2.0 EXECUTIVE SUMMARY

2.1 PURPOSE

This Draft EIR evaluates the potential for significant environmental impacts from the construction and operation of the Computational Research and Theory (CRT) Facility project (CRT project) proposed by the Lawrence Berkeley National Laboratory (LBNL).[1] It is the intent of this Executive Summary to provide decision makers, responsible agencies, and the public with a clear, simple, and concise description of the proposed project and its potential significant environmental impacts. Section 15123 of the *California Environmental Quality Act (CEQA) Guidelines* requires that the summary identify each significant effect, recommended mitigation measure(s), and alternatives that would minimize or avoid potential significant impacts. The summary is also required to identify areas of controversy known to the lead agency, including issues raised by agencies and the public and issues to be resolved. These issues include the choice among alternatives and whether or how to mitigate significant effects. This section focuses on the major areas of importance in the environmental analysis for the proposed project and uses non-technical language to promote understanding.

2.2 PROJECT LOCATION

The approximately 2.25-acre CRT project site is located on the LBNL site. LBNL is located east of the main campus of the University of California (UC), Berkeley, within the cities of Berkeley and Oakland in Alameda County, and is located on approximately 200 acres that are owned by the University of California and leased to the U.S. Department of Energy (DOE). The project site is located near the western entrance to the LBNL property in the city of Berkeley and has frontage on Seaborg Road. The project site comprises sloped terrain and is vegetated with non-native grasses and eucalyptus, immature redwood, bay, and oak trees.

The CRT project site is flanked on three sides by Buildings 70 and 70A to the east, the Building 50 complex to the north, and Cyclotron Road and the Berkeley Lab's Blackberry Canyon entrance gate to the west. The LBNL 2006 Long Range Development Plan (LRDP) designates the site for Research and Academic uses.

---

1 LBNL has also published another EIR for the Helios Energy Research (Helios) Facility project. Both the Helios EIR and this one are being circulated for agency and public review. Both the CRT and the Helios projects would be located at LBNL's hill site location and would be built over approximately the same period of time. The cumulative impacts of both projects are considered in this EIR.

The LBNL site itself is surrounded by a mix of land uses, including open space, institutional uses, and residential and neighborhood commercial areas. The University of California, Berkeley, including the Strawberry Canyon open space areas, lies west and south of the LBNL site. Residential neighborhoods and a small neighborhood commercial area in the city of Berkeley lie to the north and northwest, and regional open space, including the 2,000-acre Tilden Regional Park, lies to the northeast and east.

2.3 PROJECT DESCRIPTION

The CRT project includes development of a new building, access driveways and pedestrian access, and associated infrastructure to accommodate (1) the National Energy Research Scientific Computing (NERSC) Center, (2) the associated High Performance Computing (HPC) center, and (3) researchers and students from the Lab's Computational Research Division and the joint UC/Berkeley Lab Computational Science and Engineering program. The approximately 140,000-gross-square-foot (gsf), multi-story building would include both a supercomputer equipment floor and an office structure, with space for computing, offices, and conference rooms. The proposed building abuts a steep hillside, and the upper floor of the office structure would be accessible from the existing parking lot that connects the Building 50 and 70 complexes (see **Figure 3.0-3, CRT Conceptual Project Design**). The new advanced computational equipment and office space would support UC Berkeley's academic programs in computational science and engineering and the needs of computer scientists, mathematicians, and theoreticians who are currently engaged in high performance computing and high performance production computing and computational research.

2.4 PROJECT OBJECTIVES

Key objectives of the proposed project are to:

- Provide an integrated and appropriately designed facility that would allow for the continued operation and future advancement of the Berkeley Lab's NERSC High Performance Computing national users facility, Computational Research Division and joint Berkeley Lab/UC Berkeley Computational Science & Engineering programs;

- Provide adequate space, chilling capacity, and infrastructure to accommodate next-generation computing equipment and to allow for continual future upgrades to such equipment;

- Provide accessibility to a large, reliable, and economical electrical power source. The power source should be capable of serving both the immediate and potential future needs of Berkeley Lab's computing program;

- Provide researchers with convenient access to other Lab scientific facilities, programs, researchers, and services; locate the facility such that it fosters interaction and collaboration between the project and UC Berkeley programs; and
- Meet University of California policies on sustainability and achieve efficiencies in energy conservation, temperature control, operational and maintenance services, and transportation (i.e., near public transportation, and without provision of large amounts of parking).

2.5 TOPICS OF KNOWN CONCERN

To determine which environmental topics should be addressed in this EIR, LBNL prepared an Initial Study and circulated it along with a Notice of Preparation (NOP) in order to receive input from interested public agencies and private parties. Copies of the NOP and Initial Study are presented in **Appendix 1.0** of this EIR. Based on both the Initial Study and the NOP comments, this EIR addresses the following environmental topics in depth:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Transportation and Traffic
- Utilities, Service Systems, and Energy

2.6 IMPACT SUMMARY

Pursuant to the findings of the Initial Study, this EIR assesses each potentially significant impact to the environment that could result from implementation of the proposed project. A detailed discussion regarding potential impacts is provided in **Section 4.0, Environmental Setting, Impacts, and Mitigation Measures**. In accordance with the *CEQA Guidelines*, a summary of the project's impacts is provided in **Table 2.0-1, Summary Table of Significant Impacts, Mitigation Measures, and Level of Significance after Mitigation**, presented at the end of this section. Also provided in **Table 2.0-1** are mitigation measures that are recommended to avoid or reduce significant project impacts. The table indicates whether or not implementation of the recommended mitigation measures would reduce the level of impact to a less than significant level.

2.7 ALTERNATIVES TO THE PROPOSED PROJECT

The alternatives evaluated in this EIR focus on avoiding or further reducing potentially significant project impacts associated with aesthetics, noise, and traffic and circulation as compared to the proposed project. Project alternatives include the following:

Alternative 1: No Project Alternative. CEQA requires that a "No Project" alternative be considered. "No Project" is generally considered to be equivalent to a "no development" alternative. With this alternative, the proposed project would not be implemented. However, the site is designated for development by the 2006 LRDP, and thus future development could be constructed at the project site. The existing LBNL facility in Oakland would continue to be utilized.

Alternative 2: Low Profile Design Alternative. This alternative would configure the supercomputer facilities (equipment floors) and office facilities components of the CRT facility as a single wide building mass approximately three stories high. The intent of this alternative is to reduce the perceived bulk and height of the proposed multi-story building. The supercomputer facilities would be constructed in roughly the same footprint designated for the proposed project. This building would consist of two machine floors with approximately 20,000 gsf for a mechanical basement space and approximately 32,000 gsf for the HPC equipment floor. The main office block (office facilities) would rise two to three stories above the computer level and would provide a variety of general office, computer configuration and support, software support, videoconferencing, meeting, and visualization laboratory spaces, similar to the proposed project.

The total square footage of the building would be approximately 113,000 gsf. The amount of office space would be reduced compared to the proposed project. In addition, the amount of common space would be reduced with this alternative since there would be no upper-level loggia or pedestrian connection with the Building 70 complex. Access, parking, circulation, and landscape features would be generally similar to those including in the proposed project.

Alternative 3: Alternate LBNL Location. This alternative would make use of other space within LBNL to develop the CRT facility project. Alternative 3 would place a multi-story building on the current Building 25 and 25A location, near the geographical center of the Berkeley Lab site. Buildings 25 and 25A and associated ancillary buildings would be demolished. Slope filling would be required as part of the site preparation. The building would consist of 32,000 gsf of computer space, with a high ceiling, and three additional floors to house office space, totaling up to 140,000 gsf. Electrical utilities and chillers would be located in a 24,000 gsf basement level; cooling towers would be placed on the roof. Electrical power would be extended from the Grizzly Peak substation.

Detailed description of these alternatives and their comparative merits are presented in **Section 6.0** of this EIR. **Table 6.0-1, Summary Comparison of CRT Project Alternatives,** presents a comparison of the environmental impacts of each alternative to those that are expected to result from the proposed project.

Based on the analysis presented in the EIR, Alternative 2, Low Profile Design, was selected as the Environmentally Superior Alternative (see **Section 6.0** of this EIR).

2.8 ISSUES TO BE RESOLVED/AREAS OF CONTROVERSY

This EIR addresses environmental issues associated with the proposed project that are known to the lead agency or were raised by other public agencies or interested parties during the EIR scoping process. Comment letters and the transcript of the scoping meeting are on file with LBNL. More comprehensive descriptions of issues raised during project scoping are presented in the appropriate environmental analysis section of this EIR. Following is a listing of issues raised in the scoping comments received:

- Past landslides in the project vicinity should be analyzed and likelihood of future landslides should be addressed. The EIR should address the potential for LBNL development to increase the likelihood of landslides (s*ee **Section 4.5, Geology and Soils**);*
- The probability of an earthquake on the Hayward fault should be discussed and analyzed (s*ee **Section 4.5, Geology and Soils**);*
- Aging roads, sewers, culverts and infrastructure to serve the hill site at buildout (s*ee **Section 4.13, Utilities, Service Systems and Energy** and **Section 4.12, Transportation and Traffic**);*
- Strawberry Canyon is alleged to have active faults evidenced by the location of epicenters of earthquakes on the Berkeley Lab site. A discussion of the project site's location in an Alquist-Priolo Earthquake Fault Zone should be included (s*ee **Section 4.5, Geology and Soils**);*
- The EIR should consider impacts to Cafeteria Creek and its implications to the watershed (s*ee **Section 4.7, Hydrology and Water Quality**);*
- The LBNL site is within an area of high fire danger and the project would require vegetation removal to reduce fire danger (s*ee **Section 4.6, Hazards and Hazardous Materials**);*
- The EIR should address emergency evacuation procedures for LBNL personnel (s*ee **Section 4.6, Hazards and Hazardous Materials**);*
- Contaminants from LBNL under upset conditions can enter surface and groundwater and can adversely affect Strawberry Creek and the Bay (s*ee **Section 4.7, Hydrology and Water Quality**);*
- The Berkeley Lab should evaluate the extent of Lennert Aquifer on the LBNL site. The EIR should include a discussion of the project's effect on hydraugers and groundwater in the project area (s*ee **Section 4.7, Hydrology and Water Quality**);*

- The Berkeley Lab should evaluate impact on a Strawberry Canyon cultural landscape (*see* ***Section 4.4, Cultural Resources****)*;

- The EIR should discuss carbon emissions associated with tree removal from the project site and Strawberry Canyon (*see* ***Section 4.2, Air Quality****);*

- The use of public transit should be emphasized as a way to conserve energy (*see* ***Section 4.12, Transportation and Traffic****);*

- The East Bay Municipal Utility District (EBMUD) indicated that it proposes to build a new water storage tank near the project site and that the cumulative impacts of that project should be considered in this EIR (*see* ***Section 5.0, Cumulative Impacts****);*

- The EIR should address the cumulative impact of past LBNL development combined with the current projects on human and ecological health and safety (*see* ***Section 5.0, Cumulative Impacts****);*

- Roadways in Strawberry Canyon are already overburdened with traffic and would be more hazardous with the addition of project traffic and large construction trucks from the various projects, especially during an emergency (*see* ***Section 4.12, Transportation and Traffic****);*

- Cumulative construction activities, including the Stadium project, and intensification of land uses in the project area could affect quality of life *(see* ***Section 5.0, Cumulative Impacts****);* and

- Alternative locations for the proposed project with fewer potential impacts related to aesthetics, biological resources, cultural resources, geology and soils, population and housing, and traffic should be considered. Sites specifically identified in the scoping comments include the UC Berkeley Richmond Field Station, the former Alameda Air Base, the former Mare Island Shipyard in the City of Vallejo, the former Hunters Point Shipyard in the City of San Francisco, and locations in Merced and Nevada *(see* ***Section 6.0, Alternatives****).*

The following areas of controversy were raised during the scoping process for this project that do not relate to the environmental impacts of the proposed project and therefore are not discussed in this EIR. According to various commenters:

- A one-year moratorium should be implemented on development at LBNL to analyze projected growth and clean up of previous hazardous material releases.

  For a discussion of clean-up of previous hazardous materials releases, please see the 2006 LRDP EIR, Section IV.F. The environmental effects of the projected growth at the Berkeley Lab are evaluated in ***Section 5.0****,* ***Cumulative Impacts****.*

- The EIR should address the global implications of supplying energy to facilities.

  Evaluation of global impacts is outside the scope of this EIR. The commenter's view is noted.

Table 2.0-1
Summary Table of Significant Impacts, Mitigation Measures, and Level of Significance after Mitigation

Environmental Topic and Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.1 Aesthetics			
Impact VIS-1		**Mitigation Measure VIS-1**	
Construction activities associated with the project would create temporary aesthetic nuisances for adjacent land uses.	Potentially Significant	LBNL and its contractors shall minimize the use of on-site storage and when necessary store building materials and equipment away from public view and shall keep activity within the project site and laydown areas.	Less than Significant
Impact VIS-2		**Mitigation Measure**	
The proposed project could alter views of the LBNL site but would not result in a substantial adverse effect to a scenic vista or substantially damage scenic resources.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact VIS-3		**Mitigation Measure**	
The proposed project would alter the existing visual character of the Laboratory site but would not substantially degrade the existing visual character and quality of the site and its surroundings.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact VIS-4		**Mitigation Measure**	
The proposed project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.	Less than Significant	No project-level mitigation measure required.	Less than Significant
4.2 Air Quality			
Impact AIR-1		**Mitigation Measure**	
Construction of the proposed project would generate short-term emissions of fugitive dust and criteria air pollutants that would not adversely affect local air quality in the vicinity of the construction site.	Less than Significant	No project-level mitigation measure required.	Less than Significant

Environmental Topic and Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.2 Air Quality (continued)			
Impact AIR-2		**Mitigation Measure**	
The proposed project would generate long-term operational emissions of criteria pollutants from increases in traffic and stationary and area sources that would not adversely affect air quality.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact AIR-3		**Mitigation Measure**	
The proposed project would increase carbon monoxide concentrations at busy intersections and along congested roadways in the project vicinity but would not expose sensitive receptors to substantial pollutant concentrations.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact AIR-4		**Mitigation Measure**	
The proposed project would not create objectionable odors affecting a substantial number of people.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact AIR-5		**Mitigation Measure**	
The proposed project would not expose maximally exposed individuals to cancer risks exceeding 10 in 1 million.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact AIR-6		**Mitigation Measure**	
The proposed project would not generate ground level concentrations of non carcinogenic toxic air contaminants that would result in a Hazard Index greater than 1.0 for the maximally exposed individual.	Less than Significant	No project-level mitigation measure required.	Less than Significant
4.3 Biological Resources			
Impact BIO-1		**Mitigation Measure**	
Construction of the proposed project would result in the permanent removal of 2.25 acres of vegetation.	Less than Significant	No project-level mitigation measure required.	Less than Significant

Environmental Topic and Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.3 Biological Resources (continued)			
Impact BIO-2		**Mitigation Measure**	
The proposed project would not result in indirect adverse effects to nearby creeks and seeps subject to U.S. Army Corps of Engineers (ACOE) and the California Department of Fish and Game (CDFG) jurisdiction and also considered to be sensitive plant communities and habitats.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact BIO-3		**Mitigation Measure**	
The proposed project would not adversely affect special-status nesting birds (including raptors) such that nests are destroyed, they abandon their nests, or that their reproductive efforts fail.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact BIO-4		**Mitigation Measure**	
Removal of trees and other proposed construction activities during the breeding season would not result in direct mortality of special-status bats. In addition, construction noise could cause maternity roost abandonment and subsequent death of young.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact BIO-5		**Mitigation Measure**	
Construction of the proposed project would not result in take or harassment of Alameda whipsnake.	Less than Significant	No project-level mitigation measure required.	Less than Significant
4.4 Cultural Resources			
Impact CUL-1		**Mitigation Measure**	
The proposed project would not cause a substantial adverse change in the significance of a historical resource as defined in §15064.5.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact CUL-2		**Mitigation Measure**	
The proposed project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.	Less than Significant	No project-level mitigation measure required.	Less than Significant

Environmental Topic and Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.4 Cultural Resources (continued)			
Impact CUL-3		**Mitigation Measure**	
The proposed project would not disturb any human remains, including those interred outside of formal cemeteries.	Less than Significant	No project-level mitigation measure required.	Less than Significant
4.5 Geology and Soils			
Impact GEO-1		**Mitigation Measure**	
The proposed project would construct a research facility within the Hayward Fault zone but would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death due to rupture of the Hayward Fault.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact GEO-2		**Mitigation Measure**	
The proposed project would expose people and structures to substantial adverse effects related to seismic ground shaking.	Potentially Significant	In addition to damage assessment of the CRT building structural elements (which is covered in the LBNL Master Emergency Program Plan), assessment of stormwater conveyance systems and hydromodification vaults shall be conducted by the Damage Assessment Team following earthquakes strong enough to cause damage.	Less than Significant with Mitigation
Impact GEO-3		**Mitigation Measure**	
The proposed project would not expose people and structures to substantial adverse effects associated with seismic-related liquefaction or landslides.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact GEO-4		**Mitigation Measure**	
The proposed project would not result in substantial soil erosion or loss of topsoil.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact GEO-5		**Mitigation Measure**	
The proposed project is not located on a geologic unit that may be unstable or could become unstable as a result of the project.	Less than Significant	No project-level mitigation measure required.	Less than Significant

Environmental Topic and Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.5 Geology and Soils (continued)			
Impact GEO-6		**Mitigation Measure**	
The CRT building would not be located on expansive soils.	Less than Significant	No project-level mitigation measure required.	Less than Significant
4.6 Hazard and Hazardous Materials			
Impact HAZ-1		**Mitigation Measure**	
The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires.	Less than Significant	No project-level mitigation measure required.	Less than Significant
4.7 Hydrology and Water Quality			
Impact HYDRO-1		**Mitigation Measure HYDRO-1**	
Development of the project site would increase the area of impervious surfaces (i.e., pavements and hardscapes, building roofs, and compacted soil surfaces) and would result in increased peaks and duration of stormwater flows, potentially contributing to erosion and/or siltation in Strawberry Creek.	Potentially Significant	Using the Bay Area Hydrology Model, calculations shall be provided following approval of the final project design to show that the proposed hydromodification vaults are sized appropriately to control flows such that 'flow duration control' is provided between 10-percent of the two-year recurrence storm and the 10-year recurrence storm.	Less than Significant
Impact HYDRO-2		**Mitigation Measure HYDRO-2**	
Development of the site would alter surface drainage patterns on the site and could result in increased peak flows and induce flooding in downstream reaches.	Potentially Significant	The hydromodification vaults or stormwater pipe system shall be oversized to allow detention of peak flows for the 25-, 50- and 100-year design storms and release at a rate no greater than the pre-development condition, or equivalent separate facilities will be incorporated to provide such control. Final design calculations showing no increases in peak runoff for the 25-, 50-, and 100-year events will be provided to and reviewed by LBNL staff upon finalization of the project design.	Less than Significant

Environmental Topic and Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.7 Hydrology and Water Quality (continued)			
Impact HYDRO-3		**Mitigation Measure**	
Project construction would not result in increased erosion and sedimentation, the potential release of chemicals to stormwater, or a temporary increase in turbidity or decrease in water quality in surface waterways.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact HYDRO-4		**Mitigation Measure HYDRO-4**	
Stormwater runoff from the proposed driveway and other impervious surfaces could potentially contribute to long-term pollutant discharges to surface waters, including Cafeteria Creek, Strawberry Creek, and the Bay.	Potentially Significant	**Mitigation Measure HYDRO-4a**: An in-line pollution prevention device (such as a Continuous Deflective Separation unit or Stormceptor) shall be installed within the storm drain system to control sediment and floatables from the access driveway and loading dock area in the northern portion of the project site prior to release of stormwater to the storm drain at Cyclotron Road. **Mitigation Measure HYDRO-4b:** If feasible, vegetated swales or a stormwater garden shall be incorporated into the project to maintain water quality of roof runoff and avoid exceeding water quality objectives prior to discharge to creeks. LBNL shall provide calculations showing that design of these features meets recognized criteria for design of water quality Best Management Practices (BMPs). Should it be determined that appropriately sized vegetated swales are not feasible, then alternative Regional Water Quality Control Board-approved methods of treating stormwater runoff, such as in-line pollution prevention devices or infiltration galleries, shall be incorporated into the project. All water quality treatment and source controls shall be summarized in the project-specific Storm Water Pollution Prevention Plan (SWPPP), which will be available to regulatory agencies for inspection.	Less than Significant

Environmental Topic and Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.8 Land Use and Planning			
Impact LU-1		**Mitigation Measure**	
The proposed project would not conflict with the applicable land use plan or policy (i.e., 2006 LBNL LRDP, and 2006 LBNL Design Guidelines adopted for the purpose of avoiding or mitigating an environmental effect.	Less than Significant	No project-level mitigation measure required.	Less than Significant
4.9 Noise			
Impact NOISE-1		**Mitigation Measure**	
Construction activities would temporarily elevate noise levels at the project site and surrounding areas.	Potentially Significant	None available.	Significant and Unavoidable
Impact NOISE-2		**Mitigation Measure**	
Temporary vibration impacts related to construction activities would not cause a significant impact.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact NOISE-3		**Mitigation Measure**	
Vehicular traffic associated with the CRT project would result in an incremental, but imperceptible, long-term increase in ambient noise levels.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact NOISE-4		**Mitigation Measure**	
The operation of heating, ventilating, and air conditioning equipment at the CRT site would not result in a substantial long-term increase in ambient noise levels.	Less than Significant	No project-level mitigation measure required.	Less than Significant
4.10 Population and Housing			
Impact POP-1		**Mitigation Measure**	
The proposed project would not induce substantial population growth, either directly or indirectly.	Less than Significant	No project-level mitigation measure required.	Less than Significant

Environmental Topic and Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.11 Public Services			
Impact PUB-1		**Mitigation Measure**	
The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities in order to maintain acceptable service ratios, response times, or other performance objectives, the construction of which could cause significant environmental impacts.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact PUB-2		**Mitigation Measure**	
The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities in order to maintain acceptable service ratios, response times, or other performance objectives, the construction of which could cause significant environmental impacts.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact PUB-3		**Mitigation Measure**	
The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities in order to maintain acceptable service ratios or other performance objectives, the construction of which could cause significant environmental impacts.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact PUB-4		**Mitigation Measure**	
The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered park or recreational facilities in order to maintain acceptable service ratios or other performance objectives, the construction of which could cause significant environmental impacts.	Less than Significant	No project-level mitigation measure required.	Less than Significant

Environmental Topic and Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.11 Public Services (continued)			
Impact PUB-5		**Mitigation Measure**	
The proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated.	Less than Significant	No project-level mitigation measure required.	Less than Significant
4.12 Transportation and Traffic			
Impact TRANS-1		**Mitigation Measure**	
The proposed CRT project would not cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system under the Near-Term conditions.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact TRANS-2		**Mitigation Measure**	
The proposed CRT project would result in increases in transit ridership.	Less than Significant		Less than Significant
Impact TRANS-3		**Mitigation Measure**	
The proposed CRT project would result in increased parking demand that may exceed the available parking supply.	Less than Significant		Less than Significant
Impact TRANS-4		**Mitigation Measure TRANS-4**	
The proposed CRT project would potentially result in increased hazards to pedestrians or bicyclists or conflicts with adopted policies, plans, or programs promoting walking or bicycling.	Potentially Significant	Final design of the CRT building shall provide a minimum of 32 bicycle parking spaces to further encourage bicycling and walking to the site.	Less than Significant with Mitigation
Impact TRANS-5		**Mitigation Measure TRANS-5**	
The construction of the proposed CRT project would temporarily and intermittently result in impacts on vehicles, pedestrians, or bicyclists, and parking.	Less than Significant	LBNL shall include the following in the CTMP prepared for the proposed project: • For trucks hauling fill material internal to the LBNL site, trucks should use internal truck routes within the LBNL site to minimize disruption to vehicle, bicycle, and pedestrian circulation and parking. • Consider stacked parking within the LBNL site or off-site parking for construction workers to minimize parking demand.	Less than Significant

Environmental Topic and Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
4.13 Utilities, Service Systems, and Energy			
Impact UTILS-1		**Mitigation Measure**	
Implementation of the CRT project would not exceed wastewater treatment requirements of the applicable RWQCB and would not require an expansion of the East Bay Municipal Utility District (EBMUD) wastewater treatment plant or an expansion of the City's sewer conveyance facilities.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact UTILS-2		**Mitigation Measure**	
The proposed project would result in an increase in storm water flows but would not 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.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact UTILS-3		**Mitigation Measure**	
Implementation of the proposed CRT project would increase the demand for water but could be served by existing resources. The project-related demand for water supply would not result in the need for new or upgraded water facilities.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact UTILS-4		**Mitigation Measure**	
The proposed project would result in the need for additional chilled water facilities, the construction and operation of which would not result in a significant environmental impact.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Impact UTILS-5		**Mitigation Measure**	
Implementation of the proposed CRT project would increase the demand for electricity and natural gas but would not result in the expansion of existing or construction of new electrical and natural gas facilities.	Less than Significant	No project-level mitigation measure required.	Less than Significant

Environmental Topic and Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
5.0 Cumulative Impacts			
Cumulative Impact VIS-1		**Mitigation Measure**	
Construction activities associated with the proposed project, in conjunction with other near-term development, would not substantially affect visual resources.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Cumulative Impact VIS-2		**Mitigation Measure**	
The proposed project, in conjunction with reasonably foreseeable near-term and long-term development, would not substantially affect visual resources.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Cumulative Impact AIR-1		**Mitigation Measure**	
The proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Cumulative Impact AIR-2		**Mitigation Measure**	
Although the proposed project would result in greenhouse gas emissions, its contribution to the significant cumulative impact associated with greenhouse gas emissions would not be cumulatively considerable.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Cumulative Impact AIR-3		**Mitigation Measure**	
The proposed project would not result in a cumulatively considerable contribution to cumulative cancer risk impacts associated with future development of LBNL and UC Berkeley.	Less than Significant	No project-level mitigation measure required.	Less than Significant

Environmental Topic and Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
5.0 Cumulative Impacts (continued)			
Cumulative Impact AIR-4		**Mitigation Measure**	
The proposed project would not result in a cumulatively considerable contribution to cumulative non-cancer health impacts associated with future development of LBNL and UC Berkeley.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Cumulative Impact BIO-1		**Mitigation Measure**	
The proposed project, in conjunction with other reasonably foreseeable near-term projects and long term development, would not result in a significant cumulative impact on biological resources.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Cumulative Impact CUL-1		**Mitigation Measure**	
The proposed project, in conjunction with other reasonably foreseeable near-term and long-term development, would not result in a significant cumulative impact on cultural resources.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Cumulative Impact GEO-1		**Mitigation Measure**	
The proposed project, in conjunction with reasonably foreseeable near-term and long-term development, would place new structures and introduce an increased population in a seismically active region.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Cumulative Impact HAZ-1		**Mitigation Measure**	
The proposed project, in conjunction with reasonably foreseeable near-term and long-term development, would result in a cumulative impact related to evacuation along Centennial Drive during emergencies associated with a wildland fire or a major earthquake, but the project's contribution to the cumulative impact would not be considerable.	Less than Significant	No project-level mitigation measure required.	Less than Significant

Environmental Topic and Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
5.0 Cumulative Impacts (continued)			
Cumulative Impact HYDRO-1		**Mitigation Measure**	
The proposed project, in conjunction with reasonably foreseeable near-term and long-term development, would not result in a significant cumulative impact on surface water resources.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Cumulative Impact LU-1		**Mitigation Measure**	
The proposed project, in conjunction with other reasonably foreseeable near-term and long-term development, would not involve a significant cumulative impact related to land use.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Cumulative Impact NOISE-1		**Mitigation Measure**	
Near-term development in the vicinity of the project site would not cause a significant cumulative increase in exterior noise levels during construction.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Cumulative Impact NOISE-2		**Mitigation Measure**	
The proposed project, in conjunction with reasonably foreseeable near-term and long-term development, would not result in a significant cumulative permanent increase in ambient noise levels.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Cumulative Impact POP-1		**Mitigation Measure**	
The proposed project, in conjunction with reasonably foreseeable near-term and long-term development, would not result in a significant cumulative impact on population or housing.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Cumulative Impact PUB-1		**Mitigation Measure**	
The proposed project, in conjunction with reasonably foreseeable near-term and long-term development, would not result in a significant cumulative demand for public services.	Less than Significant	No project-level mitigation measure required.	Less than Significant

Environmental Topic and Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance after Mitigation
5.0 Cumulative Impacts (continued)			
Cumulative Impact TRANS-1		**Mitigation Measure**	
The proposed project, in conjunction with reasonably foreseeable near-term and long-term development, would degrade intersection levels of service.	Potentially Significant	Further mitigation is not feasible.	Significant and Unavoidable
Cumulative Impact TRANS-2		**Mitigation Measure**	
Construction traffic associated with the proposed project and other near-term projects would not result in significant congestion on city streets.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Cumulative Impact TRANS-3		**Mitigation Measure**	
The proposed project, in conjunction with other reasonably foreseeable near-term and long-term development, would not substantially affect transit, parking, or pedestrian and bicycle circulation.	Less than Significant	No project-level mitigation measure required.	Less than Significant
Cumulative Impact UTILS-1		**Mitigation Measure**	
The proposed project, in conjunction with reasonably foreseeable near-term and long-term development, would not result in a significant cumulative demand for utilities and service systems.	Less than Significant	No project-level mitigation measure required.	Less than Significant