UNIVERSITY OF MASSACHUSETTS

Amherst • Boston • Dartmouth • Lowell • Worcester

Fiscal Year 2010 to 2014
Five-Year Capital Plan Update

September 2009

T09-051

University of Massachusetts
FY2010 to 2014 Capital Plan Update
Executive Summary

The Board of Trustees, the President's Office and campus leadership have identified capital issues as one of the biggest challenges facing the University. Image, reputation, capacity and mission effectiveness require modern and functional facilities.

Between 2000 and 2009, an estimated $1.9 billion has been spent on capital improvements. More than $1.6 billion, or 84%, of this has been self-funded from campus operating funds ($608M) and borrowing ($998M). The remaining 16% (or $305M) has been supported by the state.

The University faces an enormous challenge to maintain and upgrade its capital assets including its infrastructure, buildings and grounds over the next five to ten years. No single source of funds has the capacity to address the vast capital needs of the University. In order to have a successful capital program, the University must rely on a combination of revenue sources to fund its investment in capital improvements. The four general categories of revenue sources are: state support either through general obligation bond funds or economic stimulus and supplemental legislative appropriations, financing through the University of Massachusetts Building Authority (UMBA), the Massachusetts Health and Educational Facilities Authority (HEFA), or other legally available sources, operating funds and external funding such as private giving and grants.

A number of important developments occurred in 2008 that will have a large impact on the overall success of the University's efforts to improve and invest in its infrastructure:

- The Commonwealth passed a $2 billion Higher Education Bond Bill that included over $1 billion for University projects;
- The Commonwealth passed a $1 billion Life Sciences Investment Bill that will provide at least $240 million of capital support to the University.
- The UMASS Building Authority borrowed $379.7 million in April and June of 2008 to fund critical projects at Amherst, Dartmouth, Lowell and the Medical School.

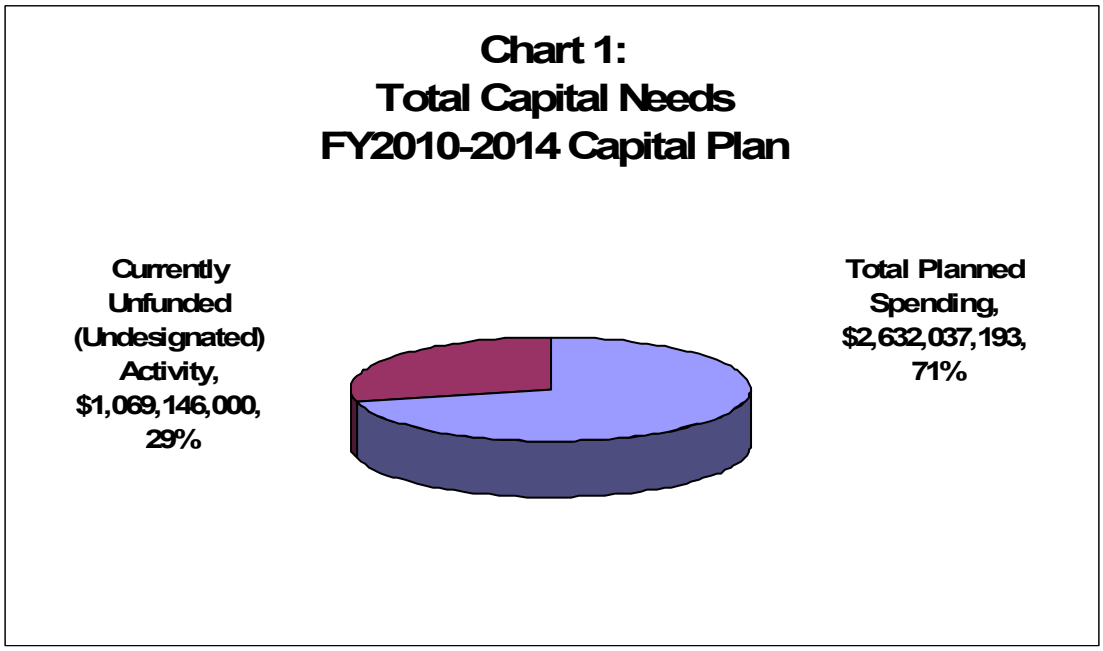
These important new developments will build on the University's efforts over the past few years to provide new first-class facilities and to address an existing backlog of building repair and renovation projects. With general obligation funds made possible through earlier Higher Education Bond Bills many projects were completed including compliance with a number of environmental, health and safety mandates, as well as other repair and replacement projects.

Maintenance and repair projects represent 46% or more than $1.7 billion of the total needs identified in the plan (and 45% or $1.2 billion of the funded program).

The University is committed to maintaining and upgrading our capital assets so degradation of facilities does not hamper the learning and research environment in the future. Over the next five to ten years the University will need to invest a significant amount of its own operating funds in capital projects. The attached plan shows that the University continues to put funding of its capital plan as one of its top priorities.

FY2010 to FY2014 University Capital Needs

The University's 5-year capital plan update for the FY2010 to 2014 period has identified $3.7 billion of capital needs across all campuses and is proposing to spend $2.6 billion over the five years to address these needs (Chart 1).



Capital Plan Summary

The President's Office works closely with the campuses to coordinate and facilitate the capital planning effort. Due to the fact that each campus has its own unique set of capital needs, the capital plans are different from each other reflecting the strategic priorities of each campus. Therefore, the listings of capital projects are presented in priority order for each campus. The campuses have developed ten-year capital spending plans following guidelines from the President's Office. These ten year plans are updated annually with particular attention given to the first five years of the plan. It is the rolling five-year part of the University capital program that is brought to the Board each year for review, reaffirmation and approval. This year the campuses prepared ten-year plans for the period FY2010 to FY2019.

The University's Five Year Capital Plan Update for FY2010 – FY2014 represents an assessment of the capital needs of our campuses based on currently available information. From direct experience, all of the campuses are acutely aware that emergencies can and do disrupt the best of plans. We also know that both the availability and the manner in which funds are made available may affect campus plans and priorities. Nevertheless, we believe the Capital Plan Update is an accurate assessment, broad enough in scope to accommodate the vagaries of funding as well as emergencies.

The FY2010 to FY2014 five year plan is summarized in Table 1 below. Additional analysis is attached as are summaries of the reports submitted by each campus.

Table 1:

Source of Funds
University of Massachusetts
Five Year Capital Plan
FY2010-FY2014

	Amherst		Boston		Dartmouth		Lowell		Worcester		Total	
Estimated Funds To be Spent FY2009-FY2013												
University Local Funds	$104,077,000	8%	$3,455,000	1%	$63,350,000	18%	$52,500,000	9%	$74,300,000	9%	$297,682,000	8%
Private Fundraising & Federal Funding	$96,290,000	7%	$14,000,000	3%	$27,000,000	8%	$12,000,000	2%	$20,000,000	2%	$169,290,000	5%
UMBA/HEFA/Other*	$438,478,000	32%	$333,364,725	60%	$25,719,000	7%	$113,200,000	19%	$365,000,000	44%	$1,275,761,725	34%
State Capital Support	$247,845,000	18%	$166,789,270	30%	$148,770,000	43%	$198,400,000	33%	$127,499,198	16%	$889,303,468	24%
Currently Unfunded / Undesignated Activity	*$497,355,000*	*36%*	*$38,550,000*	*7%*	*$82,076,000*	*24%*	*$216,590,000*	*37%*	*$234,575,000*	*29%*	*$1,069,146,000*	*29%*
Total Planned Spending	**$1,384,045,000**		**$556,158,995**		**$346,915,000**		**$592,690,000**		**$821,374,198**		**$3,701,183,193**	
											Total Not Including Undesignated Funding	**$2,632,037,193**

Since 2000, the University has supported 84% of its total capital spending. The FY2010-2014 plan proposes an overall 76%/24% sharing of the plan costs between the University and the state.

As previously noted, in order to have a successful capital program, the University must rely on a combination of revenue sources to fund its investment in capital improvements. In developing this year's capital plan update, the University has identified $3.7 billion of funding needs and matched most of these projects with a funding source -- $2.6 billion. For the remaining projects, we have categorized the funding source as "undesignated." This designation allows the University flexibility to move forward in the planning of projects and to seek out appropriate funding sources and/or take advantage of funding opportunities from external sources should they develop.

The table (Table 2) below displays the shifts in funding sources and total spending projected for the University between the proposed 5-year plan (FY2010-2014) and last year's plan for the FY2009-2013 time period:

Table 2:

Summary of Changes in University Capital Plan
FY2009 and FY2010 Plan Updates

Source of Funds	LAST YEAR'S PLAN Total Planned Spending FY2009-FY2013		CURRENT PLAN Total Planned Spending FY2010-2014		Variance	
University Local Funds	$213,940,360	6%	$297,682,000	8%	$83,741,640	39%
Private Fundraising & Federal Funding	$97,540,000	3%	$169,290,000	5%	$71,750,000	42%
University UMBA/HEFA	$1,454,698,000	42%	$1,275,761,725	34%	($178,936,275)	-14%
State Support	$798,022,704	23%	$889,303,468	24%	$91,280,764	10%
Undesignated Funding (Unfunded)	*$871,102,000*	*25%*	*$1,069,146,000*	*29%*	*$198,044,000*	*5%*
Total Capital Needs	**$3,435,303,064**	**100%**	**$3,701,183,193**	**100%**	**$265,880,129**	**8%**
Five-Year Spending Projection	***$2,564,201,064***		***$2,632,037,193***		***$67,836,129***	***3%***

The significant shifts in identified funding sources are primarily driven by better knowledge of what the state is committed to funding in the coming five years and a review of the University's borrowing capacity for capital projects.

The proposed plan continues its focus on maintenance, repair and renovation of existing facilities, 46% of the funded plan is directed toward maintenance and repair projects. Table 3 summarizes the University's capital spending plan for FY2010-2014 by project type:

Table 3:

FY2010-2014 Capital Plan Spending by Project Type	Total Capital Needs		Total Planned Spending	
Deferred Maintenance	$690,582,743	19%	$433,977,743	16%
Building Rehabilitation & Renovation	$661,879,000	18%	$439,795,000	17%
Compliance	$72,959,450	2%	$59,359,450	2%
Planned Replacement	$278,407,000	8%	$261,907,000	10%
Subtotal Maintenance & Repair	**$1,703,828,193**	**46%**	**$1,195,039,193**	**45%**
New Construction	$1,724,234,000	47%	$1,229,614,000	47%
Information Technology	$40,475,000	1%	$30,475,000	1%
Equipment	$15,500,000	0%	$15,500,000	1%
Other Capital Spending	$217,146,200	6%	$161,409,200	6%
Total Planned Spending	**$3,701,183,393**	**100%**	**$2,632,037,393**	**100%**

In addition to listing projects in priority order and categorizing projects by source of funds, we also organize projects by program type in order to demonstrate the manner in which requested projects in the FY2010-FY2014 update will support the University's mission (Table 4):

Table 4:

FY2010 to 2014 Capital Plan Spending by Program Type	Total Capital Needs		Total Planned Spending	
Basic Infrastructure	$1,321,856,393	36%	$801,534,393	30%
Research	$901,706,000	24%	$719,206,000	27%
Student Life	$399,254,000	11%	$197,319,000	7%
Teaching / Learning	$1,078,367,000	29%	$913,978,000	35%
Total	**$3,701,183,393**	**100%**	**$2,632,037,393**	**100%**

- Basic Infrastructure projects benefit the entire campus and are critical to all operations. Steam lines, power plants, roadways, general public safety improvements such as fire alarm systems and hazardous waste removal systems, and administrative computing are projects that would fall into this category.
- The Research category includes projects such as new research building construction or renovations and improvements to existing research facilities as well as large acquisitions of lab equipment.
- Student Life projects include improvements, renovations or the new construction of student centers, dining halls, recreation facilities, dormitories or other facilities that improve the student experience.
- The Teaching & Learning category includes capital projects such as improvements to or new construction of classroom facilities, auditoria, studios, library facilities and instructional equipment.

State Funding

The five year plan reflects the University's continued efforts to present a full picture of capital needs. Realization of the full plan depends upon a financial situation in which the state provides adequate financial support to the University's capital improvement program in addition to the funds that the University is committed to investing from operating funds, debt financing and external fundraising.

Statutory authorizations, which are approved through capital bond bills, are necessary to allow the Governor to spend state general obligation bond (G.O.) proceeds on University projects. The Executive Office of Administration and Finance (EOAF) and the Division of Capital Asset Management and Maintenance (DCAM) are the state agencies that develop the state's capital plan, file bond bills, approve projects that will receive state funding, allocate state funds to approved projects and in the case of DCAM, design, manage and construct public facilities and improvements. The University works with EOAF and DCAM to indentify capital needs to be supported by bond bill authorizations, develop project priorities and funding schedules and to work through the entire project completion process from study to design through construction.

In June of 2006, the Legislature passed chapters 122 and 123, the Economic Stimulus and Supplemental Appropriations bills which included funding for the following UMASS projects which have been included in the University's capital plan:

- $50 million appropriation for deferred maintenance projects.
- $4 million appropriation for the Venture Development Center at Boston.
- $14 million capital authorization and $21 million cash appropriation for Lowell's Emerging Technology and Innovation Center (ETIC).[1]
- $20 million capital authorization for the Integrated Science Building at Amherst.
- $10 million capital authorization for a Bioprocessing facility at Dartmouth.

In May of 2007 the University submitted an $840 million higher education bond bill request to the administration and the legislature. The request reflected master planning and facilities condition reviews that were underway at each of our campuses. Later that year, Governor Patrick filed his Life Science Initiative and the Higher Education Bond Bill that incorporated the University's capital priorities. Both bills were passed into law and serve as funding sources for a group of significant projects underway across the University. In fiscal year 2009, DCAM initiated a series of studies in order to get these projects moving forward and the University is currently working with EOAF and DCAM to develop an updated five-year state capital spending plan for these funds. The following two sections summarize the impact of the two new laws on UMASS. Each of these programs has been incorporated into the University's FY2010-2014 Capital Plan.

[1] Governor Patrick's administration subsequently refinanced this plan (chapter 27 of 2006) and $10.1 million has been transferred to UMBA as part of a contract to fully fund the $35 million.

Chapter 258 of 2008 – The Higher Education Capital Improvement Act

The Higher Education Capital Improvement Act (the Higher Education Bond Bill) authorizes more than $1 billion of funds toward projects exclusive to UMass. Of the funds dedicated to the University, 63% or $628,682,500 is earmarked for specific projects. The remaining 37% or $372,817,500 is currently undesignated for specific projects (Table 5). This level of undesignated funding leaves flexibility sufficient to meet emergency needs should they arise as well as the time necessary to fairly evaluate the on-going strategic investment needs of the University. DCAM has recognized the importance of the higher education investment program and has reorganized itself accordingly. DCAM has assigned a project manager to each of our campuses and is working on master plans for the Amherst, Boston, and Lowell campuses, finalizing studies for many of the projects earmarked in the bond bill, and meeting regularly with the President's Office, campuses and the UMBA to coordinate the capital planning activities of the state and University.

Chapter 130 of 2008 – The Life Sciences Industry Investment Act

The new law is designed to enhance the state's strengths in the fields of medicine and science and fill gaps in federal funding to ensure the state's ability to support life sciences innovations from idea to product. In addition to capital funding, the $1 billion Life Sciences Initiative provides a number of opportunities for the University to participate in the planning and program implementation of this important economic development effort.

The package includes:

- $500 million in Capital Funding to be spent over a 10 year period; $299.5 million for targeted infrastructure projects and the balance - $200 million in unrestricted funds for investment in public infrastructure projects, at the discretion of the Massachusetts Life Sciences Center (MLSC). $241 million of the designated projects are directed toward UMASS campus facilities and programs.
- $25 million each year for 10 years for the MA Life Sciences Investment Fund, held at the MLSC, for loans, grants, fellowships, and investments to stimulate increased research and development in the life sciences sector.
- $25 million each year for 10 years in tax incentives to be awarded to certified life sciences projects.

The Advanced Therapeutics Project (The Sherman Center) at the Medical School has been identified as the highest priority for Life Sciences funding by the administration and the University. The Research Center Complex at Amherst is under review as part of master planning efforts currently being coordinated by DCAM. This review will likely address this project as well as a number of the science facility projects included in the Chapter 258 Higher Education Capital Improvement Act. Table 6 lists the full set of University projects that are indentified for state capital support through the initiative.

Table 5:

Chapter 258 of 2008 The Higher Education Capital Improvement Act

Earmarked (designated) UMASS Projects	Project Cost
Amherst campus	
New academic classroom building	$85,000,000
New laboratory science building	$100,000,000
Repairs to Machmer Hall	$12,600,000
Repairs and renovations to Lederle Research Center	$41,250,000
Repairs and renovations to Morrill Science Center	$51,300,000
subtotal Amherst	**$290,150,000**
Boston campus	
Stabilization of the campus substructure & alternate parking improvements	$25,000,000
Construction of a new academic building	$100,000,000
subtotal Boston	**$125,000,000**
Dartmouth campus	
Renovations and infrastructure repairs to the library	$8,000,000
Building and retrofitting of vacated spaces	$11,000,000
Planning and design of dormitories	$250,000
Classroom space upgrades	$6,000,000
Air conditioning improvements to facilities	$2,100,000
Major infrastructure repair projects, construction of Charlton College of Business and construction of a Marine science facility at SMCT	$70,000,000
Portuguese American Archives	$1,000,000
Center for Portuguese Studies	$500,000
subtotal Dartmouth	**$98,850,000**
Lowell campus	
New south academic building	$26,000,000
North quad modernization	$10,000,000
MA Medical Device Development Center (M2D2)	$4,000,000
Deferred maintenance	$5,000,000
Civic and Athletic Facilities	$10,000,000
Storm water management	$1,500,000
Renovations to Olney Hall	$2,500,000
subtotal Lowell	**$59,000,000**
Worcester campus	
Repairs, renovations, and improvements to buildings, systems and other facilities	$43,500,000
Improvements to the Medical School's Shriver Center facility in Waltham	$8,500,000
Expansion of the Medical School	$3,682,500
subtotal Worcester	**$55,682,500**
Total Amount of Earmarked Projects	**$628,682,500**
Total Undesignated	**$372,817,500**
TOTAL UMASS FUNDING	**$1,001,500,000**

Table 6:

Chapter 130 of 2008 The Life Science Industry Investment Act

Earmarked (designated) UMASS Projects	Project Cost
An Advanced Therapeutics Cluster (the "Albie Sherman Center"), Worcester	$90,000,000
Life Sciences Research Center Complex, Amherst	$95,000,000
Emerging Technology Innovation Center, Lowell	$10,000,000
Grant to acquire the ATMC facility, Dartmouth	$11,400,000
Marine Biological Lab at Woods Hole, Dartmouth	$10,000,000
Center for Personalized Cancer Therapy, Dana-Farber Harvard Cancer Center, Boston	$10,000,000
Appropriation for Pioneer Valley Life Sciences Initiative lease, Amherst	$5,500,000
New Bedford Life Sciences Incubator, Dartmouth	$5,000,000
Taunton Life Sciences Incubator, Dartmouth	$5,000,000
Total UMASS Earmarks	**$241,900,000**
TOTAL LIFE SCIENCES CAPITAL PROGRAM	**$500,000,000**

State Support in FY2010 - 2014

The University is working closely with EOAF as it develops the state's FY10-14 capital spending plan. The plan lays out state capital investment for the next five years, including investments the University can expect via the Higher Education Bond Bill. The economic downturn has negatively impacted the state's borrowing capacity. Under these circumstances, however, it seems all the more important for the state to invest its capital in ways that will best help position the state for recovery. No other state investment has as high a return as the University. Previous studies have shown that for every dollar the state appropriates to UMass, the University generates eight dollars in return. The same principle holds true for capital appropriations and, by reducing or delaying capital investment in the University, the state risks slowing its own economic recovery. We continue to emphasize that point as well as the importance of adhering to the commitments made under in the Higher Education Bond Bill and Life Sciences Bill given that the University has made its plan accordingly.

New Collaborations

The University, along with the Massachusetts Institute of Technology, is organizing a regional consortium of academic and research institutions to develop a high-performance computing facility to be located in Holyoke, MA. The consortium is working closely with industry leaders with a significant presence in Massachusetts, including EMC, Cisco Systems and IBM. The facility will provide scientific computing support to researchers, catalyze collaborations in research fields requiring significant computational resources (such as climate change prediction and system-level modeling for immune response to disease), support workforce training and science education, improve management of enterprise computing systems and spur regional economic development. The benefits to UMass are significant. Faculty on all campuses will have access to unprecedented levels of computational resources for research and the opportunity to participate in joint research. The campuses and the system office will have a more robust and efficient information technology infrastructure, and the University overall will have an enhanced position through its leadership in research and education. Locating the facility in Holyoke will provide environmental benefits, reduce capital and operating costs, and present regional economic development opportunities. The institutional partners, which also

include Harvard University and Boston University – and potentially others – intend to invest their own resources and secure significant financial support from the Commonwealth, federal agencies and industry partners.

University Borrowing

The capital plan proposes using $1.27 billion in funds borrowed by the University through the UMASS Building Authority (UMBA) or other quasi-public financing agencies such as the Massachusetts Health and Education Financing Agency (HEFA). The University is responsible for servicing the debt on these bonds which is an additional cost to operations above and beyond the $298 million that is projected to be spent from University local funds on capital improvements.

It is important to note that the University has approximately $377 million of funds currently borrowed for the projects identified on the capital plan leaving approximately $900 million to be borrowed during the five-year planning period. UMBA is currently gearing up for a bond issuance targeted for October that is expected to total approximately 50% of the new borrowing required to fund the plan.

The University's currently has an average annual debt service commitment of approximately $104 million. This translates into a debt service to operations ratio of approximately 4.1%. As the University proceeds to borrow for the remaining $900 million noted above, the additional annual debt service commitment against projected increases in operating budgets would result in a debt ratio no greater than 5.5% averaging approximately 5.2%.

What the Board is being asked to approve

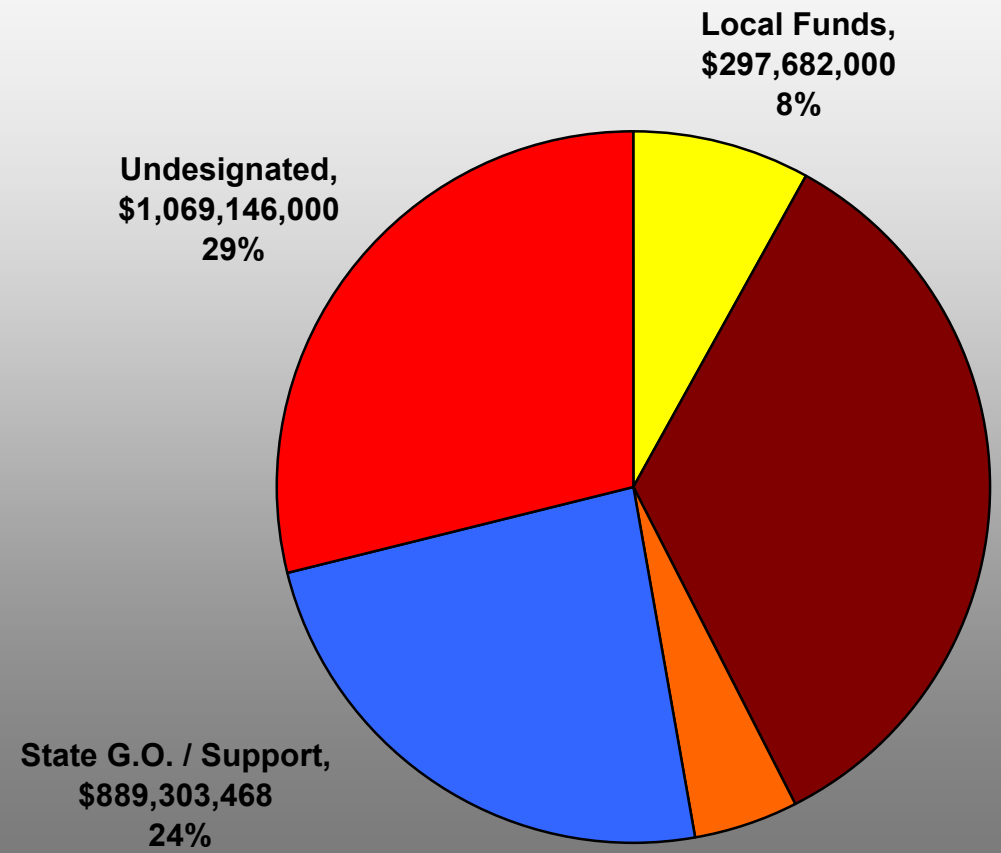
The trustees are being asked to approve the University's capital plan detailing our capital funding needs for the five year period FY2010 to 2014. This will include:

1. any new construction project over $1,000,000 as required by University policy (detailed in Appendix A) and,

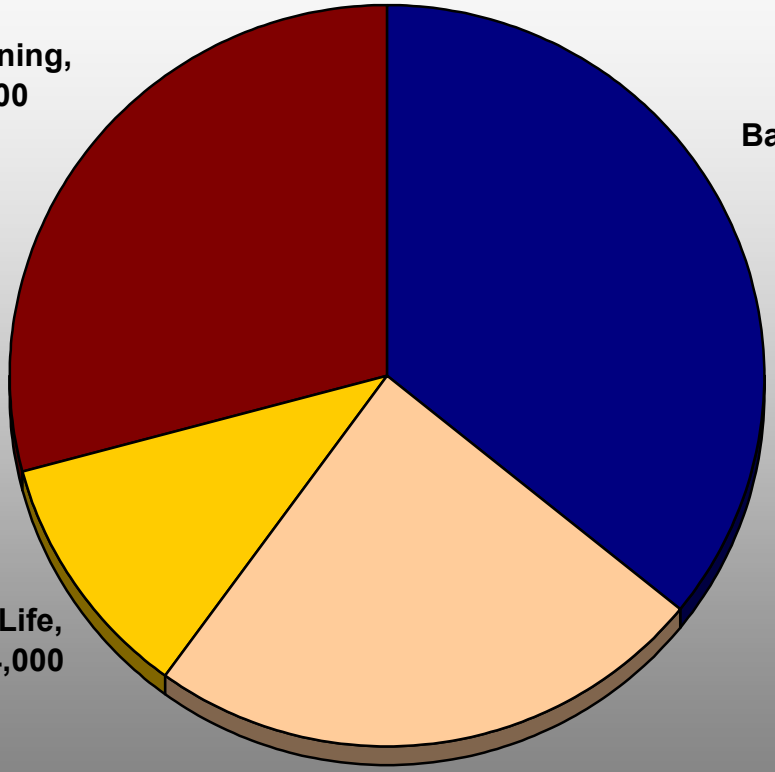
2. any update in total project cost for individual projects that are estimated to have increased by 20% or more over amounts previously approved by the Trustees (detailed in Appendix B).

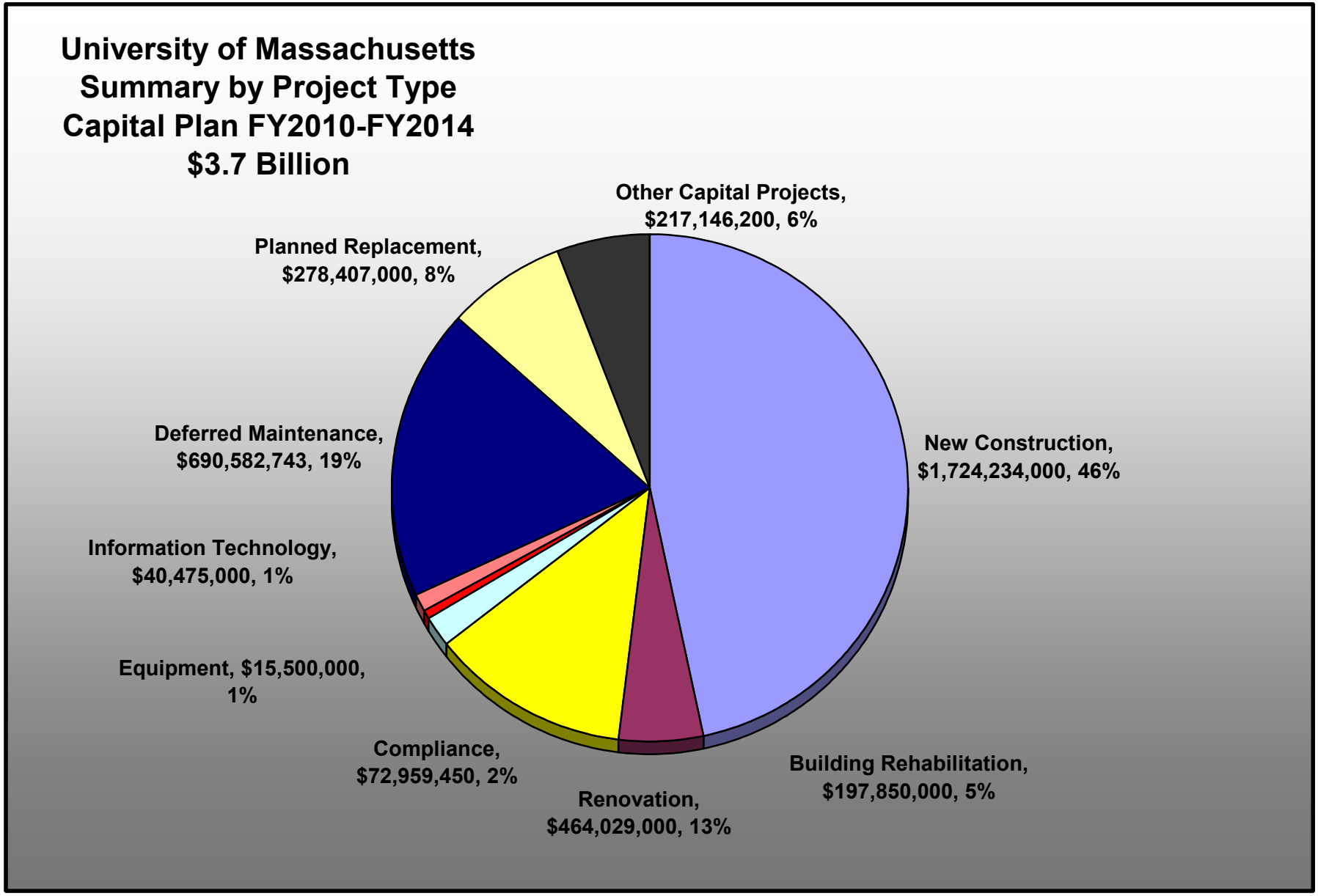
The following pages provide greater detail and analysis on the University's capital plan including summaries of campus capital plans and a full listing of capital projects.

University of Massachusetts
Summary by Source of Funds
Capital Plan FY2010-FY2014
$3.7 Billion



University of Massachusetts
Summary by Program Type
Capital Plan FY2010-FY2014
$3.7 Billion




University of Massachusetts
Summary by Project Type
Capital Plan FY2010-FY2014
$3.7 Billion
Other Capital Projects, $217,146,200, 6%
Planned Replacement, $278,407,000, 8%
Deferred Maintenance, $690,582,743, 19%
New Construction, $1,724,234,000, 46%
Information Technology, $40,475,000, 1%
Equipment, $15,500,000, 1%
Compliance, $72,959,450, 2%
Renovation, $464,029,000, 13%
Building Rehabilitation, $197,850,000, 5%

CAPITAL PLAN UPDATE
FY2010-2014
UNIVERSITY OF MASSACHUSETTS - AMHERST

The Amherst campus capital plan update is focused on a five-year planning timeframe from FY10 through FY14. The capital plan includes projects that are currently funded, or are planned to be funded, and projects that are needed but are currently unfunded. The funded project list includes projects that are underway, planned to begin in the next year and projects that the campus intends to fund within the next five or ten year planning cycles. The project list with undesignated funding source represents projects that we have identified as critical needs but that have not yet been funded.

The Amherst campus has developed and maintains a comprehensive database of facilities condition and space utilization information of our facility assets. In addition, the campus is completing comprehensive studies of science, engineering, classroom and academic space utilization and needs. This facilities data provides important detailed information that guides our capital planning process and on-going development of the physical campus. We have a continuing commitment to provide new and modernized facilities to meet the demands of an increasingly competitive market in higher education. It also recognizes that our deferred maintenance backlog and growing inventory of obsolete space must be addressed to remain competitive as a leading public research university.

As the University's "flagship" institution, the Amherst campus has many strategic challenges. Primary among the challenges is the need to maintain a strong, nationally competitive faculty in order to maintain top quality instructional and research programs that will in turn attract and retain top quality students. This requires the ability to attract new and retain existing faculty that are nationally and internationally recognized in their fields. The Amherst capital plan is structured with priorities that support the strategic challenges and campus goals of improving teaching, increasing research, enhancing student life and recruiting/retaining quality students and faculty. The underlying strategy of our plan is to balance capital investments between all of our facility needs required to support the goals and strategic priorities of the campus and the University. Thus, the priorities within the capital plan are balanced between new construction, facilities modernization and sustaining existing facilities through the reduction of deferred maintenance.

In order to make continual progress on our facilities improvement and development goals, the campus will need to continue to pursue an aggressive funding strategy to complete high priority capital projects. The Amherst campus continues to rely heavily on allocations from the campus operating budget, including borrowing through the UMBA, to fund capital projects. At the beginning of FY10, the campus will have committed $79M of campus operating funds to service debt and support our annual repair and renovation activity. This plan anticipates additional borrowing through the UMBA within the next five years.

The current capital plan includes significant State funding to address several important capital projects including new construction and much needed renovations. The State funding also includes funding for a life science facility at the Amherst campus as part of the funding authorization for a state-wide investment in the life sciences. The life science funds will provide the greatest benefit for the Amherst campus if they are released within the next five years and can be coordinated with the spending plan for new facilities funded from the Higher Education Bond Bill.

In order to sustain and improve upon our current progress, the campus recognizes the need to seek additional funding from other sources including private donations and Federal grants. In the past, private donations supported construction of the addition to the Isenberg School of Management and renovations to the Campus Center for the Hotel and Travel Management program. The campus continues to pursue private donations for new construction. The campus has been successful in obtaining over $2M in private fundraising and $5M in Federal grants to support the construction of the new Integrated Sciences Building. Efforts are underway to raise $2M for laboratory renovations for Food Science and $1.4M to support the construction of a new building for the marching band. The Isenberg School of Management has received $1M in private donations and is targeting another $9M to construct new classrooms for their academic programs. The campus is submitting several grant proposals for Federal stimulus funding through the National Institute of Health and others. The grant proposals total over $78M that if successful will provide funds for renovations of existing laboratory space and fit-out of the shell space in the new science building.

FY09 Current Projects:

As we submit the capital plan update this year, the campus has completed or is nearing completion of several major new projects that will provide modern facilities to support our teaching and research mission. Many more projects are underway and most of the previously funded major projects are in the construction phase. At the completion of FY09, capital expenditures in the past three years at the Amherst campus topped $495M with over $140M expended in FY09 alone. The priorities in the current plan are highlighted below.

1. **Reduction of deferred maintenance/code compliance**: In the past year the campus completed over $25M of deferred maintenance and code compliance projects with several other projects underway including major utility infrastructure improvements. As with previous capital plan submittals, deferred maintenance continues to be one of our highest priorities. The campus maintains a comprehensive database of critical facility repair needs that guides the prioritization of capital repairs. A priority of our next five year plan is to address the most urgent DM and code compliance needs to sustain current functions in our facilities as well as to enhance our teaching, research and public service mission. Although we are making progress in addressing deferred maintenance, we have significant DM deficiencies in the facilities built in the 1960's and 70's. An on-going investment in deferred maintenance and code compliance will remain a top campus priority over the next decade.
2. **New Central Heating Plant:** The new Central Heating Plant became operational in August 2008 providing steam and electricity to campus. Over the past year we have continued with the final commissioning of the major systems and emission testing to obtain the operating permit from the Department of Environmental Protection.
3. **New Construction:** The campus took occupancy of the new **Studio Arts Building** in the Fall 2008 and the new **Integrated Science Building (ISB)** in January 2009 ahead of schedule. These new facilities have provided needed space for art education and science teaching laboratories. The research floor of the ISB is being fit-out for occupancy in January 2010 and will provide modern research labs for the Veterinary and Animal Science Department. With completion of the research floor, Vet and Animal Science will vacate their current space in Paige Lab which will be repurposed to meet other pressing campus laboratory space needs. The campus took occupancy of the new PVTA **Transit Garage** in November 2008 with 80% of the funding from the Federal Transportation Administration grant. The new **Student Recreation Center Building** is in its final stages of construction with planned occupancy in the Fall 2009. This new facility will enhance the student life experience on campus by providing quality space for recreation and social interaction. The new **Police Facility** is scheduled to go to bid this

summer with a planned construction start in Fall 2009 and ready of occupancy in January 2011. The design for the new **Marching Band facility** is underway and is scheduled to go to bid in December 2009 with a planned occupancy in the Spring 2011. Design is underway for the **new science building** that will be connected to the Integrated Science Building. This new science facility will provide state-of-the-art research laboratories for the life sciences and is planned for occupancy in the summer 2012. The study is underway for the new **academic/classroom building** that will provide state-of-the-art instructional and other academic department space.

4. **Renovations/Modernization:** The campus took occupancy of the renovated Skinner Hall in August 2008 providing a new home for the School of Nursing. This project will is providing new teaching lab facilities for Nursing and general classrooms for the campus. We completed renovations to support the Polymer Science department nanotechnology research initiative funded in part by a State match to the National Science Foundation grant. We completed several renovations for new faculty hires in support of the Amherst-250 program. The campus has an on-going need to upgrade existing science facilities as well as additional new laboratory space to support teaching and research. We are proceeding with several other important renovations to support new and replacement faculty hires and research activities in various academic programs.

5. **Energy Performance Improvements:** With the completion of several projects aimed at improving energy performance in facilities on the Amherst campus, the campus has experienced a remarkable return on our investment. Since 2004, the campus has reduced steam consumption by 24%, water consumption by 45% and electrical consumption by 12%. With these energy efficiency measures and the completion of the new Central Heating Plant the campus has reduced its carbon footprint by 30% over the past five years. We are continuing with our current strategy and we expect significant energy performance improvements in the next five years. We are proceeding with our on-going program of improving energy performance of building mechanical systems by installing variable frequency drives. We have several steam line replacement projects underway that will provide additional energy performance improvements. Through energy savings, these projects and others will generate the capital to finance the cost of the improvements.

6. **Campus Master Plan Update:** Many of the completed, and soon to be completed, new construction projects were developed as a result of the 1993 campus master plan. This plan has been maintained, updated and enhanced with various planning studies since 1993. The campus, working with DCAM is in the process of selecting a master plan consultant to initiate a comprehensive update of the campus master plan which is expected to begin in October 2009. This plan will incorporate several previous planning documents that have been completed or are underway including the Campus Landscape Improvement Plan (CLIP), the Comprehensive Science and Engineering Facilities Plan and the Academic/Classroom Facilities Plan.

As we complete several new buildings in the next few years, the Amherst campus is committed to protect its investment in these new facilities. We currently set aside 1.5% of the project cost when we construct new facilities for long term maintenance needs. This represents our on-going strategy to provide funding for facility renewal over the life cycle of the facility and prevents the deferral of required maintenance. In addition, we budget 3.5% of the project cost for operational and routine maintenance expenses for new facilities. These budget amounts are consistent with industry standards in facility management aimed at providing the appropriate stewardship of our new facility assets. The FY10-14 capital plan represents a continued major investment in the future of the Amherst campus. It reflects the established goals of the campus and strategic priorities of the University through a balanced investment program that addresses critical repairs, maintains health and safety standards, provides new and modern teaching and research facilities and improves student life.

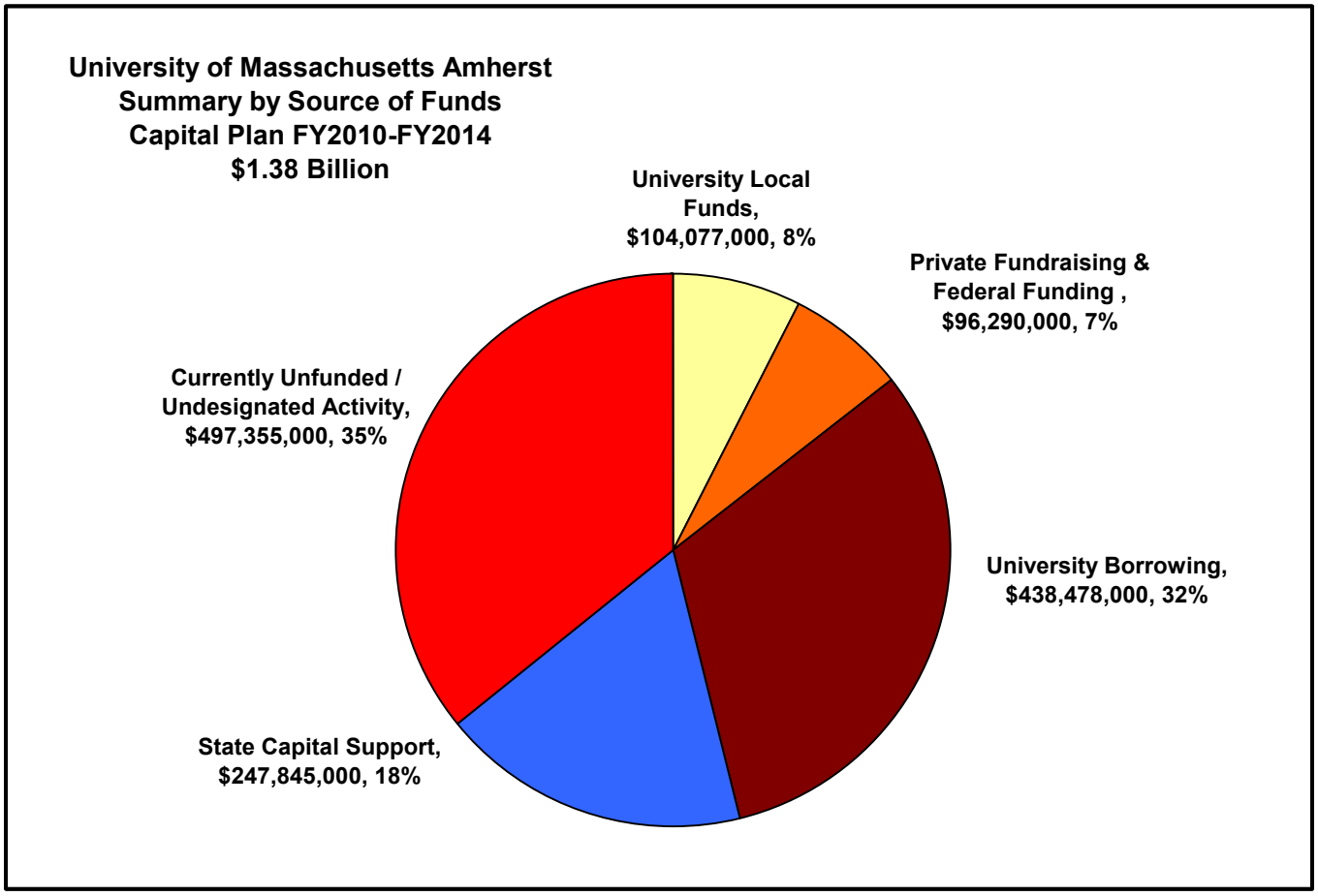
University of Massachusetts FY10 Capital Plan Update
Amherst Campus Projects

Campus Priority	Campus Project Names	Project Type	Program Type	Total Project Cost Est. August 2009	Five Year Spending Anticpated FY10-14 Cash Flow
	Designated Projects				
1	Central Heating Plant	PR	BI	$133,300,000	$17,800,000
2	Integrated Science Building (includes 4th floor fitout)	NC	TL	$114,500,000	$10,400,000
3	ADA Accessibility	CO	BI	$2,000,000	$2,000,000
4	Academic Renovations Pool	RV	TL	$2,500,000	$2,500,000
5	Campus Space Reallocation	RV	BI	$5,000,000	$5,000,000
6	Classroom & Instructional Tech Improvements	RV	TL	$2,000,000	$2,000,000
7	DuBois Library Interior Repairs	DM	TL	$13,000,000	$7,400,000
8	Bartlett Roof Replacement and Façade Repairs	DM	BI	$2,000,000	$1,000,000
9	DuBois Library Deck Replacement	RV	BI	$6,650,000	$100,000
10	Recreation Center	NC	SL	$53,300,000	$13,500,000
11	Campus Center Repairs	DM	BI	$10,000,000	$3,400,000
12	Elevator Repairs	DM	BI	$2,000,000	$1,000,000
13	Information Technology Project (Peoplesoft)	I	BI	$1,000,000	$1,000,000
14	OIT/Telecom Projects	I	BI	$1,000,000	$1,000,000
15	Housing Repair & Renovation	RV	SL	$22,500,000	$22,500,000
16	Parking Repair and Renovation	DM	BI	$2,750,000	$2,750,000
17	Classroom Renovations	RV	TL	$2,000,000	$2,000,000
18	Fine Arts Center Piping Replacement	DM	BI	$6,100,000	$1,800,000
19	Police Facility	NC	BI	$12,500,000	$12,080,000
20	University Apartments Demolition	DM	BI	$2,200,000	$2,100,000
21	UMBA Program Contingency	NC	BI	$3,300,000	$3,300,000
22	Dubois Library Elevator Replacement	DM	BI	$5,800,000	$4,820,000
23	Dubois Library Electrical and Plumbing Replacement	DM	BI	$6,100,000	$6,100,000
24	Campus Center Electrical Repairs	PR	BI	$5,200,000	$4,500,000
25	GRC basic systems upgrades	DM	BI	$10,305,000	$8,500,000
26	Relocation of research labs and academic functions, Hatch, French, Fernald	RV	R	$1,050,000	$1,050,000
27	French Greenhouse Replacement Phase I (Bowditch)	PR	TL	$8,850,000	$8,830,000
28	Housing Sprinkler Systems	CO	BI	$32,000,000	$26,300,000
29	Lab Safety Improvements - eyewash stations/showers	CO	R	$1,600,000	$1,590,000
30	Munson roof & envelope repairs and fire alarm upgrade	DM	BI	$572,000	$250,000
31	Goodell Fire Suppression System	CO	BI	$2,000,000	$1,860,000
32	Lederle GRC electrical upgrade	DM	R	$4,148,000	$3,998,000
33	Stockbridge Hall, Fire Suppression and Fire Alarms	DM	TL	$1,355,000	$920,000
34	Hasbrouck Lab - HVAC	DM	BI	$650,000	$439,000
35	Morrill complex repairs and renovations (formerly separate projects)	DM	BI	$9,081,000	$8,760,000
36	South College fire safety improvements and related activities	CO	BI	$2,000,000	$1,900,000
37	New Science Building (formerly separate projects)	PR	R	$144,000,000	$142,867,000
38	Academic Classroom Building	PR	TL	$85,000,000	$84,910,000
39	Machmer Repairs	DM	TL	$12,600,000	$1,300,000
40	Lederle GRC Repairs and Renovations	BR	R	$41,250,000	$6,000,000
41	Morrill Science Center Renovations	RV	R	$51,300,000	$4,500,000
42	Goessmann Addition Renovations	RV	R	$15,000,000	$15,000,000
43	Southwest Concourse and Infrastructure Replacement (formerly separate projects)	DM	BI	$12,000,000	$11,550,000
44	GRC 12th Floor Renovations Phase II for Biochemistry	RV	R	$800,000	$240,000
45	Renovate Morrill Library	RV	TL	$3,500,000	$2,800,000
46	OIT Back-up Data Center	IT	BI	$3,500,000	$3,330,000
47	Morrill IV HVAC	DM	BI	$5,000,000	$1,700,000
48	Band Building	NC	BI	$5,800,000	$5,644,000
49	Hampden Dining/Student Union Study (formerly Hampden only)	RV	SL	$400,000	$400,000
50	Butterfield Exterior Masonry	DM	BI	$880,000	$813,000
51	Chenoweth new faculty renovations	RV	TL	$1,961,000	$1,570,000
52	Dickinson Window Replacement	DM	BI	$2,133,000	$2,050,000
53	Dubois Library Roof Replacement	DM	BI	$900,000	$770,000
54	Hasbrouck new faculty renovations	RV	TL	$2,133,000	$2,133,000
55	Herter Roof Replacement	DM	BI	$800,000	$700,000
56	Life Sciences Facility	NC	R	$95,000,000	$30,000,000
57	LGRC Elevator Replacement	DM	BI	$2,300,000	$2,100,000
58	Morrill II & III new faculty renovations	RV	TL	$2,686,500	$2,050,000
59	North Infrastructure Improvements (formerly Polymer Steamline Replacement)	DM	BI	$9,300,000	$8,500,000
60	Student Union Roof Replacement	DM	BI	$1,395,000	$1,370,000
61	Totman Roof Replacement	DM	BI	$1,700,000	$1,695,000
62	New Faculty Hire Renovations	RV	R	$3,000,000	$3,000,000
63	Electrical/other infrastructure	RV	BI	$5,000,000	$5,000,000
64	Campus Master Plan Update	O	BI	$2,000,000	$2,000,000
65	Chenoweth Food Science Lab Renovations	RV	R	$2,800,000	$2,700,000
66	Fine Arts Center MEP	DM	BI	$4,550,000	$4,550,000
67	Machmer exterior stairways	DM	BI	$950,000	$935,000
68	Roof Repairs	DM	BI	$2,000,000	$2,000,000
69	Totman Physical Education Building MEP	DM	BI	$875,000	$870,000
70	New Africa House Elevator	DM	BI	$2,000,000	$1,870,000
71	Paige Lab Renovations	RV	BI	$6,000,000	$6,000,000
72	~~Fine Arts Center fire protection and emergency generator~~	~~DM~~	~~BI~~	~~$4,250,000~~	~~$4,250,000~~
73	Machmer fire protection and MEP	DM	BI	$5,250,000	$5,250,000
74	Boyden Gym bathroom and ventilation	DM	BI	$8,000,000	$8,000,000

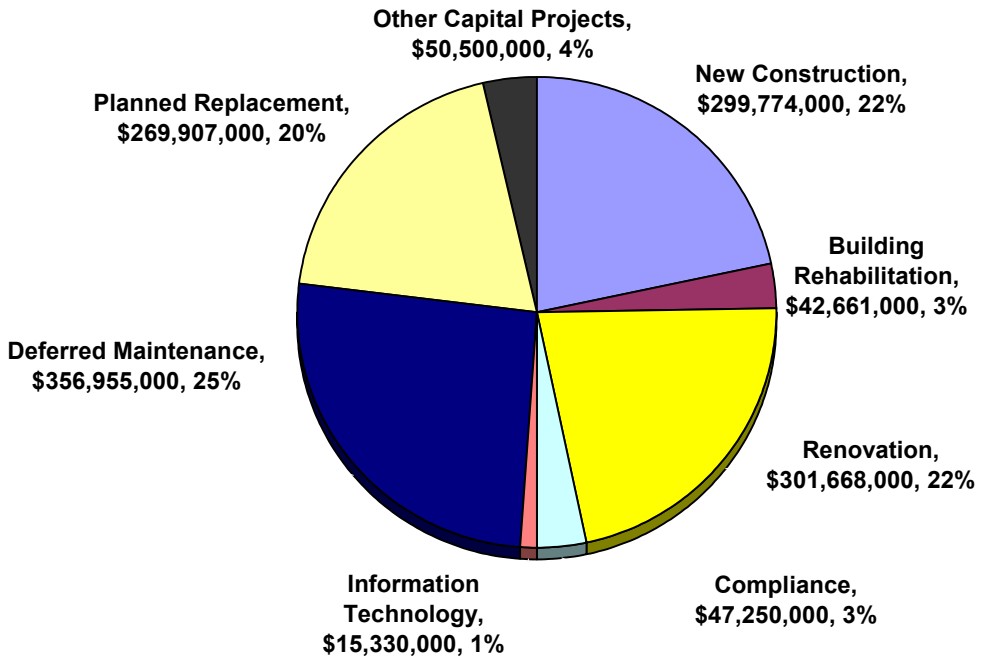
Campus Priority	Campus Project Names	Project Type	Program Type	Total Project Cost Est. August 2009	Five Year Spending Anticpated FY10-14 Cash Flow
75	Dubois Library HVAC	DM	BI	$2,750,000	$2,750,000
76	ISOM architectural and MEP	DM	BI	$2,000,000	$2,000,000
77	New Africa House exterior masonry and MEP	DM	BI	$1,640,000	$1,640,000
78	Chenoweth Laboratory Addition façade, fire protection and MEP	DM	BI	$500,000	$500,000
79	Hasbrouck Laboratory Renovations and Repairs (formerly separate projects)	DM	BI	$3,920,000	$3,920,000
80	Marks Meadow Renovations	RV	TL	$10,000,000	$10,000,000
81	Thompson Hall HVAC and steam distribution	DM	BI	$2,200,000	$1,085,000
82	Totman renovations for Kinesiology (NIH)	BR	R	$13,500,000	$13,500,000
83	Totman addition for Kinesiology (NIH)	NC	R	$16,000,000	$16,000,000
84	Morrill I Vivarium (NIH)	RV	R	$6,000,000	$6,000,000
85	New Science Building Fit out	NC	R	$44,000,000	$44,000,000
86	Hasbrouck Renovations (NIH)	BR	R	$10,000,000	$10,000,000
87	Marcus Upgrade and Relocate Electrical Power	BR	R	$1,400,000	$1,400,000
88	LGRC Faculty Renovations (NIH)	BR	R	$11,761,000	$11,761,000
89	LGRC repairs and modernization	RV	BI	$32,000,000	$0
90	Morrill Complex repairs and modernizations	RV	BI	$30,000,000	$0
91	Bartlett South Renovations and Façade Repairs	DM	TL	$24,500,000	$0
92	Bartlett North Renovations and Façade Repairs	DM	TL	$24,500,000	$0
93	Dubois Façade Replacement Study	DM	BI	$2,000,000	$0
94	Campus Utility Upgrades - Steam Line Replacements	DM	BI	$7,000,000	$0
95	Campus Utility Upgrades - Electric Distribution System	DM	BI	$5,100,000	$0
96	Hasbrouck Lab Addition Renovations	RV	R	$15,300,000	$0
97	Boyden elevator	CO	BI	$2,100,000	$0
98	Boyden Gym Renovations	RV	SL	$20,000,000	$0
99	Fine Arts Center Repairs, Renovations & Modernizations	DM	BI	$43,100,000	$0
100	Chenoweth Addition Repairs and Renovations	DM	R	$10,600,000	$0
101	Dubois Repairs and Renovations	DM	BI	$36,000,000	$0
102	Thompson Repairs and Renovations	BR	TL	$13,900,000	$0
103	Totman Renovations	RV	BI	$22,000,000	$0
104	Goodell Renovations	RV	BI	$16,000,000	$0
105	Roadway Repairs and Improvements	DM	BI	$3,000,000	$0
106	ADA Academic Building Compliance Renovations	RV	BI	$12,000,000	$0
107	Environmental/Hazardous Materials Remediations	RV	BI	$12,000,000	$0
108	Life Safety/Code Compliance	CO	BI	$12,000,000	$0
109	Campus Security Improvements	O	BI	$10,000,000	$0
110	Goodell MEP and fire doors	DM	BI	$2,641,000	$0
111	Holdsworth Hall fumehoods and MEP	DM	BI	$5,650,000	$0
112	Furcolo ceilings, structural and MEP	DM	BI	$1,785,000	$0
113	Deferred Maintenance Projects - FY10-14	DM	BI	$30,000,000	$30,000,000
114	Swing Space Renovation or New	NC	R	$50,000,000	$50,000,000
115	Campus Utility Upgrades - Steam Line Replacements	DM	BI	$10,000,000	$10,000,000
116	Campus Utility Upgrades - Electric Distribution System	DM	BI	$12,900,000	$8,000,000
117	Isenberg School of Management Repairs	DM	TL	$6,000,000	$6,000,000
118	Marston Repairs and Renovations	DM	TL	$13,700,000	$13,700,000
119	University Health Services code and MEP	DM	BI	$2,100,000	$2,100,000
120	Whitmore Hall ceiling tiles and electrical	DM	BI	$3,620,000	$3,620,000
121	Herter code and controls	DM	BI	$1,200,000	$1,200,000
122	Goessmann Lab Renovations	RV	R	$8,000,000	$8,000,000
123	Roadway Repairs and Improvements	DM	BI	$5,000,000	$5,000,000
124	Marcus Repairs	DM	R	$12,000,000	$12,000,000
125	CLIP Landscape Improvements Phase I & Phase II	DM	BI	$13,000,000	$6,000,000
126	Arnold Backfill Renovations	RV	TL	$3,650,000	$3,650,000
127	Renovate Dickinson Hall	RV	TL	$5,000,000	$5,000,000
128	Parking Trailers Replacement	PR	BI	$3,000,000	$3,000,000
129	Worcester Dining Commons Renovations	RV	SL	$20,000,000	$20,000,000
130	Deferred Maintenance Projects - FY15-19	DM	BI	$70,000,000	$0
131	Housing Repair & Renovation FY15-19	RV	SL	$62,500,000	$0
132	Auxiliary Services Repair & Renovation FY15-19	RV	SL	$20,000,000	$0
133	Student Center Repairs, Code, Renovations & Addition	NC	SL	$70,000,000	$0
134	Tobin Repairs	DM	R	$8,200,000	$0
135	Flint Laboratory drainage, fire protection, steam distribution	DM	BI	$2,228,000	$0
136	Tobin Hall lab security and MEP	DM	BI	$1,450,000	$0
137	Physical Plant Building HVAC, exterior masonry, and electrical	DM	BI	$3,600,000	$0
138	Hasbrouck Lab Repairs	DM	TL	$2,300,000	$0
139	Herter Repairs	DM	TL	$3,800,000	$0
140	Fernald Repairs	DM	TL	$1,100,000	$0
141	Campus Utility Upgrades - Water and Sewer	DM	BI	$2,100,000	$0
142	Stockbridge Renovations for PSIS non lab functions	RV	TL	$3,200,000	$0
143	Infrastructure Improvements	DM	BI	$5,000,000	$0
144	Hasbrouck Fire Alarm	CO	BI	$1,200,000	$0
145	Pedestrian Safety Improvements	DM	BI	$5,000,000	$0
146	Herter Renovations	RV	TL	$10,000,000	$0
147	Tobin Renovations	RV	R	$25,000,000	$0
148	Furcolo Renovations	RV	TL	$9,400,000	$0
	SubTotal Designated Projects			*$2,032,419,500*	*$886,690,000*

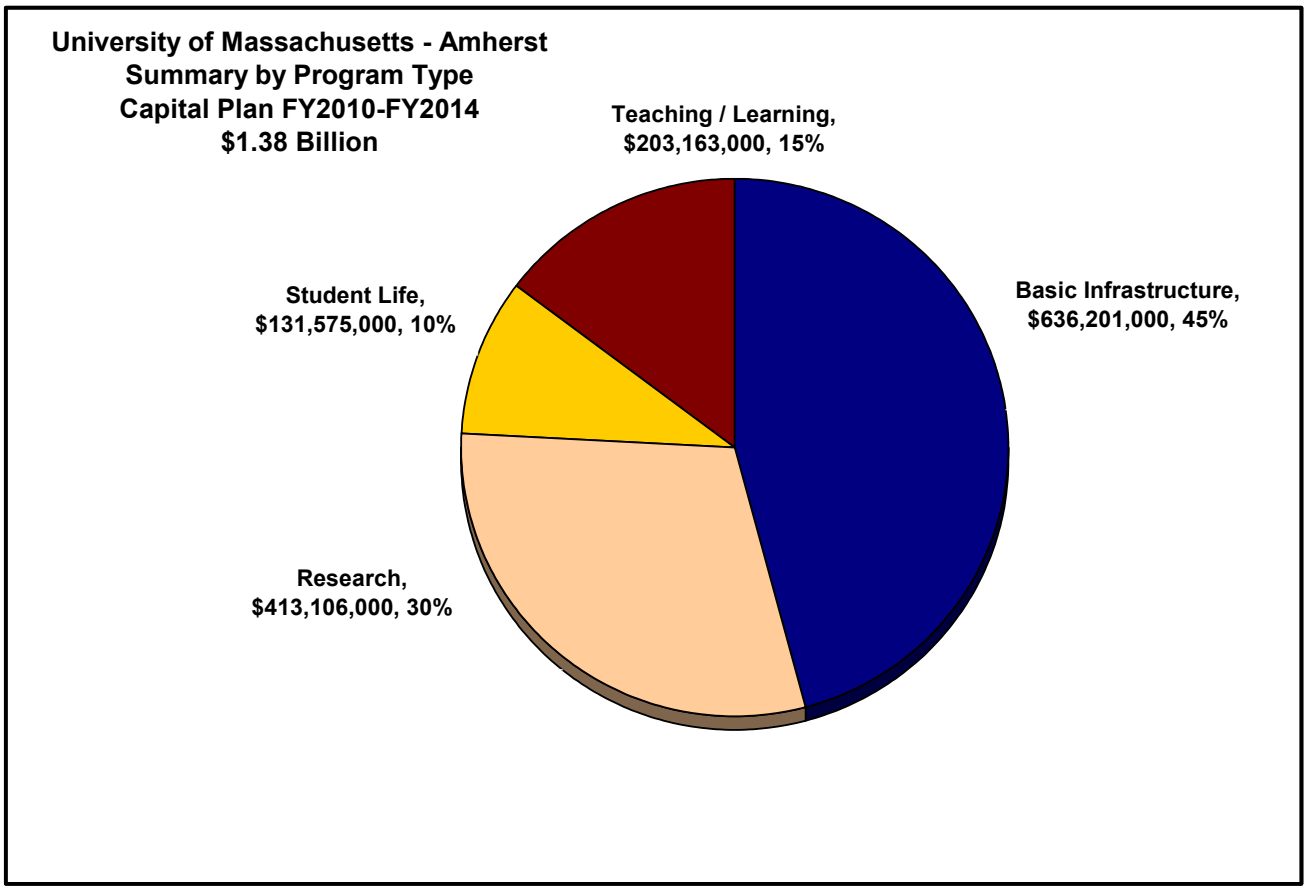
Campus Priority	Campus Project Names	Project Type	Program Type	Total Project Cost Est. August 2009
	Critical Unfunded Projects			
1	Campus Utility Upgrades - Steam Line Replacements	DM	BI	$7,000,000
2	Fine Arts Center Repairs, Renovations & Modernizations	DM	BI	$8,900,000
3	Dubois Repairs and Renovations	DM	BI	$21,000,000
4	Dubois Façade Replacement	DM	BI	$18,000,000
5	French Greenhouse Replacement Phase II	PR	TL	$8,000,000
6	Roadway Repairs and Improvements	DM	BI	$4,000,000
7	Facility Demolitions	O	BI	$20,000,000
8	Classroom & Instructional Tech Improvements	RV	TL	$8,000,000
9	Farm and outlying stations renovations	RV	BI	$4,500,000
10	Life Safety/Code Compliance	CO	BI	$10,000,000
11	Polymer/GRC Chilled Water - Expand Capacity	DM	BI	$1,000,000
12	Chiller Replacements	DM	BI	$1,150,000
13	Deferred Maintenance Projects - FY10-14	DM	BI	$35,000,000
14	Deferred Modernization Projects - FY10-14	DM	BI	$35,000,000
15	New Parking Structures	NC	BI	$14,000,000
16	Stockbridge Hall mechanical room	DM	BI	$1,000,000
17	Mather Career Center HVAC, drainage and doors	DM	BI	$1,880,000
18	University Health Services Renovations	RV	SL	$7,000,000
19	Office Park Olympia Drive	NC	BI	$15,000,000
20	Renovate Curry Hicks	RV	SL	$4,000,000
21	Campus Moves	RV	BI	$10,000,000
22	Environmental/Hazardous Materials Remediations	RV	BI	$20,000,000
23	ADA Compliance Renovations	RV	BI	$10,000,000
24	Mechanical Engineering Elab I	RV	R	$1,500,000
25	Relocate Western MA Public Health	RV	BI	$2,500,000
26	Lab Modular Building II	NC	R	$10,000,000
27	Telephone System Replacement	I	BI	$10,000,000
28	Campus Security Improvements	O	BI	$5,000,000
29	Campus Wide Card Access System	O	BI	$8,500,000
30	Renovate Hampden Dining Commons	RV	SL	$11,600,000
31	Whitmore Renovations	RV	BI	$19,000,000
32	Old Chapel Renovation	RV	BI	$15,000,000
33	North Pleasant Street Road Improvements	O	BI	$9,000,000
34	University Club Structural Repairs	RV	BI	$4,000,000
35	ISOM Addition	NC	TL	$20,000,000
36	Gladchuck practice field artificial turf	NC	BI	$3,000,000
37	Athletics Facilities Upgrade	RV	SL	$3,000,000
38	Softball Pitching Facility	NC	BI	$1,800,000
39	Tennis Court Enclosure	NC	BI	$10,400,000
40	New Baseball Field	NC	BI	$1,800,000
41	Athletics Champion Center	NC	SL	$35,000,000
42	FAC Concert Hall	RV	BI	$1,600,000
43	Rand Theater Renovations	RV	SL	$12,000,000
44	Renaissance Center Great Hall	RV	SL	$2,575,000
45	Wayfinding and Signage	O	BI	$1,000,000
46	West Experiment Station relocate occupants and mothball	O	R	$1,000,000
47	Stockbridge Pedestrian Road	NC	BI	$3,850,000
48	Holdsworth Fire Alarm	RV	BI	$700,000
49	Campus Wide Security System	CO	BI	$1,600,000
50	Science Facility Renovations	RV	R	$15,000,000
51	Property Acquisitions	O	BI	$2,000,000
52	LGRC Window Replacement	RV	BI	$6,000,000
53	Coal Yard Decommission	CO	BI	$2,000,000
54	Energy Efficiency Equipment Installations	RV	BI	$1,500,000
55	Electric Distribution Upgrade	RV	BI	$2,000,000
56	Chenoweth Food Science Phase II	RV	R	$2,000,000
57	Solar Panels	O	BI	$2,000,000
59	Waltham & Glouster renovations	RV	BI	$5,000,000
	SubTotal Undesignated Projects			***$497,355,000***

		Total 5-yr spending incl. Undesignated
Amherst Campus Grand Total FY10-14	***$2,529,774,500***	***$1,384,045,000***


University of Massachusetts Amherst
Summary by Source of Funds
Capital Plan FY2010-FY2014
$1.38 Billion
University Local Funds, $104,077,000, 8%
Private Fundraising & Federal Funding , $96,290,000, 7%
Currently Unfunded / Undesignated Activity, $497,355,000, 35%
University Borrowing, $438,478,000, 32%
State Capital Support, $247,845,000, 18%

University of Massachusetts - Amherst
Summary by Project Type
Capital Plan FY2010-FY2014
$1.38 Billion




University of Massachusetts - Amherst
Summary by Program Type
Capital Plan FY2010-FY2014
$1.38 Billion
Teaching / Learning, $203,163,000, 15%
Basic Infrastructure, $636,201,000, 45%
Student Life, $131,575,000, 10%
Research, $413,106,000, 30%

CAPITAL PLAN UPDATE
FY2010-2014
UNIVERSITY OF MASSACHUSETTS - Boston

"…the future becomes the present, the present becomes the past, and the past turns into regret if you don't plan for it."

From *The Glass Menagerie*, Tennessee Williams

Planning for the Future of UMass Boston: FY10-FY19 Capital Plan

Introduction

Since submission of last year's UMass Boston capital plan with its message of moving *Beyond the Headlines,* UMass Boston has been engaged in processes to do just that by careful attention to the clear and achievable goals set forth in its strategic plan entitled, *UMass Boston Renewal: Building the Student□Centered, Urban Public University of the New Century*. Work on the strategic plan's four key goals is transforming UMass Boston and continued effort on these goals will ensure UMass Boston fulfills its full potential. The key strategic goals are as follows:

1. **Increase student access, engagement, and success**
2. **Attract, develop, and sustain highly effective faculty**
3. **Create a physical environment that supports teaching, learning, and research**
4. **Enhance campus community engagement through improved operational structures**

Funding by Program

This capital plan outlines $750.6 million in capital spending over the next ten fiscal years in four major areas:

Program Type	Amount	% of Total Funds Allocated
Basic Infrastructure/Deferred Maintenance/Compliance Projects	$41,308,995	5.5%
Master Plan-related Projects	$645,500,000	86.0%
Substructure-related Projects	$33,075,000	4.4%
Teaching/Learning/Research Projects	$30,725,000	4.1%
Total Cost of capital Plan	$750,608,995	

Plan to fund New Construction

Of the total proposed capital spending for the ten year period from FY10 to FY19, new construction accounts for $542.8 million or 72% of the total (this includes $123 million in self-financing projects for parking and student housing). The planned $542.8 million of new construction will be funded as follows:

	Project Cost by Funding Source	
FY10-FY19 Construction Project	**Amount**	**Source(s)**
Integrated Sciences Complex (ISC)	$100,000,000	Higher Education Bond Bill funding
	$47,000,000	UMBA 2003-1 Bond proceeds
	$5,000,000	HEFA Master Lease
Total ISC Project Cost	$152,000,000	
General Academic Building #1	$100,000,000	UMBA future bond borrowing
General Academic Building #2	$100,000,000	Higher Education Bond Bill funding
Relocation of Campus Utility Systems	$43,000,000	UMBA future bond borrowing
University Drive Reconfigurations and connection to Mt. Vernon Street	$7,000,000	UMBA future bond borrowing
Wayfinding/Landscaping of campus	$7,500,000	UMBA future bond borrowing
Athletic Fields Replacement	$2,500,000	UMBA future bond borrowing
Parking Garage (1,200 spaces)	$35,000,000	UMBA future bond borrowing
Construction of Modular Facility for WUMB	$4,000,000	WUMB Fundraising
Construct seawall and HarborWalk on the north shore of the Columbia Point peninsula adjacent to JFK Library	$3,800,000	UMBA Fall 2009 bond borrowing
Living and Learning Center #1	$88,000,000	UMBA future bond borrowing

UMass has incorporated in its financial planning $241,000,000 of additional debt financing to support phase one of the master plan. The borrowing results in a forecasted increase in annual debt service payments from a projected $12 million in FY10 to approximately $23 million in FY14, and pushes the debt service to operations ratio from 4.1% (FY10 budgeted) to 6.9% and 6.2% in fiscal years 2013 and 2014, respectively. By 2014, the expected 5% increase in operations and maintenance expenditures is expected to trail only the percentage increases for depreciation (17%), scholarships and fellowships (10%) and research (5.7%) as the campus brings its new facilities on-line.

Project Highlights by Strategic Plan Goal

UMass Boston's capital plan highlights high priority projects that will support and foster its four key strategic planning goals. Although any given project may assist in the achievement of multiple strategic goals, below we identify and highlight by strategic goal, certain projects that most closely contribute to that goal's intended outcomes.

Goal 1: Increase student access, engagement, and success

"*The key to successful learning and, indeed, to developing students' talents, can be simply stated: Students learn from becoming involved.*"

From Education by Design C. Carney Strange and James H. Banning

Among the priority projects included in this capital plan are several which will foster the involvement and commitment of our students to their learning.

First and foremost, the construction of a General Academic Building, which will house a significant portion of the campus' classrooms, auditoria, and teaching laboratories, will promote an enriching educational environment. In fact, the site selected for this key project of the first phase of the Master Plan, reinforces the conceptual approach selected by the community to organize and orient the campus in the future. This approach, entitled *Improving Connections*, seeks to use the open space created by removal of the Plaza and demolition of the Science Center, to create expanded physical connections between buildings – both existing and proposed – across the span of the peninsula and beyond and, more importantly, to the people within them.

Next, this capital plan includes funding for physical spaces outside of classrooms and laboratories that will promote student engagement. Lifeless spaces scattered throughout our campus buildings will be renovated to become engaging venues for encouraging the kind of chance encounters that promote the non-academic mission so eloquently summarized in Mission and Place: Strengthening Learning and Community through Campus Design: "They also have a mission to teach civic and leadership skills and to help mold the characters of their students, so that students will achieve their best in every phase of their lives." The engaging venues funded by this capital plan will accommodate student clubs, organizations, independent study areas, reading nooks, and social spaces.

Building upon recent successful renovations to make its programs even more accessible to all (for example, Ross Disability Services office relocation to grade level space, regrading and paving of a walkway at the Campus Center making yet another fully accessible entrance to this building, installation of an automatic door opener at the Campus Center's Atrium Café exit), this UMass Boston capital plan will fund a project to make certain restrooms fully accessible at the catwalk level, the most accessible campus route to and between each building. This was a suggestion of the Disabilities Issues Committee on campus.

Finally, some space that will be made available by selective demolition will allow for the replacement of athletic fields taken out of commission as a result of the closure of the substructure's parking garage forcing the creation of temporary surface parking lots outside or when sites will be used for academic buildings in order to reinforce the Master Plan's conceptual design. UMass Boston encourages for its students what the Roman poet Juvenal called 'mens sana in corpore sano', "a healthy mind in a healthy body' and replacements of these fields will help ensure this.

Goal 2: Attract, develop, and sustain highly effective faculty

Several key projects in this UMass Boston capital plan recognize the varied space needs of faculty in this modern university. First, the construction of a new Integrated Sciences Complex will provide faculty researchers with state-of-the-art laboratories in which to conduct cutting edge research in Biology, Chemistry, Psychology, Physics, and Earth, Environmental and Ocean Sciences. This $152 million dollar building, slated to open in fall 2013 will house research laboratories, a Vivarium (animal care facility), two research centers, two Biology teaching laboratories and research faculty offices in its approximately 205,000 gross square feet.

In addition, many of the $4.5 million worth of smaller projects with a total project cost less than $500,000 will directly benefit the recruitment and retention of faculty by funding renovation of specialized teaching spaces, such as the music rooms for Performing Arts, Art, Neuropsychology and the Computer Science Teaching Laboratories and renovation of faculty research laboratories.

Goal 3: Create a physical environment that supports teaching, learning and research

As this is being written, the finishing touches are being applied to the UMass Boston Master Plan official document. Its conceptual approach as noted above, *Improving Connections*, is already guiding the focused studies begun in response to the plan's outline for transformation of the campus' physical environment.

Over the past several years, UMass Boston has experienced significant enrollment growth and will reach an enrollment of 15,000 students a year ahead of its 2010 goal and continued growth to 18,000 students is forecast for the period covered by this Capital Plan. In addition, extramural support for research also continues to rapidly increase and exceeded $45,000,000 last year, an 8.8% increase over the prior year and a nearly 50% increase over the past six years. Enrollment growth has already begun to create a shortage of total and adequate space on campus and an initial report prepared as part of the Master Plan indicated that at present enrollment levels UMass Boston has a space shortage of approximately 600,000 GSF. An updated space allocation plan that assumes a more intensive research focus and an enrollment of 18,000 students is currently being prepared but, based on a preliminary review of the data, it is anticipated that this analysis will point to an even greater space shortage on campus in the near future. As a result of these factors, this Capital Plan includes funding for a third new academic building in addition to the Integrated Sciences Complex and the General Academic Building.

Funding is included for the Science Center's demolition, which will remove a 300,000 gross square foot building; and, though it will be replaced by the new Integrated Sciences Complex, it is not a direct replacement because of growth needs. Keeping this building is not an option because of its deteriorated building system infrastructure, poorly designed space, including corridors that do not meet code, and significant water intrusion through roofs and the buildings' façade. The Master Planners' were informed of this at the outset and so the Master Plan's design for an on-grade campus with quads and open space are dependent upon the removal of this building and its fortress-like kin, the Plaza that connects it to other buildings.

At the same time, work is continuing on four Substructure-related projects:

- the interim stabilization of campus buildings that currently are supported by the Substructure;
- the replacement of the failed roof at the Utility Plant which is located in the Substructure;
- the creation of covered walkways and doorways to provide safe access to and egress from the Substructure for operations staff; and
- the replacement of acid neutralization tanks.

DCAM provided Notice to Proceed on these Substructure-related projects to its Construction Manager on July 29, 2009. The substructure projects totaling $25 million are thus officially in construction and will be completed within this capital plan period; in fact they should be complete by Quarter 4 of 2010.

UMass Boston's commitment to deferred maintenance eradication and life safety are also evident in this capital plan, which allocates $56.0 million to deferred maintenance projects and $9.5 million to life safety projects.

Deferred maintenance is the accumulation of maintenance, renewal and replacement projects on building systems and components postponed or unperformed when funding is unavailable. Like most colleges and universities, UMass Boston deferred considerable maintenance when funding was unavailable and energy costs rose. Beginning in 2005, UMass Boston undertook a systematic effort to address its deferred maintenance by commissioning a study of the highest priority deferred maintenance projects, which it continues to work on year by year. Highlights of the deferred maintenance projects which will be undertaken in this capital plan include repairs campus-wide to HVAC systems, replacement of the primary electrical switchgear, roof replacements and repairs, repairs to facades to address water intrusion and replacement of the sanitary stations.

In addition to deferred maintenance, work to address basic infrastructure deficiencies also included projects needed to which bring a facility into compliance with code, those projects are also being addressed in priority order. As a result of recent projects, more than half of all buildings at UMass Boston have fire sprinkler systems. The 11-story Healey Library building is slated to have a fire sprinkler system installed as a result of funding identified in this capital plan and improvements in fire protection will continue with a new system being installed in the Quinn Administration Building replacing a halon-based system that serviced the university's main telecommunications room.

Goal 4: Enhance campus-community engagement through improved operational structures

"*….what is lost in urban planning of open space by treating borders as though they were walls. People who live in sealed communities….the wounds of past experience, the stereotypes which have become rooted in memory, are not confronted. It is only in crossing a boundary when people can see others as if for the first time.*" -

From The Conscience of the Eye: The Design and Social Life of Cities by Richard Sennett

Indeed, this capital plan will allow UMass Boston campus to quite literally cross a boundary. In addition to the buildings noted above to be constructed, a university roadway will be created on the north side of campus that will connect with the end of Mt. Vernon Street, a public street, adjacent to what is currently a wooded area of campus behind the Calf Pasture Pumping Station. This roadway will streamline travel to the campus, the JFK Presidential Library, the Massachusetts State Archives and Commonwealth Museum and the soon-to-be-constructed Edward M. Kennedy Institute for the Study of the US Senate. A gateway entrance to the entire Columbia Point Peninsula will be established.

The roadway relocation also makes re-routing of the campus' utility lines and infrastructure possible along its axis. These utilities will allow the entire campus to be served by energy efficient systems, including the free cooling available via the Salt Water Pump House's use of the ocean waters to cool buildings.

Other building renovations will also allow the "opening of the campus" to new collaborations. Ten million dollars of funding is being planned for development of the Center for Personalized Cancer Therapy, a joint venture of UMass Boston and Dana Farber Cancer Center. Funding for this center, which will be located in the new Integrated Sciences Complex, has been earmarked in the Higher Education bond bill.

Summary

"*When your space reflects who you are, it alters continually as your life evolves. Occasionally, you face a monumental change that requires a virtual overhaul of your entire space.*"

From Meditations on Design (John Wheatman)

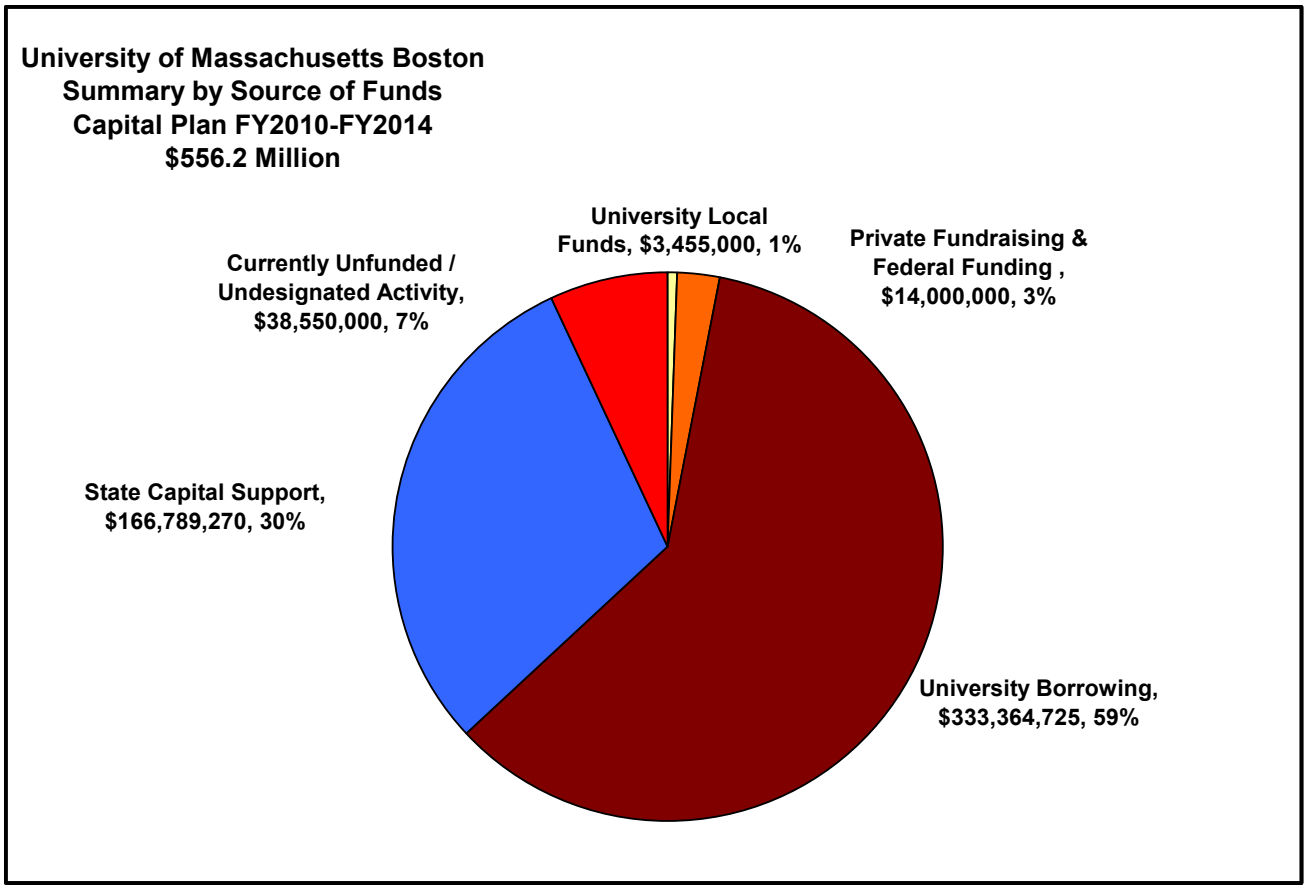
In moving *Beyond the Headlines* of its infrastructure's physical challenges, UMass Boston is taking the bold step of overhauling its entire space in a planned and considered manner. This campus will not forget its past; neither will it be defined by the physical challenges in its past that have set boundaries on its people and programs. The doors to change have been thrown open. This capital plan is a reflection of UMass Boston's determination to move forward.

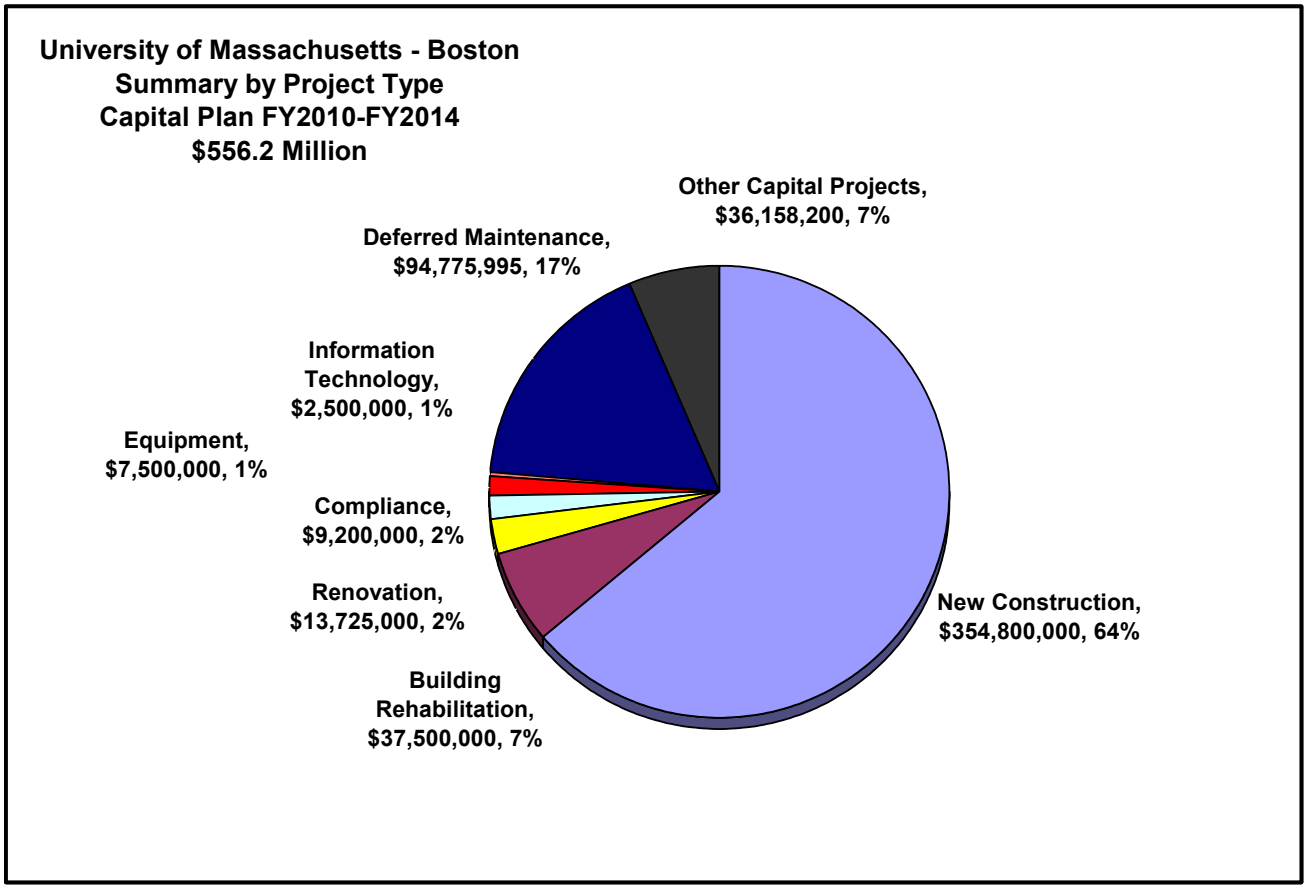
University of Massachusetts FY10 Capital Plan Update
Boston Campus Projects

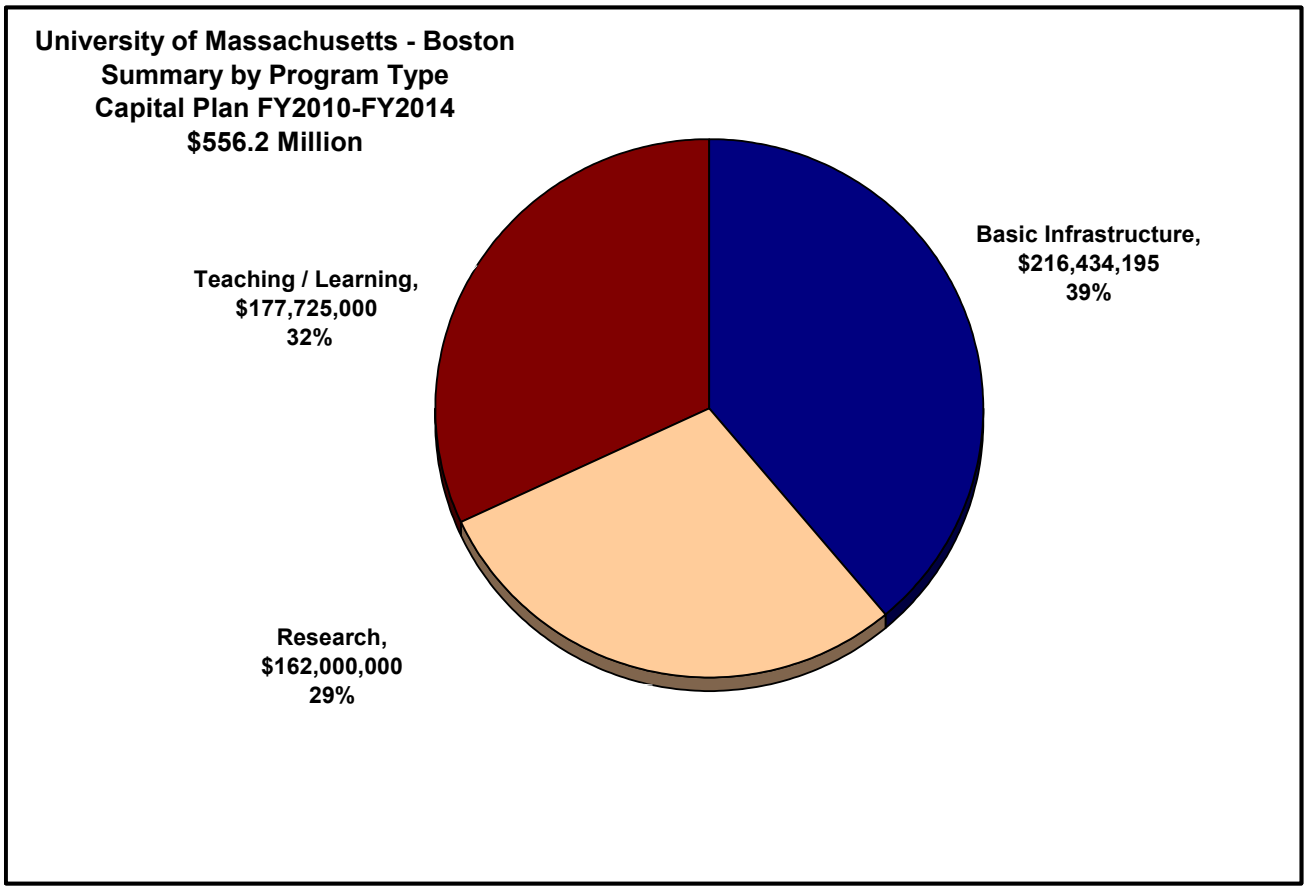
Campus Priority	Campus Project Names	Proj Type	Program Type	Total Project Cost Est. August 2009	Five Year Spending Anticpated FY10-14 Cash Flow
	Designated Projects				
	Basic Infrastructure (Life Safety/Deferred Maintenance)				
BI01	Healey Library: Fire Protection Improvements (Install Fire Sprinklers, Replace Fire Alarm System and Fire Pumps) (1)	CO	BI	$7,000,000	$7,000,000
BI02	Replace Primary Electrical Switchgear in the Utility Plant	DM	BI	$2,500,000	$2,500,000
BI03	Campus-Wide: Create ADA-conforming Restrooms and Accessible Pathways in Healey Library, McCormack Hall, the Science Center and Wheatley Hall	CO	BI	$1,200,000	$1,200,000
BI04	Campus-wide: Central IT Upgrades/Replacements	IT	BI	$2,500,000	$2,500,000
BI05	McCormack Hall and Science Center: Roof Replacements and Repairs	DM	BI	$3,700,000	$3,700,000
BI06	Healey Library: Emergency Generator Replacement	DM	BI	$800,000	$800,000
BI07	Utilities: Replace Sanitary Waste Lift Stations	DM	BI	$500,000	$500,000
BI08	Utilities: Primary Electrical System Upgrades and Emergency Generator Replacements	DM	BI	$4,000,000	$4,000,000
BI09	Campus-wide: Replace Exterior Doors to Ensure Climate Control (including vestibules) and Code Compliance	DM	BI	$3,200,000	$3,200,000
BI10	Clark Athletic Center: Install Photovoltaic Power System on Roof	O	BI	$658,200	$658,200
BI11	Grounds: Sea Wall and Harborwalk Construction on North-Facing Shore	NC	BI	$3,800,000	$3,800,000
BI12	Clark/McCormack Hall/Quinn Admin/Service/Wheatley Hall: Elevator Renovations -- Code/Restoration	DM	BI	$2,875,000	$2,875,000
BI13	Calf Pasture Pumping Station: Security and Button-up Envelope	DM	BI	$1,000,000	$1,000,000
BI14	Campus-wide: ADA Compliance	CO	BI	$1,000,000	$1,000,000
BI15	Campus-Wide: Repairs to Building Envelopes to Correct Water Intrusion	DM	BI	$1,000,000	$1,000,000
BI16	Campus-Wide: Repairs to HVAC Systems	DM	BI	$1,000,000	$1,000,000
BI17	Projects Less Than $500,000 (Aggregate)			$4,575,795	$4,575,795
	Master Plan Projects				
M01	Campus-wide: Campus Master Plan and Utility Master Plan	O	BI	$700,000	$700,000
M02	Master Plan Phase I: Construct New Integrated Sciences Complex	NC	R	$152,000,000	$152,000,000
M03.1	Master Plan Phase I: Relocate Campus Utility Systems from Substructure	NC	BI	$43,000,000	$43,000,000
M03.2	Master Plan Phase I: University Drive Relocation and Reconfiguration	NC	BI	$7,000,000	$7,000,000
M03.3	Master Plan Phase I: Wayfinding, Pathways and Landscaping	NC	BI	$7,500,000	$7,500,000
M03.4	Master Plan Phase I: Relocate Track/Athletic Field	NC	BI	$2,500,000	$2,500,000
M04	Master Plan Phase I: Construct New Academic Building 1	NC	TL	$100,000,000	$100,000,000
M05	Master Plan Phase I: Substructure and Science Center Demolition	O	BI	$9,800,000	$9,800,000
M06	Master Plan Phase I: Renovations to Existing Campus Buildings	BR	TL	$75,000,000	$37,500,000
M07	Master Plan Phase I: Construct New Academic Building 2	NC	TL	$100,000,000	$0
M08	Master Plan Phase I: Purchase of Expansion/Swing Space	O	TL	$25,000,000	$25,000,000
M09	Master Plan Phase I: Construct 1,200 Vehicle Parking Garage	NC	BI	$35,000,000	$35,000,000
M10	Master Plan Phase I: Construct 1,000 Bed Living and Learning Center	NC	SL	$88,000,000	$0
	Substructure Projects				
S01	Substructure: Interim Structural Stabilization	DM	BI	$21,820,000	$21,820,000
S02	Substructure: Utility Plant Roof Replacement	DM	BI	$4,570,000	$4,570,000
S03	Substructure: Upper & Lower Level Egress/Access	DM	BI	$6,185,000	$6,185,000
S04	Substructure: Replace Acid Neutralization Tanks	DM	BI	$500,000	$500,000
	Teaching/Learning/ Research				
TR01	McCormack Hall: Renovation of Cafeteria, Servery and Kitchen Space for Academic Use	RV	TL	$775,000	$775,000
TR02	Campus -wide: Renovations to Support Teaching and Research	RV	TL	$950,000	$950,000
TR03	Life Sciences: Center for Personalized Cancer Therapy	RV	R	$10,000,000	$10,000,000
TR04	Instructional Equipment Upgrades and Replacements	E	TL	$15,000,000	$7,500,000
TR05	Relocation WUMB Radio to Modular Building	NC	TL	$4,000,000	$4,000,000
	SubTotal Designated Projects			*$750,608,995*	*$517,608,995*

Campus Priority	Campus Project Names	Proj Type	Program Type	Total Project Cost Est. August 2009
	Critical Unfunded Projects			
1	Clark Athletic Center: Pool HVAC Upgrades	DM	BI	$2,200,000
2	Healey Library: Renovations to Create Learning Commons	RV	TL	$2,000,000
3	Clark Athletic Center: Building Envelope Repairs	DM	BI	$4,000,000
4	Healey Library: Building Envelope Repairs	DM	BI	$5,000,000
5	McCormack Hall: Building Envelope Repairs	DM	BI	$5,000,000
6	Quinn Administration Building: Building Envelope Repairs	DM	BI	$3,000,000
7	Service & Supply: Building Envelope Repairs	DM	BI	$2,000,000
8	Wheatley Hall Building Envelope Repairs	DM	BI	$5,000,000
9	Science Center: Emergency Building Repairs	DM	BI	$1,000,000
10	Clark Athletic Center: HVAC Upgrades (excluding pool area)	DM	BI	$1,850,000
11	Healey Library: HVAC Upgrades	DM	BI	$1,250,000
12	McCormack Hall: HVAC Upgrades	DM	BI	$1,550,000
13	Quinn Administration Building: HVAC Upgrades	DM	BI	$1,100,000
14	Service & Supply: HVAC Upgrades	DM	BI	$950,000
15	Utility Plant: HVAC Upgrades	DM	BI	$500,000
16	Wheatley Hall: HVAC Upgrades	DM	BI	$2,150,000
17	Projects Less than $500,000 (aggregate)	DM	BI	$600,000
	SubTotal Undesignated Projects			***$39,150,000***

		Total 5-yr spending incl. Undesignated
Boston Campus Grand Total FY10 - 14	***$789,758,995***	***$556,758,995***


University of Massachusetts Boston
Summary by Source of Funds
Capital Plan FY2010-FY2014
$556.2 Million
University Local Funds, $3,455,000, 1%
Private Fundraising & Federal Funding , $14,000,000, 3%
Currently Unfunded / Undesignated Activity, $38,550,000, 7%
State Capital Support, $166,789,270, 30%
University Borrowing, $333,364,725, 59%


University of Massachusetts - Boston
Summary by Project Type
Capital Plan FY2010-FY2014
$556.2 Million
Other Capital Projects, $36,158,200, 7%
Deferred Maintenance, $94,775,995, 17%
Information Technology, $2,500,000, 1%
Equipment, $7,500,000, 1%
Compliance, $9,200,000, 2%
Renovation, $13,725,000, 2%
Building Rehabilitation, $37,500,000, 7%
New Construction, $354,800,000, 64%


University of Massachusetts - Boston
Summary by Program Type
Capital Plan FY2010-FY2014
$556.2 Million
Basic Infrastructure,
$216,434,195
39%
Teaching / Learning,
$177,725,000
32%
Research,
$162,000,000
29%

CAPITAL PLAN UPDATE
FY2009-2013
University of Massachusetts - Dartmouth

Overview

The FY2010 – FY2014 Dartmouth Campus Capital Plan Update reflects the continued capital support for both the recommendations of the 2005 Master Plan and the goals of the Strategic Plan, ***Engaged, Embedded, and Evolving***, established in 2000 and updated in 2007.

While very similar to the plan submitted last year, the updated plan does have several significant changes. The first is the removal of the Cedar Dell project. With the completion of this project, the campus has gained 804 completely renovated beds. The "like new" facilities have been well received by the students and help showcase the positive impact of the capital plan on student life.

The second is the expansion of the library renovation project. The new project is a more comprehensive renovation that also includes the master plan recommendation of capturing the infill space beneath the Group II lecture halls. This captured space will create an event style assembly space capable of providing a larger venue for campus, community, and regional activities. The revised project also provides a scholarly commons area, a learning commons area, improved building mechanical systems, and more student study space at the perimeter of the building. The shift of student study space to the perimeter of the building takes advantage of both natural daylighting and the beautiful views of the campus.

The third is the escalation in both cost and priority of the Biomanufacturing Building. This project currently under design, is to create a facility that will provide pre-clinical scale Biomedical and Biopharmaceutical Process Suites operating and designed to meet Good Laboratory Practice (GLP) guidelines and open access applied Research and Development experiments within the Commonwealth of Massachusetts. The facility will be dedicated to serving industry's needs for large-scale process confirmation, full scale applied research experiments and workforce hands-on education in a "real size" manufacturing facility.

The fourth is the large escalation in the cost of the Energy/Water Savings project. The increase from $14.56 million to $40.0 million reflects our continued progress towards finalizing the project with DCAM and NORESCO. The audit phase which will provide the detailed figures needed to enter into a guaranteed contract is scheduled for completion towards the end of 2009.

The fifth and final difference has three components and involves the splitting of previously identified large projects into a large project component and a smaller project component of immediate need. An example of this is the splitting of the renovation project for our four oldest residence halls into a renovation project and an immediately needed roofing project. Fiscal challenges make the complete renovation of these facilities a future need, but the immediate reroofing will prevent the buildings from continuing their decay exponentially.

An additional example of this approach is seen with the redefinition of the "Basic Infrastructure Repairs" by breaking out a new "Replace Failed HVAC Systems" project. Several systems on campus no longer operate and have the potential of causing unsafe environments for our students, faculty, and staff. These systems need immediate replacement and were not well served included in the larger project scope. Currently, the campus is using operational resources to keep these systems from creating unsafe situations, but such an approach is costly and unsustainable.

A final example is seen in the splitting of the "Student Lab Program Enhancement" from the larger "Class Room Upgrades ..." project. We have been able to improve some student lab space of the past few years, but the remaining labs are extremely antiquated and hamper the effective teaching of science.

The Dartmouth Campus Capital Plan Update for FY2010 – FY2014 represents an assessment of the capital needs of the campus based on currently available information. Having recently experienced a structural failure caused by a design flaw based on the general knowledge of the properties of concrete available 40 years ago, we are acutely aware that emergencies can and do disrupt the best of plans. We also know that both the availability and the manner in which funds are made available may affect our plans and our priorities. Nevertheless, we believe the attached update is an accurate assessment, broad enough in scope to accommodate the vagaries of funding as well as emergencies.

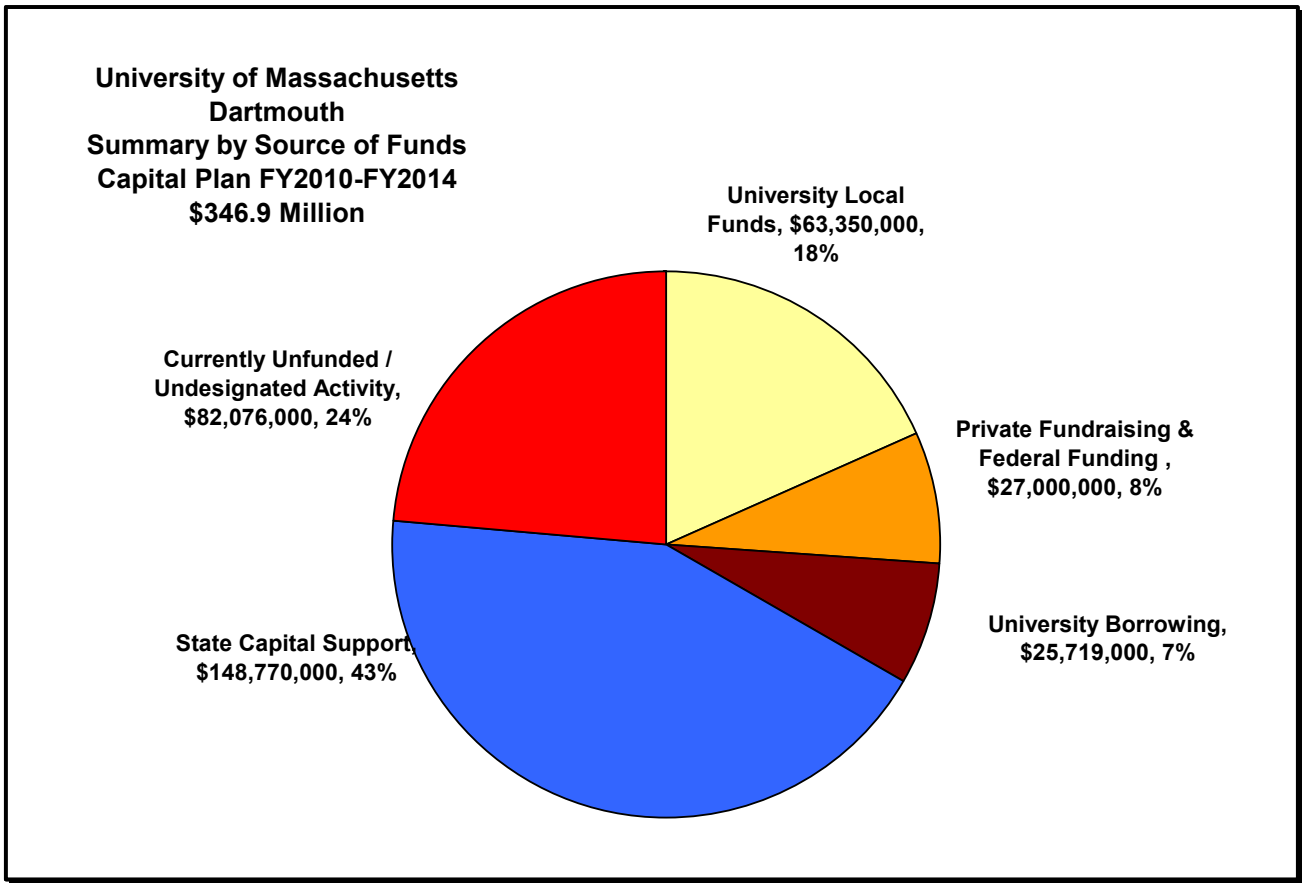
University of Massachusetts FY10 Capital Plan Update
Dartmouth Campus Projects

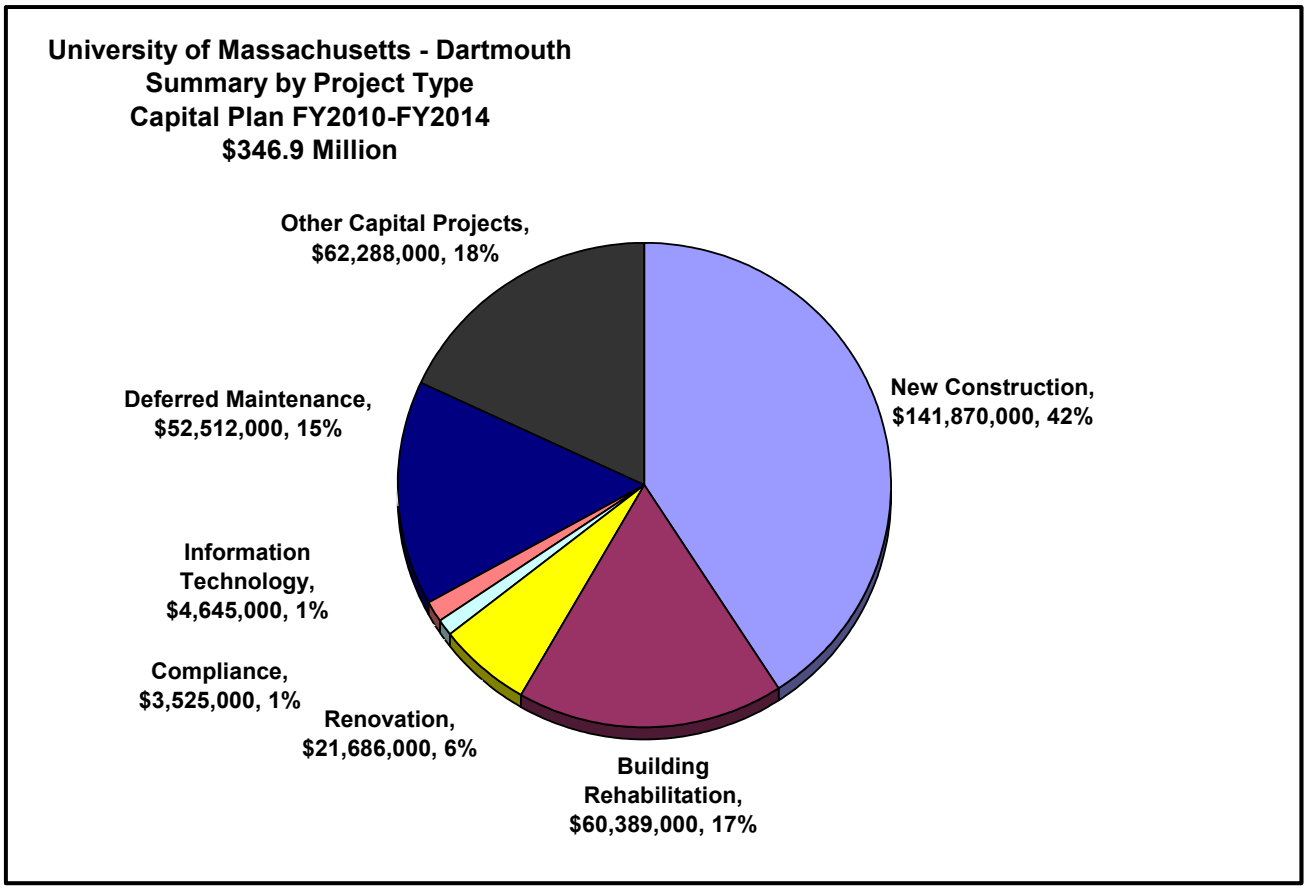
Campus Priority	Campus Project Names	Proj Type	Program Type	Total Project Cost Est. August 2009	Five Year Spending Anticpated FY10-14 Cash Flow
	Designated Projects				
1	Library Renovations	BR	TL	$44,000,000	$44,000,000
2	Biomanufacturing Building	NC	R	$15,000,000	$15,000,000
3	ATMC Acquisition	O	R	$11,400,000	$11,400,000
4	Replace Failed HVAC Systems	DM	BI	$3,500,000	$3,500,000
5	Classroom Upgrades and Learning Space Improvements	RV	TL	$7,440,000	$3,500,000
6	SMAST/DMF Expansion	NC	R	$20,000,000	$10,000,000
7	Energy/Water Savings Project	O	BI	$40,000,000	$40,000,000
8	Campus Entrance Building	NC	SL	$45,000,000	$28,000,000
9	Reroof Four Oldest Residence Halls	BR	SL	$1,900,000	$1,900,000
10	Student Lab Program Enhancements	RV	TL	$4,000,000	$4,000,000
11	Repair Four Oldest Residence Halls	DM	SL	$75,000,000	$33,000,000
12	ADA Renovations Immediate Needs	CO	BI	$2,184,000	$750,000
13	Basic Infrastructure Repairs	DM	BI	$61,702,000	$11,991,000
14	LARTS Air Conditioning Installation	RV	BI	$3,016,000	$3,016,000
15	Central Administrative Services Building	NC	TL	$12,690,000	$12,690,000
16	Landscape/Lighting Improvements	O	BI	$1,832,000	$832,000
17	Roadway Repairs	DM	BI	$5,720,000	$500,000
18	Power Plant Upgrades/MEP	DM	BI	$4,371,000	$1,521,000
19	PCB Transformer Replacements	CO	BI	$1,023,000	$1,023,000
20	Elevator Upgrades	CO	BI	$1,352,000	$1,352,000
21	Asbestos Removal	CO	BI	$400,000	$400,000
22	IT Upgrades/Peoplesoft	IT	BI	$2,080,000	$2,080,000
23	Network & Telecom Infrastructure	IT	BI	$2,565,000	$2,565,000
24	Charlton College of Business, Phase II	NC	TL	$14,000,000	$14,000,000
25	Multi Purpose Field House	BR	SL	$20,800,000	$5,000,000
26	Locker & Training Room Renovations	RV	SL	$3,120,000	$0
27	Non-critical HVAC, Infrastructure and Envelope Repairs	DM	BI	$3,640,000	$2,000,000
28	Athletic Field Replacement	O	SL	$819,000	$819,000
29	Fitness Center Expansion	NC	SL	$5,000,000	$5,000,000
30	Campus Center Addition	BR	SL	$16,400,000	$3,000,000
31	New Bedford Incubator	O	R	$5,000,000	$1,000,000
32	Taunton Life Sciences Center	O	R	$5,000,000	$1,000,000
	SubTotal Designated Projects			***$439,954,000***	***$264,839,000***

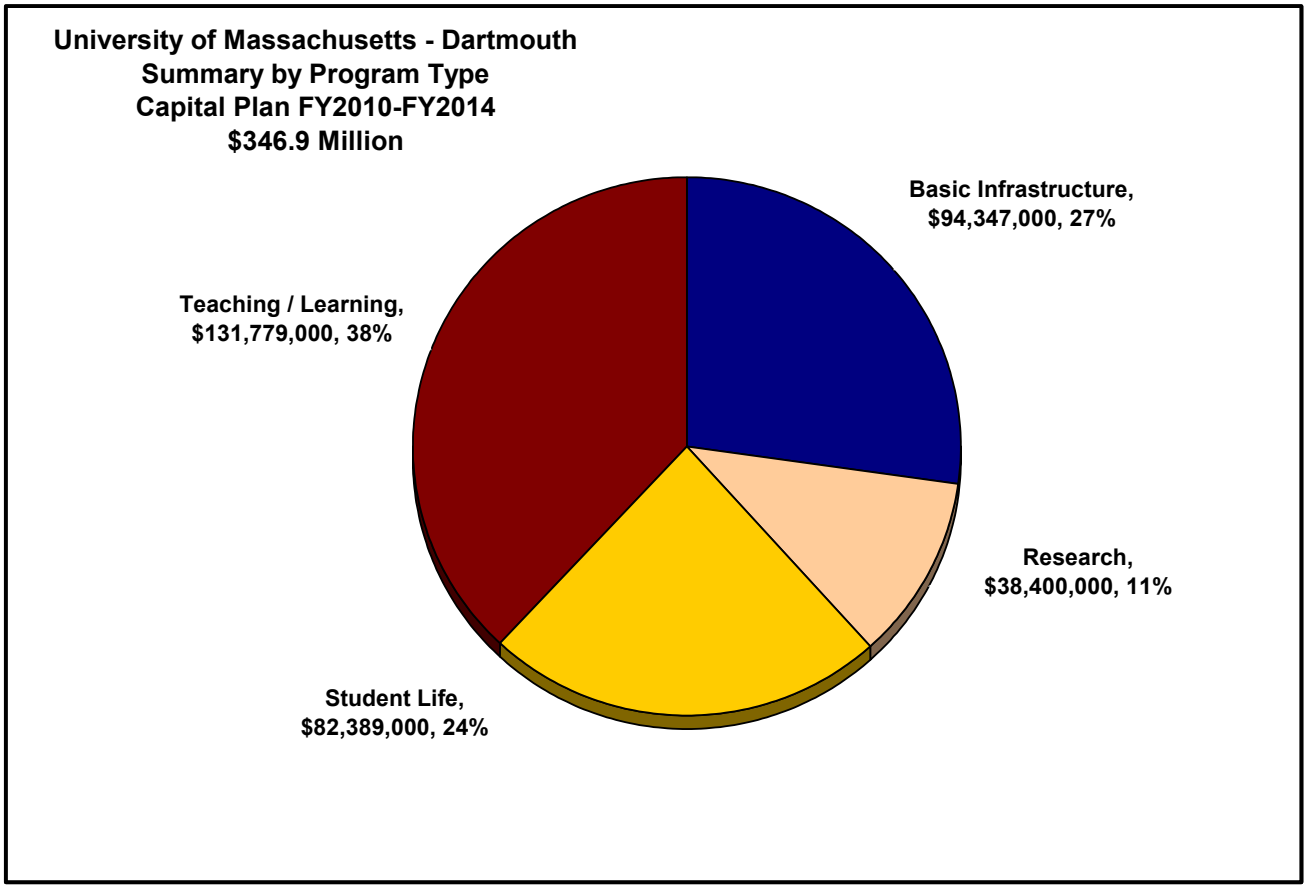
Campus Priority	Campus Project Names	Proj Type	Program Type	Total Project Cost Est. August 2009
	Critical Unfunded Projects			
1	Retrofit of Vacated Spaces from New 'Bldg Projects	NC	BI	$15,580,000
2	New Campus Center Plaza	O	BI	$2,457,000
3	Renovation Campus Auditorium	RV	TL	$11,170,000
4	Resident Dining Hall Expansion	BR	SL	$5,670,000
5	Group II/Dion Engineering Phase I	NC	TL	$22,600,000
6	Group II/Dion Engineering Phase II	NC	TL	$19,000,000
7	Centennial Drive Quadrangle	O	BI	$4,780,000
8	DCE Forensics Laboratory	BR	TL	$819,000
	SubTotal Undesignated Projects			***$82,076,000***

Total 5-yr spending incl. Undesignated

Dartmouth Campus Grand Total FY10-14	***$522,030,000***	***$346,915,000***


University of Massachusetts
Dartmouth
Summary by Source of Funds
Capital Plan FY2010-FY2014
$346.9 Million
University Local Funds, $63,350,000, 18%
Private Fundraising & Federal Funding , $27,000,000, 8%
University Borrowing, $25,719,000, 7%
State Capital Support, $148,770,000, 43%
Currently Unfunded / Undesignated Activity, $82,076,000, 24%


University of Massachusetts - Dartmouth
Summary by Project Type
Capital Plan FY2010-FY2014
$346.9 Million
Other Capital Projects, $62,288,000, 18%
New Construction, $141,870,000, 42%
Deferred Maintenance, $52,512,000, 15%
Information Technology, $4,645,000, 1%
Compliance, $3,525,000, 1%
Renovation, $21,686,000, 6%
Building Rehabilitation, $60,389,000, 17%


University of Massachusetts - Dartmouth
Summary by Program Type
Capital Plan FY2010-FY2014
$346.9 Million
Basic Infrastructure, $94,347,000, 27%
Research, $38,400,000, 11%
Student Life, $82,389,000, 24%
Teaching / Learning, $131,779,000, 38%

CAPITAL PLAN UPDATE
FY2010-2014
UNIVERSITY OF MASSACHUSETTS - LOWELL

The Lowell campus consists of 3 major locations: North, South and East. The North and South campuses are primarily academic buildings with some residence halls and tightly constrained playing fields; the East campus is the location of the majority of our residence halls and a very popular Recreation Center. East also houses the Lelacheur Baseball Park and is a short walk from the Tsongas Arena. Each of the campuses are densely developed and bounded by fully developed residential and business properties.

This Capital Plan Update for FY 2010 reflects the early stages of the UMass Lowell 2020 Strategic Planning Initiative initiated by Chancellor Meehan earlier this year. UMass Lowell 2020 will serve as the University's next-generation strategic plan, providing a blueprint for how the campus will achieve national and international recognition as a world-class institution over the next decade. The creation of this blueprint is engaging hundreds of faculty, staff and students from across the institution and will be completed in January 2010. Ten committees are assessing the University's current academic, research, partnership, fiscal, and physical plant status and will recommend strategies to improve the campus's achievement, reputation and rankings across these areas. In addition to the strategic plan, the Chancellor has reorganized and streamlined the administration, finance and facilities team to plan, operate and finance our ambitious capital program.

In parallel, the Chancellor requested that DCAM become engaged with the campus and assist in identifying needs and solutions in our physical facilities. As a result, DCAM has authorized and is engaged in two Campus Master Plans – one to address a subset of our South Campus buildings and programs in anticipation of funding for a new academic building - the first to be built since 1976. It will recommend a program for the building, renovations and department relocations, site recommendations for the new building and will generate a certifiable study for use in design and construction. The second study will be a comprehensive study of our North and East campuses as well as the remainder of the South Campus programs and buildings. This plan will include recommendations on sustainability, power plants, facility conditions, landscaping, etc. The second firm will also be responsible for a seamless integration of both plans with a set of achievable and implementable steps.

Another project that the campus will engage in with DCAM is an Energy Audit in anticipation of a performance-based contract to address the many energy challenges on each of our campuses. The power plants on both North and South are aging and becoming more expensive to operate; our North campus buildings all predate 1975 with most being over 50 years old. The energy and electrical infrastructures are in need of replacement and/ or substantial upgrades. As we continue to operate academic and research programs on a year round basis, we must address the lack of air conditioning in most of our buildings.

Many of our anticipated capital expenditures impact on a number and variety of our academic, research, athletic, recreational and outreach programs and partnerships. As the Lowell campus develops an updated Mission Statement and Strategic Plan, several themes are clear: to be recognized for the quality of student learning experiences ; quality and stature of our academic programs; contributions to the sustainability of the region; a reputation for commitment to educational excellence and diversity. If we are to achieve these and other goals and aspirations, we must provide new, modern academic and research spaces, increase

our residential capacity, renew our existing buildings, create new recreational opportunities, add to our capacity to host a broad range of meetings and events – academic, entertainment and civic.

The **Emerging Technologies Innovation Center (ETIC)** is envisioned to have two key functions. The first is to provide state-of-the art core facilities that support nano-manufacturing, bio-manufacturing, medical devices, and manufacturing in general. These core facilities will be available to UML faculty, collaborating corporations, and industry. The second function of ETIC is to provide laboratories for pioneering faculty who work in these areas. We expect their research to be supported by and to be collaborative with industry, State, and Federal agencies. ETIC will be of great interest to start-up companies who do not have the resources to invest in the diverse core facilities that are necessary for advanced manufacturing and for development of emerging technologies. ETIC will be similarly of great interest to established industry and to federal agencies for carrying out current and anticipated advanced research and development by innovative and highly accomplished faculty.

The ETIC is funded through a combination of state economic stimulus funds, campus borrowing, and federal grants. The design firm, CUH2A, has begun schematic design and we expect to start site work this fall and winter.

The location selected for the ETIC requires the demolition of an existing dormitory, Smith Hall. To compensate for this loss of beds, UMBA is overseeing a redesign of floors 4-6 of Fox Hall (our largest residence hall). This project has added 119 beds for the fall 2009 semester.

The Chancellor has established a goal of eventually housing 50% of our undergraduate students on-campus. This target, in combination with an expected increase in undergraduate enrollment, will add 1,500 beds to the Lowell campus. We are also expecting to substantially increase our foreign student population at both the graduate and undergraduate levels through cooperative programs with China, Ireland, Greece and India, e.g. we expect to enroll 100-200 new graduate students from Tsinghua University in the future.

Again, in partnership with the President's Office and UMBA, the University of Massachusetts Lowell has purchased the Doubletree Hotel in downtown Lowell. The 252-room hotel, which has been renamed the **UMass Lowell Inn & Conference Center**, will provide housing for hundreds of University students beginning this Fall and will host professional and academic conferences.

The Lowell campus has not enjoyed the opening of a new academic building in over 32 years. Many existing buildings are difficult to fully adapt to current accessibility and technology needs. The growing interest in and emphasis on interdisciplinary research and teaching makes the traditional academic floor plan increasingly less effective. This **new academic building on South** will address some of the dramatic changes and growth in student demand experienced by many South campus programs (Nursing, Criminal Justice, English and Psychology). The final program and location of the new building will be determined through the Master Planning activities. We expect to have firm plans and recommendations within the next few months.

In the next several years, the campus will focus on the modernization of the **North Quadrangle and the rehabilitation of Wannalancit**. The projects will allow the campus to more effectively use the Wannalancit Building and will provide increased year-round accessibility to the century old quadrangle buildings. The North Quadrangle is the home to our management, science and engineering departments. In order to provide year-round teaching, and to accommodate the growing demands modern teaching spaces, meeting spaces and of equipment and laboratory spaces, the Quadrangle requires substantial changes

and upgrades. The Higher Education Bond Bill recognizes these needs with an allocation of $10 million to begin this refurbishing and repurposing.

The Wannalancit Building is currently underutilized. Its rehabilitation will allow for more effective use of the facility for a variety of purposes. It's proximity to the downtown district suggests that it's best use may be to create a location and environment that supports and encourages interactions with the Greater Lowell civic, business and cultural communities. The Building Authority is currently in the design stage for one of the Wannalancit users. The Massachusetts Medical Device & Development (M2D2) is an initiative in which faculty from the Lowell and Worcester campuses are cooperating to accelerate the commercialization of medical devices – a key Massachusetts industry. The space will consist of flexible laboratory, office and conference spaces. The estimated cost of the Wannalancit rehabilitation is $15.5 million.

In conjunction with the President's office and UMBA, we are considering the **acquisition of a variety of existing properties** as a means of addressing several campus needs. These include the ability to expand beyond our current very tightly constrained boundaries, to address a pressing need for additional residential housing, to increase green space and to better support our intercollegiate, intramural and civic partnership activities. The South Campus is home to 40% of our undergraduate enrollment yet we offer virtually no convenient recreational opportunities for them. We are evaluating a proposed plan to create an all weather field and a small recreational center to address this concern.
The campus is currently working with the City of Lowell over **the transfer of the Tsongas Arena** to the University. The University would assume control of this exciting venue to expand opportunities for student programming. The facility will require approximately $5 million of renovations and improvements.

The projects listed in the Undesignated Funding Sources (Table 1b) are all important and their funding would have significant, positive impacts on the university. A number were identified in the last DCAM certified Master Plan (1988). While some progress has been made, the most expensive have been deferred for lack of resources and temporary swing space.

While this memo focuses on new and redirected capital activities, we are certainly continuing our efforts to reduce our backlog of deferred maintenance projects and looking to establish predictable levels of attention to well defined areas, e.g building envelopes, power plants, roofs, interior improvements, landscaping, etc. Renewing, modernizing and enhancing existing and historic buildings on campus leverage the improvements gained through new construction and other major renovations by upgrading the entire inventory. To this end, the new A&F and Facilities team has been reviewing the data and analysis provided by Sightlines and is proposing a change in the approach to identifying and funding deferred maintenance, compliance, repair and renewal projects.

In last year's capital plan update, we listed a series of discrete projects types such as HVAC, Building Envelopes, Elevators, Mechanical Systems, etc. For this year's plan, we have consolidated these project types into new program categories that better reflect a new investment and campus revitalization approach emerging through our Master Planning efforts. The Capital Renewal & Deferred Maintenance Program will address the backlog of deferred maintenance items (HVAC, roofs, and elevators). The Academic & Ongoing Modernization Program will address the classroom, laboratory, and building system modernization upgrades needed to get (and keep) our academic facilities up to world-class standards. The Net Asset Value (NAV) program is designed to "keep up" our facilities with regular, ongoing investments so that our backlog of repairs does not grow. Compliance provides a resource to address both regulatory and environmental compliance requirements associated with continuing to operate existing facilities as well as supplement facility renewal. Each of these new programs is consistent with the general recommendations

of the Sightlines group. The challenge is to adequately fund and operationalize this new approach to capital investment.

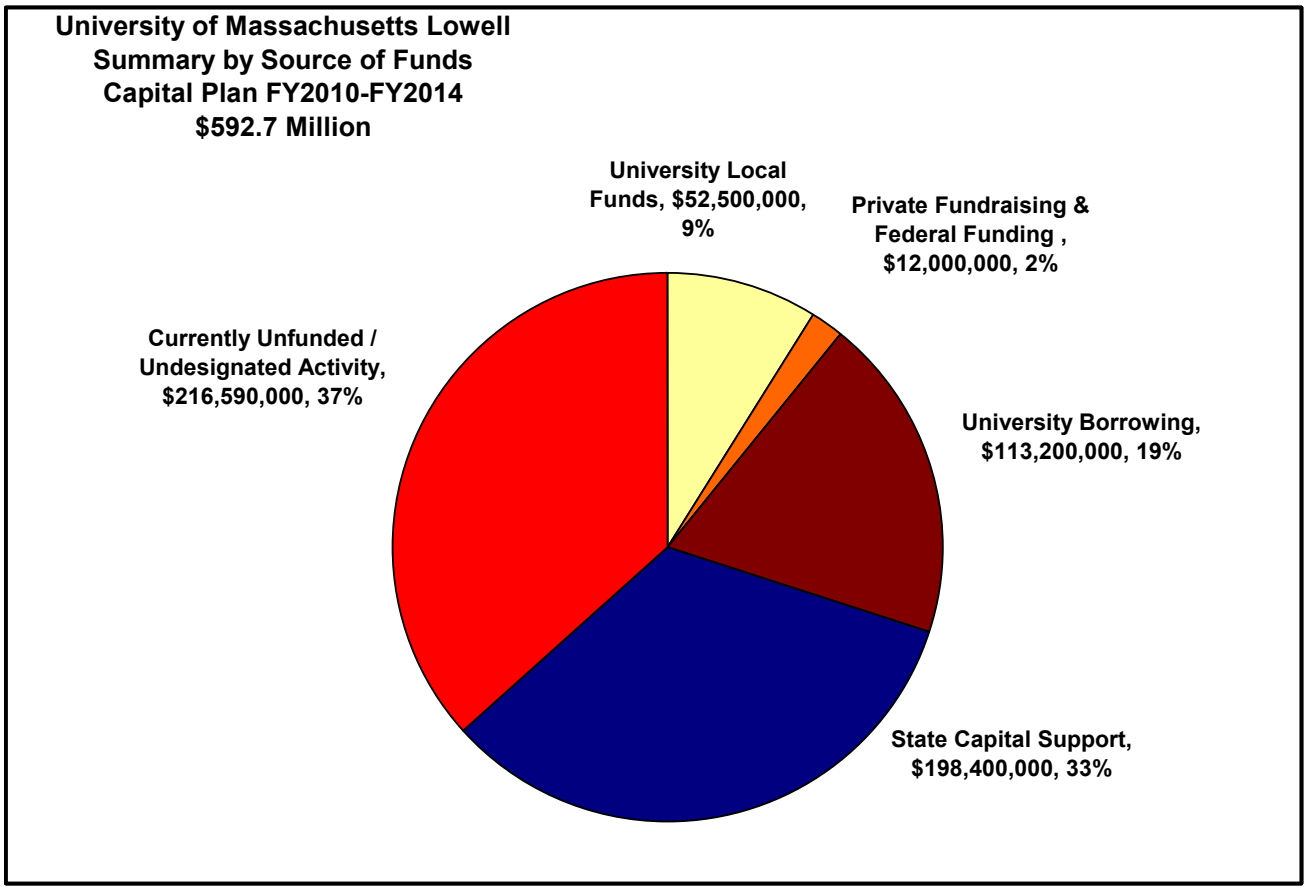
University of Massachusetts FY10 Capital Plan Update
Lowell Campus Projects

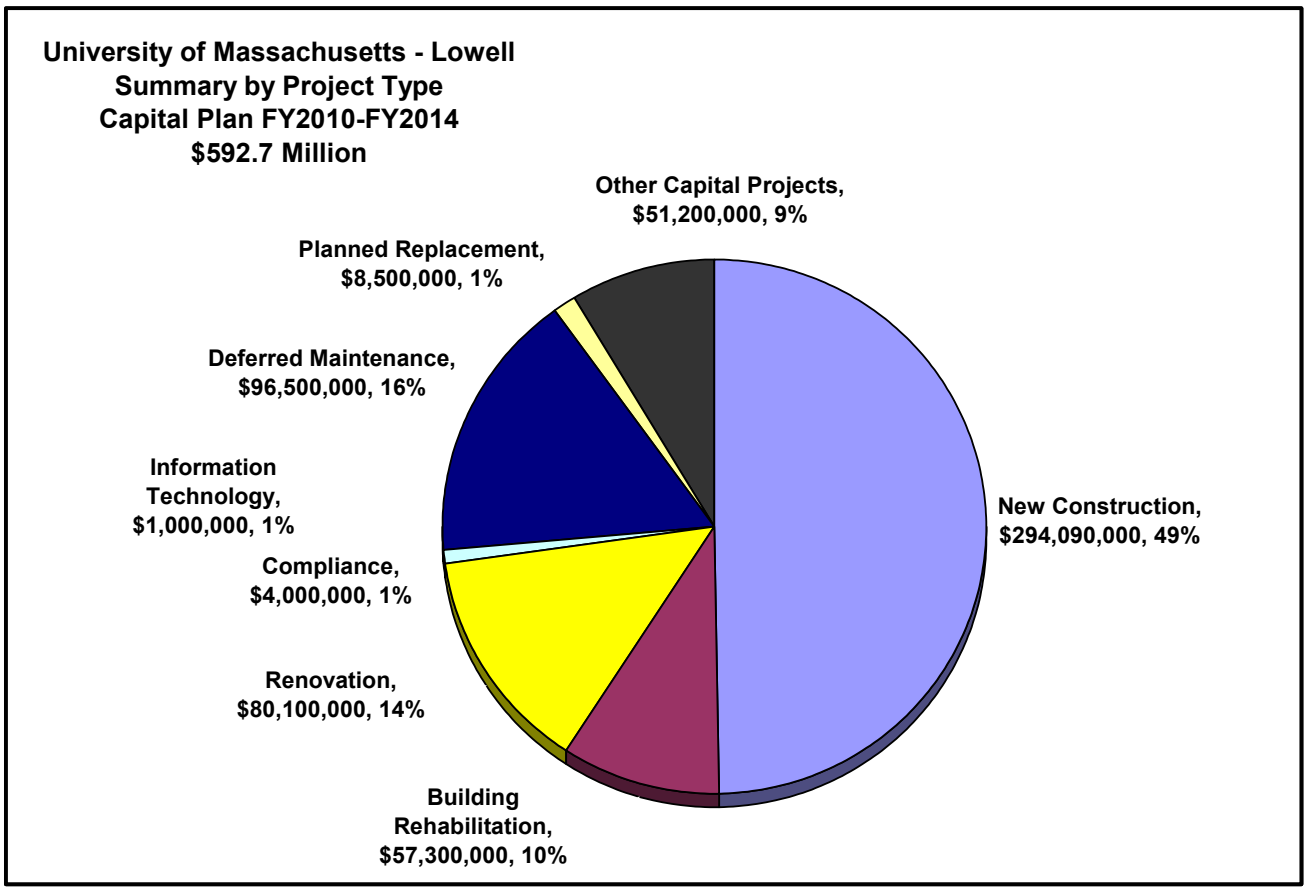
Campus Priority	Campus Project Names	Proj Type	Program Type	Total Project Cost Est. August 2009	Five Year Spending Anticpated FY10-14 Cash Flow
	Designated Projects				
1	ETIC Building	NC	R	$70,000,000	$70,000,000
2	Inn & Conference Center	O	SL	$21,200,000	$21,200,000
3	South Campus Academic Bldg.	NC	TL	$40,000,000	$40,000,000
4	Wannalancit (includes M2D2)	RV	R	$15,500,000	$15,500,000
5	Civic & Athletic Facilities	O	SL	$10,000,000	$10,000,000
6	Property Acquisitions	O	TL	$20,000,000	$20,000,000
7	Energy Services Contract (ESCO)	RV	BI	$40,000,000	$40,000,000
8	Energy Improvements	RV	BI	$10,000,000	$10,000,000
9	Capital renewal/deferred maintenance	DM	TL	$39,300,000	$20,000,000
10	Academic & ongoing modernization	DM	TL	$54,250,000	$20,000,000
11	Compliance	CO	BI	$6,000,000	$4,000,000
12	Net Asset value (NAV) Support	DM	BI	$90,000,000	$30,000,000
13	Residential Hall Renewal Program/Dining & Bookstore Replacement-- 2011	BR	SL	$50,000,000	$30,000,000
14	North Campus Academic Quad Renewal	BR	TL	$11,300,000	$11,300,000
15	North Campus Garage	NC	BI	$15,000,000	$15,000,000
16	East Campus Residence Hall	NC	SL	$50,000,000	$2,000,000
17	800 Additional Residence Hall Beds	NC	SL	$90,000,000	$0
18	Coburn Hall renewal (66 kgsf)	RV	TL	$24,000,000	$14,100,000
19	South Campus Garage	NC	BI	$15,000,000	$1,000,000
20	McGauvran Reconfiguration (42kgsf)	BR	SL	$10,500,000	$1,000,000
21	Technology Infrastructure	IT	BI	$10,000,000	$1,000,000
	SubTotal Designated Projects			***$692,050,000***	***$376,100,000***

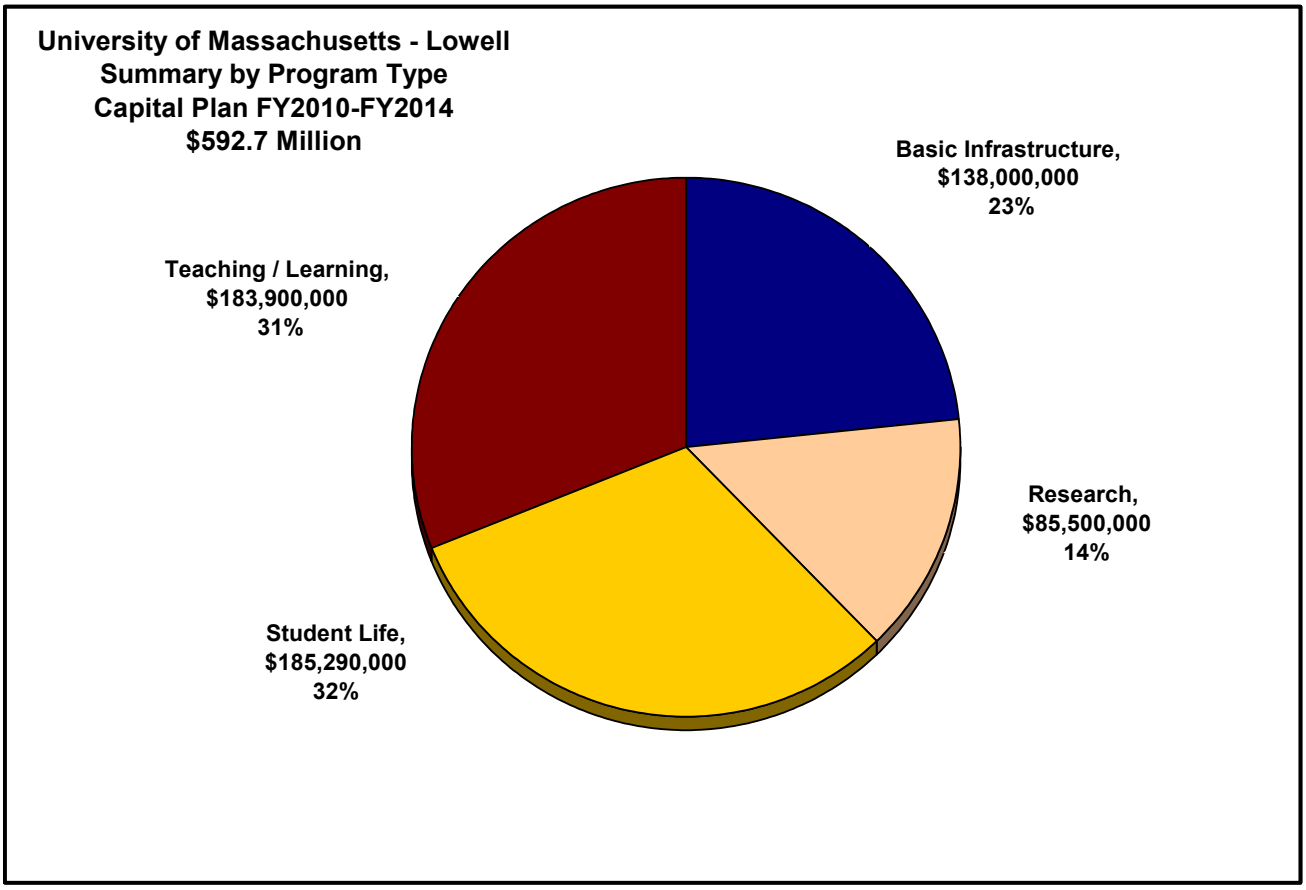
Campus Priority	Campus Project Names	Proj Type	Program Type	Total Project Cost Est. August 2009
	Critical Unfunded Projects			
1	O'Leary Comprehensive renewal (115kgsf)	NC	SL	$37,375,000
2	Ball Hall Comprehensive Renewal (100 kgsf)	NC	SL	$45,500,000
3	Weed Hall Comprehensive renewal (73 kgsf)	NC	SL	$33,215,000
4	New Management Bldg	NC	TL	$50,000,000
5	Allen House Renovations	RV	BI	$500,000
6	Alumni Hall Renovations	DM	BI	$500,000
7	Ames Bldg Renovations	DM	BI	$500,000
8	Costello Gym Renovations	PR	SL	$5,000,000
9	Cumnock Hall Renovations	DM	BI	$1,000,000
10	Dugan Hall Renovations	DM	BI	$1,500,000
11	Durgin Hall Renovations	DM	TL	$2,500,000
12	Engineering Bldg Renovations	DM	TL	$2,500,000
13	Lydon Library Renovations	PR	TL	$3,500,000
14	Olney Hall Renovations	DM	BI	$8,000,000
15	Olsen Hall Renovations	DM	BI	$7,000,000
16	Pinanski Hall Renovations	DM	BI	$3,000,000
	SubTotal Undesignated Projects			***$201,590,000***

Total 5-yr spending incl. Undesignated

Lowell Campus Grand Total FY10-14	***$893,640,000***	***$577,690,000***


University of Massachusetts Lowell
Summary by Source of Funds
Capital Plan FY2010-FY2014
$592.7 Million
University Local Funds, $52,500,000, 9%
Private Fundraising & Federal Funding , $12,000,000, 2%
Currently Unfunded / Undesignated Activity, $216,590,000, 37%
University Borrowing, $113,200,000, 19%
State Capital Support, $198,400,000, 33%


University of Massachusetts - Lowell
Summary by Project Type
Capital Plan FY2010-FY2014
$592.7 Million
Other Capital Projects, $51,200,000, 9%
Planned Replacement, $8,500,000, 1%
Deferred Maintenance, $96,500,000, 16%
Information Technology, $1,000,000, 1%
Compliance, $4,000,000, 1%
Renovation, $80,100,000, 14%
Building Rehabilitation, $57,300,000, 10%
New Construction, $294,090,000, 49%


University of Massachusetts - Lowell
Summary by Program Type
Capital Plan FY2010-FY2014
$592.7 Million
Basic Infrastructure,
$138,000,000
23%
Research,
$85,500,000
14%
Student Life,
$185,290,000
32%
Teaching / Learning,
$183,900,000
31%

Capital Plan Update
FY2010 to 2014
University of Massachusetts Medical School -- Worcester

Introduction

The UMass Medical School 2010 Capital Plan focuses on the need for new construction and the continuing requirement to properly plan and fund deferred maintenance and renewal projects. The principal goal of the plan is to assure the development and sustainment of a campus that can attract and retain top students, faculty and researchers. It is important for the Medical School to continue to recruit nationally and internationally renowned faculty to meet our vision of a nationally recognized institution in medical education, biomedical research and health care.

The capital plan is principally based on Governor Patrick's Life Sciences Bill as well as the Medical School and UMass Memorial Health Care Academic Health Sciences Center strategic plan. These initiatives helped formulate a list of capital projects to support the joint destiny of the school and medical center as we optimize our collective resources to meet the challenges of our missions.

The Life Sciences Bill, signed into law in June 2008 by Governor Patrick, is designed to enhance the state's strengths in the fields of medicine and science and fill gaps in federal funding to ensure the state's ability to support life sciences innovations from idea to product. Over the past year, UMMS undertook a robust planning effort to ensure successful implementation of the state's life sciences vision. The infrastructure portion of this plan includes the construction of The Albert Sherman Center as well as the Stem Cell Bank and International Registry at the Reed Rose Gordon Building on the Shrewsbury Campus.

In addition to the Life Sciences Initiative, UMass Medical School and UMass Memorial Health Care have developed an **Academic Health Sciences Center Strategic Plan**. The plan is driven by an overriding vision of academic health centers to improve the health and health care of their communities and of the larger society in which they reside. Our missions – teaching, research, health care, high technology solutions, continuous innovation in care, and care of the underserved – are a means toward a larger end. Goals include creating new technologies, providing increased reliance on interdisciplinary structures, developing sophisticated knowledge management and enhancing communication capability. Further, we defined these principles into goals that support the execution of the capital plan and the first several priorities on the list, including the approval and funding of the Albert Sherman Center. Other projects include the expansion of the medical school class size initiative and the renovation and expansion of the Biological Safety Level 3 (BSL) laboratory facility, a critical basic and clinical sciences research component.

The **Albert Sherman Center** will be a state-of-the-art biomedical research facility and academic support center. This significant project reflects the momentum generated by the basic and clinical sciences research effort at UMMS over the past two decades and the Medical School's role as the anchor of Worcester's burgeoning life sciences industry.

Through the construction of this 500,000-square-foot center, UMMS will be well positioned to continue the substantial growth of its research enterprise, which has experienced a 134 per cent increase in total research awards from fiscal year 1998 to fiscal year 2009 and now receives more than $200 million in

annual research funding. Moreover, through the development of the Advanced Therapeutics Cluster (ATC), a key programmatic component of the Sherman Center, UMMS will have the resources and venue to translate the pioneering basic science discoveries of its faculty, such as Nobel Laureate Craig Mello, into innovative and effective human therapies.

Although the development of the ATC, consisting of an RNA Institute, a Center for Stem Cell Biology and Regenerative Medicine and a Gene Therapy Center, continues to serve as the catalyst for the Albert Sherman Center , other critical campus needs also will be addressed through this expansion. Specifically, modern educational spaces to accommodate curriculum changes, student-life spaces, and auditorium and conference spaces, as well as parking, power plant and related utility improvements, will be included in the scope of the Sherman Center project.

With the $90 million appropriation from the commonwealth to accelerate this project, UMMS has developed a sound, long-range financial plan to ensure completion of the Sherman Center, support for its operating costs and the overall financial well-being of the Medical School. Taken together, the estimated $400 million shared investment will enhance the ability of the State's public medical school to fuel Worcester County's life sciences economic sector into an era of unprecedented growth and accomplishment by contributing more than $1 billion in economic impact to the Commonwealth of Massachusetts.

The capital plan is substantiated by three key studies: the Campus Master Plan developed by Tsoi Kobus in 2005; a VFA Inc. Facility Condition Assessment completed in 2006 and the van Zelm Engineering, Inc. Power Plant Master Plan completed in 2006.

The **Campus Master Plan** was completed by Tsoi Kobus under a DCAM contract in 2005. The plan provides a phased construction process to meet the needs of the school, hospital and Commonwealth Medicine as these organizations grow. The plan addresses infrastructure demands, enhances the collaborative community and transforms the site image to an academic campus while assuring sustainable design principles, accessibility and off-campus synergies. In addition, the themes present throughout the plan include the ability to adapt to changes in medical education and the medical school's new curriculum, emphasize translational and clinical research, and provide the ability to react to emerging technologies.

VFA completed a **Facility Condition Assessment** in May 2006 and identified more than $70 million in requirements for the Medical School. The list of requirements for the University Campus of UMass Memorial Medical Center totaled $42 million. The condition assessment team inspected installed equipment, surveyed the facility and identified deferred maintenance requirements. Each requirement was documented with detailed cost estimates, photos and narratives and then prioritized. The plan identified more than $19 million in currently critical or potentially critical requirements, all of which should be remedied within the next several years. The largest and most urgently required deferred maintenance project is the replacement of more than 30 air handling units throughout the school. By replacing these units, we will be able to improve reliability and energy efficiency and provide enhanced environmental control of research laboratories, teaching spaces and offices.

UMMS completed a **Power Plant Master Plan** in 2006. The UMMS Power Plant is an integral component of the campus and provides all steam, chilled water, normal power and emergency power to the school and the 400-bed acute care hospital and trauma center. VanZelm, Heywood and Shadford, Inc. performed the study. The recommendations focused initially on short-term reliability and plant redundancy issues, then on the longer-range capacity increases presaged by the Campus Master Plan. The operations and reliability of the Power Plant cannot be overstated, as it is critical in providing reliable services to the

health care, research and education activities on this campus. The study supports a $42 million project to address the short-term and long-term recommendations. The project will add required chiller capacity and redundancy, cooling tower capacity, and additional emergency generation. The project is aligned with Governor Patrick's 2007 Energy Policy in several areas, including the promotion of distributed generation, which improves energy efficiency and reduces greenhouse gas emissions.. The Power Plant expansion project is crucial for this year, as both the new Advanced Center for Clinical Care, Education and Science (ACCES) and the Albert Sherman Center will be fed from the central plant.

UMMS' ambitious **sustainability objectives** are reflected throughout the master plan, focusing on operational effectiveness in addition to project identification, development and execution. The $30 million air handling unit replacement project was included in the Higher Education Bond Bill and we continue to push for the full funding of this project. This project would replace more than 20 antiquated air handling units with reliable new high efficiency units, improving energy utilization and reducing the campus carbon footprint. In addition, the largest opportunity we have on campus to reduce energy and the associated carbon footprint is the co-generation system in the Power Plant. The plant utilizes steam three times as it passes through a topping cycle turbine generator, followed by a second turbine generator before being distributed for heating or spinning a chiller's turbine compressor. The Power Plant provides more than 50 per cent of the electrical power to the campus and as a distributed generation site, saves more than 30 per cent of the typical electrical line loss -- significantly offsetting greenhouse gas emissions. The Power Plant Expansion project is currently designed with a 7500KW gas turbine and heat recovery steam generator. The increased energy efficiency may top 70 per cent, reducing the campus carbon footprint and providing an economical solution to increased energy demands.

The **Advanced Center for Clinical Care, Education and Science (ACCES)** is currently under construction and will be to the location of the Centers of Excellence for Musculoskeletal Disease; Cancer; Diabetes and Endocrinology; and Heart and Vascular Disease. The building also will house a Radiology Center with MRI, CT, PET and DR equipment. In addition, the new Department of Quantitative Health Sciences will be located in this facility. This $115 million 258,000 square- foot building will provide significant new space for medical education, research, ambulatory clinics and campus support. The facility is expected to open in the summer of 2010. ACCES is being designed and constructed to meet the new state energy code and will be LEED certified upon completion.

The 2009 Capital Plan

The Medical School 2009 Capital Plan focuses on the Life Sciences Initiative as its first priority and includes several key projects that meet the goals of the Joint Strategic Plan. The projects that support the strategic plan include the medical school class size increase project, which renovates and expands critical teaching spaces on the campus; the construction of a new data center to meet the growing needs of computational sciences; and the construction of a child care center. There also are critical renewal and deferred maintenance related projects. The need for these projects is substantiated in the Facility Condition Study and the Power Plant Master Plan and includes improvement and replacement of central mechanical and electrical systems. While these projects are not always visible and do not attract attention when functioning well, they are critical to the daily teaching and research operations on the campus, and support sustainability goals with increased energy efficiencies and reduction of greenhouse gas emissions.

Jamaica Plain Campus

The University of Massachusetts Medical School's Jamaica Plain Campus consists of three buildings on approximately ten acres of land. The buildings are multi-tenanted, with the Massachusetts Biologic Laboratories and the Department of Public Health's State Laboratory Institute comprising the major occupants. The buildings range in age from 33 to over 100 years old. Very few capital improvements have been made to the buildings or the site infrastructure. The most pressing problem is the lack of adequate electrical capacity and distribution to support current needs. Beyond the electrical issues are a variety of problems that must be corrected to maintain the integrity of the buildings, meet the needs of the occupants, allow for reliable and efficient operation, and comply with current building codes and industry standards.

The Massachusetts Biologic Laboratories, a part of the Medical School, is an FDA-licensed facility engaged in the manufacture of vaccines and blood plasma products. Continued FDA licensing is contingent upon compliance with current Good Manufacturing Practices (cGMP), a set of industry standards for the operation and maintenance of biologics manufacturing facilities.

The State Laboratory Institute, a Massachusetts Department of Public Health operation housed at the Jamaica Plain campus, is the only laboratory of its kind in the Commonwealth of Massachusetts. The State Lab is responsible for the early detection and testing of potentially serious outbreaks of infectious diseases, such as rabies, HIV, food borne illnesses, H1N1 flu, West Nile Virus and Eastern Equine Encephalitis. Because of its importance to the protection of public health the State Lab would be a key center for activity in the commonwealth in the case of flu pandemic. The $6.9 million **Electrical Service Upgrade Project** and the $3.5 million **HVAC Upgrade Project** are critical to the functionality of these DPH laboratories.

Shriver Center

The University of Massachusetts Medical School's Shriver Center in Waltham consists of two buildings on the grounds of the Fernald School. The Shriver Center conducts research in developmental disabilities in children and adults. The buildings at the Shriver Center are more than 35 years old, and very few capital improvements have been made in the intervening years. A building evaluation was conducted by Hoskins Scott & Partners before the Medical School took control of the facility in 2001, and deficiencies that were serious enough to jeopardize the safe operation of the buildings were addressed at that time. The laboratory building air handling systems were improved to provide adequate ventilation, and the animal facility was brought up to AAALAC and IACUC standards.

Similar to the Jamaica Plain campus, there are a number of issues that affect the integrity of the Shriver Center buildings and the reliability and operating efficiency of the building systems. Building envelope problems continue to be a problem. We have requested more than $1.9 million for improvements to the building roofs, façade and windows. All of the Shriver Center's steam is currently supplied by the Fernald School at no cost; however the Fernald School will be ceasing operations in the next few years and as a consequence, the Medical School will be forced to provide an alternative source of steam. A study conducted by Fay, Spofford and Thorndike, Inc. in 2003 estimated a cost of $2.9 million to construct a power plant to provide steam and chilled water to the site.

WCCC Properties

Worcester City Campus Corporation comprises properties on the Medical School campus, in Shrewsbury, Mattapan and Auburn, and includes office buildings, laboratory facilities and parking garages. In 2008, the South Street property in Shrewsbury was purchased and increased the space inventory by more than 670,000 square feet. The UMass President's Office, Commonwealth Medicine, UMMS Human Resources and Information Services Department are all occupants of this facility.

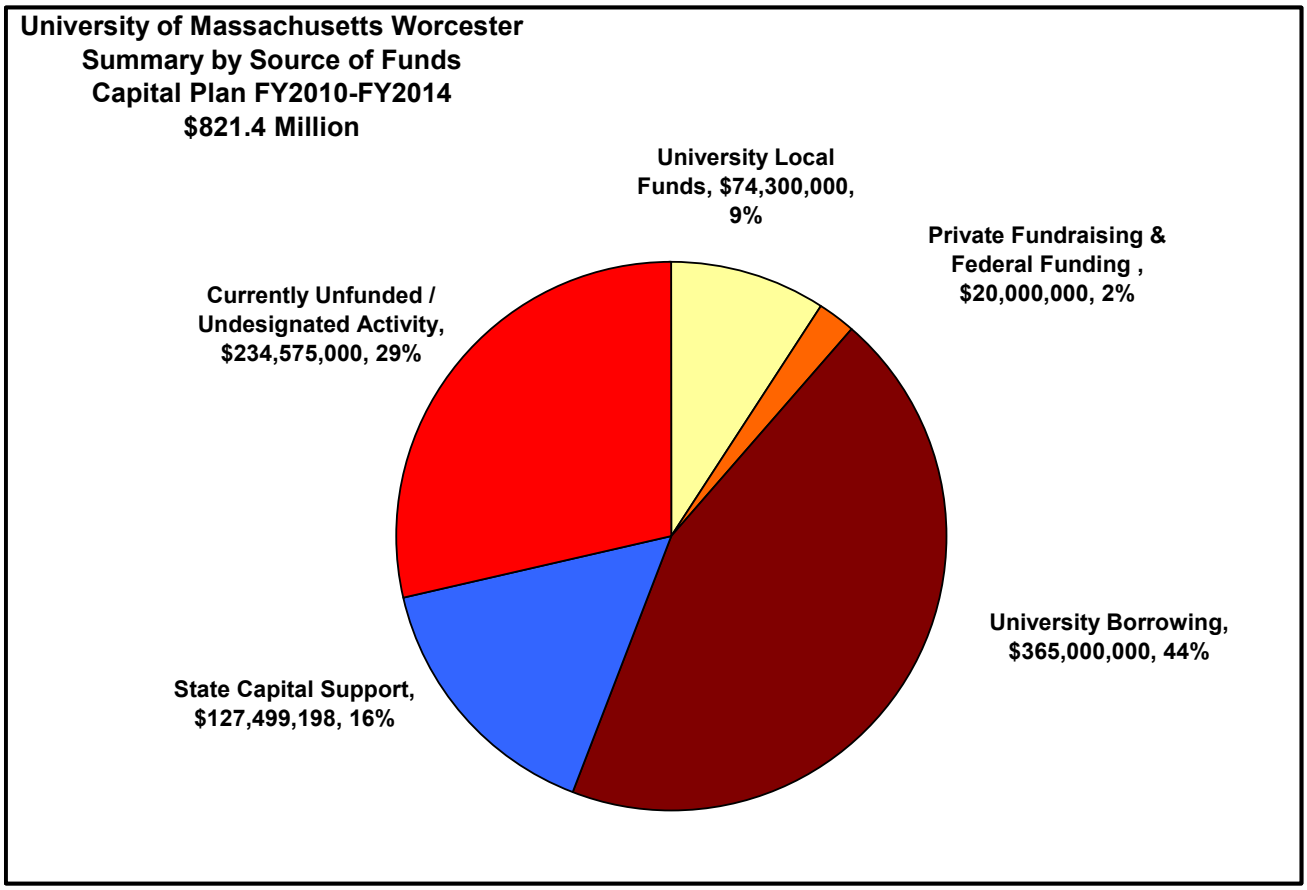
A majority of the capital funds identified in the WCCC plan are intended for Mattapan, where the Massachusetts Biologics Laboratory conducts operations. At the Mattapan site, the R&D and Office Building is currently under construction, and a new Vaccine Production and Warehouse facility is currently in the early planning stages.

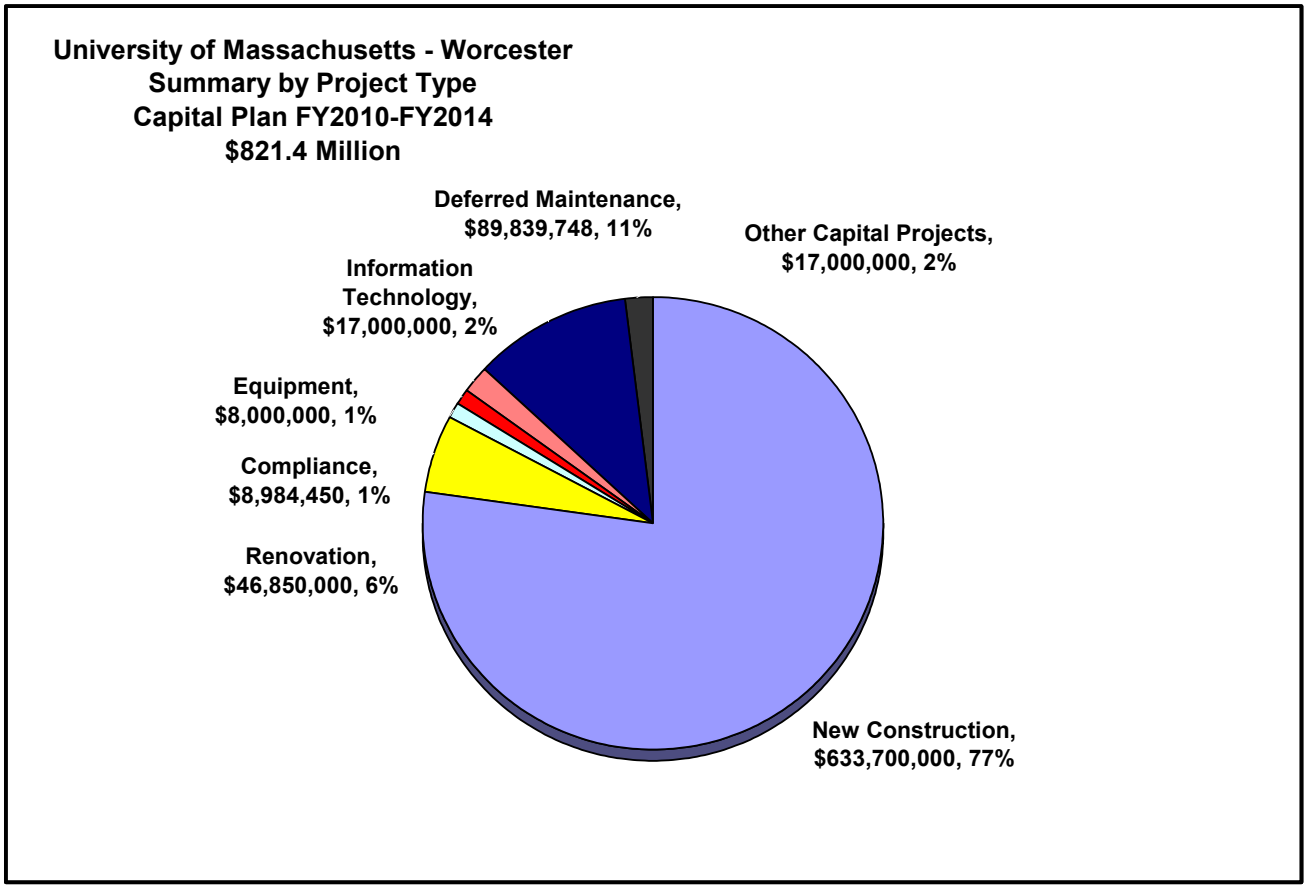
University of Massachusetts FY10 Capital Plan Update
Worcester Campus Projects

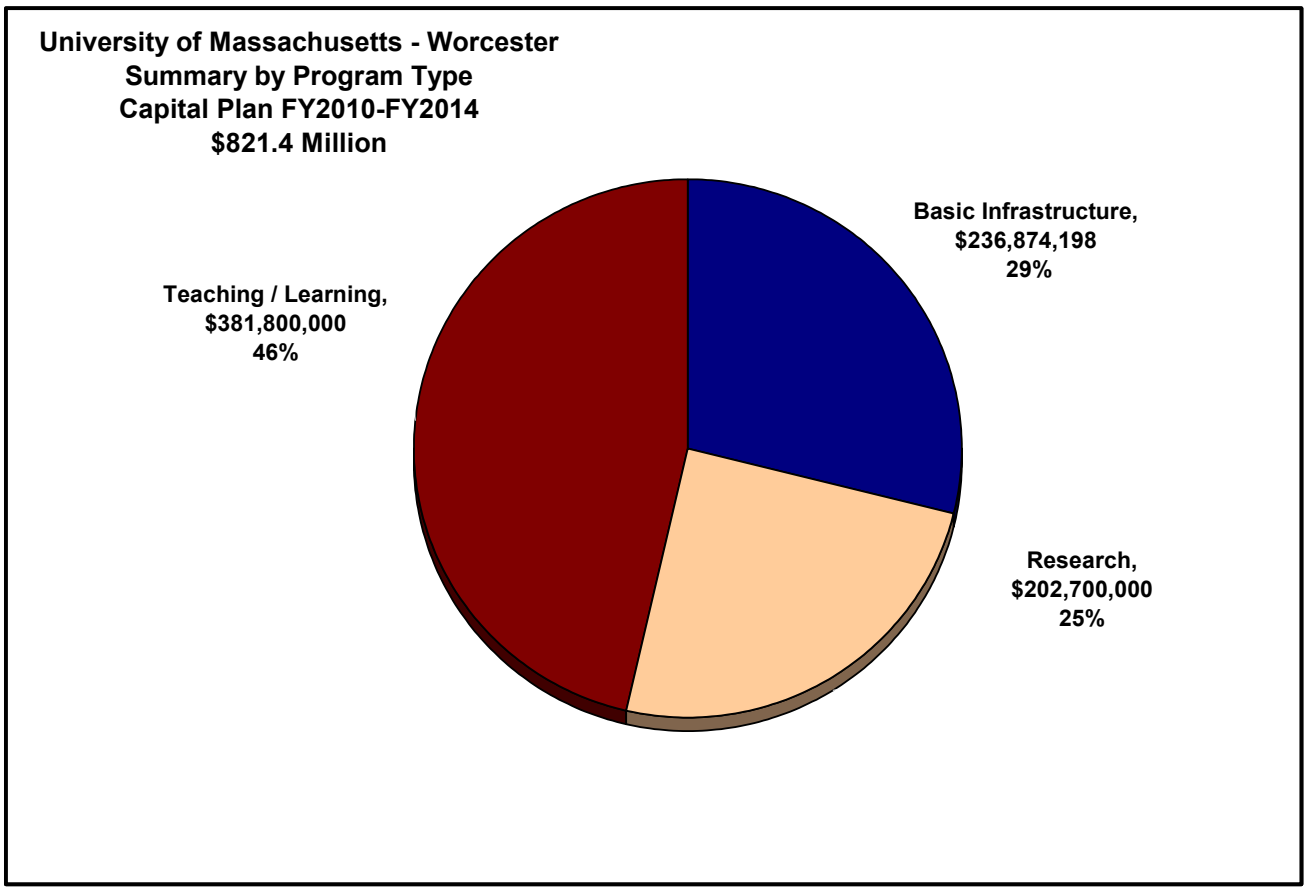
Campus Priority	Campus Project Names	Proj Type	Program Type	Total Project Cost Est. August 2009	Five Year Spending Anticpated FY10-14 Cash Flow
	Designated Projects				
	Worcester Campus Projects				
1	Power Plant Expansion	NC	BI	$42,000,000	$38,000,000
2	Albert Sherman Center (New Science Facility)	NC	TL	$320,000,000	$320,000,000
3	Complete CHW and Steam Loop on Campus	NC	BI	$12,000,000	$4,000,000
4	Construct New NW Parking Garage	NC	BI	$28,000,000	$28,000,000
5	Construct New Data Center	IT	BI	$16,000,000	$10,000,000
6	Class Size Increase Initiative	RV	TL	$8,000,000	$6,000,000
7	Construct Child Care Center	NC	BI	$5,000,000	$5,000,000
8	Advanced Education and Clinical Practice Center	NC	TL	$120,000,000	$35,000,000
9	Construct the ATC Clinical Development Center (cGMP)	NC	BI	$10,000,000	$10,000,000
10	Renovate and Expand BL3 Suite - 7th Floor	RV	R	$3,000,000	$3,000,000
11	School HVAC Upgrades/Replacements	DM	BI	$30,000,000	$5,000,000
12	Power Plant Electrical Room Expansion	CO	BI	$3,500,000	$1,000,000
13	Replace Water Filters	DM	TL	$500,000	$500,000
14	Replace the Acid Neutralization Tanks	DM	R	$500,000	$500,000
15	Replace Domestic Hot Water Heating System	DM	BI	$600,000	$600,000
16	Parking Lots - Main Campus	DM	BI	$800,000	$800,000
17	Parking Garage Repairs	DM	BI	$900,000	$900,000
18	Chair recruits	RV	TL	$6,000,000	$6,000,000
19	Data Center Power Upgrades	DM	BI	$1,000,000	$1,000,000
20	Network Infrastructure	IT	BI	$10,000,000	$7,000,000
21	Faculty Recruits	RV	R	$10,200,000	$7,200,000
22	Departmental equipment purchases	E	R	$10,000,000	$8,000,000
23	BNRI Upgrades	DM	R	$1,000,000	$1,000,000
	Jamaica Plain Campus Projects				
1	Electrical service upgrade	CO	BI	$6,900,000	$6,900,000
2	HVAC & Power Plant Upgrades	DM	BI	$3,450,000	$3,450,000
3	Building & Energy Management Systems	CO	BI	$1,084,450	$1,084,450
4	Architectural, Roofing and Site Upgrades	DM	BI	$2,300,000	$2,300,000
5	Security Improvements	DM	BI	$833,750	$833,750
6	Tower Exhaust Fan Replacement	DM	BI	$862,500	$862,500
7	JP Campus Master Plan Study	DM	BI	$575,000	$575,000
	Shriver Campus Projects				
1	Heating/Chiller Plant (Fernald School Closing)	NC	BI	$3,335,000	$2,900,000
2	Architectural, Façade, Roofing & Site Upgrades	DM	BI	$1,829,677	$1,829,677
3	Electrical System Upgrades	DM	BI	$1,317,624	$1,317,624
4	Piping, Plumbing & Restroom Upgrades	I	BI	$2,534,232	$2,534,232
5	Air Conditioning Upgrades & Retrofits	DM	BI	$711,965	$711,965
	Worcester City Campus Corporation Properties				
1	Purchase BioTech Four, Worcester	O	BI	$17,000,000	$17,000,000
2	MBL- Mattapan R&D and Office Building	NC	R	$69,000,000	$25,000,000
3	MBL- Mattapan New Vaccine Production & Warehouse	NC	R	$35,000,000	$5,000,000
4	South Street Shrewsbury Ren, Phase 3	RV	BI	$7,000,000	$2,000,000
5	South St Deferred Maintenance	DM	BI	$7,500,000	$5,500,000
6	Stem Cell Phase I, Rose Gordon Building	NC	BI	$3,500,000	$3,500,000
7	Chang Renovations	RV	BI	$500,000	$500,000
8	Century Drive - Install Emerg Generator	NC	BI	$800,000	$800,000
9	Century Drive - Rplace Roof Top Units	RV	BI	$700,000	$700,000
10	Misc Renovations WCCC	RV	BI	$3,000,000	$3,000,000
	SubTotal Designated Projects			***$808,734,198***	***$586,799,198***

Campus Priority	Campus Project Names	Proj Type	Program Type	Total Project Cost Est. August 2009
	Critical Unfunded Projects			
1	Roof Replacements	DM	TL	$1,300,000
2	AQA Terminal Box Improvements	DM	R	$3,000,000
3	School Stairwell Fire and Safety Improvements	DM	TL	$2,000,000
4	Construct New Storage Warehouse	NC	BI	$5,000,000
5	Construct New Freezer Farm	RV	BI	$2,000,000
6	Balance of Plant Controls	RV	BI	$2,150,000
7	Renovate Labs to Offices in Basic Wing - Backfill Project	RV	TL	$4,000,000
8	Replace Domestic Water Lines	DM	BI	$1,500,000
9	South Road and Lake Ave Interchange Modifications	DM	BI	$700,000
10	Replace Substations	DM	BI	$9,000,000
11	North Road Pavement, Sidewalks and Lighting	DM	BI	$400,000
12	LP Boiler Re-tubing	DM	BI	$4,000,000
13	PP Governor PLC	RV	BI	$1,000,000
14	Deferred Maintenance List - Priority 2	DM	BI	$4,500,000
15	School Interior Renovations	RV	TL	$4,000,000
16	Medical School Building Retro Commissioning and LEED EB	RV	TL	$3,000,000
17	Steam Chiller 2 Retrofits	DM	BI	$500,000
18	Campus Landscape	NC	BI	$1,500,000
19	Miscellaneous Roadway Projects	DM	BI	$1,000,000
20	Deferred Maintenance List - Priority 3	DM	BI	$30,000,000
21	Master Plan - School Initial Phases	NC	R	$150,000,000
22	Biolab roof replacement	DM	BI	$1,725,000
23	Miscellaneous Projects - Jamaica Plain	RV	BI	$2,300,000
	SubTotal Undesignated Projects			***$234,575,000***

		Total 5-yr spending incl. Undesignated
Worcester Campus Grand Total FY10-14	***$1,043,309,198***	***$821,374,198***


University of Massachusetts Worcester
Summary by Source of Funds
Capital Plan FY2010-FY2014
$821.4 Million
University Local Funds, $74,300,000, 9%
Private Fundraising & Federal Funding , $20,000,000, 2%
Currently Unfunded / Undesignated Activity, $234,575,000, 29%
University Borrowing, $365,000,000, 44%
State Capital Support, $127,499,198, 16%


University of Massachusetts - Worcester
Summary by Project Type
Capital Plan FY2010-FY2014
$821.4 Million
Deferred Maintenance, $89,839,748, 11%
Other Capital Projects, $17,000,000, 2%
Information Technology, $17,000,000, 2%
Equipment, $8,000,000, 1%
Compliance, $8,984,450, 1%
Renovation, $46,850,000, 6%
New Construction, $633,700,000, 77%


University of Massachusetts - Worcester
Summary by Program Type
Capital Plan FY2010-FY2014
$821.4 Million
Basic Infrastructure,
$236,874,198
29%
Research,
$202,700,000
25%
Teaching / Learning,
$381,800,000
46%

Appendix A
List of New Projects Requested for Board of Trustee Approval
FY2010 to 2014 University Capital Plan

Trustee Policy T92-122 requires that all new construction or renovation projects with a total project cost exceeding $1,000,000 dollars shall be approved by the Board of Trustees. The following list includes all new projects proposed for approval by the Board as part of the FY2010-2014 update to the University's Capital Plan. A description of each project is on file in the President's Office and available upon request.

Table 1 Priority #	Project Name	Project Type	Program Type	Cost Estimate as of August 2009
Amherst Campus				
80	Marks Meadow Renovations	RV	TL	$10,000,000
82	Totman renovations for Kinesiology (NIH)	BR	R	$13,500,000
83	Totman addition for Kinesiology (NIH)	NC	R	$16,000,000
84	Morrill I Vivarium (NIH)	RV	R	$6,000,000
85	New Science Building Fit-out	NC	R	$44,000,000
86	Hasbrouck Renovations (NIH)	BR	R	$10,000,000
87	Marcus Upgrade and Relocate Electrical Power	BR	R	$1,400,000
88	LGRC Faculty Renovations (NIH)	BR	R	$11,761,000
U-39	Tennis Court Enclosure	NC	BI	$10,400,000
U-45	Wayfinding and Signage	O	BI	$1,000,000
U-51	Property Acquisitions	O	BI	$2,000,000
U-52	LGRC Window Replacement	RV	BI	$6,000,000
U-53	Coal Yard Decommission	CO	BI	$2,000,000
U-54	Energy Efficiency Equipment Installations	RV	BI	$1,500,000
U-55	Electric Distribution Upgrade	RV	BI	$2,000,000
U-56	Chenoweth Food Science Phase II	RV	R	$2,000,000
U-57	Solar Panels	O	BI	$2,000,000
U-59	Waltham & Glouster renovations	RV	BI	$5,000,000
U-7	Facility Demolitions	O	BI	$20,000,000
	Amherst total			**$166,561,000**
Boston Campus				
BI-02	Replace Primary Electrical Switchgear in the Utility Plant	DM	BI	$2,500,000
M-08	Master Plan Phase I: Purchase of Expansion/Swing Space	O	TL	$25,000,000
	Boston total			**$27,500,000**
Dartmouth Campus				
4	Replace Failed HVAC Systems	DM	BI	$3,500,000
8	Campus Entrance Building	NC	SL	$45,000,000
9	Re-roof Four Oldest Residence Halls	BR	SL	$1,900,000
10	Student Lab Program Enhancements	RV	TL	$4,000,000

		Dartmouth total		**$54,400,000**

Lowell Campus

7	ESCO	RV	BI	$40,000,000
8	Energy Improvements	RV	BI	$10,000,000
9	Capital renewal/deferred maintenance	DM	TL	$39,300,000
10	Academic & ongoing modernization	DM	TL	$54,250,000
11	Compliance	CO	BI	$6,000,000
12	Net Asset value (NAV) Support	DM	BI	$90,000,000
13	Residential Hall Renewal Program/Dining & Bookstore Replacement--2011	DM	SL	$50,000,000
17	800 Additional Residence Hall Beds	NC	SL	$90,000,000
	Lowell total			**$379,550,000**

Worcester Campus

9	Construct the ATC Clinical Development Center (cGMP)	NC	BI	$10,000,000
U - 7	Renovate Labs to Offices in Basic Wing - Backfill Project	RV	TL	$4,000,000
U -16	Medical School Building Retro-Commissioning and LEED EB	RV	TL	$3,000,000
WCCC - 5	South St Deferred Maintenance	DM	BI	$7,500,000
WCCC - 8	Century Drive - Install Emergency Generator	NC	BI	$800,000
WCCC - 9	Century Drive - Replace Roof Top Units	RV	BI	$700,000
	Worcester total			**$26,000,000**
	Total New projects			**$654,011,000**

Appendix B
Change in Estimates of Total Project Cost Greater then 20%
For Projects Previously Approved by the Board of Trustees

As detailed in the attached table, the total cost of University capital projects can change for various reasons, including scope expansion, planning adjustments, revised guidance provided by oversight agencies, or more informed estimates provided by design contractors. In addition, the convergence of rising material and fuel costs is influencing total project costs in the commercial construction industry. Of the total number of capital projects included in this year's University's capital plan update only 7 of the 409 require a change in the total project cost estimate.

Campus Priority #	Project Name	Initial TPC	Revised TPC	% Change	Explanation for Change in Cost
	Boston Campus				
BI-01	Healey Library Fire Protection (Fire Sprinklers, Fire Alarm System, Fire Pumps)	$5,100,000	$7,000,000	37%	The project scope has been expanded to include: 1) the replacement of the existing fire alarm system (original to the construction of the building) with an addressable fire alarm system that will also include smoke detectors, heat detectors, strobe lights and a building-wide emergency address system; and 2) the replacement of the original fire pumps with larger pump units to ensure adequate water flow in standpipes on all floors.
	Dartmouth Campus				
1	Library Renovations	$18,000,000	$44,000,000	144%	The project increased in scope with the addition of the Infill Addition and the larger project triggered a complete code upgrade for the entire building.
2	Biomanufacturing Building	$10,000,000	$15,000,000	50%	The project scope increased by the inclusion of education and business/research incubator capabilities.
7	Energy/Water Savings Project	$4,800,000	$14,560,000	203%	The Favorable bidding environment resulted in the winning Performance Contractor, Noresco, committing to making $40M worth of energy/water conservation investments on campus.
	Medical School				
1	Power Plant Expansion	$35,000,000	$42,000,000	20%	The original scope of this project was based on the 2007 Power Plant Master plan study and assumed a planned additional load profile based on construction schedules. The number, size and purpose of the planned buildings have increased therefore increasing the load profile and size of this expansion project. In addition, the selection of a gas turbine over a steam drive turbine generator will minimize green house gas emissions and provide an accelerated economic payback.
6	Class Size Increase	$4,000,000	$8,000,000	100%	At the time of the original development of this project, all programming had not been completed. Additional programming with the users and a medical education curriculum change has increased the size of the required renovations and added a large information technology and audio visual component to this project.
WCCC-2	Mattapan, R&D and Office Building	$50,000,000	$69,000,000	38%	Most of the Massachusetts Biologic Laboratories (MBL) functions are moving to new facilities on a 15.3-acre campus in the Mattapan section of Boston. The expanded facilities will allow MBL to continue filling its own products as well as offer this unique resource to private and public entities.