expansive soils shrink and swell in response to changes in moisture content and, unless mitigated, can cause damage to structures built within them. Mitigation Measures III-B-1 and III-B-2b from the 1987 LRDP EIR, as amended, would be included as part of the project. These measures would ensure the implementation of the recommendations set forth in Chapter 5 of the <i>Geotechnical Investigation Report</i>. As a result, potential impacts related to expansive soils would be <i>less than significant</i>.</p>					
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?					X
<p>The proposed project does not include installation of septic tank systems or alternative waste disposal systems, and as such <i>no impact</i> would occur.</p>					
f) Exceed an applicable LRDP or Program EIR standard of significance?				X	
<p>The applicable standards of significance from the LRDP Program EIR, as amended, are adequately addressed through the responses included in the checklist above. As explained in the checklist discussion, with the implementation of standard operating procedures, and with the mitigation measures identified in the LRDP EIR, as amended, the proposed project would not exceed the Standards of Significance identified in the LRDP EIR, as amended.</p>					

Summary of Impacts and Mitigation Measures:

Potentially significant impacts not mitigated by 1987 LRDP EIR, as amended, mitigation measures or LBNL Standard Operating Procedure: None.

The proposed project would incorporate the following 1987 LRDP EIR, as amended, Mitigation Measures and LBNL Standard Operating Procedures: Mitigation Measures: III-B-1, III-B-2a, III-B-2b, III-B-2c, and III-B-2d. Operating Procedures: General Requirement Section, Part 1.03(A).

Guest House Project-Specific Mitigation Measures: None.

7. HAZARDS and HAZARDOUS MATERIALS

LRDP EIR, as amended:

The following relevant and potentially significant impacts, resulting from exposure to hazards and hazardous materials, have been anticipated and analyzed pursuant to CEQA, as part of the programmatic LRDP EIR, as amended, from which this analysis is tiered:

Impact IV-K-1: Continued UC operation of LBNL, including proposed increases in laboratory and facility space, may result in impacts from the increased use of hazardous materials in research, facility construction, and facility maintenance activities.

Impact IV-K-3: Continued UC operation of LBNL, including proposed increases in laboratory and facility space, will result in the increased transportation of hazardous materials and wastes.

Impact IV-K-4: Continued UC operation of LBNL, including proposed increases in laboratory and facility space, will result in the upgrading or removal of regulated building components.

Impact IV-K-5: Continued UC operation of LBNL, including proposed increases in laboratory and facility space, will result in increased numbers of employees and thus increase the potential for exposures to hazardous or radioactive materials.

Impact IV-K-6: Continued UC operation of LBNL, including proposed increases in laboratory and facility space, will result in a need to continue emergency preparedness and response programs to minimize impacts which may result from actual or potential release of hazardous materials in the workplace or the environment.

Impact IV-K-7: Continued UC operation of LBNL, including proposed increase in laboratory and facility space, may affect ongoing activities to characterize and remediate prior spills of hazardous materials and leaching of these materials into the soil and ground water.

The following mitigation measures, adopted as part of the LRDP EIR, as amended, are already required for the proposed project, and are therefore incorporated as part of the proposed project's description:

Mitigation Measure IV-K-1: LBNL will prepare an annual self-assessment summary report. The report will summarize environment, health, and safety program activities, and identify any areas where LBNL is not in compliance with laws and regulations governing hazardous materials, hazardous waste, hazardous materials transportation, regulated building components, worker safety, emergency response, and remediation activities.

Mitigation Measure IV-K-4: None required, since upgrading or removing regulated building components will be done in conformance with requirements designed to protect public health and the environment and since the upgrading and removal operations will result ultimately in reductions in the likelihood of potential harm to human health or the environment from potential incidents relating to underground storage tanks, above ground storage tanks, asbestos-containing building materials and electrical equipment containing polychlorinated biphenols.

Mitigation Measure IV-K-6: LBNL will update its emergency preparedness and response program on an annual basis, and will provide copies of this program to local emergency response agencies and to members of the public upon request.

Mitigation Measure IV-K-7: In addition to implementing its site characterization and remediation program, LBL will continue to maintain copies of the results of its environmental and workplace monitoring programs. LBL will continue to make this information available for review at the request of employees or members of the public, as permitted by law.

In addition, the following standard operating procedures are already required for the proposed project, and are therefore incorporated as part of the proposed project’s description:

General Requirement Section, Part 1.04(A): The area to be set aside for the work under this Subcontract is shown on the drawings, and the Subcontractor shall confine the construction to the immediate area within the construction limits.

General Requirement Section, Part 1.05(A): Parking for private vehicles is limited. Parking for Subcontractors and their workers will be limited to the construction limits and as agreed with the Project Manager. During periods of under utilization, Ernest Orlando Lawrence Berkeley National Laboratory (Berkeley Lab, LBNL) personnel will be allowed to use subcontractor spaces. Parking regulations will be strictly enforced and all parking violations are subject to citation by the University Police.

Safety Requirement Section, Part 1.13 (A): Subcontractor shall furnish an adequate number of flaggers for all work that may affect the use of roads by University.

Safety Requirement Section, Part 1.13 (A)(1): Flaggers shall be posted at the entrance and exit of access roads used for hauling material and at all other areas where normal traffic is subject to disruption.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
7. HAZARDS AND HAZARDOUS MATERIALS – Would the project:					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X	
<p><u>Construction Phase</u></p> <p>Construction of the Guest House would involve the transport and use of hazardous materials typically employed during the construction of an overnight lodging facility. These materials include, but are not necessarily limited to engine oils and lubricants, diesel fuels, and adhesives. Transport of these materials to and from the Guest House site and the handling of them on-site would comply with applicable local and state regulations. As such, the transportation and use of these hazardous materials during construction would represent a <i>less-than-significant</i> impact.</p> <p><u>Operational Phase</u></p> <p>The operation of the Guest House would involve the storage and use of typical types and volumes of hazardous materials associated with running a hotel-type facility, such as various types of cleaning agents. The</p>					

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	Less Than Significant Impact	No Impact
proposed project would not involve the disposal of such materials on-site and the implementation of Mitigation Measure IV-K-1, would ensure that the storage and handling of such materials on-site complies with the most current laws and regulations. Thus, use and storage of hazardous materials on-site during the project's operational phase would result in a <i>less-than-significant</i> impact.					
b) 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?				X	
Through the implementation of Mitigation Measures IV-K-1, IV-K-4, and IV-K-6, as part of the project, the project would result in <i>less than significant</i> hazards to the public or environment.					
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?					X
The proposed project site is located within one-quarter mile of an existing or proposed K-12 school. ⁵⁶ Thus, <i>no impact</i> would occur.					
d) 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?					X
The proposed project site is not included on the Hazardous Waste and Substances Site List, compiled pursuant to Government Code Section 65962.5; also know as the Cortese List. ⁵⁷ Thus, <i>no impact</i> would occur.					
e) 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, would the project result in a safety hazard for people residing or working in the project area?					X

⁵⁶ The Thomas Guide Bay Area Metro Street Atlas, 2005, page 629. Berkeley Unified School District, Louis Jones, Director of Facilities, Personal Communication with DC&E on April 18, 2007.

⁵⁷ California Department of Toxic Substance Control. http://www.dtsc.ca.gov/SiteCleanup/index.cfm#Cleanup_Sites. Accessed February 19, 2007

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	Less Than Significant Impact	No Impact
<p>The closest public airport to the project site is the Oakland International Airport, which is approximately 15 miles to the southeast.⁵⁸ The project would not be located within an airport land use plan and as a result, <i>no impact</i> to personal safety would occur as a result of aviation hazards.</p>					
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?					X
<p>There are no private airstrips located in the vicinity of the project site.⁵⁹ Thus, <i>no impact</i> related to personal safety as a result of aviation hazards would occur.</p>					
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X	
<p><u>Construction Phase</u></p> <p>There is an Emergency Response Plan in place for the entire LBNL campus. The Plan delineates the line and authority and responsibility for emergency response and is composed of four sections: (1) the Building Emergency Plan; (2) the Fire Department Emergency Pre-Plan; (3) the Memorandum of Understanding and (4) the Alameda County Fire Mutual Aid Plan.⁶⁰</p> <p>Construction of the Guest House project could impair implementation of or physically interfere with the adopted Emergency Response Plan if construction activities fully blocked any roadways or other access ways (i.e. pedestrian pathways). LBNL has standard provisions that would confine work and support functions (parking) to prevent conflicts with emergency access. Code 1.04(A) in LBNL's Standard Operating Procedures requires that an area be set aside for work under each construction contract and shown on contract drawings, and that the contractor confine the work to the immediate area within the construction limits.⁶¹ Code 1.05 (A) requires that parking for contractors and their workers be limited to the construction limits and as agreed to with the Project Manager.⁶² Codes 1.13 (A) and (A)(1) require that the contractor furnish an adequate number of flaggers for all work that may affect the use of roads and that flaggers are posted at the entrance and exit of access roads used for hauling material and at all other areas where normal traffic is subject to disruption.⁶³</p> <p>These requirements, which would be included as part of the project, would ensure that construction activities do not have a significant impact on LBNL's Emergency Response Plan. A <i>less-than-significant</i> impact</p>					

⁵⁸ Google Map: <http://www.google.com/maphp?hl=en&tab=wl&q=> (then entered "Berkeley, CA" in search box). Accessed March 6, 2007.

⁵⁹ List of California Airports. <http://www.myafd.com/State/ca>. Accessed March 6, 2007.

⁶⁰ DSEIR for LBNL, Page IV-H-4 and 5, April 1992.

⁶¹ LBNL Facilities Master Specifications, Division 1 Special Requirements, page 01010-4.

⁶² LBNL Facilities Master Specifications, Division 1 Special Requirements, page 01010-4.

⁶³ LBNL Facilities Master Specifications, Section 01020, Environment, Safety, and Health General Requirements, page 01-9

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
<p>would occur.</p> <p><u>Operational Phase</u></p> <p>The Guest House would be situated on a site that does not interfere with any roads, fire lanes or key LBNL access-ways. Furthermore, none of the operational activities proposed for the Guest House would interfere with an emergency response or evacuation plan.</p> <p>As a result, <i>no impact</i> to emergency access would occur during the operational phase of the proposed project.</p>					
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X	
<p>According to the California Department of Forestry and Fire Protection (CDF) Natural Hazard Disclosure Map Images and Data for Alameda County, the proposed project site is not located in an area that has a substantially high potential for wildland fires.⁶⁴ However, the project site does contain various types of vegetation and mature trees that could burn during a wildland fire event.</p> <p>As a result of the October 1991 Oakland Hills fire, LBNL has since conducted a program to reduce the amount of vegetative growth near its buildings and remove vegetation along the perimeter areas that need to be cleared.</p> <p>In 1997, LBNL published a Wildland Fire Evacuation/Relocation Plan. The plan which would apply to the project site is based on a wildland fire scenario that would require rapid mobilization of resources, quick decision making and well-coordinated execution by emergency responders during a wildland fire. Furthermore, fire management would be considered in the selection of plant stock for post construction landscaping as per LBNL's Integrated Landscape Management Program. Based on information provided by CDF, application of LBNL's Wildland Fire Evacuation/Relocation Plan, LBNL's control of vegetative growth around buildings and on the site's perimeters, and strategic selection of plant stock, a <i>less-than-significant</i> impact related to wildland fires is anticipated.</p>					
i) Exceed an applicable LRDP or Program EIR standard of significance?				X	
<p>The applicable standards of significance from the LRDP Program EIR, as amended, are adequately addressed through the responses included in the checklist above. With incorporation of mitigation measures IV-K-1, IV-K 4 and IV-K 6 and standard operating procedures as part of the project, the proposed project would not</p>					

⁶⁴ California Department of Forestry and Fire Protection. *Natural Hazard Disclosure Map Images and Data for Alameda County*. <http://www.fire.ca.gov/ab6/ab6lst.html>. Accessed March 6, 2007.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
exceed a hazard and/or hazardous materials standard of significance established by the programmatic 1987 LRDP EIR, as amended.					

Summary of Impacts and Mitigation Measures:

Potentially significant impacts not mitigated by the 1987 LRDP EIR, as amended, mitigation measures or LBNL Standard Operating Procedures: None.

The proposed project would incorporate the following 1987 LRDP EIR, as amended, Mitigation Measures or LBNL Standard Operating Procedures: Mitigation Measures: IV-K-1, IV-K-4, IV-K-6, IV-K-7. Operating Procedures: General Requirements, Parts 1.04(A), 1.05 (A). Safety Requirements, Parts 1.13 (A) and (A)(1).

GH Project-Specific Mitigation Measures: None.

8. HYDROLOGY AND WATER QUALITY

LRDP EIR, as amended:

The following relevant impacts to hydrology and water quality have been anticipated and analyzed pursuant to CEQA, as part of the programmatic LRDP EIR, as amended, from which this analysis is tiered:

Impact III-C-1: LBNL is not located in a flood-plain area. Continued University operation of LBNL, including continued implementation of the 1987 LRDP, is not expected to increase off-site flood hazard, erosion, or sedimentation. The project is not expected to deplete groundwater resources, interfere with groundwater recharge, or degrade surface or groundwater quality substantially.

Impact III-C-2: Continued University operation of LBNL, including continued implementation of the 1987 LRDP, could produce increased surface and storm runoff.

As a result of anticipated hydrological and water quality impacts, the following mitigation measures, adopted as part of the LRDP EIR, as amended, are already required for the proposed project, and are therefore incorporated as part of the proposed project’s description:

Mitigation Measure III-B-2a: Excavation and earth moving will be designed for stability, and accomplished during the dry season when feasible. Drainage will be arranged to minimize silting, erosion, and landsliding. Upon completion, the land will be restored, covering exposed earth with planting.

Mitigation Measure III-B-2d: Revegetation of disturbed areas, including slope stabilization sites, using native shrubs, trees, and grasses, will be included as part of all new projects.

Mitigation Measure III-C-2: Each individual project will continue to be designed and constructed with adequate storm drainage facilities to collect surface water from roofs, sidewalks, parking lots, and other surfaces and deliver it into existing channels which have adequate capacity to handle the flow.

In addition, as discussed below in response to item c), a series of BMPs would be implemented during project construction as part of the lab’s Storm Water Pollution Prevention Plan (SWPPP).

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
8. HYDROLOGY AND WATER QUALITY – Would the project:					
a) Violate any water quality standards or waste discharge requirements?				X	
<p>LBNL is situated in the ridges and drainage areas of Blackberry and Strawberry Canyons in the East Bay Hills within the Strawberry Creek watershed. Surface water runoff from the proposed Guest House would be collected in the LBNL storm drain system and would subsequently discharge water further downstream into Strawberry Creek.⁶⁵</p> <p>The Lawrence Berkeley Lab site is a party to the state's general permit for stormwater discharges associated with industrial activity. During both construction and operation of the project, stormwater runoff would be managed in accordance with the requirements of the State Water Resources Control Board (SWRCB). As required by this general permit, Lawrence Berkeley Lab has prepared and regularly maintains a Storm Water Pollution Prevention Plan (SWPPP), the primary purpose of which is to identify sources of pollutants that could affect the quality of stormwater discharges and to implement measures, called Best Management Practices (BMPs), that are followed to properly manage both stormwater and non-stormwater run off that reaches neighboring surface waters.</p> <p>Given the size of the Guest House facility (8,000 square-foot footprint) and the estimated area of disturbance for construction purposes (15,000 square-foot) it is not expected that the project would require a separate construction permit from the SWRCB. The threshold for such a permit is currently disturbance of an area that is one acre (approximately 44,000 square feet) or greater. However, should such a permit be needed, a SWPPP dedicated solely to construction activities for this project would also be required. The project area would revert back to coverage under the site-wide general permit at the end of the construction phase.</p> <p>In addition to the inclusion of BMPs as part of the project, storm water from the site would be treated with a properly sized mechanical storm water treatment unit (vault). This vault would be placed underground within a new 8-inch diameter storm drain lateral, upstream of the final storm water discharge point. The drain lateral and its location are further discussed in the utilities section of the checklist. To ensure runoff from the site is treated in accordance with provision C.3 of Regional Water Quality Control Board (RWQCB), all rainwater that falls on the site will be routed through the storm water separator vault.</p> <p>Based on compliance with SWPPP practices and the inclusion of a stormwater separator vault, the project</p>					

⁶⁵ Personal communication with Kirk Haley of LBNL, March 5, 2007.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
would result in a <i>less-than-significant</i> impact in terms of meeting water quality standards and waste discharge requirements.					
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?					X
<p>The project would not use water supplied from groundwater sources at or near the site, but from the East Bay Municipal Utility District (EBMUD) supply system.⁶⁶ Therefore, the project would not need to pump groundwater and would not contribute to the depletion of an established groundwater source. <i>No impact</i> would occur.</p>					
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				X	
<p>As noted in response to 4(c) above, there are no streams, rivers, or other natural drainages on the project site. The existing drainage pattern of the site from east (upslope) to west (downslope) would be maintained during construction and operation. New yard and roof drain inlets would be added around the Guest House building during construction that would discharge to the LBNL campus stormwater drainage system following construction.⁶⁷ This drainage system is described in response to item c) in the utilities section of this checklist. As a result, a <i>less-than-significant</i> impact would occur.</p> <p>As explained above in response to criteria a) of this section, the lab maintains a SWPPP that identifies BMPs to manage both stormwater and non-stormwater run off that reaches neighboring surface waters. BMPs that would be implemented, as feasible, during construction of the Guest House project include the following:</p> <ul style="list-style-type: none"> • The covering of excavated material. • Installation of silt traps, fencing, and use of filter fabric as measures to control erosion and sedimentation and prevent such materials from entering surface water discharges. • Truck and construction equipment maintenance and storage to minimize pollutants. • Prohibition of cement truck washout to LBNL drains and surfaces. 					

⁶⁶ Personal email communication from Steve Blair of LBNL, February 22, 2007.

⁶⁷ Personal email communication from Steve Blair of LBNL, February 22, 2007.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
<ul style="list-style-type: none"> Oversight throughout construction by LBNL project manager(s) and environmental specialists. <p>In addition, implementation of Mitigation Measures III-B-2a and III-B-2d from the 1987 LRDP EIR, as amended, as part of the project, would ensure that erosion and siltation is minimized during and following earthwork activities (i.e. excavation). Through inclusion of the BMPs listed above and these mitigation measures, as part of the project, potential impacts related to erosion and siltation would be <i>less than significant</i>.</p>					
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?				X	
<p>As discussed in response to item (c) above, the project would not substantially alter the existing drainage pattern of the project site nor would the project alter the course of a stream or river. However, the project would increase the amount of impervious building and roadway surface area on-site. The roof area of new Guest House would be approximately 8,000 square feet. The roof area of Building 29A, currently located on the site, is approximately 1,446 square feet. Building B29, which was removed from the project site circa 2002 had a roof area of approximately 4,800 square feet.⁶⁸ Therefore, the project would increase the amount of impervious surface area on the site by approximately 6,554 square feet over existing conditions and 1,754 square feet over site conditions that existed within the last five years.</p> <p>LBNL Engineering staff analyzed the effect of a 6,554 square-foot net increase in impervious surface area on the project site. Based on this analysis, it is anticipated that the downstream runoff volume following construction would approximate the runoff volume before construction. The Guest House project would result in an increase of 0.15-acre of impervious surface area within the 878-acre (38,245,680 square-foot) eastern Strawberry Creek Watershed. The associated increase in runoff from the project site to the Strawberry Creek Watershed for any given storm is estimated to be 0.01 percent (one one-hundredth of one percent).⁶⁹ The associated increase in runoff from the project site to the North Fork sub-watershed is estimated to be 0.04 percent.⁷⁰ Such increases would not be measurable and are considered negligible.</p> <p>Therefore, although the project would result in an increase in the amount of runoff leaving the site, the volume would be negligible and the impact would be <i>less than significant</i>.</p>					
e) 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?				X	

⁶⁸ Personal email communication from Kirk Haley, LBNL Project Manager, March 16, 2007.

⁶⁹ Steve Blair, LBNL Engineer, email correspondence received by DC&E on April 12, 2007.

⁷⁰ Steve Blair, LBNL Engineer, personal correspondence, April 26, 2007.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
<p>As explained in the response to item d) above, the estimated increase in runoff from the project site for any given storm would be 0.01 percent (one one-hundredth of one percent) to the Strawberry Creek Watershed and 0.04 percent to the North Fork sub-watershed. These increases are not measurable and are considered negligible. As a result, the increase in storm water volume would not exceed the capacity of existing stormwater drainage systems or drainage improvements that are planned as part of the project.</p> <p>Regarding the potential creation of polluted runoff, during both construction and operation of the Guest House, the BMPs referred to in item c) above would include measures that would treat and retain stormwater on-site. The BMPs would prevent excessive stormwater runoff from entering the local stormwater system and reduce the level of contamination or sedimentation in the stormwater that does enter the system. Furthermore, the project drainage system would include a new stormwater separator vault to reduce the level of contamination in stormwater leaving the site. This feature is also described above in response to item c).</p> <p>Due to the negligible increase in the estimated amount of stormwater runoff that would be generated by the project, and the inclusion of BMPs and the stormwater separator vault as part of the project, a <i>less-than-significant</i> impact would occur.</p>					
f) Otherwise substantially degrade water quality?				X	
<p>Beyond the potential impacts to water quality previously discussed in response to items (a) and (e), the project is not expected to otherwise affect water quality. A <i>less-than-significant</i> impact would occur.</p>					
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X	
<p>The Federal Emergency Management Agency (FEMA), in conjunction with the Federal Insurance Administration (FIA), has determined the area of the proposed LBNL Guest House to be in an area designated as flood Zone C, according to the Flood Rate Community Panel Number 060004 0002 A. Zone C is designated as an area that is expected to receive minimal flooding in the event of significant rainfall.⁷¹ Thus, a <i>less-than-significant</i> impact would occur.</p>					
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X	
<p>Please refer to the response to item (g) above.</p>					

⁷¹ Berkeley Lab Guest House Program Statement, Guidelines Specifications, Systems Descriptions, Macdonald Architects, November 10, 2006, pg. 14

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?					X
According to the Association of Bay Area Government's Dam Failure Hazard Map for Berkeley/Albany, the proposed project site would not be inundated by flooding caused by levee or dam failure. ⁷² Thus, <i>no impact</i> related to such occurrences are anticipated.					
j) Inundation by seiche, tsunami, or mudflow?				X	
The proposed project is not located in an area that could be impacted by a seiche or tsunami or mudflow. The proposed project would be located at an elevation above that at which inundation from a tsunami or seiche would occur. ⁷³ The potential for mudflows on the site is greater due to the sloping grade. During construction, the potential for mudflows on-site would be reduced to a less-than-significant level through Mitigation Measures III-B-2a and III-B-2c, which are described above in the Geology and Soils section of this checklist. Following construction, implementation of Mitigation Measure III-B-2d from the 1987 LRDP EIR, as amended, would reduce potential impacts related to soil instability to a less-than-significant level. As a result, potential impacts related to mudflows would be <i>less than significant</i> .					
k) Exceed an applicable LRDP or Program EIR standard of significance?					X
The applicable standards of significance from the LRDP Program EIR, as amended, are adequately addressed through the responses included in the checklist above. As explained in the checklist, with the implementation of the mitigation measures identified in the LRDP EIR, as amended, the proposed project would not exceed the Standards of Significance.					

Summary of Impacts and Mitigation Measures:

Potentially significant impacts not mitigated by the 1987 LRDP EIR, as amended, mitigation measures or LBNL Standard Operating Procedures: None.

The proposed project would incorporate the 1987 LRDP EIR, as amended, Mitigation Measures: III-B-2a, III-B-2d, and III-C-2.

GH Project-Specific Mitigation Measures: None.

⁷² Bay Area Dam Failure Inundation Maps from ABAG. <http://www.abag.ca.gov/bayarea/eqmaps/damfailure/dfpickc.html>. Accessed March 5, 2006.

⁷³ Borrero et al. *Numerical Modeling of Tsunami Effects at Marin Oil Terminals in the San Francisco Bay*, Figure 8: Areas of potential tsunami inundation by a 20-foot tsunami at the Golden Gate Bridge. Page 12.

9. LAND USE AND PLANNING

LRDP EIR, as amended:

The following relevant impacts to land use and planning policies have been anticipated and analyzed pursuant to CEQA, as part of the programmatic LRDP EIR, as amended, from which this analysis is tiered:

Impact III-G-1: There are no LBNL-proposed developments in the site development plan that would impact directly on the privately owned multiple-family or single-family housing along the LBNL western and northern boundaries.

Impact III-G-2: Continued operation of LBNL by the University, including continued implementation of the 1987 LRDP, would result in the conversion of a small amount of open space into urban- or suburban-scale uses.

Impact III-G-3: Continued operation of LBNL by the University, including continued implementation of the 1987 LRDP, would be consistent with the 1990 UC Berkeley Long Range Development Plan, and the General Plans of the City of Berkeley and the City of Oakland.

As a result of anticipated impacts to land use and planning policies, the following mitigation measure, adopted as part of the LRDP EIR, as amended, is already required for the proposed project, and is therefore incorporated as part of the proposed project’s description:

Mitigation Measure III-G-2: Buildings proposed for development at LBNL will follow the design guidelines contained in the LBNL LRDP, as amended.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
9. LAND USE AND PLANNING – Would the project:					
a) Physically divide an established community?					X
<p>The proposed project site is an infill site, located near the center of the LBNL Campus. The project would be constructed on the same site as the existing Building 29A, which is located among several other LBNL facilities and supporting infrastructure (i.e. roadways and parking lots). As a result, the project would not introduce a new structure or facilities where they do not already exist. Rather, the project would include a continuation of institutional uses on the project site. As a result, the project would have <i>no impact</i> in terms of physically dividing a community.</p>					
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the LRDP, general plan, specific plan, local coastal program, or zoning ordinance) adopted for					X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
the purpose of avoiding or mitigating an environmental effect?					
<p>As stated in Impact III-G-3 in the 1987 LRDP EIR, as amended, continued operation of the LBNL, including continuing implementation of the 1987 LRDP, would be consistent with the 1990 UC Berkeley Long Range Development Plan, and the General Plans of the City of Berkeley and the City of Oakland. In addition, the proposed project site and the 1987 LRDP are consistent with the City of Berkeley’s zoning ordinance designation of “Institutional”.⁷⁴ As a result, no impacts are anticipated in relation to the land use plans or policies of surrounding jurisdictions. The project’s consistency with the 1987 LRDP is discussed below.</p> <p><u>1987 LRDP and LRDP EIR, As Amended</u></p> <p>The proposed project is located in the functional planning area designated in the LRDP as the “Light Source Research and Engineering Area,” which is also known as “Old Town” or “the original laboratory site.” According to the 1987 LRDP, this area is to be “renovated and reconstructed to allow the efficient and safe conduct of research and the design and fabrication of advanced electrical and mechanical systems.” The proposed project would provide valuable on-site accommodations for visiting researchers in the Old Town planning area and thereby result in a beneficial contribution to the improvements that are considered in the 1987 LRDP.</p> <p>Furthermore, the proposed project would not exceed a land use standard of significance established by the programmatic 1987 LRDP EIR, as amended. As a result, <i>no impact</i> would occur and no project-specific mitigation measures would be required.</p>					
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?					X
<p>As discussed in response to Criteria 4(f) above in the Biological Resources section of this checklist, the project site is not located in area of LBNL that falls under the jurisdiction of a habitat conservation plan or natural community conservation plan. Thus, <i>no impact</i> would occur.</p>					
d) Exceed an applicable LRDP or Program EIR standard of significance?				X	
<p>The applicable standards of significance from the LRDP Program EIR, as amended, are adequately addressed through the responses included in the checklist above. With the incorporation of LRDP EIR, as amended, Mitigation Measure III-G-2 as part of the project, the proposed project would not exceed a land use standard of significance established by the programmatic 1987 LRDP EIR, as amended. Land use and planning impacts would be <i>less than significant</i> and no project-specific mitigation measures would be required.</p>					

⁷⁴ DSEIR for LBNL. Land Use Chapter. Page III-G-7. Discussion of Impact III-G-1. April 1992.

Summary of Impacts and Mitigation Measures:

Potentially significant impacts not mitigated by the 1987 LRDP EIR, as amended, mitigation measures or LBNL Standard Operating Procedures: None.

The proposed project would incorporate the following 1987 LRDP EIR, as amended, Mitigation Measures: III-G-2.

GH Project-Specific Mitigation Measures: None required.

10. MINERAL RESOURCES

LRDP EIR, as amended:

LBNL is not located in a Mineral Resource Zone identified by the California Department of Mines and Geology. Therefore the proposed project would have no impact on a Mineral Resource Zone and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
10. MINERAL RESOURCES – Would the project:					
a) 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?					X
No mineral resources exist on the project site or in its vicinity, thus <i>no impact</i> to mineral resources would occur. ⁷⁵					
b) 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?					X
Please refer to the response for item (a) above. <i>No impact</i> would occur.					
c) Exceed an applicable LRDP or Program EIR standard of significance?					X
The applicable standards of significance from the LRDP Program EIR, as amended, are adequately addressed through the responses included in the checklist above. The proposed project would not exceed a mineral					

⁷⁵ Department of Conservation, California Geological Survey. California : Principal Mineral-Producing Localities Map 1990-2000. Accessed March 5, 2007.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
resource standard of significance established by the programmatic 1987 LRDP EIR, as amended. <i>No impact</i> to mineral resources would occur and no project-specific mitigation measures would be required.					

Potentially significant impacts not mitigated by the 1987 LRDP EIR, as amended, mitigation measures or LBNL Standard Operating Procedures: None.

GH Project-Specific Mitigation Measures: None required.

11. NOISE

LRDP EIR, as amended:

The following relevant impacts to noise levels have been anticipated and analyzed pursuant to CEQA, as part of the programmatic LRDP EIR, as amended, from which this analysis is tiered:

Impact III-K-1: Ambient noise levels from the University’s continued operation of LBNL will generate noise levels which could conflict with applicable noise ordinances and standards.

Impact III-K-2: Construction activities resulting from continued implementation of the 1987 LRDP could create significant adverse noise impacts on-site.

Impact III-K-3: Since construction periods are of short term, approximately 1 to 2 years for site work and exterior construction, the overall off-site construction noise impacts are not expected to be significant.

As a result of anticipated impacts to noise levels, the following mitigation measures, adopted as part of the LRDP EIR, as amended, are already required for the proposed project, and are therefore incorporated as part of the proposed project’s description.

Mitigation Measure III-K-1: Projected noise levels will be compared with ambient noise levels and the Berkeley Noise Ordinance limits, or other applicable regulations. Acoustical performance standards would be included in future construction documents. LBNL will continue to design, construct, and operate buildings and building equipment taking into account measures to reduce the potential for excessive noise transmission.

Mitigation Measure III-K-2: Noise-generating construction equipment will be located as far as possible from existing buildings. If necessary, windows of laboratories or offices will be temporarily covered to reduce interior noise levels on-site.

In addition, the following standard operating procedure is already required for the proposed project, and is therefore incorporated as part of the proposed project’s description:

General Requirement Section 1.06(B): Compliance is required with the City of Berkeley Noise Ordinance.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
11. NOISE – Would the project result in:					
a) Exposure of persons to or generation of noise levels in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies?				X	

LBNL is a federal facility operated by UC and conducting work within UC's mission and as such is generally exempted by the federal and state constitutions from compliance with local land use regulations, including general plans and zoning. However, LBNL seeks to cooperate with local jurisdictions to reduce any consequences of potential land use conflicts to the extent feasible. Accordingly, LBNL adheres to the City of Berkeley's General Plan Environmental Management Element, which contains guidelines for determining the compatibility of various land uses with different noise environments.

The City of Berkeley Municipal Code, Chapter 13.40, Community Noise, establishes land use noise level limits for developed lands within the City of Berkeley subject to its jurisdiction. Residential exterior noise limits are established in terms of the median hourly (L₅₀) sound level. The limits are adjusted upward in 5 dB increments for sounds of shorter duration. In residential areas, the L₅₀ limits range from 55 dBA to 60 dBA during the daytime (7:00 a.m. to 10:00 p.m.) and 45 dBA to 55 dBA during the nighttime (10:00 p.m. to 7:00 a.m.). The commercial daytime limit is 65 dBA and the commercial nighttime limit is 60 dBA.

Construction Phase

The City of Berkeley noise ordinance also regulates construction and demolition noise. Section 13.40.070, Prohibited Acts, states: "The following acts and the causing or permitting thereof are declared to be in violation of this chapter:"

Operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between weekday hours of 7:00 p.m. and 7:00 a.m., or 8:00 p.m. and 9:00 a.m. on weekends or holidays such that the sound therefrom creates a noise disturbance across a residential or commercial real property line, except for emergency work of public service utilities or by variance issued by the NCO. (This section shall not apply to the use of domestic power tools as specified in Section 13.40.070(B) (11).)

Project construction could involve the simultaneous operation of various tools and equipment which could result in significant noise impacts. Impact III-K-2, which is identified above in the 1987 LRDP EIR, as amended discussion, also identifies potential construction noise impacts. In an effort to reduce any potential impacts related to construction noise, Mitigation Measure III-K-1 and III-K-2 from the 1987 LRDP EIR, as amended would be implemented as part of the proposed project. These measures are identified above in the LRDP EIR discussion. In

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	Less Than Significant Impact	No Impact
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addition, as stated in LBNL's Standard Operating Procedures, compliance with the City of Berkeley Noise Ordinance is required.⁷⁶ The quantitative thresholds that would be observed during project construction are shown in Table Noise-1.

Table NOISE-1: City of Berkeley Noise Thresholds

	R-1, R-2¹ Residential (dBA)²	R-3 and Above Multi-Family Residential (dBA)
Daily, 7:00 a.m. to 10:00 p.m.	55	60
Nighttime, 10:00 p.m. to 7:00 a.m.	45	55

¹ R refers to residential land use designation in the City of Berkeley General Plan.

² dBA refers to decibel level threshold.

In addition, the spatial separation between the project site and the closest sensitive receptor would be a mitigating factor. The closest residence to the Guest House site is a multi-unit student housing complex (UC Foothill), which is 1,300 feet away (approximately 0.25 miles). The nearest single-family residence is located at Highland Place and Cyclotron Road, and is over 1,500 feet from the project site (approximately 0.28 miles). Neither of these residential uses has a direct line of sight to the Guest House.⁷⁷ The transfer of noise generated on the project site during construction would be interrupted by terrain, vegetation, and buildings located between the Guest House and these receptors.

Based on compliance with the City of Berkeley Noise Ordinance and the distance between the Guest House and the closest sensitive receptors, potential noise impacts during construction would be *less than significant*.

Operational Phase

Regarding operation of the Guest House following construction, Impact III-K-1, which is identified above in the LRDP EIR discussion, continued operation of LBNL will result in noise levels that could potentially exceed applicable noise policies. While the project could cause an increase in ambient noise levels, it would not result in noise levels in excess of the applicable City of Berkeley Municipal Code thresholds, which are identified above at the beginning of this response. With implementation of Mitigation Measure III-K-1 from the 1987 LRDP EIR, as amended, as part of the project, potential impacts would be less than significant. This measure would ensure that the Guest House would be designed, constructed and operated so that excessive noise transmission is avoided during operation of the facility.

Similarly, the project would not expose Guest House visitors or staff to noise levels in excess of the City of Berkeley exterior noise thresholds for multi-family residential units, which was assumed for this project. These thresholds are shown above in Table NOISE-1 as being 60 and 55 dBA for daily and nighttime hours, respectively. The primary land uses to the east and west of the project site include Building 2 and Building 54 (cafeteria),

⁷⁶ LBNL General Requirements, Section 1.06(B), page 01010-5.

⁷⁷ Email correspondence from Kirk Haley, LBNL Project Manager, March 16, 2007.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	Less Than Significant Impact	No Impact
<p>respectively. Neither of these facilities would be expected to generate exterior noise levels at the Guest House that would result in an exceedance of City noise thresholds. The defining features to the immediate north and south of the Guest house site are a surface parking lot and Lawrence Road, respectively. Neither of these would be expected to generate noise levels that would exceed the specified dBA thresholds for exterior uses.</p> <p>Based on the implementation of the mitigation measures specified above, potential impacts related to increases in noise levels would be <i>less than significant</i> during construction or operation.</p>					
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				X	
<p>Pile driving or blasting, which could cause substantial ground borne vibration, would not be required for construction of the foundation or the upper portions of the Guest House.⁷⁸ While other construction methods used may cause minor vibration, these levels would not be substantial enough to adversely affect people in adjacent buildings. As a result, a <i>less-than-significant</i> impact is expected.</p>					
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X	
<p>After construction of the proposed project is complete, the facility would not generate noise apart from that generated by HVAC equipment, and delivery/pick-up of passengers and supplies. None of these noise sources would create a substantial permanent increase in ambient noise levels. As a result, the project's impact on ambient noise levels would be <i>less than significant</i>.</p>					
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?				X	
<p>Please refer to response to 11(a) above, which concludes that the project would result in a <i>less-than-significant</i> impact in terms of temporary increases in ambient noise levels.</p>					
e) 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, would the project expose people residing or working in the project area to excessive noise levels?					X

⁷⁸ Personal communication with Kirk Haley of LBNL, March 5, 2007.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
The proposed project would not be located within two miles of a public airport or within an airport land use plan. As a result, there would be <i>no impact</i> in relation to excessive airport noise. ⁷⁹					
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?					X
The proposed project is not located within the vicinity of a private airstrip. As a result, the project would not be impacted by excessive airport noise. ⁸⁰ <i>No impact</i> would occur.					
g) Exceed an applicable LRDP or Program EIR standard of significance?					X
The applicable standards of significance from the LRDP Program EIR, as amended, are adequately addressed through the responses included in the checklist above. As explained in the checklist, with the implementation of standard operating procedures and mitigation measures identified in the 1987 LRDP EIR, as amended, the proposed project would not exceed the Standards of Significance identified in the LRDP EIR, as amended.					

Summary of Impacts and Mitigation Measures:

Potentially significant impacts not mitigated by 1987 LRDP EIR, as amended, mitigation measures or LBNL Standard Operating Procedures: None.

The proposed project would incorporate the following 1987 LRDP EIR, as amended, Mitigation Measures and LBNL Standard Operating Procedures: Mitigation Measures: III-K-1 and III-K-2. Operating Procedures: General Requirement Section 1.06(B).

GH Project-Specific Mitigation Measures: None.

12. POPULATION AND HOUSING

LRDP EIR, as amended:

The following relevant impacts to population and housing have been anticipated and analyzed pursuant to CEQA, as part of the programmatic LRDP EIR, as amended, from which this analysis is tiered:

⁷⁹ Google Map. <http://www.google.com/maphp?hl=en&tab=wl&q=>. Accessed March 6, 2007.

⁸⁰ Google Map. <http://www.google.com/maphp?hl=en&tab=wl&q=>. Accessed March 6, 2007.

Impact III-H-1: Population growth associated with continuation of existing LBNL activities, including continued implementation of the 1987 LRDP, is not expected to have a significant adverse impact.

Impact III-H-2: Population growth associated with continuation of existing activities, including renewal of the contract term, could create an impact on the availability of both owned and rented housing.

Because no significant impacts were identified in the LRDP EIR, as amended, no mitigation measures were identified.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
12. POPULATION AND HOUSING – Would the project:					
a) Induce substantial 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)?				X	
<p>Although the new Guest House would provide temporary accommodation for up to a maximum of 73 guests, the facility is not expected to induce substantial population growth in the area. Those likely to stay at the Guest House would be temporary visitors to the area who would not collectively represent a new permanent population. It is expected that most Guest House visitors would return to their respective places of permanent residence outside the region following their stay.</p> <p>Regarding the Lab’s visitor population, the Guest House would enable visitors to stay at the Lab’s main hill sight overnight whereas no such option currently exists. The on-site accommodation of these visitors would not cause a substantial population increase at the Lab’s campus in the near or long-term, however, because the maximum capacity of the Guest House would be fixed and those likely to stay at the Guest House most likely are researchers who would be visiting LBNL facilities regardless of the existence of the Guest House.</p> <p>As a result, the new lodging facility would not directly contribute to a substantial increase in the LBNL campus’ or local community’s population. In addition, while the project would involve improvements to infrastructure on the LBNL campus (e.g. utility connections), the site-specific nature of the improvements are such that they would not result in substantial, indirect population growth either on the campus or in the surrounding municipalities. Accordingly, a <i>less-than-significant</i> impact related to population inducement would occur.</p>					
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?					X
<p>The proposed project would not result in the displacement of any existing housing as no housing exists on-site. As a result, <i>no impact</i> to existing housing would occur.</p>					

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?					X
The proposed project would not require the displacement of any people which could necessitate the construction of replacement housing in another location. As a result, <i>no impact</i> would occur.					
d) Exceed an applicable LRDP or Program EIR standard of significance?				X	
The applicable standards of significance from the LRDP Program EIR, as amended, are adequately addressed through the responses included in the checklist above. The proposed project would not exceed a population and housing standard of significance established by the programmatic 1987 LRDP EIR, as amended. Population and housing impacts would be <i>less than significant</i> and no project-specific mitigation measures would be required.					

Summary of Impacts and Mitigation Measures:

Potentially significant impacts not mitigated by 1987 LRDP EIR, as amended, mitigation measures or LBNL Standard Operating Procedures: None.

GH Project-Specific Mitigation Measures: None.

13. PUBLIC SERVICES

LRDP EIR, as amended:

The following impacts to public services have been anticipated and analyzed pursuant to CEQA, as part of the programmatic LRDP EIR, as amended, from which this analysis is tiered:

Impact III-L-1: The construction of additional facilities and any increased population would not cause increased impacts on local police and fire protection services.

Impact III-L-2: The construction of additional facilities and any increase in population according to the 1987 LRDP would not cause significant impacts on local school systems.

Impact III-L-3: Development proposed under the 1987 LBNL LRDP would increase demand for recreational services. This increase is not considered significant.

No mitigation measures were identified by the programmatic LRDP EIR, as amended. All impacts were found to be less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
13. PUBLIC SERVICES: a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:					
Fire protection?				X	
<p>The Guest House project would add a new 25,000 gross square feet building to the LBNL campus, and like any new building, the Guest House would require fire protection. Sprinklers would be included in all rooms, including the common areas, and hydrants would be added to areas adjacent to the outside of the building as part of the project. While these features would not eliminate the risk of a fire altogether, they would reduce the potential for impacts from fires. Furthermore, according to Impact III-L-1 in the 1987 LRDP EIR, as amended, additional facilities and population at LBNL would cause increased impacts on fire protection services.</p> <p>However, this impact was determined to be <i>less than significant</i>. The closest fire station to the project site is on the LBNL main hill site located at Building 48, which is approximately 1,200 linear feet from the proposed Guest House site. Based on the inclusion of on-site fire prevention features into the project, the close proximity of the fire station, and the conclusion of Impact III-L-1 in the 1987 LRDP EIR, as amended, that construction of additional facilities and any increased population at LBNL would not cause increased impacts on fire protection services, it is not expected that the Guest House would require new or expanded fire protection services that could result in significant impacts. A <i>less-than-significant</i> impact would occur.</p>					
Police protection?				X	
<p>The Guest House would employ approximately eight staff. This increase would not be substantial in relation to the existing number of staff already employed at LBNL. Similarly, the Guest House is not expected to result in a substantial increase in the area's population or the number of visitors to the LBNL campus. Those likely to stay at the Guest House would be temporary visitors to the area who would not collectively represent a new permanent population. It is expected that most Guest House visitors would return to their respective places of permanent residence outside the region following their stay.</p> <p>Regarding the Lab's visitor population, the Guest House would enable visitors to stay at the Lab's main hill site overnight whereas no such option currently exists. The on-site accommodation of these visitors would not cause a substantial population increase at the Lab in the near or long-term, however, because the maximum capacity of the Guest House would be fixed and those likely to stay at the Guest House are researchers who would be visiting LBNL facilities regardless of the existence of the Guest House.</p>					

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
<p>While the increase of overnight visitors to the campus could increase the number of police calls, it is not expected that the degree of potential increase would be such that existing police facilities would need to be expanded or new facilities constructed. As a result, a <i>less-than-significant</i> impact would occur.</p>					
Schools?					X
<p>New or expanded school facilities could be required if the Guest House project introduced school-aged children into existing schools that were at or above classroom capacity. As stated above in response to the criteria concerning police services, the Guest House project would not result in a substantial population increase in the City of Berkeley or other municipalities that could trigger impacts on school capacity.</p> <p>Due to the service-nature of the Guest House jobs, it is expected that the approximately eight staff hired at the Guest House would be hired from the local labor pool. In addition, visitors to the Guest House would represent a transient population that is not expected to move to or necessarily reside in the vicinity of the project. Therefore, if the visitors do have school-aged children, it is not expected that they would require new or expanded school facilities in the project vicinity, the construction of which could result in potentially significant environmental effects.</p> <p>This is supported by the conclusion in the 1987 LRDP EIR, as amended, that any increased population associated with the 1987 LRDP would not cause significant impacts on local school systems. As such, the project would have <i>no impact</i> on the area's population or its schools.</p>					
Parks?					X
<p>As explained above in response to the criteria concerning schools, the Guest House project would not result in an increased population in local municipalities. Thus, the proposed project would not result in an increased demand for new or expanded parks. <i>No impact</i> would occur.</p>					
Other public facilities?					X
<p>Because the Guest House project would not result in an increase in the population of local municipalities, it would not require the expansion of existing public facilities or the construction of new facilities. <i>No impact</i> would occur.</p>					
b) Exceed an applicable LRDP or Program EIR standard of significance?					X
<p>The applicable standards of significance from the LRDP Program EIR, as amended, are adequately addressed through the responses included in the checklist above. The proposed project would not exceed a public services standard of significance established by the programmatic 1987 LRDP EIR, as amended. Public service impacts would be less than significant and no project-specific mitigation measures would be required.</p>					

Summary of Impacts and Mitigation Measures:

Potentially significant impacts not mitigated by LRDP EIR, as amended, mitigation measures: None.

GH Project-Specific Mitigation Measures: None required.

14. RECREATION

The following impacts to recreation have been anticipated and analyzed pursuant to CEQA, as part of the programmatic LRDP EIR, as amended, from which this analysis is tiered:

Impact III-L-3: Development proposed under the 1987 LBNL LRDP would increase demand for recreational services. This increase is not considered significant.

No mitigation measures were identified by the programmatic LRDP EIR, as amended. All impacts were found to be less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
14. RECREATION –					
a) Would the project 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?				X	
<p>As explained in the Public Services section of this checklist, the Guest House project would not result in a temporary or permanent increase in the population of local municipalities. The approximately eight staff that would be employed at the Guest House would likely be hired from the local labor pool and visitors to the Guest House are likely to already visit the LBNL campus for research and work-related functions. Therefore, the project is not expected to result in increased usage of neighborhood or regional parks or other recreational facilities to the extent that substantial physical deterioration of such facilities would occur or be accelerated. Furthermore, as stated in Impact III-L-3, development proposed under the 1987 LBNL LRDP would increase demand for recreational services, however this increase is not considered significant. As a result, the project would have a <i>less-than-significant</i> impact on neighborhood and regional parks, and other recreational facilities.</p>					
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?					X

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
The project does not include the construction of any recreational facilities or require the expansion of any existing facilities. Thus, <i>no impact</i> would occur.					
c) Exceed an applicable LRDP or Program EIR standard of significance?					X
The LRDP EIR, as amended, does not specifically analyze the impact of anticipated development on existing neighborhood parks and regional parks or other recreational facilities, and therefore does not include standards of significance in relation to such resources.					

Summary of Impacts and Mitigation Measures:

Potentially significant impacts not mitigated by LRDP EIR, as amended, mitigation measures: None.

GH Project-Specific Mitigation Measures: None.

15. TRANSPORTATION/TRAFFIC

LRDP EIR, as amended:

The following relevant impacts to transportation and traffic have been anticipated and analyzed pursuant to CEQA, as part of the programmatic LRDP EIR, as amended, from which this analysis is tiered:

Impact III-I-1: Incremental increases in traffic are expected due to projected increases in the number of employees and visitors at LBNL.

Impact III-I-2: The ratio of parking spaces to LBNL employees will decrease during the LRDP implementation period.

As a result of anticipated impacts to transportation and traffic, the following mitigation measures, adopted as part of the LRDP EIR, as amended, are already required for the proposed project, and are therefore incorporated as part of the proposed project’s description:

Mitigation Measure III-I-Ia: Discourage single-occupant-vehicle use and encourage the use of other transportation options. LBNL will continue to implement its Transportation System Management (TSM) Program. The specific features of this program include:

- Establishing transportation modal-split goals for LBNL which will result in a reduction in the number and percentage of single-occupant automobiles being driven to and from LBNL;
- Assigning a transportation planner to coordinate the design and implementation of TSM programs;
- Promoting carpools by creating a carpool matching program;

- Providing preferential carpool parking;
- Developing a vanpooling program;
- Permitting staggered (flex-time) work hours;
- Developing an annual monitoring program to evaluate the programs in relation to established goals and identify new elements which should be added to the program;
- Promoting the TSM programs by giving orientation briefings to new employees, providing information aids to be distributed to LBNL employees, organizing an information center, and selling transit tickets on-site at LBNL;
- Reviewing LBNL shuttle service and transit interface facilities; and
- Reviewing bicycle routes and storage facilities for improvements.

Mitigation Measure III-I-1b: LBNL will conduct bi-annual peak hour traffic counts in and around LBNL. In particular, the bi-annual count will include the Gayley Road corridor between Hearst Avenue and Bancroft/Piedmont.

Mitigation Measure III-I-1c: If and at such time as the level of service at intersections along the Gayley Road corridor reaches “D,” a review of necessary improvements will be conducted with UC Berkeley.

Mitigation Measure III-I-1d: LBNL will pay for its fair share of allowable and necessary signalization improvements along the Gayley Road corridor proportional to LBNL’s share of increases in traffic.

Mitigation Measure III-I-1e: Details of the Gayley Road corridor improvements, including environmental assessment of the improvements, will be reviewed at the time the thresholds are reached.

Mitigation Measure III-I-2: LBNL will continue to implement and monitor the implementation of its Transportation System Management Program.

In addition, the following standard operating procedures are already required for the proposed project, and are therefore incorporated as part of the proposed project’s description:

General Requirement Section, Part 1.04(A): The area to be set aside for the work under this Subcontract is shown on the drawings, and the Subcontractor shall confine the construction to the immediate area within the construction limits.

General Requirement Section, Part 1.05(A): Parking for private vehicles is limited. Parking for Subcontractors and their workers will be limited to the construction limits and as agreed with the Project Manager. During periods of under utilization, Ernest Orlando Lawrence Berkeley National Laboratory (Berkeley Lab, LBNL) personnel will be allowed to use subcontractor spaces. Parking regulations will be strictly enforced and all parking violations are subject to citation by the University Police.

General Requirement Section, Part 1.05(B): The Subcontractor may use certain University roads as designated by the University for transportation of equipment, materials, workers, or other needs related to the work of this Subcontract. The Subcontractor shall be responsible for all damage to roads, curbs, gutters, fences, guard rails and other property resulting from Subcontractor use of the roads, and shall repair all damage resulting from such use.

General Requirement Section, Part 1.05(C): Heavy and slow moving trucking will not be permitted to the Berkeley Lab (University) from the top of Hearst Avenue or on Centennial Drive between 7:00 a.m. and 8:30 a.m. Trucks attempting to enter the University during this period shall be denied access.

General Requirement Section, Part 1.05(D): Permission for access to the site may be revoked for any and all persons who violate the University traffic regulations including speed limits, parking restrictions and directions of the University police. All of the Subcontractor's personnel, operating forces, and delivery personnel shall be made aware of and shall comply at all times with traffic regulations.

Safety Requirement Section, Part 1.13 (A): Subcontractor shall furnish an adequate number of flaggers for all work that may affect the use of roads by University.

Safety Requirement Section, Part 1.13 (A)(1): Flaggers shall be posted at the entrance and exit of access roads used for hauling material and at all other areas where normal traffic is subject to disruption.

Safety Requirement Section, Part 1.13 (A)(2): Flaggers shall be equipped and instructed at Subcontractor's expense in accordance with current "Instructions to Flaggers" of the Department of Transportation, State of California.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
15. TRANSPORTATION/TRAFFIC – Would the project:					
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e. result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?				X	
<p><u>Construction Phase</u></p> <p>Site preparation involving excavation grading, and soil export is expected to last for two months, which equates to 40 working days. During this time, LBNL estimates that there would be a total of 915 round trips made to and from the site by a combination of contractor vehicles and dumpster trucks.⁸¹ Allocated among the 40 working days, approximately 23 round trips would be made to the site each day. Based on the nature and components of site preparation work, this analysis assumes that approximately half (11.5) of these trips would be made by dumpster trucks. For these 11.5 truck trips, this analysis used a Passenger Car Equivalent (PCE) factor of 2.5, per the 2000 Highway Capacity Manual (HCM), because trucks are much larger than typical passenger vehicles and accelerate, decelerate, and generally travel slower than passenger vehicles. Therefore, the refined estimation of vehicle trips to the project site each work day during preparation work is quantified by adding the number of</p>					

⁸¹ Personal Communication and email communication with Kirk Haley, LBNL Project Manager, March 5, 2007 and April 27, 2007.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	Less Than Significant Impact	No Impact
<p>contractor vehicle trips (11.5) to truck trips (11.5*2.5)=28.75. The estimate is 40.25 round trips per day (28.75 + 11.5).</p> <p>LBNL estimates that construction of the Guest House, subsequent to the site preparation stage described above, would take place over 10 months. LBNL estimates that 620 round trips would be made to the site each month. Assuming there are 20 working days in each month, this would equate to 31 round trips per day. Due to the nature of construction, it can be assumed that a portion of these trips would be made by delivery trucks. It has been assumed that of the 31 rounds trips per day, 25 would be made by contractor vehicles, and six would be made by delivery trucks. For these 6 truck trips, this analysis used a Passenger Car Equivalent (PCE) factor of 2.5, per the 2000 Highway Capacity Manual (HCM), because trucks are much larger than typical passenger vehicles and accelerate, decelerate, and generally travel slower than passenger vehicles. The refined estimation of vehicle trips to the project site each work day during preparation work is quantified by adding the number of contractor vehicle trips (25) to truck trips (6*2.5=15). The estimate is 40 round trips per work day (25 +15).</p> <p>Traffic entering and leaving LBNL was counted at each of the three access gates on Thursday, October 29, 2003. The counts indicated that daily vehicle trip generation is approximately 5,700 (split roughly evenly between inbound and outbound traffic). Although specific volumes were not counted for the Cyclotron Road/Blackberry Gate, which is the gate most likely to be used by the contractor vehicles for this project, it is assumed that this gate captured approximately one-half of the 5,700 daily trips (2,850 trips).</p> <p>Assuming that all vehicles arriving for site preparation work and construction would use the Cyclotron Road gate, the estimated 40.25 round trips per day during the two-month site preparation and estimated 40 round trips per day during the construction phase would represent a 1 percent and 1.4 percent increase in traffic loads, respectively, when compared to the 2,850 daily trip estimate Cyclotron Road/Blackberry Gate.</p> <p>Implementation of LBNL's Standard Operating Procedures as part of the project would ensure that these increases, although relatively small and temporary in nature, would not cause significant impacts to existing traffic operations. The specific procedures that would focus on control of construction traffic include the following:⁸²</p> <ul style="list-style-type: none"> • Heavy and slow moving trucks will not be permitted to the Berkeley Lab (University) from the top of Hearst Avenue or on Centennial Drive between 7:00 a.m. and 8:30 a.m. Trucks attempting to enter the University during this period shall be denied access. • Permission for access to the site may be revoked for any and all persons who violate the University traffic regulations including speed limits, parking restrictions and directions of the University police. All of the Subcontractor's personnel, operating forces, and delivery personnel shall be made aware of and shall comply at all times with traffic regulations. • Parking for private vehicles is limited. Parking for Subcontractors and their workers will be limited to the construction limits and as agreed with the Project Manager. During periods of under utilization, Ernest Orlando Lawrence Berkeley National Laboratory (Berkeley Lab, LBNL) personnel will be allowed to use subcontractor spaces. Parking regulations will be strictly enforced and all parking violations are subject to citation by the 					

⁸² LBNL Facilities Master Specifications, Division 1, Special Requirements, page 01010-4.

⁸³ LBNL Facilities Master Specifications, Section 01020, Environment, Safety, and Health General Requirements, page 01-xxx-9.

⁸⁴ Personal Communication with Kirk Haley, LBNL Project Manager, March 19, 2007.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
<p>University Police.</p> <ul style="list-style-type: none"> The Subcontractor may use certain University roads as designated by the University for transportation of equipment, materials, workers, or other needs related to the work of this Subcontract. The Subcontractor shall be responsible for all damage to roads, curbs, gutters, fences, guard rails and other property resulting from Subcontractor use of the roads, and shall repair all damage resulting from such use. The contractor is required to furnish an adequate number of flaggers for all work that may affect the use of roads and that flaggers are posted at the entrance and exit of access roads used for hauling material and at all other areas where normal traffic is subject to disruption.⁸³ <p>During the PM peak hour, it is not expected that construction traffic would contribute to significant impacts. Whereas in the morning, most contractors would typically arrive on-site before or during the AM peak hour, their afternoon departure times would be more staggered and less likely to coincide with the PM peak hour.⁸⁴</p> <p>Through implementation of the Standard Operating Procedures listed above as part of the project, impacts from construction-period traffic would be <i>less than significant</i>.</p> <p><u>Operational Phase</u></p> <p>With respect to vehicle trips generated by the eight Guest House staff, assuming that each employee used a single-occupant vehicle, this would result in an increase of 16 round trips to and from LBNL each weekday (the Guest House would be operational 24-hours per day/7 days per week). In comparison to the volumes identified above for the Cyclotron Road/Blackberry Gate, 16 additional trips would represent only a 0.5 percent increase. Furthermore, it is not expected that all Guest House staff would have a work schedule requiring them to travel during the peak hour. Some staff are expected to have shifts that begin or end outside of the AM and PM peak hours. Lastly, employees would have the option to ride the free LBNL-shuttle, which would service the Guest House and provide connections to the Downtown BART station, AC Transit lines, and various destinations throughout Berkeley.</p> <p>The provision of on-site accommodations where no such accommodations currently exist is expected to reduce the number of daily vehicle trips to and from the lab. Whereas overnight visitors currently must travel to the lab from off-site accommodations, the project would provide visitors with the option to stay on-site and access their destinations on the lab site more easily by foot, bicycle, or the free LBNL shuttle. Under a scenario in which the Guest House was fully occupied and all visitors accessed destinations at the lab by means other than a single-occupant vehicle, the project has the potential to result in a net reduction of 124 trips. This scenario assumes that prior to the existence of the Guest House, all visitors would have traveled to and from the lab from off-site destinations in single-occupancy vehicles.</p> <p>Accordingly, it is expected that the Guest House would result in a net decrease in the number of vehicle trips made to and from the LBNL campus on a daily basis. A <i>less-than-significant</i> impact would occur.</p>					
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion				X	

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
management agency for designated roads or highways?					

Site Preparation and Construction Phase

As stated above in response to criteria a), site preparation and construction of the Guest House would result in the generation of 40.25 and 40 round trips per week day, respectively. As part of the cumulative analysis, these trips must be considered in relation to the trip volume increases associated with the construction of other projects.

There are several projects on the LBNL campus, the UC Berkeley campus, and within the City of Berkeley that could occur simultaneously with the construction of the Guest House, or both. Three projects at LBNL, for example, that could occur simultaneously with the Guest House include construction of the Helios and Computational Research Theory (CRT) facilities, and demolition of Building 51 and the Bevatron. Similarly, overlapping UC Berkeley projects that could add to cumulative traffic volumes include, but are not necessarily limited to, the CITRUS Project, the Tien Center, and the Southeast Campus Integrated Projects.

Although not all project schedules, estimated traffic loads, and access routes for these cumulative projects are known, the combination of Guest House trips with cumulative project trips could have significant impacts on City of Berkeley operation standards at intersections and along roadway segments in the vicinity of LBNL. However, during the AM peak hour, the LBNL Standard Operating Procedure identified above in response to item a) would prohibit entry to the lab of heavy and slow moving trucks between 7:00 a.m. and 8:30 a.m. During the PM hours, construction-traffic would be dispersed, as opposed to concentrated in the PM hour, based on the staggered nature of contractor schedules.

Therefore, based on the implementation of LBNL’s Standard Operating Procedure related to AM peak hour construction-traffic and the varied nature of contractor schedules during the PM hours, the Guest House project would not contribute to a significant cumulative impact on traffic operations or roadway capacity during either the AM or PM peak hour. Outside peak hours, reduced traffic volumes in relation to applicable intersection and roadway LOS standards are such that project truck trips would not result in a significant cumulative impact. A *less-than-significant* impact would occur.

Operational Phase

Operation of the Guest House would result in the hiring of eight additional staff. Assuming that each employee used his or her personal vehicle, this would result in an increase of 16 round trips to and from LBNL each weekday.⁸⁵ In comparison to the volumes identified above for the Cyclotron Road/Blackberry Gate, 16 additional trips would represent only a 0.5 percent increase. This would not represent a significant contribution to a cumulative increase in vehicle trips on roadways and at key intersections on the LBNL campus and in the City of Berkeley. Furthermore, it is not expected that all Guest House staff would have a work schedule requiring them to travel during the peak hour when cumulative impacts on roadway or intersection Level of Service (LOS) could occur. Lastly, Guest House employees would have the option to ride the free LBNL-shuttle, which would provide connections to BART and AC Transit lines and various destinations throughout Berkeley.

⁸⁵ where is footnote***

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
<p>Visitors may use private automobiles to arrive at the Guest House. However, due to the limited parking on-site and the availability of other means of transportation such as taxis or the free LBNL shuttle, it is not expected that visitor traffic would result in a substantial traffic volume increase. Furthermore, upon making advanced reservations and checking in, Guest House visitors would be informed by Guest House reception staff about the availability of the free LBNL-shuttle to encourage its use. As a result, the project would not contribute to significant cumulative impact on traffic volumes or operations during the operational phase. A <i>less-than-significant</i> impact would occur.</p>					
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?					X
<p>The proposed project does not include any activities that could affect air traffic patterns. Thus, <i>no impact</i> would occur.</p>					
d) Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?					X
<p>The project would include construction of drop-off areas on the western and eastern sides of the building. Neither of these would introduce hazardous design features related to circulation. The project would not otherwise include any modifications to LBNL's roadway network. For these reasons, <i>no impact</i> would occur.</p>					
e) Result in inadequate emergency access?					X
<p>The proposed project would not interfere with emergency access to LBNL or the proposed project site. Emergency vehicles accessing destinations on the LBNL campus would continue to use existing emergency routes during construction and operation of the Guest House. As a result, <i>no impact</i> related to emergency access would occur.</p>					
f) Result in inadequate parking capacity?				X	
<p>The proposed project would not add or remove any parking spaces. Because the project would not cause a substantial increase in LBNL's employee or visitor population over existing levels, it would not result in a need for increased parking. It is expected that staff and visitors to the Guest House could be adequately accommodated in the existing lots adjacent to Building 2 or across Lawrence Road from the project site.</p> <p>Assuming a worst-case scenario in which the Guest House was 100 percent occupied and all staff and visitors required parking for a single-occupancy vehicle at the same time, there would be a demand for 78 parking spaces (70 guests and eight staff). This level of demand is not expected to occur, however. It is expected that many guests and some staff would arrive at the Guest House by means other than single-occupancy vehicle. This is based on the fact that upon making reservations, guests would be informed about alternative means of transportation to the</p>					

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
<p>site, including BART, AC Transit, and the LBNL Shuttle. Guests would also be informed of the connections between these modes of mobility and local airports and the availability of the LBNL shuttle to access destinations within the lab campus and throughout downtown Berkeley.</p> <p>Based on Figure IV.L-4 of the 2006 LRDP EIR, there are two parking lots with 49 or fewer spaces and one lot with 50-100 spaces within 150 feet of the Guest House site.⁸⁶ For the parking demand that would occur as a result of the project, existing facilities are expected to be adequate. It is expected that demand for parking at the Guest House could be accommodated in these lots. As a result, the project would have a <i>less-than-significant</i> impact on parking capacity.</p>					
g) Conflict with applicable policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)?					X
<p>The 1987 LRDP EIR, as amended Mitigation Measure III-I-1a, which is explained above in the LRDP EIR discussion, requires the implementation of a Transportation System Management Plan (TSMP). The TSMP contains several polices designed to encourage the use of alternative transportation to, from, and within the LBNL campus.</p> <p>The proposed project encourages alternative forms of transportation as it does not provide parking. Furthermore, a shuttle stop is located directly across Lawrence Road from the project site. The shuttle is free and would provide connections for staff and visitors of the Guest House between LBNL and various destinations in Berkeley including the Downtown BART station and AC Transit stops. Upon making advanced reservations and checking in, Guest House visitors would be informed by Guest House reception staff about the availability of the shuttle to encourage its use.</p> <p>As a result, the proposed project would be consistent with Mitigation Measure III-I-2, and <i>no impact</i> would occur.</p>					
h) Exceed an applicable LRDP or Program EIR standard of significance?					X
<p>The applicable standards of significance from the LRDP Program EIR, as amended, are adequately addressed through the responses included in the checklist above. The proposed project would not exceed a traffic or transportation standard of significance established by the programmatic 1987 LRDP EIR, as amended due to the inclusion of the mitigation measures and standard operating procedures previously discussed.</p>					

⁸⁶ Environmental Science Associates, Lawrence Berkeley National Laboratory 2006 Long-Range Development Plan Draft Environmental Impact Report. January 22, 2007, page IV--14.

Summary of Impacts and Mitigation Measures:

Potentially significant impacts not mitigated by 1987 LRDP EIR, as amended, mitigation measures or LBNL Standard Operating Procedures: None.

The proposed project would incorporate the following 1987 LRDP EIR, as amended, Mitigation Measures or LBNL Standard Operating Procedures: Mitigation Measures: III-I-a, III-I-b, III-I-c, III-I-d, III-I-e, and III-I-2. Operating Procedures: General Requirements, Sections 1.04(A), 1.05(A)(B)(C)(D). Safety Requirements, Section 1.13.

GH Project-Specific Mitigation Measures: None.

16. UTILITIES AND SERVICE SYSTEMS

LRDP EIR, as amended:

The following relevant impacts to utilities and service systems have been anticipated and analyzed pursuant to CEQA, as part of the programmatic LRDP EIR, as amended, from which this analysis is tiered:

Impact III-M-1: Projected development according to the 1987 LRDP may create demands with regard to existing wastewater and sanitary sewer systems.

Impact III-M-2: Development proposed under the 1987 LBNL LRDP would increase the demand for domestic water. This demand is well within the capacity of the existing ties to EBMUD and the LBNL water distribution system. This demand is not considered significant.

Impact III-M-3: Development proposed under the 1987 LBNL LRDP would increase the usage of natural gas. The projected usage is within the capacity of the existing PG&E and LBNL systems. This increased usage is not considered significant.

Impact III-M-5: Development proposed under the 1987 LBNL LRDP would increase the usage of electrical power. PG&E has the capacity to supply this power.

This increased usage is not considered significant. Cumulative Impacts: Cumulative development at and in the vicinity of LBNL is not expected to result in adverse impacts to utilities and waste services.

Mitigation Measure III-M-1: Prior to construction of any project which may add significant sewer load to the city sanitary sewer system, LBL will investigate the potential impact of the project on the city system. LBL will identify mitigation measures to accommodate the sewer load if the impact investigation indicates that the city system could not accommodate the additional sewage. LBL will reimburse the City of Berkeley and/or EBMUD for its fair share of allowable and necessary sewer improvement capital costs which are needed to accommodate increased demand and mitigate sewer impacts from implantation of the LBL LRDP.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
16. UTILITIES AND SERVICE SYSTEMS – Would the project:					
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X	

The Guest House project would increase sanitary sewer loads generated on the site. Whereas there is currently no demand for sanitary sewer service on the site because Buildings 29A, B, and C are vacant, the introduction of a 60-room facility would increase the demand.

Consistent with implementation of Mitigation Measure III-M-1, as described above, LBNL engineering staff developed and reviewed wastewater generation estimates in relation to City of Berkeley and EBMUD treatment capacity. Based on this review, it was determined that although the project would result in an increase in the volumes of waste water generated on-site, this increase would not exceed capacity at either City of Berkeley or EBMUD treatment facilities. Therefore, the project would not conflict with Regional Water Quality Control Board requirements.⁸⁷

The capacity of local waste water facilities was also examined as part of the environmental review conducted for LBNL's 2006 LRDP Draft EIR. Although this Draft EIR has not yet been certified by the UC Regents, research completed in advance of its circulation for public review provides background information relevant to waste water treatment capacity. As stated on page IV-M-7 of the draft 2006 LRDP EIR, sanitary waste effluent from LBNL's western portion, which includes the Guest House project site, generally flows into the City of Berkeley sub-basin 17-013 by way of the Hearst Monitoring Station. Sub-basin 17-013 is not currently constrained during peak wet weather flows, and it is expected to have future wet weather capacity to meet LBNL's growth needs during the term of the 2006 LRDP, which would include the Guest House facility.⁸⁸

The City of Berkeley's sewer system transports the effluent from the Hearst Monitoring Station to EBMUD's north interceptor sewer and then to EBMUD's treatment facility in Oakland. EBMUD's waste water treatment facility has an average daily flow of 77 million gallons per day (mgd) during dry weather conditions. During wet weather, the treatment plant accepts more flow; the plan has a sustainable primary treatment capacity of 320 mgd, and a maximum secondary treatment capacity of 168 mgd.⁸⁹ As stated on page IV-M-21 of the 2006 LRDP Draft EIR, EBMUD anticipates having adequate dry weather capacity to treat the proposed waste water flow from LBNL at buildout of the 2006 LRDP EIR.⁹⁰ Given that the Guest House Project would become operational in 2009, it would not exceed the treatment capacity of EBMUD's Oakland facility.

Therefore, neither the City of Berkeley sub-basin 17-013 or the EBMUD's Oakland treatment facility are at

⁸⁷ Mike Dong, LBNL Engineering, Email received by DC&E on April 19, 2007.

⁸⁸ Lawrence Berkeley National Laboratory Long-Range Development Plan Draft Environmental Impact Report, Environmental Science Associates, January 22, 2007, page IV-M-7.

⁸⁹ Lawrence Berkeley National Laboratory Long-Range Development Plan Draft Environmental Impact Report, Environmental Science Associates, January 22, 2007, page IV-M-4.

⁹⁰ Lawrence Berkeley National Laboratory Long-Range Development Plan Draft Environmental Impact Report, Environmental Science Associates, January 22, 2007, page IV-M-21.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	Less Than Significant Impact	No Impact
capacity. Both would have capacity to accommodate the increased sanitary sewer volumes that the Guest House project would generate. As a result, a <i>less-than-significant</i> impact would occur.					
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X	
<p>The site currently has a 6-inch sanitary sewer line stubbed near the north end of the proposed building. According to the site topographic survey, this existing 6-inch sanitary stub is currently abandoned and would likely need to be cleared and rehabilitated in order to serve the site.⁹¹ It is also anticipated that a new 6-inch line would need to extend approximately 30 feet to the existing service line, which would tie into the Hearst outflow.⁹² It is anticipated that this line would be sufficient to handle the sewer demand of the Guest House. Construction of these improvements would be localized and would result in a <i>less-than-significant</i> impact. Beyond these improvements, it is not expected that the Guest House project would require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities.</p>					
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X	
<p>The nearest storm drain point of connection on the site is a catch basin to the west that is served by an existing 10-inch corrugated metal pipe (CMP). This catch basin would be accessed by constructing a storm drain lateral from the project site approximately 120 lineal feet across Lawrence Road. Based on the slope of the site, it is estimated that the storm pipe would need to be 8 inches in diameter.⁹³ As stated above in the hydrology section of the checklist, the project would result in a negligible increase in the volume of stormwater leaving the site. The estimated increase in runoff from the project site to the Strawberry Creek Watershed for any given storm would be 0.01 percent (one one-hundredth of one percent).⁹⁴ The storm drain lateral is necessary, however, because a storm water conveyance system does not currently exist on-site and is required to manage runoff.</p>					

⁹¹ Berkeley Lab Guest House Program Statement, Guidelines Specifications, Systems Descriptions, Macdonald Architects, November 10, 2006, Exhibit 1, page 15.

⁹² Email communication received from Steve Blair of LBNL, February 14, 2007.

⁹³ Berkeley Lab Guest House Program Statement, Guidelines Specifications, Systems Descriptions, Macdonald Architects, November 10, 2006, pg. 15.

⁹⁴ Steve Blair, LBNL Engineering, email received by DC&E on April 12, 2007.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/Program EIR is Sufficient	Less Than Significant Impact	No Impact
<p>The end of the pipe closest to the Guest House would be located near the center of the building on the western side. The pipe would extend in a southwesterly direction across a portion of the project site, across Lawrence Road, and tie into the existing storm drain system on the southeastern side of Building 54.⁹⁵ The ground disturbance necessary to construct this new storm drain lateral would take place largely within areas that have already been disturbed by previous site preparation and construction or the installation of infrastructure and utilities. In terms of access, during installation of the storm drain lateral, Lawrence Road would be kept open at all times so that access to the project site and other locations on the LBNL campus would be maintained. Lastly, during the construction and connection of the new storm drain to the existing system, the existing system could continue to function normally. As a result, installation and operation of the storm pipe would result in a <i>less-than-significant</i> impact.</p>					
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X	
<p>The expected usage of water for the site is 50 gallons per day per living unit, which would equate to a demand of approximately 3,000 gallons per day for all of the guest rooms. It is expected that overall demand would be slightly higher because this estimate does not account for administrative or janitorial purposes within the building.⁹⁶</p> <p>According to LBNL, no upgrades to water lines would be required on- or off-site to provide potable water to the Guest House and sufficient water supply from EBMUD exists to serve the project in addition to existing demand. As part of the analysis completed for the 2006 LRDP EIR, LBNL submitted a request to EBMUD to prepare a water supply assessment (WSA) for the proposed LRDP project. EBMUD transmitted the WSA to LBNL in November, 2004 and confirmed in November, 2006 that buildout of the lab's 2006 LRDP, which includes the Guest House, is accounted for in EBMUD's water long-term water demand projections. EBMUD confirmed that implementation of the 2006 LRDP would not trigger a significant increase in water use beyond what EBMUD projected for its service area.⁹⁷</p> <p>This conclusion is supported by Impact III-M-2 from the 1997 SEIR, as identified above in the LRDP EIR discussion, which states that development occurring under the LRDP EIR is well within the capacity of existing ties to EBMUD and the LBNL water distribution system. Furthermore, the Department of Energy (DOE) owns and maintains three 200,000-gallon storage tanks on site for emergency supply in the event of interruption of EBMUD's service. As a result, the project would result in a <i>less-than-significant</i> impact to water supplies.</p>					
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected					X

⁹⁵ Berkeley Lab Guest House Program Statement, Guidelines Specifications, Systems Descriptions, Macdonald Architects, November 10, 2006, Exhibit 1, page 17.

⁹⁶ Email communication received from Steve Blair of LBNL, February 14, 2007

⁹⁷ 97 William Kirkpatrick, EBMUD, correspondence with LBNL, February 23, 2006.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
demand in addition to the provider's existing commitments?					
The discussion in (a) satisfies (e).					
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?					X
<p>According to the 1997 SEIR Addendum, Richmond Sanitary Service (RSS) was awarded the contract to collect LBNL's garbage and recyclable waste in 1995. RSS took recyclable material to its own recycling facility in Richmond. RSS also picked up LBNL's solid waste and hauled it to the Richmond Sanitary Landfill in Richmond, which closed on September 30, 2006. RSS now takes LBNL's waste to Potrero Hills Landfill in Solano County, which has approximately 50 years of excess capacity.⁹⁸ RSS transports recyclables to its recycling facility in the City of Richmond.</p> <p>Therefore, the proposed project would be served by a landfill with sufficient permitted capacity to accommodate its solid waste disposal needs. As such, <i>no impact</i> would occur.</p>					
g) Comply with applicable federal, State, and local statutes and regulations related to solid waste?					X
<p>As a government-owned facility operated through contract by the UC, LBNL complies with the waste minimization reporting requirements of the DOE, the State of California, the UC and LBNL itself.⁹⁹ Adherence to these reporting requirements would ensure compliance with federal, State, and local statutes related to solid waste reduction. Thus, <i>no impact</i> would occur.</p>					
h) Exceed an applicable LRDP or Program EIR standard of significance?					X
<p>The applicable standards of significance from the LRDP Program EIR, as amended, are adequately addressed through the responses included in the checklist above. The proposed project would not exceed a public utility standard of significance established by the programmatic 1987 LRDP EIR, as amended. Public utility impacts would be less than significant and no project-specific mitigation measures would be required.</p>					

Summary of Impacts and Mitigation Measures:

Potentially significant impacts not mitigated by 1987 LRDP EIR, as amended, mitigation measures or LBNL Standard Operating Procedures: None.

⁹⁸ Personal email communication with William Collins of LBNL, September 20, 2006.

⁹⁹ DSEIR for LBNL. Hazardous Materials Chapter. Page IV-A-1. April 1992.

The proposed project would incorporate the following 1987 LRDP EIR, as amended, Mitigation Measures: None
 GH Project-Specific Mitigation Measures: None required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
17. MANDATORY FINDINGS OF SIGNIFICANCE –					
a) Does the project have the potential to 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, 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	
The proposed project was not found to have any biological or cultural resources-related impacts that could not be mitigated to a <i>less-than-significant</i> level through the implementation of measures specified in the 1987 LRDP EIR or LBNL standard operating procedures.					
b) Does the project 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	
The project would result in potentially significant cumulative impacts to traffic volumes and operations; however with implementation of required standard operating procedures identified in the traffic section of this checklist as part of the project, potential impacts would be <i>less than significant</i> .					
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				X	

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Impact for which LRDP/ Program EIR is Sufficient	Less Than Significant Impact	No Impact
<p>The proposed project would not have any environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly, that could not be mitigated to a <i>less-than-significant</i> level. As such, no significant impacts are anticipated.</p>					

18. Fish and Game Determination

Based on the information above, there is no evidence that the project has a potential for a change that would adversely affect wildlife resources or the habitat upon which the wildlife depends. The presumption of adverse effect set forth in 14 CCR 753.5 (d) has been rebutted by substantial evidence.

Yes (Certificate of “No Effect”)

No (Pay fee)

VI. CUMULATIVE ANALYSIS

PROJECTS IN VICINITY OF PROPOSED PROJECT

Planned, pending, and/or reasonably foreseeable projects in the area of the proposed project include:

The Computational Research and Theory (CRT) Building: As currently projected, the CRT building would likely be a six-story, 165,000-gsf building constructed near the Blackberry Gate entrance to the Lab's main site. It would provide high-end computing floor space and accompanying office space to support the Lab's National Energy Research Scientific Computing (NERSC) Center, which is currently operating within the confines of an off-leased site. CEQA review would be conducted and an appropriate document circulated for public review in approximately mid-2007. Construction of the project would occur subsequent to environmental review.

The Helios Research Facility: As currently projected, the Helios Research Facility building would likely be proposed as a four-story, 120,000 to 160,000 gsf laboratory building constructed just south of existing LBNL buildings 66 and 62. The goal of the Helios Project is to accelerate the development of renewable and sustainable sources of energy using sunlight by developing fundamentally new and optimized materials for use in collectors, efficient processing steps, and energy handling. CEQA review would be conducted and appropriate documents circulated for public review in approximately fall/winter 2008. Construction of the project is expected to begin in April, 2008.

The User Support Building: The proposed three-story, approximately 30,000 gross square foot (gsf) User Support Building (USB) would be composed of assembly space, support laboratories, and offices. An existing 16,038 gsf structure, Building 10, which houses approximately 24 full-time LBNL staff would be demolished and removed to create space for the USB. An Initial Study/Negative Declaration was prepared and circulated in winter 2006/2007. Demolition of Building 10 would take place between mid and late-2007. Construction of the USB would take place from winter 2008 through summer 2009.

The Bevatron Project: It is expected that a Final EIR will be certified in the Spring of 2007 for the demolition and removal of the Building 51 complex, including the Bevatron a retired particle accelerator and the concrete blocks and building shell surrounding it. This Final EIR would be tiered from the 1987 LRDP EIR, as amended. The Bevatron removal would likely take place from approximately 2007 to 2012.

LBNL 2006 Long Range Development Plan: This LRDP would guide LBNL's development for approximately 20 years (through 2025). The proposed new LRDP is anticipated to identify new population and space growth projections for LBNL, although growth would be projected to occur at approximately the same rate as has been experienced at LBNL during its recent history (approximately 1.3 percent per year). An environmental analysis of this proposal is currently underway and a UC Regents decision regarding the plan is expected to occur in mid-2007.

South Campus Integrated Projects: In May 2006, UC Berkeley published a Tiered, Focused Draft EIR for the Southeast Campus Integrated Projects (SCIP). The SCIP projects include seismic and program improvements at the California Memorial Stadium, including a 158,000-gsf athletic training center; construction of a parking structure and sports field at the current site of Maxwell Family Field; construction of a 186,000-gsf building linking the Law and Business Schools,

landscape improvements at the Southeast Campus and Piedmont Avenue; interior improvements at selected buildings at the School of Law and the Haas Business School; and renovation and restoration of four historic houses on Piedmont Avenue. The SCIP DEIR identified significant and unavoidable impacts in the areas of aesthetics, cultural resources, geology, noise, traffic, and utilities and service systems.

Northeast Quadrant Science and Safety Projects: The NEQSS project would construct approximately 324,400 gsf of buildings (demolition of existing 100,000 gsf, construction of 430,000 gsf), 140 parking spaces and add approximately 400 full-time equivalent (FTE) employees to the northeastern quadrant of the UC Berkeley campus. The environmental review for these projects has been completed and they are currently under construction.

City of Berkeley Development: The 2001 City of Berkeley General Plan allows for steady growth and development, but given a lack of substantial undeveloped space in the City, at a relatively even pace with an emphasis on in-fill development. Projections include a population increase of approximately 7,000 people (a roughly 6 percent increase), approximately 3,300 new household units (a roughly 8 percent increase), and approximately 3,700 new jobs (a roughly 5 percent increase) by the year 2020.

Building 77 Rehabilitation Project:

The Building 77 Rehabilitation of Building Structure and Systems, Phase 2 project will upgrade the mechanical and electrical systems in Building 77, a 68,500 square foot, high-bay shop building. The project will replace a 40-year-old mechanical system with new heating, ventilating and air conditioning systems to provide temperature control, which is required for precision fabrication and testing. The project will also upgrade portions of the electrical system to support the new mechanical systems. The project is expected to begin in mid-2007 and continue through the end of 2008.

Building 6 Seismic Upgrade Project:

The project will seismically upgrade LBNL Building 6 Advanced Light Source (ALS) dome structure to the University of California seismic safety policy. The purpose of the project is to rehabilitate structural deficiencies of the dome structure, upgrade the polar crane base isolation system, and all other structural elements which do not comply with the requirements of current codes and seismic standards. The work will occur during one month shut-down periods each year over four years. The first phase, occurring in 2007, will repair five of the total 24 column bents, the second phase (in 2008) will repair seven of the total, and six bents will be repaired in 2009 (phase 3) and 2010 (phase 4) (for a total of 24 bents).

Building 29 A, B, C Removal

As stated in the Project Description, the removal of Building 29 A would take place as a separate DOE project. However, its removal has been considered as part of the cumulative analysis. The removal of Buildings 29B, and C have also been considered as part of this analysis. Although removal of these facilities would not occur as part of the Guest House project and the timeline is not known, the removal of each is a reasonably foreseeable project.

CUMULATIVE IMPACT AREAS

Agricultural and mineral Resources

Based on the analysis provided provide above, it was concluded that the Guest House site does not include or is not within the immediate vicinity of any agricultural or mineral resources. As a result, the proposed Guest House project would not reasonably be expected to result in significant cumulative impacts to such resources.

Aesthetics/Visual Quality

The proposed Guest House project, in combination with the other cumulative projects listed above, would contribute to an overall visual change to the LBNL and UC campuses and nearby areas in the City of Berkeley. The primary visual change would be an increase in the amount of urban uses (i.e. residential, commercial, institutional) in areas that are currently undeveloped or developed at intensities below what they would be under future projects. The User Support Building, for example, would involve construction of a more modern building that is larger in scale than what is on the site now.

As discussed in the aesthetics section of the checklist above, the proposed Guest House project would take place on an infill site that is currently occupied by Building 29A and surrounded by existing LBNL buildings and roadways. Although larger in scale and different in appearance than the existing Building 29A, the proposed project would construct a new building where one currently exists and would therefore represent a continuation of uses on the site and within the larger visual context. As a result, the project would not introduce a significant visual change to the site or substantially degrade the visual quality of the surroundings. Further, the project would not affect a scenic highway corridor or result in a substantial amount of light or glare.

In addition, the proposed Guest House project is consistent with the 1987 LRDP and 1987 LRDP EIR, as amended, which addressed cumulative visual impacts associated with LBNL growth. The proposed project would incorporate 1987 LRDP EIR, as amended, mitigation measures designed to safeguard the aesthetic character of the University-owned, LBNL-managed hillside area. Therefore, no significant cumulative impact to aesthetic or visual resources is expected.

Air Quality

The proposed Guest House project would not result in any individually significant air impacts, nor would it result in any significant cumulative air quality impacts. It would be consistent with the LBNL LRDP, and would neither conflict with nor obstruct implementation of the *Bay Area 2005 Ozone Strategy*, which is the most recently approved regional Clean Air Plan.

The proposed Guest House project would not violate any applicable air quality standard or contribute substantially to any existing or projected air quality violations. It would not result in a cumulatively considerable net increase in any criteria pollutant for which the project region is in non-attainment (federal and State ozone and State PM₁₀ and PM_{2.5}).

No construction or operational emissions—either criteria pollutants or toxic air contaminants—would be expected to exceed any regional, state, or federal thresholds of significance. The proposed Guest House project would not create or substantially contribute to a significant Toxic Air Contaminant (TAC) impact. Emission of TACs would be limited to the site preparation and

construction phases of the project. Project emissions of TACs are expected to be very low in general and negligible at the distance of the nearest sensitive receptors, which are residential areas in the case of the Guest House project. In addition, the proposed project is consistent with the LRDP and LRDP EIR, as amended, which addressed cumulative air impacts associated with LBNL growth.

Therefore, the Guest House project would not result in a significant, cumulative air quality impact.

Biological Resources

As discussed in the biology section of the checklist, the proposed Guest House project would take place on a site that has already been disturbed for other uses (Buildings 29A, B, and C). The site is primarily defined by Building 29A and surrounding hardscape features, including equipment loading areas. Those portions of the site not occupied by buildings or hardscape include ruderal vegetation and a cluster of oak and eucalyptus trees. As concluded in the biology section, the site does not contain any wetlands, riparian habitats, recognized wildlife movement corridors, and it is not located within a resource management plan area. Furthermore, the site does not contain special status plant or animal species, and the project would not conflict with any state or local ordinances protecting biological resources. As a result, the Guest House project would have a less-than-significant impact.

In addition, the proposed Guest House project is consistent with the LRDP and LRDP EIR, as amended, which addressed cumulative biological resources impacts associated with LBNL growth. As a result, the proposed Guest House project would not result in any significant impacts to biological resources, and therefore would not contribute to significant cumulative impacts.

Cultural Resources

As explained in the cultural resources section of the checklist, the Guest House project would not contribute to a significant cumulative impact on historically significant architectural resources. Further, through the implementation of standard operating procedures concerning the protection of cultural resources, the proposed Guest House project and the other cumulative projects listed above would not significantly affect any archaeological or human remains, and therefore would not contribute to any cumulative impacts on such resources.

In addition, the proposed Guest House project is consistent with the LRDP and LRDP EIR, as amended, which addressed cumulative historical resources impacts associated with LBNL growth.

Geology, Soils and Seismicity

Geological and seismic impacts are typically site-specific and do not result in cumulative impacts. The proposed Guest House project, in combination with the other cumulative projects listed above, would expose a greater number of people to risk associated with regional seismic events. An increased number of people would be occupying building space on the LBNL campus that would be subject to partial or complete failure during a seismic event. For example, the construction of the CRT Building, the Helios Research Facility, and the Guest House would introduce an increased amount of facility space that would be occupied by employees, researchers, and guests. All of these structures, in addition to the others included in the list of projects above, would be subject to seismic damage or failure.

However, as the proposed project and other projects are constructed, adherence to State requirements such as the Uniform Building Code would ensure structural safety to the maximum extent feasible. This would reduce potential cumulative impacts related to seismic safety to a less-than-significant level.

In addition, the proposed Guest House project, in combination with other projects, has the potential to contribute to a significant cumulative impact associated with soil erosion. However, because the proposed Guest House project and the other cumulative projects listed above would incorporate Best Management Practices (BMPs) that reduce erosion to a less-than-significant level, the project would not have a significant cumulative impact in relation to erosion and the loss of top soil.

In addition, the proposed Guest House project is consistent with the LRDP and LRDP EIR, as amended, which addressed cumulative geology, soils, and seismicity impacts associated with LBNL growth. As a result, no significant cumulative geology, soils, or seismicity impacts would be expected to result from the proposed project.

Hazards and Hazardous Materials

The proposed Guest House project, together with other projects identified in the list above, would likely expose an increased number of people to hazards such as hazardous materials spills and exposure to wildland fires. However, these potential project-specific impacts would be less-than-significant through implementation of 1987 LRDP EIR mitigation measures and LBNL Standard Operating Procedures as part of the project, and through compliance with local, regional, State and federal regulations such as those that control the production, use and transportation of hazardous materials.

Similarly, as the cumulative projects are developed either on the LBNL or UC campuses or in the City of Berkeley, local, regional, State and federal regulations would apply to this development, thereby reducing the potential for cumulative impacts associated with hazards and hazardous materials to a less-than-significant level.

In addition, the proposed project is consistent with the LRDP and LRDP EIR, as amended, which addressed cumulative hazards and hazardous materials impacts associated with LBNL growth. Therefore, the proposed project would not create any significant cumulative hazards or hazardous materials impacts.

Hydrology and Water Quality

As a result of the proposed Guest House project and the other cumulative projects listed above, the amount of impervious surfaces will increase on the LBNL campus, resulting in a potential increase in the amount of pollutants in runoff, thereby potentially impacting surface and groundwater quality. However, cumulative water quality and hydrology impacts on the LBNL and UC campuses and in the City of Berkeley would be reduced by implementing BMPs in accordance with the National Pollutant Discharge Elimination System (NPDES) programs. Through continued compliance with the NPDES and other Regional Water Quality Control Board (RWQCB) regulations in the region, there would be no significant cumulative hydrology or water quality impacts from the proposed Guest House project and the other cumulative projects listed above.

In addition, the proposed project is consistent with the LRDP and LRDP EIR, as amended, which addressed cumulative hydrology and water quality impacts associated with LBNL growth.

Land Use

Construction and operation of the proposed Guest House project would not contribute to land use conflicts as the site and surrounding area are currently developed with LBNL institutional uses in close proximity to each other. When combined with the other cumulative projects listed above, the proposed Guest House project would not contribute to a significant shift in the character of the LBNL campus or surrounding areas in the City of Berkeley or on the UC campus. Further, the land use section of the checklist above concluded that the project would not divide an established community or conflict with adopted land use or habitat plans or policies. Since the project would not result in a land use impact, the project would not contribute to a cumulative land use impact.

In addition, the Guest House project is consistent with the LRDP and LRDP EIR, as amended, which addressed cumulative land use impacts associated with LBNL growth.

Noise

Construction-related noise effects from the proposed Guest House project could combine with noise from other construction projects to generate cumulative impacts. However, construction of the proposed Guest House project and other cumulative projects would be staggered over a period of several years and there would not be a point at which all projects were fully under construction. In addition, the projects are separated physically and by intervening terrain and structures. During the operation phase, the project would not result in an increase in vehicle trips to LBNL and therefore would not contribute to a significant cumulative noise impact resulting from traffic.

In addition, the proposed project is consistent with the LRDP and LRDP EIR, as amended, which addressed cumulative noise impacts associated with LBNL growth. As a result, the project would not result in a significant noise impact.

Population and Housing

As explained in the population and housing section of the checklist above, the proposed project could increase full-time staff on the LBNL campus by eight people. However, it is expected that these employees would be hired from the local labor pool and would not represent a new population to the area that would require additional housing. In terms of visitors to the Guest House, it is expected that the majority of them already visit the LBNL campus for work or research-related purposes. Therefore, the Guest House project would not induce a substantial growth in local population. Further, the Guest House project would not displace any people or conflict with any housing or population projections in the LRDP or any other local planning documents.

The UCB Campus and City of Berkeley projects listed above would induce employment growth and, consequently, housing demand, but this level of demand would not be affected or increased by the Guest House project.

In addition, the Guest House project is consistent with the LRDP and LRDP EIR, as amended, which addressed cumulative population and housing impacts associated with LBNL growth.

Therefore, the proposed project would not result in a significant cumulative impact to housing resources or population.

Public Services

As stated in the population and housing section of the checklist, the proposed Guest House project would substantially increase the full or part-time population on the LBNL campus. The facility would only require eight full-time staff and it is expected that visitors who stay at the Guest House already visit the LBNL campus for work or research-related purposes. While other LBNL, UC, or City of Berkeley projects listed above could increase population and thereby increase the demand for public services, the Guest House project would not contribute to this demand and therefore not result in a significant cumulative impact in combination with other projects. The proposed Guest House project could be adequately served through existing public services and existing facilities.

In addition, the proposed Guest House project is consistent with the LRDP and LRDP EIR, as amended, which addressed cumulative public services impacts associated with LBNL growth. Therefore, no significant cumulative impacts would occur.

Recreation

As stated in the recreation section of the checklist, the proposed Guest House project would not result in an increased demand on recreational facilities such that new facilities would be required or that existing facilities would be substantially degraded. The other cumulative projects, which may result, in an increased population could increase the demand for and usage of recreational facilities. However, because the proposed Guest House project would not contribute to this increased demand, it would not result in a significant cumulative impact to recreational resources.

Traffic and Circulation

Construction of the proposed Guest House project, in combination with the other projects listed above, has the potential to result in significant cumulative impacts to operations of roadway segments and intersections during the AM and PM peak hours. While the full extent of information on all cumulative projects is not known, such as project schedules, truck routes, and staging areas, enough information is known to determine that construction periods for several of these projects could overlap. As a result, the proposed Guest House project and other projects could simultaneously introduce truck and contractor vehicle traffic at intersections and along roadway segments in the City of Berkeley that are already experiencing poor operations. The combined effect of this traffic could have a significant impact on the Level of Service (LOS) at an intersection or along an arterial in that a LOS threshold could be exceeded.

However, due to the inclusion of standard operating procedures as part of the project, heavy truck trips to the Guest House during site preparation and construction would not be permitted during the AM peak hour. As a result, while the Guest House project would result in additional vehicle trips, those trips would not contribute to significant cumulative impacts.

During the operational phase, the availability of on-site, overnight accommodations is expected to result in a net reduction in the number of daily trips to and from the LBNL campus. Whereas no such lodging options at LBNL currently exist and many visitors opt to arrive on-site by private automobile, the Guest House would allow them to arrive on-site and access LBNL facilities by

walking or the shuttle, as opposed to making trips to and from off-site lodging facilities. As a result, the project would not have a significant cumulative impact on traffic operations during the operation phase.

In addition, the proposed project is consistent with the LRDP and LRDP EIR, as amended, which addressed cumulative traffic and circulation impacts associated with LBNL growth.

Utilities/Energy

The proposed project would be constructed on an infill site that is already served by potable water supply lines, sanitary waste water systems, storm water drainage systems, and energy supply. Due to the increased demand for utility service and energy on the site, new or upgraded connections to several of these utilities would be required. However, none of these improvements would result in a significant physical impact. Further, the increased demand would not exceed existing supply of the necessary resources.

Several of the cumulative projects listed above would be expected to increase demand for regional utilities and energy provision. However, these utilities are managed and augmented by service providers in relation to regional growth projections to accommodate region-wide demand increases. These cumulative projects would be expected to fit within this long-term planning. Therefore, because the proposed Guest House project, by itself, would not result in a significant impact on utilities and because utility needs for the cumulative projects listed above would be addressed through long-term planning, the proposed project would not result in significant cumulative impacts in combination with other projects.

In addition, the proposed Guest House project is consistent with the LRDP and LRDP EIR, as amended, which addressed cumulative utilities/energy impacts associated with LBNL growth.

A P P E N D I X A

1987 LRDP EIR, AS AMENDED,
MITIGATION MEASURES AND
LBNL STANDARD OPERATING
PROCEDURES INCORPORATED
INTO PROJECT

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The following mitigation measures from the 1987 LRDP EIR would be included in the Guest House Project.

Aesthetics

Mitigation Measure III-F-1a: Buildings will occupy as limited a footprint as feasible. They will incorporate features that enhance flexibility and future versatility.

Mitigation Measure III-F-1b: Buildings will be planned to blend with their surroundings and be appropriately landscaped. Planned objectives will be for new buildings to retain and enhance long-distance view corridors and not to compromise views from existing homes. New buildings will generally be low-rise construction.

Mitigation Measure III-F-2: Any new facilities will not use reflective exterior wall materials or reflective glass, to mitigate the potential impacts of light and glare.

Mitigation Measure III-D-2a: Revegetation of disturbed areas, including slope stabilization sites, using native shrubs, trees, and grasses will be included as part of all new projects.

Mitigation Measure III-G-2: Buildings proposed for development at LBNL will follow the design guidelines contained in the LBNL LRDP, as amended.

Air Quality

Mitigation Measure III-J-1: Construction contract specifications would require that during construction exposed surfaces would be wetted twice daily or as needed to reduce dust emissions. In addition, contract specifications would require covering of excavated materials.

Mitigation Measure III-J-2: LBNL will design building ventilation systems to minimize emission of criteria air pollutants following compliance with all applicable regulatory requirements (e.g. New Source Review).

In addition, the following standard operating procedure is already required for the proposed project, and is therefore incorporated as part of the proposed project's description:

Safety Requirement Section 1.02(A): Subcontractors shall comply with the requirements of Bay Area Air Quality Management District (BAAQMD) Rules, Regulations, and Manual of Procedures, including CEQA Guidelines.

Biological Resources

Mitigation Measure III-D-2a: Revegetation of disturbed areas, including slope stabilization sites, using native shrubs, trees, and grasses will be included as a part of all new projects.

Mitigation Measure III-D-2b: Invasion of opportunistic colonizer trees and shrubs will be controlled. A maintenance program for controlling further establishment of eucalyptus, green wattle acacia, French broom, cotoneaster, and other opportunistic

colonizer shrubs and trees in disturbed areas on-site will be undertaken. Herbicides will not be used for this purpose.

Mitigation Measure III-D-2c: Removal of native trees and shrubs will be minimized. (To the greatest extent possible, the removal of large coast live oak, California bay, and Monterey pine trees will be avoided.)

Mitigation Measure III-D-2f: Periodic monitoring of disturbed areas, fill slopes, and other areas of exposed soil treated under the revegetation program will be conducted and fixed.

Cultural Resources

The following standard operating procedure is required for the proposed project, and is therefore incorporated as part of the proposed project's description:

In the event of a discovery of archaeological resources or human remains on the project site, project managers and project contractors shall comply with the provisions set forth in Sections 15064.5 (c) or (e) of the CEQA Guidelines, depending on the type of resource encountered.

In the event that an archaeological resource is discovered during project construction activities (e.g. excavation, grading), the following provisions of Section 15064.5 (c) of the CEQA Guidelines are to be followed.

- (1) A lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).
- (2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.
- (3) If an archaeological site does not meet the criteria defined in subdivision (a), but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c-f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.
- (4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.
 - (d) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with

Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:

- (1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).
- (2) The requirements of CEQA and the Coastal Act.

In the event that any human remains are discovered during project construction activities (e.g. excavation, grading), the following provisions of Section 15064.5 (e) of the CEQA Guidelines are to be followed.

(1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

(A) The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and

(B) If the coroner determines the remains to be Native American:

1. The coroner shall contact the Native American Heritage Commission within 24 hours.
2. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
3. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or

(2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.

(A) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.

(B) The descendant identified fails to make a recommendation; or

(C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

Geology and Soils

Mitigation Measure III-B-1: Geologic and soils studies will be undertaken during the design phase of each LBNL building project. Recommendations contained in those studies would be followed to ensure that the effects of landsliding, lurching, and liquefaction potential will not represent a significant adverse impact during a seismic event.

Mitigation Measure III-B-2a: Excavation and earth moving will be designed for stability, and accomplished during the dry season when feasible. Drainage will be arranged to minimize silting, erosion, and landsliding. Upon completion, all land will be restored, covering exposed earth with planting.

Mitigation Measure III-B-2b: Foundations for proposed structures will be designed in accordance with geologic and soils engineering recommendations to minimize the long-term possibilities of landslide.

Mitigation Measure III-B-2c: Excavations will be shored as required by law to preclude minor short-term landslides during construction.

Mitigation Measure III-B-2d: Revegetation of disturbed areas, including slope stabilization sites, using native shrubs, trees, and grasses will be included as part of all new projects.

In addition, the following standard operating procedure is already required for the proposed project, and is therefore incorporated as part of the proposed project's description:

General Requirement Section, Part 1.03(A): Applicable provisions of Public Law 91-54, the Constitution and Laws of the State of California and the codes and regulations of the Department of Energy are hereby referred to and made a part of this Subcontract and all work performed shall be in accordance with such laws, regulations and the latest edition or supplement or amendment thereto in effect at the time of submittal of bid shall be considered to be the issue in effect (unless shown otherwise) of all applicable codes including, but not limited to, California Building Code (CBC).

Hazards and Hazardous Materials

Mitigation Measure IV-K-1: LBNL will prepare an annual self-assessment summary report. The report will summarize environment, health, and safety program activities, and identify any areas where LBNL is not in compliance with laws and regulations governing hazardous materials, hazardous waste, hazardous materials transportation, regulated building components, worker safety, emergency response, and remediation activities.

Mitigation Measure IV-K-4: None required, since upgrading or removing regulated building components will be done in conformance with requirements designed to protect public health and the environment and since the upgrading and removal operations will result ultimately in reductions in the likelihood of potential harm to human health or the environment from potential incidents relating to underground storage tanks, above ground storage tanks, asbestos-containing building materials and electrical equipment containing polychlorinated biphenols.

Mitigation Measure IV-K-6: LBNL will update its emergency preparedness and response program on an annual basis, and will provide copies of this program to local emergency response agencies and to members of the public upon request.

Mitigation Measure IV-K-7: In addition to implementing its site characterization and remediation program, LBL will continue to maintain copies of the results of its environmental and workplace monitoring programs. LBL will continue to make this

information available for review at the request of employees or members of the public, as permitted by law.

In addition, the following standard operating procedures are already required for the proposed project, and are therefore incorporated as part of the proposed project's description:

General Requirement Section, Part 1.04(A): The area to be set aside for the work under this Subcontract is shown on the drawings, and the Subcontractor shall confine the construction to the immediate area within the construction limits.

General Requirement Section, Part 1.05(A): Parking for private vehicles is limited. Parking for Subcontractors and their workers will be limited to the construction limits and as agreed with the Project Manager. During periods of under utilization, Ernest Orlando Lawrence Berkeley National Laboratory (Berkeley Lab, LBNL) personnel will be allowed to use subcontractor spaces. Parking regulations will be strictly enforced and all parking violations are subject to citation by the University Police.

Safety Requirement Section, Part 1.13 (A): Subcontractor shall furnish an adequate number of flaggers for all work that may affect the use of roads by University.

Safety Requirement Section, Part 1.13 (A)(1): Flaggers shall be posted at the entrance and exit of access roads used for hauling material and at all other areas where normal traffic is subject to disruption.

Hydrology and Water Quality

Mitigation Measure III-B-2a: Excavation and earth moving will be designed for stability, and accomplished during the dry season when feasible. Drainage will be arranged to minimize silting, erosion, and landsliding. Upon completion, the land will be restored, covering exposed earth with planting.

Mitigation Measure III-B-2d: Revegetation of disturbed areas, including slope stabilization sites, using native shrubs, trees, and grasses, will be included as part of all new projects.

Mitigation Measure III-C-2: Each individual project will continue to be designed and constructed with adequate storm drainage facilities to collect surface water from roofs, sidewalks, parking lots, and other surfaces and deliver it into existing channels which have adequate capacity to handle the flow.

Land Use

Mitigation Measure III-G-2: Buildings proposed for development at LBNL will follow the design guidelines contained in the LBNL LRDP, as amended.

Noise

Mitigation Measure III-K-1: Projected noise levels will be compared with ambient noise levels and the Berkeley Noise Ordinance limits, or other applicable regulations. Acoustical performance standards would be included in future construction documents.

LBNL will continue to design, construct, and operate buildings and building equipment taking into account measures to reduce the potential for excessive noise transmission.

Mitigation Measure III-K-2: Noise-generating construction equipment will be located as far as possible from existing buildings. If necessary, windows of laboratories or offices will be temporarily covered to reduce interior noise levels on-site.

In addition, the following standard operating procedure is already required for the proposed project, and is therefore incorporated as part of the proposed project's description:

General Requirement Section 1.06(B): Compliance is required with the City of Berkeley Noise Ordinance

Traffic, Circulation and Parking

Mitigation Measure III-I-1a: Discourage single-occupant-vehicle use and encourage the use of other transportation options. LBNL will continue to implement its Transportation System Management (TSM) Program. The specific features of this program include:

- Establishing transportation modal-split goals for LBNL which will result in a reduction in the number and percentage of single-occupant automobiles being driven to and from LBNL;
- Assigning a transportation planner to coordinate the design and implementation of TSM programs;
- Promoting carpools by creating a carpool matching program;
- Providing preferential carpool parking;
- Developing a vanpooling program;
- Permitting staggered (flex-time) work hours;
- Developing an annual monitoring program to evaluate the programs in relation to established goals and identify new elements which should be added to the program;
- Promoting the TSM programs by giving orientation briefings to new employees, providing information aids to be distributed to LBNL employees, organizing an information center, and selling transit tickets on-site at LBNL;
- Reviewing LBNL shuttle service and transit interface facilities; and
- Reviewing bicycle routes and storage facilities for improvements.

Mitigation Measure III-I-1b: LBNL will conduct bi-annual peak hour traffic counts in and around LBNL. In particular, the bi-annual count will include the Gayley Road corridor between Hearst Avenue and Bancroft/Piedmont.

Mitigation Measure III-I-1c: If and at such time as the level of service at intersections along the Gayley Road corridor reaches "D," a review of necessary improvements will be conducted with UC Berkeley.

Mitigation Measure III-I-1d: LBNL will pay for its fair share of allowable and necessary signalization improvements along the Gayley Road corridor proportional to LBNL's share of increases in traffic.

Mitigation Measure III-I-1e: Details of the Gayley Road corridor improvements, including environmental assessment of the improvements, will be reviewed at the time the thresholds are reached.

Mitigation Measure III-I-2: LBNL will continue to implement and monitor the implementation of its Transportation System Management Program.

In addition, the following standard operating procedures are already required for the proposed project, and are therefore incorporated as part of the proposed project's description:

General Requirement Section, Part 1.04(A): The area to be set aside for the work under this Subcontract is shown on the drawings, and the Subcontractor shall confine the construction to the immediate area within the construction limits.

General Requirement Section, Part 1.05(A): Parking for private vehicles is limited. Parking for Subcontractors and their workers will be limited to the construction limits and as agreed with the Project Manager. During periods of under utilization, Ernest Orlando Lawrence Berkeley National Laboratory (Berkeley Lab, LBNL) personnel will be allowed to use subcontractor spaces. Parking regulations will be strictly enforced and all parking violations are subject to citation by the University Police.

General Requirement Section, Part 1.05(B): The Subcontractor may use certain University roads as designated by the University for transportation of equipment, materials, workers, or other needs related to the work of this Subcontract. The Subcontractor shall be responsible for all damage to roads, curbs, gutters, fences, guard rails and other property resulting from Subcontractor use of the roads, and shall repair all damage resulting from such use.

General Requirement Section, Part 1.05(C): Heavy and slow moving trucking will not be permitted to the Berkeley Lab (University) from the top of Hearst Avenue or on Centennial Drive between 7:00 a.m. and 8:30 a.m. Trucks attempting to enter the University during this period shall be denied access.

General Requirement Section, Part 1.05(D): Permission for access to the site may be revoked for any and all persons who violate the University traffic regulations including speed limits, parking restrictions and directions of the University police. All of the Subcontractor's personnel, operating forces, and delivery personnel shall be made aware of and shall comply at all times with traffic regulations.

Safety Requirement Section, Part 1.13 (A): Subcontractor shall furnish an adequate number of flaggers for all work that may affect the use of roads by University.

Safety Requirement Section, Part 1.13 (A)(1): Flaggers shall be posted at the entrance and exit of access roads used for hauling material and at all other areas where normal traffic is subject to disruption.

Safety Requirement Section, Part 1.13 (A)(2): Flaggers shall be equipped and instructed at Subcontractor's expense in accordance with current "Instructions to Flaggers" of the Department of Transportation, State of California.

Utilities

Mitigation Measure III-M-1: Prior to construction of any project which may add significant sewer load to the city sanitary sewer system, LBL will investigate the potential impact of the project on the city system. LBL will identify mitigation measures to accommodate the sewer load if the impact investigation indicates that the city system could not accommodate the additional sewage. LBL will reimburse the City of Berkeley and/or EBMUD for its fair share of allowable and necessary sewer improvement capital costs which are needed to accommodate increased demand and mitigate sewer impacts from implantation of the LBL LRDP.

A P P E N D I X B

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