The Regents of the University of California

COMMITTEE ON GROUNDS AND BUILDINGS
March 23, 2010

The Committee on Grounds and Buildings met on the above date at UCSF–Mission Bay Community Center, San Francisco.

Members present: Regents Makarechian, Reiss, Schilling, and Zettel; Ex officio member Yudof; Advisory members Cheng, Hime, and Powell

In attendance: Regents Bernal, Nunn Gorman, and Stovitz, Faculty Representative Simmons, Secretary and Chief of Staff Griffiths, Associate Secretary Shaw, General Counsel Robinson, Executive Vice President Brostrom, Vice President Lenz, Chancellors Blumenthal and Fox, and Recording Secretary Harms

The meeting convened at 2:35 p.m. with Committee Chair Schilling presiding.

1. **PUBLIC COMMENT**

Committee Chair Schilling explained that the public comment period permitted members of the public an opportunity to address University-related matters. The following persons addressed the Committee:

A. Ms. Ali Reed remarked that college campuses across the country are linking teaching, research, and campus engagement to focus on sustainable food systems. Over the past five years, students from the California Student Sustainability Coalition have worked with student government, Regents, the Office of the President, and housing directors to strengthen commitment to sustainable campus food systems.

B. Ms. Kitty Bolte stated that newly established statewide sustainability guidelines will allow the University to set minimum-level thresholds and baseline indicators, and assess metrics for best practices for contracted and in-house food service vendors and facilities. She noted that it is crucial that UC continue to set the standard for sustainability.

C. Ms. Gabby Kirk, the campus sustainability outreach coordinator at UC Santa Cruz, thanked the Regents for their past commitments to sustainability. She observed that climate change is a critical issue worldwide and asked the Regents to pledge continued support for climate neutrality on the campuses, for renewable energy projects, and for energy-efficient practices.

2. **APPROVAL OF MINUTES OF PREVIOUS MEETING**

Upon motion duly made and seconded, the minutes of the meeting of January 19, 2010 were approved.

3. **UNIVERSITY OF CALIFORNIA CAPITAL PROGRAM: MONITORING PROGRESS AND PERFORMANCE**

The President recommended that:

A. The Regents endorse the initiatives that the Office of the President is in the process of implementing in response to the following recommendations set forth in the 2005 report to the Regents entitled, *Transforming Capital Asset Utilization: Opportunities for Reducing Project Costs and Achieving More Program for the University's Capital Dollar*:

(1) Ownership and Accountability. Identify individuals accountable for capital asset utilization, delivery and performance.

(2) Formal Business Case Analysis. Develop a thorough examination of non-building solutions and alternatives at earliest identification of need, and develop a high-level function for executing analysis and planning.

(3) Shorter, Simpler Process. Significantly shorten lengthy pre-planning and pre-design phases. Use business case analysis for concept development. Provide more clearly defined decision-making authority.

(4) Robust Flexible Contracting Environment. Advocate for statutory authority to award construction contracts on the basis of "Best Value," modify UC contracts to be less onerous, advocate for changes to laws that preclude UC from benefitting from early design consultation with qualified subcontractors.

(5) Systemwide Building and Project Metrics, and Standards and Data. Develop a common project administration system that automates roll-up reporting to track projects and benchmark design and construction metrics as resources allow.

B. The Office of the President return to the Regents in July 2010 with a progress report concerning the actions addressed in A. (above) and other initiatives including: a process to provide the Regents with timely opportunities to address material changes to project budgets and scope; increased reporting for high-risk projects; the establishment of an Office of the President/Campus Capital Program Leadership Forum; guidelines and criteria for business case analysis; quarterly financial status reports; and the potential need for a Change Agent.

[Background material was mailed to the Committee in advance of the meeting, and copies are on file in the Office of the Secretary and Chief of Staff.]

Vice President Lenz explained that the purpose of his report was to respond to the Regents' concerns about the management of UC capital programs in the context of increasing fiscal challenges.

In the 19-year period for which the University has collected data, said Mr. Lenz, the volume of major capital projects at UC has grown from $3 billion to $9.2 billion. The majority of the projects have related primarily to life safety and seismic upgrades combined with the demands of increased enrollment. Mr. Lenz reminded the Regents that funding for building construction and renovation cannot be used for other purposes, such as salaries or ongoing operating costs. Most UC facilities for educational programs are paid for either out of voter-approved General Obligation (GO) bonds or lease revenue bonds from the Legislature and the Governor. Funding for other campus structures, such as hospitals, housing, parking, and athletics venues, typically is generated by the operations themselves or by fees that students approve for specific facilities.

Market conditions play a critical role in bidding for capital projects. Mr. Lenz showed the Regents a chart comparing trends in market construction costs to trends in UC project augmentations between 1997 and 2009. Because of the economic downturn, he observed, many bids on recent projects came in well below their pre-bid estimates.

Mr. Lenz remarked that the first recommendation for which he sought approval concerned the issue of ownership and accountability. He stated that a designated individual at each campus and one at the Office of the President should be accountable for the campuses' capital projects. Mr. Lenz then addressed the issue of formal business case analysis. This analysis includes a thorough examination of alternative solutions rather than simply justifying a particular project. Non-building solutions will need to be thoroughly examined prior to the decision to build.

The Vice President noted that the University has, for the most part, implemented a shorter, simpler process for projects under $60 million. On average, said Mr. Lenz, the pre-planning and pre-design phases can take as many as three to five years, resulting in final design and cost data that are out of date. He noted that UC Irvine provided an excellent example of a shorter, simpler process that clearly defined roles and timelines. He said that the University has also worked with the State to develop a streamlined process for State-funded projects.

Mr. Lenz recommended a flexible contracting environment that would allow early design consultation with bidders. He observed that a best-value pilot program has been successful at UCSF; he is working to extend the authorizing legislation systemwide in order to apply that program to other sites. He remarked on new contracting models, such as Integrated Project Delivery, currently used at the UCSF Mission Bay hospital, and performance-based contracting for energy efficiency projects. He stated that the University will also establish a vehicle by which the campuses will be able to share best

practices, problems, and opportunities.

With regard to systemwide metrics and the exchange of timely design and construction information, Mr. Lenz informed the Regents that the Office of the President had scheduled bi-monthly meetings with campus capital program leaders to forge approaches, exchange information, and provide early notification of any constraints or opportunities. Ideally, he said, the University would like to develop proposals for systemwide project tracking systems that would facilitate campus input; however, the concept is challenged at this time by a lack of resources.

Mr. Lenz observed that the sixth recommendation from the 2005 report was not one he was prepared to recommend at this time. This element calls for assigning a "change agent" in the Office of the President who would implement recommendations regarding campus capital facilities projects. He suggested that the previous five recommendations should be implemented first so that the University could track their progress.

Vice President Lenz pointed out some additional proposed improvements for early notification regarding changes in project budget and scope. Early warning would be provided by the Office of the President to the Chair of the Committee on Grounds and Buildings at project decision points so that proactive action can be taken. Mr. Lenz suggested increased reporting for high-risk projects, such as hospitals, research facilities, and laboratory buildings. He discussed levels of accountability between the Regents, the President, and the campuses, and a plan of action to be taken by the Office of the President and the campuses between March and September 2010.

In closing, Mr. Lenz noted that the 2005 recommendations had been brought before the Regents previously, and they were not formally adopted at that time. As a result, the University lacked oversight and implementation on some projects. He suggested that the Regents might consider adopting the first five recommendations of the 2005 Transforming Capital Asset Utilization Report.

In response to a question asked by Regent-designate Hime, Mr. Lenz provided information about data listed for budget augmentations.

Regent Makarechian asked Mr. Lenz why he was not advocating adoption of the last recommendation from 2005. Mr. Lenz explained that the University would be very busy implementing the first five recommendations and establishing accountability through the reporting process. Mr. Lenz was not comfortable with adding a change agent at this time, but would like to return to the Regents to discuss that proposal in the future.

Regent Makarechian asked if the Regents were being asked to adopt the detail of the 2005 report, and Mr. Lenz responded that they would be.

Regent Zettel asked if it would be cost effective to designate a person at each campus to be responsible for capital plans. Mr. Lenz explained that he was not intending to hire new employees for this position, but to add to the responsibilities of existing administrators.

Upon motion duly made and seconded, the Committee approved the President's recommendation and voted to present it to the Board.

4. **ACCEPTANCE OF 2010-20 CAPITAL FINANCIAL PLAN AND PHYSICAL DESIGN FRAMEWORK AND AUTHORIZATION TO PARTICPATE IN THE PILOT PHASE OF THE REDESIGNED PROCESS FOR CAPITAL IMPROVEMENT PROJECTS, MERCED CAMPUS**

The President recommended that the Regents:

A. Accept the UC Merced 201020 Capital Financial Plan and the Physical Design Framework.

B. Authorize the Merced campus to participate in the Pilot Phase of the Redesigned Process for Capital Improvement Projects.

[Background material was mailed to the Committee in advance of the meeting, and copies are on file in the Office of the Secretary and Chief of Staff.]

Executive Vice Chancellor Alley stated that UC Merced was placed in the San Joaquin Valley to serve the educational and research needs of its vastly underserved population. The campus planning principles included building areas of academic distinction based on interdisciplinary approaches. The campus works to provide access for its diverse student body and to focus on the success of those students. He showed the Regents slides depicting the expanding capacity of the Merced campus, including growth in student body, graduate students, ladder rank faculty, and research funding.

Mr. Alley observed that the demographics of the Merced campus reflect the diversity of the state; UC Merced has the most diverse campus in the University and one of the most diverse of any campus in the United States. Mr. Alley remarked that the Merced students are an extremely entrepreneurial group. In addition to starting over 100 clubs and organizations, they were responsible for inviting First Lady Michelle Obama to speak at last year's commencement ceremony.

Vice Chancellor Miller explained that the Ten-Year Capital Plan would describe the needs of UC Merced based on the assumption that it will continue to grow and that it will continue to have strong support from the Regents and the Office of the President.

Ms. Miller remarked that the decision to place the campus on grazing land with no established infrastructure within miles necessitated an arduous, multi-year process of securing necessary approvals and permits. Infrastructure providing for needs such as water, sewer, roads, and storm water management was nonexistent and extremely costly; this cost is perpetuated with each new facility the campus develops. In addition, the campus has been required to mitigate for impact to wetlands and habitats, and for traffic disruptions to the local community.

Despite these setbacks, said Ms. Miller, there have been advantages to building a new campus. UC Merced has had the ability to design buildings according to its own standards. In addition, the development of the campus and the management of the mitigated acreage provide an opportunity for advanced teaching and research. Furthermore, sustainability can be, and has been, one of the hallmarks of the campus. She showed the Regents a photograph of the campus' new solar farm, which accounts for 20 percent of the campus' annual energy usage, and 50 percent of the campus' need on a typical hot summer day. Energy use by facilities at UCM is about 50 percent of typical buildings of their type, and water use is about 40 percent. Thus far, the campus is 100 percent Leadership in Energy and Environmental Design (LEED) certified with regard to its permanent buildings, with most certified at LEED Gold; the campus has won many sustainability awards.

Ms. Miller reported that the State has invested approximately $311 million thus far in the campus. Approximately $253 million was for initial development; of that, $75 million was for basic infrastructure. The remainder of the initial funding was used for three State-funded buildings. Using auxiliary and student fee revenues, the campus has built housing, parking, and recreation facilities for a total investment of about $135 million.

UC Merced admitted its first 865 students in 2005-06; this past fall, the campus enrolled more than 3,400 students. Ms. Miller stated that the campus is scheduled to add 600 to 700 students per year for the foreseeable future. To accommodate growth, UCM will need a significant infusion of capital funds over the next ten years. Slightly more than half will be requested from the State, and the remainder will be obtained through external funding to be repaid through student fees and auxiliary funds.

Currently, the campus is constructing a facility for social sciences and management; UCM expects to open the building by fall 2011. Following that project will be the renovation of a facility at the former Castle Air Force Base; the campus will require funding to transform that space into faculty laboratories. About ten miles from campus, the Castle Air Force Base facility is used for faculty research pending the creation of on-campus facilities. Ms. Miller noted that the Office of the President is working with the campus for creative funding for a critical new facility, a science and engineering building that the campus must have operational by 2014 in order to keep pace with student and faculty growth.

Ms. Miller emphasized that UC Merced has serious mitigation issues; over the next ten years it hopes to address most of them at a cost of $39 million. In addition, the campus has very cumbersome infrastructure challenges, as discussed previously.

Campus Architect Lollini explained that the Physical Design Framework fits within a family of documents, including the Long Range Development Plan (LRDP) and the Ten-Year Capital Plan. It is structured to be flexible as possibilities emerge for the campus, while maintaining a framework for how it will evolve.

Mr. Lollini echoed Ms. Miller's stress upon the importance of infrastructure in

developing UC Merced. The topography of the site strongly determines the design of the campus; two canals that run through the grounds will require the construction of 15 to 30 bridges. In addition, UC Merced has two geographical depressions in the heart of the campus. Mr. Lollini observed that the design challenges afford the campus an opportunity to be innovative in its approach.

The Physical Design Framework integrates environmental design principles, community principles, and planning principles; these are interwoven to shape the overall design of campus buildings. The population of the Central Valley is expected to increase by 130 percent in the next four decades. UC Merced is hoping to create a model for that development in sustainability and efficiency. He showed the Regents slides of the buildings on campus, highlighting the use of simple and inexpensive materials.

Mr. Lollini explained that UCM has set up a campus review and approval process including a Building Advisory Committee, Campus Physical Planning Committee, Campus Design Review Committee, Technical Advisory Committee, and Chancellor's Advisory Committee on Environmental Sustainability. Over the next five years, the campus is proposing several small infrastructure projects that will backfill areas that were left incomplete from the initial construction and a major infrastructure project in the South Bowl that is essential to prepare the campus to break ground on its next group of academic buildings.

Regent Makarechian asked if UC Merced's Section 404 permit from the U.S. Army Corps of Engineers was only for the east campus or for entire campus site. Mr. Lollini explained that it was for the entire campus and the community to the north. Regent Makarechian then asked if the $165 million for mitigation was for the entire campus or merely a portion of it. Mr. Lollini explained that the Ten-Year Plan timeframe will equate to approximately $39 million, but the bulk of the larger costs have to do with construction of subsequent phases of the campus parkway. The actual near-term mitigation cost is related to wetland replacement projects, which is roughly $8 or $9 million.

Regent Makarechian noted that a number of the projects in the Physical Design Framework exceeded the Regents' limit of $60 million. Mr. Lollini responded that the Framework established guidelines for approvals, and that projects over $60 million will come to the Regents for approval. Regent Makarechian specified that projects that are close to the $60 million limit require a statement of contingency costs to ensure that they do not exceed $60 million without Regental approval.

Regent-designate Cheng asked where the center of student life on campus would be located. Mr. Lollini responded that it would evolve over time as the center of the campus shifts with the growth of the campus. Ms. Miller added that the Plan includes a Student Union building that would be funded by student fees.

Upon motion duly made and seconded, the Committee approved the President's recommendation and voted to present it to the Board.

5. **ACCEPTANCE OF 2009-19 CAPITAL FINANCIAL PLAN AND PHYSICAL DESIGN FRAMEWORK AND AUTHORIZATION TO PARTICPATE IN THE PILOT PHASE OF THE REDESIGNED PROCESS FOR CAPITAL IMPROVEMENT PROJECTS, SANTA CRUZ CAMPUS**

The President recommended that the Regents:

A. Accept the UC Santa Cruz 2009-19 Capital Financial Plan and the Physical Design Framework.

B. Authorize the Santa Cruz campus to participate in the Pilot Phase of the Redesigned Process for Capital Improvement Projects at its main campus, 2300 Delaware Avenue, and its Marine Science Campus.

[Background material was mailed to the Committee in advance of the meeting, and copies are on file in the Office of the Secretary and Chief of Staff.]

Chancellor Blumenthal remarked that in September 2009, he reviewed with the Regents the campus Strategic Plan. At that time, he highlighted some of the strengths of UC Santa Cruz, including its 2,000-acre main campus, its 100-acre Marine Science Campus, and the four other properties it manages: Lick Observatory on Mount Hamilton, the Monterey Bay Education, Science, and Technology Center at the former Fort Ord military base, 2300 Delaware Avenue in Santa Cruz, which houses research and administrative offices, and the planned Silicon Valley Center at the National Aeronautics and Space Administration (NASA)/Ames site at Moffett Field. In addition, UCSC manages five Natural Reserve System sites on the Central Coast.

This month, *Forbes* magazine named UC Santa Cruz one of the world's most beautiful campuses. Planners and architects have worked to integrate its structures in a way that is sensitive to the natural setting and responsive to the campus needs. The intent is to design buildings that encourage users to engage with their surroundings.

President Yudof asked the Committee to approve the remaining action items at this point with the understanding that approval of any particular item could be rescinded the following day if necessary. Upon motion duly made and seconded, the Committee approved the President's recommendations for *Acceptance of 2009-19 Capital Financial Plan and Physical Design Framework and Authorization to Participate in the Pilot Phase of the Redesigned Process for Capital Improvement Projects, Santa Cruz Campus*; *Approval of the Budget for Capital Improvements and the Capital Improvement Program and Approval of External Financing, Glen Mor 2 Student Apartments, Riverside Campus*; *Approval of the Budget for Capital Improvements and the Capital Improvement Program and Approval of External Financing Budget, UCSD Medical Center East Campus Bed Tower, San Diego Campus*; and voted to present them to the Board.

Chancellor Blumenthal explained that UCSC's Physical Design Framework is organized around five unifying concepts: respect for major landscape types, organized development

in a core college configuration, building in clusters, and connecting major campus buildings using a ladder of roads and grid of paths. The last two design concepts have allowed the development of a pedestrian-friendly campus, enabled efficient use of bus and shuttle transit, and ensured that travel for those who drive is clear and efficient.

UCSC, said the Chancellor, has three major landscape types: meadows, forests, and ravines. The Framework provides guidelines for development in each area. Larger buildings are clustered in the campus core and surrounded on three sides by smaller-scale groupings.

Chancellor Blumenthal remarked that the Santa Cruz campus has a decades-long history of pursuing sustainable practices in campus-wide operations, including energy-saving upgrades to mechanical and lighting systems, alternative transportation programs, water conservation, and cutting-edge sustainable food and dining practices. The campus is committed to integrating sustainable features into its major construction and renovation projects, aiming to achieve the equivalent of U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) Silver rating or better. The campus currently has one LEED Silver certified building, with five additional buildings in the certification process.

Each year, explained the Chancellor, UC Santa Cruz reviews and evaluates capital needs and assesses alternatives based on anticipated resources. The 2009-19 Capital Financial Plan is an outcome of that process and is consistent with UC's current planning parameters regarding enrollment and State support. The campus has built flexibility into the plan by defining projects that can address multiple needs and by positioning itself to respond quickly to changes in enrollment, research growth, and State funding. Each project that appears in the plan achieves one or more of five objectives: academic program development, retrofit or upgrade of existing facilities, student life and intellectual engagement in residential life, core infrastructure, campus environment, sustainability, and life safety.

Chancellor Blumenthal informed the Regents that nearly half of UCSC's capital program budget, $394 million, is for core instructional and research facilities. Approximately 40 percent, $333 million, is for investment in student-related facilities, including housing. Roughly 13 percent, $109 million, has been targeted for infrastructure and investment. Santa Cruz has slated approximately 70 percent of its anticipated State funding to address existing academic space deficiencies or to retrofit and upgrade facilities. The remaining 30 percent of the State dollars will help the campus renew and extend UCSC's core infrastructure.

The Chancellor observed that the campus anticipates the need for approximately $335 million in external financing. Each of the projects requiring external financing has been subjected to, and passed, the standard fiscal tests UC uses in order to ensure the financial feasibility of a project. Nearly all of the proposed debt is for auxiliary functions such as housing and parking projects, and will rely on those business operations for repayment.

Chancellor Blumenthal remarked that the planning process at UC Santa Cruz incorporates participation by students, faculty, staff, administration, and design professionals. The development and implementation of land use and capital improvement plans is overseen by two standing committees: the Advisory Committee on Campus Planning and Stewardship, and the Chancellor's Design Advisory Board. The recommendations of those advisory bodies are made to campus Provost Kliger and to Chancellor Blumenthal, who are responsible for final decisions. Relevant principal officers and their staff meet very frequently to review budget, scope, and all design and construction milestones. The campus will extend that practice in order to prepare quarterly reports on high-risk projects for the Office of the President.

Upon motion duly made and seconded, the Committee approved the President's recommendation and voted to present it to the Board.

6. **APPROVAL OF THE BUDGET FOR CAPITAL IMPROVEMENTS AND THE CAPITAL IMPROVEMENT PROGRAM AND APPROVAL OF EXTERNAL FINANCING, GLEN MOR 2 STUDENT APARTMENTS, RIVERSIDE CAMPUS**

The President recommended that:

A. The 2010-11 Budget for Capital Improvements and the Capital Improvement Program be amended to include the following project:

Riverside: Glen Mor 2 Student Apartments – preliminary plans, working drawings, construction, and equipment – $144,462,000, to be funded from external financing ($140,895,000) and the Riverside campus' Housing Net Revenue Fund Reserves ($3,567,000).

B. The President be authorized to obtain external financing not to exceed $140,895,000 to finance the Glen Mor 2 Student Apartments project. The Riverside campus shall satisfy the following requirements:

(1) Interest only, based on the amount drawn, shall be paid on the outstanding balance during the construction period.

(2) As long as the debt is outstanding, the Riverside campus' Housing Net Revenue Fund Reserves and associated Net Parking Revenues shall be maintained in amounts sufficient to pay the debt service and to meet the related requirements of the authorized financing.

(3) The general credit of the Regents shall not be pledged.

C. The President be authorized to execute all documents necessary in connection with the above.

[Background material was mailed to the Committee in advance of the meeting, and copies are on file in the Office of the Secretary and Chief of Staff.]

[Regents were provided with a packet of correspondence received regarding this item, and copies are on file in the Office of Secretary and Chief of Staff.]

Vice President Lenz informed the Regents that the recommendation deletes paragraph B. contained in the background item at the request of the campus.

Committee Chair Schilling noted that because the President had requested the earlier vote, the change would be considered part of the prior approval. She asked if there was any objection to this, and there was none.

Regent Zettel asked if UC Riverside felt that the bids for the project were competitive, given the troubled economy and reductions in bid prices. Associate Vice Chancellor Ralston explained that the project had not yet been bid. The campus had just completed the pre-design phase and had cost estimates related to that stage of the process. Regent Zettel asked if the estimates were more costly than Glen Mor 1, and Mr. Ralston stated that they were, due to changes in the structural system of Glen Mor 2 in response to student input from residents of Glen Mor 1. The changes primarily addressed sound attenuation and building longevity.

Regent Zettel recalled that she had read that some of the common facilities in Glen Mor 2 would be shared with residents of Glen Mor 1. Assistant Vice Chancellor Plumley confirmed this to be the case, as was originally planned when Glen Mor 1 was constructed. Regent Zettel commented that the price differential between the two structures might also reflect addition of more common areas, and Mr. Ralston agreed.

Regent Schilling asked if the campus was seeking a public/private partnership on the project, and Mr. Ralston stated that Riverside had evaluated that prospect early in the process. The Riverside campus has a ten-year history of third-party developments. However, third-party structures have a higher probability of success at the periphery of the campus versus in the core campus. Since this project is closer to the core campus, a third-party contractor would not be used. In addition, Glen Mor 2 enhances and expands the program already in place for Glen Mor 1, which has been very successful, and which uses a very tight integration of housing and the student life program. Mr. Plumley stated that the program at Glen Mor is very closely linked to the campus' residence hall program; Glen Mor serves as a transition between residence hall living and off-campus apartments.

Upon motion duly made and seconded, the Committee approved the President's recommendation and voted to present it to the Board.

7. **APPROVAL OF THE BUDGET FOR CAPITAL IMPROVEMENTS AND THE CAPITAL IMPROVEMENT PROGRAM AND APPROVAL OF EXTERNAL FINANCING BUDGET, UCSD MEDICAL CENTER EAST CAMPUS BED TOWER, SAN DIEGO CAMPUS**

The President recommended that:

A. The 2009-10 Budget for Capital Improvements and the Capital Improvement Program be amended to include the following project:

San Diego: UCSD Medical Center East Campus Bed Tower – preliminary plans, working drawings, construction, and equipment – $663,800,000 to be funded from external financing ($356,800,000), gift funds ($131,000,000), hospital reserves ($72,000,000), Children's Hospital Bonds ($69,000,000), and capitalized leases ($35,000,000).

B. The Regents approve the UCSD Medical Center East Campus Bed Tower with a project scope that includes: new bed tower of approximately 470,300 gross square feet (GSF) with capacity for approximately 245 beds and 11 operating rooms, a new stand-alone central plant of approximately 35,900 GSF, and renovation of approximately 63,800 GSF in the existing Thornton Hospital.

C. The President be authorized to obtain external financing of $356,800,000 and capitalized leases of $35,000,000 for a total not to exceed $391,800,000 to finance the UCSD Medical Center East Campus Bed Tower project. The San Diego campus shall satisfy the following requirements:

(1) Interest only, based on the amount drawn, shall be paid on the outstanding balance during the construction period.

(2) As long as the debt is outstanding, UCSD Medical Center gross revenues shall be maintained in amounts sufficient to pay the debt service and to meet the related requirements of the authorized financing.

(3) The general credit of The Regents shall not be pledged.

D. The President be authorized to execute all documents necessary in connection with the above.

[Background material was mailed to the Committee in advance of the meeting, and copies are on file in the Office of the Secretary and Chief of Staff.]

[Regents were provided with a packet of correspondence received regarding this item, and copies are on file in the Office of Secretary and Chief of Staff.]

Chancellor Fox noted that the Regents had already approved an expansion of the Thornton Bed Tower; the campus now was requesting approval for the project budget and acquisition of external financing. The Chancellor stated that she was pleased to announce that UC San Diego had secured an anonymous private donor who will provide $5 million for the project at this time, and $70 million over next five years.

Regent Zettel asked if the donor had provided matching funds. Hospital CEO Jackiewicz replied that these were not matching funds, but were distributed over the period of construction. Chancellor Fox added that the campus has received letters of support from various elected officials and additional donors.

Regent Makarechian called attention to the $72 million in hospital reserves mentioned in the recommendation. He asked how that disbursement would affect the overall operations of the hospital. Mr. Jackiewicz explained that UCSD has been planning for the project for quite some time. The campus reviewed its cash and its projected margin over next few years, and determined that the use of those funds would not be detrimental to the hospital. Regent Makarechian then asked if the project used 100 percent of the reserves, and Mr. Jackiewicz said that the hospital typically has 80 days in cash on hand; during the low point of the project, the reserve would be reduced to approximately 60 days of cash on hand.

Regent Makarechian recalled that the campus saved close to $100 million in its rebidding process and asked if the money from the donor was still necessary. Chancellor Fox responded that part of the reason for the budget request is that the campus does not have enough funding to thoroughly complete all parts of the expansion.

Regent Makarechian noted that the campus had resubmitted figures since its original bid. He recalled that the campus had committed to securing a more favorable estimate through the rebidding process, given the current economic cycle. Mr. Jackiewicz answered that he would very much like to bring the project in under budget. However, if the campus saves money in the construction phase, it would like to employ the savings to outfit the hospital immediately, rather than over time.

Chancellor Fox added that that the project has a Leadership in Energy and Environmental Design (LEED) Silver objective. Regent-designate Hime inquired as to the cost of Silver certification. Mr. Jackiewicz answered that he did not have the cost at hand, but would provide it to the Regents.

Upon motion duly made and seconded, the Committee approved the President's recommendation and voted to present it to the Board.

8. **ANNUAL REPORT ON SUSTAINABILITY PRACTICES**

Executive Vice President Brostrom explained that in 2002-03, the Office of the President was challenged to include sustainability in its operations, consistent with its teaching, research, and public service missions. In subsequent years, the Office of the President has

developed a groundbreaking systemwide policy; the President has guided the implementation of that policy and measured its progress. The University is now recognized as a national leader in sustainability in the higher education sector.

Vice President Lenz informed the Regents that the University has more than doubled its number of Leadership in Energy and Environmental Design (LEED) certified buildings over the past year, from 15 to 32, more than any other university in the country. Relying on LEED certification has spared UC the expense of creating an internal certification program; furthermore, within the construction industry, LEED has emerged as a national green building standard. Mr. Lenz stated that the University has eight new construction projects that achieved LEED certification in 2009, all of them at the Gold level.

Mr. Lenz stated that the incorporation of sustainability principles into the design process allows the University to consider initial construction costs as well as ongoing operation and maintenance costs. To date, 167 UC projects, totaling 20 million gross square feet, have been registered with the Residential or Non-Residential New Construction Program's energy efficiency efforts. By the time those projects are completed, the University is projected to avoid about $4.8 million per year in energy costs and receive about $6.8 million in incentive fund payments from the utility companies.

The energy efficiency partnership allows the University to invest in energy efficiency projects that generate significant operational savings. This includes lighting retrofit, building recommissioning, and upgrades to heating, ventilation, and air conditioning systems. Nearly $30 million in grant funding has been received, and the resulting operational savings to the University is approximately $15 million a year.

Mr. Lenz remarked that the University's climate action plans are roadmaps to reduce greenhouse gas emissions and achieve UC targets. The University also has a long-term goal of achieving carbon neutrality as soon as possible. Several campuses have committed to ambitious emissions reduction timetables, despite the fact that they are growing significantly. UC Irvine and UCLA committed to reduce their emissions to year 2000 levels by 2012. The Berkeley campus is reducing its emissions to 1990 levels by 2014, and UC Merced intends to be entirely carbon neutral by 2020.

Mr. Lenz explained that sustainable transportation programs seek to lessen environmental impact by reducing commuting, fleet, and business air travel, which all contribute to greenhouse gas emissions. One strategy that the University has employed is car sharing, which has proven highly popular at the campuses. UC Berkeley is achieving savings of approximately $23,000 per year through its car share program, and it has tripled the number of shared vehicles available on campus.

UC's goal to divert 50 percent of its municipal solid waste from landfills mirrors the State requirement for municipalities and State agencies. The University's next goal is to divert 75 percent of its waste by 2012. Mr. Lenz remarked that UC Davis recently opened a zero-waste multipurpose Aggie stadium; everything sold in the stadium can be recycled or composted. This approach is being copied by the University of Colorado, Boulder.

Mr. Lenz stated that sustainable purchasing and procurement efforts are focused on strategically outsourced systemwide contracts and environmentally preferred products – including office equipment, carpet, and cleaning supplies. The University now uses paper composed of 30 percent post-consumer recycled product. In addition, Berkeley has a program for reusing office supplies and equipment; this program has been identified as a model for potential use in the U.S. Capitol.

Guidelines on sustainable food service were added to the policy by the Regents last September, said Mr. Lenz. They require the campuses to set and track goals related to procurement, operations, education, and outreach. The dining services on the Berkeley and Davis campuses already exceed UC's systemwide procurement goals. Furthermore, some of the campuses have eliminated trays from their dining halls, which has greatly reduced food waste and water consumption.

Mr. Lenz remarked that the University's sustainability program contributes to its research, teaching, and public service missions through unique collaborations of students, faculty, and staff. For instance, the UC Santa Cruz Center for Agroecology and Sustainable Food Systems received a grant from the U.S. Department of Agriculture to establish a Sustainable Food Systems Research fellowship for both undergraduate and graduate students on five UC campuses. The Regents and UC continue to receive extensive recognition as national leaders in sustainability, and are benefiting from the increased national media coverage and student interest in the topic of sustainability. In 2009, *The Princeton Review* completed an annual survey which indicated that an institution's level of sustainability would influence college choice of 67 percent of graduating high school seniors. All major college guides have initiated green ratings, and UC ranks at the top of all of them.

Mr. Brostrom remarked that the University does track the costs of LEED certification, which can range from a few thousand dollars to $200,000, depending on the size and scope of the project. He informed the Regents that LEED was not initially designed specifically for higher education projects, but that the U.S. Green Building Council has now established a higher education liaison. Three UC campuses are participating in the pilot program to develop LEED standards that are more relevant to college campuses. Regent-designate Hime asked for clarification regarding the amount of money spent by the University on third-party entities in order for UC to obtain LEED certification, particularly since California has taken the national lead in sustainable building design. He suggested that UC should investigate developing its own LEED equivalency and that it could save several hundred thousand dollars.

Regent Reiss commented that the Governor hosted a climate summit with the United Nations last year, and included in it was a DVD showcasing UC's sustainable building practices.

Regent Bernal asked what the University does to communicate its sustainable practices more broadly to the public and the Legislature. Mr. Brostrom remarked that the campuses have been highlighting their activities individually for the most part, and that a good deal

of that communication has been internal. He said he has been working with the University's communications department on an initiative that would highlight the University's tremendous accomplishments. He observed that the fortieth anniversary of Earth Day would be in April 2010, and that it would be beneficial to have some articles about UC's efforts in conjunction with that date.

Regent-designate Cheng expressed concern that UC's medical centers and food auxiliaries were not sufficiently engaged in the University's sustainability efforts. Mr. Lenz observed that the University is making a concerted effort to get those entities involved in following best practices. Mr. Brostrom commented that the campuses are working to make sure external food vendors follow the same practices that UC requires of its own dining operations. Regent-designate Cheng remarked that he had heard about a May deadline in relation to these efforts. Sustainability Analyst Coghlan explained that all of the campuses had formed working groups with their contract food service entities to try to incorporate sustainability requirements into Requests for Proposals (RFPs) for new vendors as well as for current providers. Each campus is required to submit a feasibility study to see how they will apply the principles outlined in the sustainable food service guidelines to their service providers. The same deadline applies to the medical centers that need to review their operations to see how they can incorporate these goals, given their unique challenges. Mr. Coghlan remarked that the University has been pleased with the engagement with the medical centers on the issue.

Regent Makarechian asked if the University does a building-by-building cost-benefit analysis for each one of the campuses. He remarked that he was recently at a meeting of the Committee on Investments at UCLA, where he counted 154 lights that were on in a window-filled room on a sunny day. Likewise at UC Santa Barbara, he was surprised to find all the lights on in a building when he, another Regent, and two security guards were the only occupants of the building. Regent Makarechian asked if the campuses can install motion and light sensors to reduce this type of waste. Mr. Brostrom responded that one of the biggest and easiest energy-saving tactics is the reformulation of lights and installation of sensors. Regent Makarechian asked if the University has a building-by-building plan for each campus. Mr. Brostrom said that he had a list of approximately $250 million in projects. The list does not cover every single building, but the next step is to extend the list, particularly to older buildings without good lighting configurations or sensors.

9. **UPDATE ON WORK OF THE CLIMATE SOLUTIONS STEERING GROUP**

Executive Vice President Brostrom explained that his predecessor, Executive Vice President Lapp, had created the Climate Solutions Steering Group to focus on large-scale, systemwide renewable solutions that would enable UC to realize its ambitious sustainability goals.

UC Irvine Vice Chancellor Wendell Brase remarked that the Climate Solutions Steering Group is not a committee that makes recommendations, but is a unit focused on moving quickly from concept to implementation. Mr. Brase explained that there are many laws and policies that guide the group, including an Executive Order from the Governor,

California Assembly Bill 32 (The Global Warming Solutions Act), UC's Policy on Sustainable Practices, and the American College and University Presidents' Climate Commitment. In addition, the Steering Group is still awaiting the pending American Clean Energy and Security Act.

Mr. Brase stated that the University is responsible for roughly two million metric tons per year of carbon dioxide equivalents. He noted that large campuses with medical centers have much larger carbon footprints than those that are smaller or that do not have medical centers. A typical campus will be able to mitigate ten to twenty percent of its total carbon footprint; approximately one to five percent of the power generated by a campus could come from onsite photovoltaics. He acknowledged that the figure might seem low, but that the campuses have to take into account rooftops that are shaded, too low, or are covered by equipment that prevent the installation of solar panels.

Mr. Brase noted that most campuses cannot attain climate neutrality onsite. Campuses need access to renewable power off-campus; this access, he explained, means both the ability to procure power from the market and the ability to transmit it to the campuses. He informed the Regents that even if the University could access enough renewable power right now for all of the campuses, there would still be a problem. On six campuses, the University has combined heat and power plants that are very carbon-efficient because they are natural gas fired and they recover their waste heat. However, he explained, they are not paid for as of this point. Some of them are only ten years into a 30-year bond issue. The University will need to find a solution that takes into account this investment and the fact that it is relatively environmentally sound.

Overall, said Mr. Brase, the Steering Group is certain that reduction of carbon emissions will be costly, and that represents both a problem and an opportunity for the University. The opportunity is that it will actually shift the cost-benefit assumption for a number of prospective endeavors. However, UC will have to determine how to address the cost. At this time, observed Mr. Brase, it is nearly impossible to figure out what those costs will be, but they will increase over time, as what is now a voluntary market turns into regulated market offsets. Mr. Brase observed that the direct cost of allowances will likely start out in the low end of a range between $1 million and $18 million and will trend toward the high end by 2020. Indirect allowances, for the costs embedded in power procured by the University, will be a comparable amount and will start in 2012 in California.

Mr. Brase remarked that efforts to handle carbon emissions costs are complicated and that the proposals that will be brought forward by the Climate Solutions Steering Group will likely be very unconventional. They will represent a break with past practice and will require a long-term commitment.

Regent Makarechian asked if the actual materials of the buildings and their point of origin are taken into account when calculating campus footprint. As an example, he stated that Chinese steel has a larger footprint than local steel. Mr. Brase said that the University does try to procure locally to lower its carbon impact.

Regent Makarechian observed that the University has installed stationary photovoltaics, which are not very efficient. Mr. Brase noted that the photovoltaics at UCSD and Davis are German-made and that they do operate in two dimensions.

Regent-designate Hime noted that when the University entered into its agreement with ACUPCC, it took into account the buildings that were built after 1983 under Title 24 (the California Building Standards Code), which makes them 50 percent more efficient than others in the country. He asked if the Steering Group had seen any difference in energy costs between investor-owned utilities (IOUs) and municipal utilities, and if the University had studied the new announcement concerning Bloom Energy. Mr. Brase explained that the buildings that show the most energy savings through retrofitting are the newest laboratory buildings. Laboratories consume two-thirds of the energy on any campus. The University can install sensors that allow them to vary their ventilation based upon real-time sensing of contaminants in the building rather than using a constant rate of ventilation at all times. The sensors also can vary the ventilation based upon building occupancy. Through these efforts, UC is seeing savings of an additional 50 percent over Title 24 levels.

Mr. Brase speculated that many people are considering the newly publicized Bloom Energy product, and that the University's fuel cell experts are evaluating it. He said that the Bloom technology will likely play a role, particularly in residential settings, because it is a very scalable product and may work for student apartments. However, the cells do not have a thermal output, and are not well-suited to a central campus setting.

Mr. Brostrom added that the University's energy portfolio covers a wide range. UC is a client of the three IOUs, at least two municipal utilities, and a large direct-access player. All of those relationships come into play, he explained, when the University determines how it will mitigate its climate impact going forward.

Regent-designate Hime remarked that when the U.S. House of Representatives adopted its energy efficiency measure last year, it singled out California in recognition of the fact that it has implemented Title 24 and therefore has buildings that are 50 percent more efficient than in the rest of the country.

The meeting adjourned at 5:05 p.m.

Attest:

Secretary and Chief of Staff