4.1 Aesthetics

4.1.1 Introduction

This section identifies existing visual conditions at the project site and analyzes the potential for implementation of the proposed Computational Research and Theory (CRT) Facility project to affect those resources. Information presented in the discussion and subsequent analysis was drawn from site visits, the Lawrence Berkeley National Laboratory (LBNL) 2006 Long Range Development Plan (LRDP) Environmental Impact Report (EIR), and environmental documents associated with specific LBNL projects. The physical characteristics of the site and surrounding areas are discussed briefly.

For purposes of this analysis visual or aesthetic resources are generally defined as the natural and built landscape features that can be seen. The overall visual character of a given area results from the unique combination of natural landscape features including landform, water, and vegetation patterns as well as built features such as buildings, roads and other structures.

Two computer-generated visual simulations illustrating "before" (current) and "after" (proposed) visual conditions from representative public vantage points near the project site are presented as part of this analysis. The locations of the visual simulation vantage points were selected in consultation with visual resources professionals and LBNL staff and were chosen to represent public viewpoints that provide the most direct views of potential site changes.

In response to the Notice of Preparation for this EIR, several commenters expressed concern regarding quality of life, but no specific comments related to scenic resources, scenic vistas, visual character, or light and glare were received.

4.1.2 Environmental Setting

Regional Location

The CRT project is located on the LBNL campus in the eastern hills of the cities of Berkeley and Oakland in Alameda County. The LBNL campus is located on approximately 200 acres that are owned by the University of California (See Figure 3.0-1, Regional Location Maps). Situated on the steeply sloping hillsides above the UC Berkeley campus, the LBNL site rises from an elevation 500 feet near its main entrance along Cyclotron Road at the Blackberry Canyon Gate to about 1,000 feet at the northern border of the site. The hills are covered in a mix of grass and native stands of native oaks and California bay as

well as introduced eucalyptus or conifers provide a natural-appearing landscape backdrop to the Berkeley Lab site.

The entire LBNL site cannot be viewed from any one single off-site vantage point. However, portions of the Berkeley Lab site are visible from residential neighborhoods, public roadways, and public vantage points in adjoining areas. Views of individual buildings or groups of buildings are available from public vantage points such as the Memorial Stadium, the Lawrence Hall of Science, and Grizzly Peak Boulevard. Portions of the Berkeley Lab site are visible in medium range views (less than 1 mile) from nearby elevated off-site locations such as the residential neighborhoods in the north and northwestern portions of the City of Berkeley. Long-range views (greater than 1 mile) available from downtown Berkeley and the Berkeley Marina encompass portions of the LBNL site.

Surrounding Land Uses

The LBNL site is surrounded by open space, institutional uses, and residential and neighborhood commercial areas (see Figure 3.0-6, Conceptual Utility Relocation Plan, in Section 3.0, Project Description). The University of California, Berkeley, including the Strawberry Canyon open space area, lies south and southeast 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.

The Berkeley Lab site is largely buffered by undeveloped land owned by the University of California, although the northwest corner of the Berkeley Lab abuts residential neighborhoods in the City of Berkeley. Access to the Berkeley Lab's hillside site is not available to the general public; three controlled-access vehicular gates include the main Blackberry Canyon Gate on Cyclotron Road and the Strawberry Canyon and Grizzly Peak gates on Centennial Drive. Visitors primarily use the Blackberry Canyon Gate. The Grizzly Peak Gate is an exit-only gate for use after the morning commute hours. The western part of the LBNL site, including the project site, lies within the Berkeley city limits, whereas the eastern part is within the City of Oakland.

The visual character of LBNL's built environment can be described as eclectic. Established in the 1930s, the Berkeley Lab now includes buildings of various ages and architectural styles. Many buildings display an industrial look and utilitarian quality. A number of buildings are painted in neutral colors to blend with the natural setting. Some of the buildings are recognizable landmarks including Building 50 (Bevatron) and the distinctive domed Advanced Light Source building, which was constructed as the Cyclotron in the 1940s. Portions of these buildings are visible from some public locations; however, mature trees interspersed through the site screen views of buildings from many other locations. Views of

the Berkeley Lab from nearby areas generally include natural landform and tree clusters as well as buildings or other structures, roadways, fencing and pavement situated upon the hillside.

Project Site

The CRT project site occupies approximately 2.25 acres located on the western portion of the LBNL campus. The site is flanked by Buildings 70 and 70A to the east, the Building 50 complex to the north, and Cyclotron Road and the Blackberry Canyon entrance gate to the west (see Figures 3.0-1 and 3.0-2). The sloped terrain of the project site drops approximately 100 feet from east to west. The site includes approximately 60 eucalyptus trees and a number of smaller immature redwood, bay, and oak trees.

Site Viewshed

For purposes of this study, the project viewshed is defined as the general area from which the CRT project would be visible to the public. Due to screening provided by intervening vegetation, topography, and existing development, the CRT site is not visible from most areas located beyond the LBNL site itself. Public views are available however from limited locations on the UC Berkeley campus and in the City of Berkeley to the south and southeast. Distant views of the project site are available from a limited area of west Berkeley. Existing development and mature vegetation largely screen views of the project area from other locations. The following section describes potentially affected existing views which are available from these areas.

Site Visibility and Public View Corridors

A set of eight photographs document representative public views of the CRT project site as seen from relatively close range and distances of up to approximately 2 miles away. Locations of photo viewpoints are shown on Figure 4.1-1, Photo Viewpoint Locations, and the photos are presented as Figures 4.1-2a through 4.1-2b, Public Views of the Site and Surroundings. The facility would be situated adjacent to Building 50, a visually prominent feature seen from some public viewing locations. In the following description of existing visual conditions, this building therefore provides a useful reference point for orientation purposes.

Distant views of the project site are available from limited locations in west Berkeley. Photo 1 shows the view from University Avenue and Curtis Street approximately 2 miles from the project site. LBNL buildings visible from this distant location appear on the hillside nestled between clumps of mature vegetation. Building 50 is located near the center of the image and the CRT project site is just to the right of this above the street trees. University Avenue is a major gateway into the City of Berkeley and to the

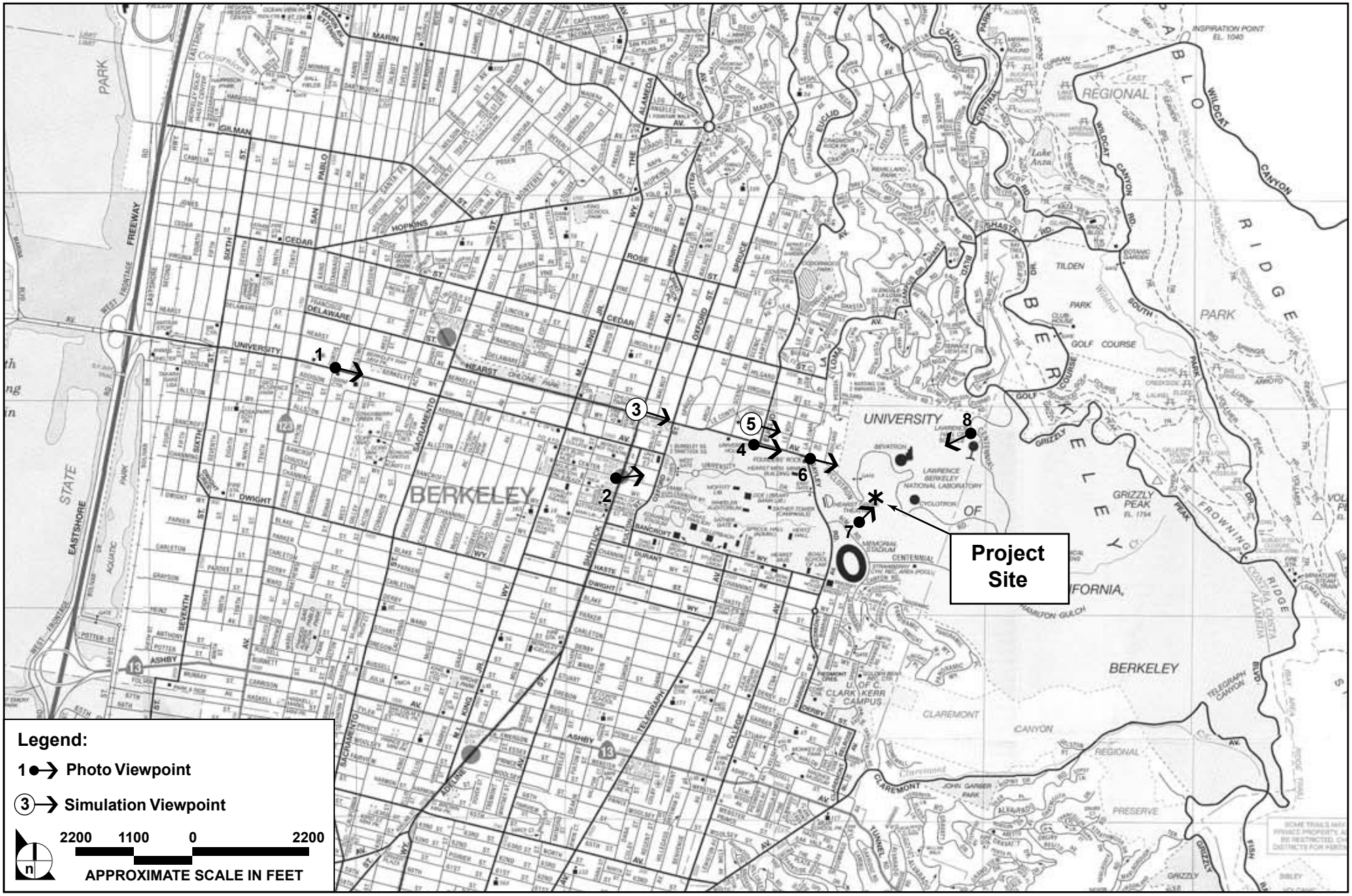
University Campus. In other locations on this street, buildings and mature vegetation partially screen views of the project area.

Limited views are available from downtown areas, although buildings and vegetation screen many downtown views of the project. Photo 2 is a view from the downtown Berkeley Bay Area Rapid Transit (BART) Station, located at Center Street and Shattuck Avenue. The project, situated almost 1 mile away, is not visible from this location. Photo 3 shows the view from Hearst Avenue and Shattuck Avenue, four blocks north of the BART Station. Building 50, which lies adjacent to the project site, can be seen from this location.

Located on the hillside to the north of the UC campus, the "Northside" neighborhood includes a small commercial area, several university facilities, and a mixture of apartment buildings, single-family homes and student housing. Views of the CRT project site are available from limited areas within this neighborhood. Photo 4 shows the view from the commercial area at Hearst Avenue near Euclid Avenue. In this view, existing vegetation partially obscures the project site. Photo 5, taken from a block north at Ridge Road near Euclid Avenue, includes a view of the two taller portions of Building 50 which appear above the trees seen near the center of the image.

When seen from closer range locations, mature trees, existing buildings, and topography generally screen views toward the site. Photo 6, taken from Hearst Avenue at La Loma Avenue and Gayley Road demonstrates that tall trees situated on the hillside below the project area largely obstruct views of Building 50 and the CRT project site. At the Foothill Parking Lot on the University campus, existing eucalyptus screen views of the site (refer to Photo 7). Views toward the site from the recreation trail which runs between this parking lot and the edge of Lawrence Road, an internal LBNL road, are also screened by existing vegetation.

Public views of the project site are available from some higher elevation locations such as the Lawrence Hall of Science (LHS) parking lot, situated about 0.5 mile away. Photo 8, taken from this area, shows various LBNL buildings including the domed Advanced Light Source (ALS) building which appears in the middle ground between groupings of mature tress. The project site is slightly to the right of the center of the image and is partially screened by existing buildings and mature vegetation.



SOURCE: Environmental Vision - September 2007

FIGURE **4.1-1**

Photo Viewpoint Locations

1. University Avenue at Curtis Street looking east

2. BART Station at Center Street at Shattuck Avenue looking northeast

3. Hearst Avenue at Shattuck Avenue looking east*

* simulation viewpoint

4. Hearst Avenue near Euclid Avenue looking east

SOURCE: Environmental Vision - September 2007

FIGURE **4.1-2a**

Public Views of the Site and Surroundings

5. Ridge Road near Euclid Avenue looking east* * simulation viewpoint

6. Hearst Avenue at Laloma Avenue and Gayley Road looking east

7. Foothill Parking Lot looking northeast

8. Parking lot at Lawrence Hall of Science looking southwest

SOURCE: Environmental Vision - September 2007

FIGURE **4.1-2b**

Public Views of the Site and Surroundings

4.1.3 Regulatory Considerations

Local Plans and Policies

The proposed project would be located at LBNL, which is operated by the University of California and conducts work within the University's mission on land that is owned or controlled by The Regents of the University of California. As a state entity, the University is exempted by the state constitution from compliance with local land use regulations, including general plans and zoning. However, the University seeks to cooperate with local jurisdictions to reduce any physical consequences of potential land use conflicts to the extent feasible. LBNL is located in both the City of Berkeley and the City of Oakland. The following sections summarize objectives and policies from the LBNL 2006 LRDP and LBNL Design Guidelines, the City of Berkeley and City of Oakland General Plans and local ordinances that relate to visual quality.

2006 LRDP and LBNL Principles and Strategies[1]

The "Vision" section of the 2006 LRDP proposes four fundamental principles that form the basis for the LRDP's development strategies. The two principles most applicable to aesthetic aspects of new development are to "Preserve and enhance the environmental qualities of the site as a model of resource conservation and environmental stewardship" and to "Build a more campus-like research environment." (LRDP, Section 2 – "Vision")

Development strategies provided by the 2006 LRDP are intended to minimize potential environmental impacts that could result from implementation of the 2006 LRDP. Development strategies set forth in the 2006 LRDP that are applicable to aesthetics include the following:

- Protect and enhance the site's natural and visual resources, including native habitats, streams and mature tree stands by focusing future development primarily within the already developed areas of the site;
- Increase development densities within areas corresponding to existing cluster of development to preserve open space, enhance operational efficiencies and access;
- To the extent possible site new projects to replace existing outdated facilities and ensure the best use of limited land resources;

1 While this Environmental Impact Report is a "stand alone" analysis that does not rely upon tiering from any programmatic CEQA document, Berkeley Lab does actively follow the 2006 Long Range Development Plan (LRDP) as a planning guide for Lab development. Accordingly, relevant 2006 LRDP principles, strategies, and design guidelines are identified in this section.

- To the extent possible site new projects adjacent to existing development where existing utility and access infrastructure may be utilized;
- Create a more "collegial" environment that encourages and facilitates interaction among the variety of Berkeley Laboratory employees and guests;
- Site and design new facilities in accordance with University of California energy efficiency and sustainability policy to reduce energy, water and material consumption and provide improved occupant health, comfort and productivity;
- Exhibit the best practices of modern sustainable development in new projects as a way to foster a greater appreciation of sustainable practices at the Laboratory;
- Eliminate parking from the sides of major roadways, thereby improving safety and allowing one-way roads to be converted to two-way traffic;
- Maintain or reduce the percentage of parking spaces relative to the adjusted daily population;
- Consolidate parking into larger lots and/or parking structures, locate these facilities near Laboratory entrances to reduce traffic within the main site;
- Remove parking from areas targeted for outdoor social spaces and service areas;
- Preserve and enhance the native rustic landscape and protect sensitive habitats;
- Consolidate service functions wherever possible in the Corporation Yard;
- Improve the pedestrian spaces at the heart of the research clusters and adjacent to research facilities so as to support interaction among Laboratory users;
- Retain and improve walkways as appropriate throughout the open space portions of the site, carefully integrating these pathways to minimize intrusion in the natural environment;
- Improve wayfinding for visitors in particular through a comprehensive and coordinated signage system and through the naming of buildings and research clusters;
- Develop new campus-like outdoor spaces such as plazas within clusters of facilities and improve those that already exist;
- Maintain and enhance tree stands to reduce the visibility of Laboratory buildings from significant public areas in neighboring communities;
- Improve the overall appearance and experience of the Laboratory through improvements to the main entry gates, and the landscape areas associated with roadways, parking lots, and pedestrian pathways;
- Continue to use sustainable practices in selection of plant materials and maintenance procedures;

- Develop all new landscape improvements in accordance with the Laboratory's vegetation management program to minimize the threat of wildland fire damage to facilities and personnel;
- Utilize native, drought-tolerant plant materials to reduce water consumption; focus shade trees and ornamental plantings at special outdoor use areas; and
- Minimize impervious surfaces to reduce storm water run-off and provide landscape elements and planting to stabilize slopes, reduce erosion and sedimentation.

LBNL Design Guidelines

The LBNL Design Guidelines were developed in parallel with the 2006 LRDP and provide specific guidelines for site planning, landscape, and building design as a means to implement the 2006 LRDP's development principles as each new project is developed. Specific design guidelines are organized by a set of design objectives that essentially correspond to the strategies provided in the 2006 LRDP. The LBNL Design Guidelines provide the following specific planning and design guidance for the aesthetic aspects of new development to achieve these design objectives.

The design guidelines would be applied to the proposed project. As part of the design review and approval process, the proposed project would be evaluated for adherence to the LRDP Land Use Map, the design guidelines, the Building Heights Map, and any other relevant plans and policies. Approvals would be subject to satisfactory compliance with these provisions. Design objectives that are contained within the design guidelines and applicable to the aesthetics analysis include the following:

- Provide screening landscape elements to visually screen large buildings;
- Minimize impacts of disturbed slopes;
- Create landform elements consistent with design on the Hill;
- Mass and site buildings to minimize their visibility;
- Screen roofscapes;
- Respect view corridors;
- Integrate buildings into the overall landscape using appropriate materials;
- Create a cohesive identity across the Laboratory as a whole by following established precedents for new landscape elements;
- Provide appropriate site lighting for safety and security;
- Create new commons spaces in clusters that currently lack them;

- Allow sunlight to reach the commons spaces;
- Create as high a density and critical mass around commons spaces as possible;
- Create new keystone structures in clusters that currently lack them;
- Utilize artifacts to create identity and add interest to each cluster;
- Create consistency between buildings in individual clusters;
- Develop research clusters in a way that is mindful of future expansion;
- Design pathway layouts that support pedestrian flow and encourage casual interaction;
- Construct new walkway structures such as stairs, bridges, slope retention for walkways and guardrails of materials compatible with the surrounding landscape;
- Minimize visual and environmental impacts of new parking lots;
- Site and design parking structures to integrate with the natural surroundings; and
- Organize service functions to minimize conflicts and visual impacts.

Local Plans and Policies

City of Berkeley General Plan

The Urban Design and Preservation Element of the City of Berkeley Draft General Plan contains few policies related specifically to visual quality that would apply to the proposed 2006 LRDP. Policies relevant to the LBNL include:

> Policy UD-10 The University of California: The City of Berkeley strongly supports actions by the University to maintain and retrofit its historic buildings, and strongly opposes any University projects that would diminish the historic character of the campus or off-campus historic buildings. (Also see Land Use Policies LU-36 and LU-37)
>
> Policy UD-31 Views: Construction should avoid blocking significant views, especially ones toward the Bay, the hills, and significant landmarks such as the Campanile, Golden Gate Bridge, and Alcatraz Island. Whenever possible, new buildings should enhance a vista or punctuate or clarify the urban pattern.
>
> Policy UD-32 Shadow: New buildings should be designed to minimize impacts on solar access and minimize detrimental shadows.

City of Oakland General Plan

The Open Space, Conservation, and Recreation (OSCAR) Element of the City of Oakland's General Plan was adopted in 1996. OSCAR policies pertaining to aesthetics and visual resources with relevance to implementation of the LBNL LRDP include the following:

> Policy OS-10.1: Protect the character of existing scenic views in Oakland, paying particular attention to: (a) views of the Oakland Hills from the flatlands; (b) views of downtown and Lake Merritt; (c) views of the shoreline; and (d) panoramic views from Skyline Boulevard, Grizzly Peak Road, and other hillside locations.
>
> Policy OS-10.2: Encourage site planning for new development which minimizes adverse visual impacts and takes advantage of opportunities for new vistas and scenic enhancement.

4.1.4 Impacts and Mitigation Measures

Significance Criteria

The impact of the proposed project on aesthetics would be considered significant if it would exceed the following Standards of Significance, in accordance with Appendix G of the CEQA Guidelines and the UC CEQA Handbook:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

The significance determination is based on several evaluation criteria including the extent of project visibility from sensitive viewing areas such as designated scenic routes, public open space, or residential areas; the degree to which the various project elements would contrast with or be integrated into the existing landscape; the extent of change in the landscape's composition and character; the number and sensitivity of viewers; and the duration of affected views.

Issues Not Discussed Further

The CRT Facility Initial Study found that implementation of the project would have no impact on scenic resources within a State scenic highway, as there are no scenic routes located within the vicinity of the project site, and no scenic routes on the project site that would be affected by the proposed project.

Methodology and Visual Simulations

Field observations of the project site and surroundings, conducted in July, August, and September 2007, were completed in order to observe existing visual conditions in the project vicinity, to photograph representative public views of the site, and to identify key viewing locations for purposes of preparing visual simulations. In addition to the field observations, the visual impact assessment is based on review of project materials including topographic maps, project drawings and technical data supplied by the LBNL project design team, aerial and ground-level photographs of the project area, and computer-generated visual simulations which portray the project's appearance from representative public viewing locations. The evaluation of potential visual impacts associated with the CRT project is based, in part, on comparing the "before" and "after" visual conditions as portrayed in the simulation images and assessing the degree of visual change that the project would bring about.

A set of visual simulations is presented as part of the CRT project visual resources analysis to illustrate "before" and "after" visual conditions in the project area. The simulations illustrate the location, scale and conceptual appearance of the proposed project as seen from two representative viewpoints: (1) Hearst Avenue at Shattuck Avenue approximately 0.9 mile from the project site (Figure 4.1-3, Visual Simulation: Hearst Avenue at Shattuck Avenue) and (2) Ridge Road near Euclid Avenue approximately 0.5 mile from the site (Figure 4.1-4, Visual Simulation: Ridge Road near Euclid Avenue). These simulation locations are delineated on Figure 4.1-1. These viewpoints were selected to represent public viewpoints that provide the most direct view of the potential site changes and would therefore be the most appropriate locations from which to prepare visual simulations. Computer modeling and rendering techniques were employed to produce the visual simulation images. The computer-generated visual simulations are the results of an objective analytical and computer modeling process described briefly below.

The visual study employs photographs taken in July, August, and September 2007, using a single lens reflex (SLR) digital camera with a 50mm equivalent lens which represents a view angle of approximately 40 degrees. Existing topographic and site data supplied by LBNL project architects provided the basis for developing an initial digital model (Perkins + Will 2007a). The three-dimensional computer model of the

Existing view from Hearst Avenue at Shattuck Avenue

Visual simulation of proposed project

SOURCE: Environmental Vision - September 2007

FIGURE **4.1-3**

Visual Simulation: Hearst Avenue at Shattuck Avenue

Existing view from Ridge Road near Euclid Avenue

Visual simulation of proposed project

SOURCE: Environmental Vision - September 2007

FIGURE **4.1-4**

Visual Simulation: Ridge Road near Euclid Avenue

proposed project massing was combined with the digital site model to produce a complete computer model of the proposed project. For each of the simulation viewpoints, viewer location was digitized from topographic maps using 5 feet as the assumed eye level. Computer "wireframe" perspective plots were overlaid on photographs to verify scale and viewpoint location. Digital visual simulation images were then produced based on computer renderings of the 3-D model combined with digital versions of the selected site photographs.

Project Characteristics

The CRT project involves construction of a new building, adjacent cooling towers, pedestrian access, and a vehicular service access road connection to Cyclotron Road. Sited on the side of a steep slope, the building would be approximately 110 feet in height from basement level to roof level at its tallest. Building support structures and a partially enclosed staircase would extend a further 50 feet down the hillside to provide pedestrian access from Cyclotron Road. The new building would include a total of approximately 140,000 square feet comprised of a lower multi-story base, a computing floor with a footprint of approximately 32,000 square feet and a central six-story section approximately 100 feet in height. The building would also include a linear circulation loggia on the north and west faces of the uppermost floor of the central section. The upper floor would be accessible via a pedestrian bridge from the existing parking lot that connects the Building 50 complex and Buildings 70 and 70A. The majority of the building would be at a lower elevation than the adjacent Buildings 70 and 70A, with the top floor roughly level with the ground floor of Building 70A (Perkins + Will 2007b).

Specific building materials have not been chosen; however, based on information provided in the EIR Project Description, the visual simulations portray exterior materials similar to those of adjacent LBNL buildings. The final exterior architectural treatment would be responsive to the solar exposure of each façade and treatments would vary depending on exposure. The project would also include an approximately 350-foot-long service road connection from Cyclotron Road. Approximately 32 trees (all Eucalyptus) with trunk diameters greater than 20 inches and 40 smaller trees would be removed as part of the proposed project.

Mitigation Measures included in the Proposed Project

The following mitigation measures, adopted as part of the 2006 LRDP, are required by the LRDP for the proposed project and are thus included as part of the proposed project. The analysis presented below evaluates environmental impacts that would result from project implementation following the application of these mitigation measures. These mitigation measures that are included in the project

would be monitored pursuant to the Mitigation Monitoring and Reporting Plan that will be adopted for the proposed project.

LRDP MM VIS-4a: All new buildings on the LBNL hill site constructed pursuant to the 2006 LRDP shall incorporate design standards that ensure lighting would be designed to confine illumination to its specific site, in order to minimize light spillage to adjacent LBNL buildings and open space areas. Consistent with safety considerations, LBNL project buildings shall shield and orient light sources so that they are not directly visible from outside their immediate surroundings.

LRDP MM VIS-4b: New exterior lighting fixtures shall be compatible with existing lighting fixtures and installations in the vicinity of the new building, and will have an individual photocell. In general, and consistent with safety considerations, exterior lighting at building entrances, along walkways and streets, and at parking lots shall maintain an illumination level of not more than 20 Lux (approximately 2 foot-candles).

LRDP MM VIS-4c: All new buildings on the LBNL hill site constructed pursuant to the 2006 LRDP shall incorporate design standards that preclude or limit the use of reflective exterior wall materials or reflective glass, or the use of white surfaces for roofs, roads, and parking lots, except in specific instances when required for energy conservation.

Project Impacts

CRT Impact VIS-1: Construction activities associated with the project would create temporary aesthetic nuisances for adjacent land uses. (Potentially Significant; Less than Significant with Mitigation)

Construction activities associated with the project would include earth moving, paving, and landscape installation. Project construction would be visible from locations along public roadways in the City of Berkeley including University Avenue and Hearst Avenue. This work would entail the use of considerable heavy equipment and would be most noticeable to local residents in the Northside neighborhood of Berkeley. This effect would be temporary, and it is anticipated that CRT project construction would be completed within a 27-month period. This impact is considered potentially significant. With the implementation of the proposed mitigation measure, the impact would be less than significant.

CRT Mitigation Measure VIS-1: 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.

Significance after Mitigation: Less than significant.

CRT Impact VIS-2: The proposed project could alter views of the LBNL site and but would not result in a substantial adverse effect to a scenic vista or substantially damage scenic resources. (Less than Significant)

Scenic Vistas

For purposes of this study, a scenic vista is considered an open and expansive public view encompassing valued landscape features such as ridgeline, open bay waters, distinctive urban skyline or major landmarks. The proposed project would be partially visible from a limited area including Lawrence Hall of Science where expansive urban landscape views encompass the cityscape and San Francisco Bay in the backdrop (see Photo 8 on Figure 4.1-2b). However, as seen from these locations, the project would largely be screened by existing LBNL buildings and intervening vegetation. In addition, the proposed project would not obscure views of distant scenic landscape features such as the Bay or San Francisco skyline which are currently seen by the public from these locations.

Other Public Views

Figure 4.1-3 presents a "before" and "after" view from Hearst Avenue at Shattuck Avenue. The CRT building is almost a mile away from this vantage point. In the Figure 4.1-3 visual simulation, the CRT building appears behind the streetlight seen in the foreground near the center of the image. The new building would be seen on the hillside to the right of Building 50. A cluster of mature eucalyptus trees situated below the project above Hearst Avenue would partially screen the CRT building. As shown in the simulation, the removal of existing trees associated with the CRT project would make Building 70A somewhat more visible from this location.

Figure 4.1-4 depicts a "before" and "after" view from Ridge Road near Euclid Avenue. The CRT building is approximately 0.5 mile away from this viewpoint. In the existing view UC Berkeley's Etchevery Hall and palm trees on the right and mature street trees on the left frame the view down Ridge Road. Portions of existing Berkeley Lab buildings are visible above the street trees including the two taller portions of Building 50 which appears at the top of the hill, near the center of the image. In the Figure 4.1-4 visual simulation, the CRT building appears on the hill behind the palm trees on the right side of the view. Existing trees screen lower portions of the building.

The Figure 4.1-3 and 4.1-4 simulations demonstrate that, as seen from a limited area situated to the west, the CRT project would alter the appearance of the LBNL site by increasing the amount of visible development. In addition to the new CRT building, the tree removal associated with the project would result in Building 70A being somewhat more visible from limited locations to the west. However, from many locations in the Berkeley area, intervening topography, vegetation, and structures would partially or fully screen views of the project. As visible from limited locations, the CRT project would introduce an additional structure into an already developed hillside. From locations in Berkeley further from the project, the project would appear as an incremental addition to an already developed hillside. These impacts would be less than significant.

Mitigation Measure: No project-level mitigation measure required.

CRT Impact VIS-3: 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)

The project would introduce a new research building and an access driveway on the hillside down slope and adjacent to/south of the Building 50 complex and Buildings 70/70A within the LBNL site. The project design calls for placing the High Performance Computer (HPC) component, which has the largest footprint, parallel to the contours of the hillside and creating a relatively narrow multi-story portion with one floor extending to form a pedestrian link to the existing buildings. This approach would reduce the need for excavation and visually integrate the new building massing into the hillside, thus reducing its potential visibility. Placement of the office portion of the building in a separate wing above and perpendicular to the HPC and the terrain would reduce the amount of square footage overlying the HPC for structural reasons, optimize building access, and reduce solar gain by minimizing the area of the facade facing west. The HPC has relatively few windows and solar gain would therefore not be a major issue for that portion of the building. Distinct lower and upper hillside entry points would also be created, allowing access from the Blackberry Gate as well as from the parking lots of buildings 50 and 70.

The CRT building would generally be lower than nearby Lab buildings and would not be visually prominent from most off-site locations. As shown in Figures 4.1-3 and 4.1-4, from typical public vantage points, the project would be visible as an addition to the existing hillside development. It would be relatively unobtrusive from most locations and would not be visible from large areas of the City of Berkeley because of intervening terrain, trees, and buildings.

In terms of its exterior appearance, the new CRT building would display characteristics that are similar to the nearby buildings. Materials would include the use of metal, concrete, and glass. The project would

not include new parking lots. Project design and implementation would be in keeping with the guidelines of the 2006 LRDP and in this respect, the project would contribute a more coherent appearance to the existing hillside structures through the use of similar materials and by adding to an existing cluster of buildings.

The new building would be constructed on a disturbed portion of the LBNL site. Vegetation to be removed for the project consists primarily of non-native eucalyptus trees; tree removal would be mitigated by planting new trees on the project site and elsewhere on the Berkeley Lab site.

Taken together, these changes would result in a noticeable visual effect on the site's existing visual character. However, as described above, the project would not substantially alter the overall visual character of the LBNL site. Therefore, this impact is considered less than significant.

Mitigation Measure: No project-level mitigation measure required.

CRT Impact VIS-4: 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)

The project would create new sources of light and glare within an already developed area. Sources of new light and glare could include expansive windows, and metal and steel materials. During the day, sunlight could reflect off the windows and the metal and steel materials of the buildings, and vehicles using the access road, and could thereby create additional glare. During the nighttime, the project site would be lit for nighttime operations and security reasons. These new sources could potentially affect day and nighttime views and could conflict with local lighting regulations and policies. However, implementation of LRDP Mitigation Measure VIS-4a and LRDP Mitigation Measure VIS-4b are included in the proposed project which would ensure the project's potential lighting impacts are less than significant.

Mitigation Measure: No project-level mitigation measure required.

4.1.5 References

Lawrence Berkeley National Laboratory. 2007. 2006 Long Range Development Plan Final Environmental Impact Report, SCH No. 2000102046. July.

Perkins + Will. 2007. CRT Conceptual Project Design Drawings. August.