UC is not just an institution of higher learning. Here, research aims higher. Service reaches higher.

A higher level of excellence calls for a higher commitment.

2009-15 STATE AND NON-STATE CAPITAL IMPROVEMENT PROGRAM

UNIVERSITY of CALIFORNIA

# FOREWORD

This 2009-15 State and Non-State Capital Improvement Program presents information regarding the University's multi-year plan for capital development as well as the proposed 2010-11 Budget for State Capital Improvements, which is being submitted to the Regents for approval through a separate action in conjunction with the 2010-11 Budget for Current Operations. Further, the 2009-15 State and Non-State Capital Improvement Program is being submitted to the State to comply with reporting requirements.

The 2009-15 State and Non-State Capital Improvement Program report provides an overview of the University's capital program and related issues, goals, and needs; sets the capital program within the larger context of the economic and other challenges facing the University; and demonstrates how the University has responded to these challenges.

The majority of the report provides information regarding the multi-year campus plans for capital development. A separate chapter for each campus lists the capital projects the campus expects to propose for funding from the State for 2010-15 and from non-State sources for 2009-10 and over the next five years.

The document demonstrates how campuses have planned carefully for the outlay of scarce resources and presents the campuses' best estimate of fund sources that will be available for defined capital projects, including debt financing, campus resources, gifts, capital reserves, federal funds, and State funds. Except for those projects for which approval has been delegated to the Chancellors under the Pilot Phase of the Redesign Process for Capital Improvement Projects, individual projects funded from non-State sources will continue to come before the Board for approval at its regular meetings. As campuses continue to refine their plans and as opportunities present themselves, the scope, cost, and funding plan of projects included in this report may change, to some degree, by the time a project is formally presented for project and funding approval.

The program of anticipated campus projects addresses a wide range of facilities needs; however, the listed projects do not meet all campus capital needs. Campuses have included in this report projects that they believe are sufficiently defined in terms of scope and cost at this time and for which a reasonable funding plan can be defined. Potential projects to meet other identified needs may not be included because feasibility studies are underway, alternative solutions are being evaluated, or funding sources have not yet been identified.

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# PERSPECTIVE ON THE 2009-15 CAPITAL IMPROVEMENT BUDGET

The University of California was founded in 1868 as a public, State-supported land grant institution. The State Constitution establishes UC as a public trust to be administered under the authority of an independent governing board, the Regents of the University of California. The University maintains ten campuses: Berkeley, Davis, Irvine, Los Angeles, Merced, Riverside, San Diego, San Francisco, Santa Barbara, and Santa Cruz. Nine of the campuses offer undergraduate, graduate, and professional education; one, San Francisco, is devoted exclusively to health sciences graduate and professional instruction. The University operates teaching hospitals and clinics on the Los Angeles and San Francisco campuses and in Sacramento, San Diego, and Orange counties.

Designated as the primary State-supported academic institution for research, the University has exclusive jurisdiction in public higher education instruction in the professions of law, medicine, dentistry, and veterinary medicine. The 1960 Master Plan for Higher Education articulated the University's three primary missions:

- Instruction of qualified individuals through undergraduate, graduate, professional, and post-doctoral programs.
- Research programs with an emphasis on teaching research at both the undergraduate and graduate levels.
- Public service, including outreach and K-14 improvement programs, cooperative agricultural extension programs, and health sciences clinical care programs.

The curriculum outlined in the University's Charter has also been embodied at dozens of ancillary sites throughout the State – institutes, research stations, cultural centers, ecological preserves, hospitals and clinics, observatories, agricultural extension offices, conference centers, a scholarly press, super-computing installations, and overseas affiliates. The University's Agricultural Field Stations, Cooperative Extension offices, and the Natural Reserve System benefit all Californians. In addition, the University provides oversight of the Lawrence Berkeley Laboratory and is a partner in limited liability corporations that oversee two additional Department of Energy laboratories.

The capital improvement program for the University of California stems from a sentence in the University's Charter of 1868:

Sec. 25. The Regents shall devise, and with the funds appropriated for that purpose cause to be constructed, such buildings as shall be needed for the immediate use of the University.



Berkeley: South Hall

UC's first permanent building, South Hall, was completed in 1873 in Berkeley and remains in daily use. It is home currently to the School of Information, a fitting assignment because the University's founders intended their new institution to encompass the entire scope of human knowledge:

The University shall have for its design, to provide instruction and thorough and complete education in all departments of science, literature, art, industrial and profession pursuits, and general education, and also special courses of instruction in preparation for the professions of Agriculture, the Mechanic Arts, Mining, Military Science, Civil Engineering, Law, Medicine and Commerce.

By the start of the twentieth century, the University's programs in Berkeley and San Francisco had risen to national prominence and were recognized as major contributors to California's successes in agriculture, engineering, commerce, and the arts. In 1919, the University's "Southern Branch" was established in Los Angeles, quickly becoming a major resource in the development of southern California. Other regions of the State soon recognized the benefits of higher education to their economies and their communities, and some of UC's affiliated sites rose to the status of independent campuses.



UCLA: Anderson Graduate School of Management

After the Second World War, it was widely acknowledged that California had taken national leadership in technological advancement. New industries and new population centers recognized that higher education and incisive research could be keys to their success. The University benefited from demographic shifts, economic growth, government sponsorship of research, receipt of Nobel and other awards, and legislative support to expand its facilities and to plan and build new campuses – the latest of which, Merced, admitted it first class of undergraduates in 2005. During the twentieth century, enrollments at UC campuses grew significantly and rapidly, and the University evolved into what Clark Kerr famously called "the multiversity."

Since 1873, the inventory of the Regents' capital assets has grown to include over 5,000 structures enclosing 125 million square feet on approximately 30,000 acres. Over the course of 140 years, the University of California has grown to become the most diversified and eminent institution for acquiring and disseminating knowledge.

# The University's Contributions to California

The University of California makes fundamental contributions to the State's economy and the quality of life of its citizens. Through its instruction, research, and public service programs, the University provides social, cultural, and economic benefits to the people of California by:

- contributing a highly educated workforce needed by high-tech business, agriculture, health care, education, and other sectors of the economy;
- conducting research that creates jobs, generates new products and services, and increases productivity, leading to higher standards of living;
- encouraging innovation and an entrepreneurial spirit, essential elements for the businesses that drive California's competitiveness;
- providing an unmatched combination of stateof-the-art patient care facilities, leading-edge research programs, and high-quality health education programs for Californians; and
- working with K-12 schools to improve the quality of instruction and expand educational opportunities for future generations.

The excellence of the University's programs leverages billions of dollars in federal and private funding and promotes the discovery and dissemination of new knowledge that fuels economic growth. To maintain California's leadership role and to meet the changing needs of future generations, California must continue to invest in the University.

# **Economic Impact of UC Capital Investment**

In addition to the economic benefits to the State arising from the instruction and research enterprise, economic benefits also accrue from capital investment in the University. A 2004 economic impact study commissioned by the Davis campus suggested that capital investment resulted in a 1:1 ratio of direct capital investment expenditures to indirect or secondary expenditures. On average, then, for every \$100 million in University capital funding, there was an additional \$100 million in other economic activity, with a total of about 3,400 jobs created on a direct and an indirect basis.

Based on a recent assessment of capital funding, the annual budget for the combined State and non-State capital program averages about \$1.5 billion. Using the multiplier effect of 1:1, this level of direct expenditure would generate an equal amount of indirect or induced expenditures, yielding a total economic impact of \$3 billion per year.

The Davis study also examined the expenditure impacts in terms of job creation. This level of economic activity generates approximately 56,600 jobs in the State, half as a result of direct expenditures and half as a result of indirect expenditures.

# State Capital Improvement Program 2010-11 Budget Request

The University is requesting State funding in 2010-11 to:

- restore projects that were included in the Governor's proposed budget plans for 2008-09 and 2009-10, but were not funded; and
- provide funding for additional projects included in the campuses' five-year capital plans, primarily those that address critical needs for seismic and life safety, enrollment growth that has already occurred, and facilities renewal.

The 2010-11 State budget request (shown on pages 14-15) totals \$631.5 million in State funds for capital outlay projects. The budget request assumes a four-year General Obligation bond measure for higher education and K-12 will be approved by the voters in 2010 that provides at least \$450 million per year for general campuses to meet enrollment, renewal, seismic improvement, and modernization needs, and that another \$100 million per year will be provided for health sciences programs to help address California's need for more health care providers and improved clinical facilities. Display 1 shows the 2010-11 State funding request by type of project.



Approximately 17% of the funds requested will be used to address existing enrollment needs, 28% will be used for seismic and other life-safety needs, 51% will address renewal and modernization needs of existing facilities, and 4% will be used for new program initiatives.

# **Capital Needs**

The major factors that determine the capital needs of the University of California are:

- enrollment demand, consistent with the University's commitment to student access under the *Master Plan for Higher Education;*
- preservation of existing capital assets through investment in renewal of facilities, including seismic correction and systematic modernization; and
- change and obsolescence in academic and research program needs.

# **Enrollment Demand**

In recent decades, enrollment growth - and the increasingly complex nature of the space needed to support that growth - has been a critical determinant of the University's need for space (either new or renovated). The University's undergraduate enrollment planning is based on UC's student-access requirements under the Master Plan, which specify that the top 12.5% of California high school graduates, as well as transfer students from the California Community Colleges who have successfully completed specified college work, shall be eligible for admission to the University. Graduate and professional enrollment planning is based on assessments of State and national needs, program quality, and available financial support.

The facilities needed to accommodate enrollment growth at the University have become increasingly diverse and complex. Nearly half of the University's State-supportable square footage is located in buildings that require complex utility systems. Typical examples include biological laboratories, high-energy physics laboratories, climate-controlled animal-research facilities, and specialized greenhouses. The high proportion of laboratory and specialized research space reflects the University's role as California's primary academic research institution and the State's decision to prioritize instruction and research in the sciences, engineering, and other technical areas.

The University's 1999 long-term enrollment plan called for annual enrollment growth of about 5,000 FTE students over the decade. The State was expected to provide funding for this enrollment growth at the agreed-upon marginal cost of instruction as adjusted annually. However, the University experienced far more rapid enrollment growth than projected, with the result that the University enrolled more students than the number for which it was funded in both 2006-07 and 2007-08. Unfortunately, due to the current fiscal crisis, the 2008-09 and 2009-10 State budgets provided no new resources for enrollment growth. As a result, the University is significantly overenrolled; in 2009-10 the University is enrolling 14,000 FTE students more than the State-funded enrollment target in 2007-08, the last year for which enrollment growth funding was provided.

For 2009-10, the University took action to slow enrollment growth by reducing the size of the incoming freshman class. For 2010-11, the University proposes to reduce further the freshman class, while slightly expanding access for California Community College transfer students, to begin to bring total enrollment to a level more consistent with available resources. For capital planning purposes, all general campuses, except the newest campus at Merced, have assumed enrollments would be reduced to 2007-08 levels. Enrollment at Merced will continue to expand.

# **Preservation of Capital Assets**

As campus facilities age, the need to maintain and improve the physical condition and functional utility of those facilities also is a high priority for capital outlay. Regular funding is needed for the systematic renewal of building systems that wear out under normal use and require periodic replacement. These systems (including mechanical systems for heating, ventilation, and air conditioning; plumbing; elevators; electrical equipment; fire protection; roofs; and built-in equipment) generally have useful lives of 20 to 40 years and may require replacement two or three times over the life of a building.

The University also has a substantial backlog of deferred maintenance and repairs. This backlog is the result of inadequate funding for systematic renewal and replacement of building and infrastructure systems. In addition, long-term underfunding of routine maintenance has exacerbated the effects of this shortfall of capital renewal funding by reducing the useful life of building systems. Moreover, roughly 55% of the University's State-supported space is more than 35 years old, most of it constructed during the 1950s and 1960s. As a result, the University's annual facilities renewal needs are projected to increase steadily through 2014-15 as the systems in these buildings reach the end of their useful function.

Finally, the University needs to continue its program of seismic corrections, a major consideration in the preservation of the University's capital assets. As of June 2008 (the last date for which there is an official report), approximately 16.3 million square feet of space that required correction has been seismically retrofit, has been vacated, or has corrections to the space underway. Design activities for an additional 3.8 million square feet of space that required correction was in progress. Correction of approximately 4.5 million square feet of space remains to be addressed at nine campuses: Berkeley, Davis, Irvine, Los Angeles, Riverside, San Diego, San Francisco, Santa Barbara, and Santa Cruz. Approximately 87% of the space remaining to be corrected is at the Berkeley and Los Angeles campuses. A study is underway to review campus

plans for mitigation of the seismic risk and completion of the remaining seismic work.

# Changing Nature of Academic and Research Programs

The University's need for different types of specialized space has been influenced by both rapid advances in technology and the changing nature of academic programs. Academic programs must be at the forefront of learning by developing and using innovative processes and technologies that support discovery, expand knowledge, and give competitive advantage to California. As science, industry, and commerce change in response to new knowledge and opportunities, the academic programs responsible for preparing students and conducting research also must change. As instruction and research objectives evolve and the boundaries between academic disciplines disappear, the methods and tools used also must evolve, and academic facilities must be renovated and updated to accommodate those changes.

# 2009-2015 State and Non-State Capital Improvement Program

The chapters following this overview provide a plan for capital development by campus, with a summary of capital projects each campus expects to propose for funding from State sources over the next five years and non-State sources for the current year and the next five years. Each chapter provides the context for the campus's capital improvement program including:

- a discussion of its capital needs;
- a Project Summary Table of State and non-State projects expected to be funded; and
- descriptions of projects proposed in 2009-15.

For 2009-15, campuses are proposing \$9.9 billion in funding for four categories of projects. Approximately 59% of the funding is for educational and general projects that support the academic mission of the University, with 35% at the general campuses and 24% for the health sciences. Another 24% of the funding is associated with auxiliary and student-fee-supported projects. The remaining project funding of 17% is at the medical centers.



The primary objective of capital projects – that is, the needs that would be addressed by the planned projects - has changed over time. As noted, enrollment growth has been a primary determinant of the University's need for space in recent decades. As the pace of enrollment growth slows, however, the campuses expect to address other critical needs. For 2009-15, well over half of project funding would be used for improving capital assets: 37% would address renewal and modernization needs and another 20% would address seismic and other life-safety needs. Only 11% would be used to meet enrollment needs. About one-third would support new program initiatives, primarily telemedicine and medical education programs, new academic initiatives, and new health center endeavors.

The budget plan being presented includes only those projects which have been adequately defined in terms of scope and cost and for which a reasonable funding plan has been identified.



It is important to note that the capital improvement program presented in this report is constrained by the availability of resources over the next five years. The University's capital funding needs far exceed what is financially feasible at this time.

Currently, the University estimates more than \$1 billion is needed annually over the next five years to address its most pressing Statesupportable facility needs to support core academic programs, including new construction and renovation of instruction and research facilities, seismic renovation of existing facilities, and expansion and renewal of critical infrastructure. In addition, at least \$1 billion annually is needed to address other urgent needs in areas traditionally not supported by the State, such as student and faculty housing, parking, and other facilities that serve the public as well as the University.

# **Delegated Project Approval Process**

In 2007, the University initiated efforts to identify specific opportunities to achieve administrative efficiencies within the Office of the President (OP) and across the system. One outcome of those efforts was the recommendation to engage in an in-depth study of the capital project review and approval process and propose modifications. Subsequently, recommendations were advanced from a Capital Projects Working Group, comprised of campus and OP representatives and supported by the Monitor Group. In March 2008, the Regents authorized an 18-month pilot phase to implement the new process.

During the pilot phase, the Regents will review and accept from each campus a ten-year Capital Financial Plan and a Physical Design Framework that demonstrate integrated academic, physical, and capital plans, and financial feasibility. Acceptance of these plans, in concert with prior approval of a Long Range Development Plan (LRDP), will authorize campus participation in the pilot phase, and delegate authority to approve the budgets and designs of projects with values less than or equal to \$60 million. These two new documents, in association with a campus's LRDP, will provide the Regents with a comprehensive understanding of the frameworks and processes that are guiding both long-term programmatic and physical development, and financial strategies that are being implemented at each campus. Through this process, the Regents will exercise portfolio oversight of capital projects; OP will provide due diligence regarding approval processes and legal, financial, or policy risks; and the campuses will have greater responsibility and accountability for the successful delivery of capital projects.

Currently, the Regents have reviewed and accepted a *Capital Financial Plan* and *Physical Design Framework* for three campuses and will review plans from an additional two campuses at the November Regents meeting. To date, two campuses have used the delegated process to implement four eligible projects, and more are anticipated in coming months as additional campuses present their portfolios for review and acceptance.

The feasibility of external financing for delegated projects is based on existing business models for auxiliaries (self-supporting programs and facilities, such as housing and parking), education and general debt (for core instruction, research and support space), medical center debt (campuses with patient care facilities and medical center support space), and plant operations (such as the energy savings program). The external financing models are currently being reformulated. The expectation is that once a financing model has been adopted systemwide, campuses will utilize that model for external financing feasibility going forward.

# **Fund Sources**

The 2009-15 capital program depends on a wide range of fund sources to support proposed projects, including State funds, gifts, grants, University equity funds (derived from auxiliary enterprise revenues, certain fees and other discretionary resources), and external financing (long-term debt). UC's general revenue is pledged as security for long-term debt; however, Educational Fees are not used to pay for construction or debt service.

About 26% of the 2009-15 program is comprised of State funding. Nearly one-third of the program uses external financing. Anticipated gifts represent 15% of the funding while campus reserves represent about 10%. Even with aggressive pursuit of federal funding through the American Recovery and Reinvestment Act (ARRA), grant funds overall represent only 3% of the capital program.



While capital improvements to support academic programs, academic support, core student services and administration, and campus operational support are eligible for State bond funding, they may be funded from both State and non-State sources. Self-supporting activities such as housing, parking, athletics, and medical enterprises generally are not eligible for State funding and must be supported from other sources.

**State Funds.** General Obligation (GO) bonds, which require voter approval, have been the primary source of State funds to support general campus and medical education facility needs since the mid-1980s. The University has also been the recipient of GO bonds to support expansion and improvements to children's hospital facilities throughout the State as well as bonds to support regenerative medicine (stem-cell) research facilities. The voters last approved a GO bond measure for higher education in 2006, which provided funding to support general academic projects and expansion of health sciences facilities and telemedicine programs.

State Lease Revenue bonds also have supported the University's capital improvement program. These bonds require only the approval of the Legislature and the Governor and, unlike GO bonds for which the State's general revenue is pledged as repayment of the bonds, a physical asset is pledged as collateral for repayment. In recent years, the State has utilized Lease Revenue bonds for selective programs or to support a limited number of highpriority projects. Limited State General Fund revenues have been provided for selective program purposes.



As noted earlier, the University is requesting support for a new four-year GO bond for higher education and K-12 that provides at least \$450 million per year for UC's general campuses to meet enrollment, seismic, and renewal and modernization needs, and another \$100 million per year for UC's health sciences facilities to help address California's need for more healthcare providers and improved clinical facilities.

**Non-State Funds.** The University has four principal non-State sources of funds available to support capital projects. These include current funds, gifts, grants, and external financing.



**Current funds** include reserves generated from specific operations and campus funds available to the Chancellor. These include revenues from hospital operations, housing, parking, athletics, and other auxiliaries. Reserves associated with the University Registration Fee also may be used to support capital improvements, and studentinitiated fees can support the construction of recreation, student union, and other studentrelated facilities. The use of reserves typically is restricted to support the program that generates the reserve revenue.

**Gifts** include those in hand, pledged, and to be raised. The University has a successful history of acquiring major gifts to fund capital projects. Philanthropic support in fiscal year 2008-09, while still highly successful, declined from the prior year due to the global economic downturn. In some instances, the economic crisis has directly

impacted the pace at which private funds have been raised in support of specific capital projects. As a result, projects listed will be advanced when funding targets have been achieved.

**Grants** include federal, State, and private awards. Campuses are aggressively pursuing State and federal grants to fund capital projects. The campuses are improving and expanding research facilities with grant money from the California Institute for Regenerative Medicine and renovating and constructing new facilities to support children's health with grant funds from the California Health Facilities Financing Authority. In addition, the University anticipates receiving millions of ARRA federal stimulus dollars to fund capital projects.

Grant funds can be used to cover direct capital expenditures, or a portion of grant overhead funds can be used to pay long-term debt service. The "Garamendi" financing mechanism is a specific tool for financing the construction of facilities through which the University has realized a number of projects. Under State Government Code Section 15820.21, the University may seek authorization to pay debt service and maintenance costs for specifically approved research buildings using federal indirect cost recovery from net new research dollars awarded. The University has had 22 facilities approved using this mechanism, including two new facilities approved in 2009-10, one at San Diego and one at Santa Barbara.

**External financing** under the Regents' authority is a significant financing tool to support capital improvement projects. The University's credit rating allows the Regents to borrow and sell bonds at rates that are more favorable than those for the State at this time. The financial markets are able to evaluate the credit-worthiness of the University using all its many revenue streams. While general revenue is pledged as security for bonds, the Educational Fee is not used to pay for construction or debt service.

Campuses must pledge the use of specific funds for repayment of the debt and must demonstrate that

sufficient funds are available from that fund source to repay the debt. In addition, interim financing – the use of short-term financing instruments – may be provided to campuses to backstop pledged gifts or gifts to be raised.

**Recent developments.** In 2009, the University used short-term financing to raise cash to bridge certain capital expenses to be repaid by the State. To facilitate completion of voter-approved building projects, UC accessed approximately \$200 million through the sale of short-term commercial paper to purchase a privately placed State General Obligation bond. This effort enabled several projects that had been stopped at eight campuses to resume. The State is obligated to redeem the bond within three years, with interest. In addition, as part of a broader initiative to maximize resources, the University utilized a deferred principal structure with its most recent bond issue (August 2009).

Because State funding does not fully meet the University's needs, many projects are funded from a combination of State and non-State sources. When the State fails to authorize bond funds, either by not authorizing new appropriations or by suspending existing appropriations, as in 2008 and 2009, campuses must make decisions about how to fund critical projects that cannot be delayed. In some cases, campuses choose to direct non-State funds to those projects that otherwise would have been funded with State resources. To the extent these funds are used to support core academic capital needs, less funding is available to support those needs which traditionally cannot be supported by the State. Therefore, predictability in the amount of State funding that will be available in the future is necessary for the campuses to develop reasonable alternate resource plans.

#### **Budget Challenges**

During the past few years, the University's capital program has been faced with an especially challenging and uncertain fiscal environment arising from:

- an unpredictable construction market;
- the absence of a 2008 General Obligation bond measure;
- a suspension of State-funded loan financing for capital construction projects throughout the State; and
- a softening in charitable giving to the University.

**Construction Market Conditions.** Prior to 2008-09, budgets for both State and non-State projects were undermined by extraordinary increases in construction market costs. These conditions created a highly volatile context for project implementation.

Beginning in late 2008, the economic downturn led to a dramatic decline in construction spending nationwide. The impact of the financial crisis on the construction industry is revealed in the remarkably low bids – as much as 20% to 40% below project estimates – that the University has received.

The major construction cost indices have shown unprecedented declines, especially those involving materials and labor as well as overhead and profit. In addition, the decline in the construction market has brought about intense competition among contractors who vie for fewer and fewer jobs.

The forecast for 2009-10 suggests that construction spending will continue to decline for a time, although at a slower rate as the economy recovers. While national indicators suggest that the economic downturn may have "bottomed out," the forecast for California is not clear. Further, it is not apparent whether market volatility will return once the State's economy does improve. Absence of a 2008 Bond Measure. In 2008, the University anticipated approval of a two-year GO bond measure of approximately \$890 million to meet the University's high-priority capital investment needs for general campus and health sciences. The measure was expected to be placed before the electorate in November 2008. However, with the State's fiscal condition continuing to deteriorate, legislation to authorize the needed bond funds was not enacted.

The 2008-09 State budget, as adopted by the Legislature and signed by the Governor, included only \$261.3 million in funding, including \$204.6 million to be financed from State Lease Revenue bonds for a limited number of projects. The 2009-10 State budget provided just under \$31 million in existing GO bond funds, primarily to support medical education and telemedicine projects. Over the two-year period, less than onethird of the funding requested to meet highpriority needs was provided to the University.

Going forward, the most significant issue impacting the University's State-funded capital program will be the uncertainty regarding a 2010 GO bond measure.

Suspension of Financing for State-Funded Projects. The State manages the cash-flow needs for capital projects through the State Pooled Money Investment Board (PMIB). State entities, including the University, make applications to the PMIB for interim loans to obtain funds to pay expenses for projects authorized by budget action. These interim loans are funded through pooled funds and short-term borrowing by the State, typically using commercial paper. As bonds are sold, the short-term borrowing is paid off. In this way, the State provides for the immediate cash needs of State agencies to pay bills and maximizes the cash balance that the State invests to generate interest on idle funds.

Because of the delayed enactment of the 2008-09 State budget and the worsening of the State's financial condition, the State was unable to access the bond market or obtain new interim financing for the second half of 2008, resulting in an all-time high of unreimbursed loan expenditures for capital improvement projects statewide. To address this problem, the PMIB took the unprecedented step in December 2008 of suspending State-funded loan disbursements for existing projects across the State. In addition, the PMIB suspended approval of new loans for appropriated projects that were not yet underway.

Appropriations for 68 UC projects totaling \$983 million initially were halted or suspended as a result of the freeze of loan disbursements. Of these, the University received an exemption from the freeze and partial funding to continue 11 projects. In April 2009, the University received funding from two General Obligation bond sales totaling \$62.8 million and \$164.8 million respectively, as well as Lease Revenue bond sales totaling \$142.6 million. These funds allowed the 11 exempted projects to continue and 15 additional projects to restart. As described previously, the University raised \$199.8 million in July 2009 through the sale of short-term commercial paper and purchased a privately placed State of California General Obligation bond that provided funding for 18 additional projects.

Funding totaling \$413 million for the remaining 24 projects, including seven to be funded from Lease Revenue bonds, remains suspended. Although the University received approximately \$5 million from a GO bond sale in October, the funding is sufficient to complete only a handful of projects which had previously been allowed to resume. The University continues to work diligently with the State administration and Legislature to ensure that funds from ongoing bond sales are provided for existing projects impacted by the PMIB freeze. It is an unfortunate irony that, while the bidding market is the most favorable in years, the State has been unable to obtain the financing to construct projects.

**Softening of Charitable Giving.** The recession has severely impacted the University by limiting the State's ability to provide sufficient funds to support its operations and fund capital investments. It has had an impact in other ways as well. Donors who otherwise would have made gifts to the University have been unable or reluctant to commit to current or future funding for both facilities and programs.

These challenges require each campus to consider carefully how to deploy resources to optimize the benefit to the academic programs and the campus as a whole. The Office of the President works with the campuses in this process, providing guidance and perspective relative to Regental and State policies and expectations. The resulting decisions reflect campus priorities and are identified in the list of projects scheduled in the multi-year plan presented for each campus.



The 10 Campuses of the University of California

# 2010-11

# **Budget for State Capital Improvements**

As Presented to the Regents for Approval

# UNIVERSITY OF CALIFORNIA 2010-11 BUDGET FOR STATE CAPITAL IMPROVEMENTS

(\$ in 000s)

CAMPUS	PROJECT	I	PREFUNDED	201	0-11 BUDGET	TOTAL BUDGET
Berkeley	Campbell Hall Seismic Replacement	PW	\$6,400	с с с	<b>\$65,205</b> \$11,000 F \$2,029 X	<b>\$71,605</b> \$15,787
Davis	Briggs Hall Safety Improvements and Building Renewal			PW	\$2,332	\$23,326
Davis	Campus Wastewater System Improvements Phase 1			PWC	\$4,707	\$4,707
Davis	Chemistry Building Renovations Phase 1			PW	\$1,200	\$10,999
Davis	Chilled Water System Improvements Phase 7A			PWC	\$5,754	\$5,754
Davis	Electrical Improvements Phase 5			PWC	\$6,832	\$6,832
Davis	Seismic Corrections, Thurman Laboratory			PWC	\$738 GF	\$738
Davis	Music Instruction and Recital Building	Р	\$893 X	wc	\$15,617	\$15,617
				E	\$517 X	\$1,410
Irvine	Arts Building	PWC	\$39,855	E	\$2,668	\$42,523
Irvine	Humanities Building	PWC	\$25,726	E	\$2,201	\$27,927
		PWCE	\$10,000 LB			\$10,000
Irvine	Primary Electrical Improvements Step 4			PWC	\$11,858	\$11,858
Irvine	Engineering Renovations	Р	\$92 X	PWC	\$12,343	<b>\$12,343</b> \$92
Los Angeles	Electrical Distribution Systems Expansion Step 6C	Р	\$281 X	wc	\$10,712	<b>\$10,712</b> \$281
Los Angeles	CHS South Tower Seismic Renovation	Р	\$5,235 X	wc W	<b>\$66,155</b> \$3,881 X	<b>\$128,953</b> \$90,949
Los Angeles	CHS - Courtyard Seismic Renovation	Р	\$400 X	wc	\$8,100	<b>\$8,100</b> \$400
Los Angeles	CHS - School of Public Health Seismic Renovation	Р	\$400 X	wc	\$7,900	<b>\$7,900</b> \$400
Los Angeles	Life Sciences Building Renovation Phase 1			Р	\$675	\$16,130
Los Angeles	School of Medicine High-Rise Fire Safety Phase 1	Р	\$358 X	wc	\$14,407	<b>\$14,407</b> \$358
Merced	Castle 1200 - Facilities Renewal			PWC	\$14,450	\$15,000
Merced	Science and Engineering Building 2	Р	\$3,700 X	wc	\$81,040	<b>\$85,119</b> \$3,700
Merced	Site Development and Infrastructure Phase 4/5			PWC	\$10,400	\$10,400
Merced	Social Sciences and Management Building	PWC	\$45,622	E	\$2,028	\$47,650
Merced	Site Development and Infrastructure Phase 6			PWC	\$2,000	\$2,000

CAMPUS	PROJECT		PREFUNDED	201	0-11 BUDGET	TOTAL BUDGET		
Riverside	Batchelor Hall Building Systems Renewal	Р	\$402	WC	\$12,643	\$13,045		
Riverside	Engineering Building Unit 3			PWC	\$67,975	<b>\$72,160</b> \$1,046		
Riverside	Environmental Health and Safety Expansion	<b>PWC</b> WC	<b>\$17,019</b> \$1,082 X	E	\$373	<b>\$17,392</b> \$1,082		
San Diego	Campus Storm Water Management Phase 2			PWC	\$6,020	\$6,020		
San Diego	Satellite Utilities Plant			PWC	\$24,950	\$24,950		
San Diego	SIO Research Support Facilities			PWC	\$6,127	\$6,127		
San Diego	Biological and Physical Sciences Building			Р	\$3,470	<b>\$81,533</b> \$1,570		
San Francisco	Medical Sciences Building Improvements Phase 3			w	\$700	\$26,248		
San Francisco	Electrical Distribution Improvements Phase 2	PW	\$1,417	с	\$14,107	\$15,524		
Santa Barbara	Davidson Library Addition and Renewal	PW	\$2,305	WC	\$67,698	\$71,078		
Santa Barbara	Infrastructure Renewal Phase 1	<b>PW</b> PWC	<b>\$741</b> \$5,950 X	с	\$10,982	<b>\$11,723</b> \$5,950		
Santa Barbara	Infrastructure Renewal Phase 2	PW	\$661 X	PW C	<b>\$1,257</b> \$4,336 X	<b>\$12,809</b> \$4,997		
Santa Barbara	Phelps Hall Renovation	PW	\$1,100	с	\$11,173	\$12,273		
Santa Cruz	Biomedical Sciences Facility	<b>PWC</b> PWCE	<b>\$75,860</b> \$12,896 X	E	\$2,148	<b>\$78,008</b> \$12,896		
Santa Cruz	Infrastructure Improvements Phase 2	PW	\$684	с	\$7,232	\$7,916		
Santa Cruz	Infrastructure Improvements Phase 3			PWC	\$16,161	\$16,161		
Santa Cruz	Coastal Biology Building			PW	\$4,075	\$47,953		
ANR	Intermountain REC Field Laboratory and Multipurpose Building			PWC E	<b>\$1,891</b> \$50 G	<b>\$1,891</b> \$50		
Universitywide	Capital Renewal			с	\$23,230	170,000		

TOTAL STATE	General Obligation Bonds	\$630,796	
	General Funds	\$738	
	Health Sciences	\$0	
	TOTAL 2010-11 STATE FUNDS	\$631,534	
TOTAL NON-	Campus Funds (X)	\$10,763	
STATE	Gift Funds (G)	\$50	
	Federal Funds (F)	\$11,000	
	TOTAL	\$21,813	

# 2009-15

# State and Non-State Capital Improvement Program

# **BERKELEY CAMPUS**

The founding campus of the University, Berkeley today stands as a national and international leader in education, research, and public service. It is a campus objective that, within this context, a Berkeley education be within reach of every eligible student.

Since the Berkeley campus is a densely developed urban campus, a dual strategy of conservation and development is being pursued in its capital investments. When feasible, academic and administrative facility needs are met through more intensive space use and selective renovation of existing facilities. When this approach is inadequate, the campus considers replacement of deficient buildings with new construction. Where feasible, seismic and code upgrades are combined with capital renewal and program improvements through multi-source funding plans that leverage State funds with gifts and other non-State funds to optimize the benefit of each project to the University's mission.



# **Capital Needs**

Capital investment at Berkeley is guided by the campus's *Strategic Academic Plan* and its *Long Range Development Plan* and is determined by a number of factors.

# **Seismic Safety**

Seismic improvements continue to be a primary determinant of the Berkeley capital program. The



Mining Circle

total area of buildings at Berkeley with seismic deficiencies was 6.5 million GSF. As of Fall 2008, seismic improvements to 61% of this space had been completed, and another 5% of this space had been vacated or had corrections in progress in the design stage. Over 2 million GSF remain to be corrected.

Although State funds have been the primary funding source for seismic improvements, the Berkeley campus has also utilized a variety of other funding sources.

Seismic retrofits of four large academic buildings were financed with a combination of FEMA, campus, and State funds. Improvements to several housing and parking structures have been financed with auxiliary revenues, and the retrofit of the student union building is being financed with a student life-safety fee. However, non-State funds for seismic improvements are both limited and episodic. Without new resources, the seismic program will continue to consume the vast majority of State capital funds allocated to

BERKELEY CAMPUS FACTS												
Established	1873											
FTE Enrollment 2008-09												
Undergraduates	26,540											
Graduate students	8,192											
Health science students	753											
Campus Land Area	1,290 acres											
Campus Buildings	10.4 million ASF											

Berkeley for at least the near term, and will constrain the campus's ability to respond to new initiatives in education and research and to direct resources to the renewal of obsolete facilities.

Completing seismic corrections while maintaining the ongoing academic program is challenging. A few seismic projects can be completed while the tenants remain in the building; however, this is the exception, not the rule, for two reasons. First, many seismic improvements designed to raise the rating of the building from "Poor" to "Good" require extensive and intrusive work to the building interior, creating very difficult if not impossible conditions for active instruction and research. Second, given the age of the Berkeley campus, most buildings requiring seismic improvements also have life-safety and other code deficiencies as well as building systems that have aged beyond their useful lives. A seismic renovation offers the campus a one-time opportunity to upgrade or replace those systems while the building is vacant. Availability of State funding for temporary surge space is a limiting factor in the pace of the seismic program and in enabling critical system upgrades to occur at the same time as seismic upgrades.

#### Academic Needs

Berkeley must not only accommodate the significant enrollment growth experienced over the past decade, but also respond to transformative trends in both instruction and research. Many complex problems require a combination of focused, individual work and work in interactive, often multidisciplinary teams. Several major projects at Berkeley – recently completed, now underway, or planned – reflect this trend. For example, the Community Health Campus will bring together several health sciences disciplines to catalyze new initiatives at the intersection of research, practice, and policy. The Chang-Lin Tien Center will bring together the various academic units focused on China, Japan, and Korea into a single integrated center of language and culture to complement the recently completed East Asian Library.



Starr and Doe Libraries

New academic initiatives and continued growth in sponsored research also create demand for more space. While some of this demand can be met through renovation of existing buildings, new buildings are also required, particularly for programs that demand high-performance infrastructure and other advanced features.



Stanley Hall

Finally, upgraded classroom technology is critically needed. In Fall 2006, the Berkeley campus began a five-year program to install modern classroom technology in all generalassignment classrooms and to improve the physical environment in the most critical rooms. As of Fall 2009, the percentage of classrooms with new technology has been increased from 25% to 75%. The stock of unimproved classrooms, however, continues to impede the instructional mission and remains a funding challenge for the campus.



Sather Gate

#### **Renewal Needs**

Existing instruction and research space and building systems have been compromised not only by age but also by decades of inadequate investment. The renewal of Berkeley's physical plant is crucial to recruit and retain exceptional individuals and to pursue new topics of research and new models of instruction.

#### Infrastructure Needs

The campus needs to complete improvements to its information network, to rehabilitate and expand its aging utilities systems, and to optimize campus access and circulation, including ensuring universal access to all facilities.

**Utility Infrastructure**. A continuing and systematic program to renew utility systems is needed to support normal operations and to provide for the future needs of research and instruction. The campus infrastructure has a desperate need of investment, due not only to the age of the campus and many of its inter- and intrabuilding systems but also to the increasing demands placed on those systems by 21<sup>st</sup> century education and research. Failures are common in power, water, steam, and sewer lines, and

increased demand has brought utility systems to the limits of their capacity. The limited amount of State and campus funding in recent years has led to serious underinvestment in the campus infrastructure. In the long term, this chronic underinvestment will constrain the campus's ability to maintain its historic level of excellence as age and obsolescence outpace the rate of investment.

**Information Infrastructure.** The construction of a new inter-building "backbone," to replace obsolete data links and provide capacity for future growth, began in 1985. To date, five of the eight information infrastructure elements have been completed. Completion of the remaining elements is necessary for all campus programs to have access to the level of network performance that modern education and research demand.

**Building Infrastructure.** Berkeley is the oldest campus of the University, and many building systems are at or beyond their functioning limits. Many instructors and researchers struggle with building infrastructure systems that, like the campus's utility systems, are compromised by age and by decades of inadequate capital investment. To the extent feasible, seismic renovations are designed to include building system upgrades. However, for older buildings not requiring seismic work, the limited amount of State funding available for capital renewal is a major issue.

### Support Needs

The breadth and quality of Berkeley's academic programs is the equal to that of any University in the world; yet, Berkeley is more than its programs. A great research university also requires a vital intellectual community, one that provides exposure to a wide range of cultures and perspectives and generates the encounters and interactions that lead to discovery.

The renovation of Moffitt Library will transform it into a place conducive to group interaction as well as individual study, with state-of-the-art spaces for team-based projects and presentations. The adaptive renovation of Hearst Gymnasium not only will entail seismic upgrades and infrastructure renewal; it will also transform this 80-year-old facility into a true center of student life.

A vital intellectual community includes facilities for recreation and student-centered programs, as well as good, reasonably priced housing to attract exceptional students and faculty and enable them to live close to campus and participate fully in campus life.

The constrained and expensive housing market near the Berkeley campus has driven both students and faculty to live farther and farther away, making it increasingly difficult to engage fully in campus life. The price of Berkeley community housing also continues to be a formidable obstacle in campus efforts to recruit and retain exceptional graduate students and faculty.

In response, the campus has increased the number of University-owned student bed spaces by 20% since the late 1990s. Two new student housing projects, to be constructed within the next decade, will provide another 890 beds. Over the past decade, the campus has replaced 920 1940s- and 1960s-vintage student family housing units at University Village with new units, and it is renovating facilities at the Clark Kerr Campus which provide 840 student beds. Renovations of Bowles and Stern Halls, with a combined 490 beds, are planned within the next decade.

The *Long Range Development Plan* includes an objective to provide up to 100 new faculty units; a 150-unit apartment project planned for construction in the next five years would more than meet this objective. The market response to this initial project will determine the scope and pace of further investment in faculty housing.

# **Environment and Sustainable Design**

Capital investment is required to preserve the magnificent legacy of historic buildings and landscaping on the central campus, as well as to create new places for the interactions that lead to new insights and discoveries. As one of the world's great research universities, Berkeley also has a special obligation to serve as a model of how strategic capital investment can minimize resource consumption and advance the state of the art in responsible, sustainable design.



Campanile Esplanade

The renewal of building infrastructure is also critical to meeting campus and University goals for the reduction of water and energy consumption and emissions of greenhouse gases; nearly 80% of those emissions are associated with campus buildings. The Berkeley campus's objective is to reduce its emissions to 1990 levels by 2014, six years earlier than required by University policy.

#### BERKELEY CAMPUS (\$ in 000s)

SUMMARY

BUDGET YEAR	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
STATE FUNDING	0	72,405	70,600	129,100	14,100	9,600
NON-STATE FUNDING	554,446	391,729	107,500	24,558	60,600	229,300
TOTAL	554,446	464,134	178,100	153,658	74,700	238,900

#### STATE FUNDED PROJECTS

		PRI/ OBJE	MAR CTIV	Y /E	BUDGET YEAR											
PROJECT NAME	ent Needs	ty Deficiencies	/Modernization	gram Initiatives										TOTAL		
	nrollme	fe Safe	enewal	ew Pro										PROJECT		
F & G - GENERAL CAMPUS	ü	5	æ	z	PREFUNDED	I	2009-10	2010-11		2011-12	2012-13	2013-14	2014-15	BODGET*		
Energy Research Facility: West Site				•	C (0.000 LD	P W C C	15,620 LB 7,180 LB 76,046 LB 5,000 G							143,846		
Energy Research Facility: East Site				•	C 30,000 LK	P W C	7,400 G 2,400 G 14,600 G							54,400		
Campbell Hall Seismic Replacement		•			P 3,200 W 3,200	_		C 65,205 C 11,000 F			F 2.758 G			87,392		
Tolman Hall Seismic Renovation		•							P W	6,800 6,400	C 120,700			133,900		
Lewis Hall Seismic Renovation		•										P 1,900	W 1,900	38,500		
Mulford Hall Seismic Renovation		•											P 1,900	52,700		
Capital Renewal			•					7,200		7,400	5,500	6,400		26,500		
Gateway Bldg: Capital Lease Seismic Surge Space	Ī	•									2,900 1,800 LB	5,800 3,500 LB	5,800 3,500 LB	41,900		
E & G - HEALTH SCIENCES	-								- r							
Community Health Campus Phase 1	•							P 5,000 G	W C C C	5,000 HSE 45,000 HSE 41,100 G 4,700 LB				100,800		

\* Total Project Budget may include proposed funding in years after 2014-15

#### NON-STATE FUNDED PROJECTS

		PRIA OBJE	MARY CTIV	/ /E				BUDGET YEAR				
PROJECT NAME	Enrollment Needs	Life Safety Deficiencies	Renewal/Modemization	New Program Initiatives	PREFUNDED	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	TOTAL PROJECT BUDGET
E & G - GENERAL CAMPUS	Г	-		-	1	,,	55 000 C			1		55.000
Momiti Library Renovation							22,000 G					55,000
Chang-Lin Tien Center	Γ		•	Γ			50,000 G					50,000
Berkeley Art Museum		•					171,000 G 20,000 LB					191,000
2223 Fulton Demolition		•								3,000 X		3,000
Community Health Campus Phase 2				•							84,100 G 4,100 LB	88,200
Old Art Museum		•									83,600 G	83,600
Capital Renewal			•			5,000 X	5,000 X	5,000 X	5,000 X	5,000 X	5,000 X	30,000
Campus Landscape Fund			•								5,000 G	5,000
Campus Projects Under \$5 Million			•			15,000 X	15,000 X	15,000 X	15,000 X	12,000 X	15,000 X	87,000
AUXILIARY & FEE SUPPORTED FACILIT	<b>FIES</b>											
Memorial Stadium Seismic Corrections & West Program	Ī	•		T !		321,000 LB						321,000
Student Facilities Seismic Corrections King Union Retrofit Greek Theater Partial Retrofit Eshleman Hall Partial Retrofit 2111 Bancroft Partial Retrofit		•				7,900 X 4,000 X 1,200 X 2,200 X						15,300
Anna Head West Student Housing	•					63,500 LB 6,400 HSR						69,900
Smyth Faculty Apartments				•			52,400 LB 5,300 HSR					57,700
Bowles Residence Hall Renovation			•					37,200 LB 4,500 HSR				41,700
Stern Residence Hall Renovation			•							35,000 LB 2,100 HSR		37,100
Clark Kerr Campus Renovation			•								25,100 LB 3,900 HSR	29,000

# BERKELEY CAMPUS 2010-11 State Capital Funding Request

# Campbell Hall Seismic Replacement Building

# C: \$65,205,000

This project will construct a new 53,138 ASF building consisting of research laboratories, instructional space, and academic and administrative office and support space for the Departments of Physics and Astronomy. This project will replace the 50-year old, seismically deficient ("Poor") Campbell Hall, achieving the dual goals of reducing seismic risk and meeting the critical need for additional high-quality physics laboratories on the campus. Total project cost is \$87,392,000.

# Capital Renewal Program \$7,200,000

The multi-year Capital Renewal Program, which will be funded from State and non-State sources, will address the campus's highest capital renewal priorities. Projects include selective renewal or replacement of the campus utility infrastructure, and selective renewal or replacement of building systems, equipment, roofs, walls, and windows. Total program cost is \$26,500,000.

# 2011-15 State Capital Program

# Community Health Campus Phase 1

Estimated cost for WC: \$50,000,000

The Community Health Campus (CHC) is a twophase project that will provide up to 300,000 GSF for health disciplines on the university-owned site of the former California Department of Health Services. To accommodate proposed enrollment growth in Public Health programs, CHC Phase 1 would provide 160,000 GSF of space to house the instruction and research programs of the School of Public Health, including office and dry lab-based research space, library, seminar and conference spaces, and student workspaces. This project will consolidate all Public Health program functions, currently dispersed in 17 locations across the campus, into one location. Estimated total project cost is \$100,800,000.

# Gateway Building (Capital Lease)

Estimated lease cost: \$14,500,000

This project will provide a general purpose office building on a university-owned site in downtown Berkeley, adjacent to the central campus. The facility will be constructed by a private-sector developer and leased back to the university under a long-term capital lease; ownership of the building will revert to the Regents at the end of the lease term. The building will provide surge space to accommodate several future seismic renovation projects. When the space is no longer required for surge purposes, it will be re-tenanted with campus research and administrative units now housed in rental space. The project also includes the renovation and reuse of the adjacent and seismically "Poor" UC Garage. The total lease cost will extend beyond this Plan and will be funded over the life of the 30-year lease. Estimated total lease cost is \$41,900,000.

# Lewis Hall Seismic Renovation

Estimated cost for PW: \$3,800,000

This project will provide seismic improvements and systems renewal for the 68,100 GSF Lewis Hall, which provides wet labs, two classrooms, and other instruction and research space for the College of Chemistry. Completed in 1948, the building has a "Poor" seismic rating and requires life safety improvements and comprehensive renewal of obsolete building systems. The project budget does not include space alterations, reconfigurations, or other program-related improvements, which will be provided as a separately budgeted project. Estimated total project cost is \$38,500,000.

# **Mulford Hall Seismic Renovation**

Estimated cost for P: \$1,900,000

This project will provide seismic improvements and systems renewal for the 93,500 GSF Mulford Hall, which provides instruction and research space, including four classrooms, for the College of Natural Sciences. Completed in 1948, the building has a seismic rating of "Poor" and requires life safety improvements and comprehensive renewal of obsolete building systems. The project budget does not include space alterations, reconfigurations, or other program-related improvements, which will be provided as a separately budgeted project. Estimated total project cost is \$52,700,000.

# **Tolman Hall Seismic Renovation** Estimated cost for PWC: \$133,900,000

This project will provide seismic improvements and systems renewal for the 247,000 GSF Tolman Hall, which houses instruction and research space, including 13 classrooms, for the Department of Psychology and the School of Education. Completed in 1962, Tolman Hall has a "Poor" seismic rating, and requires life safety improvements and comprehensive renewal of obsolete building systems. Because it is a very large building, completion of the project requires phasing to provide adequate and suitable surge space for the occupants of this building during renovation. The project budget does not include space alterations, reconfigurations, or other program-related improvements, which will be provided as a separately budgeted project.

# 2009-15 State Capital Program: Other Capital Projects

# (Helios) Energy Research Facility: West Site

Estimated cost for C: \$40,000,000

This previously funded State project will provide 64,300 ASF of new construction to house the Energy Biosciences Institute and complementary bioengineering programs devoted to biofuels research. The building will be located on the site of the former California Department of Health Sciences Building, adjacent to the cluster of existing bioscience and natural resource programs and facilities in the northwest quadrant of the Berkeley campus. Estimated total project cost is \$143,846,000.

# (Helios) Energy Research Facility: East Site Estimated cost for C: \$30,000,000

This previously funded State project will provide 21,000 ASF of new construction to house research devoted to nanoscale photovoltaic and electrochemical solar energy systems. The building will be located within the LBNL campus on a site proximate to other facilities critical to nanoscale research. Estimated total project cost is \$54,400,000.

# 2009-15 Non-State Capital Program

# Anna Head West Student Housing

Estimated project cost: \$69,900,000

This project, which will add 424 new single student beds, will be constructed on the site of an existing campus surface parking lot. It will include space for study, computing, and fitness, apartments for a resident director and resident faculty member, and offices for academic advising. When combined with the additional bed spaces to be provided in the proposed Ellsworth project, the number of single student beds will meet the 2020 LRDP objectives for entering students.

# **Berkeley Art Museum Seismic Replacement** Estimated project cost: \$191,000,000

The Berkeley Art Museum is currently housed in a 105,800 GSF building with a "Poor" seismic rating. The Pacific Film Archive cinema, formerly housed in the Museum, has been relocated temporarily to a nearby building. This project will construct a new home for both the Museum and the Film Archive on a site in downtown Berkeley, adjacent to the west entrance to campus and within a block of the downtown BART station. A separate project will undertake an adaptive-reuse renovation of the existing Art Museum building to serve other academic needs.

# **Bowles Residence Hall Renovation**

Estimated project cost: \$41,700,000

This project will completely renovate the 1927 historic Bowles Hall, providing code upgrades, comprehensive renewal of building systems, and restoration of historic facades and windows. All of the interior hollow-clay partition walls, except those in historic ground floor rooms, will be demolished and replaced with new interior walls, providing two-person residence rooms, lounge and study space on each floor, a central laundry, and an academic center. The project also includes two apartments within the building for a resident director and a visiting faculty appointment as well as a new ramped path, entrance, and elevator for universal building access.

# **Campus Landscape Fund**

Estimated project cost: \$5,000,000

The campus Landscape Master Plan and the 2020 LRDP identify 29 priority investments needed in the campus landscape – 25 place-specific locations plus the four urban edges of the campus. These are intended to serve as the framework for development of an ongoing gift fund focused on improvements in the campus landscape. The gift campaign is proposed to begin in 2014-2015, with a goal of raising \$5 million per year.

# **Chang-Lin Tien Center Phase 2**

Estimated project cost: \$50,000,000

Phase 1 of the Chang-Lin Tien Center, construction of the Starr East Asian Library, was completed in 2007. Phase 2 will provide 43,500 GSF of office, seminar, and conference space for the Department of East Asian Languages and Cultures (EALC) and the Institute for East Asian Studies (IEAS). EALC is currently housed in Dwinelle Hall, which has no capacity for further growth. IEAS is presently housed in 2223 Fulton, a seismically "Poor" facility that is scheduled for demolition.

# **Clark Kerr Campus Renovation Phase 3** Estimated project cost: \$29,000,000

As the final phase of a three-phase project initiated in 2007 to renew the residential buildings and the site utility infrastructure at the historic Clark Kerr Campus, this project will provide upgrades to fire and life safety, access, building systems (heating, plumbing, lighting, power, security, and telecommunications), finishes and furnishings to three buildings. Implementation of these upgrades involves selective demolition and careful reconstruction of the historic buildings. The Phase 1 renovation of an initial three buildings was completed in summer 2009. Phase 2, the renovation of four additional buildings, is now underway and will be completed in summer 2010.

# **Community Health Campus Phase 2**

Estimated project cost: \$88,200,000

The Community Health Campus (CHC) is a twophase project that will provide up to 300,000 GSF for health disciplines on the university-owned site of the former California Department of Health Services. CHC Phase 2 will construct up to 140,000 GSF to accommodate health sciencerelated programs in Neuroscience, Optometry, Bioengineering, and/or Psychology, to maximize synergy with each other and with the Public Health programs accommodated in CHC Phase 1.

# 2223 Fulton Demolition

### Estimated project cost: \$3,000,000

The seismically "Poor" building at 2223 Fulton is scheduled for demolition following relocation of its remaining primary tenants, the Institute for East Asian Studies and Public Health, to the proposed Chang-Lin Tien Center Phase 2 and Community Health Campus Phase 1 facilities, respectively.

# Memorial Stadium Seismic Renovation and West Program Improvements

Estimated project cost: \$321,000,000

This is the second of three projects to improve and seismically upgrade the Stadium athletic facilities. This project will renovate and seismically upgrade the 82-year old Stadium, including replacement of the west grandstand and provision of new gameday amenities, including restrooms, concessions, and concourse space. The new grandstand will be designed to provide a life-safe structure for the seating bowl and the spaces below it, while preserving and bracing the existing architecturally significant exterior wall. The first project, the Student Athlete High Performance Center, now under construction, provides a new adjacent facility serving 12 men's and women's teams, and replaces training spaces now housed within the Stadium. A future third project will consist of program improvements to the east side of the Stadium, including a lower concourse with restrooms and concessions, and improved emergency vehicle access.

#### **Moffitt Library Renovation**

Estimated project cost: \$55,000,000

This project will upgrade the obsolete building infrastructure of the 130,600 GSF Moffitt Undergraduate Library to support 21st century methods for research and analysis; provide flexible state-of-the-art spaces for team-based projects and presentations showcasing student work; and provide space that is more conducive to group interaction as well as quiet individual study.

# Old Art Museum Seismic & Program Renovation

Estimated project cost: \$83,600,000

Following relocation of the Berkeley Art Museum and Pacific Film Archive to the proposed new Berkeley Art Museum, this project will structurally improve the existing 105,800 GSF 1970 building to raise the seismic rating from "Poor" to "Good" and correct access and other code upgrades. In addition, the project will renew existing building systems and renovate space to accommodate other programs yet to be determined.

# **Other Campus Projects Under \$ 5 Million**

Estimated cumulative costs: Up to \$87,000,000

Depending on available resources, the campus expects to fund up to \$15 million per year for smaller, unanticipated capital projects, space alterations, emergency repairs, preliminary studies for future projects, and other in-year expenditures. Projects also may include improvements to campus accessibility and continued remediation of the Richmond Field Station.

# **Smyth Faculty Apartments**

Estimated project cost: \$57,700,000

Upon completion of the final phase to consolidate student family housing at University Village in Albany, the existing Smyth Fernwald student housing will be vacated and demolished, and the site will be redeveloped to provide 154 faculty apartments. Visiting scholars, post-docs, graduate students, and student families also may be eligible as tenants.

# Stern Residence Hall Renovation

Estimated project cost: \$37,100,000

The rehabilitation of Stern Hall, completed in 1942, will include comprehensive renewal of building systems and finishes. While the interior layouts will remain largely intact with only minor changes, common restrooms will be completely remodeled, and a new elevator will be installed to provide universal access to all six floors.

Student Facilities Seismic Corrections (four projects):

# 2111 Bancroft Partial Seismic Retrofit

Estimated project cost: \$2,200,000

The proposed structural improvements to 2111 Bancroft, acquired in 1974, will raise the seismic rating of the building from "Very Poor" to "Poor;" however, this upgrade will reduce the life-safety hazard to current building tenants until the building is either sold or removed and replaced. The existing structure is not planned for long-term retention, although the specific future of the property has not yet been determined.

# **Eshleman Hall Partial Seismic Retrofit**

Estimated project cost: \$1,200,000

Eshleman Hall, completed in 1965, is scheduled for long-term replacement as part of the renovation of Lower Sproul Plaza. Although this structural retrofit of Eshleman will not raise its seismic rating above "Poor," it will reduce the lifesafety hazard to building tenants until the existing building is removed and replaced.

# **Greek Theater Partial Seismic Retrofit** Estimated project cost: \$4,000,000

The historic Greek Theater has a seismic rating of "Very Poor." This project will take initial steps to improve the facility to a seismic rating of "Poor," reducing the life-safety hazard to building users until funding is available to complete the additional corrections required to achieve a "Good" rating. The project also will include coderequired fire/life safety and disability access upgrades.

# King Union Seismic Retrofit

Estimated project cost: \$7,900,000

The proposed structural improvements to King Union, completed in 1961, will upgrade its seismic rating from "Poor" to "Good" and will correct disability access and life-safety code deficiencies in those building sections that have been structurally improved.

# **DAVIS CAMPUS**

Physically the largest of the ten UC campuses with 5,300 acres, the Davis campus has 31,216 students, an annual research budget exceeding \$500 million, a comprehensive health sciences center, and 13 specialized research centers. The university offers more than 100 undergraduate majors in four colleges - Agricultural and Environmental Sciences, Biological Sciences, Engineering, and Letters and Science - and advanced degrees from five professional schools - Education, Law, Management, Medicine, and Veterinary Medicine. Graduate study and research opportunities are offered in nearly 90 programs along with a number of interdisciplinary graduate study programs. UC Davis has large populations of students and faculty engaged in laboratory-intensive science programs, a significant driver of facility and infrastructure needs in the capital program.

During the past decade, with rapid growth spurring the expansion of new facilities, the Davis campus has invested more than \$1.6 billion in capital construction. This level of investment, however, still has not kept pace with campus needs. There remains a need for additional facilities for departments that are not properly accommodated, and a substantial number of aging buildings require renovation or replacement. The campus's unusually large complement of infrastructure systems requires substantial investment to provide increased capacity, system renewal, and deferred maintenance. High-priority initiatives focused on sustainability and reducing

DAVIS CAMPUS FAC	стѕ
Established	1905
FTE Enrollment 2008-09	
Undergraduates	24,754
Graduate students	4,267
Health science students	2,195
Campus Land Area	5,993 acres
Campus Buildings	8.1 million ASF
Hospitals and Clinics	1.7 million ASF
Veterinary Hospital	211,611 ASF



Earth & Physical Sciences Building

the campus's carbon footprint will also vie for scarce capital resources.

Complicating these needs is the uncertainty of current economic conditions. State funding for the University's capital program has been substantially less than anticipated for the past two years. The campus has had to substitute scarce campus resources to address long-planned and time-critical infrastructure needs.



Because the prospects for continued State funding remain unclear in the near- to mid-term, the campus has initiated a new budget planning process, acknowledging that financial pressure on the campus's operating and capital budgets will make absorbing further budget reductions impossible without systemic change. The outcome of this planning process will need to be aligned with the updated academic plan currently being reviewed by the Davis division of the Academic Senate.

# **Capital Needs**

The campus faces many challenges in this era of increasing uncertainty. Broadly, these challenges fall into four categories:

- Continued demand for new facilities.
- Need for major building renovations.
- Need for renewal of infrastructure systems.
- Necessary investments to achieve sustainability.

# **New Facilities**

Despite the recent history of investment and the University's plan to reduce enrollments to align with funded levels, new academic facilities are still needed to accommodate growth that has already occurred. The Music Instruction and Recital Building has been deferred for two years because of reduced State funding, and Veterinary Medicine 3B has been similarly deferred for a year. In addition, health sciences programs need additional basic research space and facilities to support the new School of Nursing.

Additional non-State projects to accommodate past enrollment growth include expansion of the Memorial Union/Bookstore and the final phase of student housing which will complete the Tercero Residence Hall neighborhood program, part of a campus strategic plan to expand on-campus housing for second-year and transfer students. The campus will also break ground next summer for a new Student Community Center to consolidate various student activities and services.

#### **Building Renewal**

The 2008-2009 academic year marked the Davis campus centennial. A source of immense pride for the campus, the event also highlighted one of the campus's significant challenges. The Davis campus (excluding satellite sites in Sacramento and other outlying areas) supports more than 950 buildings, comprising nearly 10 million gross square feet with an estimated replacement value of \$5 billion. Forty percent of these buildings have been constructed within the past 25 years; the remaining 60% are older and many are in need of significant renewal and renovation to adequately serve campus needs.

Construction of new facilities in support of enrollment growth creates secondary effects when departments vacate older buildings. Re-use of older buildings raises many challenges including appropriateness of the space for different programs, deficiencies of aging building infrastructure, hazardous materials abatement, and mandatory upgrades to meet current building, seismic, and accessibility code standards. Currently, Briggs Hall and the Chemistry Building remain the highest priorities for renewal projects. The campus is continuing its analyses of several aging campus buildings (e.g., Wickson Hall, Physics, Haring Hall) to determine feasibility, cost, and priority for renewal as part of a phased renewal strategy.

The campus also is undertaking an assessment of older facilities to re-evaluate their seismic condition. This process may result in additional needs for capital investment to correct identified hazards.

Another key element of building renewal is improvement in energy efficiency and a reduction of energy cost. Every prospective building renovation will be carefully evaluated to achieve this goal to the greatest extent possible. The campus is aggressively pursuing energy efficiency projects as part of the Strategic Energy Partnership program.

#### Infrastructure Renewal

Because the Davis campus evolved within a rural setting where basic urban infrastructure was not available, the campus owns and operates virtually all infrastructure support systems. These have a cumulative estimated replacement value in excess of \$650 million. In addition to systems for steam and chilled water like those common to most other campuses, the Davis campus also operates its own water supply and distribution system, providing water for domestic use and for irrigation of landscaping and agricultural research lands. The campus also operates its own landfill, wastewater treatment plant, and electrical substation and distribution system, independent of the neighboring community. Although the existence of these systems frees the campus from many of the town-gown issues facing other UC campuses, they create additional demands for campus capital and operating resources. Lack of adequate funding has created a backlog of capital renewal and deferred-maintenance costs in excess of \$160 million, or nearly 25% of the estimated \$650 million current replacement value.



Installation of High-Efficiency Chiller

A substantial portion of the campus capital plan is aimed at renewing and upgrading the campus infrastructure systems. The plan includes major projects to improve campus chilled water and steam distribution, improve domestic water quality and reliability, upgrade the wastewater collection and disposal system, and improve electrical system reliability. The interruption of State funding has resulted in postponement of plans for new construction and a redirection of campus funds to critical infrastructure needs.

# Sustainability

Consistent with State law and Regents' policy, the campus attempts to address sustainability on many levels. Because consumption of electricity and natural gas is a major factor in the campus's



Dairy and Stadium

carbon footprint, new facilities will be designed and constructed with a particular focus on energy efficiency and use of the best available costeffective technologies. Similarly, renovation of existing facilities will focus on strategies to reduce energy consumption. The campus also will seek to use energy from renewable sources to reduce environmental impacts.

The campus is in the process of preparing its *Climate Action Plan* to identify the various initiatives needed to comply with State law and Regents' policy. The plan should be complete by the end of 2009. The *Climate Action Plan* will likely require capital expenditures, although the plan currently includes only "place-holder" projects for carbon reduction and green-energy procurement until detailed projects and funding strategies can be developed.

#### DAVIS CAMPUS (\$ in 000s)

SUMMARY

BUDGET YEAR	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
STATE FUNDING	500	42,151	45,939	67,046	39,411	63,086
NON-STATE FUNDING	296,535	300,457	94,250	49,000	40,000	172,750
TOTAL	297,035	342,608	140,189	116,046	79,411	235,836

#### STATE FUNDED PROJECTS

		PRI/ OBJE	MAR	Y /E				BUDGE	T YEAR							
PROJECT NAME	Enroll ment Needs	Life Safety Deficiencies	Renewal/Modernization	New Program Initiatives	PREFUNDED	2009-10	2010-11	2011	1-12		2012-13		2013-14		2014-15	TOTAL PROJECT BUDGET
E & G - GENERAL CAMPUS	_					1				1				1		1
Music Instruction and Recital Building			•		P 893 X		W 959 C 14,658 E 517 X									17,027
Electrical Improvements Phase 5			•				P 281 W 316									6,832
Campus Wastewater System Improvement Phase 1			•				P 223 W 212 C 4,272									4,707
Chilled Water System Improvements Phase 7A			•				P 276 W 262 C 5,216									5,754
Seismic Corrections, Thurman Laboratory		•					P 47 GF W 51 GF C 640 GE									738
Briggs Hall Safety Improvements & Building Renewal Phase 1		•					P 1,166 W 1,166	C 20	),994							23,326
Chemistry Building Renovations Phase 1			•		-		P 650 W 550	С 9	9,799							10,999
Capital Renewal			•				4,971	4	<b>i</b> ,971		4,971		4,971		4,971	24,855
Solano Water Treatment Plant			•		-			P W C 7	400 400 7,200							8,000
Infrastructure Renewal Phase 1			•		-			<u>р</u>	925	W C	925 18,500					20,350
Building Renewal Phase 1			•					P 1	1,250	w c	1,250 22,500					25,000
Chemistry Building Renovations Phases 2/3/4			•							P W	475 500 9.025	P W	475 500 9.025	P W	375 425 7.650	28,450
Chilled Water System Improvements Phase 7A TES			•		-					P W C	375 375 375 7,500		5,625		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	8,250
Building Renewal Phase 2			•							P	650	W C	650 13,500			14,800
Briggs Hall Safety Improvements & Building Renewal Phase 2		•			-							P W C	365 365 6 560			7,290
Building Priority 1			•									P	3,000	W C	3,000 46,665	52,665
E & G - HEALTH SCIENCES		-		-	1							-				
Veterinary Medicine 3B			•		P 3,100 W 4,751 C 64,737 LRB C 19,643 G		E 1,540 G									93,771
Telemedicine Facilities Phase 2				•		E 500 PT										500

#### NON-STATE FUNDED PROJECTS

		PRIA OBJE	MAR) CTIV	( 'E				BUDGET YEAR				
PROJECT NAME	ollment Needs	e Safety Deficiencies	newal/Modernization	w Program Initiatives								TOTAL PROJECT
	Enr	Life	Rer	Ne	PREFUNDED	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	BUDGET
E & G - GENERAL CAMPUS						-						
Center for Neuroscience Renewal			•			5,000 X						5,000
Physics Building Renovation Project (NIST Grant Submission through ARRA), Davis			•			15,000 F 3,200 X						18,200
Chemical Biology Core Facility (G20 Grant Submission through ARRA), Davis				•		7,000 F						7,000
Campus Projects \$750K to \$5 M			•			14,000 X	14,000 X	14,000 X	14,000 X	14,000 X	14,000 X	84,000
Art Museum		T	•								15,000 LB 15,000 G	30,000
E & G - HEALTH SCIENCES	<u> </u>	_		L							1	
Health Sciences Education Expansion		Γ	Γ	•		5,600 TBD	8,400 TBD 56,000 G					70,000
Center for Chronic Disease Research Project (C06 Grant Submission through ARRA), Sacramento			•			1,450 F	13,050 F					14,500
UC Davis Institute for Regenerative Cures Phase 3			•			14,800 F						14,800
Respiratory Disease Center (C06 Grant Submission through ARRA), Davis			•			15,000 F						15,000
Collaborative Neuroscience Imaging Center (C06 Grant Submission through ARRA). Davis				•		15,000 F 720 X						15,720
Vivarium Renovation & Improvement Project (G20 Grant Submission through ARRA), Sacramento			•			10,000 F						10,000
UC Davis Institute for Regenerative Cures Phase 4				•			9,400 TBD					9,400
Research IV			•				67,000 TBD					67,000
Chronic Disease Translational Research Institute (aka Governor's Hall Dry Lab)				•			10,000 TBD					10,000
MIND Prevention and Treatment Research Building				•			20,000 TBD					20,000
#### NON-STATE FUNDED PROJECTS Continued

		PRIN OBJE	IMARY BUDGET YEAR									
PROJECT NAME	Enrollment Needs	Life Safety Deficiencies	Renewal/Modemization	New Program Initiatives	PREFUNDED	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	TOTAL PROJECT BUDGET
AUXILIARY AND FEE SUPPORTED FAC	ілт	IES										
MU/Bookstore Expansion			•			13,000 N 17,000 LB						30,000
Silo Renovation			•			3,000 N 6,000 LB						9,000
Segundo Life Safety Improvements		•				13,000 HSR						13,000
Student Affairs-Division Wide System Renewal			•			675 N 1,325 UR	675 N 1,325 UR	675 N 1,325 UR	675 N 1,325 UR	675 N 1,325 UR	675 N 1,325 UR	12,000
Student Housing Projects \$750K to \$5M			•			3,000 N	3,000 N	3,000 N	3,000 N	3,000 N	3,000 N	18,000
Castilian Hall Privatized Redevelopment Project			•				2,000	18,000				20,000
Tercero South Student Housing Phase III	•						7,800 HSR 30,200 LB					38,000
Student Affairs Recreation, MU, Unitrans Projects \$750K to \$5M			•			1,500 LB 1,500 N	2,000 F 300 LB 300 N					5,600
Rowing Facility			•					1,000 N 2,000 G 2,000 LB				5,000
Family & Graduate Housing Redevelopment			•						3,750 HSR	3,750 HSR	55,200 LB 12,300 HSR	75,000
Intercollegiate Athletics Projects \$750K to \$5M				•					P 4,000 G			4,000
Aggie Stadium Phase II			•								39,000 G	39,000
MEDICAL CENTER												
Parking Structure III				•	2,000 N	13,515 N 31,000 LB						46,515
North Addition			•			P 60,000 HR						60,000
2nd Floor Surgery Remodel			•			8,000 HR						8,000
Campus Approved Projects \$750K to \$5M			•			17,250 HR	22,250 HR	22,250 HR	22,250 HR	17,250 HR	17,250 HR	118,500
Emergency Power Upgrade Phase 2			•				10,000 HR					10,000
Department of Justice Property Acquisition				•			16,700 HR					16,700
Marion Anderson School Property Acquisition				•			4,000 HR					4,000
North / South Wing Demolition & Façade Reconstruction		•						30,000 HR				30,000

## DAVIS CAMPUS 2010-11 State Capital Funding Request

## Briggs Hall Safety Improvements & Building Renewal Phase 1 PW: \$2,332,000

This project will be the first phase of a multi-phase project that will renovate the seven-tower Briggs Hall to modernize the building's fire and lifesafety, electrical, mechanical, and roofing systems. This first project phase will focus on five of the seven towers that comprise the building and will replace the fire alarm system, upgrade exit corridors and elevators, replace electrical transformers and primary electrical distribution equipment, install an emergency power system, and replace primary air handling mechanical equipment and controls. The project will be implemented in an occupied research facility and is structured to minimize the impact on programs. Total project cost is \$23,326,000.

## Campus Wastewater System Improvements Phase 1 PWC: \$4,707,000

This project will increase the reliability and capacity of the campus wastewater system. The project will renew or replace two 38-year-old sanitary sewer lift stations and one undersized sanitary sewer lift station that have mechanical, electrical, and control systems which have insufficient capacity and have reached the end of their useful lives. Inefficient pipe routing from the lift stations to the Campus Waste Treatment Plant will be corrected. A third solids storage basin, an emergency overflow pipe, and a septage receiving station will be constructed. An electrical switchboard, motor-control center and automatic transfer switch also will be replaced as part of this project. Total project cost is \$4,707,000.

## Capital Renewal Program \$4,971,000

The multi-year Capital Renewal Program will correct fire and life-safety issues, replace mechanical and HVAC control systems, repair roads and paths, and replace roofs. The facility projects will be implemented primarily in central campus buildings with renewal needs, including Physics, Geology, Wickson, Enology, Bainer, Food Science and Technology, Veihmeyer, Chemistry Annex, Hutchison Hall, Walker Hall, Academic Surge, Cowell, Hunt Hall 2nd Floor, and Everson and Young Halls, as well as animal facilities throughout the campus. Total program cost is \$24,855,000.

## Chemistry Building Renovations Phase 1 PW: \$1,200,000

This project is the first of four phases to modernize building systems, correct code compliance deficiencies, improve energy efficiency, and renew finishes for the 42-year old Chemistry Building. The systems for the building are at the end of their useful lives and need to be renewed to support contemporary chemistry teaching and research. Phase 1 will design the fire protection, mechanical, and electrical systems and the seismic corrections for the entire building; implement seismic corrections in the majority of the building; and renovate the third floor for Synthetic Chemistry. The project will include improvements to the elevator controller, stairs railings, and a new firesprinkler main serve to the building. The project will be implemented in an occupied research facility and will be structured to minimize the impact on programs. Total project cost is \$10,999,000.

## Chilled Water System Improvements Phase 7A PWC: \$5,754,000

This project will add a 2,500-ton high-efficiency electric chiller and cooling tower at the Central Heating and Cooling Plant. It will complete the chilled water production infrastructure at the plant and provide the associated equipment and improvements needed to support the new chiller, including the cooling tower and the integration of the new chiller into the Central Heating and Cooling Plant and Thermal Energy Storage Chilled Water Plan control system. This project is part of a phased strategy to increase reliability and efficiency in the chilled water system and to meet the capacity needs of newly constructed facilities and building projects for which State funding has been approved. Total project cost is \$5,754,000.

## Electrical Improvements Phase 5 PWC: \$6,832,000

This project will increase the reliability of the distribution system by unloading and rebalancing over-loaded circuits in the central campus. The project will extend and upsize duct banks and conductors, add sectionalizing switches and fault interrupters, and modify the capacitor bank at Transformer E. Further, the project will add new control integration at the Health Sciences District Switch Station. The overhead electric conductor on the west campus will be enlarged in an undersized section. This project is part of a phased strategy to provide adequate electrical capacity, improve system distribution infrastructure, and increase the reliability and efficiency of the campus electrical system. Total project cost is \$6,832,000.

# Music Instruction and Recital Building WC: \$15,617,000

This project will construct a 10,100 ASF facility adjacent to the current music building. The facility will include a 325-seat recital hall designed to accommodate large music lecture classes, as well as small- to medium-sized instrumental and choral performances. The project will provide instructional studios, practice rooms, faculty offices, and administrative offices and will consolidate the music program and address the program's need for space with appropriate acoustical qualities. Total project cost is \$17,027,000.

## 2011-15 State Capital Program

## Building Priority 1

Estimated cost for PWC: \$52,665,000

This project represents the next significant new building investment in the central campus. A 3- to 4-story building of 60,000 to 70,000 GSF, Building Priority 1 will meet high-priority needs to be identified through the campus's new budget planning process undertaken in recognition of increased pressures on the capital budgets. The scope, cost, funding sources, and timing of this project are estimated, pending the completion of more detailed analyses.

**Building Renewal Phase 1** Estimated cost for PWC: \$25,000,000 **Building Renewal Phase 2** Estimated cost for PWC: \$14,800,000

These projects will comprise the first and second phases of a multi-phase effort to renew and renovate older central campus buildings. Over the last decade, as the campus experienced significant growth, core campus programs have expanded into new buildings, leaving older buildings in need of significant renewal. These buildings include Physics Geology, Haring, Wickson, Enology, Bainer, Food Science & Technology, Veihmeyer, Chemistry Annex, Hutchison, Walker, Academic Surge, Cowell, Hunt 2nd Floor, Everson and Young Halls, as well as animal facilities throughout the campus. The campus is evaluating the most effective reuse strategies for these buildings and will determine the highest priorities for renewal investment.

## Briggs Hall Safety Improvements & Building Renewal Phase 2

Estimated cost for PWC: \$7,290,000

This project will comprise the second phase of a multi-phase project to modernize Briggs Hall's fire and life-safety, electrical, mechanical, and roofing systems. Addressing space in two towers of the seven-tower building, Phase 2 will replace the fire alarm system, upgrade exit corridors and elevators, replace electrical transformers and primary electrical distribution equipment, install an emergency power system, and replace primary air handling mechanical equipment and controls. Implemented in an occupied research facility, the project will be structured to minimize the impact on operations and programs.

## Chemistry Building Renovations Phases 2/3/4

Estimated cost for PWC: \$28,450,000

The Chemistry Building Renovations Phases 2/3/4 project will continue the renewal of the 42-yearold facility, modernizing its building systems, including fire and life-safety, electrical and mechanical; correcting building code compliance deficiencies; improving energy efficiency; and upgrading finishes. Phases 2/3/4 will renovate selected laboratories, as well as replace the fire alarm system, provide fire sprinklers, and replace primary air handling mechanical equipment and control. Implemented in an occupied research facility, the project will be structured to minimize the impact on operations and programs.

## **Chilled Water System Improvements 7A Thermal Energy Storage (TES)** Estimated cost for PWC: \$8,250,000

The Chilled Water System Improvements Phase 7A TES project will construct a second 40,000 tonhour thermal energy storage tank at the TES chilled water facility. The project will include pump and piping modifications to efficiently integrate TES chilled water capacity into the chilled water loop and accommodate TES tank charging from the loop. It also will expand chilled water system capacity to serve existing enrollment and program growth and increase the efficiency of the system.

#### **Infrastructure Renewal Phase 1** Estimated cost for PWC: \$20,350,000

This project will address the highest priority campus needs for infrastructure renewal. The campus currently has multiple infrastructure system improvements under study, including replacing steam lines, renewing electrical distribution elements, replacing domestic and utility water wells, correcting deficiencies in the campus waste water systems, and repairing and replacing roads and paths.

### **Solano Water Treatment Plant** Estimated cost of PWC: \$8,000,000

This project will construct a water treatment plant on the west campus to meet campus domestic water needs for high quality water and to help mitigate issues with current wastewater discharge quality. The current domestic water supply comes exclusively from deep aquifer wells, resulting in poor water quality. In addition, because it is high in dissolved solids, the campus is hindered in its ability to satisfy discharge requirements from the Waste Treatment Plant.

### Veterinary Medicine 3B

Estimated cost for E: \$1,540,000

This funding will provide equipment for Veterinary Medicine 3B, a new 76,000 ASF laboratory facility comprised of biomedical research laboratories, laboratory support, and office space for the School of Veterinary Medicine. The project will replace existing obsolete research laboratories, support, and office space in Haring Hall and the Surge 3 Building that can no longer support modern veterinary biomedical research. Estimated total project cost is \$93,771,000.

## 2009-15 Non-State Capital Program

#### **Aggie Stadium Phase II**

Estimated project cost: \$39,000,000

The project will construct a facility at the north end of the stadium to house meeting rooms, storage, and athletic training and weight rooms. The project will also expand stadium seating by 20,000 seats and provide space for the Intercollegiate Athletics department.

#### Art Museum

Estimated project cost: \$30,000,000

This museum project will create a 30,000 ASF built environment to explore the nature of the visual arts, showcase the University's artistic legacy, expand collections, reflect the diversity of the region, and support the University's mission to teach, conduct research, and serve the public. The museum will be located in the South Entry District near other campus centers, including the Robert Mondavi Center for the Performing Arts, the Academic Conference Center, the Buehler Alumni and Visitor Center, the Robert Mondavi Institute for Wine and Food Science, and the Hyatt Place at UC Davis Hotel.

## Campus-Approved Projects \$750,000 to \$5 Million

Estimated cumulative project costs: \$84,000,000

These include major capital projects, each budgeted at a cost between \$750,000 and \$5,000,000, and typically include smaller renovations, new construction, equipment installation, infrastructure and other projects. Examples of previously funded projects include improvements to Advanced Transportation Infrastructure Research Center Phase 2, Foundation Plant Services Addition, Hopkins District Parking Lot, California Corridor Improvements, IET-CR Modular Relocation, Surge III Rooms 1310 & 1350 Renovations, North Fork Cattle Relocations, Building J1 Renovations, Tercero Dining Commons Parking & Central Waste Disposal, Bainer Hall Bioenergy Research Laboratory, Tupper Hall 4th Floor Laboratory Remodel, and Hotel Site Preparation and Utilities Project. The campus estimates up to \$14,000,000 in projects will be funded per year.

### Center for Chronic Disease Research

Estimated project cost: \$14,500,000

This grant-funded project will build out approximately 18,800 ASF of existing shelled space in the Stockton Boulevard Research Center (SBRC), located on the UC Davis Medical Center Sacramento Campus. When complete, it will consolidate the space for four chronic disease programs investigating cardiovascular and peripheral vascular disease, chronic lung disease, metabolic disease, and neurodegenerative and neurodevelopmental disease. The project will include laboratory and laboratory support space as well as office, office support and conference space.

#### **Center for Neuroscience Renewal**

Estimated project cost: \$5,000,000

This project will increase capacity and expand distribution of electrical systems to laboratories in the Center for Neuroscience and will renew building systems in approximately 30,580 ASF of the facility.

#### **Chemical Biology Core Facility**

Estimated project cost: \$7,000,000

This grant-funded project will renovate two laboratories in the Chemistry Building (2nd Floor) to create a state-of-the-art core facility to chemically synthesize, assay for biological activity, and optimize small organic molecules as probes of biological pathways. The upgraded laboratories will facilitate efforts to accelerate development of the next generation of antibiotics, anti-cancer drugs and regulators of stem cell differentiation by co-locating two separate facilities (chemical synthesis and bio-analysis/screening labs, including tissue culture and animal imaging). The project will also include the replacement of air handling and exhaust systems as well as upgrades to restrooms for ADA compliance.

## **Chronic Disease Translational Research Institute (aka Governor's Hall Dry Lab)** Estimated project cost: \$10,000,000

This project will renovate approximately 21,400 GSF to provide office and support space to facilitate translational research within the UC Davis School of Medicine and promote collaboration with Foods for Health and Bioengineering programs. This project will support continued growth in the School of Medicine's extramural research, which has increased 267 percent in the last eight years and which currently supports over 500 research studies.

## Collaborative Neuroscience Imaging Center (C06 Grant Submission through ARRA)

Estimated project cost: \$15,720,000

This grant-funded project will construct a Collaborative Neuroscience Imaging Center (CNIC) on land owned by the University in the South Davis Research Park. The proposed building will include approximately 21,545 GSF of office, laboratory and building support space for the College of Biological Sciences.

## **Department of Justice Property Acquisition** Estimated project cost: \$16,700,000

This project will acquire approximately 26 acres currently owned by the State of California, located adjacent to the UC Davis Sacramento Campus, and will provide new space to support the Sacramento Campus's expansion needs, including a potential future School of Public Health. Acquisition of the property is contingent upon the State's long-range relocation plan for the Department of Justice.

## **Emergency Power Upgrade Phase 2**

Estimated project cost: \$10,000,000

This project will increase emergency power capacity through the addition of two selfcontained 3-megawatt emergency generators that will be located in the central plant yard. The project will include a buss duct from the generators to the second floor electrical room in the central plant, and modifications to the emergency buss duct in the electrical room, which are required to handle the full future capacity of 12 megawatts produced by all emergency generators. An 80,000 gallon above-ground diesel fuel tank will also be installed. This project is necessary to provide adequate emergency power to all medical and research buildings on the campus as required by code.

## Family and Graduate Student Housing

Estimated project cost: \$75,000,000

This project will involve redevelopment of the 40year-old Orchard Park apartment community, which currently has 200 one- and two-bedroom units. The project will include the demolition of the existing structures and construction of 276 new apartments for family/graduate housing on the site. The campus will conduct a master planning effort for the development of this property, as well as for the 276-unit Solano Park community.

## Health Sciences Education Expansion

Estimated project cost: \$70,000,000

This project will construct a new building on the Sacramento Campus to house instructional, administration and support services for the students, faculty, and staff in the Betty Irene Moore School of Nursing. The approximately 100,000 GSF building will provide state-of-the-art facilities designed to foster interdisciplinary and inter-professional education with other health sciences education programs, and to create an environment that serves as a magnet for students, faculty, staff and other health care professionals. The School was launched through a \$100 million commitment from the Gordon and Betty Moore Foundation.

### **Intercollegiate Athletics Projects**

Estimated cumulative project costs: \$4,000,000

This funding will support Intercollegiate Athletics' major capital projects reflecting the objectives of donor development programs.

## Marion Anderson School Property Acquisition

Estimated project cost: \$4,000,000

This project will involve the acquisition of approximately 6 acres currently owned by the City of Sacramento School District and contiguous with the Sacramento Campus. The land will be used for expansion of either clinical or administrative programs. The acquisition of this property is contingent upon the School District's relocation of an existing program.

### **MU/Bookstore Expansion**

Estimated project cost: \$30,000,000

The Memorial Union/Bookstore Expansion project will correct building code and accessibility deficiencies and improve building system efficiency. The project will include expansion of the Bookstore, addition of flexible program space, enhanced connection to the MU, increased efficiencies, and an expanded retail venue. It will reinforce the existing facility as a primary destination for the UC Davis campus, fostering opportunities for community development, cultivation of friendship, and enhancement of educational experiences.

# MIND Prevention and Treatment Research Building

Estimated project cost: \$20,000,000

This project, the third step of the Medical Investigation of Neurodevelopmental Disorders (MIND) Institute, will construct a new facility of approximately 33,000 GSF to provide office space for faculty, and shared modular work stations for post-docs, students and staff, testing/observation rooms, conference rooms, and classrooms. The project will also include space for Evoked Response Potential, an EEG and electrophysiology laboratory, technician space, a phlebotomy station, a skin biopsy room, computer and assistive technology training rooms, and a studio for video and graphics editing. The project provides additional space to meet the expanding population of patients who seek special treatment from the MIND Institute.

### North Addition (Medical Center)

Estimated project cost: \$60,000,000

The North Addition project will provide 80,000 GSF of space to relocate a number of office functions from the seismically deficient North/South Wings of the existing Medical Center and the Housestaff Building, following demolition of the North/South Wings. The project also will provide space expansion for other critical departments such as Physical Medicine and Rehabilitation and Acute Rehabilitation. The facility will be built on the footprint of the former Trauma Nursing Unit and Children's Surgery Center and will connect to the Main Hospital at the first floor.

## North/South Wing Demolition and Façade Reconstruction

Estimated project cost: \$30,000,000

To comply with the provisions of SB 1953, this project will demolish approximately 265,000 GSF of seismically deficient space in the North/South Wings when the Surgery and Emergency Services Pavilion project is completed. A new exterior wall and facade, lobby and elevators will be constructed on the west face of the East Wing where the North/South Wing was connected, and a landscaped area will be constructed between the new facade and the existing parking structure.

## Other Medical Center Projects of \$750,000 through \$5 million

Estimated cumulative project costs: \$118,500,000

These major Medical Center capital projects of less than \$5 million each will include a wide range of clinic, hospital, and office facility renovations. They also will include significant investments in infrastructure, including projects that foster improved energy efficiency. For the three year period from FY 2010 to 2013, the annual funding will increase from \$17.5 million to \$22.5 million to include renovation of the East Wing and other portions of the main hospital complex.

#### **Parking Structure III**

Estimated project cost: \$46,515,000

The project will construct 1,215 parking spaces in a seven-level structure to be located on the Sacramento Campus at the northeast corner of Stockton Boulevard and X Street. It will be built within the existing footprint of Parking Lot 2, located near the entrance to the hospital, providing additional needed patient parking in close proximity to the main hospital complex.

## **Physics Building Renovation Project (NIST Grant Submission through ARRA)** Estimated project cost: \$18,200,000

This project will renew approximately half of the 127,072 GSF Physics Geology Building, modernizing existing research laboratory space for the Department of Physics. Following relocation of the Department of Geology to the newly constructed Earth and Physical Sciences Building (formerly known as the Physical Sciences Expansion), this project will: 1) renovate and modernize the laboratory and lab support space, 2) modernize the mechanical, fire and life-safety systems, 3) correct building code and accessibility deficiencies, and 4) implement energy efficiency strategies.

#### **Research IV**

Estimated project cost: \$67,000,000

This project will construct a 75,000 GSF wet-bench research laboratory for the Medical Center, providing space to consolidate cancer research programs and to meet projected program growth.

#### **Respiratory Disease Center**

Estimated project cost: \$15,000,000

This project will construct approximately 14,000 ASF of office and office support space, laboratory and laboratory support space, inhalation exposure facilities, and a pulmonary testing laboratory on University-owned land, immediately north of the existing Animal Wing #2 at the California National Primate Research Center on the UC Davis campus. The new space will permit consolidation of programs within the Respiratory Diseases Unit, focusing on childhood health and disease research with an emphasis on respiratory diseases, and will provide a state-of-the-art inhalation exposure facility with a complete pulmonary function laboratory.

#### **Rowing Facility**

Estimated project cost: \$5,000,000

The project will construct a new rowing facility, to be located in Sacramento, to serve the ICA women's rowing team and the Club men's rowing team. The new facility will replace the current leased facility and will house a local rower's association.

## Segundo Life Safety Improvements Project

Estimated project cost: \$13,000,000

This project will renovate Malcolm, Ryerson, Bixby and Gilmore high-rise residence halls, which currently house 800 first-year students. It will provide seismic upgrade, roof replacement and fire sprinkler installation for all four buildings, and will include upgrades such as carpet installation, closet work and replacement of various finishes.

#### **Silo Renovation**

Estimated project cost: \$9,000,000

This project will expand food service operations, increase efficiency, and provide expanded seating capacity in the existing Silo Building. In addition, the project will correct building code and accessibility deficiencies and improve building system efficiencies. The Silo Union Expansion project will transform the existing facility into a major food service destination location for the UC Davis campus.

## Student Affairs Division-Wide System Renewal

Estimated cumulative project costs: \$12,000,000

These major capital improvement projects will address building system renewal needs in existing student services facilities. These projects will be completed as funds are available. The anticipated annual project funding is approximately \$2,000,000 for each of the six years.

## Student Affairs, Recreation, MU, Unitrans: Projects Under \$5 Million

Estimated cumulative project costs: \$5,600,000

These renewal and expansion projects will address Student Affairs, Recreation, MU, and Unitrans major capital improvement needs.

## Student Housing Projects \$750, 000 to \$5 Million

Estimated cumulative project costs: \$18,000,000

Anticipated projects include a wide range of facility and infrastructure upgrades, as well as space renovations for student housing facilities, including significant investments in projects that foster improved energy efficiency. The anticipated annual project funding is approximately \$3,000,000.

### **Tercero South Student Housing Phase III** Estimated project cost: \$38,000,000

This project, the final phase of a three-phase master plan to increase on-campus housing options at UC Davis, will construct a new 100,000 GSF residence hall complex to accommodate approximately 400 first-year students and eight resident advisors. The complex will be comprised of two four-story wood-framed buildings to be built on the site once the current building is demolished.

## UC Davis Institute for Regenerative Cures Phase 3

Estimated project cost: \$14,800,000

This project will build out approximately 29,000 GSF of space in the UC Davis Institute for

Regenerative Cures building, providing space for shared open research laboratories; individual laboratory support rooms; and academic, postdoctoral and administrative offices. This project, with Phase 4, will complete the build-out of the structure to support the stem cell program.

### UC Davis Institute for Regenerative Cures Phase 4

Estimated project cost: \$9,400,000

This project will build out approximately 12,000 GSF of space in the UC Davis Institute for Regenerative Cures building, providing space for shared open research laboratories; individual laboratory support rooms; and academic, postdoctoral and administrative offices. This project, with Phase 3, will complete the build-out of the structure to support the stem cell program.

## Vivarium Renovation & Improvement Project (g20 Grant Submission through ARRA), Sacramento Campus

Estimated project cost: \$10,000,000

This grant-funded project will renovate 5,495 GSF of existing vivarium space in the Research III Building on the Sacramento Campus. The project will also expand existing cage washing capacity to support all of the current Sacramento Campus animal facilities. The project will re-purpose existing open storage space for animal holding, procedure, and CLAS storage/supply to accommodate program growth. In addition to funding design and construction, the project will include equipment such as a tunnel washer, autoclave, rack washer, rodent housing systems, and biological safety cabinets.

#### 2nd Floor Surgery Remodel

Estimated project cost: \$8,000,000

Following relocation of surgical services to the new Surgery and Emergency Services Pavilion building in 2010, this project will remodel approximately 36,000 GSF in the 2nd floor existing surgery suites of the Main Hospital to accommodate an Ambulatory Outpatient Surgery Center. The remodeled Center will have nine operating suites, as well as recovery, support, storage, and administrative space. Independent check-in, registration and waiting areas will also be included as part of the project. This renovation project will accommodate surgical growth and provide adequate space for outpatient procedures.

## 2009-15 Non-State Capital Program: Other Anticipated Projects

#### **Carbon Reduction Phase 1**

Total project cost: TBD

The Carbon Reduction Phase 1 project will provide solutions to help UC Davis reach carbon reduction goals consistent with UC policy. By 2014, the campus's carbon footprint should be reduced to 2000 levels, and by 2020 the carbon footprint should be reduced to 1990 levels. The scope, cost, funding sources, and timing of this project are yet to be determined, pending the completion of more detailed analyses.

### Castilian Hall Privatized Redevelopment Project

Estimated project cost: \$20,000,000

The 40-year-old Castilian Hall, in need of seismic renovation, ADA upgrades and fire sprinkler installation, will be redeveloped and administered through a third party partnership. The building currently has 500 beds and will be taken off-line after the 2010-11 academic year. The bed spaces will be replaced consistent with the campus's strategic plan for student housing.

### **Green Energy Project Phase 1** Total project cost: TBD

The Green Energy Project will provide electrical capacity for the campus using alternative technologies other than carbon-based models, consistent with UC policy goals to reduce systemwide dependency on non-renewable resources. Projects under consideration include solar photovoltaic and biogas digester technologies.

#### **IRVINE CAMPUS**

Since opening its doors in 1965, UC Irvine has grown into an internationally recognized research university, consistently ranking among the nation's best public universities and among the top 50 U.S. universities. The campus's status as the youngest institution to be elected to the Association of American Universities (62 of the most distinguished research institutions), is an indicator of its stature in the academic community and of its rapid development.

Growth has been a defining characteristic of the Irvine campus for much of its history. In the last decade, total enrollment has increased by 70% to 29,197 student FTE in 2008-09. In keeping with the University's decision to align enrollments to match funded levels in the face of current budgetary uncertainties, budgeted enrollment at UCI will be scaled back to 26,050 students over the next several years. The campus's long-term approach, however, is to work toward its goal of enrolling 32,000 students, as set forth in the 2006 Strategic Plan. Should even further enrollment growth be warranted, UCI's Long Range Development Plan, last updated in 2007, provides a framework for accommodating an enrollment of up to 37,000 students.

Over the last decade, because of enrollment growth, capital investment priorities have of necessity been concentrated on new construction; since 2000, new instruction and research buildings have been (or are being) constructed to provide space for nearly every academic unit.

IRVINE CAMPUS FACT	ſS
Established	1965
FTE Enrollment 2008-09	
Undergraduates	24,377
Graduate students	3,426
Health science students	1,394
Campus Land Area	1,543 acres
Campus Buildings	6.1 million ASF
Hospitals and Clinics	670,955 ASF



Humanities Building

In addition, 4,633 new housing beds have been provided during this period, with 1,700 additional beds scheduled for completion in Fall 2010. It is anticipated that these new beds will meet current housing demand. While some space needs remain, with the curb on enrollment growth, the campus will focus more resources on other critical capital needs, including the expansion and improvement of campus infrastructure systems to accommodate the current campus population. In addition, many of the building systems in the campus's older facilities are reaching the end of their useful lives and require renewal or replacement.

#### **Capital Needs**

UC Irvine's capital needs include the following:

#### New Space

Although the major emphasis over the next several years will be on infrastructure improvements and facility renewal, some new construction will be needed. For instance, the Paul Merage School of Business has not been assigned any new permanent space in a decade and has longstanding space shortages that are exacerbated by the need to accommodate a popular new undergraduate major. When funding to expand health sciences enrollments is provided, space for new programs such as Nursing Sciences and Public Health will be needed.



Natural Sciences Buildings 1 & 2

Many of the buildings that have been completed in the last decade, particularly in the Health Sciences sector of the campus, have included an increment of shell space to help meet current and projected program requirements. The campus is planning to build out a number of these spaces using grant funds or gift funds.



**Engineering Hall** 

In recent years, one of the campus's strategies for addressing the space shortages caused by rapid enrollment growth has been to relocate administrative units and some research activities to leased space so that expansion space could be created within the campus core for academic units. As a result, the campus currently leases approximately 245,000 rentable square feet, primarily of office space, in the surrounding community at considerable expense. In an effort to provide more cost-effective accommodations for the off-campus units, the campus currently is exploring the purchase of an office building.



Student Center Anteater

## Renewal and Replacement of Existing Facilities

The oldest buildings on the main campus are over 40 years old, with nearly 70 general campus and health sciences buildings and scores of housing units at least 20 years old. A number of the older buildings are exhibiting serious deterioration, and building systems have become inefficient or obsolete. This problem is particularly acute in science buildings where older HVAC systems cannot provide support for fume hoods, building utility systems struggle to meet increased demands, and sophisticated information technology is needed to sustain today's modern research activities. The capital program includes a number of projects to modernize academic buildings, including renovations of classrooms and laboratories and other academic space. In addition, the program includes projects to renovate or replace several student-housing complexes.

Some buildings on the campus are reaching the end of their useful lives and require replacement. The capital program includes provision for replacement of Med Surge 1 and 2 (wood-frame research laboratory buildings completed in 1969) and replacement of the School of Biological Sciences greenhouse space that is no longer adequate.

#### Life-Safety

All known seismically deficient structures on the main campus have been upgraded or replaced. Five deficient buildings at the UCI Medical Center, totaling 62,600 ASF, will have upgrades completed by June 2011. These upgrades will be implemented as Chancellor-approved projects.

The fire-alarm systems in a number of instruction and research buildings are obsolete, increasingly difficult to service, and lacking many of the features and safeguards of modern systems. The capital program includes a project to replace deficient systems in 17 campus buildings.



#### Infrastructure

In the last decade, campus infrastructure systems have been required to accommodate loads generated by the construction of over 1.4 million ASF of new space and nearly 12,000 additional students (as well as associated increases in faculty and staff). The campus's electrical, cooling, sewer, and storm drainage systems currently are operating at maximum capacity, with some systems significantly overloaded. Campus roadways are overcrowded, resulting in safety issues at intersections and pedestrian crossings. Expansion and upgrade of these systems is imperative for the continued efficient operation of the campus.

#### **Medical Center Needs**

Capital investment at the UCI Medical Center has been extensive over the last decade, totaling approximately \$672 million. In addition to construction of a new hospital to replace the former seismically deficient facility, Medical Center projects completed or underway include construction of a clinical laboratory building, build-out of shell space in the new hospital, and major renovations to the Chao Comprehensive Cancer Center and Building 1A, as well as a number of smaller renovation projects. Even with these improvements, deficiencies still remain in clinical and support facilities. A strategic planning effort for the Medical Center is currently in progress; specific capital needs will be defined upon completion of the plan and included in subsequent capital programs.



UCI Medical Center

#### **Sustainability Efforts**

All UCI projects are designed and constructed using sustainable design concepts and materials to the maximum extent practical. To date, four UCI buildings have been certified LEED Gold (out of only eight Gold projects in Orange County).

Photographs for the Irvine campus courtesy of Nick Merrick for Henrick Blessing Photographers

#### IRVINE CAMPUS (\$ in 000s)

SUMMARY

BUDGET YEAR	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
STATE FUNDING	0	31,824	94,546	37,254	80,088	82,055
NON-STATE FUNDING	172,158	26,400	29,260	15,000	39,000	12,000
TOTAL	172,158	58,224	123,806	52,254	119,088	94,055

#### STATE FUNDED PROJECTS

		PRIA OBJE	MARY CTIV	/ /E				BUI	DGET YEAR							
PROJECT NAME	Enrollment Needs	Life Safety Deficiencies	Renewal/Modernization	New Program Initiatives	PREFUNDED	2009-10	2010-11		2011-12	2	012-13		2013-14	:	2014-15	TOTAL PROJECT BUDGET*
E & G - GENERAL CAMPUS	_				1		_	_		1						
Humanities Building	•				P 1,225 P 332 LB W 524 W 178 LB C 23,977 C 9,075 LB E 415 LB		E 2,201									37,927
Arts Building	•				P 2,160 W 732 C 36,963		E 2,668									42,523
Engineering Renovations			•		P 92 X		P 743 W 241 C 11,359									12,435
Primary Electrical Improvements, Phase 4			•				P 445 W 445 C 10,968									11,858
Business Unit 2	•							P W W C C	812 272 G 1,792 92 G 35,838 4,156 G	E	1,000 3,000 G					46,962
Humanites & Social Sciences Classroom Renovation			•					P W C	78 78 2,194							2,350
Water Infrastructure Improvements			•					P W C	450 450 12,600							13,500
Building Renewal Phase 1			•							P W C	670 670 18,660					20,000
Fire Safety Improvements		•								P W C	230 230 6,540					7,000
Transportation Infrastructure Safety Improvements			•							P W C	130 130 3,740					4,000
Biological Sciences Greenhouse Replacement			•									P W C	1,030 290 13,680			15,000
Sciences Buildings Renovation			•									P W C	1,310 360 17,330			19,000
Sciences Building	•													P W C	4,700 1,300 58,300	72,300
Chilled Water System Expansion	•													P W C	900 280 13,820	15,000
Capital Renewal			•				2,754		2,754		2,754		2,755		2,755	13,772
Nursing Sciences Building		-	T	•				P	2 550	F	2 500	-		1		45 000
								w C C	850 34,100 5,000 G	L	2,500					43,000
Med Surge Replacement			•									P W C	4,760 1,590 36,983 27.000 G			73,833

\* Total Project Budget may include proposed funding in years after 2014-15

#### NON-STATE FUNDED PROJECTS

	_	PRIA OBJE	AARY CTIV	Υ /Ε	Y BUDGET YEAR										
PROJECT NAME	Enrollment Needs	Life Safety Deficiencies	Renewal/Modernization	New Program Initiatives	PREFUNDED	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	TOTAL PROJECT BUDGET			
E & G - GENERAL CAMPUS								1	1	1					
Off-Campus Office Building Acquisition	•					TBD X TBD LB						TBD			
E & G - HEALTH SCIENCES															
Breast and Women's Cancer Laboratory				•		2,085 F 3,094 G						5,179			
Gross Hall Animal Resource Center				•		14,999 F						14,999			
National Center for Biophotonic Medical Devices	╞			•		9,994 F						9,994			
Eye Institute			•			52,940 G						52,940			
Gross Hall 4th Floor Buildout	T		T	•			6,400 G					6,400			
Hewitt Hall Basement Buildout - Laboratory Shell	ŀ		T	•				7,740 G				7,740			
AUXILIARY & FEE SUPPORTED FACILI	TIES										·				
Irvine Campus Housing Authority Groundlease for Faculty/Staff Rental Housing	•					Privatized						Privatized			
Center for Awareness, Reflection and Meditation				•		8,000 G						8,000			
Verano Unit 4 Renovation/Replacement			•			7,000 HSR 34,046 LB						41,046			
Mesa Court Units 1 & 2 Renovations			•			15,000 LB						15,000			
Middle Earth, Phase 1 Renovations			•			7,000 LB						7,000			
Athletics Department Building	T		T	•			8,000 G					8,000			
East Campus Commercial Development	T			•				Privatized				Privatized			
Chancellor-Approved Projects	•	•	•	•		10,000 X	10,000 X	10,000 X	10,000 X	10,000 X	10,000 X	60,000			
MEDICAL CENTER															
Chancellor-Approved Projects	•	•	•	•		8,000 HR	2,000 HR	2,000 HR	2,000 HR	2,000 HR	2,000 HR	18,000			

## IRVINE CAMPUS 2010-11 State Capital Funding Request

## Arts Building E: \$2,668,000

The project will equip the new Arts Building, currently under construction. The new facility will provide 38,564 ASF of instructional and research space, exhibition and associated support space, and academic and administrative offices to support the significant enrollment growth and program expansion of the past decade in the Claire Trevor School of the Arts. Total project cost is \$42,523,000.

# Capital Renewal Program \$2,754,000

The multi-year capital renewal program will address the campus's highest capital renewal priorities, including selective renewal or replacement of the campus utility infrastructure, building systems, equipment, roofs, walls, and windows. Total program cost is \$13,722,000.

## Engineering Renovations PWC: \$12,343,000

This project will provide space required to consolidate Engineering activities now temporarily housed in a campus-funded surge building, as well as needed renovations in two existing buildings to address facility needs for planned reassignments following occupancy of the Engineering Unit 3 Building. The project will build out 14,600 ASF of campus-funded shell space in Engineering Unit 3 to provide research laboratories and offices; replace the aged and deteriorated HVAC system in Engineering Tower and retrofit existing dry laboratories to accommodate wet research; and renovate released space in the Rockwell Engineering Center to accommodate school-wide student services and academic support units. Total project cost is \$12,435,000.

## Humanities Building E: \$2,201,000

This project will equip the new Humanities Building (45,605 ASF) completed in August 2009. The new facility provides instructional and research space and faculty and administrative offices for the School of Humanities, space for humanities-based research programs, four new Disability Services testing rooms, and replacement space for two small general assignment classrooms. Total project cost is \$37,927,000.

## Primary Electrical Improvements Step 4 PWC: \$11,858,000

The Primary Electrical Improvements Step 4 project will increase the efficiency and improve the reliability and safety of the campus's electrical distribution system by reconfiguring the University Substation and installing a new electrical transformer and by constructing a new electrical South Substation and multiple switchgear stations throughout the distribution system. The project will correct existing deficiencies in the 40-year-old system and address infrastructure needs resulting from significant campus development over the last two decades. Total project cost is \$11,858,000.

## 2011-15 State Capital Program

## Biological Sciences Greenhouse Replacement

Estimated cost for PWC: \$15,000,000

This project will demolish and replace the existing Biological Sciences Greenhouse, an 11,500 ASF facility built in 1968. Time, program growth, and the progress of technology have combined to render the facility inadequate to support the needs of biological sciences programs. This project will construct replacement and expansion space for existing functions, including areas that are individually programmable for temperature, a lath house for plants requiring ambient conditions, an area for soil sterilization, storage for greenhouse supplies, a growth chamber space, and commonuse laboratories. This project will also provide support space for new biological sciences technologies.

#### **Building Renewal Phase 1** Estimated cost for PWC: \$20,000,000

This project will address the most critical needs of the campus, including renovations to instruction and research buildings and building system improvements. The project will address inefficiencies or obsolescence in aging building systems, and provide contemporary technology systems to support evolving academic and research programs.

#### **Business Unit 2**

Estimated cost for PWCE: \$39,442,000

The Business Unit 2 building will address existing graduate program space deficiencies and support projected enrollments in the new undergraduate degree program in the Paul Merage School of Business by constructing 47,035 ASF of instruction, research, and support space; casestudy classrooms; an auditorium; and food services. Estimated total project cost is \$46,962,000.

#### **Chilled Water System Expansion**

Estimated cost for PWC: \$15,000,000

This project will expand existing capacity to address the increased demand for chilled water services resulting from significant campus growth over the last decade. Projects just completed or nearing completion will strain the capacity of the existing system. The Central Plant Chiller Expansion Step 5 project completed in 2007, addressed short-term demand with the addition of approximately 6,000 tons of cooling capacity. Since the Step 5 chiller project maximized the available space at the Central Plant facility, the campus currently is exploring options for providing additional chiller capacity, including a satellite facility. The estimated scope, costs, funding sources, and timing of this project are conceptual, pending the completion of more detailed analyses.

#### **Fire Safety Improvements**

Estimated cost for PWC: \$7,000,000

This project will improve fire safety and address ADA safety code requirements through the replacement of obsolete and problematic fire alarm systems in 17 campus buildings. The project will install modern pull stations, smoke and heat detectors, and audio-visual signal devices to meet all current codes.

## Humanities and Social Sciences Classroom Renovations

Estimated cost for PWC: \$2,350,000

This project will provide renovations and technology upgrades in two of UCI's oldest lecture halls: Humanities Hall 178, which has technology deficiencies, and Social Sciences Hall, which has HVAC deficiencies, poor sightlines and acoustics for today's technologies, and access and entry point limitations. This project will complete the campus's phased plan, begun in 2003-04, to renovate and upgrade existing general assignment classrooms with the aim of improving older rooms in poor condition and providing the technological capabilities required by modern teaching practices.

#### Med Surge Replacement

Estimated cost for PWC: \$43,333,000

This project will provide a replacement building of approximately 65,000 ASF to support modern research in the health sciences. The existing Med Surge 1 (16,700 ASF) and Med Surge 2 (42,800 ASF) facilities are wood-frame research laboratory buildings that were constructed in 1969. The 40year-old health sciences facilities have deteriorated over the years, and building systems are no longer adequate to support modern medical research technologies and practices. Estimated total project cost is \$73,833,000.

#### **Nursing Sciences Building**

Estimated cost for PWCE: \$40,000,000

This project will construct a 32,000 ASF building to provide instruction and research space and faculty and administrative offices to accommodate the Program in Nursing Science, established in 2005. The Program, projected to grow to 375 students and 40 faculty, currently occupies approximately 3,300 ASF in Irvine Hall, which is inadequate to accommodate the anticipated growth. Estimated total project cost is \$45,000,000.

## Sciences Building

Estimated costs for PWC: \$64,300,000

This project will provide approximately 58,000 ASF of additional teaching and research laboratories and offices to address the facility requirements of laboratory-based disciplines. The sciences disciplines – which include the Schools of Biological Sciences, Physical Sciences, Engineering, and Information and Computer Science, and the Department of Pharmaceutical Sciences – together comprise more than 37% of all campus enrollments. Once growth can be supported, the campus is committed to increasing science enrollments, which will require this additional instruction and research space. Estimated total project cost is \$72,300,000.

#### **Sciences Buildings Renovations**

Estimated cost for PWC: \$19,000,000

This project will renovate sciences facilities that have seriously deteriorated building systems, or systems that can no longer support the technology required for laboratory-intensive instruction and research activities. These renovations are needed to support rapid advances in science and technology related to cutting-edge instruction and research programs. The sciences – the Schools of Biological Sciences, Physical Sciences, Engineering, and Information and Computer Science, and the Department of Pharmaceutical Sciences – together comprise more than 37% of all campus enrollments. The campus is committed to improving these systems once enrollment growth can again be supported.

## Transportation Infrastructure Safety Improvements

Estimated cost for PWC: \$4,000,000

This project will expand, reconfigure, and/or signalize selected campus intersections; add bike lanes on selected roads; and construct pedestrian bridges over major roadways to address congestion and safety needs for drivers, pedestrians, and bicyclists.

### Water Infrastructure Improvements Estimated cost for PWC: \$13,500,000

This project will construct replacement or parallel sewer piping in deficient sections of the sewer backbone system and construct a bypass line to handle additional waste. Deficient portions of the campus storm drain system will be upgraded in order to provide additional capacity to manage excess rain and groundwater and comply with current State and federal storm water regulations. The project also will construct additional domestic waterline connections to the 30-year old system, update campus pressure regulating stations, and increase the capacity of the current Ring Mall water main.

## 2009-15 Non-State Capital Program

#### **Athletics Department Building**

Estimated project cost: \$8,000,000

This project will construct a new 8,000 ASF building at Cicerone Field (formerly known as the Anteater Ballpark) to provide administrative offices and meeting and team space for the Department of Intercollegiate Athletics. The new building also will provide a baseball press box and donor suites. Administrative space released in Crawford Hall as a result of this project will be renovated to provide upgraded student-athlete support facilities.

## Breast and Women's Cancer Laboratory

Estimated project cost: \$5,179,000

This grant-funded project will build out shell space in the basement of Sprague Hall to provide 14,161 ASF of research laboratory and support space for basic and translational research in women's cancers. With funding from the National Cancer Institute, UCI has aggressively expanded both basic and clinical research programs in cancer, including a significant effort in women's cancers – breast, ovarian, cervical, and gynecological. The project will provide a combination of open laboratory areas and enclosed lab support rooms to house these programs.

# Center for Awareness, Reflection and Meditation

Estimated project cost: \$8,000,000

This project will construct a new 8,000 ASF facility providing a wide array of multipurpose spaces to accommodate group discussions, meetings, speakers, meditation, and other activities which promote awareness, conscientious action, and open and respectful communication.

## **Chancellor-Approved Projects** (Main Campus) Estimated cumulative project costs: \$60,000,000

These will include major capital projects between \$750,000 and \$5,000,000 anticipated to be approved by the Chancellor over the next six years. The projects will include utility and infrastructure improvements; renovations of classrooms, laboratories, administrative, athletic and performance facilities; and technology upgrades.

## Chancellor-Approved Projects (Medical Center)

Estimated cumulative project costs: \$18,000,000

These will include major capital projects between \$750,000 and \$5,000,000 anticipated to be approved by the Chancellor over the next six years. These Medical Center projects will include seismic retrofits; parking improvements; renovations of laboratories, administrative, and clinical facilities; and technology upgrades.

#### **Eye Institute**

Estimated project cost: \$52,940,000

This project will construct a new building of approximately 50,500 ASF in the Health Sciences Complex at the main campus to provide clinical space, wet and dry research laboratories, and administrative support space for the Department of Ophthalmology.

### **Gross Hall Animal Resource Center** Estimated project cost: \$14,999,000

This grant-funded project will build out shell space in the basement of Gross Hall, a stem cell research and regenerative medicine facility currently under construction, to provide animal holding and procedure space. The project will provide approximately 17,443 ASF of holding suites, a suite for immuno-compromised animals, associated support and staff spaces, and cage washing and shipping and delivery facilities.

#### **Gross Hall 4th Floor Buildout**

Estimated project cost: \$6,400,000

This project will build out approximately 12,000 GSF of shell space on the 4th floor of Gross Hall, which is currently under construction. The buildout will provide approximately 7,000 ASF of additional wet laboratories and support space for research in stem cell and regenerative medicine.

### Hewitt Hall Basement Buildout - Laboratory Shell

Estimated project cost: \$7,740,000

This project will complete approximately 7,000 ASF of shell space in the basement of Hewitt Hall to provide additional wet and dry research laboratories and support space for programs in the School of Medicine.

#### Mesa Court Units 1 and 2 Renovations

Estimated project cost: \$15,000,000

This project will renovate the original two units of undergraduate residence halls on the Irvine campus, Mesa Court Units 1 and 2, which were built respectively in 1965 and 1968. This project will replace roofs; the heating system; exhaust fans; water and drain piping to bathrooms; bathroom fixtures; light fixtures and exit signs; and floor coverings. In addition, laundry rooms will be renovated; building electrical systems will be upgraded; egress from second floor units will be modified; and the fire alarm system will be replaced in Unit 1, as recommended by the Fire Marshal.

#### Middle Earth Phase 1 Renovations

Estimated project cost: \$7,000,000

This project will provide renovations to the Middle Earth undergraduate residence hall, which was completed in 1974. Housing 339 beds in 51,880 ASF of space, the complex is suffering from deterioration and age-related problems. The scope of work will include renovation and/or replacement of building systems, including plumbing and electrical; reconfiguration and remodel of bathrooms; replacement of interior and exterior lighting; roof replacement; and design and installation of a new code-compliant fire suppression system.

## National Center for Biophotonic Medical Devices

Estimated project cost: \$9,994,000

If grant funds are awarded, this project will construct a 12,147 ASF addition to the existing Beckman Laser Institute and Medical Clinic to provide new research facilities for the design, prototyping, and testing of biophotonic medical devices and for clinical translational research to rapidly bring these technologies forward for practical use.

#### Verano Unit 4 Renovation/Replacement

Estimated project cost: \$41,046,000

This project will replace the aging Verano Unit 4 facilities. This graduate and family housing complex, which consists of 20 buildings housing 200 apartments with 400 beds, was constructed in 1976. The two-story buildings are showing extensive deterioration due to age, exposure to the elements, and water penetration in many areas. After evaluating the alternatives - renovation or replacement of the facilities - it was determined that the replacement option would be more costeffective. The replacement project will demolish those buildings housing 200 of the 400 deteriorating beds, and build higher-density housing that will provide 400 beds. The structures with the 200 remaining older beds will be scheduled for demolition following completion of the new construction.

## 2009-15 Non-State Capital Program: Other Anticipated Projects

### East Campus Commercial Development

Estimated project cost: TBD

The East Campus district has been developed to provide student support facilities for a rapidly growing campus, including housing for more than 8,000 students and a major recreation center. This privatized development project will develop a retail shopping center to provide food facilities, convenience stores and specialty shops to serve this large student community.

## Irvine Campus Housing Authority Ground Lease for Faculty/Staff Rental Housing

Estimated project cost: TBD

This project authorizes the lease of an additional twelve acres of the Irvine Campus Inclusion Area to the Irvine Campus Housing Authority to be used for third-party development of up to 120 rental units for faculty and staff.

## Off-Campus Office Building Acquisition

Estimated project cost: TBD

In response to rapid campus growth over the last decade, a number of academic and administrative units were relocated to approximately 245,000 SF of leased space off-campus, freeing up campus space for other critical functions. This project would purchase a 100,000-150,000 SF office building near the campus to accommodate a portion of those campus units. The timing and cost of the acquisition will depend on the availability of an appropriate property and a successful negotiation of terms.

## LOS ANGELES CAMPUS



Janns Steps and Dickson Plaza

UCLA's Westwood campus opened its doors in 1929 with a Teacher's College and the College of Letters and Science occupying the first four permanent campus buildings. The Los Angeles campus has continued to expand and evolve into a world-renowned university. To address the diverse interests of the UCLA community – students, faculty, staff, and visitors – campus planning focuses on managing scarce resources wisely while pursuing the University's academic and community service missions.

The campus continues to be committed to longterm comprehensive planning efforts that address the most critical campus capital needs. Campus capital funding strategies will be directed primarily to three strategic initiatives included in the campus's 2009-19 Capital Financial Plan that was accepted by the Regents at their July 2009 meeting. These initiatives will 1) complete the seismic correction of all remaining deficient structures by 2019, 2) transform the campus to a residential

LOS ANGELES CAMPUS FACTS											
Established	1919										
FTE Enrollment 2008-09											
Undergraduates	27,196										
Graduate students	7,749										
Health science students	3,891										
Campus Land Area	419 acres										
Campus Buildings	12 million ASF										
Hospitals and Clinics	2.2 million ASF										

academic community, and 3) build a sustainable campus.

In support of these three initiatives, there will also be a continued emphasis on the implementation of other life-safety corrections, infrastructure renewal and upgrades, and academic program improvements, primarily through the use of private funds to supplement the limited amount of available State funds.



#### Capital Needs

The campus's 2009-19 Capital Financial Plan includes the three capital strategic initiatives described below.

#### **Complete the Seismic Program**

A comprehensive seismic safety program has been underway since the mid-1980s to provide seismic corrections to buildings rated seismically "Poor" or "Very Poor." The 1994 Northridge earthquake damaged several general campus buildings as well as structures in the Center for the Health Sciences (CHS). Changes in building codes following the earthquake prompted studies that identified additional seismically deficient buildings requiring repairs and upgrades. Since the Northridge earthquake, the campus has allocated 92% of its State General Obligation bond funding to seismic and life-safety upgrades.



Royce Hall Seismic Renovations (1998)

To date, the campus has completed seismic corrections to 36 structures representing 4.3 million GSF and has seismic work in progress on eight structures totaling 1.4 million GSF. Fourteen structures (1.7 million GSF) with seismic work remain, including 11 structures in the CHS (1.6 million GSF), an off-campus library, and one auxiliary structure.



Biomedical Sciences Research Building (seismic replacement building) and Orthopedic Hospital Research Center

Seismic renovations of most general campus structures have been completed, including all buildings rated seismically "Very Poor." Detailed planning is underway for the remaining seismically deficient facilities on- and off-campus. Structures in the CHS are addressed in the *Academic Health Center Master Plan*. With the recent completion and occupancy of the Westwood Replacement Hospital and other replacement facilities under the first phase of the *Master Plan*, the campus is positioned to proceed with an accelerated program to complete seismic corrections and life-safety mitigations in the remainder of the CHS complex.

High-priority projects to address the seismic and life-safety deficiencies under the second phase of the Master Plan include the seismic renovation of the CHS South Tower and renovation of the adjacent Life Sciences Building to accommodate occupants of seismically deficient space in the CHS complex. The South Tower is currently 90% vacant (all of the old hospital patient floors are entirely unoccupied) and the building can be seismically upgraded to accommodate instruction and research functions currently located in the School of Medicine (SOM) East, SOM West, and Outpatient Wing portions of the CHS complex. Upon completion of the South Tower Seismic Renovation project, those seismically deficient structures will be available to be renovated for new uses as soon as funding becomes available.

Construction of new facilities is also a part of the campus's integrated strategy to provide safe facilities for the occupants of the health and medical sciences buildings. New facilities will include a Medical Education and Biomedical Library Replacement Building and an addition to the Southern Regional Library (to accommodate materials from the stacks now housed in the Biomedical Library Tower in the CHS complex). Following completion of these projects, the remaining seismically deficient structures in the CHS complex will undergo seismic corrections and renovation or will be demolished.

# Transform UCLA to a Residential Academic Community

During the past 20 years, UCLA has continued its transformation from a commuter campus to a residential campus by accommodating over 10,000 students in on-campus housing and approximately 2,500 in University-owned off-campus housing. The campus experiences continued demand for undergraduate and graduate student housing, which will be met partially by recently approved projects to provide 1,511 additional undergraduate beds in the Northwest zone of the campus and 504 additional studio apartments for single graduate and professional students in the Southwest zone. The campus also is proposing to construct 1,000 additional beds for undergraduate students in the Northwest zone of the campus, renovate existing on-campus residence halls and dining facilities, and upgrade off-campus apartment buildings.



Weyburn Terrace Housing Units

The 2009-19 Capital Financial Plan also includes a commitment to supplying housing proximate to the campus for faculty and staff. Finding and keeping an engaged workforce is key to sustaining the high quality of educational programs, services, and facilities. The local housing market, one of the most expensive in the country, presents barriers to UCLA's ability to attract the highest quality workforce; many prospective employees feel compelled to choose employment with competing entities located in more affordable housing markets. In an effort to address the insufficient supply of reasonably priced housing options, a campus task force has been assigned to assess needs and provide options for addressing this issue in the context of a Workforce Housing Master Plan, scheduled for completion in FY 2009-10. The primary goal is to develop a workforce housing program which will improve the recruitment,

retention, productivity, and satisfaction of employees in a manner similar to the student housing system and to integrate the workforce housing program with the *Long Range Development Plan*.



Wilson Plaza

#### **Build a Sustainable Campus**

A campus Sustainability Committee has been active at UCLA since 2005 and continues to advance campus sustainability practices and initiatives. UCLA is committed to achieving at least a LEED Silver certification for all new construction and major refurbishment projects. Currently, 17 projects are targeting this goal. UCLA's recently completed *Climate Action Plan* identifies initiatives that the campus will implement to reduce greenhouse gas emissions below 1990 levels by 2012, eight years ahead of goals established in the *University of California Policy on Sustainability*.

In the coming years, UCLA's challenge will be to find ways to continue to reduce its carbon footprint as the campus expands and the demand for energy increases. The Green Building Program has allowed UCLA to reduce the amount of energy used on a square-foot basis in both its new building and renovation projects. Energy conservation programs include HVAC system retrofit projects and continuation of more energyefficient lighting installations. Additional sustainability initiatives are focused in areas of transportation, housing and hospitality services, information systems, and waste diversion.

#### LOS ANGELES CAMPUS (\$ in 000s)

SUMMARY

BUDGET YEAR	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
STATE FUNDING	25,300	107,949	82,123	193,130	2,500	27,500
NON-STATE FUNDING	702,804	90,881	350,415	217,040	156,600	96,600
TOTAL	728,104	198,830	432,538	410,170	159,100	124,100

#### STATE FUNDED PROJECTS

		PRI/ OBJE	MAR' CTIV	Y /E	BUDGET YEAR													
PROJECT NAME	Enrollment Needs	Life Safety Deficiencies	Renewal/Modernization	New Program Initiatives	PREFUNDED		2009-10		2010-11		2011-12		2012-13		2013-14		2014-15	TOTAL PROJECT BUDGET*
E & G - GENERAL CAMPUS																		
Engineering Addition	•															Р	2,000	100,000
E & G - HEALTH SCIENCES	1			<u> </u>												I		
CHS South Tower Seismic Renovation		•			P 5,235 X			W W C	3,357 3,881 X 62,798	c c	62,798 81,833 X							219,902
Telemedicine and PRIME Facilities Phase 2				•		P W C E	512 PT 802 PT 14,292 PT 9,694 PT											25,300
Electrical Distribution System Expansion Step 6C		•			P 281 X		·	W C	333 10,379									10,993
School of Medicine High-Rise Fire Safety Phase 1		•			P 358 X			W C	430 13,977									14,765
CHS - School of Public Health Seismic Correction		•				Р	400 X	W C	425 7,475									8,300
Medical Education and Biomedical Library Seismic Replacement Building	Ì	•								P W	7,600 HSE 10,000 HSE	C C	149,400 HSE 96,000 G	E	4,000 G			267,000
CHS - Courtyards Seismic Correction	Ì	•				Р	400 X	W C	450 7,650									8,500
Life Sciences Building Renovation Phase 1	l	•						Р	675	w	725	С	14,730					16,130
CHS - Outpatient Wing Seismic Correction	l	•								Р	1,000	W C	2,500 24,500					28,000
CHS SOM West Seismic Correction		•										Р	2,000	W	2,500	С	25,500	30,000

\* Total Project Budget may include proposed funding in years after 2014-15

#### NON-STATE FUNDED PROJECTS

		PRIA OBJE	MAR) CTIV	Y /E				BUDGET YEAR				
PROJECT NAME	Enrollment Needs	Life Safety Deficiencies	Renewal/Modemization	New Program Initiatives	PREFUNDED	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	TOTAL PROJECT BUDGET
E & G - GENERAL CAMPUS	-				-			r	r	r		
Pauley Pavilion Renovation and Expansion			•			100,000 G 60,000 LB 25,000 X						185,000
Strathmore Bridge Seismic Correction		•				5,000 X						5,000
UNEX Building Seismic Correction		•	T	T							29,600 X	29,600
Campus Projects \$750K thru \$5M		•	•	•		17,000 X	17,000 X	17,000 X	17,000 X	17,000 X	17,000 X	102,000
Infrastructure Capital Renewal Step 1		•						3,628 LB	3,455 LB			12,646
E & G - HEALTH SCIENCES	1					I		J.				
NPI Low-Rise Office Relocation		Ι	Ι	•		15,000 G						15,000
Wasserman Building Site and Tenant Improvements				•		46,000 G						46,000
CHS - Reed Bridge Seismic Correction		•				5,000 X						5,000
Jules Stein Seismic Correction		•							2,000 G	25,600 G		27,600
AUXILIARY & FEE SUPPORTED FACILI	TIES							1				
Weyburn Terrace Graduate Student Housing				•		109,915 LB 11,500 HSR						121,415
Dykstra Repairs and Refurbishment			•			46,888 HSR						46,888
Residential Conference Center				•		106,913 LB 36,916 G						143,829
Wilshire Center Exterior Repairs and Refurbishment		•				10,872 N						10,872
Northwest Campus Student Housing Infill Phase 2		T	T	•				164,006 LB 5,101 HSR				169,107
DeNeve Dining Services Renovation			•					5,442 HSR				5,442
Glenrock Apartments Refurbishment			•					5,741 LB 227 HSR				5,968
Parking Access & Revenue Control System Replacement		•						5,356 PSR				5,356
Solar Voltaic Panels								544 N 3,537 G				4,081
Landfair Apartments Refurbishment			•						8,362 LB 223 HSR			8,585

#### NON-STATE FUNDED PROJECTS Continued

		PRI OBJE	MAR ECTIV	Y VE				BUDGET YEAR				
PROJECT NAME	Enrollment Needs	Life Safety Deficiencies	Renewal/Modemization	New Program Initiatives	PREFUNDED	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	TOTAL PROJECT BUDGET
MEDICAL CENTER	-				-							
Temporary Psychiatric Hospital Lease and Retrofit				•		10,000 LB						10,000
RUMC Clinical Lab Remodel				•		5,000 LB						5,000
MP200/MP300 Refurbishment	ľ	•				8,000 LB 8,000 HR 4,000 G						20,000
SM Ambulatory Building Care Building Lease	l			•		21,000 LB						21,000
RUMC Psychiatric Bed Conversion to Medical/Surgical Beds				•			20,000 LB					20,000
SMH Tower Demolition		•						8,000 LB				8,000
SMH Inpatient Tower Staircase Modification and Basement	ľ			•					40,000 LB			40,000
SMH Merle Norman Pavilion Renovation	Ì		•							60,000 LB		60,000
Capital Equipment Replacement Lease Financing			•			33,330 LB 11,170 HR 5,500 G	300,000					

## LOS ANGELES CAMPUS 2010-11 State Capital Funding Request

### CHS Courtyards Seismic Correction WC: \$8,100,000

This project will seismically upgrade the basement area beneath the east and west courtyards in the Center for the Health Sciences, which has a seismic rating of "Poor." The basement level is immediately adjacent to the corresponding basement levels in the CHS South Tower, which is scheduled for upgrade as part of the CHS South Tower Seismic Renovation project. The project will strengthen the lateral force-resisting system of the building; upgrade fire, life-safety and accessibility deficiencies; and repair and restore buildings systems and finishes impacted by the work. Upon completion of the project, the seismic rating will be upgraded to "Good." Total project cost is \$8,500,000.

## CHS School of Public Health Seismic Correction WC: \$7,900,000

This project will seismically upgrade the 90,690 ASF School of Public Health Building in the Center for the Health Sciences, which has a seismic rating of "Poor." The project will strengthen the lateral force-resisting system of the building through the installation of new exterior shear walls and will address fire, life-safety and accessibility deficiencies. Upon completion of the work, the building will be upgraded to a seismic rating of "Good." Total project cost is \$8,300,000.

## CHS South Tower Seismic Renovation WC: \$66,155,000

This project will renovate the 443,387 GSF South Tower in the UCLA Center for the Health Sciences (CHS). The South Tower, rated seismically "Poor," has been substantially vacant since the relocation of medical inpatient care and related programs to the Westwood Replacement Hospital in 2008. The project will upgrade the building for use as a teaching and research facility. Construction of new hospital facilities to replace seismically deficient clinical space was the first phase of the multi-phase Academic Health Center Facilities Reconstruction Plan. The renovation of CHS South Tower represents the initiation of the second phase of that plan. The scope of work will include: 1) interior demolition and hazardous materials abatement, 2) seismic retrofit of building and upgrades to the building shell, 3) building infrastructure improvements, and 4) interior improvements. Upon completion of this project, occupants from other CHS seismically deficient space will be moved to the South Tower, enabling subsequent renovations, demolition, and reconstruction of those facilities in separate projects. Total project cost is \$219,902,000.

## Electrical Distribution System Expansion Step 6C WC: \$10,712,000

This project will complete the implementation of the Electrical Distribution Master Plan, which has guided development of the UCLA electrical distribution system since 1988. Specifically, the project will replace the remaining old 4.8kV radial feeders, connect existing buildings to the new 12.47kV loops, and add two feeder loops in the Center for the Health Sciences. This project will complete the conversion of the main central campus substation from 4.8kV to 12.47kV, convert the old 4.16 kV system on the southwest campus to 12.47 kV, and provide two inter-ties between north campus and south campus to provide backup electrical pathways. Total project cost is \$10,993,000.

## Life Sciences Building Renovation Phase 1 P: \$675,000

This is the first phase of a multi-phase project to renovate the 115,846 ASF (211,505 GSF) Life Sciences Building (LSB) to address critical building deficiencies. Renovations will involve repairs and upgrades to building systems and infrastructure, and address fire, life-safety, and accessibility deficiencies. Upon completion of the project, nonhospital programs currently housed in seismically deficient space in the Center for the Health Sciences will be relocated into LSB. Total project cost is \$16,130,00

## School of Medicine High-Rise Fire Safety Phase 1 WC: \$14,407,000

This project will install backbone fire suppression and fire alarm systems in the Center for the Health Sciences. The project, part of a phased plan to improve fire safety for occupants of CHS, will install a new water distribution main that will loop the entire complex to connect all existing fire sprinkler system risers, will install a fire suppression water storage tank and fire pump, and will convert existing dry standpipes to wet standpipes and combination fire sprinkler risers. These improvements are necessary to meet lifesafety provisions as a result of a change in the occupancy classification of the existing building (from hospital to high-rise building) following the relocation of Medical Center functions to the Westwood Replacement Hospital in 2008. Total project cost is \$14,765,000

## 2011-15 State Capital Program

#### **CHS Outpatient Wing Seismic Correction** Estimated cost for PWC: \$28,000,000

This project will seismically upgrade the 77,615 ASF Outpatient Wing in the Center for the Health Sciences, which has a seismic rating of "Poor." Seismic deficiencies include a lack of shear wall strength, weak columns, and in adequate connections in the steel framing. The project will strengthen the lateral force-resisting system of the building and address fire, life-safety and accessibility deficiencies.

## CHS School of Medicine West Seismic Correction

Estimated cost for PWC: \$30,000,000

This project will seismically upgrade the 88,569 ASF School of Medicine West Tower in the Center for the Health Sciences, which has a seismic rating of "Poor." The project will strengthen the lateral force-resisting system of the building and will address fire, life-safety and accessibility deficiencies. The work excludes the west basement courtyard, which will be addressed in another project. Upon completion of the work, the building will be upgraded to "Good."

#### **Engineering Addition**

Estimated cost for P: \$2,000,000

This project will construct a new building to address previous enrollment growth and accommodate new program initiatives in engineering. The project will provide instruction and research space adjacent to the completed Engineering 1 Replacement Building. Estimated total project cost is \$100,000,000.

## Medical Education and Biomedical Library Seismic Replacement Building

Estimated cost for PWC: \$167,000,000

This project will construct a 144,000 ASF Medical Education and Biomedical Library building on a site located along the eastern border of the Center for the Health Sciences complex. The proposed facility will enable CHS occupants to relocate to seismically safe space, consolidate educational programs that are currently scattered throughout the CHS complex, and realize synergies between medical education programs and the biomedical library. It also will provide the School of Medicine with modern space that cannot be provided in the existing building. The building will accommodate classrooms and seminar rooms, multi-purpose laboratory space, computer and imaging laboratories, a gross anatomy laboratory, a biomedical library, study and meeting space for students, and administrative office and building support space. Estimated total project cost is \$267,000,000.

## 2009-15 Non-State Capital Program

#### Campus Projects \$750K to \$5M

Estimated cumulative project costs: \$102,000,000

These include major capital projects anticipated to be approved by the Chancellor over the next six years. The projects will include minor or inexpensive renovations, new construction and equipment installation.

## Capital Equipment Replacement Lease Financing

Estimated cumulative project costs: \$300,000,000

This funding represents anticipated lease expenditures over six years for major capital improvement equipment by the UCLA Health System to ensure that the system is equipped with state-of-the-art technology.

## CHS Reed Bridge Seismic Correction

Estimated project cost: \$5,000,000

This project will upgrade the 985 GSF Reed Bridge in the Center for the Health Sciences from a seismic rating of "Poor" to "Good." The pedestrian bridge, which connects the Reed Neurological Research Building and the north wing of the Neuropsychiatric Institute, has insufficient structural support to resist lateral loads during a seismic event. The project will strengthen the vertical and lateral load carrying systems.

### **DeNeve Dining Services Renovation**

Estimated project cost: \$5,442,000

This project will renovate the existing full-service restaurant and dining room located in the DeNeve Plaza undergraduate residential complex. The renovation will increase the existing operational efficiency related to customer service; improve the condition of and access to service platforms, beverage stations, and seating arrangements; and replace obsolete equipment with energy efficient units.

# Dykstra Hall Residential Repairs and Refurbishment

Estimated project cost: \$46,888,000

This project will upgrade building and safety systems in Dykstra Hall, an 86,573 ASF high-rise undergraduate student residential facility built in 1959. The project will replace and repair obsolete mechanical, electrical, plumbing, fire alarm and elevator systems with upgraded systems that are also energy-efficient and easy to maintain. The project will replace systems servicing the residential floors and occupied portions of the basement, refurbish interiors on the residential floors, and replace the windows on the exterior of the building.

## **Glenrock Apartments Refurbishments** Estimated project cost: \$5,968,000

This project will refurbish a 43,493 ASF, 43-unit off-campus apartment building for undergraduate students, and may address building systems, any identified structural needs, and interior finishes. The scope, cost, funding sources, and timing of this project are estimated, pending the completion of more detailed analyses.

### Infrastructure Capital Renewal Step 1

Estimated project cost: \$12,646,000

The campus-wide capital renewal program replaces key building systems and infrastructure to support UCLA's research and teaching functions. The projects typically also support the campus' energy efficiency and sustainability goals.

## Jules Stein Seismic Correction

Estimated project cost: \$27,600,000

This project will provide corrections to strengthen the seismic force-resisting system of the Jules Stein Eye Institute building. The 44,481 ASF building, constructed in 1967 on a site in the Center for the Health Sciences, is a reinforced concrete building with a seismic rating of "Poor." The building lacks shear capacity and ductility in its columns in the north and south end shear walls. Upon completion of the corrective work, the building will be upgraded to "Good." The improvements also will include fire and life-safety upgrades, accessibility improvements, and asbestos removal.

#### Landfair Apartments Refurbishment

Estimated project cost: \$8,585,000

This project will refurbish a 39,125 ASF, 75-unit off-campus apartment building for undergraduate students, and may address building systems, any identified structural needs, and interior finishes. The scope, costs, funding sources, and timing of the project are estimated, pending the completion of more detailed analyses.

#### MP200 / MP300 Refurbishment

Estimated project cost: \$20,000,000

This project will refurbish and upgrade the aging infrastructure in two intensively used outpatient medical facilities, the Medical Plaza 200 and Medical Plaza 300 buildings. Built in 1990, the MP200 building comprises 261,894 ASF of space (366,966 GSF) and the MP300 building comprises 63,794 ASF of space (101,095 GSF).

#### NPI Low-Rise Office Relocation

Estimated project cost: \$15,000,000

This project will renovate 30,780 ASF of space in the Neuropsychiatric Institute (NPI) to

accommodate occupants of the building's seismically deficient low-rise wing which will be demolished to create a site for construction of a separate project, the proposed gift-funded Wasserman Building.

## Northwest Campus Student Housing Infill Phase 2

Estimated project cost: \$169,107,000

This project will provide the remaining 1,000 undergraduate beds needed in the northwest campus. The scope, costs, funding sources, and timing of the project are estimated pending more detailed assessment and analyses.

## Parking Access & Revenue Control System Replacement

Estimated project cost: \$5,356,000

This project will replace the Parking Access and Revenue Control System, which is near the end of its lifecycle. The system is responsible for managing daily parking sales as well as access into 26 parking structures and lots used by approximately 2.2 million customers per year. The project will replace point-of-sale equipment in parking sales kiosks, access gates with in-ground loops and other vehicle sensing equipment, and credential readers. Transportation Services intends to enhance the project with the use of new technology (e.g., RFID and / or license plate recognition) to provide improved service and more flexibility to customers.

# Pauley Pavilion Seismic Renovation and Expansion

Estimated project cost: \$185,000,000

This project will expand and renovate 61,944 GSF of the Pauley Pavilion (180,000 GSF) to provide needed patron amenities, functional improvements, and seismic and code upgrades. Upon completion of the project, the seismic rating will be upgraded from "Fair" to "Good." The
project will construct new team locker rooms, reception and meeting facilities, and an enclosed concourse around the perimeter of the building with a new lobby, restrooms, and concession space. The project will also improve sight lines, access and circulation; replace the seating; renovate the existing locker rooms, concession space, and public restrooms; replace obsolete building systems; upgrade sound and lighting systems; and upgrade interior and exterior finishes.

# Residential Conference Center

Estimated project cost: \$143,829,000

This project will address the need for a yearround, on-campus residential conference center. The estimated scope, costs, funding sources, and timing of this project are conceptual, pending the completion of more detailed analyses.

#### **RUMC Clinical Lab Remodel**

Estimated project cost: \$5,000,000

This project will remodel and expand the existing 9,564 ASF clinical laboratory in the basement of the Reagan UCLA Medical Center (RUMC) to provide additional processing capability for its blood bank, core laboratory and staff work areas. Upon completion, the lab will comprise 10,337 ASF.

## **RUMC Psychiatric Bed Conversion to Medical/Surgical Beds**

Estimated project cost: \$20,000,000

This project will convert space currently occupied by inpatient psychiatric beds and related support in the Reagan UCLA Medical Center (RUMC) into medical/surgical beds. This work will occur following the relocation of the psychiatric beds to a temporary facility under a separate project.

# SMH Inpatient Tower Staircase Modification and Basement

Estimated project cost: \$40,000,000

This project will construct 40,000 ASF of subterranean storage space beneath the 15th Street garden at the UCLA Santa Monica Orthopaedic Hospital, following the demolition of the seismically deficient West Hospital Tower. A courtyard will be built within the footprint of the old tower, along with a new basement beneath the courtyard. The work also will involve modifications to a portion of the building currently under construction as part of the Santa Monica Replacement Hospital project, including the grand staircase integrating the hospital facilities.

#### **SMH Merle Norman Pavilion Renovation**

Estimated project cost: \$60,000,000

This building did not undergo full renovations as part of the Santa Monica Orthopaedic Replacement Hospital project. This project will renovate the Merle Norman Pavilion at the UCLA Santa Monica Orthopaedic Hospital to bring the building up to contemporary hospital standards.

#### **SMH Tower Demolition**

Estimated project cost: \$8,000,000

This project will demolish the seismically "Poor" 233,000 GSF hospital tower following completion of the Santa Monica Orthopaedic Replacement Hospital project.

#### **Solar Voltaic Panels**

Estimated project cost: \$4,081,000

For this project, UCLA will install a 0.5 megawatt solar photovoltaic (PV) system on one of its parking structures, pending availability of Los Angeles Department of Water and Power (LAWDP) and grant funding. LADWP currently offers an incentive that reduces the capital cost of solar installation by nearly 33%. To achieve a costeffective payback period for the solar PV system, an incentive from LADWP of \$1.5 million and additional funding of \$2.4 million from a grant will be required to provide the necessary five-year return on the campus's investment.

#### **Strathmore Bridge Seismic Correction**

Estimated project cost: \$5,000,000

This project will upgrade the Strathmore Bridge from a seismic rating of "Very Poor" to "Fair" or "Good." The bridge, a reinforced and pre-stressed concrete structure built in 1966, spans Strathmore Drive between Parking Structure 8 (PS8) to the south and Spaulding Field to the north. The long, single-span structure supports a portion of the athletic field and provides covered vehicular access to PS8 from Strathmore Drive.

# Temporary Psychiatric Hospital Lease and Retrofit

Estimated project cost: \$10,000,000

This project will lease and retrofit a local skilled nursing facility to accommodate temporarily the majority of the UCLA Neuropsychiatric Hospital functions located in the Reagan UCLA Medical Center until a permanent replacement facility is completed. The retrofit work will include modifications to ensure the facility's compliance with applicable building and other regulatory codes and licensing requirements.

#### **UNEX Building Seismic Correction**

Estimated project cost: \$29,600,000

This project will upgrade the 68,500 ASF University Extension Building, from a seismic rating of "Poor" to "Good." The project will strengthen the lateral force-resisting system of the building and address fire, life-safety and accessibility deficiencies. The campus is evaluating the potential to relocate the UNEX program; if feasible, the building will be upgraded for an alternative use.

## Wasserman Building Site and Tenant Improvements

Estimated project cost: \$46,000,000

This project will provide tenant improvements for the Jules Stein Eye Institute and School of Medicine programs that will occupy space in the new, gift-in-kind Wasserman Building. The project will also include associated site utility improvements .

# Weyburn Terrace Graduate Student Housing

Estimated project cost: \$121,415,000

This project will construct approximately 205,335 ASF of additional graduate student housing in the southwest campus zone adjacent to the existing Weyburn Terrace graduate student housing complex. The project will provide 504 studio apartments and associated commons space for unmarried graduate students.

# Wilshire Center Exterior Repairs and Refurbishment

Estimated project cost: \$10,872,000

This project will replace existing exterior curtain wall panels containing asbestos in the UCLA Wilshire Center with new thinner and lighter panels. The new panels are insulated for energy efficiency, fire inhibition, and mullion cladding. This project also will include the renovation of the Wilshire Boulevard entrance to include new signage, lighting, and hardscape.

# 2009-15 Non-State Capital Program: Other Anticipated Projects

### SMH Ambulatory Care Building Lease

Estimated project cost: \$21,000,000

This project will entail lease of a 50,000 ASF Ambulatory Care Building near the UCLA Santa Monica Hospital to be constructed by a private developer. The building will accommodate ambulatory surgery, radiation oncology, phlebotomy services, and physician offices.

### MERCED CAMPUS

UC Merced opened in September 2005 as the tenth campus in the University of California system. The campus significantly expands access to the UC system for students throughout the State, with a special mission to increase college-going rates among students in the San Joaquin Valley. It also serves as a major base of advanced research and as a stimulus to economic growth and diversification throughout the region. The campus plans to grow over time to support about 25,000 students as funds are available.



'Beginnings' Sculpture

UC Merced's strategic academic vision identifies priority academic programs that will serve the University system, State, and nation. Current programs include the Sierra Nevada Research Institute, the Merced Energy Research Institute, and the Health Sciences Research Institute. Notable areas of faculty expertise in these programs include hydrology, solar power technologies, stem-cell biology, infectious disease, biodiversity and global climate change, air and water quality, and population health. Education and research at UC Merced is enhanced through partnerships with other UC campuses and with entities such as Lawrence Livermore National Laboratory, Sequoia and Kings Canyon National Parks, and Yosemite National Park. Members of the School of Social Sciences, Humanities and Arts faculty are actively engaged in such interdisciplinary research programs as cognitive science, computer science, psychological sciences, and economics.



UC Merced Dorms

The first phase of campus physical development encompasses approximately 100 acres. Instruction and research space includes teaching and research laboratories, laboratory support space, and other academic support space necessary for the success of academic programs and students. Locations in Merced, Atwater, Fresno, Modesto, and Bakersfield provide off-campus space for additional administrative, research, and informal teaching uses.

In May 2009, the campus received its Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers for the full development of the campus and associated University Community

MERCED CAMPUS FACTS	
Established	1998
FTE Enrollment 2008-09	
Undergraduates	2,591
Graduate students	184
Campus Land Area	2,000 acres
Campus Buildings	719,841 ASF

land area. This permit will allow development of the approximately 815-acre campus site and the approximately 2,115-acre University Community, situated directly south of the campus.



Recreation and Wellness Center

#### **Capital Needs**

As a new campus, UC Merced has had the opportunity to serve as a leader in sustainable planning and environmental design. In constructing the campus, UC Merced committed to green building principles, requiring certification of all new buildings at the Silver level of the U.S. Green Building Council's LEED program. Beginning in 2009, the campus will strengthen its commitment to sustainability by requiring all new buildings to be designed at a certified LEED Gold



**Classroom Building** 

level. The campus's *Long Range Development Plan* (*LRDP*) continues the commitment to plan, design, build, and operate UC Merced at ever-increasing levels of sustainability.

If the campus is to grow in a manner consistent with its *LRDP*, significant investment from both State and non-State capital resources will be necessary for the site development and infrastructure needs of a new campus and instruction and research facilities.



Additional campus circulation and infrastructure are essential to meet the needs of planned campus growth. Consistent with the *LRDP*, the Merced campus will expand to include acreage that is currently undeveloped. Expansion of the Central Plant and distribution of underground utilities will be necessary to support higher enrollments and to serve future campus development. Expansion into the undeveloped areas of the campus will require site improvements to address issues such as surface topography and drainage. New bridges, roadways, lighting, parking lots, landscaping, and bicycle and pedestrian pathways also will be required to serve the new areas of the campus.

Future campus capital program elements will provide additional space associated with increasing enrollments and campus growth and will support academic programs; student housing, dining, and recreation programs; and child care, parking, public safety, and student services. It is anticipated that future phases of campus development will include the introduction of professional schools and programs in the health sciences.

#### MERCED CAMPUS (\$ in 000s)

SUMMARY

BUDGET YEAR	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
STATE FUNDING	0	109,918	5,550	4,647	5,512	4,310
NON-STATE FUNDING	5,805	23,735	1,000	52,885	48,400	42,675
TOTAL	5,805	133,653	6,550	57,532	53,912	46,985

#### STATE FUNDED PROJECTS

	•	PRIA OBJE	MAR) CTIV	/ /E	BUDGET YEAR													
PROJECT NAME	Enrollment Needs	Life Safety Deficiencies	Renewal/Modernization	New Program Initiatives	PREFUNDED		2009-10		2010-11	2	2011-12	2	012-13	2	013-14	2	014-15	TOTAL PROJECT BUDGET*
E & G - GENERAL CAMPUS																		
Social Sciences &	٠				P 1,191			Е	2,028									47,650
Management					W 1,476 C 42,955													
Science & Engineering	٠					Р	3,700 X	W	3,457			E	4,079					88,819
Building 2								С	77,583									
Castle 1200	-	1	•	1				Р	500	E	550							15.000
Facilities Renewal								w	750									
Site Development &								P	/68									10 400
Infrastructure (P4 & P5)								w	572									10,400
Site Development &									9,500	-								2 000
Infrastructure (P6)								w	110									2,000
Site Development &			•					-	1,000	Р	225							5 000
Infrastructure (P7)										w c	275							5,000
Campus Instructional			•							, c	1,500	Р	256	C	5.112			6.080
Space Renovations												w	312	E	400			0,000
Site Development &			•													Р	2.250	50.000
Infrastructure (P8)																	-,	21,000
Instruction & Student	•															Р	2,060	48,700
Academic Services Building																		

\* Total Project Budget may include proposed funding in years after 2014-15

#### NON-STATE FUNDED PROJECTS

	,	PRIA OBJE	MAR	Y /E				BUDGET YEAR				
PROJECT NAME	Enrollment Needs	Life Safety Deficiencies	Renewal/Modernization	New Program Initiatives	PREFUNDED	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	TOTAL PROJECT BUDGET
E & G - GENERAL CAMPUS	-											
Campus Approved Projects Under \$5 Million				•			\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	5,000
AUXILIARY AND FEE SUPPORTED FAC	ILIT	IES										
Campus Parking Lots G & H	•	T	T	T		1,335 LB						1,335
J.E. Gallo Recreation & Wellness Expansion	•					770 LB	2,000 G 14,330 LB					17,100
Multi-Purpose Recreation Field	•						1,000 G 4,500 LB					5,500
Campus Parking Lots I & J	•		ł	Ţ			905 LB					905
Administration Building	•			†					1,600 LB	35,950 LB		37,550
Student Housing Phase 4	•								48,700 LB			48,700
West Campus Site Development & Infrastructure	•								450 LB	9,550 LB		10,000
Campus Parking Lot K	•								1,135 LB			1,135
Student Union	•									1,900 LB	4,000 G 37,000 LB	42,900
Student Aquatics Center	•										675 LB	675

# MERCED CAMPUS 2010-11 State Capital Funding Request

# Castle Building 1200 - Facilities Renewal PWC: \$14,450,000

This project will provide a comprehensive upgrade to inadequate building infrastructure and utility systems in Castle Building 1200 in Atwater, CA (leased space in the Castle Commerce Center) and reconfigure approximately 19,200 ASF of underutilized space to meet the demand for modern research facilities, primarily for the Schools of Natural Sciences and Engineering. The project will include renewal of building electrical, plumbing, HVAC, emergency power, life-safety, laboratory service and information technology systems to meet current code requirements and to support intensive modern research activities. Flexible, generic wet and dry laboratories will accommodate further fit-out by the University as future researchers are assigned space and as research programs evolve. Total project cost is \$15,000,000.

### Social Sciences and Management Building E: \$2,028,000

This project will equip the new Social Sciences and Management Building, currently under construction, which will provide 61,900 ASF of classrooms, teaching laboratories, academic and administrative offices, and research and scholarly activity space to support continued growth in the School of Social Sciences, Humanities and Arts. Total project cost is \$47,650,000.

## Science and Engineering Building 2 WC: \$81,040,000

This second building for the School of Natural Sciences and the School of Engineering will provide critically needed space to support expanding instructional and research activities that cannot be accommodated in Science and Engineering Building 1. The project will provide approximately 56,800 ASF of teaching and research laboratories and laboratory support space, scholarly activity and study facilities, faculty offices, and administrative space to meet growing student demand in these disciplines and increased faculty workload. The project will accommodate new and expanding programs in physical/analytical chemistry, experimental physics, synthetic/organic chemistry, biology, mechanical and electrical engineering, and bioengineering. Total project cost is \$88,819,000.

## Site Development and Infrastructure Phases 4 & 5 PWC: \$10,400,000

This project will complete critical infrastructure and site development elements for the campus academic core, including: 1) improvements to the campus storm water management system; 2) improvements to equipment and building systems at the Central Plant, Telecommunications Building, and Pump Station; 3) construction of a materials lay-down and handling area and corporation vard for Facilities Management, including an access road to the site; 4) extension of buried utilities to future academic building sites; and 5) permanent improvements to a portion of the campus loop road (which was outside the initial campus environmental boundary) including storm water management elements to mitigate environmental impacts to adjacent, protected wetlands. Total project cost is \$10,400,000.

# Site Development and Infrastructure Phase 6 PWC: \$2,000,000

The project would complete key phases of work related to the federal Clean Water Act Section 404 permit conditions including: 1) construction of a dirt perimeter road to improve access to the outer areas of the campus and community, 2) construction of appropriate boundary fencing between the campus and preserve lands, 3) mass grading to improve storm water management, 4) construction of a kit fox bridge, and 5) salvage of impacted wetland soils. Total project cost is \$2,000,000.

### 2011-15 State Capital Program

#### **Campus Instructional Space Renovations** Estimated project cost: \$6,080,000

This project will renovate approximately 4,500 ASF in the Science and Engineering 1 building (ground floor), converting laboratories that had been used temporarily for research purposes back to teaching laboratories and support space for student instruction. The project will also provide technological modifications in existing teaching labs to improve their utilization and functionality for interdisciplinary instruction. In addition, approximately 2,500 ASF of instructional space in the Classroom and Office Building will be reconfigured to be more responsive to established pedagogy needs.

## Instruction & Student Academic Services Building

Estimated cost for P: \$2,060,000

This project will construct a new 51,000 ASF mixed-use building to accommodate growing student and academic support programs, including space for enrollment management, academic advising, financial aid, graduate and international student programs, disability services, and student business services. The building will provide new instructional space (computer learning), conference rooms, multi-purpose space, student processing and advising areas, offices, and related support space. Total estimated project cost is \$48,700,000.

# Site Development and Infrastructure Phase 7

Estimated project cost: \$5,000,000

This project will install new site infrastructure, site utilities, and equipment for Statesupportable instruction and research programs, providing critical connections to and through the campus academic core. This includes major roadways (a portion of Ranchers Road) and connections associated with planned campus development to support 5,000 student FTE. Improvements would address access and safety deficiencies and provide storm water management infrastructure to comply with required environmental mitigations.

# Site Development and Infrastructure Phase 8

Estimated cost for P: \$2,250,000

This project will provide the initial infrastructure and utilities necessary for the next phase of campus development. It includes mass grading and basic infrastructure for approximately 89 acres, utilities distribution and connections to the existing Central Plant, and a data/telecommunications building. The infrastructure components will include bridges, major roadways, bicycle and pedestrian paths, lighting, landscaping, safetycall boxes, and a sanitary sewer pump/lift station. The utilities distribution system will include expansion of the campus electrical and communications distribution systems and other major utilities systems such as sewer, non-potable (irrigation) and potable water, storm water management and erosion control, natural gas, heating hot water, and chilled water. This project will provide access and services to future State-eligible facilities in the upper portions of the Gateway and Campus West Neighborhoods, as well as connections to the existing North Campus area. Estimated total project cost is \$50,000,000.

# 2009-15 Non-State Capital Program

# Administration Building and Alumni/Visitors Center

Estimated project cost: \$37,550,000

This project will construct a 50,000 ASF multipurpose facility, providing space for general administration, conferences, and an alumnivisitor center. The building will allow consolidation of programs currently housed in off-campus leased space and provide new space for conferences, alumni, and visitors.

# Baseball & Softball Competition Field Complex

Estimated project cost: \$5,500,000

This project will construct an outdoor complex that will provide competitive venues for baseball and softball intercollegiate programs, as well as intramural recreation programs. The project will provide playing areas that meet current NCAA standards (with lights) along with necessary spectator and support facilities (restrooms, press box, seating, concessions and storage).

# Campus Approved Projects Under \$5,000,000

Estimated cumulative project costs: \$5,000,000

The campus will renovate and fit out existing research laboratories and laboratory support spaces in order to accommodate new equipment and technology associated with emerging and evolving research programs.

#### **Campus Parking Lots G&H**

Estimated project cost: \$1,335,000

This project will provide new surface parking lots on the southeast corner of the intersection of Lake and Bellevue Roads, providing approximately 650 new parking spaces, with lighting, designated for students, staff, faculty, and visitors.

#### **Campus Parking Lot K**

Estimated project cost: \$1,135,000

This project will construct a new surface parking lot east of the current Facilities Services buildings, providing approximately 325 parking spaces designated for students, staff, faculty, and visitors.

#### **Campus Parking Lots I&J**

Estimated project cost: \$905,000

This project will construct new surface parking lots north of the Kolligian Library and east of the, providing approximately 175 and 255 parking spaces respectively (430 total) and designated for students, staff, faculty, and visitors.

# Joseph Edward Gallo Recreation and Wellness Center Expansion

Estimated project cost: \$17,100,000

The Joseph Edward Gallo Recreation and Wellness Center is one of the most utilized facilities on campus, with demand already in excess of capacity during all hours of operation. This project will provide approximately 30,000 ASF of expansion space for additional sports instruction rooms, allpurpose meeting/exercise/dance rooms, gymnasium space, a larger cardio/workout room, equipment storage, office space, and a climbing wall.

#### **Multi-Purpose Recreation Field**

Estimated project cost: \$5,500,000

This project will provide a multi-purpose recreation field that includes an artificial turf surface, lighting, fencing, and signage. The scope will include associated site development and utilities.

#### **Student Aquatics Center**

Estimated cost for P: \$675,000

This project will complete preliminary plans for a new Student Aquatics Center for intercollegiate athletics, club and intramural sports, and recreational classes. The Center will include a pool and pool deck and a 10,000 ASF building housing locker rooms, administrative space, a reception area, team meeting space, storage, pool equipment, and spectator seating. Estimated total project cost is \$15,000,000.

#### **Student Housing Phase 4**

Estimated project cost: \$48,700,000

This project will provide approximately 350 student beds and one live-in staff apartment in a 58,000 ASF facility located adjacent to Student Housing Phase 3 in the Campus West Neighborhood.

#### **Student Union**

Estimated project cost: \$42,900,000

The Student Union project will construct an approximately 50,000 ASF facility to accommodate student programs, services, and activities. The building will house a variety of functions including the Office of Student Life, Student Government offices, Cultural Center, Learning Center, bookstore, convenience store, food services, meeting rooms and lounges, student activity spaces, copy center, ticket/events office, specialized computer lab, multi-purpose ballroom, and bank or credit union. The project also will incorporate outdoor areas to accommodate events, casual dining, seating, and other interactive functions.

# West Campus Site Development and Infrastructure

Estimated project cost: \$10,000,000

This project will provide site development, utilities, and other infrastructure improvements to support development for housing, dining, administrative support buildings, recreation, and parking. The project scope includes mass grading, major roadways, pedestrian and bicycle paths, hardscape and landscape, lighting, and security features. The utilities distribution system will include expansion of the campus electrical distribution system and other major utilities and connections to the primary campus utility networks.

# **RIVERSIDE CAMPUS**

Originally authorized as a citrus experimental station in 1907, the Riverside campus became a general campus of the University in 1959. Since that time, UCR has become a center of research and learning in the Inland Empire region of southern California. Campus enrollment increased substantially over the past decade, creating a demand for instruction and research facilities, specialized student services, athletic and recreation facilities, housing, and various campus support services. These facilities led to additional requirements for communications networks, roadways, pedestrian walkways, open space, underground utilities, and other infrastructure systems.



Highlander Union Building

In this 2009-2015 State and Non-State Capital Improvement Program, the Riverside campus is seeking to address the following needs:

- Modernization of aging and obsolete academic buildings to extend their useful life and optimize energy efficiency.
- Renewal and extension of campus infrastructure to address system deterioration and insufficient capacity and realization of sustainability objectives through greater system efficiencies.

- Initial development of the West Campus for professional and graduate programs, in response to campus growth pressures.
- Completion of interim health sciences research and teaching facilities to accommodate the initial contingent of School of Medicine students.

#### **Capital Needs**

The Riverside campus currently occupies more than 1,100 acres, serves 18,082 student FTE, and offers 181 degree programs. In response to current budgetary uncertainties, enrollment at the University over the next five years will be reduced to match funded levels; for UCR, budgeted enrollment will be scaled back to 17,159 over the next several years.

As of 2008-09, UCR facilities comprise 6.5 million GSF of building space, accommodating approximately 1,400 faculty and researchers and 5,900 staff, in addition to the student population. The 2005 Long Range Development Plan (LRDP) articulates the need for approximately 11.8 million GSF to accommodate a total of 25,000 students, 1,742 faculty and researchers, and 8,800 staff through the planning horizon of 2014-15. UCR's ability to realize the projected population and square footage by the horizon year will be affected by a variety of factors, including funding availability, demographic changes, student preferences, and academic trends.

Currently the Riverside campus is undertaking an amendment to the 2005 *LRDP* to extend its

RIVERSIDE CAMPUS FACTS	
Established	1907
FTE Enrollment 2008-09	
Undergraduates	15,896
Graduate students	2,132
Health science students	54
Campus Land Area	1,112 acres
Campus Buildings 4	.4 million ASF

horizon year to 2020 while holding the maximum 25,000 enrollment target constant. These revised assumptions reflect a more gradual rate of enrollment growth than was assumed in the original formulation of the *LRDP*. The launch in 2009 of a comprehensive strategic planning exercise, which will incorporate UCR's latest academic planning efforts, will also impact future capital needs.



# Renewal and Replacement of Existing Facilities

The performance of building systems and infrastructure-renewal needs occupy a very critical place in the 2009-15 capital program. Of the 6.5 million GSF in campus assets, approximately 43% are at least 30 years old and due for either renewal of building systems or complete replacement. Even with regular maintenance, building systems wear out in normal use and require scheduled replacement. Treated as a strategic investment, systems renewal can both extend the useful life of a building and yield operating cost efficiencies to the campus, particularly in aging research facilities.

The 2009-15 capital program seeks funding of the following renewal projects: Batchelor Hall Building Systems Renewal, the first increment of UCR's capital renewal program, and East Campus Infrastructure Improvements Phase 3. The campus will be undertaking a comprehensive review of capital renewal and deferred maintenance in 2009-10 to match academic facility requirements with available funds.

#### **New Space**

In response to the dramatic enrollment increases of the past decade (85% over 1998-99 levels), the Riverside campus capital program includes new academic facilities to be located on the West Campus, as well as new student housing and recreational facilities. The new West Campus Graduate and Professional Center Phase 1 will house two graduate programs (Graduate School of Education, School/Department of Public Policy), shared instruction and instructional-support spaces, and associated infrastructure. Locating these programs in the new West Campus space will also free up critically needed space on the East Campus for academic program use.

The capital program also includes construction of the new Glen Mor 2 student apartment complex of 800 beds, 600 spaces of structured parking, and associated support facilities. The Glen Mor 2 project is predicated on current waiting-list demand. Completion of the project will move UCR toward its goal of becoming a more residential campus, as well as satisfying the specific *LRDP* objective of accommodating 50% of students in UCR-controlled housing.



Lothian Residence Hall

Lastly, the 2009-15 capital program anticipates the completion of the Student Recreation Center Expansion. The existing facility was completed in 1994 to serve a student population of 11,000. The planned facility will address continued demand and respond to diversification of recreationprogram needs. Approval of the Student Recreation Center Expansion is dependent on a student referendum in Spring 2010.

#### **Health Science Needs**

Development of facilities for the health sciences is proceeding on two parallel paths: near-term transitional facilities within the existing academic core of UCR's East Campus and, concurrently, planning for permanent facilities on UCR's West Campus within a newly designated School of Medicine precinct.



Carillon Tower

East Campus Transitional Instruction and Research Space. Instructional and related support space will be developed within the academic core immediately adjacent to the UCR/UCLA Biomedical Sciences program. This will be realized through the Health Sciences Teaching Center project, to be completed in tandem with equipment and facility improvements constructed with PRIME/Telemedicine funding. Transitional needs for research space will be met in the Health Sciences Surge Building, currently under construction and slated for completion in the summer of 2010.



Health Sciences Surge Building

West Campus Instruction and Research Space. The planned initial build out of new health sciences facilities includes the School of Medicine (SOM) Instruction and Research 1 and 2 projects, and the related SOM Infrastructure 1 and 2 projects. A pre-design study for the infrastructure projects has been completed. Amendment of UC Riverside's 2005 LRDP to create the West Campus SOM precinct is slated for spring 2010. The initial SOM West Campus facilities will be scheduled in coordination with academic and enrollment planning for the School. Currently, however, estimated allocations of State funds would not be sufficient to complete these projects within the 10year planning period. Completion of the projects within this period would require identification of additional State funding or alternative fund sources for capital startup needs.

#### RIVERSIDE CAMPUS (\$ in 000s)

SUMMARY

BUDGET YEAR	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
STATE FUNDING	0	83,754	34,838	67,826	33,885	62,787
NON-STATE FUNDING	199,896	60,489	28,631	117,740	266,700	0
TOTAL	199,896	144,243	63,469	185,566	300,585	62,787

#### STATE FUNDED PROJECTS

	,	PRIA OBJE	MAR' CTIN	Y /E	BUDGET YEAR									
PROJECT NAME	Enrollment Needs	life Safety Deficiencies	Renewal/Modernization	Vew Program Initiatives	PRFFUNDED	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	TOTAL PROJECT BUDGET*		
E & G - GENERAL CAMPUS		-	-	-	THE CHOLE	2007 10	2010 11		2012 13	2013 11	2011 13			
Environmental Health and Safety Expansion			•		P 400 W 635 LRB W 215 X C 15,984 LRB C 867 X		E 373					18,474		
Batchelor Hall Building Systems Renewal			•		P 402		W 768 C 11,875					13,045		
Engineering Building Unit 3			•				P 2,372 W 3,310 C 62,293		E 4,185 E 1,046 X			73,206		
Capital Renewal Program		•					2,763		3,737	3,745		10,245		
West Campus Infrastructure Improvements				•				P 548 W 733 C 13,731				15,012		
West Campus Graduate and Professional Center, Phase 1				•				P 1,482 W 2,044	C 41,869	E 3,136		48,531		
West Campus Infrastructure Improvements 2				•					P 480	W 800	C 12,862	14,142		
West Campus Graduate and Professional Center, Phase 2				•					P 1,255	W 2,092	C 41,840	49,187		
East Campus Infrastructure Improvements, Phase 3			•							P 175 W 337 C 7,300		7,812		
Psychology Building South Wing	•										P 471 W 941	16,950		
Academic Facilities Improvements Step 1			•								P 627 W 1,046	20,073		
E & G - HEALTH SCIENCES									-					
School of Medicine Infrastructure Improvements 1				•				P 2,430 HSE W 1,345 HSE C 23,156 OT⊢	1			26,931		
School of Medicine Instruction and Research 1				•				P 2,900 HSE W 4,100 HSE	C 6,226 HSE C 68,774 OTH		E 5,000 HSE	87,000		
School of Medicine Instruction and Research 2				•				P 5,525 HSE P 5,475 OTH	W 7,500 HSE W 7,500 OTH	C 16,300 HSE C 266,700 OTH		321,000		
School of Medicine Infrastructure Improvements 2				•					P 317 HSE W 2,257 HSE C 40,420 OTH			42,994		

\* Total Project Budget may include proposed funding in years after 2014-15

#### NON- STATE FUNDED PROJECTS

		PRI <i>N</i> OBJE	MAR' CTIV	Y /E				BUDGE	T YEAR			
PROJECT NAME	Enrollment Needs	Life Safety Deficiencies	Renewal/Modernization	New Program Initiatives	PREFUNDED	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	TOTAL PROJECT BUDGET
E & G - GENERAL CAMPUS					-		-		-			
Health Sciences Teaching Center			•			5,704 X						5,704
AUXILIARY AND FEE SUPPORTED FAC	ILIT	IES			•					•	•	
Creekside Terrace	•					14,125 LB 7,000 X						21,125
Summer Ridge	٠					19,350 LB						19,350
Glen Mor 2	•					144,737 LB 3,384 N						148,121
Barn Expansion 1			•			5,346 LB 250 N						5,596
Barn Expansion 2			•				7,632 LB 1,500 N					9,132
Student Recreation Center Expansion	•						51,357 LB					51,357

# RIVERSIDE CAMPUS 2010-11 State Capital Funding Request

# Batchelor Hall Building Systems Renewal WC: \$12,643,000

This project will provide a comprehensive upgrade and replacement of obsolescent building infrastructure and utility distribution systems, including HVAC, electrical, plumbing, and fire protection. The completed project, covering approximately 57,300 ASF, will provide the building systems necessary to support moderateintensity contemporary research space and related program functions. Total project cost is \$13,045,000.

# Capital Renewal Program \$2,763,000

The multi-year Capital Renewal Program will address the highest priority needs of the campus's aging physical plant, including several core campus buildings and the campus's utility distribution systems. Projects will include renewal and replacement of obsolescent building infrastructures, including HVAC, electrical, plumbing, and life safety systems that have reached the end of their useful life, are neither code-compliant nor energy-efficient, and are unable to support contemporary instructional and research activities. Total program cost is \$10,245,000.

## Engineering Building Unit 3 PWC: \$67,975,000

This project will provide 53,475 ASF of new construction to meet critical space needs for interdisciplinary programs in engineering, including bioengineering and chemical and environmental engineering. The new facility will include class laboratories, research laboratories and support space, academic offices, scholarly activity spaces, and shared research core facilities. Total project cost is \$73,206,000.

# Environmental Health and Safety Expansion E: \$373,000

In response to campus growth and an increasingly complex regulatory environment, this project will provide a new facility to accommodate expanded program needs for the Environmental Health and Safety operations. The new building will provide 17,905 ASF of space for hazardous materials handling, laboratory functions, a training and learning center, offices, administrative support, and associated site improvements. Total project cost is \$18,474,000.

## 2011-15 State Capital Program

### Academic Facilities Improvements Step 1

Estimated cost for PW: \$1,673,000

This project is the first phase of a multi-phase, multi-faceted effort to upgrade core campus instruction and research (I&R) facilities that can no longer support current and future program needs and require investment to extend their useful life. Approximately 66% of UCR's East Campus buildings are over 40 years old, affecting over 50% of the available ASF. This project will upgrade or replace systems infrastructure, address life-safety code and program deficiencies, optimize building performance and operating efficiencies (e.g. energy, water, chilled water usage), and complete program based renovations that increase long-term flexibility of these buildings. Estimated total project cost is \$20,073,000.

#### East Campus Infrastructure Improvements Phase 3

Estimated cost for PWC: \$7,812,000

This project is part of a phased strategy to address deficiencies in UCR's chilled water, potable water, sanitary sewer, and electrical services in the East Campus academic core. It will continue the campus efforts, begun in the East Campus Infrastructure Phase 1 and 2 projects, to add capacity to these systems in response to prior campus growth, as well as to address obsolescence of aging systems averaging 30-50 years old.

## **Psychology Building South Wing** Estimated cost for PW: \$1,412,000

This project will add 18,000 ASF to the existing Psychology Building. The new South Wing will provide 18 laboratories to support Psychology Neurosciences research, as well as research support space and faculty offices. The programs currently are housed in space which is inadequate to support modern research in this field. Estimated total project cost is \$16,950,000.

# School of Medicine Infrastructure Improvements 1

Estimated cost for PWC: \$26,931,000

This project will construct the below-ground infrastructure improvements necessary to support the initial development of UCR's School of Medicine (SOM). It will provide domestic water, sanitary sewer, electrical power, data communications, natural gas, and associated distribution systems (e.g. tunnels, trenching, and ducting).

# School of Medicine Instruction and Research 1

Estimated cost for PWCE: \$87,000,000

This project will provide approximately 144,000 GSF of new space associated with the initial buildout of UCR's School of Medicine. The project, supporting four 100-student cohorts, will include lecture halls, classrooms, a gross anatomy suite, basic sciences teaching laboratories, a learning resource center, a clinical skills center, a simulation center, student services space, and administrative support space.

# School of Medicine Instruction and Research 2

Estimated cost for PWC: \$309,000,000

This project will construct approximately 310,000 GSF of new research laboratory and laboratory support space for the research teams associated with the initial buildout of UCR's School of Medicine on the West Campus. The facilities will include laboratory core space (e.g. imaging, tissue culture, etc.), office and office support space, and a component of animal research space (e.g. holding facilities, imaging, and procedure rooms). Estimated total project cost is \$321,000,000.

# School of Medicine Infrastructure Improvements 2

Estimated cost PWC: \$42,994,000

This project will provide above-ground infrastructure improvements required to support the initial development of UCR's School of Medicine. The infrastructure improvements will include a central plant (chillers and boilers), energy management systems, landscape, hardscape, and roadways.

#### **West Campus Infrastructure Improvements** Estimated cost for PWC: \$15,012,000

This project will provide the initial phase of development for circulation (roadways and pedestrian pathways) and utility improvements (domestic water, sanitary sewer, storm drain, electrical power, and communications) to accommodate the academic development of the West Campus. The improvements will support facilities operations for the West Campus Professional and Graduate Center Phase 1 project.

# West Campus Graduate and Professional Center Phase 1

Estimated cost for PWCE: \$48,531,000

This project will provide approximately 74,000 GSF of new instructional and research space, academic office and support space, and shared support spaces for UCR's Graduate School of Education and the School of Public Policy. The relocation of these programs, currently on the East Campus, to the new West Campus facility will be the initial step in a longer term development of the West Campus academic precinct for graduate and professional programs.

### West Campus Infrastructure Improvements 2 Estimated cost for PWC: \$14,142,000

This project is the second phase of infrastructure development for circulation (roadways and pedestrian pathways) and utility improvements (domestic water, sanitary sewer, storm drain, electrical power, and communications) to accommodate the academic development of the West Campus. The improvements will support facilities operations for the West Campus Professional and Graduate Center Phase 2 project.

# West Campus Graduate and Professional Center Phase 2

Estimated cost for PWC: \$45,187,000

This second phase of the West Campus Professional and Graduate Center development will provide approximately 80,000 GSF to house the Anderson Graduate School of Management (AGSM), as well as shared facilities for academic programs located in this development zone of the West Campus. AGSM currently occupies two wings of the Citrus Experiment Station, located in the academic core of the East Campus, which lacks adequate space and has little or no room for expansion. The new facility will alleviate the existing space shortages and will accommodate anticipated growth as well as instructional and research program diversification. Estimated total project cost is \$49,187,000.

## 2009-15 Non-State Capital Program

#### **Barn Expansion 1**

Estimated project cost: \$5,596,000

This project will provide approximately 2,467 GSF of replacement space for the University Club in the East Campus academic core. The existing University Club is slated to be demolished to make room for an expanded kitchen serving the Barn Dining facility. The project also will provide 38,000 SF of hardscape and landscape improvements for integrated service access, as well as landscape improvements for the new facility.

#### **Barn Expansion 2**

Estimated project cost: \$9,132,000

This project will provide approximately 7,900 GSF for the expansion of kitchen facilities serving the existing Barn Dining facility, located in the East Campus academic core. The siting and footprint of the expansion requires relocation of the existing University Club to a new location (under a separate project), and demolition of the associated space.

#### **Creekside Terrace**

Estimated project cost: \$21,125,000

This acquisition of 13.5 acres includes a partially completed residential development. Of the originally planned 78 homes, 24 have been completed, as well as community facilities (clubhouse, pool, tot lots, etc.). UC Riverside is prioritizing the 24 homes for its for-sale faculty housing program. The longer-term objective is to develop the total acreage with additional for-sale homes or townhomes to expand UC Riverside's for-sale faculty housing program as demand and market conditions warrant.

#### Glen Mor 2

Estimated project cost: \$148,121,000

This project will construct the second increment of student apartments, shared community spaces, and structured parking to augment the scope of UCR's planned student residence community. The project will be located adjacent to other undergraduate student housing and dining facilities on the East Campus.

#### Health Sciences Teaching Center

Estimated project cost: \$5,704,000

This project will renovate teaching and support space for UCR's Biomedical Sciences program, as well as modernize the building's infrastructure and address life-safety code deficiencies. The project's scope, schedule and phasing will be coordinated closely with the State-funded UCLA PRIME/Telemedicine 2 project.

#### **Student Recreation Center Expansion**

Estimated project cost: \$51,357,000

This project will provide 46,000 ASF of new construction, 6,800 ASF of renovated space, and approximately 21,000 SF of outdoor pool and related site improvements. The new space will be located on the south side of the existing Student Recreation Center and will connect to the current facility via a pedestrian bridge. The project will consolidate all weight-training and fitness areas into the new space and use the renovated space for multi-purpose rooms, a rock climbing wall, and storage space for outdoor excursions. The leisure pool will be located adjacent to the expansion space to optimize the shared use of the facilities.

### Summer Ridge

Estimated project cost: \$19,350,000

This acquisition includes an apartment complex comprised of 136 units and 185 covered surface parking spaces on a 5.5-acre site immediately adjacent to the UCR campus and other student housing complexes. Approximately 95% of the units in the complex are rented by UCR students. The acquisition provides the campus with both a strategic asset to expand housing offerings in the near term and the opportunity to provide interim housing options in the long term for students with families.

# SAN DIEGO CAMPUS

UC San Diego's origins date to 1912 when the Scripps Institution of Oceanography became part of the University of California. Established as a comprehensive general campus in 1960, UC San Diego has evolved into an internationally renowned research university. A distinguishing academic feature of the campus is found in its six semi-autonomous undergraduate colleges. Each college has a distinctive educational philosophy that provides academic and extramural



**Biomedical Library** 

opportunities typically found only in small liberal arts colleges, and each possesses its own residential and academic facilities. Professional and advanced degrees and research opportunities are provided by the general campus's divisions and graduate programs, the Graduate School of International Relations and Pacific Studies, the Rady School of Management, the Scripps Institution of Oceanography, the School of Medicine, the Skaggs School of Pharmacy and Pharmaceutical Sciences, and the UC San Diego Medical Center.

As UC San Diego endeavors to provide adequate space to support enrollment, the capital program must assure the construction of essential new space as well as the renewal and upgrade of deteriorating buildings and infrastructure. Improved campus facilities are needed to support emerging academic and research programs critical to California's economy.

Several areas comprise capital needs at the San Diego campus:

#### **Instruction and Research**

As programs have evolved, especially in the last decade, a shortage of space occurred in many campus instruction and research programs. Construction of new facilities did not keep pace with past periods of significant enrollment growth. Without construction of new facilities, the campus will continue to face a shortage of space and limited flexibility.

# Renewal of Existing Facilities and Infrastructure

Many of the buildings serving the general campus and the health sciences programs are over 40 years old, and a few at the Scripps Institution of Oceanography are nearly 100 years old. Renewal and upgrades are required to respond to health and safety requirements, obsolescence, and changing academic programs. These older buildings no longer efficiently or effectively support modern teaching and research.

#### **Utility Systems**

Improvements to the campus and medical center utilities plants, including renewal of building systems and introduction of new energy management and energy conservation equipment, have proved to be efficient and cost-effective and

SAN DIEGO CAMPUS FACTS	5	
Established	1912	
FTE Enrollment 2008-09		
Undergraduates	23,842	
Graduate students	3,645	
Health science students	1,705	
Campus Land Area	2,143 acres	
Campus Buildings	8.7 million ASF	
Hospitals and Clinics	877,998 ASF	

will continue to be implemented over the next several years. The campus will continue vigorous investigation and implementation of "green" energy conservation measures. Improvements to the campus telecommunications network will accommodate expanding computing and instructional technologies.

### **Capital Needs**

UC San Diego's capital improvement program will balance new construction, renovation, building system upgrades, and the renewal and expansion of infrastructure. Private gifts and grants, industry partnerships, and federal grants and contracts will continue to provide important capital funding to complement State funding.



#### **New Space**

Past enrollment growth and the complex nature of the space required to support UCSD's educational and research programs have driven the need for new buildings (and facility renewal projects). General campus enrollment grew from approximately 17,340 full-time-equivalent (FTE) students in 1998-99 to 27,500 FTE students in 2008-09, a 60 percent increase. In response to current budgetary uncertainties, enrollment at the University over the next five years will be reduced to match funded levels. For UCSD, budgeted enrollment will be held to 26,375 over the next several years. Availability of space has not kept up with significant prior enrollment growth and, despite accounting for the slight reduction in the next few years, critical deficiencies of space remain for many academic departments in the general campus and health sciences schools.

In addition, an increased demand for medical care has resulted in UC San Diego's health sciences programs playing increasingly important roles in training health-care professionals, delivering essential health-care services, and undertaking scientific research. To better serve its patients, the



Bear Garden and Engineering District

Medical Center is embarking on major capital improvement projects to provide additional inpatient beds and improve health services to the San Diego region.

Similarly, increasing emphases on the global climate and sustainability are compelling expansion of the Scripps Institution of Oceanography.

# Renewal and Replacement of Existing Facilities

Funding is needed for the systematic renewal of building systems that wear out with normal use and require replacement on a regular basis. Renewal categories include mechanical systems (such as heating, ventilation, and air conditioning), plumbing, elevators, electrical equipment, fire protection, roofs, and built-in laboratory equipment.

In addition to addressing ongoing renewal needs, the campus has a substantial backlog of deferred maintenance in State-supported facilities. The current list of "mission critical" deferred maintenance and renewal projects totals approximately \$32 million. Long-term underfunding of basic ongoing maintenance has exacerbated the campus's deferred maintenance problem by reducing the useful life of building systems. Modernizing these buildings and providing upgrades to meet fire, life-safety, and other code requirements are high campus priorities.

Over half of UC San Diego's major research buildings – including biology and chemistry laboratories, high-energy physics laboratories, and animal care facilities – require complex utility systems. A high proportion of laboratory and specialized research space is necessary to support UCSD's programs in science, engineering, and other technical areas, including fields that are being driven by rapid advances in information technology. This program modernization also is driving the need for renewal projects.

Implementation of renewal projects will ensure the availability of space for cutting-edge research and solidify UCSD's ability to recruit premier faculty, students, and staff.

#### **Sustainability Efforts**

An important component of the University's capital planning and design process entails incorporating environmentally sustainable features, with a special focus on conserving natural resources. UC San Diego's capital projects comply with the University of California Policy on Sustainable Practices and adopt energy-efficient and sustainable features to the fullest extent possible, consistent with budgetary constraints and regulatory and programmatic requirements. UCSD's goal is to incorporate sustainability design features that result in a USGBC LEED Silver (or higher) rating. The campus also recently completed a *Climate Action Plan* that includes goals and timelines for sustainability planning and actions to achieve climate neutrality.

Improvements to the campus and Medical Center utilities plants, including renewal of building systems and introduction of new energy management and energy conservation equipment, have proved to be efficient and cost-effective and will continue to be implemented over the next several years.

Life-cycle costing and evaluation of options have been made part of the design process to ensure that economy and sustainability in systems designs and equipment selection can be achieved. Parameters evaluated include cost, energy savings, operation and maintenance, replacement cost, and the ability to make future upgrades.



Price Center West Courtyard

#### SAN DIEGO CAMPUS (\$ in 000s)

SUMMARY

BUDGET YEAR	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
STATE FUNDING	61,895	40,567	146,898	74,670	68,740	27,659
NON-STATE FUNDING	704,245	260,490	129,090	73,190	28,000	29,570
TOTAL	766,140	301,057	275,988	147,860	96,740	57,229

#### STATE FUNDED PROJECTS

		PRI/ OBJE	MARY CTIV	Ē				BUDGET YEAR										
PROJECT NAME	Enrollment Needs	Life Safety Deficiencies	Renewal/Mo dernizati on	New Program Initiatives	PREFUNDED		2009-10		2010-11		2011-12		2012-13		2013-14		2014-15	TOTAL PROJECT BUDGET
E & G - GENERAL CAMPUS		1										-						
Structural and Materials Engineering Building	•				P 3,378 W 4,128 C 67,551	E E	2,305 4,244 X			E	890							82,496
Biological and Physical Sciences Building	•							Р	3,470	W C	4,024 72,994					E E	1,045 1,570 X	83,103
Campus Storm Water Management Phase 2			•					P W C	210 375 5,435									6,020
Satellite Utilities Plant				•				P W C	1,123 1,372 22,455									24,950
SIO Research Support Facilities			•					P W C	276 337 5,514									6,127
Muir Biology Building Renovation		•						-		P W	2,300 2,800	с	46,400					51,500
SIO Sverdrup Hall Renewal		•								P W	490 600	с	9,800					10,890
Campus Fire and Life Safety Improvements		•								P W	360 440	с	7,200					8,000
Instructional Technology Building			•									P W	2,710 3,360	С	61,135			69,550
Infrastructure Renewal Phase 1		•												P W	540 660	С	10,800	12,000
Building Systems Improvements Phase 1		•												P W	530 650	С	10,589	11,769
Capital Renewal Program			•								4,000		5,200		5,225		5,225	19,650
E & G - HEALTH SCIENCES					J					-								
Medical Teaching Facility Laboratory Renovation			•							P W C	2,600 HSE 3,200 HSE 52,200 HSE							58,000
MEDICAL CENTER																		
UCSD Medical Center East Campus Bed Tower				•	P 12,000 HR	P W C C C	9,590 HR 25,045 LB 59,590 CH 113,135 G 244,410 LB 59,430 I B											523,200

#### NON-STATE FUNDED PROJECTS

	6	PRO OBJEC	јест стіv	JECT RUDGET YEAR								
PROJECT NAME	nent Needs	ety Deficiencies	al/Modernization	ogram Initiatives								TOTAL
	Enrollr	Life Safe	Renewa	New Pr	PREFUNDED	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	PROJECT BUDGET
E & G - GENERAL CAMPUS			-									
Cogeneration Plant Expansion	1			•	23,759 LB	1,546 LB						42,665
						17,360 F						
Clean Water Utility Initiative			•			41,515 F						41,515
Institute for Molecular and Nano-Imaging				•		14,250 F 6,020 X						20,270
Marine Biomedical Sciences Building				•		14,340 F 5,835 LB						20,175
Nimitz Marine Facilities Pier Renovation			•			9,715 F 5,935 LB						15,650
Animal Care Central Cage Wash Facility			•			14,465 F						14,465
Urey Hall Renovation to Expand and Enhance Biomedical Research Facilities			•			6,705 F						6,705
Birch Aquarium Expansion				•				52,270 G				52,270
SIO Second Century Research Building				•					45,190 LB			45,190
Campus Projects below \$5M			•			13,000 X	13,000 X	13,000 X	13,000 X	13,000 X	13,000 X	78,000
E & G - HEALTH SCIENCES	<u> </u>	<u> </u>	-	I				<u> </u>				
Health Sciences Biomedical Research	1	1		•	136.150 LB	13.450 F						160.065
Facility 2					1,500 X	8,965 LB						
East Campus Office Building				•		22,400 LB						22,400
Medical Teaching Facility Renovation of Neural Circuits and Behavior Core			•			6,965 F						6,965
Clinical and Translational Research Institute				•			232,490 LB					232,490
AUXILIARY AND FEE SUPPORTED FA		ITIE	s	1	1			L				
East Campus Parking Structure				•		13,480 HR 3,369 PSR						18,310
International Center Expansion			ŀ	•		1,915 X 4,785 G						6,700
University House Rehabilitation		•				985 X 4,930 G						5,915
Wellness Center				•				48,820 G				48,820
MEDICAL CENTER	1	1		1								
Campus Projects below \$5M			•			15,000 HR	15,000 HR	15,000 HR	15,000 HR	15,000 HR	15,000 HR	90,000

# SAN DIEGO CAMPUS 2010-11 State Funded Project Request

### **Biological and Physical Sciences Building** P: \$3,470,000

This project will provide 51,000 ASF of modern instructional and research facilities for the divisions of Biological Sciences and Physical Sciences. The new building will include teaching and research laboratories, nuclear magnetic resonance research facilities, and office and administrative space. Total project cost is \$83,103,000.

## Campus Storm Water Management Phase 2 PWC: \$6,020,000

This project, part of an ongoing phased effort to improve storm water management on the campus, will replace obsolete, non-compliant utility systems and provide storm drain structural upgrades to comply with more stringent environmental regulations. The existing campus storm water utility systems and pollution controls cannot meet discharge requirements mandated by the city, state, and federal regulatory agencies. Total project cost is \$6,020,000.

### Satellite Utilities Plant PWC: \$24,950,000

This project will provide increased capacity for chilled water and emergency electrical power and expand the distribution of primary electrical power to the West Campus. Addressing capacity deficiencies resulting from previous enrollment and program growth, this new facility will supplement the existing Central Utility Plant. Total project cost is \$24,950,000.

# SIO Research Support Facilities PWC: \$6,127,000

This project will provide new space to support the seagoing and remote location research programs of the Scripps Institution of Oceanography (SIO). It will provide a flexible facility that will allow researchers to stage and test equipment prior to transport and use by research expeditions. These expeditions require specialized instrumentation, equipment, and support materials for use at sea and at remote sites. Many of the existing research support structures were built in the 1940s, are in deteriorating condition, are inadequate for storage or protecting expensive equipment, and do not provide the space or utilities necessary for staging and testing equipment. Total project cost is \$6,127,000.

# 2011-15 State Capital Program

#### **Building Systems Improvements Phase 1** Estimated cost for PWC: \$11,769,000

With an aging physical plant, the building systems of many campus facilities have reached or are beyond their useful life. Improvements are required to respond to obsolescence, health and safety requirements, and changing academic programs. This project will replace or upgrade building heating, ventilation, and air conditioning systems; electrical equipment; elevators and conveying systems; and roofing and window systems in buildings throughout the campus.

#### **Campus Fire and Life Safety Improvements** Estimated cost for PWC: \$8,000,000

This project will provide fire and life-safety improvements in selected State-supportable campus buildings to reduce fire-related hazards. Buildings will be retrofitted with modern, fully addressable fire alarm systems and automatic sprinkler systems, an interface module at the fire alarm panel will be installed in each building. These measures will provide early fire detection and occupant alerting, transmission of fire alarm information to the UC San Diego Police Department, and automatic fire suppression.

#### **Capital Renewal Program**

#### Estimated program cost: \$19,650,000

The State-funded Capital Renewal Program will address the needs of an aging physical plant that has been neglected through years of insufficient funding. Projects will include building systems improvements; energy efficiency, fire and healthsafety upgrades; and campus infrastructure improvements. Specific projects will be identified annually as part of the State capital budget request.

# Infrastructure Renewal Phase 1

Estimated cost for PWC: \$12,000,000

This project will replace or upgrade major campus infrastructure systems including gas, water, storm drain, and sewer. Most of the campus infrastructure is more than forty years old and has deteriorated to such a degree that failures are becoming common, particularly in lateral sewer lines.

#### Instructional Technology Building

Estimated cost for PWC: \$67,205,000

This project will address the campus need for a learning center by consolidating into a single facility a number of academic support programs dedicated to the development and use of instructional technology. The space released by those programs moving into the new facility will be reassigned to meet the needs of several core instruction and research departments. The project will also support efforts to improve the Education Studies Program by providing additional space to address existing space constraints. Estimated total project cost is \$69,550,000.

# Medical Teaching Facility Renovation

Estimated cost for PWC: \$58,000,000

This project will remodel, upgrade and correct deficiencies of research laboratories, core research facilities, and instructional spaces in the 31-year old Medical Teaching Facility, located on the School of Medicine campus. The majority of the laboratories were not designed for molecular biology, which is now the mainstay of the medical education research, or for the accompanying multi-investigator, large grants that characterize the School's current extramural funding and graduate training. The facilities are outdated and poorly configured. Renovation of this facility is essential to the instruction and research activities of the School.

#### **Muir Biology Building Renovation**

Estimated cost for PWC: \$51,500,000

This project will upgrade the Muir Biology Building for fire and life-safety and infrastructure improvements, and will renovate research laboratories to bring the building up to contemporary standards for its use as an instruction and research facility. The building has serious deficiencies with respect to its infrastructure and compliance with life-safety requirements. Muir Biology is one of the few laboratory buildings that is not sprinklered. In addition, other life-safety, telecommunications and general building systems require renewal or replacement.

#### SIO Sverdrup Hall Renewal

Estimated cost for PWC: \$10,890,000

This project will upgrade and/or replace the electrical, HVAC, and plumbing systems at Sverdrup Hall, the oldest laboratory building at UCSD, located at the Scripps Institution of Oceanography. These improvements will help prevent system failures and attain significant energy savings. The current condition of the laboratories and building systems adversely impacts the instruction and research conducted in the facility, decreases productivity, and costs the campus tens of thousands of dollars in excess energy costs.

### Structural and Materials Engineering Building

Estimated cost for E: \$890,000

This project will provide the final increment of equipment funding for a 110,593 ASF building, providing new instruction and research space for the Jacobs School of Engineering and the Department of Visual Arts. The building will include approximately 50,000 ASF of instruction, research laboratory, and office space for the Department of Structural Engineering; approximately 40,000 ASF of research laboratory and office space for the interdisciplinary Materials Engineering research group; and approximately 20,000 ASF of instructional, research laboratory, and studio space for the Department of Visual Arts. The new building will sustain the excellence of these programs by addressing space deficiencies due to significant past growth. Total project cost is \$82,496,000.

## 2009-15 Non-State Capital Program

#### **Animal Care Central Cage Wash Facility** Estimated project cost: \$14,465,000

Current animal sanitation facilities, duplicated in seventeen research support facilities across the campus, have become a major operating and maintenance expense and occupy a significant amount of space. This project will consolidate these operations with construction of an approximately 10,280 ASF new centralized facility, renovation of approximately 3,800 ASF of existing space, and relocation of existing equipment from three buildings to the new facility. This is a grantfunded project that will advance with receipt of a successful grant award.

#### **Birch Aquarium Expansion**

Estimated project cost: \$52,270,000

This project will provide approximately 39,000 ASF of new space for the existing Birch Aquarium to better serve educational and community outreach efforts. Expanded educational facilities are required to serve the needs of elementary and secondary education as well as adult visitors. The museum expansion will accommodate more interactive exhibits that will educate visitors about oceans, earth, and climate. The aquarium will add a large exhibit area for sharks and other large fish to help demystify these fish and educate the public about these threatened species. In addition, a new cafe will facilitate longer stays at the facility and provide needed services. This project is dependent upon gifts and will advance when sufficient funds are available.

### Campus Projects Under \$5 Million (General Campus)

These will include major capital projects under \$5 million anticipated to be funded over the next six years. Such projects typically include facility

renovations, equipment installations, or infrastructure projects

### Campus Projects Under \$5 Million (Medical Centers)

These will include major capital projects under \$5 million anticipated to be funded over the next six years. Such projects typically include facility renovations, equipment installations, or infrastructure projects in the hospital or in clinical settings.

#### **Clean Water Utility Initiative**

Estimated project cost: \$41,515,000

This project will combine a group of essential infrastructure improvements with several innovative technology and management measures that will demonstrate new conservation tools to water users statewide, as well as protect highly valued ocean resources. This project will include piping and pump station retrofits, infrastructure mapping, water meter installation and automation, water recycling, water conservation retrofits, wastewater treatment and piping improvements, storage tank projects, and structural treatment controls. This is a grant-funded project that will advance when funds are available.

### Clinical and Translational Research Institute

Estimated project cost: \$232,490,000

This project will construct a new approximately 180,000 ASF facility in the East Campus Health Sciences neighborhood, and will provide critical dry and wet bench research laboratory, core facilities and research support, and office space for Health Sciences. The new facility will require expansion of the East Campus Central Utility Plant, which is included as part of this project.

### **Cogeneration Plant Expansion** Estimated project cost: \$42,665,000

This project will increase the production and distribution of electrical and steam-generated power to meet the demands of the campus. The existing cogeneration operations at the Central Utility Plant on campus, including a waste-heat recovery system, will be expanded, and distribution capabilities of the North Campus Switching Station will be extended to deliver the additional power.

#### East Campus Office Building

Estimated project cost: \$22,400,000

This project will provide approximately 56,000 ASF of essential office and support space for Health Sciences on the East Campus. With the continuing growth of research and clinical services on the East Campus, there is insufficient office space for faculty and staff. This project will allow for consolidation of departments, reductions in lease space, and interim space for departments impacted by other construction projects.

#### **East Campus Parking Structure**

Estimated project cost: \$18,310,000

This project will provide 1,030 parking spaces in a new structure to meet the patient, visitor, and staff parking needs of the East Campus neighborhood and provide convenient access to medical facilities. With current facilities and planned new construction, the demand for parking in proximity to the medical center facilities will increase significantly. A portion of the parking structure will be constructed under a synthetic turf recreational field.

# Health Sciences Biomedical Research Facility 2

Estimated project cost: \$160,065,000

This project will construct a new facility providing approximately 110,000 ASF of critically needed space at the School of Medicine for instruction and research programs. It will include research laboratory and support space, as well as academic and administrative office and support space. The facility will support growing disciplines, including medical genomics, and will accommodate critical growth needs for several clinical science departments. If awarded a federal grant, the size of this facility would be increased to provide additional research facilities for the Institute for Genomic Medicine.

# Institute for Molecular and Nano-Imaging

Estimated project cost: \$20,270,000

This project will construct a new facility with research laboratory, laboratory support, and academic and research office space for programs emphasizing the use of nano-imaging techniques to advance the study of the chemical physics of biology, advanced materials, and superconductivity. Primary users will be the Department of Chemistry and Biochemistry and the Department of Physics. This is a grant-funded project that will advance when funds are available.

#### **International Center Expansion**

Estimated project cost: \$6,700,000

This project will construct new space and renovate existing space in the International Center, providing additional program space and modernizing and addressing existing inefficiencies. The campus plans to increase student participation in study abroad programs to ensure that, by 2013, 50% of UC San Diego's undergraduate students will have studied abroad before graduation. The International Center also is increasing its programs and services to the campus's growing international student and scholar population and providing undergraduates with critical knowledge, skill, and sensitivities for a well-rounded education. This is a gift-funded project that will advance when sufficient funds are available.

#### Marine Biomedical Sciences Building Estimated project cost: \$20,175,000

This project will construct a new building providing research laboratory, laboratory support, and office space to support cutting-edge marine biomedical research. The marine environment represents a rich, yet largely untapped resource for the discovery of new drugs as well as biochemical probes to examine the foundations of human disease. New facilities are necessary to support research in marine-derived pharmaceuticals, chemical biology, genomics, and molecular and genetic biosynthesis, as well as efforts to promote discoveries benefiting public health. This is a grant-funded project that will advance when funds are available.

## Medical Teaching Facility Renovation of Neural Circuits and Behavior Core Estimated project cost: \$6,965,000

This project will renovate space in the Medical Teaching Facility to consolidate and modernize a neuroscience core, supporting neural circuits and behavior. The modernized research laboratory and support space will support campus research, as well as the broader, highly-interactive community-based neuroscience research. This is a grant-funded project that will advance when funds are available.

#### Nimitz Marine Facilities Pier Renovation

Estimated project cost: \$15,650,000

This project will provide major repairs and upgrades to modernize the pier and wharf facilities at the Nimitz Marine Facility which supports oceanographic research vessels funded by the National Science Foundation and other federal agencies. The structures are nearing the limit of their designated service life and now exhibit dire structural problems. Major repairs are required to continue to serve the research fleet safely and efficiently, and modernization is necessary to expand fleet support services. The proposed project would repair and modernize the pilings, deck, fendering, and utility systems of the pier and wharf to allow the facility to support the physical and technical demands of existing and planned vessels.

# SIO Second Century Research Building

Estimated project cost: \$45,190,000

To contribute to a better understanding of the impacts of global warming, this expansion project will provide approximately 36,500 ASF of space for research laboratories, academic and staff offices, and conference areas for existing global ocean and atmospheric observation programs. The Scripps Institution of Oceanography (SIO) is a world leader in global ocean and atmospheric observations and is continuing to expand its research and graduate training efforts. These observations provide scientific data to develop the predictive models necessary to understand global warming and man's role in reversing the warming trend.

# UCSD Medical Center East Campus Bed Tower

Estimated project cost: \$523,200,000

This project will construct a major addition to Thornton Hospital, including ICU and Med/Surg beds, new operating and procedure rooms, a major expansion of imaging, and new inpatient perinatal services. Existing hospital space will be renovated to improve functionality and meet the adjacency requirements of the larger hospital. The project will permit the hospital to become a regional focus for cancer, cardiac, and advanced surgical care while continuing to provide bed availability for emergent medical conditions.

#### **University House Rehabilitation**

Estimated project cost: \$5,915,000

University House serves as both the residence for the UC San Diego Chancellor and as a public venue for a variety of University functions. This project will rehabilitate the existing University House, while preserving the historical and cultural character of the property. This project will provide necessary facility improvements to the existing structure and address code-related deficiencies, upgrade the utility systems, and improve the public and private residence spaces, while minimizing site disturbances.

# Urey Hall Renovation to Expand and Enhance Biomedical Research Facilities

Estimated project cost: \$6,705,000

This project will renovate portions of Urey Hall to provide state-of-the-art research facilities, supporting centralized facilities for interdisciplinary biomedical research. The project will consolidate four core research facilities to provide greater integration of molecular biology and chemical biology research and to accommodate the space needs of new instrumentation. These core research facilities support the main campus, the School of Medicine, the Skaggs School of Pharmacy and Pharmaceutical Sciences, and the Scripps Institution of Oceanography. This is a grantfunded project that will advance when funds are available.

#### Wellness Center

Estimated project cost: \$48,820,000

This project will construct a 43,000 ASF facility to support a holistic approach to health and wellbeing for students by addressing the psychological, spiritual, physical, ethical, social, and nutritional needs of students. There has been a rise nationally in the number of students entering with or experiencing psychological, emotional and moral challenges while in college. These trends are evident at UC San Diego. This project will help the campus take a more integrated and proactive approach to supporting student development. This gift-funded project will advance when sufficient funds are available.

### SAN FRANCISCO CAMPUS

First affiliated with UC in 1873 and established as an independent campus in 1964, the University of California, San Francisco is a graduate health sciences campus with three major instructional and research sites (Parnassus, Mission Bay, and Mount Zion) and four teaching hospitals – two UC-owned UCSF Medical Center hospitals at Parnassus and Mount Zion and two non-UCowned hospitals (San Francisco General Hospital, or SFGH, and the Veterans Affairs Medical Center) with which the campus has longstanding affiliation agreements.

As one of the nation's preeminent health-science institutions, UCSF has been diligent and successful in carrying out its four-fold mission of teaching, research, clinical care, and other public service for over a century. In pursuing these goals, UCSF's programs have experienced rapid growth and change, leading to significant demands for space and new facilities. In the past decade, UCSF acquired its Mission Bay campus site and has developed over half of it with facilities needed to accommodate research and instructional programs, as well as to support faculty, staff, and student needs for housing, recreation, and child care services.

UCSF's long-term vision is to create integrated campus sites with clinical care and basic and translational research at Parnassus Heights and Mission Bay, and a major outpatient hub at Mount Zion. UCSF has recently expanded its Mission Bay site with the acquisition of additional land to construct new UCSF Medical Center specialty

SAN FRANCISCO CAMPUS FACTS	
Established	1873
FTE Enrollment 2008-09	
Health science students	4,184
Campus Land Area	180 acres
Campus Buildings	3.7 million ASF
Hospitals and Clinics	1.2 million ASF

hospitals for children, women, and cancer treatment, along with ambulatory-care facilities. The new hospitals will replace aging and seismically-deficient inpatient facilities with stateof-the-art space for clinical programs. UCSF also has undertaken new development at Parnassus Heights and Mount Zion, as well as renovation of released space to accommodate new and expanding research and clinical programs.



Parnassus Site

UCSF faces a number of challenges with its existing facilities at Parnassus, Mount Zion, and other sites, all of which are located in urban neighborhoods around San Francisco. At Parnassus and Mount Zion, the campus must replace or upgrade obsolescent building systems to meet fire and laboratory safety requirements, modernize existing labs and instructional space, and revamp utility infrastructure to meet the demands of complex laboratory and clinical facilities. At Parnassus and Mount Zion, as well as at SFGH, the campus is required to remediate or vacate several seismically deficient buildings and to upgrade infrastructure to be in conformance with UC seismic-safety policies. Aging facilities at other sites, including Laurel Heights and Mission Center, need building systems replaced or upgraded. To the degree possible, all proposed
projects will be implemented using the most environmentally sustainable practices.

#### **Capital Needs**

UCSF has chosen to pursue a multi-track capital improvement program to build new facilities while trying to resolve a number of other longstanding capital needs. Historically, construction of new facilities has been funded largely through debtfinancing, gifts, and equity. Major commitments to fund several approved large-scale projects, however, have consumed most non-State resources currently available. State funding currently allocated to the campus falls far short of what is needed to address the cost of capital projects eligible for such funds.



UCSF's capital needs include projects that address seismic, fire, laboratory, and other life-safety hazards; replace or correct aging and obsolete building infrastructure and underground utility systems; modernize instructional and research space to meet the current requirements of biomedical and health-science programs; and promote environmentally sustainable practices at all campus sites. Addressing these needs in a timely fashion will require new fund sources or substantial increases from current sources.

#### Seismic Remediation and Improvements

The San Francisco campus has seven remaining buildings rated seismically "Poor" at its older Parnassus and Mount Zion campus sites. UCSF



Clinical Sciences Building

has identified plans for remediation or replacement of these buildings, but financial resources are insufficient in the short-term to undertake all the needed corrections. Remediation of five of the seven remaining buildings is included in this plan. The two other buildings will be partially remediated within this plan, with the expectation that funding will be identified to complete full remediation.

#### Leased Space at SFGH

The campus has a long-term commitment to provide medical services at the San Francisco General Hospital facility. To address seismic deficiencies in leased space occupied by UCSF at San Francisco General Hospital, the campus has been working with the City and County of San Francisco to develop a facilities improvement plan to remediate or replace UC-occupied space.

## **Capital Renewal and Modernization**

The campus is also engaged in several phased projects to upgrade or replace obsolete building systems at Parnassus and Mount Zion. These projects will correct fire and life-safety deficiencies, toxic hazards, code deficiencies, and other infrastructure problems. The mechanical systems of major academic research buildings, as well as their emergency and standby power systems, are being upgraded in phases at Parnassus. Progress has been slow due to a scarcity of available financial resources. Improvements to building systems in clinical facilities at Parnassus and Mount Zion have begun with funding from the UCSF Medical Center.



Parnassus Infrastructure requires modernization

#### New Research and Teaching Facilities

Recent advances in research and patient care in fields such as oncology, cardiovascular disease, regenerative medicine, and neuroscience have resulted in needs for new research and clinical care buildings at Mission Bay, Parnassus, and Mount Zion. The proximity of research and clinical care activities at these sites helps promote the development of translational research. Modern research and clinical-support facilities also are being created through renovation of existing space at Parnassus and Mount Zion. Using State General Obligation bond funding from Proposition 1D, the campus will soon construct new instructional facilities with sophisticated telemedical information technology systems by renovating the second floor of the Kalmanovitz Library at Parnassus. The Parnassus campus lacks a sufficient number of small meeting rooms to hold the simultaneous break-out discussions called for by recent curricular changes in professional health science education. Accordingly, new classrooms and other instructional spaces are being added at the Mission Bay campus site in each new research and teaching building.

#### **Sustainability Goals**

UCSF incorporates environmentally sustainable practices into its capital projects, including measures for conserving energy, water, and other resources. UCSF's capital projects comply with the University of California Policy on Sustainable Practices and adopt energy-efficient and sustainable measures to the greatest extent possible, consistent with budgetary constraints and with regulatory and programmatic requirements. The campus seeks to incorporate design features into all its larger scale projects that lead to a LEED rating of "Certified" or higher. The campus is also completing a Climate Action Plan to direct sustainability planning and action toward achieving climate neutrality.

#### SAN FRANCISCO CAMPUS (\$ in 000s)

SUMMARY

BUDGET YEAR	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
STATE FUNDING	2,750	14,807	28,948	13,400	16,350	2,800
NON-STATE FUNDING	121,130	73,300	53,005	75,689	106,596	80,409
TOTAL	123,880	88,107	81,953	89,089	122,946	83,209

#### STATE FUNDED PROJECTS

		PRI <i>I</i> OBJE	MAR'	ARY TIVE BUDGET YEAR												
PROJECT NAME	Enrollment Needs	Life Safety Deficiencies	Renewal/Modernization	New Program Initiatives	PREFUNDED	2009-10	2010-11		2011-12		2012-13		2013-14	2	2014-15	TOTAL PROJECT BUDGET*
E & G - HEALTH SCIENCES																
Telemedicine and PRIME-US				•		E 2,750 PT	-									2,750
Education Facilities Phase 2																
Electrical Distribution Improvements		•			P 525		C 14,107	E				$\uparrow$				15,524
Phase 2					W 892											
Medical Sciences Building	-		•				W 700	с	25,548							26,248
Improvements Phase 3																
Parnassus Fire Water Line		•	1					Р	600	С	10,800					12,000
Seismic Upgrade								w	600							
Capital Renewal Program			•						2,200		1,000		1,000		1,000	5,200
Clinical Sciences Building		•								Р	600	С	14,400			16,000
Seismic Upgrade Phase 1										w	1,000					
Mission Bay Central Utilities System			•									Р	950	w	1,000	47,700
Phase 2 (Distribution)												Ρ	1,300 X	w	3,500 X	
Parnassus Underground Utilities		1	•	1						1				Р	800	16,300
Upgrade Phase 1																

\* Total Project Budget may include proposed funding in years after 2014-15

#### NON-STATE FUNDED PROJECTS

	_	PRIA OBJE	MAR)	Y /E	BUDGET YEAR										
PROJECT NAME	Enrollment Needs	Life Safety Deficiencies	Renewal/Modemization	New Program Initiatives	PREFUNDED	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	TOTAL PROJECT BUDGET			
E & G - HEALTH SCIENCES			T	1	1	×	r		r	r					
Mission Bay 2nd Parcel Central Plant Utilities Phase 1			•			5,000 X 1,800 G						6,800			
Parnassus - S-13 Anatomy Lab Renovation			•			7,500 X						7,500			
Mission Bay Diller Building 4th Floor Shell Space Fit-out				•		13,986 F 1,005 X						14,991			
Parnassus - S-14 Microbial Pathogenesis and Host Defense Laboratory			•			5,000 F						5,000			
Parnassus - UC Hall Decant Project		•					30,000 X					30,000			
Campus Projects (under \$5M each)			•			20,000 X 24,000 G	15,000 X 5,000 G	15,000 X	15,000 X	15,000 X	15,000 X	124,000			
AUXILIARY AND FEE SUPPORTED FAC	ILIT	IES													
Mission Bay Block 7 Affordable Housing (237 units)				•								TBD			
Possible privatized aevelopment Mission Bay Block 38/39 Medical Center Parking Garage (500 spaces)	-			•						29,000 LB		29,000			
Mount Zion Parking Project (200+ spaces) - Possible Privatized Development				•								TBD			
MEDICAL CENTER	-		-					1							
ACC 4 Ophthalmology Relocation and Consolidated Renovation			•			18,800 HR						18,800			
ACC 7 Kidney Transplant Renovation			•			5,000 HR 5,000 G						10,000			
Moffitt Long Hospitals 3rd Floor Body Interventional Equipment Replacement			•			5,609 HR						5,609			
Moffitt Hospital Chiller Replacement			•			6,500 HR						6,500			
ACC 7 Malignant Hematology Clinic & Infusion Center Renovation			•					10,000 HR				10,000			
Mount Zion Buildings B, D Structural Seismic Improvements (per California Building Code)		•					9,000 HR 3,000 F					12,000			
Medical Center Projects (under \$5 M each)			•			1,930 HR	11,300 HR	28,005 HR	60,689 HR	61,296 HR	61,909 HR	225,129			

# SAN FRANCISCO CAMPUS 2010-11 State Capital Funding Request

# Electrical Distribution Improvements Phase 2

#### C: \$14,107,000

This project will improve emergency and standby power systems, upgrade system management capability to balance loads, respond to outages, and address code changes. The project is the second phase in the multi-phase electrical system improvements master plan for the Parnassus campus site. When fully implemented, the master plan improvements will include programming upgrades to control systems at the Central Utility Plant, extension of emergency power/standby power feeders to both Health Sciences East and Health Sciences West buildings and their elevator cores, control system improvements to Millberry Union (MU) and the Library, distribution of dedicated standby power from the CUP to the new Parnassus Services Building, addition of a new diesel emergency power generator within a soundinsulated enclosure next to the Nursing Building, and reconfiguration of emergency/standby power distribution to the Clinical Sciences and Nursing Buildings. Total project cost is \$15,524,000.

## Medical Sciences Building Improvements, Phase 3 W: \$700,000

This project will build upon the work completed through Phases 1 and 2 of the Medical Sciences Building Improvements project, completing the upgrade of the building's mechanical systems (heating, ventilation, and air conditioning) begun in the earlier projects. The project will include chilled water distribution, air-handling units, the heating hot water system, building management controls, and other mechanical and electrical systems. It also will extend conditioned air distribution to remaining floors. Total project cost is \$26,248,000.

## 2011-15 State Capital Program

#### **Capital Renewal Program**

Estimated program cost: \$5,200,000

The capital renewal program will address the highest campus priorities for capital renewal and correct smaller-scale problems with facility systems such as mechanical systems, roofing, and HVAC controls.

## Clinical Sciences Building Seismic Upgrade Phase 1

Estimated cost for PWC: \$16,000,000

The Parnassus Heights Clinical Sciences Building, constructed in 1933, was recently discovered to be structurally deficient and rated seismically "Poor." This Phase 1 Project will address some of the building's high priority critical structural deficiencies and will improve the building's seismic life-safety risk.

## Mission Bay Central Utilities System Phase 2 (Distribution)

Estimated cost for PW: \$1,950,000

This project is the second phase of a multi-phase infrastructure development plan that will ultimately construct a central utility plant with cogeneration and a comprehensive underground utility distribution system to serve the Mission Bay campus. This project will continue and complete the construction of an underground utility distribution system loop to enable all major buildings at Mission Bay to connect to central utility services from a future central utility plant which would supply power, steam, condensate, chilled water, and high-temperature hot water. Estimated total project cost is \$47,700,000.

## **Parnassus Fire Water Line Seismic Upgrade** Estimated cost for PWC: \$12,000,000

The Parnassus Fire Water Line Seismic Upgrade project will ensure a reliable supply of water to fight fires created by weather, accident, or the aftermath of earthquakes. This project will repair the existing water line and also will construct a new parallel water pipeline for redundancy of supply. The project will involve excavation for the new line, installation of pipes extending from the water tank and City fire water lines at the top of Mount Sutro down the slope of the campus, and changing of joints from friction-fitted to bolted along the existing water pipeline.

## Parnassus Underground Utilities Upgrade Phase 1

Estimated cost for P: \$800,000

This project will be the first phase of a multi-phase plan to construct a utilities loop on the Parnassus campus enabling the central utility plant to distribute utilities more efficiently and costeffectively to all campus buildings. This phase will extend utility services from the central utility plant to the West campus. Estimated total project cost is \$16,300,000.

## 2009-15 Non-State Capital Program

## Ambulatory Care Center Floor 4 -Ophthalmology Relocation and Consolidated Renovation Estimated project cost: \$18,800,000

This project will renovate the entire fourth Floor of the Ambulatory Care Center and consolidate the two existing UCSF Ophthalmology clinical practices currently located on the fifth Floor of UC Hall and half of the seventh Floor of the Ambulatory Care Center.

## Ambulatory Care Center Floor 7 - Kidney Transplant Renovation

Estimated project cost: \$10,000,000

This project will renovate 6,500 ASF of the seventth Floor of the Ambulatory Care Center and consolidate the various kidney transplant services at UCSF. Otolaryngology - Head and Neck Surgery (OHNS) and Audiology Services, the current occupants of the space, will be relocated elsewhere in a separate project. UCSF is a major kidney transplant referral center, known for treating complex cases.

## Ambulatory Care Center Floor 7 - Malignant Hematology Clinic & Infusion Center Renovation

Estimated project cost: \$10,000,000

The Malignant Hematology clinic is currently located on the fifth floor of the Ambulatory Care Center Building. With this project, the program will expand to west side of the seventh floor in a space of approximately 10,000 ASF. Facilities for treatment will be expanded by 20 infusion chairs and 12 exam rooms. The project will include installing accessible toilets, upgrading fire life safety measures (fire sprinkler, rated walls, and alarm), reconfiguring mechanical and electrical systems, and upgrading interior finishes to suit the clinical functions.

#### **Campus Projects Under \$5 million**

Estimated cumulative project costs: \$124,000,000

These will include major capital projects between \$750,000 and \$5,000,000 anticipated to be approved by the Chancellor over the next six years. Such projects typically include minor or less expensive renovations, new construction and equipment installation projects, infrastructure and other projects.

# Medical Center Projects Under \$5 million

Estimated cumulative project costs: \$225,129,000

These will include about 7 to 9 smaller projects annually (costing under \$5 million each) at an approximate average total of \$37.5 million per year. Such projects will primarily be facility renovations or installations of major equipment in the hospital or in clinic settings.

## Mission Bay Block 38/39 Medical Center Parking Garage

Estimated project cost: \$29,000,000

This project will construct a new parking structure to provide 500 spaces for visitors and staff at the future hospital at Mission Bay. This facility supports the implementation of the long range business plan of the UCSF Transportation Services and will be completed concurrently with the opening of the new hospital complex.

## Mission Bay Diller Building 4th Floor Shell Space Fit-out

Estimated project cost: \$14,991,000

This project will build out 20,400 ASF on the fourth floor of the recently completed five-story Diller Family Cancer Research Building. This project will construct a laboratory suite with 9,100 ASF of wet laboratory space containing six open lab neighborhoods, 7,700 ASF of laboratory support space, and 3,600 ASF of office space and will be dedicated to clinical cancer research programs in Neurological Surgery, Urology and the UCSF Cancer Center. These laboratories will accommodate: 12 newly recruited principal investigators (PI); 112 student, postdoctoral, and staff scientists; and 9 informatics and support staff. The new research teams will join existing teams under 34 PIs who currently occupy the building. The cancer research programs, through interactions with clinical cancer programs at the future Mission Bay Clinical Facilities, will improve clinical outcomes for patients.

## Mission Bay 2nd Parcel CUP Utilities Phase 1

Estimated project cost: \$6,800,000

This project will prepare a section of the northwest quadrant of the Mission Bay campus site to allow connection of a future major research building to centrally provided utilities. The project will include various infrastructure projects including surcharging the site wherever roads, sidewalks and open space improvements are planned; installation of any necessary utilities including storm, sewer, domestic water, emergency water, electrical, natural gas and telecom lines; completion of Nelson Rising Lane; and completion of Fifth Street, the Fifth Street pedestrian walk, and Sixth Street.

## Moffitt Hospital Chiller Replacement

Estimated project cost: \$6,500,000

This project will replace obsolete chillers in the basement of Moffitt Hospital that serve both Moffitt and Long Hospitals. Medical Center operational costs will be reduced as a result of energy savings from more efficient HVAC building systems.

## **Moffitt Long Hospitals 3rd Floor Body Interventional Equipment Replacement** Estimated project cost: \$5,609,000

This project will replace equipment in two existing body interventional rooms. Moffitt Room 365, currently a 20-year-old single-plane radiographic room, will be replaced with a ceiling-mounted biplane radiographic facility. Moffitt Room 375, a 25-year-old bi-plane radiographic room, will be replaced by an upgraded bi-plane radiographic facility. These upgrades will provide improved imaging capabilities and increase the number of patients who can be processed per day.

# Mount Zion Buildings B, D Structural Seismic Improvements

Estimated project cost: \$12,000,000

This project will remediate structural deficiencies in Hospital Buildings B and D at Mount Zion and seismically retrofit these buildings changing occupancy classifications from "I" occupancy (Hospital) to "B"occupancy (Office). In the event that the Mission Bay Hospital is not completed or occupied by 2014, or other conditions exist at that time that would require Building B to remain an acute care hospital, plans have been submitted to OSHPD for review and approval that would provide required seismic upgrades and allow for continued use as a hospital through 2030.

## Parnassus S-13 Anatomy Lab Renovation (Medical Sciences Building) Estimated project cost: \$7,500,000

This project will renovate 7,677 ASF of the 13th floor of the Medical Sciences Building. It will develop new laboratory suites for the departments of Anatomy and Pathology with associated areas for laboratory and administrative support. The project will provide work areas for up to three principal investigators, as well as new wet laboratory modules for 36 faculty and staff. The project will also include fume hoods, laboratory support rooms, tissue culture rooms, equipment rooms, cold room, confocal microscope rooms, and an electron microscope room.

## Parnassus S-14 Microbial Pathogenesis & Host Defense Laboratory (Medical Sciences Building)

Estimated project cost: \$5,000,000

This shared core BSL-3 laboratory project will be built on the 14th floor of the Medical Sciences Building to house the Microbial Pathogenesis and Host Defense program. The new facility will replace an existing BSL-3 laboratory located in the basement of the UC Hall building which is seismically deficient.

#### Parnassus - UC Hall Decant Project

Estimated project cost: \$30,000,000

This multi-step project will relocate departments and units currently occupying office space in UC Hall so that this seismically deficient building can be demolished. The total project will consist of about 15 smaller-scale steps that will accommodate individual units either in renovated existing space or through other solutions. The series of projects for relocating UC Hall occupants will be phased over two to three years.

## 2009-15 Non-State Capital Program: Other Anticipated Projects

# Mission Bay Block 7 Affordable Housing

Estimated project cost: TBD

This project will build affordable housing for staff who meet specific income criteria in Mission Bay on the 2.6-acre Block 7 site. The housing, with an ultimate total capacity of 237 units, may be constructed in phases, based on further analyses. It is anticipated that the project will be provided through privatized development.

## **Mount Zion Parking Project**

Estimated project cost: TBD

This project will construct parking on a property in the vicinity of the UCSF Medical Center at Mount Zion. This parking facility, providing approximately 300 spaces, is needed for visitors and staff as more outpatient clinical activity is concentrated at or near the Mount Zion medical complex. The scope, cost, funding sources, and timing of this project are estimated, pending the completion of more detailed analyses. It is anticipated that the project will be provided through privatized development.

## SANTA BARBARA CAMPUS

In the past half-century, the University of California, Santa Barbara has grown from a small teachers' college to a world-class research university, enrolling 22,000 students and occupying over 4 million ASF of building space. In response to a decade of enrollment and program expansion, implementation of a major capital program has added approximately 850,000 ASF to the campus since 1998. Over 400,000 ASF of this space was completed with State funds. Funding from other sources was used to construct dormitories with 1,700 new beds, add 3,500 new parking spaces, purchase a 1,300-bed residence hall, and acquire 200 acres of land on the West and North campuses. Today UCSB occupies more than 1,000 acres, employs over 1,100 faculty, and enrolls roughly 19,000 undergraduates and 3,000 graduate students.



San Clemente Villages

UCSB diligently pursues its fundamental missions of teaching, research, and public service. The aim of the capital program is to support the campus in meeting its goals of advancing its academic programs and research, strengthening the campus's physical layout with an academically focused campus core, enhancing the overall quality of the built environment, working to house increasing numbers of students, faculty, and staff in campus neighborhoods, and implementing state-of-the-art energy, transportation, and sustainability programs. The campus strives to be a significant support to the communities of Santa Barbara and Goleta, as well as an active partner in the new *Isla Vista Master Plan*.

### **Capital Needs**

UCSB has a number of essential planning documents and principles that have contributed to the current campus capital plan. The campus relies on the following four integrated planning processes to envision its future:

- Strategic Academic Planning
- Long Range Development Planning
- Capital Planning
- Campus Sustainability Planning

The selection of projects for this multi-year capital plan has also been influenced by unprecedented and challenging financial realities that the University of California currently faces.

#### Strategic Academic Planning

The campus's 2007 Strategic Academic Plan articulates all of the campus core values and directly guides future capital development. Informed by a lengthy analysis of existing and future academic needs, the *Plan* assumes a gradual enrollment increase of 5,000 additional students, subject to financial conditions to support this growth. In the present environment, the campus is assuming enrollment growth will resume in 2015 and continue at a rate of 1% per year.

Enhancement of interdisciplinary teaching and research efforts is a fundamental academic planning principle. The campus has emphasized interdisciplinary efforts particularly with the disciplines of materials science, nanoscience, marine science, internationalization, education, biotechnology, film studies, communication,

SANTA BARBARA CAMPUS FACTS											
Established	1944										
FTE Enrollment 2008-09											
Undergraduates	19,695										
Graduate students	2,894										
Campus Land Area	1,012 acres										
Campus Buildings	4.2 million ASF										

digital media, business, computer science, earth sciences, and cultural studies (from both humanistic and social science perspectives).

In order to continue its role as a leader in social advancement, UCSB will identify opportunities for enlisting talented students and faculty from the growing under-represented minorities in the State's population. To hire and retain world-class faculty and motivated top students, UCSB must continue to work toward providing appropriate housing. Housing for faculty and staff, as well as for students, is a priority endorsed in UCSB's *Long Range Development Plan* and this capital improvement program.

#### Long Range Development Planning

An amendment to the 1990 Long Range Development Plan (LRDP) is nearing completion and builds on the goals and objectives of the 2007 Strategic Academic Plan. The LRDP describes how the campus intends to optimize land use for enrollment growth, academic initiatives, housing, and support needs. The LRDP carefully addresses the needs and impacts of expanding academic and research programs and provides a framework for future capital and physical development of the campus.



Future Campus View with Storke Tower

Another important aim of the *LRDP* is preserving and enhancing the campus's unique and sensitive environment, including such elements as strengthening campus public spaces, creation of enhanced pedestrian corridors, and improving pedestrian, vehicular, and bicycle circulation. In addition, the *LRDP* actively promotes programs which support energy savings, low-impact transportation, and sustainability.

### **Capital Planning**

UCSB is currently preparing its *Ten-Year Capital Financial Plan* for Regents review and acceptance. This plan will identify the physical resources and improvements necessary to meet the goals of the campus. The greatest challenge will be to identify and secure sufficient financial resources for the proposed projects.



During the first six years of the *Plan*, a major priority will be to modernize and improve the efficiency and safety of aging facilities and infrastructure. Many building systems can no longer meet current needs, are unable to accommodate new research and instruction technologies, and are not energy-efficient. There are fire and life-safety concerns in older science and engineering buildings and in the six-story towers that house humanities and social sciences programs. Of the more than 1.4 million ASF of space devoted to instruction and research, over 70% is at least 35 years old and 47% is over 40 years old. Without thorough renovation, this space cannot continue to function productively.

In addition, replacement and renewal of the major campus underground infrastructure systems will be included in the *Plan*. Along with obsolescence



Obsolete 1943 World War II Marine Barracks

issues, UCSB will also continue to address critically important seismic renovations and upgrades for the protection of the campus community.

Because the cost of housing in the Santa Barbara area is extremely high, providing university housing to serve faculty and staff is critical to the future success of the campus. Existing student housing facilities, particularly those over 40 years old, will be upgraded and code deficiencies corrected.

Using donor funding, external financing, and auxiliary reserves, the campus will also address the needs of recreation and intercollegiate athletic programs for replacement or expansion of facilities.

The biggest challenge, however, will be to continue to provide important new research and instructional space to serve the increasing needs of faculty and students. In this Plan, funding has been identified to develop a new facility for bioengineering, expand the university library, and create a new K-12 ocean-science education center.

#### **Campus Sustainability Planning**

The *Campus Sustainability Plan* provides a roadmap for achieving the campus's sustainability goals over the next 20 years, specifically in critical areas of the built environment, energy consumption, landscape biotic, transportation,

waste management, and water conservation. Campus groups have developed a series of goals, objectives, and benchmarks for one-, five-, and twenty-year timeframes, with implementation overseen by the Chancellor's Sustainability Committee. These goals are interconnected and consistent with the sustainability goals found in the *University of California Policy on Sustainable Practices.* 

UCSB has taken a leadership role in the integration of sustainability into programs of learning, discovery, and operations. Current initiatives include the "greening" of campus structures, purchasing, and facility-maintenance operations, as well as accountability for greenhouse-gas emissions. Green building principles are integrated into all new projects from pre-planning through occupancy. UCSB was the first recipient of a LEED Double Platinum Award for the Bren Building and recently has received its first LEED Gold rating for the San Clemente Graduate Student Housing project. Over the next five years, through the Statewide Energy Partnership Program and through its own ongoing capital and maintenance programs, the campus will be implementing improvements to existing buildings and constructing new facilities that continue to reduce its carbon footprint.



Performing Arts Building

#### SANTA BARBARA CAMPUS (\$ in 000s)

SUMMARY

BUDGET YEAR	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
STATE FUNDING	0	91,110	14,427	21,340	3,200	24,182
NON-STATE FUNDING	108,461	66,736	51,500	21,500	15,000	7,000
TOTAL	108,461	157,846	65,927	42,840	18,200	31,182

#### STATE FUNDED PROJECTS

	Ţ	PRIA OBJE	AARY CTIV	RY TIVE BUDGET YEAR														
PROJECT NAME	Enrollment Needs	Life Safety Deficiencies	Renewal/Modernization	New Program Initiatives	PREFUNDED		2009-10		2010-11		2011-12		2012-13		2013-14		2014-15	TOTAL PROJECT BUDGET*
E & G - GENERAL CAMPUS																		
Davidson Library Addition			•		P 1,250			W	1,200	E	1,075							71,078
and Renovation					W 1,055			С	66,498									
Phelps Hall Renovation			•		P 550 W 550			С	11,173									12,273
Infrastructure Renewal		$\vdash$	•	$\vdash$	P 489			С	10.982	-								17.673
Phase 1					P 251 X			C	10,702									.,,.,.
					W 252													
					W 530 X													
					C 5,169 X													
Infrastructure Renewal			٠			Ρ	294 X	Р	521	С	11,552							17,806
Phase 2						w	367 X	w c	736 4336 X									
Ellison Hall Renovation		$\vdash$	•	$\vdash$		┢			1,550 7.	Р	845	с	20.440					22.240
										w	955	-	,					
South Hall and HSSB			•											Ρ	450	W	450	10,960
Music Building Addition & Seismic Corrections			•									Р	900	w	1,850	с	21,882	35,000
Physics/Engineering Building	•													Ρ	900	W	1,850	35,000

\* Total Project Budget may include proposed funding in years after 2014-15

#### NON-STATE FUNDED PROJECTS

		PRIA OBJE	MAR)	Y /E				BUDGE	T YEAR			
PROJECT NAME	Enrollment Needs	Life Safety Deficiencies	Renewal/Modernization	New Program Initiatives	PREFUNDED	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	TOTAL PROJECT BUDGET
E & G - GENERAL CAMPUS	-	T										
Bioengineering Building				•	1,600 X	2,000 X 51,400 LB						55,000
Alumni House - 1st Floor Improvements				•			5,000 G					5,000
Aquatics Center Phase 1			•				6,000 G					6,000
Coastal Research Interpretive Center				•			1,000 G					1,000
Multipurpose Sports Facility				•				20,000 G				20,000
Aquatics Center Phase 2				•				5,000 G				5,000
Ocean Science Ed Building - Phase 2				•			3,000 G					\$3,000
Ocean Science Ed Building - Phase 3				•				3,000 G				3,000
Chancellor Approved Projects			•			2,000 X	2,000 X	3,000 X	4,000 X	4,000 X	4,000 X	19,000
AUXILIARY AND FEE SUPPORTED FAC	ILIT	IES										
Storke Field Artifical Turf and Lighting			•			3,400 LB						3,400
North Campus Faculty Housing (Phase 1)				•		9,400 LB						9,400
Residential Life Resource Building			•				4,500 LB					4,500
Portola Dining Commons Renovations			•	-			6,400 LB					6,400
Ortega Dining Commons		•					11,500 LB					11,500
Santa Rosa Fire Safety & Renewal		•		†				5,000 LB				5,000
Faculty in Residence Phase 1				•				3,000 LB				3,000
Anacapa Safety & Renewal			•						5,000 LB			5,000

#### NON-STATE FUNDED PROJECTS Continued

		PRIA OBJE	MAR)	Y VE				BUDGE	ΓYEAR			
PROJECT NAME	Enrollment Needs	Life Safety Deficiencies	Renewal/Modernization	New Program Initiatives	PREFUNDED	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	TOTAL PROJECT BUDGET
AUXILIARY AND FEE SUPPORTED FAC	.ILIT	TES (	Cont	tinue	ed 🛛							
Santa Cruz Hall Fire Safety & Renewal		•								5,000 LB		5,000
Faculty in Residence Phase 2				•						3,000 LB		3,000
Chancellor Approved Projects			•			4,600 X	3,000 X	3,000 X	3,000 X	3,000 X	3,000 X	19,600
Sierra Madre Family Housing	$\vdash$	+	+	+	ł'	35.000	ł ł			łł	<b>ر</b> ا	35.000
Privatized Development						,				ļ		
North Campus Housing Phase 2				•			20,000 LB					20,000
North Campus Housing Phases 3-4 Privatized Development								9,500	9,500			19,000

# SANTA BARBARA CAMPUS 2010-11 State Capital Funding Request

# Davidson Library Addition and Renewal WC: \$67,698,000

This project will construct 44,646 ASF of new library facilities and renovate and seismically upgrade 114,679 ASF of space in the two- and eight-story wings of the existing library. Fire and life-safety systems will be extended throughout the entire library complex. The project will also correct ongoing overcrowding, accommodate new technology, provide increased instructional and study space and replace over 25,000 ASF of leased book-storage space. Total project cost is \$71,078,000.

## Infrastructure Renewal Phase 1 C: \$10,982,000

This project, the first phase of a multi-phase effort to improve reliability and operational efficiency of the campus infrastructure, will replace or upgrade major systems, including natural gas, potable water, storm drainage, and sanitary sewer. This will cover most of the main distribution systems and lateral lines connecting the main systems to campus buildings. Most of the campus infrastructure is more than forty years and has deteriorated to such a degree that failures are common, particularly in lateral sewer lines. Total project cost is \$17,673,000.

## Infrastructure Renewal Phase 2 PW: \$1,257,000

This project, the second phase of a multi-phase effort to replace or upgrade major campus infrastructure systems, will address system deterioration and hydraulic capacity, respond to regulatory requirements, improve operational efficiency, and accommodate known demand. This Phase 2 project will continue improvements to storm water, sanitary sewer, potable water, and natural gas systems by addressing deficiencies that seriously constrain operations of the campus. The project will include the critical Lagoon Road storm system that eliminates the ocean outfalls. Total project cost is \$17,806,000.

## Phelps Hall Renovation C: \$11,173,000

The renovation of Phelps Hall, constructed in the 1960s, will be the second phase of a multi-phase overall campus space plan to address critical space needs for the sciences, humanities, and social sciences. Following completion of the new Education and Social Sciences Building, the Phelps Hall Renovation project will renovate approximately 43,000 ASF of released space, converting it to modern specialized teaching and research laboratories, correcting code deficiencies, and upgrading major building utility systems. The renovated facilities will be used to increase computer and teaching laboratory space for students and to provide needed offices, teaching space, and research space for departments in the sciences, engineering, and humanities. Total project cost is \$12,273,000.

## 2011-15 State Capital Program

#### **Ellison Hall Renovation**

Estimated cost for PWC: \$22,240,000

This project will correct code and life-safety deficiencies and upgrade major building utility systems throughout the 113,588 GSF Ellison Hall. As part of the campus's overall space and building improvement plans to address critical space needs of the sciences, humanities, and social sciences, the renovations will address age and obsolescence problems and accommodate departmental consolidation. While interior alterations will cover 58,400 ASF, systems infrastructure work will encompass the entire building.

#### South Hall & HSSB Renovation

Estimated cost for PW: \$900,000

This project will correct code deficiencies, upgrade major building utility systems, and renovate space to meet the instruction and research needs of humanities and social sciences disciplines. Built in 1969, South Hall has not had a major renewal of its infrastructure. Estimated total project cost is \$10,960,000.

# Music Building Addition and Seismic Corrections

Estimated cost for PWC1: \$24,632,000

This project will modernize building systems and address seismic, life-safety and accessibility deficiencies in the 1954 Music Building. The twostory north wing of the building will be upgraded from a seismic rating of "Poor" and, upon completion of the renovation, will be rated "Good." The HVAC and electrical systems will be upgraded to meet programmatic requirements. The project also will construct an addition to the Music Building to address enrollment needs in the humanities, fine arts and social sciences. The size of the building addition and the scope and cost of this project are estimated, pending the completion of more detailed analyses. Estimated total project cost is \$35,000,000.

## **Physics and Engineering Building**

Estimated cost for PW: \$2,750,000

This project will construct a 70,000-80,000 ASF building to meet the instruction and research needs of the Department of Physics and the College of Engineering. The new building will replace the trailers and Marine barracks currently used by both departments to accommodate the significant growth in undergraduate and graduate enrollment over the past five years. Additional growth is expected beyond 2015. Estimated total project cost is \$35,000,000.

## 2009-15 Non-State Capital Program

#### Alumni House 1st Floor Improvements

Estimated project cost: \$5,000,000

At the time of construction, the Mosher Alumni House included approximately 7,500 ASF of shell space on the first floor. This project will build out this remaining space to accommodate services for faculty, staff, and visitors.

#### Anacapa Safety and Renewal

Estimated project cost: \$5,000,000

The Anacapa Residence Hall, opened in 1959 and housing 420 students, was renovated in 1993 to provide mechanical system upgrades and general reconditioning of the building. This project will provide an upgrade to the physical plant and a new fire alarm and fire sprinkler system as part of an effort by the housing program to address fire/lifesafety needs by installing sprinkler systems in all residence halls.

#### **Aquatics Center Phase 1**

Estimated project cost: \$6,000,000

The Aquatics Center Phase 1 project will construct a new 65-meter regulation pool, pool deck, and pool support facilities (mechanical, electrical, pumps, and filtration equipment)to accommodate intercollegiate athletics (men's and women's swim and water polo programs) and recreational activities. Constructed in 1943, the existing Campus Pool does not comply with modern pool codes or meet NCAA regulations for competition.

#### **Aquatics Center Phase 2**

Estimated project cost: \$5,000,000

The Aquatic Center Phase 2 project will construct approximately 14,000 GSF of athletic program support facilities, including those required to support major NCAA Division I swim meets and water polo matches. The project will provide new men's and women's locker rooms, concession and ticket office facilities, ample spectator bleacher seating, new electronic scoreboards and officials' areas, and space for television and media operations. The existing facilities are both obsolete and too small to accommodate competitive swimming and water polo programs and recreational use.

#### **Bioengineering Building**

Estimated project cost: \$55,000,000

This project will construct a 35,000-45,000 ASF building to support the development of new programs in bioengineering. The facility will provide wet and dry laboratories, offices, an auditorium and support space. Proposed occupants include the Institute for Collaborative Biotechnologies (ICB), a unit of the Center for Stem Cell Biology and Engineering, and a new interdisciplinary Ph.D. program in bioengineering. Collectively, these organizations comprise the nucleus for academic growth and research in the field of bioengineering. The project will be financed with federal overhead funding using the "Garamendi" mechanism.

# Campus-Approved Projects Under \$5,000,000

Estimated cumulative project costs: \$19,600,000 (AUX) \$19,000,000 (E&G)

These major capital projects, each budgeted between \$750,000 and \$5,000,000, range from utility and infrastructure improvements to building renovations. Anticipated projects include road improvements; the modernization of the Jameson Community Center and reconditioning of the Jameson Café; upgrade and modernization of the Linda Vista Kitchen; and construction of Tipton House, a new 3,000 ASF facility on the Sedgwick Reserve in the Santa Ynez Valley, to provide space for University classes, public workshops, and visitor orientation. This latter project will be delivered through a license agreement with a donor who is also responsible for design and construction.

## **Coastal Resources Interpretive Center**

Estimated project cost: \$1,000,000

This gift-funded project, which will include the renovation of 1,200 ASF in the former Devereaux building at the new West Campus, is the result of a collaboration between the Coal Oil Point Reserve (COPR) and the South Parcel Open Space area managed by Cheadle Center for Biodiversity and Environmental Research (CCBER). The Center with its focus on outreach, research, internship programs, and docent training programs — will feature interactive displays, a large classroom for University-sponsored activities, and office space for management of the South Parcel.

Faculty in Residence Phase 1 Estimated project cost: \$3,000,000 Faculty in Residence Phase 2 Estimated project cost: \$3,000,000

These projects will expand the Faculty in Residence Program in two phases, adding new faculty residences to the east side of campus, currently home to 2,000 freshmen student. The number of units to be constructed will be determined following further analysis.

## **Multipurpose Sports Facility**

Estimated project cost: \$20,000,000

This project will add a minimum of 1.5 regulationsized indoor hardwood basketball courts to meet the demand for additional facilities that support education, recreation, and intercollegiate athletics programs. High demand for the existing Rob Gym and the Events Center — which support men's and women's intercollegiate volleyball and basketball programs, numerous academic and recreational programs, intramural activities, club and recreation sports, seasonal camps, community programs — hampers scheduling flexibility and accommodation of visiting athletic teams as required by NCAA rules.

# North Campus Faculty Housing Phases 1

Estimated project cost: \$9,400,000

The North Campus Faculty Housing project Phases 1-4 will provide a total of 161 housing units consisting of one-, two-, and three-story townhouses and single-family homes on 26 acres. The first phase of this project completes 22 units, including all of the single-family homes. The site is located approximately 3 miles from the main campus south of Phelps Road, bounded on the west by Ellwood Mesa open space and on the south by the Ocean Meadows Golf Course. This project supports the Strategic Academic Plan by providing housing critical to the hiring and retention of faculty.

# North Campus Faculty Housing Phase 2

Estimated project cost: \$20,000,000

Phase 2 of the 161-unit North Campus Faculty Housing project will construct up to 76 homes consisting of two- and three-story townhouses. This project supports the Strategic Academic Plan by providing housing critical to the hiring and retention of faculty.

**Ocean Science Education Building Phase 2** Estimated project cost: \$3,000,000

Phase 2 of the gift-funded Ocean Science Education Building project will provide for fit-out of the first floor of the Outreach Center for Teaching Ocean Science (OCTOS), which is operated by the Marine Science Institute. Improvements in this phase, encompassing approximately 2,810 ASF, will include the installation of wet and dry exhibits, support space, and an entry lobby that comprise the main seawater center component of OCTOS.

## **Ocean Science Education Building Phase 3**

Estimated project cost: \$3,000,000

Phase 3 of the gift-funded Ocean Science Education Building project will provide for fit-out of the second floor of the Outreach Center for Teaching Ocean Science (OCTOS). Improvements in this phase, encompassing approximately 2,800 ASF, will include the installation of a 35-seat state-of-the-art theater, a manager's office, and docent and storage space. The theater will be designed to accommodate special-format video programming, developed to "immerse" viewers into the program subject matter. As a classroom/laboratory facility, it is flexibly designed for hands-on education in a broad curriculum that utilizes computer and video technology, and fresh and saltwater utilities for instruction and demonstration.

## **Ortega Dining Commons Renovations**

Estimated project cost: \$11,500,000

Built in 1960, the Ortega Dining Commons is one of four dining commons on campus serving a residence hall population of 4,800 students. Ortega also serves summer session students and guests. This 50-year-old facility requires significant renewal and modernization to address code, life-safety, and seismic deficiencies. It will also improve the facility's production efficiencies and offer enhanced services to students.

# Portola Dining Commons Renovations

Estimated project cost: \$6,400,000

The Portola Dining Commons project will include renovation and modernization of the 1966 food service facility. The Commons and Linda Vista Kitchen together serve 1,399 students at the Santa Catalina housing complex. This project will follow the renovation of the Linda Vista Kitchen, which will be completed as a separate project and which will serve as the complex's main dining facility during the Commons upgrade.

## **Residential Life Resource Building**

Estimated project cost: \$4,500,000

This project will provide 5,680 ASF of additional administrative space for the UCSB Housing Program and permanent space for the Office of Residential Life. The Residential Life Resource Center (RLRC) will serve the needs of UCSB resident students by providing a central location for residential programming, assignment services, judicial affairs and conduct, and key interactions with housing management staff. The project will consolidate space currently distributed throughout various campus facilities.

## **Santa Cruz Hall Fire Safety & Renewal** Estimated project cost: \$5,000,000

Santa Cruz Residence Hall, opened in 1960 and housing 420 students, was renovated in 1992 to provide mechanical system upgrades and some general reconditioning of the building. This project will provide an upgrade to the physical plant and a new fire alarm and fire sprinkler system.

## **Santa Rosa Hall Fire Safety and Renewal** Estimated project cost: \$5,000,000

The Santa Rosa Residence Hall, opened in 1955 and housing 420 students, was renovated in 1987 to provide mechanical system upgrades and general reconditioning. This project will provide an upgrade to the physical plant and a new fire alarm and fire sprinkler system. Although the current building complies with all building codes, this project is part of the effort by the housing program to provide sprinkler systems in all residence halls.

#### Storke Field Artificial Turf and Lighting

Estimated project cost: \$3,400,000

This project will install all-weather synthetic turf and lighting on the existing Storke Field. Completion of this field will increase the inventory of playing fields, recently reduced by the construction of a new housing project.

## 2009-15 Non-State Capital Program: Other Anticipated Projects

### Sierra Madre Family Housing

Estimated project cost: \$35,000,000

The Sierra Madre project, to be located on the North Campus, will provide the campus with 151 apartments, related parking, and support space to meet the need of students, staff and faculty for affordable family housing. The project will be delivered through a third-party developer, who will finance, construct and manage these apartments. The project supports the campus's long range plan to provide a mix of housing types to meet the campus recruitment and retention needs for faculty, staff and students.

## North Campus Faculty Housing Phases 3 and 4 Estimated project cost \$19,000,000

The North Campus Faculty Housing project Phases 1-4 will provide a total of 161 housing units consisting of one-, two-, and three-story townhouses and single-family homes on 26 acres. Phases 3-4 of the development, consisting of approximately 63 units, will be delivered through a third-party developer, who will finance and construct these for-sale homes.

## SANTA CRUZ CAMPUS

Since it opened in 1965, UC Santa Cruz has been devoted to excellence in undergraduate education, graduate studies, and research. Campus physical design and planning honor its vision as an uncommon research university where educational programs do not simply co-exist with, but also are enriched by, the research environment. Ten residential colleges transform the larger university setting into smaller social and intellectual gathering places—each offering a distinctive, interdisciplinary academic theme, co-curricular programs, academic advising, and student support services.



Opportunities for Students in Original Research

Today, over half of Santa Cruz's undergraduates assist faculty with research. Thirty professional and advanced graduate degrees are offered through the campus's five academic divisions. Santa Cruz faculty are known as leaders in major disciplines, including biochemistry, molecular biology, environmental studies, geosciences, astronomy and astrophysics, literature, and international economics.

Campus enrollment increased 58%, to 16,809 FTE students, over the 10-year period beginning in 1998-99. However, construction of new facilities did not keep pace with enrollment growth and the associated increases in faculty and staff. Thus, the campus has a significant unmet need for new and renovated space and for supporting infrastructure.

Several areas comprise the capital needs at UC Santa Cruz:

#### Instruction and Research

In addition to the needs created by past growth, a shortage of space has resulted from the evolution and increased sophistication of campus instruction and research programs. Without the construction of new facilities, the development of these programs will be slowed.

# Renewal of Existing Facilities and Infrastructure

Many buildings on the 44-year-old campus require renewal, modernization, and upgrades to comply with health and safety requirements and to respond to obsolescence and the changing academic program needs.

## Improvements to Utility Systems and Circulation Infrastructure

Similarly, renewal of campus utility systems – both to address obsolescence and to improve efficiency and energy conservation – and the expansion of pedestrian and automobile bridges, roads, and pathways are needed to address safety issues and to support current enrollments and program development.

In response to budgetary uncertainties, near-term enrollment at the University is being reduced to funded levels of 16,075 FTE (equivalent to 2007-08 levels). Even accounting for this small reduction over the next few years, there remains significant unmet need at Santa Cruz for new and renovated space and for supporting infrastructure.

SANTA CRUZ CAMPUS FACTS											
Established	1965										
FTE Enrollment 2008-09											
Undergraduates	15,359										
Graduate students	1,450										
Campus Land Area	2,000 acres										
Campus Buildings	3.7 million ASF										

## **Capital Needs**

To achieve its mission, the Santa Cruz campus capital improvement program will balance: new construction; building and utility renovation, renewal, and upgrades; and the expansion of utility systems and infrastructure. Projects funded from non-State sources complement and extend State investment by addressing specific research and infrastructure needs, as well as student life and housing needs.



## **State Capital Program**

Priorities for the State capital improvement program include:

New buildings for instruction and research. Past enrollment growth and the complex nature of the space required to support the continued evolution of leading-edge disciplines (a strength of the campus) has driven the need for new buildings. Recent projects have partially addressed these needs, but a shortage of space and limited flexibility remain in virtually all campus programs. This capital improvement program addresses critical space deficiencies in key academic disciplines, particularly in the sciences and engineering programs.

The campus's location has influenced the focus and reach of its world-renowned research. Facilities at the Marine Science Campus, located on the Monterey Bay coast, serve as the center for marine and coastal-related research and study.



Seeking Discoveries in a Rich Research Environment

They bring together a modern marine field station, the Long Marine Laboratory, with a public outreach center and many other assets of a worldclass research university.

Similarly, planned development of the Silicon Valley Center is an important element in efforts to develop research and education opportunities in Santa Clara County, serving students and faculty, develop higher education partnerships, enhance outreach programs with K-12 schools, and increase collaborative research with industry. The Center would also contribute to important regional professional development needs. With expansion of the Baskin School of Engineering, the campus helps train the skilled engineering workforce that is essential to the economies of Silicon Valley and the State.



Engineering 2 houses Two UC Science Institutes

The campus's social sciences disciplines play an increasingly important role in addressing global

societal needs in interdisciplinary environmental research, economics, and education. New (and renovated) facilities are required to meet campus needs for teaching and research laboratory space as well as general-assignment classroom space.

Gift- and extramural research-funded projects and support facilities are planned to complement proposed and recent State-funded facilities.



Newly Completed Digital Arts Research Center

**Renewal of existing facilities.** Renewal of existing facilities and infrastructure is urgently needed to respond to: changing academic programs; new health, safety, and regulatory requirements; building aging; and program obsolescence.

Even at a newer campus such as Santa Cruz, funding is needed for the ongoing and systematic renewal and modernization of building systems that wear out with normal use or that no longer meet the current requirements of a building's occupants.

Long-term underfunding of basic maintenance has exacerbated the campus's renewal efforts by reducing the useful life of building systems and other infrastructure. As a result, there is a substantial backlog of deferred maintenance associated with State-supported facilities. The list of the campus's maintenance and renewal projects currently exceeds \$125 million.

The campus is also witnessing the evolution of cutting-edge programs (that formerly did not require separate research facilities) into disciplines that depend upon laboratory and computer facilities of a much larger scale. This evolution requires that the campus rebalance, reconfigure, and augment its existing space inventory to address new teaching and research needs.

The capital improvement program also includes a multi-year effort to address health and safety issues and ADA upgrades, renew and modernize building utility infrastructure, replace existing fixed classroom seating, re-roof various structures, repair windows and building wall membranes, and upgrade failing sections of roads and pathways.

Infrastructure improvements. The need for renewal and modernization is just as acute for campuswide infrastructure, including the rehabilitation and expansion of basic utilities such as the campus fire alarm, sewer, communications, water (cooling, heating, fire protection, and domestic), electrical, natural gas, and drainage systems. An important component of the infrastructure improvement program entails incorporating environmentally sustainable features, with a special focus on conserving natural resources and reducing CO<sub>2</sub> emissions. The introduction of new energy-management and conservation technologies has proven to be efficient and cost-effective. The campus is participating in the Statewide Energy Partnership program and has in place processes to improve the sustainability of planned projects.

**Circulation infrastructure.** The 2005 *Long Range Development Plan* and other planning efforts have identified the need for adequate University campus circulation infrastructure and improvements in campus access. The campus occupies 2,000 acres, with the developed central campus (consisting of the colleges and most academic buildings) comprising approximately 400 acres. Changes in elevation, an abundance of ravines, and dense forest create the need for a coordinated system of pedestrian and automobile bridges, roads, and pathways to provide direct and efficient routes throughout the campus. This network remains incomplete, and the current system is further strained under the weight of enrollment.

To ensure that projects are optimally sited and integrated with both existing facilities and longterm development objectives, the campus has initiated area planning and infrastructure studies as well as financial feasibility analyses in support of both academic and student life facilities in this capital improvement program.

#### Auxiliary and fee-supported capital needs.

Projects funded from non-State sources address facilities needs that are essential to creating an intellectual community. Capital projects that support student life and affordable housing needs, for example, help complete the living and learning environment for the student population. By providing places conducive to conversation, socialization, and recreation, these projects enable students and faculty to participate fully in core instruction and research activities.

**Student support facilities.** A number of studentfee-supported facilities will be renovated or constructed as they gain approval and become financially feasible. These projects include: corrections to mitigate seismic and life-safety deficiencies in student facilities; construction of a student center; and renovation of an outdoor quarry amphitheater.

**Housing.** Student housing demand and campus projections predict shortages for both on- and off-campus housing. Accordingly, the campus is pursuing new student housing opportunities as well as renovation of older residential college and student living space.



New Humanities 1 building fits within the landscape

Because affordability limits housing options, faculty and staff housing continues to present a critical challenge. Phased housing projects on campus inclusion-area land are underway.

**Transportation improvements.** The 44-year-old campus needs improved circulation, and non-State-funded capital projects will improve parking and transportation.

#### SANTA CRUZ CAMPUS (\$ in 000s)

SUMMARY

BUDGET YEAR	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
STATE FUNDING	0	29,616	45,637	27,042	62,459	4,112
NON-STATE FUNDING	5,021	165,792	12,724	5,200	49,680	24,000
TOTAL	5,021	195,408	58,361	32,242	112,139	28,112

#### STATE FUNDED PROJECTS

	PRIA OBJE	MAR'	Y VE	BUDGET YEAR									
PROJECT NAME	Enrollment Needs	Life Safety Deficiences	Renewal/Modernization	New Program Initiatives	PREFUNDED	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	TOTAL PROJECT BUDGET*	
E & G - GENERAL CAMPUS					•	I				I	I		
Biomedical Sciences Facility	•				P 4,090 P 35 X W 2,400 W 550 X C 69,370 C 9,371 X E 2,940 X		E 2,148					90,904	
Infrastructure Improvements Phase 2			•		P 367 W 317		C 7,232					7,916	
Coastal Biology Building	•						P 2,552 W 1,523	C 42,866	E 1,012			47,953	
Infrastructure Improvements Phase 3			•				P 1,446 W 703 C 14,012					16,161	
Infrastructure Improvements Phase 4			•					P 1,284	W 856 C 19,257			21,397	
Social Sciences Facility	•								P 2,920	W 1,950 C 43,825		50,695	
Circulation and Infrastructure Extensions Phase 1	•								P 905 W 605	C 13,580		15,090	
Silicon Valley Center				•						P 980	W 700	20,000	
Alterations for Physical, Biological, and Social Sciences			•								P 682 W 606	13,813	
Capital Renewal			•					1,487	1,487	2,124	2,124	7,222	

\* Total Project Budget may include proposed funding in years after 2014-15

#### NON-STATE FUNDED PROJECTS

	c	PRO DBJEC	JECT CTIV	T BUDGET YEAR								
PROJECT NAME	Enrollment Needs	Life Safety Deficiences	Renewal/ Modernization	New Program Initiatives	PREFUNDED	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	TOTAL PROJECT BUDGET
E & G - GENERAL CAMPUS												
Center for Ocean Health Expansion	•						26,590 G					26,590
Oceans Auditorium				•			6,600 G					6,600
Center for Art and Visual Studies				•							20,000 G	20,000
Campus Approved E&G Projects under \$5 Million			•			3,021	5,102	2,000	2,000	2,000	2,000	16,123
AUXILIARY AND FEE SUPPORTED FAC	ILIT	IES										
Student Life Seismic Corrections Phase 2		•					5,500 LB					5,500
Student Center			•				71,500 LB 1,500 X					73,000
Ranch View Terrace Phase 2	•						45,000 LB					45,000
Upper Quarry Amphitheater Renovaation and Expansion		•						8,724 G				8,724
West Campus Infrastructure			•	Π						250 HSR 4,750 LB		5,000
Kresge College Renovation			•							1,500 HSR 28,500 LB		30,000
Lower East Field Improvements		•								3,000 G 7,680 LB		10,680
Campus Approved Auxiliary Projects under \$5 Million			•			2,000	4,000	2,000	3,200	2,000	2,000	15,200

# SANTA CRUZ 2010-11 State Capital Funding Request

## Biomedical Sciences Facility E: \$2,148,000

This project will equip the new Biomedical Sciences Facility, currently under construction, which will provide 59,728 ASF of flexible and generic interdisciplinary research space for programs in molecular, cell and developmental biology; chemistry and biochemistry; environmental toxicology; and biomolecular engineering. In addition to research laboratories and laboratory support space, the facility will include core specialized facilities, academic and administrative offices, and meeting and scholarly activity space. Total project cost is \$90,904,000.

## Coastal Biology Building PW: \$4,075,000

This project, located at the Marine Science Campus, will provide approximately 33,200 ASF of instructional, research, and office space for the program in ecology and evolutionary biology. As the center for marine-dependent and coastalrelated biological sciences research and study, the new building will help accommodate existing enrollments in Physical and Biological Sciences and will bring together faculty and students to promote scientific collaboration, the sharing of specialized facilities, and the integration of instructional and research activities. Total project cost is \$47,953,000.

## Infrastructure Improvements Phase 2 C: \$7,232,000

This project is the second phase of a multi-phase program of improvements to the existing campus infrastructure designed to correct failing systems, address health and safety concerns, improve the reliability of distribution systems, and provide sufficient capacity to meet the needs of existing and planned instruction and research programs. This phase, which addresses the needs associated with current campus enrollments, will continue critical improvements to the storm water drainage system, replace portions of the central campus heating water and electrical systems, and upgrade portions of the natural gas system. Total project cost is \$7,916,000.

## Infrastructure Improvements Phase 3 PWC: \$16,161,000

This project is the third phase of a multi-phase program of improvements to the existing campus infrastructure designed to correct failing systems, address health and safety concerns, improve the reliability of distribution systems, and provide sufficient capacity to meet the needs of existing and planned instruction and research programs. This phase will provide continued improvements to the storm water and electrical systems on the main campus and will install the infrastructure required to support the Coastal Biology Building and other instruction and research development at the Marine Science Campus. Total project cost is \$16,161,000.

## 2011-15 State Capital Program

# Alterations for Physical, Biological and Social Sciences

Estimated cost for PW: \$1,288,000

This renovation project will address critical space needs associated with the physical, biological and social sciences programs. Approximately 56,000 ASF will be renovated in Thimann Laboratories for the physical and biological sciences, providing additional teaching laboratory space and addressing lifesafety and accessibility code deficiencies throughout the building. Approximately 6,400 ASF will be renovated on two floors of Social Sciences Building 1 to provide modern flexible teaching and research laboratory space for expanding social sciences programs. Estimated total project cost is \$13,813,000.

#### **Capital Renewal Program**

Estimated program cost: \$7,222,000

This multi-year program will renew and upgrade existing buildings and systems and will include projects such as replacement of classroom fixed seating, roof and window replacement, road and walkway upgrades, fire alarm and building control system upgrades, research seawater systems and tank repairs, and elevator replacements.

## Circulation and Infrastructure Extensions Phase 1

Estimated cost for PWC: \$15,090,000

This project will provide the necessary circulation and utilities infrastructure to support the construction of the Social Sciences Facility, proposed for the northeast area of the campus.

#### **Infrastructure Improvements Phase 4**

Estimated cost for PWC: \$21,397,000

This project is the fourth phase of a multiphase program of improvements to the existing campus infrastructure, designed to correct failing systems, address health and safety concerns, improve the reliability of distribution systems, and provide sufficient capacity to meet the needs of existing and planned instruction and research programs. Phase 4 continues essential improvements to campus electrical, natural gas, storm water, and sanitary systems, as well as data communications infrastructure. In addition, replacement of the existing cogeneration plant, which provides essential back-up power to science and engineering facilities and has reached the end of its useful life, will assist in the reduction of carbon emissions in support of the campus's Climate Action Plan.

#### Silicon Valley Center

Estimated cost for PW: \$1,680,000

A new off-campus center, sited in the Silicon Valley, will support education and research opportunities for students and faculty; accommodate academic outreach, graduate, and professional programs for working adults; foster higher education partnerships by housing a collaborative venture between UCSC, San Jose State University, Foothill-De Anza Community Colleges, and NASA Ames Research Center; expand outreach programs with K-12 schools; and increase collaborative research with industry. Estimated total project cost is \$20,000,000.

## **Social Sciences Facility** Estimated cost for PWC: \$48,695,000

This project will construct an approximately

50,000 ASF building to house teaching, research, and office space for the Economics and Education departments, as well as offices for the Social Sciences Division administration. The scope will include approximately 5,000 ASF of general assignment classroom space. Released space will accommodate programs in Engineering, Psychology, Anthropology, and other social sciences; Humanities programs; and the University Library. Estimated total project cost is \$50,695,000.

## 2009-15 Non-State Capital Program

#### Center for Art and Visual Studies

Estimated project cost: \$20,000,000

This project will construct an approximately 20,000 GSF Center for Art and Visual Studies, a visual research and exhibition facility open to and engaging all disciplines and located in the public access area adjacent to the Digital Arts Research Center.

#### **Center for Ocean Health Expansion**

Estimated project cost: \$26,590,000

This project will construct a 15,000 GSF lab wing on the west side of the Center for Ocean Health on the Marine Science Campus. The expansion will provide 10 research labs, expansion of an existing seminar room, research offices, shared office space, and equipment and controlled temperature rooms. In addition, a new aquatic vivarium and research support building will facilitate large marine mammal research. The pool area will include a 360,000-gallon aquatic performance testing tank, a 32,000-gallon quarantine holding tank, and a thermal/metabolic test channel for physiological testing of animals and humans. The research support building of approximately 8,135 GSF will include an adaptive physiology lab, an adaptive genomics lab, an animal support area, and offices for researchers and animal tech staff.

#### **Kresge College Renovation**

Estimated project cost: \$30,000,000

This project continues a comprehensive capital renewal program and includes renovations to the existing Kresge proper residential college. Scope analysis is currently being developed with the anticipation that the project will address seismic, structural, utilities, accessibility, and IT improvements.

#### Lower East Field Improvements

Estimated project cost: \$10,680,000

This project will renovate and provide improvements to the Lower East Field sports area. The scope will include installation of synthetic turf seed, restroom facilities, ADA upgrades, lighting, a public announcement system, and bleachers.

#### **Oceans Auditorium**

Estimated project cost: \$6,600,000

This project will construct a small, site-specific auditorium on the Marine Science Campus. In addition to accommodating larger lectures and presentations, the building will include several smaller seminar-type meeting rooms and a dining hall for on-site food service. The project will be designed to enhance the ability of the Marine Science Campus to sponsor meetings, conferences, and workshops of state, national, or international scope; hold internal academic seminars and lectures; and promote community education.

## Ranch View Terrace Phase 2

Estimated project cost: \$45,000,000

Utilizing the same design as the Phase 1 homes, this employee housing project will construct 39 single-family detached homes on the 12.5-acre Ranch View Terrace site. Infrastructure and site preparation have been completed and an environmental impact report has been approved as a result of the Ranch View Terrace Phase 1 project. The project, to be delivered in clusters, will be built by the University.

#### **Student Center**

Estimated project cost: \$73,000,000

This project will construct a new Student Center to serve as the "Hub, Heart, and Haven" of the UCSC student experience. The facility will include space for retail and restaurant operations; student organizations; a resource center; events and outdoor activities; meeting and study rooms; drop-in child care; an art gallery/art co-op; and a satellite wellness center (including space for dance, yoga, meditation classes, etc).

#### **Student Life Seismic Corrections Phase 2**

Estimated project cost: \$5,500,000

This project will address seismic and lifesafety deficiencies in the Student Music East-KZSC Radio Station, Merrill College Recreation Room (Cantu GLBTI Center), Student Union, Student Union Redwood Building, Cardiff House Women's Center, and the Stonehouse.

# Upper Quarry Amphitheater Renovation and Expansion

Estimated project cost: \$8,724,000

This project will renovate and expand the Upper Quarry Amphitheater, providing improved stadium seating, grass-berm seating, a new stage, lighting, stage canopy, ADA improvements, and restrooms. The project will bring the facility back on line for campus programming, allow for infrastructure improvements, reduce the liability associated with an aging facility, and enhance the student experience.

#### West Campus Infrastructure

Estimated project cost: \$5,000,000

This project will provide the infrastructure (including roads, utilities and general construction pathways) for the West Campus Student Housing projects Phases 1 and 2.

## AGRICULTURE AND NATURAL RESOURCES

Agriculture and Natural Resources (ANR) represents a partnership of four world-renowned science and education communities on three UC campuses, a UC presence in all California counties, an unmatched system of research locations and expertise, recognized leadership in special program areas, and an internationally recognized community of Cooperative Extension professionals.

These responsibilities are authorized by three federal legislative acts. The Morrill Act of 1862 provided land grants to states and territories to establish colleges for the teaching of agriculture and mechanical sciences. The Hatch Act of 1887 established experiment stations to conduct agricultural research at the land-grant colleges. The Smith Lever Act of 1914 provided federal support for extension services in the agricultural colleges to transfer knowledge and to identify new research needs.

Through strategic planning, ANR makes scientific and technological breakthroughs that address the challenges Californians face. ANR's Strategic Vision identifies initiative areas necessary for California to compete in a global economy, ensure a safe nutritious food supply, and conserve natural resources. ANR's work contributes to a healthy California through teaching, research, and outreach education programs focused on nutrition and healthy lifestyles and through its work on animal and ecosystem health.

ANR operates through the Agricultural Experiment Station and Cooperative Extension.

AGRICULTURE & NATURAL RESOURCES FACTS									
Established	1952								
Campus Land Area	12,653 acres								
Campus Buildings	535,355 ASF								
Research and Extension Centers	9								

The Research and Extension Centers (RECs) provide world-class facilities enabling research of critical issues associated with these challenges, as well as education programs and outreach utilizing research results.



**Capital Needs** 

The ANR Strategic Vision, as presented to the Regents in July 2009, states:

"ANR envisions a thriving California in 2025 where healthy people and communities, healthy food systems, and healthy environments are strengthened by a close partnership between the University of California and its research and extension programs and the people of the state. The University remains connected and committed to the people of California, who enjoy a high quality of life, a healthy environment and economic success in a global economy."

Investment in capital facilities is vital to ensuring the success of ANR programs. Ten RECs, located in a variety of ecosystems across the State, are a major component of ANR facilities and represent the major focus of ANR's capital needs.

An in-depth evaluation of ANR facilities in 2008, both on the campuses and at the Research and Extension Centers, was conducted to determine condition, adequacy, and space needs related to agricultural research and outreach programs. The ANR studies confirmed that many facilities supporting these programs are in poor condition, inefficient, outdated, and inadequate to meet current needs. These constraints hinder ANR's ability to provide solutions for agriculture, sustainability, environmental, and human-needs problems for California.

The capital program for ANR addresses two main concerns: the need for new construction to remain academically relevant and address shortages of research space, and renewal and deferred maintenance of existing facilities.

REC facilities support multi-disciplinary initiatives in growing methods, pest control, water management, resource conservation, and other subjects necessary to respond to new issues and crucial needs facing the State. Supporting these programs are scientific laboratories, field laboratories, academic and administrative offices, greenhouses, livestock barns, special-use equipment-intensive support facilities, classrooms, meeting facilities, maintenance shops, and storage buildings. The required infrastructure includes domestic and agricultural water systems, wastewater systems, electrical and gas distribution systems, roads and fences, security and fireprotection systems, and hazardous-waste storage and treatment systems.

Research and educational programs conducted at the RECs have changed markedly over the years. These include changes in the direction and nature of field research and extension programs as well as methods used to conduct research in agriculture, biology, resource sciences, and related disciplines.

New field and analytical chemistry laboratories are necessary to support new research programs. New research methodologies require systems and equipment that are not currently available at ANR. In addition, the demand for space to support existing research and education programs exceeds the available facilities. Larger multipurpose rooms are urgently needed to accommodate educational meetings and classes with researchers, students, industry, and community groups. These multipurpose facilities provide hands-on opportunities for researchers and their students to evaluate field trials. They are critical for the research being conducted at the RECs and provide opportunities for rural Californians to interact with University researchers and scientists.



Desert REC children with instructional cow display

Many of the existing ANR facilities require renewal and renovation. The facilities proposed for renovation in this program have an average age of 35 years. Some are in poor condition from a backlog of deferred maintenance from years of underfunding. Some suffer from designs that no longer support contemporary research methods or lack the flexibility to respond to changing foci in research. Funding is needed to upgrade and modernize existing facilities to return them to their full intended usage. Renewal needs include mechanical, plumbing, electrical, fire protection, and waterproofing systems, as well as built-in laboratory equipment.

#### AGRICULTURE AND NATURAL RESOURCES (\$ in 000s)

SUMMARY

BUDGET YEAR	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
STATE FUNDING	0	1,891	1,728	1,808	1,590	0
NON-STATE FUNDING	0	1,644	200	275	220	0
TOTAL	0	3,535	1,928	2,083	1,810	0

#### STATE FUNDED PROJECTS

	PRIMARY OBJECTIVE				BUDGET YEAR								
PROJECT NAME	Enrollment Needs	Life Safety Deficiencies	Renewal/Modemization	New Program Initiatives	PREFUNDED	2009-10	2010-11		2011-12	2012-13	2013-14	2014-15	TOTAL PROJECT BUDGET
E & G - GENERAL CAMPUS											-		
Intermountain REC Field Laboratory			٠				P 75						1,941
and Multipurpose Facility							W 83						
							C 1,733 E 50 G						
ANRCapital Renewal Program			٠					Р	25				1,928
-								w	48				
								С	1,655				
								С	200 G				
Kearney REC Insectary Facility				٠						P 72			2,083
										W 79			
										C 1,657			
										C 75 X			
										E 200 G			
West Side REC Field Laboratory			٠								P 65		1,810
and Multipurpose Facility											W 105		
											C 1,420		
											C 45	х	
											E 175	G	

#### NON- STATE FUNDED PROJECTS

		PRIA OBJE	ለARነ CTIV	/ 'E	BUDGET YEAR							
PROJECT NAME	Enrollment Needs	Life Safety Dificiencies	Renewal/Modernization	New Program Initiatives	PREFUNDED	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	TOTAL PROJECT BUDGET
E & G - GENERAL CAMPUS												
Sierra Foothill REC Citrus Clonal				٠			1,200 G					1,200
Protection Facility												
Shafter REC Cotton Gin Renovation			٠				197 F					394
							197 X					

# AGRICULTURE AND NATURAL RESOURCES 2010-11 State Capital Funding Request

## Intermountain REC Field Laboratory and Multipurpose Facility PWC: \$1,891,000

This project will provide approximately 3,000 ASF of additional multipurpose space for dry laboratory activities, seminars, and educational programs at the Intermountain Research and Extension Center. Faculty, Cooperative Extension specialists, and advisors will use the facility for a variety of mountain and high desert agriculture and natural resource activities. This project will also offer a greater range of research, extension, and educational activities than are currently available at the Intermountain Research and Extension Center and will be able to accommodate a large number of participants. Total project cost is \$1,941,000.
## 2011-15 State Capital Program

#### Capital Renewal Program

Estimated program cost: \$1,928,000

The ANR Capital Renewal Program will consist of two main components: irrigation water renovation at the West Side Research and Extension Center; and heating, air conditioning and ventilation (HVAC) renovation/renewal at various Research and Extension Centers. The irrigation water renovation will address the deficiencies of an aging irrigation system at West Side where limitations on water supply hinder research. Restoration of the reservoir will provide a more reliable water supply. Aging and energyinefficient HVAC systems will be replaced or upgraded at several Research and Extension Centers, with priority given to the least energyefficient systems as identified by the audit for the Energy Efficiency Partnership Program.

### **Kearney REC - Insectary Facility** Estimated cost for PWC: \$1,808,000

The project will construct approximately 3,000 ASF of new space for the raising of a wide variety of insects and mites used in research on integrated pest management, insects, and their predators. The facility will provide space and environmental controls for optimum growing conditions for multiple species of insects, while decreasing cross-contamination risks. Onsite, campus, and county-based researchers and their students involved in insectary, greenhouse and field research will utilize the facility to develop safer, more efficient, and environmentally friendly farming practices and to develop means to mitigate the effects of new invasive pests. Estimated total project cost is \$2,083,000.

# West Side REC Field Laboratory and Multipurpose Facility

Estimated cost for PWC: \$1,590,000

This project will construct a new 4,500 ASF facility to support field research, extension and field educational programs at the West Side Research and Extension Center, particularly for vegetables, tree, cotton, and irrigation studies. The new facility will provide for both dry laboratory research and the preparation of bulk research samples from the field. Open-space areas will accommodate education programs, outreach activities, equipment demonstrations, and seminars for small or large groups. Estimated total project cost is \$1,810,000.

## 2009-15 Non-State Capital Program

### Shafter REC Cotton Gin Renovation

Estimated project cost: \$394,000

This project will renovate the existing Cotton Gin building as a conference facility to provide critically needed space for public extension and educational activities at the Shafter Center. Using approved historical preservation standards, the project will also construct new space for accessible restrooms and storage.

# Sierra Foothill REC - Citrus Clonal Protection Facility

Estimated project cost: \$1,200,000

This project will construct a new 40,000 ASF facility to provide a protected propagating and growing environment for the State's citrus budwood collection. The facility will be in a location that is remote from the citrus production regions of the State and is, therefore, less prone to infestation by the many species of pests threatening the state's annual \$1.1 billion citrus industry. The main area, which will provide for several hundred trees, will be clad in special net material and served with passive cooling, freeze protection, heating and irrigation systems to maintain the specimens. Support spaces will include vestibules for the protected passage of trees, workers and vehicles; headhouse and laboratory spaces for propagation and evaluation; and related work and storage areas.

## Key to the Tables

**Program Categories:** The list of projects is organized into four program categories.

- Education & General General Campus: New construction and renovation of core instruction, research, general campus academic space, academic support space, student support space, institutional support space, infrastructure, and seismic/life safety.
- Education & General Health Sciences: New construction and renovation of all academic space, academic support, student support, seismic/life safety, infrastructure and institutional support space for the health sciences if developed separately from general campus space (i.e., a separate health sciences library or vivarium).
- Auxiliary Enterprises and Fee-Supported Facilities: New construction and renovation of student housing/dining, faculty/staff housing, student activities, recreation or athletic facilities, student health centers, parking and roads, seismic/life safety, and child care facilities.
- **Medical Centers:** New construction, renovation, remediation of patient care facilities, infrastructure, seismic/life safety, and medical center support space.

**Project Objectives:** Identifies the primary purpose(s) of each project.

- **Enrollment Needs:** To provide capacity related to student and faculty growth.
- Life-Safety Deficiencies: To correct seismic hazards rated seismically "Poor" or "Very Poor" and other life-safety deficiencies.
- **Facilities Modernization:** To address unsatisfactory conditions in existing buildings or infrastructure systems. This may include code deficiencies, systems obsolescence, technological obsolescence, or program modernization needs.
- New Program Initiatives: To accommodate new or expanding programs that are not necessarily related to enrollment growth. Examples are new research centers or institutes or the initiation of new schools or degree programs.

Project Phase: Identifies the funding amounts associated with each phase of the project.

- **P** = Preliminary Plans
- W = Working Drawings
- C = Construction
- **E** = Equipment

Funding Sources: Identifies the categories of fund sources used to support the project.

### **State Funds**

- (blank) General Obligation Bonds or other State funds
- **CH** Children's Hospital Bonds (Propositions 3 and 61)
- **CRM** California Institute for Regenerative Medicine Bonds CIRM (Proposition 71)
- **GF** General Funds
- **HSE** Health Sciences Expansion
- LRB State Lease Revenue Bonds
- **PT** Telemedicine PRIME (Proposition 1D)
- OTH or TBD As yet unidentified State or non-State funding

#### Non-State Funds

- LB External Financing
- IL Internal Loans (funds provided by the Office of the President)
- X Campus funds or other University sources
- **G** Gifts in hand, pledges, and amounts expected to be raised
- UR University Registration Fee Reserves
- **HR** Hospital Reserves
- HSR Housing System Reserves
- **PSR** Parking System Reserves
- **N** Other auxiliary reserves
- **F** Funds expected to be provided from any federal agency
- **OTH or TBD** As yet unidentified State or non-State funding

**Cost Indexing:** All 2009-10 project costs for Non-State-funded facilities in this Budget are based on California Construction Cost Index (CCCI) 5320 and Equipment Price Index (EPI) 2894. All 2010-15 unfunded project costs for both State-funded and non-State-funded projects in this Budget are based on California Construction Cost Index (CCCI) 5565 and Equipment Price Index (EPI) 2928, as projected for December 2010. Since these indices are associated with the 2010-11 Budget, individual project costs estimated for years beyond 2010-11 do not include adjustment for subsequent inflationary increases.