

## SECTION 4

# CAPITAL BUDGET AND THREE-YEAR CAPITAL PLAN

The university's Capital Budget and three-year Capital Plan are based on a projection of the major capital projects that the university intends to pursue related to its academic mission. The Capital Budget represents the anticipated capital expenditures in the first year of the rolling three-year Capital Plan. The Capital Plan includes projects that are in progress or are expected to commence during that three-year period. Both the Capital Budget and the Capital Plan are subject to change based on funding availability, budget affordability, and university priorities.

The Capital Plan continues to reflect the substantial investment that Stanford University makes in its facilities. It is driven by the academic priorities for teaching, research, and related activities described in Section 2, and the initiatives of the administrative and auxiliary units that support the academic mission, described in Section 3. This section includes a discussion of the 2009/10 Capital Budget, provides an overview of the capital planning process, describes current and long-term strategic initiatives, and presents the 2009/10 – 2011/12 Capital Plan and its constraints.

### THE CAPITAL BUDGET, 2009/10

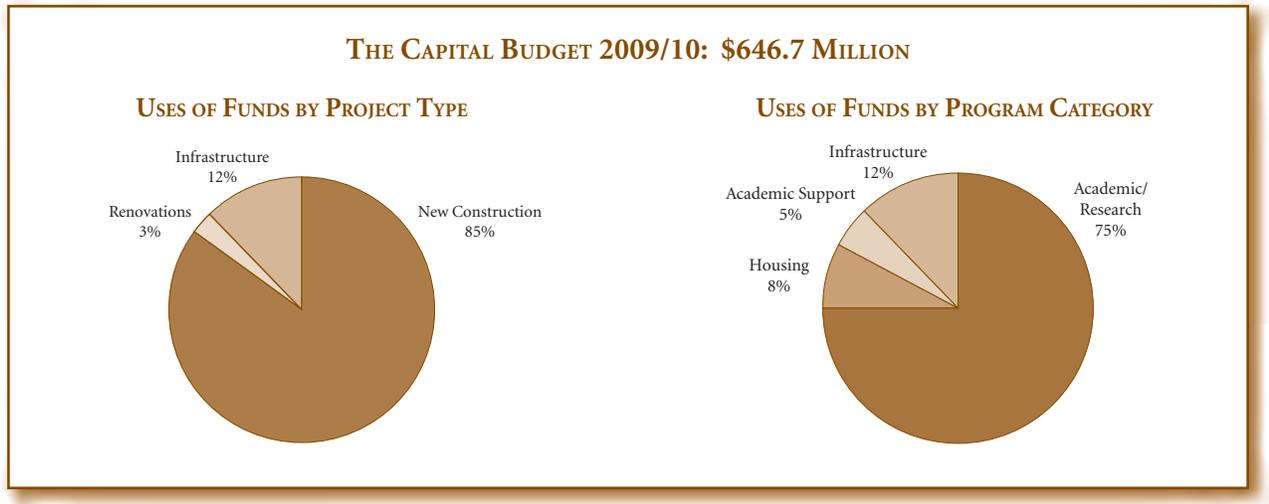
The 2009/10 Capital Budget at \$646.7 million reflects the university's significant capital initiatives, including expenditures for five of the eight Science, Engineering, and Medical Campus (SEMC) buildings, the new Graduate School of Business (GSB) Knight Management Center (KMC), the new Bing Concert Hall, the new Law School Clinics and Faculty Office building, and various infrastructure projects and programs. The projected 2009/10 expenditures reflect only a portion of the total costs of the capital projects, as most projects span more than one year. The following table highlights the major capital projects in the plan, the project costs that will be incurred in the 2009/10 Capital Budget, as well as the percentage of the project that is expected to be completed by the end of 2009/10.

The magnitude of the Capital Budget is based on the assumption that funding availability will align with approved project schedules. It is the policy of the university to have the funding identified before beginning construction. As a result, the Capital Budget has historically been substantially higher than actual spending. In fact, actual expenditures have averaged only 65% of the budget over the past eight years. These lower than planned expenditures are mostly due to project deferrals caused by funding gaps. Most of the projects in the 2009/10 Capital Budget have funding identified, staff assigned, and have received preliminary

### MAJOR CAPITAL PROJECTS – PERCENT OF COMPLETION 2009/10

[IN MILLIONS OF DOLLARS]

	Capital Budget 2009/10	Estimated Project Cost	Estimated Percent Complete 2009/10
GSB New KMC Campus and Parking Structure (PS7)	185.0	374.3	77%
Lorry I. Lokey Stem Cell Research Building	95.0	202.9	100%
Jen-Hsun Huang Engineering Center and the Center for Nanoscale Science & Technology	66.0	194.6	100%
Li Ka Shing Center for Learning and Knowledge	43.2	144.2	100%
Law School Clinics and Faculty Office Building	37.0	70.6	82%
Bing Concert Hall	30.6	133.0	23%
Center for Nanoscale Science and Technology Fit-up	18.1	20.1	100%
East Campus Dining Commons	17.4	20.0	73%
Stanford Avenue Faculty Homes (39 units)	14.4	30.9	60%
Infrastructure Projects	80.9	294.0	Various
Other projects	59.1	316.0	Various
	646.7	1,800.6	



Board of Trustees approval. Therefore, the expectation is that the actual expenditures in 2009/10 will be much closer to the budget than in the past.

### SOURCES AND USES

Sources of funds for the Capital Budget are anticipated to be a combination of current funds (which include the Capital Facilities Fund, existing reserves, and fund balances), gifts, debt, and other sources (which represent funds from the California Institute of Regenerative Medicine, Peking University donations, and funds from the hospitals). The university typically uses debt on projects as the last source of funds. The mix of funds will be impacted by the timing of gift receipts.

Of the \$646.7 million in the overall Capital Budget, 75% will be spent on Academic/Research projects. Infrastructure, Housing, Academic Support, and Athletics/Student Activities will represent 12%, 8%, 5%, and less than 1%, respectively. An estimated 85% of the budget will be spent on new construction projects. The majority of these expenditures are for the SEMC buildings, the Knight Management Center and Parking Structure 7, the Law School Clinics and Faculty Office Building, and the Bing Concert Hall. Another 12% will be spent on infrastructure projects and programs, including the Investment in Plant Maintenance Program and the Capital Utilities Program (CUP). The remaining 3% will be spent on renovation projects for Crothers Hall/Crothers Memorial Hall, the School of Education Building, and the Cognitive and Neurobiological Imaging Center for the School of Humanities and Sciences.

### Capital Facilities Fund

A crucial source of funds for capital projects is the Capital Facilities Fund (CFF). In June 2007, the Board of Trustees approved an increase in the target endowment payout rate from 5.0% to 5.5%. The additional payout frees up unrestricted funds, which have been sequestered in the CFF to support major facilities projects.

Transfers to the CFF will be \$130.2 million in 2008/09 and \$122.4 million in 2009/10, with commitments of \$40.8 million in 2008/09 and \$86.4 million in 2009/10, as shown in the table on the next page. The 2009/10 total includes the anticipated use of \$58.2 million to cover the EFP payout shortfall in accordance with the new EFP policy described in Section 1.

Non-formula CFF funds are allocated for projects that are difficult to support through restricted sources, and thus reduce the call for general funds serviced debt. Among other uses, non-formula CFF is funding the enhanced sustainability features of several of the SEMC buildings.

The formula units determine uses of their CFF funds according to their highest priority.

### CAPITAL BUDGET IMPACT ON 2009/10 OPERATIONS

The 2009/10 Consolidated Budget for Operations includes incremental debt service and O&M expenses for projects completing in 2009/10. Additionally, this budget includes an incremental increase in debt service and O&M expenses for projects completing in 2008/09 which were operational for less than 12 months.

**CAPITAL FACILITIES FUND (CFF)****Funding Sources and Committed Uses of Funding**  
[IN MILLIONS OF DOLLARS]

	2008/09	2009/10
<b>Sources of Funding</b>		
Formula Units		
School of Medicine	16.1	16.7
Graduate School of Business	7.5	7.5
Hoover Institution	4.7	4.5
Presidential Funds	16.7	15.0
Non-formula	85.2	78.7
<b>Total Funding</b>	<b>130.2</b>	<b>122.4</b>
<b>Committed Uses of Funding</b>		
EFP potential shortfall		58.2
Stanford Avenue Faculty Homes	11.3	8.3
School of Education Building	5.2	
Visitor Information Center	3.7	
Munger Graduate Residences	2.9	
Redwood City Campus	2.0	
Bioengineering & Chemical Engineering		5.0
Emergency Power Program		3.0
GSB Knight Management Center construction financing	7.5	7.5
Medical School projects	6.1	4.0
Hoover facilities projects	2.0	
Other projects	0.1	0.4
<b>Total Commitments</b>	<b>40.8</b>	<b>86.4</b>
Annual Uncommitted Balance	89.4	36.0
Uncommitted Balance	107.9	143.9

Capital projects are partially funded from internal loans which are amortized over the asset life in equal installments (principal and interest). The budgeted interest rate (BIR) used to calculate internal debt service is a blended rate of interest expense on debt issued for capital projects, bond issuance costs, and administrative costs. The BIR is reset annually. The projected BIR for 2009/10 is 5.0%.

The projected incremental internal debt service funded by unrestricted funds, including formula units, in 2009/10 is \$3.3 million. This amount includes the additional debt service on the energy retrofits of Gilbert Biology, the Beckman Center, Stauffer II, the Center for Nanoscale Science and Technology, the Lorry I. Lokey Stem Cell Research Building, the School of

Medicine Connective Elements, and other smaller capital projects and programs, offset by a reduction of 0.2% in the budgeted interest rate. It excludes debt service incurred to bridge finance the receipt of gift and annual lease payments. This additional debt service brings the total annual internal debt service borne by the unrestricted university budget to \$47.4 million, 3.1% of unrestricted revenues, general funds, and designated funds.

Consolidated internal debt service, including that borne by formula units, auxiliaries, service centers, Faculty Staff Housing, and real estate investments is projected to increase from \$139.3 million to \$149.0 million. In addition, annual lease payments are projected at \$19.5 million and debt service incurred to bridge finance the receipt of gifts under construction is estimated at \$2.6 million.

The university will incur additional O&M costs in 2009/10 of approximately \$5.5 million, \$2.1 million of which will be funded by the School of Medicine. The incremental costs are mostly due to the completion of the Lorry I. Lokey Stem Cell Research Building, the Jen-Hsun Huang Engineering Center, the Li Ka Shing Center for Learning and Knowledge, the Center for Nanoscale Science and Technology, the John A. and Cynthia Fry Gunn Building (SIEPR), the Visitor Information Center/Track Bleachers Expansion, the Automotive Innovation Facility, and smaller infrastructure maintenance costs.

**CAPITAL PLANNING OVERVIEW****CAPITAL PLANNING AT STANFORD**

Stanford's Capital Plan is a three-year rolling plan with budget commitments made for the first year and then only for projects with fully identified and approved funding. Cash flow expenditure forecasts for these projects extend beyond the three-year period. Budget impacts for operations, maintenance, and debt service commence at construction completion. The plan includes tables forecasting both cash flow and budget impacts by year, demonstrating the longer than three-year impact of the plan.

The Capital Plan is set in the context of a longer-term capital forecast for the university. The details of this longer-term forecast, particularly funding sources and schedules, are less clear than those of the three-year plan, as all of the needs and funding sources that may

emerge over the long-term horizon are difficult to anticipate. Additionally, plans tend to change over time as some projects prove more feasible than others given evolving funding realities and academic priorities.

At approximately \$1.8 billion, this year's Capital Plan is 35% lower than the prior year's approximate \$2.8 billion plan. This significant decrease reflects the delay or suspension of approximately \$1.1 billion in projects in response to the economic downturn.

Stanford has been in the midst of the largest construction program in its history. The Capital Plan addresses the need to replace and upgrade many of the university's aging facilities for science, medicine, and engineering. Additionally, the plan includes a new campus for the Graduate School of Business, a Law School clinics and faculty office building, a concert hall, and several housing projects.

The current economic downturn has had a significant impact on the university's ability to fund incremental operations and maintenance (O&M) on new buildings, and debt service on both new and renovated buildings as they are occupied. O&M expenses include: planned and reactive/preventive maintenance, zone management, utilities, contracts, grounds, and outdoor lighting. The university had originally delayed or suspended \$1.3 billion of capital projects. Subsequently \$230.5 million in projects were re-activated and are included in the plan, reducing the delayed and suspended projects to \$1.1 billion as detailed in the table below. For the delayed or suspended projects, estimated deferral of debt service and O&M are \$44.9 million and \$20.4 million respectively. The future timing of all delayed or suspended projects will be re-evaluated annually as part of the capital planning process.

#### DELAYED AND SUSPENDED PROJECTS

[IN MILLIONS OF DOLLARS]

	Estimated Project Cost	Debt Service	Operations & Maintenance
Redwood City Campus Master Plan Phase 1	379.0	18.5	8.9
Foundations in Medicine (FIM) 1	142.7	5.4	3.6
Biology (SEMC project)	108.3	4.5	2.4
Art Building	64.6	3.1	1.4
Memorial Auditorium Renovation	57.8	1.5	
Encina Renovation	56.7	2.7	
Old Chemistry	47.7	2.8	1.1
Academic Computing Building (Meyer Library Replacement)	46.1	2.4	
Cummings Replacement	45.6	2.3	1.1
Maples Parking Structure	40.0		0.2
Panama Mall Renovations	20.8		0.1
Buildings 02-520 and 02-524 Renovations (\$12 million)			
Durand Phase 4 (\$6.8 million)			
Building 02-560 (\$2 million)			
Public Safety Building	15.7	0.6	0.3
Mechanical Engineering (Building 630 Replacement)	14.9		0.4
Stanford Auxiliary Libraries (SAL) 3 - Phase 2	14.0		0.5
Green Dorm (47 beds)	12.7	0.3	0.1
Access Control Enterprise System (ACES) - Phase 2	11.7		
Golf Club House, Pro Shop, Cart Barn	8.7	0.5	0.1
Madera Grove East Campus Child Care Center 2	5.4		0.1
Multiple Non-Board of Trustee Level Projects	16.5	0.2	0.1
<b>Total Delayed and Suspended Projects*</b>	<b>1,108.8</b>	<b>44.9</b>	<b>20.4</b>

\*Initially delayed and suspended total was \$1.3 billion.

Last year, 17% of the Capital Plan was dependent on “Gifts to Be Raised,” compared to just 7% this year. Likewise, 15% of last year’s Capital Plan was dependent on “Resources to Be Identified,” compared to less than 1% this year. For any projects relying on gifts to be raised, the Office of Development has determined that fundraising plans are feasible, although the time frames could change. “Resources to be Identified” includes funds yet to be fully identified, with the expectation that funds will come from a combination of gifts and/or school, department, and university reserves.

## STRATEGIC INITIATIVES

The following current and long-term strategic initiatives are integral to this year’s Capital Plan and are described in more detail below.

### CURRENT

- Science, Engineering, and Medical Campus (SEMC)
- Housing

### LONG-TERM

- Redwood City Campus
- Sustainability and Energy Management

### CURRENT

#### Science, Engineering, and Medical Campus

The SEMC consists of eight new buildings:

- ◆ Astrophysics (completed in 2006)
- ◆ Jerry Yang and Akiko Yamazaki Environment and Energy Building (Y2E2) (completed in 2007)
- ◆ Lorry I. Lokey Stem Cell Research Building (SIM 1) (under construction)
- ◆ Jen-Hsun Huang Engineering Center (under construction)
- ◆ Center for Nanoscale Science and Technology (under construction)
- ◆ Li Ka Shing Center for Learning and Knowledge (LKSC) (under construction)
- ◆ Bioengineering/Chemical Engineering (BioE/ChemE) (in planning)
- ◆ Biology (delayed)

This year’s Capital Plan includes five of the eight SEMC buildings, together with associated connective elements, utilities, and demolition projects. It

also includes a line item for contingency risk. SEMC project costs included in this plan are \$683.6 million, or 38% of the total plan expenditures.

The following are descriptions of the SEMC buildings currently under way:

#### *Lorry I. Lokey Stem Cell Research Building (SIM 1)*

The School of Medicine long-range plan calls for the development of new research facilities that will focus on five Institutes of Medicine to be housed in three new buildings. The Stanford Institutes of Medicine (SIM 1) building, the first of three institute-based buildings planned by the school, will house the Stem Cell Biology and Regenerative Medicine Institute (SCBRM) and the Cancer Center. Researchers from other School of Medicine Institutes will also occupy the building.

The Lokey Stem Cell Research Building will encompass 200,000 gross square feet, with a basement and three above grade floors of research labs and other support facilities. The Lokey Building has extensive sustainability features as described in the School of Medicine Academic Unit write-up in Section 2.

#### *Jen-Hsun Huang Engineering Center*

The Jen-Hsun Huang Engineering Center, at the heart of the new SEQ 2, will be the headquarters for the School of Engineering. The project began construction in 2008 and will be completed in 2010.

The Huang Engineering Center is located on the southern portion of the former HEPL building site. The 129,000 gross square feet building will house administrative units, academic departments and institutes, classrooms, an auditorium, a library, and collaborative spaces. The building skin, architectural elements, and sustainable design features are being carried forward from the Y2E2 building.

#### *Center for Nanoscale Science and Technology (Nano Center)*

The Center for Nanoscale Science and Technology is located on the northern portion of the former HEPL building site. The project began construction in 2008 and will be completed in 2010. The 102,000 gross square feet building will house a broad spectrum of laboratories. The Nano Center will support the Ginzton Laboratory and the proposed Institute for Nanoscience and Technology.

Using the most advanced equipment available, the Nano Center will make these labs available to approximately 70 researchers from all over campus, including leaders in the natural and physical sciences, engineering, and medicine. Natural ventilation and day-lighting strategies will be employed throughout the Nano Center. Sustainability goals for the building are covered in the Dean of Research Academic Unit write-up in Section 2 of this book.

### *Li Ka Shing Center for Learning and Knowledge (LKSC)*

The Li Ka Shing Center for Learning and Knowledge is currently under construction on the site cleared by the Fairchild Auditorium demolition. The project began construction in 2008 and is anticipated to be completed in 2010. The 118,000 gross square foot LKSC building will house a conference center, classrooms, student study and social areas, and medical simulation and virtual reality environments.

The LKSC will be an active hub for the School of Medicine, providing supportive environments for learning, knowledge development, and public assembly, with an emphasis on access to information resources throughout. A cornerstone of the new education space will be the flagship facility of the Center for Immersive and Simulation-based Learning. The center aims to provide an integrated environment for hands-on learning of clinical, procedural, cognitive, and interpersonal skills. Sustainability features of the LKSC are covered in the School of Medicine Academic Unit write-up in Section 2.

### **Housing**

Stanford University prides itself in having a housing program that provides a wide range of choices for its students. The long-range vision for academic housing builds on this program by providing a physical framework that would offer a variety of living options.

The plan for undergraduate housing east of the Main Quad develops a series of neighborhoods, anchored by new quadrangles, which would accommodate a collection of freshman and upper class dorms as well as academic theme houses. Centralized dining and academic program facilities serve as the hub for these neighborhoods and allow students to migrate among different housing venues while still residing in the same “community”.

On the west side of campus the long-range vision strengthens Santa Theresa as a streetscape of student dorms by replacing parking lots with dorms that will all face and activate the street. In the spirit of providing choices, the housing venues on this side of campus focus less on a quadrangle system, and more on individual dorms and houses in a natural setting.

Working towards achieving this long-range vision and meeting the needs of our faculty and staff, the following projects are included in the Capital Plan.

**CROTHERS HALL AND CROTHERS MEMORIAL HALL RENOVATION** – These buildings comprise a total of 104,000 gross square feet of coeducational dormitory space that currently houses 244 graduate students. With the opening of the Munger Graduate Residences, both Crothers Hall and Crothers Memorial Hall will be used for undergraduate housing. The renovated buildings are anticipated to house 376 undergraduate students. A new Resident Fellow apartment will be added as part of the renovation as will some housing offices and support spaces. The Mark Taper Law Student Center will be converted into an administrative center linking the Crothers buildings into one Crothers complex.

The buildings will be renovated to be consistent with the characteristics inherent in the original design and building type. The building colors, materials, and overall design elements will respond to the Central Campus Design Guidelines. The scope will bring the structures up to code and seismic performance standards. The central courtyard between Crothers Hall and Crothers Memorial Hall will be maintained as the main public central space for large community gatherings and events.

**EAST CAMPUS DINING COMMONS** – The construction of a new 26,000 square foot dining commons on Escondido Road will support Stanford Dining’s commitment to provide quality meals and excellent service to the 376 undergraduate students that will be housed in the renovated residences at Crothers Hall and Crothers Memorial Hall, together with staff, faculty, conferees, and other guests. The new facility will also serve as a regional dining facility, which will offer an alternative dining location for students housed in Toyon Hall.

To enhance the residence hall’s living and learning experience, the new facility will provide a unique,

innovative, attractive, and exciting dining alternative. The new facility will follow a “culinary studio” approach in its design and showcase “just-in-time” cooking concepts and flexible cooking stations and seating areas. The menu will be multi-cultural and diverse. The Dining Commons will not only be state of the art, but also comfortable for students, with a warm ambience.

**STANFORD AVENUE FACULTY HOMES** – The availability of high-quality affordable housing on or close to campus plays a critical role in recruiting and retaining Stanford faculty. In recent decades, the desirable but increasingly expensive housing in the greater Stanford area has challenged the university to assist faculty in identifying suitable, affordable housing opportunities. The Stanford Avenue Faculty Homes project was developed as an option to address this issue. The project was approved by the Board of Trustees in 2007 and is expected to be completed by 2011.

The project entails the construction of 39 single-family detached homes on a 6.7 acre parcel located between Stanford Avenue and Olmsted Road in the southeastern area of campus, adjacent to Escondido Village graduate student housing and the College Terrace neighborhood. The homes will range from 1,820 to 2,400 square feet. The units are clustered around shared private courtyards. The homes have been designed to integrate with the existing fabric of the adjacent College Terrace neighborhood. The site plan will provide for a public access jogging trail and public sidewalks along Stanford Avenue and Olmsted Road.

**OLMSTED ROAD STAFF RENTAL HOUSING** - The Department of Athletics, Physical Education, and Recreation (DAPER) has become more reliant on using mortgage subsidies and housing assistance in recruiting and retaining coaches in a very competitive environment. In lieu of providing a subsidy for the purchase of homes, DAPER plans to construct rental on-campus housing for coaches and staff.

The Olmsted Road Staff Rental Housing project will construct 25 units of staff housing – 17 single-family detached homes and four duplexes on a three-acre site bounded by El Camino Real, Stanford Avenue, Olmsted Road, and the expansion site of the new child care center. The architectural styles of the homes will take cues from College Terrace residences in terms of massing, scale, proportion, detail, and color. The col-

lection of homes conforms to the setback and buffer requirements of the El Camino Plan. Although primary access to the housing will be via Olmsted Road, there will be pathway connections to El Camino Real and the university.

## LONG-TERM

### Redwood City Campus

A conceptual master plan has been completed for the development of a new campus located in Redwood City on 35 acres owned by the university. The current plan is to redevelop the site to provide up to 1.5 million square feet of professional staff, amenity, and research space. Phase I of the Stanford Redwood City Campus, approximately 558,000 square feet, has received concept and site approval from the Board of Trustees. A project application has been submitted to Redwood City, and the project entitlement and EIR process is moving forward. Entitlement approval is targeted for fall 2009 or early 2010. Several non-academic campus programs plan to relocate to the new campus. Due to the current economic downturn, it is not clear when the site work and redevelopment will begin.

### Sustainability and Energy Management

Stanford is committed to advancing sustainability in the design, construction, and operation of campus facilities. The reduction of overall energy consumption and the use of cleaner energy sources are integral to creating a sustainable campus. Stanford continues a decade-long commitment to energy conservation and efficiency.

Current energy-saving strategies are expected to decrease energy consumption through 2011. In 2012, additional demand from new buildings may require enhanced conservation efforts. While Stanford produces energy from an efficient natural gas-fired combined heat and power plant, the university is exploring renewable energy solutions.

Stanford is also pursuing various approaches to reduce the use of non-renewable resources and minimize environmental impacts.

- **Energy Demand and Water Use Reductions:** As of February 2008, Stanford has instituted sustainability standards that require all new buildings to establish the goal of achieving a reduction in energy demand by 30% below the American Society of Heating, Refrigerating, and Air-Conditioning

Engineers (ASHRAE) standard 90.1 (2004 edition) and a reduction in water usage to 25% below that of comparable campus buildings.

- **12 Building Energy Study:** Stanford's comprehensive energy reduction program has identified 12 of the largest energy-intensive buildings on campus. As reported in the section on the Building Energy Retrofit Program (see the Infrastructure section of the Capital Plan), the large-scale projects are in varying stages of implementation and require a capital investment of approximately \$16 million.
- **Existing Building Retrofits:** Through minor capital and operational improvements, Stanford plans to continue programs to reduce energy and water use in existing buildings. Examples include the Energy Retrofit Program (ERP), the Energy Conservation Incentive Program (ECIP), and other capital retrofit projects.
- **Energy Supply Options:** Stanford is aggressively working to identify energy supply options that reduce Stanford's dependence on fossil fuel.

A major effort to identify and prioritize options for a long-term reduction of campus greenhouse gas (GHG) emissions is expected to be completed in 2009. The GHG reduction plan will incorporate advanced efficiency standards for new buildings, improvements to existing buildings, and potential long-term changes to campus energy supply strategies.

Sustainability Working Teams are focusing on advancing sustainability across campus operations. These working teams bring together campus operations leaders with knowledge of water resources, green purchasing, food service, recycling, and transportation.

The recently completed Y2E2 building exemplifies Stanford's commitment to sustainability. The building is projected to use 56% less energy and 90% less potable water for fixtures than comparable buildings. The building also used fly ash (a by-product of making cement) as a construction material, incorporated the use of recycled steel and renewable wood, included uncarpeted floors in many areas, and employed photovoltaic panels on portions of the roof.

### THE CAPITAL PLAN, 2009/10 – 2011/12

Stanford's central campus, including the Medical School but excluding the hospitals, has more than 700 buildings providing more than 14.2 million gross

square feet of physical space. The physical plant has a historical cost of \$5.3 billion and an estimated replacement cost in excess of \$7 billion.

The Capital Plan includes a forecast of Stanford's annual programs designed to restore, maintain, and improve campus facilities for teaching, research, housing, and related activities. The plan also outlines Stanford's needs for new facilities. The Capital Plan is compiled, reviewed, and approved in a coordinated manner across the university. The plan carefully balances institutional needs for new and renovated facilities with challenging constraints of limited development entitlements, available funding, and budget affordability.

Projects listed in the Capital Plan are those which have been approved by the Provost and have an estimated cost of \$5 million or more. Many of the projects are under the purview of the Board of Trustees. Criteria established for the Board of Trustee-level approval are any of the following:

- Total project cost of \$10 million and above
- New building construction
- Projects that use 5,000 or more new square feet within the Academic Growth Boundary
- Changes in land use
- Projects with major exterior design changes

Expenditures in the 2009/10–2011/12 Capital Plan, which includes major construction projects in various stages of development and numerous infrastructure projects and programs, total \$1.8 billion. The table below provides a comparison of the last three Capital Plans.

#### COMPARATIVE CAPITAL PLANS

[IN MILLIONS OF DOLLARS]

	2007/08	2008/09	2009/10
Design/			
Construction	1,377.4	2,068.3	1,427.0
Forecasted Projects	739.7	420.0	79.6
Infrastructure	252.1	280.0	294.0
Total	2,369.2	2,768.3	1,800.6

#### Projects in Design and Construction

Projects in Design and Construction represent \$1.4 billion (79% of the plan). Construction of these projects is contingent on fundraising of \$110.2 million (8%).

Seventeen projects are listed in this category, as shown in the related table at the end of this section.

Project costs in Design and Construction have decreased by \$641.3 million from 2008/09. Accounting for this significant decrease is \$577.3 million in delayed or suspended projects including: Redwood City Campus Master Plan Phase 1 (\$379 million), Biology Building (\$108.3 million), Maples Parking Structure (\$40.0 million), Mechanical Engineering Building (\$14.9 million), Durand Renovations - Phase 4 (\$6.8 million), and three other smaller projects totaling \$23.4 million. Additionally, \$289.9 million in projects are rolling off of the Capital Plan as they will be completed by 2009/10, the largest of which is the Munger Graduate Residences (\$227 million). Offsetting these decreases is the move of \$175 million in projects from "Forecasted" to "Design & Construction," including: Bing Concert Hall (\$133 million), Crothers Hall/Crothers Memorial Hall Renovation (\$22 million), and East Campus Dining Commons (\$20 million). Two new projects to the plan are the Center for Nanoscale Science and Technology Fit-up (\$20.1 million) and the Jen-Hsun Huang Engineering Center Fit-up (\$14 million).

### Forecasted Projects

Forecasted projects are those anticipated to receive Board of Trustees approval over the next three years. These projects total \$79.6 million (5% of the plan). As with the projects in Design and Construction described above, these projects are contingent on funding. For this group of projects, a total of \$15 million, or 19% remains to be fundraised.

Project costs within this category have decreased by \$340.4 million from 2008/09, as a number of projects have been delayed or suspended. The delayed or suspended projects total \$192.1 million and include: Art Building (\$64.6 million), Encina Renovation (\$56.7 million), Cummings Replacement (\$45.6 million), Stanford Auxiliary Libraries 3 Phase 2 (\$14 million), Green Dorm (\$12.7 million), and Panama Mall Renovations (\$9 million).

Projects totaling \$205 million have moved to Design and Construction, including: Bing Concert Hall (previously forecasted at \$163 million), East Campus Dining Commons (previously forecasted at \$22 million), and Crothers Hall/Crothers Memorial Hall Renovation (previously forecasted at \$20 million). Offsetting these decreases are two new projects:

Scientific Research Computing Facility (\$46.6 million) and Cognitive and Neurobiological Imaging Center (\$10 million). The 800 Welch Road (Blood Center) project remains on the plan and has been renamed the Jill and John Freidenrich Center for Translational Research (\$23 million).

### Infrastructure

Stanford's ongoing efforts to renew its infrastructure are reflected in a budget of \$294 million (16% of plan). Infrastructure programs include: Investment in Plant Maintenance Program, Capital Utilities Program (CUP) and projects, R&DE's Capital Improvement Program, Stanford Infrastructure Program (SIP), Building Energy Retrofit Program, Information Technology & Communications Systems, GUP Mitigation Program, and Storm Drain projects. GUP mitigation and SIP projects are funded through construction project surcharges.

Infrastructure costs have increased in this year's Capital Plan by \$14 million. This increase is largely due to the inclusion of the Cooling Tower #5 and Chiller Building (\$12.7 million). See the Capital Utilities Programs and Projects sections below for further discussion.

### *Investment in Plant – Maintenance Program*

This program includes deferred and planned maintenance for building subsystems. The planned costs and funding total \$93.3 million and are detailed by area on page 79.

### *Capital Utilities Program and Projects*

The three-year plan allocates a total of \$43.6 million to the Capital Utilities Program (CUP) to improve electrical, steam, water, chilled water, and wastewater utility systems. This CUP program covers the areas of system expansion, system replacement, controls, and regulatory (compliance) issues and is an annual capital program.

In addition to the ongoing CUP program, there are three capital utilities projects totaling \$67.7 million. These projects include a Replacement Central Heating Plant (\$30 million) that will allow decommissioning and removal of four existing boilers in the Central Energy Facility (CEF), a Cooling Tower and Chiller building (\$12.7 million) planned at the CEF to support the increased cooling capacity needs of SEMC buildings, and the new Searsville Substation (\$25 million), which will address the university's projected electrical demand growth requirements for the next 50 years.

These projects represent capital investments required under a “business-as-usual” arrangement in which the university continues to utilize the Cardinal Cogeneration plant (a third-party owned and operated 100% fossil-fueled cogeneration facility, operating since 1987) for its long-term energy supply. The current Cardinal Cogeneration plant contract expires in April 2015, at which time the plant will be at or near the end of its useful life. To meet state-mandated greenhouse gas emission reduction requirements (and anticipated Federal requirements currently moving through Congress), significant rehabilitation to the Cardinal Cogeneration would be required.

For these reasons and with a long-range view towards sustainability, a year-long planning effort has been underway to identify new energy supply options to reduce both the university’s long-term cost and greenhouse gas emissions from its operations, and to achieve increased cost stability by reducing the reliance on fossil fuel. These energy supply options are now under review. With the approval of a new energy supply, the proposed \$67.7 million in capital utilities projects discussed above will be significantly altered. In essence, these projects represent only a placeholder for the business-as-usual case, rather than the anticipated new long-term strategy.

#### *Residential & Dining Enterprises Capital Improvement Program*

The Residential & Dining Enterprises Capital Improvement Program (CIP) is intended to address life and health safety, seismic upgrades, code compliance, energy conservation and sustainability measures, and major programmatic improvements in the student housing and dining physical plant. CIP projects anticipated over the next three years total \$46.8 million. The plan includes continuation of the code compliance upgrades of various Row Houses, repairs to the Escondido Village slab heating system and infrastructure, as well as bathroom renovations. The Crothers Hall/Crothers Memorial Hall project and the East Campus Dining Commons are in addition to these CIP totals and are listed on the Projects in Design and Construction table.

#### *Stanford Infrastructure Program (SIP)*

The SIP consists of planning and transportation projects and programs for the improvement and general support of the university’s academic community, hospitals, and physical plant. SIP expenditures are expected to total \$13.5 million over the next three

years. SIP projects include the construction of campus transit improvements, parking lot infrastructure improvements, site improvements, landscape design and enhancements, bicycle, cart and pedestrian paths, lighting, signage, and outdoor art.

#### *Building Energy Retrofit Program*

In the first phase of a comprehensive energy reduction program, Stanford’s largest energy-intensive buildings were studied with the goal of energy consumption reductions. The buildings selected for retrofit represent \$15.9 million of energy expenses per year, or nearly 36% of the total campus energy expense. Figures are based on average consumption in 2006/07 and 2007/08 multiplied by the 2008/09 energy rates. The studies resulted in a range of recommendations from less costly (<\$100,000) to large-scale energy retrofit projects. Most of the less costly retrofits have already been implemented through Sustainability & Energy Management (SEM) department programs. The large-scale projects are in varying stages of implementation and are expected to require a capital investment of about \$16 million.

The table on the following page summarizes the status of these projects, expected annual savings, and early results. It should be noted that early results may not be indicative of expected long-term improvements due both to the imprecise nature of estimating potential energy savings from major renovations as well as the time needed for the changes to take full effect. Some projects will return higher than expected savings and some less than expected due both to the nature of the work and potential changes in expected building occupancy, equipment, tenant improvements, operating schedules, or weather patterns. Where results vary significantly from expectations (more than  $\pm 5\%$ ) and after at least one full annual building cycle has passed, troubleshooting will continue until any identified problems are fixed and expectations are met or exceeded. This troubleshooting will be undertaken unless unforeseen building changes or weather patterns, though unlikely, materially affect the design intent of the retrofit. Note that the Herrin Hall-Biology retrofit was cancelled due to the limited expected life of this building.

Though not included in the Capital Plan, a second group of 14 buildings have been identified for the energy retrofit studies and implementation program. These 14 buildings together consume \$10.7 million in

**BUILDING ENERGY RETROFIT PROGRAM — 12 BUILDING ENERGY STUDY**

Project	Retrofit Status	Estimated Annual Savings	Early Results
Stauffer I – Chemistry	Complete	41%	46%
Gordon & Betty Moore Materials Research	Complete	32%	11%
Paul Allen Center for Integrated Systems (CIS)	Complete	15%	11%
Forsythe (George) Hall <sup>1</sup>	Complete	5%	0%
Stauffer II - Physical Chemistry	Complete	38%	46%
Gates Computer Science	Complete	29%	21%
Beckman Center for Molecular and Genetic Medicine	Construction	43%	
Gilbert Biological Sciences	Program/Design	34%	
Cantor Center for Visual Arts	Program/Design	TBD	
Center for Clinical Sciences Research (CCSR) <sup>2</sup>	Delayed to 2012/13	TBD	
Lucas Center <sup>2</sup>	Delayed to 2011/12	TBD	
Herrin Hall – Biology <sup>3</sup>	Cancelled		

<sup>1</sup> Considering additional work in the server area to improve consumption savings results.

<sup>2</sup> Delayed in order to benefit from lessons learned on the Beckman Center retrofit currently in progress.

<sup>3</sup> Scheduled for demolition.

energy each year, or an additional 24% of Stanford's total energy usage. The estimated capital investment for this group of buildings is \$15 million. The group includes: Green Library West, Clark Center, Mitchell, Jordan Hall, Green Earth Sciences, Varian, Mechanical Engineering Laboratory, Center for Educational Research (CERAS), Packard Electrical Engineering, Arrillaga Alumni, Green Library East, Sweet Hall, Meyer Library, and Tresidder.

In addition to the large-scale retrofits listed above, two medium-sized energy retrofits have been implemented. An energy retrofit of the Avery pool is nearly completed and a 56% savings in energy costs is expected. An energy retrofit of the Keck Science Building has been completed and yielded measured savings of 31%.

#### ***Information Technology and Communication Systems***

The university's communications and networking systems provide voice, data, and video services to all buildings on campus. Over time, these systems must be replaced and/or improved so that a consistently high level of service can be maintained. Additionally, new technologies are implemented that provide more efficient, faster, and/or more cost effective solutions. A total of \$9.6 million has been allocated for upgrades to network and communication systems.

#### ***GUP Mitigation***

Stanford reached agreement with Santa Clara County on the implementation of the required trails in the County and other jurisdictions. Santa Clara County segments were permitted for construction and began in 2005. Construction was suspended when the Committee for Green Foothills sued the County and Stanford over the adequacy of the EIR. The litigation is expected to be resolved in 2009 or 2010 by a California Supreme Court ruling. The Capital Plan provides for \$8.3 million in capital expenditures for this mitigation. Funding is generated by an internal fee levied on capital projects that increase school/department campus space allocations.

#### ***Storm Drains***

The ongoing storm drain program includes projects for installing detention facilities that will mitigate increased peak flow runoff from development of the West Campus, projects to recharge groundwater, and projects to improve minor drainage deficiencies and restore capacity in the existing storm drain system. In addition, new storm water quality regulations require site design measures and new runoff treatment facilities to minimize contamination conveyed to natural water bodies from small storms.

## Other Stanford Entities

In an effort to present a comprehensive view of university planned construction, the capital planning process has included real estate investments, Stanford Hospitals and Clinics (SHC), Lucile Packard Children's Hospital (LPCCH), and the SLAC National Accelerator Laboratory. Although the Capital Plan tables at the end of this section do not include these other entities, brief descriptions of their capital programs follow:

### *Real Estate Investments*

**SAND HILL ROAD HOTEL/OFFICE BUILDING** – The development of an office complex and 123-room hotel on Sand Hill Road is complete. The Rosewood Sand Hill Hotel, operated by Rosewood Hotels and Resorts, opened in April 2009. Office leasing of the donor-funded 100,000 square foot office complex has exceeded original expectations, with 75% of the office space currently leased. The first office tenant moved in November 2008.

**STANFORD RESEARCH PARK** – The Research Park continues to be a desirable location for a variety of corporations, creating a dynamic environment throughout boom and bust real estate cycles. Under an approved land use development agreement, known as the Mayfield Agreement, the Real Estate division will be master planning the conversion of some commercial sites on the edges of the Research Park to residential sites by the year 2013, when the underlying ground leases expire.

### *Stanford Hospitals and Clinics and Lucille Packard Children's Hospital*

The university, SHC, and LPCCH are requesting entitlements in Palo Alto to create a new hospital zone, which would allow development of approximately 1.3 million square feet of net new hospital, clinic, and medical office space. In addition, the new zone would allow for an increase in the height limit from 50 feet to 130 feet.

Since the fall of 2006, representatives from the two hospitals, the School of Medicine, and university administration (including Land, Buildings and Real Estate (LBRE), Public Affairs, and Office of the General Counsel) have worked together to manage the entitlement process. The formal project application was submitted in August 2007. The City Council hearing on the final Environmental Impact Report (EIR) and approval of the Development Agreement are now targeted for late 2009 or early 2010. The ability

to meet targeted environmental review and ultimate entitlement dates will be a significant challenge given the discretionary nature of this process.

### *SLAC National Accelerator Laboratory*

Currently, the SLAC National Accelerator Laboratory is updating its Long-Range Development Plan with a vision to consolidate research science activities, upgrade infrastructure, and/or demolish and renovate facilities. Recent Capital Plan efforts have focused on the Linac Coherent Light Source (LCLS) project, a project totaling \$315 million, funded by the Department of Energy. A remaining effort involves the renovation of office space for staff and users of the LCLS facility. This work is scheduled to be completed in 2010. Additionally, projects totaling \$97.1 million (funded by the Department of Energy) are underway on a Research Support Building (RSB) and infrastructure modernization. These projects include the construction of a new 60,000 gross square foot building to house accelerator research staff at the RSB, renovation of three mission-support buildings, and the demolition of 57,000 square feet of substandard buildings and trailers.

## Overall Summary

A summary table of the 2009/10-2011/12 three-year Capital Plan appears on the next page.

To differentiate between the estimated costs of the three-year Capital Plan and the forecasted spending to complete its projects and programs, an additional table (Capital Plan Cash Flows) is included along with the Capital Plan Summary. This table forecasts the expenditure outflow of the Capital Plan based on project and program schedules. Included are projects and programs in Design or Construction, Forecasted, and Infrastructure projects that are anticipated to commence in the next three years. Related cash expenditures are anticipated to be spent over a period extending through 2014/15.

Operating (including utilities), maintenance, and debt service costs will impact the operating budget once the construction is substantially complete. Although the Capital Plan Summary shows the full budget impact of all completed projects, it is important to note that this impact aligns with the project completion schedule and will be absorbed by the university budget over a period of six years (through 2014/15) based on actual project completion dates. The Capital Plan Impact on Budget table has been included along with the Capital Plan Summary and Capital Plan Cash Flows

**SUMMARY OF THREE-YEAR CAPITAL PLAN 2009/10–2011/12**

[IN MILLIONS OF DOLLARS]

	Project Funding Source									Annual Continuing Costs	
	Estimated Project Cost	Capital Budget 2009/10	Current Funds <sup>1</sup>	Gifts		University Debt		Other <sup>2</sup>	Resources To Be Identified <sup>3</sup>	Debt Service	Operations, Maintenance & Utilities <sup>4</sup>
				In Hand or Pledged	To Be Raised	Service Center/ Auxiliary Debt	Academic Debt				
Projects in Design & Construction	1,427.0	554.7	310.4	749.9	110.2	13.5	199.5	43.5		14.1	23.9
Forecasted Projects	79.6	11.2	10.0	8.0	15.0		46.6			3.1	1.5
<b>Total Construction Plan</b>	<b>1,506.6</b>	<b>565.9</b>	<b>320.4</b>	<b>757.9</b>	<b>125.2</b>	<b>13.5</b>	<b>246.1</b>	<b>43.5</b>		<b>17.2</b>	<b>25.4</b>
Infrastructure Programs	294.0	80.9	105.3			162.1	16.4	0.4	9.7	14.5	0.4
<b>Total Three-Year Capital Plan 2009/10 – 2011/12</b>	<b>1,800.6</b>	<b>646.7</b>	<b>425.7</b>	<b>757.9</b>	<b>125.2</b>	<b>175.6</b>	<b>262.5</b>	<b>43.9</b>	<b>9.7</b>	<b>31.7</b>	<b>25.7</b>

<sup>1</sup> Includes funds from university and school reserves, the CFF, and the GUP and SIP programs.<sup>2</sup> “Other” represents funds from government grants, Peking University, and the hospitals.<sup>3</sup> Anticipated funding for this category is through a combination of gift raising and school, department, and university reserves yet to be identified.<sup>4</sup> Operations and Maintenance includes: planned and reactive preventative maintenance, zone management, utilities, contracts, grounds, and outdoor lighting**CAPITAL PLAN CASH FLOWS**

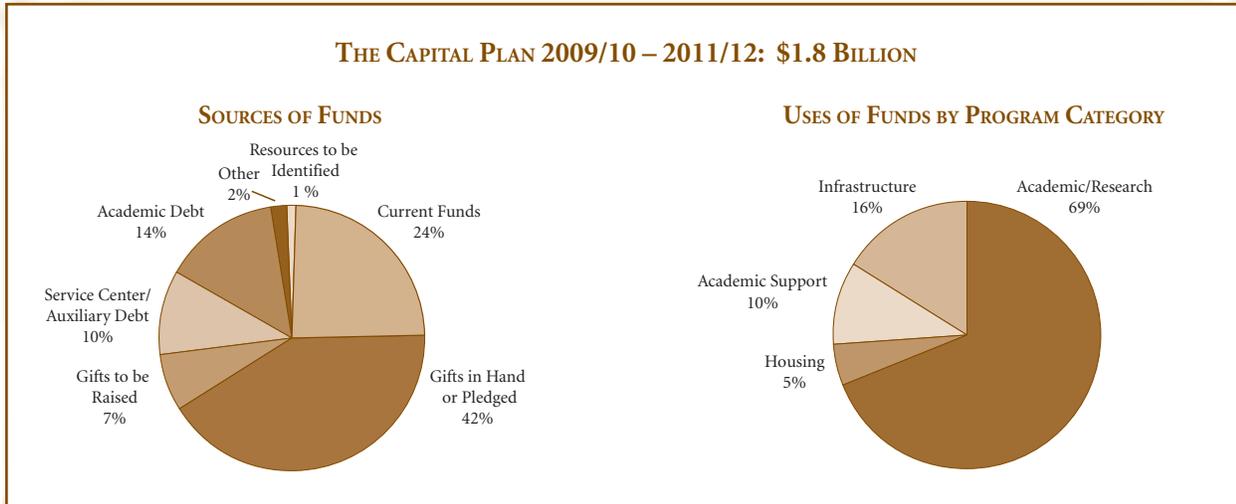
[IN MILLIONS OF DOLLARS]

	2009 & Prior	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15 & Thereafter	Total
Projects in Design & Construction	512.4	554.7	260.8	98.0	1.2			1,427.0
Forecasted Projects	4.9	11.2	34.6	28.9				79.6
<b>Total Construction Plan</b>	<b>517.3</b>	<b>565.9</b>	<b>295.4</b>	<b>126.9</b>	<b>1.2</b>			<b>1,506.6</b>
Infrastructure Programs	1.8	80.9	77.0	106.0	14.0	13.5	0.9	294.0
<b>Total Three-Year Capital Plan 2009/10 – 2011/12</b>	<b>519.1</b>	<b>646.7</b>	<b>372.3</b>	<b>232.9</b>	<b>15.1</b>	<b>13.5</b>	<b>0.9</b>	<b>1,800.6</b>

**CAPITAL PLAN IMPACT ON BUDGET**

[IN MILLIONS OF DOLLARS]

	2010/11	2011/12	2012/13	2013/14	2014/15 & Thereafter	Total
<b>Debt Service</b>						
General Funds	1.9	0.5	0.1	4.5		7.0
Formula and Other Schools	2.4	7.0	0.1			9.5
Auxiliary	1.9	1.6	2.0			5.5
Service Center	1.5	1.5	2.5	2.3	2.0	9.7
<b>Total Debt Service</b>	<b>7.7</b>	<b>10.5</b>	<b>4.7</b>	<b>6.7</b>	<b>2.0</b>	<b>31.7</b>
<b>Operations and Maintenance</b>						
General Funds	5.4		2.5	4.1		11.9
Formula and Other Schools	6.4	6.6				13.0
Auxiliary	0.2	0.3				0.5
Service Center			0.4			0.4
<b>Total Operations and Maintenance</b>	<b>12.0</b>	<b>6.9</b>	<b>2.8</b>	<b>4.1</b>		<b>25.7</b>



to forecast the budget impact by area of responsibility (e.g., general funds, formula schools, etc.).

The tables at the end of this section provide a detailed list of the projects included in the Capital Plan. The text summarizes these projects in order to present a comprehensive view of all planned construction on Stanford lands.

The following section addresses the Capital Plan’s funding sources: the uses of funds by program category (e.g., Academic/Research, Housing, etc.), by project type (e.g., new construction, renovation, etc.), and resource constraints.

**CAPITAL PLAN FUNDING SOURCES**

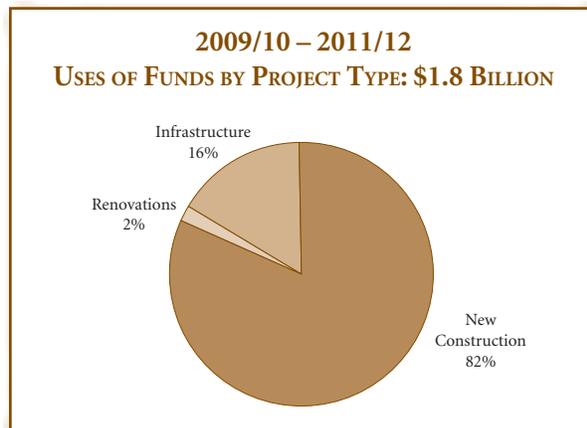
As the chart above shows, Stanford’s Capital Plan relies on several funding sources: current funds (which include the Capital Facilities Fund, existing reserves and fund balances), gifts, debt, and other (which represent funds from the California Institute of Regenerative Medicine, Peking University donations, and funds from the hospitals). Depending upon fundraising realities and time frames, some projects will prove more difficult than others to complete. As a result, it is possible that additional projects on the Capital Plan—beyond those already delayed or suspended—will have to be cancelled, delayed, or scaled back in scope. As illustrated in the chart, 42% of the plan is anticipated to be funded from gifts in hand or pledged and 7% is from gifts to be raised, for a total of 49%. This is consistent with last year’s trend, where 46% of the plan came from these fundraising categories.

**USES OF FUNDS BY PROGRAM CATEGORY**

As the chart above shows, the Capital Plan is divided into the following program categories: Academic/Research, Infrastructure, Academic Support, and Housing. The majority of this year’s Capital Plan funds are allocated to Academic/Research programs at 69%, compared to last year’s Capital Plan at 60%. The nearly 9% change is largely due to the Redwood City Campus Master Plan Phase 1, categorized as Academic Support, being moved to a delayed/suspended status.

**USES OF FUNDS BY PROJECT TYPE**

The following chart classifies projects as new construction, renovation, or infrastructure. The vast majority of the Capital Plan’s projects fall into the new construction category (82% consistent with last year’s plan at 80%). Infrastructure constitutes 16% and renovations 2%.



## CAPITAL PLAN CONSTRAINTS

### Affordability

The incremental internal debt service expected at the completion of all projects commencing in the three-year plan period (completion dates range from 2008/09 to 2014/15) totals \$31.7 million annually (excluding debt service for debt backstopping the receipt of gifts). Of this amount, \$7 million will be serviced by general funds, \$15.2 million by auxiliary or service center operations, and \$9.5 million by formula schools (the GSB and the SoM).

The additional O&M costs expected at the completion of all projects commencing in the three-year period total \$25.7 million per year. Of this amount, \$11.9 million will be serviced by general funds, \$0.9 million by auxiliary and service center operations, and \$13 million by the formula schools. O&M and debt service on capital projects compete directly with other academic program initiatives.

### Debt Capacity

As of May 1, 2009 the university had approximately \$517 million of debt available to fund capital projects and faculty mortgages, including \$273 million of taxable commercial paper, \$212 million of tax-exempt commercial paper, and \$32 million of unexpended taxable and tax-exempt bond proceeds. In addition, through fiscal year-end 2009/10, \$107 million from internal amortization on debt-funded projects will become available to lend to projects and \$161 million in forecasted pledge payments will retire debt issued to bridge finance the receipt of gifts.

The Capital Plan will require a total of \$882 million of debt:

- \$302 million to complete projects already approved or under construction,
- \$121 million for projects forecast to be approved in 2009/10,
- \$428 million to bridge finance the receipt of gift pledges for projects under construction, and
- Approximately \$31 million to finance construction on the Rosewood Sand Hill Road Hotel and office buildings.

Additional debt will be required to finance the Faculty and Staff Housing program. As of March 31, 2009 the portfolio of debt-subsidized mortgages had increased by \$22 million to \$349 million.

Projects identified in the three-year Capital Plan commencing after 2009/10 will require an additional \$217 million in permanent debt. Debt for these projects has not been committed and allocations will be evaluated in the context of debt capacity, affordability, and the viability of the funding plan and GUP limitations.

### Entitlements

The Stanford campus comprises 8,180 acres, which fall within six jurisdictions. Of this total, 4,017 acres, including most of the central campus, are within unincorporated Santa Clara County.

In December 2000, Santa Clara County approved a General Use Permit (GUP) that allows Stanford to construct up to 2,035,000 additional gross square feet of academic-related buildings on the core campus. The GUP also allows the construction of up to 2,000 new student housing units and over 1,000 units of housing for postdoctoral fellows, medical residents, faculty, and staff.

Conditions of approval include the following:

- The creation of an academic growth boundary to limit the buildable area to the core campus.
- The approval of a sustainable development study (SDS) before new construction is developed beyond one million gross square feet. (The SDS was approved by Santa Clara County in April 2009.)
- The construction of 605 units of housing for each 500,000 gross square feet of new academic building.

Given the stringent requirements imposed by the GUP and the increasingly difficult entitlement environment, Stanford carefully manages the allocation of new growth. The total GUP square footage allocation was originally projected to be expended over 15 years at an average rate of approximately 135,000 gross square feet per year. Subsequent experience has lengthened this projection.

The Capital Plan includes 723,010 gross square feet of GUP square feet currently in Design and Construction and no net GUP square feet in forecasted projects. In addition, 28,027 GUP square feet is shown in the Infrastructure category, for the Replacement Boiler Plant and the Cooling Tower #5 and Chiller Building projects. This square footage, along with gross square feet previously allocated, brings the total GUP 2000 gross square feet expended or planned to approximately

one million. Given the university's longer-term capital forecast, coupled with funding and affordability challenges and ongoing scrutiny of expansion, the current GUP allocation may endure until 2025.

Regarding the housing requirement, with the completion of Crothers Hall/Crothers Memorial Hall Renovation, Olmsted Road Staff Rental Housing, and other housing projects, Stanford will have added 1,307 net new student beds since approval of the GUP and 2,400 units since 1999. The completion of these units will enable the university to construct up to 1,499,999 gross square feet of new academic space under the GUP.

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### **CAPITAL PLAN PROJECT DETAIL**

The tables on the following three pages show projects grouped within three categories: Projects in Design and Construction, Forecasted Construction Projects, and Infrastructure Projects and Programs.

**2009/10–2011/12 CAPITAL PLAN**  
**PROJECTS IN DESIGN & CONSTRUCTION**  
 [IN MILLIONS OF DOLLARS]

	School/ Department	Fiscal Year Project Schedule	Estimated Project Cost	Capital Budget 2009/10	Current Funds <sup>1</sup>	Project Funding Source				Annual Continuing Cost	
						Gifts	University Debt	Other <sup>2</sup>	Resources to be Identified <sup>3</sup>		
Science, Engineering and Medical Campus (SEMC) Projects <sup>5</sup>											
Lorry I. Lokey Stem Cell Research Building	SOM	2008-10	202.9	95.0	26.8	109.5	17.9	9.5	39.2	0.6	4.3
Jen-Hsun Huang Engineering Center and the Center for Nanoscale Science and Technology	SOE	2005-10	194.6	66.0	39.4	105.7	24.5	25.0		1.7	4.9
Li Ka Shing Center for Learning and Knowledge	SOM	2006-10	144.2	43.2	72.4	46.5	7.3	18.0		1.2	2.1
Bioengineering / Chemical Engineering Contingency	SOE	2005-13	136.9	11.4	5.0	99.5	2.4	30.0		2.0	2.6
			5.0	1.0	5.0						
Knight Management Center and Parking Structure (PS7)	GSB	2006-11	374.3	185.0	32.5	241.5	25.4	75.0		5.0	5.2
Bing Concert Hall	PRES/PROV	2009-12	133.0	30.6	54.6	66.4	12.0			2.0	2.5
Law School Clinics and Faculty Office Building	SLS	2008-11	70.6	37.0	4.7	18.1	17.8	30.0		2.0	1.5
John and Cynthia Fry Gunn (SIEPR) Building	DOR	2007-10	32.0	6.5	0.5	31.4	0.2				0.5
Stanford Avenue Faculty Homes (39 units)	LBRE	2008-11	30.9	14.4	30.9						
Grothers Hall/Crothers Memorial Hall Renovation	R&DE	2008-10	22.0	8.0				10.0		1.5	
Center for Nanoscale Science and Technology Fit-up	DOR/H&S/ SOE/SOM	2009-10	20.1	18.1	20.1						
East Campus Dining Commons	R&DE	2009-11	20.0	17.4	2.5	14.0		3.5		0.2	0.3
Olmsted Road Staff Rental Housing (25 units)	DAPER	2008-10	14.8	9.7	12.4	2.4					0.2
Jen-Hsun Huang Engineering Center Fit-up	SOE	2009-11	14.0	7.0	14.0						
School of Education Building Renovation	SUSE	2008-10	6.5	1.3	6.5						
Stanford in China	DOR	2008-10	5.2	3.0	0.6	0.3			4.3		
Subtotal — Projects in Design & Construction			1,427.0	554.7	310.4	749.9	110.2	13.5	199.5	14.1	23.9

<sup>1</sup> Includes funds from university and school reserves, the CFE, and the GUP, and SIP programs.

<sup>2</sup> "Other" represents funding from the California Institute for Regenerative Medicine and Peking University donations.

<sup>3</sup> Anticipated funding for this category is through a combination of gift raising and school, department, and university reserves yet to be identified.

<sup>4</sup> Operations & Maintenance includes: planned and reactive/preventive maintenance, zone management, utilities, contracts, grounds, and outdoor lighting.

<sup>5</sup> Associated connective elements, utilities, and demolitions are included in each project budget.

Excludes the completed Astrophysics and Y2E2 (Environment & Energy) buildings and the delayed Biology project.



**2009/10–2011/12 CAPITAL PLAN  
INFRASTRUCTURE PROJECTS & PROGRAMS**

[IN MILLIONS OF DOLLARS]

	School/ Department	Fiscal Year Project Schedule	Estimated Project Cost	Capital Budget 2009/10	Project Funding Source				Resources to be Identified <sup>3</sup>	Annual Continuing Cost			
					Current Funds <sup>1</sup>	In Hand or Pledged	Gifts To Be Raised	Service Center/ Auxiliary Debt		Academic Debt	Other <sup>2</sup>	Debt	Operations & Service Maintenance <sup>4</sup>
Investment in Plant (Planned Maintenance)													
Non-Formula/Admin Formula	LBRE	2010-12	45.9	12.8	45.9								
R&DE <sup>5</sup>	SOM/GSB	2010-12	21.2	11.3	17.9			3.3					
DAPER	R&DE	2010-12	19.5	5.7	19.5								
Utilities <sup>6</sup>	DAPER	2010-12	6.4	3.8				6.4					
Roads	LBRE	2010-12	0.2	0.1	0.2								
Subtotal-Investment in Plant (Planned Maintenance)			93.3	33.6	83.5			9.7					
Capital Utilities Program (CUP)													
System Expansion	LBRE	2010-12	22.9	5.8			22.9			2.2			
System Replacement	LBRE	2010-12	14.4	4.0			14.4			1.4			
Controls	LBRE	2010-12	2.5	0.7			2.5			0.2			
Regulatory	LBRE	2010-12	3.7	3.3			3.7			0.4			
Subtotal-CUP			43.6	13.7			43.6			4.2			
Capital Utilities Projects													
Replacement Central Heating Plant	LBRE	2010-15	30.0	0.3			30.0			2.0			
Searsville Substation	LBRE	2011-13	25.0				25.0			1.7			
Cooling Tower #5 and Chiller Building	LBRE	2006-12	12.7	5.0			12.3	0.4		0.8	0.4		
Subtotal-Capital Utilities Projects			67.7	5.3			67.3	0.4		4.5	0.4		
R&DE Capital Improvement Program <sup>5</sup>	R&DE	2010-12	46.8	5.7			46.8			3.8			
Stanford Infrastructure Program (SIP)	LBRE	2010-12	13.5	4.0	13.5								
Building Energy Retrofit Program	Various	2006-12	10.3	7.8				10.3		1.0			
Information Technology & Communications Systems	ITS	2010-12	9.6	2.3			4.5	5.1		0.9			
GUP Mitigation Program - C.I Trails	LBRE	2005-12	8.3	8.3	8.3								
Storm Drains	LBRE	2010-12	1.0	0.3				1.0		0.1			
Subtotal – Infrastructure Projects & Programs			294.0	80.9	105.3		162.1	16.4	0.4	9.7	14.5		
<b>Total Capital Plan</b>			<b>1,800.6</b>	<b>646.7</b>	<b>425.7</b>	<b>757.9</b>	<b>125.2</b>	<b>262.5</b>	<b>43.9</b>	<b>9.7</b>	<b>31.7</b>		
											<b>25.7</b>		

<sup>1</sup> Includes funds from university and school reserves, the CFF, and the GUP and SIP programs.

<sup>2</sup> "Other" represents funding from hospitals.

<sup>3</sup> Anticipated funding for this category is through a combination of school, department, and university reserves yet to be identified.

<sup>4</sup> Operations & Maintenance includes: planned and reactive/preventive maintenance, zone management, utilities, contracts, grounds, and outdoor lighting.

<sup>5</sup> R&DE Capital Improvement Program generally includes program and code upgrades vs. Planned Maintenance which includes subsystem replacement.

<sup>6</sup> Included under CUP - System Replacement below.

