University of Michigan-Flint

Comprehensive 5-Year Capital Outlay Plan

FY 2014

Submitted November 2012
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PLAN OVERVIEW

This comprehensive 5-year plan updates last year’s submission and adjusts estimated project costs and program priorities as appropriate. As we look towards the future, the University requests consideration of its top priority request: **To Expand and Renovate William S. White Building (WSW) ($40.7 million)**. This priority request is described in more detail later in this 5-year plan.

**Deferred Maintenance/Capital Renewal**

This year’s projected 10-year $37.8 million deferred maintenance (capital renewal) plan is comparable to last year’s $37.7 million projection, primarily because of the combination of the University’s ability to complete a number of critical projects in the deferred maintenance backlog and continued campus growth. Several deferred projects have been recently completed including the University Center roof replacement, University Pavilion cooling tower replacement, and the Thompson Library Lighting upgrade. The combined total cost of these projects is approximately $1,000,000. During FY2012, two of the University’s larger capital projects began construction activity that will continue through FY2013: the Central Energy Plant (CEP) boiler replacement and Northbank Center elevator replacement project. These projects are expected to total a combined $4.6 million.

In addition to the new roof noted above, a number of critical projects were completed during FY2011-12, including, 1) replacement of the fire alarm system at the Hubbard Building, significantly enhancing the integrity of the system; 2) two aging and unreliable rooftop heating units were replaced at the University Pavilion, 3) outdoor lighting in Parking Lot A and the student plaza between the University Center and French Hall Buildings was upgraded to LED lighting, significantly improving energy efficiency, light levels and safety; 4) the installation of variable speed drive (VSD) motors on chilled water pumps with three more facilities upgraded to this technology; and, 5) extensive repairs to the outside seating areas between the Thompson Library and French Hall. Many of the above critical capital improvements have resulted in better use of natural resources by reducing energy consumption.

Table 2, Deferred Maintenance (Capital Renewal) Summary on page 16, indicates that the University of Michigan-Flint must invest on average $3.78 million/year over the next 10 years to maintain its buildings and infrastructure in good working order, as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2013</td>
<td>$3.5 million</td>
</tr>
<tr>
<td>FY2013</td>
<td>$9.3 million</td>
</tr>
<tr>
<td>FY2014-18</td>
<td>$11.5 million</td>
</tr>
<tr>
<td>FY2019-23</td>
<td>$12.8 million</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$37.8 million</strong></td>
</tr>
</tbody>
</table>

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1
This year, FY2013, various non-critical issues have now become more critical. This is especially true with regard to the condition of Mill Street Parking Ramp, which is slated for major repairs during the spring of 2013. This project is in addition to those identified in the FY2013 Capital Outlay Plan including MSB renovations, CEP boilers and NBC elevator replacement, all of which have advanced significantly in the past year and will continue to be high priorities throughout this year. These projects are also in addition to regular ongoing preventive annual maintenance/repair costs, such as other annual parking structure maintenance and restoration, routine preventative mechanical/electrical equipment maintenance, and roofing inspection, assessments and repair.

With energy and utility costs expected to increase over time, and greater awareness of environmental issues, the University is aggressively pursuing energy conservation/efficiency and sustainability with a strong focus on reducing its carbon footprint via its Go Blue! Live Greener… campus-wide campaign. In this regard, the University made significant strides during FY2012 both with respect to the campus and to the community. Related to the former, the University recently (during FY2011) embarked on a program to perform focused building/energy assessments across the campus. To date, four building assessments and the recommended building system improvements have been completed, with plans being developed to continue the assessment process for two additional buildings this year. On the community front, the University continues to strengthen its commitment to the green economy, energy and the environment through its participation with a regional consortium referred to as E3 Innovation Network, including representation on the E3 Advisory Committee. Both initiatives are described in greater depth later in this 5-year plan.

In addition to these broader-scale initiatives, the University continues to make energy efficiency upgrades across the campus. In addition to the campus walkway lighting upgrade, the Thompson Library’s lighting upgrade, and installation of the VFDs mentioned earlier, the University has replaced ‘shell in tube’ inefficient water heaters in the Recreation and University Center Buildings with high efficiency instantaneous water heaters. Several more VFDs have been added to building systems and pumps. An energy management upgrade is underway to improve the accuracy of metering and controls. Control upgrades have been completed on the CEP boilers and the University Pavilion chillers, which have yielded increased output with less maintenance and reduced natural gas and electrical consumption.

The French Hall Capital Outlay project addressed many of the critical items in French Hall. In addition, the 4th floor French Hall offices were recently renovated to address various surface issues (carpet, paint, etc.) However, there are still mechanical issues in the building, which were not part of the outlay project and remain as deferred maintenance items to be addressed as funding becomes available.

The University of Michigan-Flint looks forward to continuing its partnership with the State of Michigan to meet the educational needs of its students, the community and the region.

**Academic Initiatives**

Some innovative academic initiatives underway at the University of Michigan – Flint include:
• **Genesee Early College (GEC)**
The Genesee Early College opened its doors in fall 2007. This unique new high school alternative program run by the Genesee Intermediate School District (GISD) resides in the William S. White Building on the campus of the University of Michigan-Flint. It is the state’s first early college high school that prepares students for health careers on the campus of a major [tier 1] university.

GEC is a fully operational high school, serving the needs of Genesee County area students interested in pursuing academic and professional careers in the health professions and related fields. Students attending this five-year program earn their high school diploma (awarded by the Genesee Intermediate School District) as well as up to 60 transferable credits towards their undergraduate degrees, and engage in valuable experiential learning and internship opportunities in their areas of interest. It is anticipated that 250 students will enroll by Fall 2016. Currently 145 high school students attend the early college.

• **Master of Public Administration**
This innovative WebPlus Weekend/Online Program in Educational Administration is designed to provide a high-quality experience to full-time, working educators. A unique blend of face-to-face interaction and convenient online coursework provides teachers, administrators, and aspiring administrators the tools and concepts necessary for successful administration and an informed perspective on the range of problems confronting K-12 education. After completion of the two-year, 39-credit hour program, students are awarded a Master of Public Administration from the University of Michigan’s nationally recognized Horace H. Rackham School of Graduate Studies. The MPA concentration in Educational Administration is approved by the Michigan Department of Education for Principal Preparation.

• **RN/BSN Online Program**
This innovative online program is designed for working registered nurses who wish to obtain their bachelor’s degree. The instruction for this degree program is delivered completely online. Students select a few on-campus sessions for presentations and assessment.

• **The Master of Arts in English Language and Literature**
This degree program is offered through the College of Arts and Sciences at UM-Flint. It has a flexible curriculum and is offered as a part-time program, with classes in a variety of traditional, online, and mixed-mode formats with meetings during evening hours and weekends. It is designed to provide convenience and flexibility to working professionals.

• **Doctorate of Physical Therapy**
This program replaced the Master in Physical Therapy with essentially no increase in annual operating expenses.

• **Doctor of Nursing Practice (DNP)**
The University of Michigan-Flint’s School of Health Professions and Studies offers the Doctor of Nursing Practice (DNP), which provides the skills necessary for advanced
nursing practice in primary health care. This part-time program is taught in a distance-learning (online) format with minimal campus visits required (approximately once per year). It is available in two degree tracks: BSN to DNP, and MSN to DNP.

- **Post-Master’s Program – Education Specialist**
  The Education Specialist degree is a post-Master’s program designed to prepare in-service teachers and educational leaders to assume greater professional roles in their building and/or in administration and supervision. The program is designed for educators seeking to pursue a post-master's experience, but not yet a doctorate. The emphasis is on applied learning and preparation for executive leadership assignments. The program includes 30 credit hours over 18 months in a cohort-structure. The format is a unique blend of online class-work, coupled with on-campus classes one Saturday per month. A full cohort began the program in fall 2010.

- **Master of Arts in Technology in Education**
  The courses in this degree program are almost entirely offered in a mixed-mode or online format for the convenience of students throughout our region. The program is intended primarily for teachers who wish to maximize the use of classroom technology to increase student academic performance. Beginning May 2007 the School of Education and Human Services began offering an additional format for the Technology in Education M.A. degree program. In this Global Program, students never actually have to set foot on campus: half their credits are earned online and half during two intensive summer residencies at the John Knox Center in Geneva, Switzerland. Click [here](#) for additional information regarding this exciting program.

- **NetPlus! MBA Program**
  This innovative mixed-mode program, which combines intensive online learning with four campus visits each semester, has received national recognition as one of the best online graduate programs in the United States, offering opportunity to specialize in one of seven concentrations areas in Accounting, Finance, Healthcare, International Business, Lean Manufacturing, Marketing and Organizational Leadership.

- **Community One**
  Community One, a think tank for the City of Flint, was created as a cooperative venture between the School of Management and the regional members of the Michigan Minority Business Development Council (MMBDC). Students and faculty provide research and consulting to local business firms. Community One also received the Government and Education Award from the MMBDC at their 26th annual awards dinner.

- **Michigan Family Business Center**
  The School of Management has started the Michigan Family Business Center, which provides educational seminars and insight to regional family businesses and closely-held firms.
Graduate Program Enrollment Growth
For the eighth consecutive year graduate enrollment at the University of Michigan-Flint has increased, with graduate credit hours increasing 3.5% in Fall 2012.

SECTION I --- MISSION STATEMENT AND VISION, STRATEGIC PLAN AND ACCREDITATION

Mission Statement:
The University of Michigan-Flint is a comprehensive urban university of diverse learners and scholars committed to advancing our local and global communities. In the University of Michigan tradition, we value excellence in teaching, learning and scholarship; student centeredness; and engaged Citizenship. Through personal attention and dedicated faculty and staff, our students become leaders and best in their fields, professions and communities.

Vision:
Engaging Minds, Preparing Leaders through Academic Excellence, Student Centeredness, and Engaged Citizenship

Strategic Plan:
A key goal outlined in the University of Michigan-Flint’s earlier 2005-2010 strategic planning document was planned strategic enrollment growth to 8,000 students by 2010. In aggressively pursuing this strategic imperative while at the same time maintaining quality in teaching and scholarship, fall 2010 enrollment increased 4.6% to 8,138 students, the most students ever to attend the University of Michigan-Flint until Fall 2012 when 8,289 students enrolled. Growth over the past several years has come from new and innovative academic programming in the health sciences and graduate programs, as well as a strong recruiting focus with veterans and international students.

The University’s 2011-2016 Strategic Plan calls for increasing enrollment to 10,000 students over the next several years, including on-campus as well as online and satellite campus enrollment. Academic programming focus over the next five years will include STEM and health sciences, business, new graduate programs and continued emphasis on recruiting military veterans and international students. Click here for more strategic plan details.

Campus Master Plan
The University of Michigan-Flint retained the services of Sasaki and Associates to update its 2003 campus master plan. The Sasaki group completed a 2011 master plan update with a focus on facility-building-classroom utilization, Murchie Science Building renovation/expansion, signage, parking and a walkable pedestrian-safe campus. Completion of the campus master plan was coordinated with the completion of the University’s 2011-2016 Strategic Plan update, referenced above in this document. Further detail regarding the 2011 Campus Master Plan can be referenced here.

Accreditation
The Higher Learning Commission (HLC) of the North Central Association of Colleges and Schools is the regional accrediting body for the University of Michigan–Flint. Our most recent
A comprehensive site visit was October, 2009. As a result of this site visit, the University of Michigan-Flint received certification/accreditation through 2019.

SECTION II. ---INSTRUCTIONAL PROGRAMMING AND SUPPORT FOR COMMUNITY ACTIVITIES

_Philosophy: Excellence in teaching, learning and scholarship; student-centeredness; and engaged citizenship with the community..._

University of Michigan-Flint strives to achieve a supportive and nurturing campus climate where the individual is valued, creativity is rewarded, and teamwork and collaboration are evident throughout the learning environment. We are committed to providing a physical learning environment that supports and enhances the educational experience with a focus on the health and safety and well-being of the campus community and its visitors.

At University of Michigan-Flint, the student is the center of attention and teaching, learning and scholarship are highly valued. Individual growth and intellectual development are encouraged through close and often informal association between faculty and students. This close relationship is reinforced by a learning environment that encourages small classes and frequent student faculty interactions. UM-Flint expects that administration, faculty, and staff will excel in their respective roles to provide our diverse student population the necessary guidance, support, and encouragement to develop and achieve their academic goals.

In addition to traditional academic activities for students, the University of Michigan Flint places great emphasis on engaged citizenship, one of three pillars that support the mission of the University. The University values outreach as a pragmatic and scholarly endeavor, one that creates useful results for communities, but also adds to knowledge in a scholarly manner. In recognition of this symbiotic relationship, the University and community engage in mutually beneficial partnerships. These partnerships are evident, in part, through applied research, service learning, co-sponsorship of events, and shared resources. Click [here](#) for more details regarding University’s community outreach and engagement efforts.

**Extended Learning and Online Education**

The University of Michigan-Flint’s 2011-2016 Strategic Plan calls for 13 percent of all undergraduate students to be fully online students by the end of 2016. This will entail developing more fully online programs at the undergraduate level. Currently, although enrollments in online courses are robust, they tend to be in individual courses at the undergraduate level or enrollments in fully online graduate programs.

The Office of Extended Learning (OEL) promotes development of fully online programs and for 2012-13 and beyond, has committed to supporting:
- A proposed online master’s program in English
- An online Master of Science in Nursing degree.
Current online and hybrid programs offered by UM-Flint:

- RN / BSN Online Program
- Africana Studies Certificate
- Bachelor of Applied Science (BAS)
- Bachelor of Business Administration (BBA)
- Education Specialist (EdS)
- Graduate Certificate in Business
- Master of Arts (MA) in Education -- Technology in Education
- Master of Arts (MA) in Education -- Technology in Education Global Program
- Master of Science (MS) in Computer Science and Information Systems
- NetPlus! Master of Business Administration (MBA)
- WebPlus! Master of Public Administration (MPA) — Education Administration
- Doctor of Nursing Practice (DNP)
- Transitional Doctor of Physical Therapy (t-DPT)
- Doctor of Anesthesia Practice DrAP

**Technology Investments to Support Online Teaching and Learning**

- Expanded learning management system technology, updating to latest version of the Blackboard learning management system.
- Increased high-speed storage for both production and backup systems.
- Launched a campus-wide course evaluation software program. officially that year and we paid the P/O.
- Extended help desk support (services and hours).
- Installed lockdown browser for online testing purposes.
- Purchased laptop carts and laptops for faculty training purposes.
- Have begun development of an off-site disaster recovery system.

**Enrollment for Online Programming**

Enrollments in online courses hit a fall 2012 record of 5,308, an increase of 11.6% over fall 2011. There were also 1,150 mixed-mode (hybrid) enrollments, down 8.2% from fall 2011.
Students and faculty are supported by the Office of Extended Learning (OEL), which operates a helpdesk dedicated to users of the learning management system and distance learning technology. Staffing includes 13 FTEs and four part-time, temporary positions; four FTE are dedicated to instructional design and assisting faculty in course development.

For the 2011-12 academic year, there were:

- 14,607 individual online course enrollments (12.6 percent increase over 2010-11)
- 617 online course sections (15.8 percent increase)
- 3,530 mixed-mode enrollments (11.4 percent increase)
- 180 mixed-mode courses (9.8 percent increase)
- 187 faculty taught at least one online course (13 percent increase)
- 75 faculty taught at least one mixed-mode (hybrid) course (39 percent increase)

**Satellite Campuses**

To enhance opportunities for Michigan residents to obtain a University of Michigan degree, the University of Michigan-Flint has also expanded its satellite programs.

- Lansing Community College University Center, Lansing, Michigan—RN-to-BSN and BS in health care administration degrees. Both programs are offered in mixed-mode format.
  - In 2011-12, there were 301 individual course enrollments, an increase of 45.7 percent.
- St. Clair County University Center, Port Huron, Michigan—RN-to-BSN and Bachelor of Arts in psychology
  - In 2011-12, there were 229 individual course enrollments, up 56.8 percent.
- Wayne County Community College District, Harper Woods, Michigan—RN-to-BSN
  - New in winter 2011, there 174 individual course enrollments in 2011-12.
- Alpena Community College, Alpena, Michigan—RN-to-BSN
  - First courses offered fall 2012 with 15 course enrollments.
Academic Program Offerings
The University of Michigan-Flint offers a variety of liberal arts, pre-professional and professional academic programs.

The College of Arts and Sciences (CAS)
CAS offers over 40 academic programs, which lead to degrees including the Bachelor of Arts (B.A.), Bachelor of Science (B.S.), Bachelor of Science in Computer Information Systems (B.S.C.I.S), Bachelor of Interdisciplinary Studies (B.I.S.), Bachelor of Applied Sciences (B.A.S.), Bachelor of Music Education (B.M.E.), and Bachelor of Fine Arts (B.F.A.). The College’s newest undergraduate program is a B.A. in journalism. In conjunction with the Horace H. Rackham School of Graduate Studies at the University of Michigan, CAS offers the Master of Public Administration (M.P.A.) and Master of Liberal Studies in American Culture (M.L.S.) degrees. In the past five years, CAS has more than doubled its number of graduate programs, and nearly quadrupled graduate enrollment. In addition to its Rackham programs it offers masters degrees in Biology, Computer Science and Computer information Systems, Social Sciences, English Language and Literature, has initiated (fall 2008) a BS/MS in Biochemistry, and has a doctorate in Clinical Psychology in development.

The School of Education and Human Services (SEHS)
SEHS offers programs leading to Bachelor of Science in Education and the Bachelor of Social Work. The Master of Arts in Education degree accepts students with a baccalaureate degree in a content area but no teaching certificate. In addition, programs are offered to prepare students for the State of Michigan certification in elementary and secondary teaching. In response to the needs of our community, the Education department has recently established three new concentrations within the Master of Arts in Education: Education Specialist, Special Education and Technology Education.

The School of Management (SOM)
SOM offers six concentration programs, all leading to the Bachelor of Business Administration (B.B.A.) degree: General Business, Accounting, Finance, Marketing, Operations Management, and Organizational Behavior and Human Resources Management. The school also offers programs leading to the Master of Business Administration (M.B.A.) degree, and a joint B.B.A./M.B.A. degree. In addition to the traditional MBA degree, a NetPlus! M.B.A. uses online course delivery and brings students to campus for several weekends.

The School of Health Professions and Studies (SHPS)
SHPS offers undergraduate academic programs leading to the Bachelor of Science in Nursing, Radiation Therapy, Medical Technology, Health Education, Health Sciences, and Health Administration. Master of Science degrees in Anesthesia, Nursing, and Health Education are also offered. In conjunction with the Master of Public Administration program, the school offers a concentration in Health Care Administration. The School of Health Professions and Studies has teamed up with the School of Management to offer a NetPlus! MBA Program concentration in
the area of Health Care Management. The Doctorate of Physical Therapy is now offered and has replaced the Master of Physical Therapy.

**Honors Program**
The University of Michigan-Flint also offers an honors program leading to honors degrees in 30 concentration areas. The Honors Scholar Program is unusual in that it offers students partial tuition support and requires that the student conduct research at an off campus site (preferably abroad). The off campus research is supported by a $3,000 grant to each student. The honors program has not only contributed to the progress of these students, but has also enhanced the intellectual life of the University through its emphasis on academic achievement and research for undergraduates.

**Degrees Awarded**
During the 2011-2012 academic year the University of Michigan-Flint awarded a total of 1,490 degrees: 1,075 undergraduate degrees; 370 graduate degrees plus 36 DPT degrees and 9 DPT Post Professional Certificates compared to 918 undergraduate, 349 graduate, and 45 DPT degrees and certificates, respectively, the previous academic year.

**Support for Community Activities**
The University offers use of its facilities for a wide variety of community events and celebrations.

SECTION III. --- STAFFING, ENROLLMENT, STUDENT PROFILE AND CLASS SIZE AND ALUMNI

Staffing
In Fall 2011, UM-Flint employed 1,060 faculty (530) and staff (530) including 278 full-time faculty, 252 part-time faculty, 431 full-time staff and 99 part-time staff.

Enrollment

Fall 2012 student enrollment continued to increase, up .33% overall, with undergraduate enrollment up .36% and graduate enrollment up .15%, for a Total Fall 2012 enrollment of 8,289.

As one of several strategies to increase student enrollment the University began offering an on-campus residential option for 300+ students beginning Fall 2008, with full capacity reached each year. We believe that student housing has had a beneficial impact on both the campus and downtown Flint’s economic re-development. Please refer to Section V, Planned or Considered Major Projects, Priority 7, for more details regarding student housing.

Internationalizing the Campus
Nine years ago there were fewer than 25 international students attending the University of Michigan-Flint. Over the past several years the University’s leadership and faculty established many partnerships with multiple international institutions, including universities and organizations from different regions of the world. As of Fall 2012, there are 348 international students studying at the University, making up 4.2% of the entire student body. The countries represented have increased from 35 countries to 42. Some of the countries represented include: Saudi Arabia (111), China (87), India (27), Nigeria (23), Canada (17), South Korea (13), Croatia (4), and Sweden (2). Also contributing to the internationalization of our campus is student participation in faculty-led, exchange, and 3rd party provider study abroad programs, all of which have had steady increases in enrollment over the past several years.

Student Profile and Class Size
In Fall 2012, total full and part-time enrollment numbered 8,289 (6,984 undergraduate and 1,305 graduate). Sixty-one percent of UM-Flint students are female. In Fall 2012, 20.9% of all students, graduate and undergraduate, self-identified as minorities, including African Americans (12.0%), Hispanics (3.7%), Asians (1.7%), Native Americans (0.7%), Hawaiian or Pacific Islander (0.1%), and Two or More Races (2.7%). Seventy percent (70.1%) of all UM-Flint students self-identified as White, and 4.2% were Non-Resident Aliens. Nearly five percent (4.8%) of all students declined to self-identify.
In FY 2011-12, the average overall class size was 23 students, with undergraduate class size nearly 24 students and graduate class size 17, thereby allowing UM-Flint students a more personalized education.

 Alumni
Since 1956, the University of Michigan-Flint has graduated over 32,000 students. The great majority of these alumni (about 80 percent) have chosen to continue to live, work, and pay taxes in the State of Michigan. Around 18,000 University of Michigan-Flint graduates reside in Genesee and the contiguous six counties.

SECTION IV. ---FACILITY ASSESSMENT, DEFERRED MAINTENANCE, ENERGY CONSERVATION AND SUSTAINABILITY, CLASSROOM UTILIZATION AND DEBT

General
The University is located in the heart of downtown Flint and has a positive physical presence and visual appearance in the community. "UM-Flint sets a standard for the City of Flint in maintaining its space; it is a bright spot in downtown Flint" (Source: Community discussion group); and “you know, the University of Michigan-Flint is pound-for-pound one of the prettiest campuses I’ve seen.” (Source: Andrew Heller Column, the Flint Journal). The campus presents an environment characterized by an extremely attractive appearance, well maintained grounds, newer campus buildings, and the Flint River running through its center. UM-Flint has been fortunate in the support it has received from the State of Michigan, particularly for capital projects. In addition, the campus has been successful in securing funds through individual contributions and private organizations during several capital campaign efforts. The C. S. Mott Foundation has been a significant benefactor to the University over the years, providing support for land acquisition and funding for capital projects and various consulting reports. With the strong support of the City of Flint and the C.S. Mott Foundation, the University has been able to expand the campus and its facilities.

In November 1999 construction began on the 177,400 sq. ft. William S. White Building, funded through the State Capital Outlay process and the C. S. Mott Foundation. In late February of 2002, the University of Michigan-Flint accepted possession of the William S. White Building. This mixed-use building houses the School of Health Professions and Studies, Early Childhood Development and the Urban Health and Wellness Centers, Genesee Early College, and Department of Communication and Visual Arts. The recent relocation of the School of Management (SOM) from this building to Riverfront Center (a leased facility located on S. Saginaw Street) has freed up space. This added space has created a strategic opportunity for the School of Health Professionals and Studies (SHPS). SHPS has been experiencing significant enrollment and programmatic growth in recent years and will benefit from expanding into the vacated SOM space.

2012 Facility Condition Index (FCI =12.4 or Fair Condition)
In attempting to provide a context for the approximate condition of facilities on the University of Michigan-Flint Campus we have applied the Facility Condition Index (FCI), a model which was presented several years ago at a NACUBO Seminar titled: Financial Planning in an Institutional Setting. In this model, FCI=ADM/CRV*100, where ADM=Accumulated Deferred Maintenance and CRV=Current Replacement Value. Using this model, UM-Flint’s 2012 FCI is 12.45 =
When this number, 12.45, is compared with the Facility Condition Index’s (FCI’s) ratings: GOOD <5; FAIR 5-15; and POOR >15, a 12.45 rating indicates that the UM-Flint facilities are only in FAIR condition. Facilities and Operations’ goal is to obtain a “GOOD” rating by 2023; however, this will require an immediate commitment of $3.78 million annually for deferred maintenance by the University to achieve this goal. At present, $1 million is committed to deferred maintenance per year, in addition to Facilities and Operations’ day-to-day annual repair and maintenance budget.

**Professionally Developed Facilities Assessment**

To date, most facility reviews regarding deferred maintenance have been conducted internally by Facilities & Operations personnel, with the exception of the 1999 Northbank Center (NBC) and two more recently completed external facility condition reports—French Hall (FH) and William R. Murchie Science Building (MSB). These latter two facility condition reports were prepared by DSA Architects in conjunction with our partially funded FH-MSB capital outlay project. It remains the desire of the Facilities & Operations staff to obtain external second opinion facility condition reports for all facility structures as funds become available. It has been estimated that an additional $114,380 (0.06 dollars/sq. ft. x 1,906,330 sq. ft.) will be required to conduct the remaining external facility condition reviews, and update the FH, MSB and NBC reports.

The University of Michigan-Flint campus consists of 73.38 acres: 43.14 acres south of the Flint River and 30.24 acres north of the river. In addition, the University owns one off campus 3.67 acre property where the chancellor resides. This residence was given to the university in 1973 by the Ross family and is referred to as The Ross House. The 2011 replacement value for University buildings and parking structures is $307,980,322, accounting for 1.9+ million gross square feet contained within 14 buildings, four parking structures and three surface lots. This campus replacement value is up slightly from the previous year value of $303,630,835. The newest of these buildings is the First Street Residence Hall which was completed and occupied by 310 students in August 2008.

The campus maintains 4.58 miles of University roads and sidewalks including the recently added Kearsley Street connection (reconnected in FY2009). This reconnected roadway has facilitated easier campus access and maneuverability; has enhanced downtown redevelopment opportunities; and created an educational-cultural corridor between the Flint Cultural Center, Mott Community College, University of Michigan-Flint, downtown City of Flint, and Kettering University.

It should be noted that as on-campus enrollment increases, as many as 250-400 parking spaces may be required. And, with that in mind, 165 additional student parking spaces were added in fall 2009, with an additional 112 in fall 2010 which leaves the University of Michigan-Flint possibly in need of an additional 123 spaces to support current and projected growth. In early FY2011, spaces were added to student Parking Lot T by removing the spiral helix and expanding the lot. In addition, a “Park and Walk for a Healthier U” coupled with our “Go Blue! Live Greener…” campaign was launched to encourage optimal utilization of Lots R and S, which are farthest from the main classroom buildings. Key factors that impact the number of additional on-campus student parking spaces that are required include: 1) the day and time classes are offered; and 2) the number of off-campus, online, and mixed-mode class offerings. University of
Michigan-Flint’s fall 2012 total enrollment increased to 8,289, showing an increase of total students for the eighth year in a row.

Facility Replacement Value
Please refer to Table I below for a list of campus buildings and parking structures. Also included is each building’s primary usage and replacement value. These replacement values have increased by 1.5% from comparable values one year ago. No land purchases are anticipated in FY2013.

Table 1: Replacement Value of UM-Flint Buildings and Parking Structures

<table>
<thead>
<tr>
<th>Building / Structure</th>
<th>Year Occupied</th>
<th>Gross Square Feet</th>
<th>Replacement Value</th>
<th>Building Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ross House</td>
<td>1971</td>
<td>4,160</td>
<td>$1,160,417</td>
<td>Admin &amp; Support</td>
</tr>
<tr>
<td>Hubbard Building</td>
<td>1977</td>
<td>24,634</td>
<td>$5,023,983</td>
<td>Admin &amp; Support</td>
</tr>
<tr>
<td>David M. French Hall</td>
<td>1977</td>
<td>176,056</td>
<td>$31,239,664</td>
<td>Classroom/ Faculty Office</td>
</tr>
<tr>
<td>Central Energy Plant</td>
<td>1978</td>
<td>26,586</td>
<td>$12,595,009</td>
<td>Admin &amp; Support</td>
</tr>
<tr>
<td>Harrison Street Parking Ramp</td>
<td>1979</td>
<td>121,359</td>
<td>$8,596,320</td>
<td>Parking Structure</td>
</tr>
<tr>
<td>Harding Mott University Center</td>
<td>1979</td>
<td>114,284</td>
<td>$20,619,544</td>
<td>Admin &amp; Support</td>
</tr>
<tr>
<td>Recreation &amp; Fitness Center</td>
<td>1982</td>
<td>81,923</td>
<td>$17,116,198</td>
<td>Rec Sports Bldg.</td>
</tr>
<tr>
<td>William R. Murchie Lab Science Building</td>
<td>1988</td>
<td>193,420</td>
<td>$44,212,547</td>
<td>Classroom/ Faculty Office</td>
</tr>
<tr>
<td>Mill Street Parking Ramp</td>
<td>1988</td>
<td>302,100</td>
<td>$20,398,527</td>
<td>Parking Structure</td>
</tr>
<tr>
<td>University Pavilion</td>
<td>1991</td>
<td>86,532</td>
<td>$4,409,232</td>
<td>Admin &amp; Support</td>
</tr>
<tr>
<td>University Pavilion Parking Ramp</td>
<td>1991</td>
<td>121,265</td>
<td>$8,731,313</td>
<td>Parking Structure</td>
</tr>
<tr>
<td>University Pavilion Annex</td>
<td>1991</td>
<td>3,037</td>
<td>$1,116,323</td>
<td>Teach, Research</td>
</tr>
<tr>
<td>Frances Willson Thompson Library</td>
<td>1994</td>
<td>109,750</td>
<td>$28,685,887</td>
<td>Library</td>
</tr>
<tr>
<td>Northbank Center</td>
<td>1999</td>
<td>189,375</td>
<td>$39,434,988</td>
<td>Admin &amp; Support</td>
</tr>
<tr>
<td>Northbank Center Parking Ramp</td>
<td>1999</td>
<td>71,280</td>
<td>$5,392,438</td>
<td>Parking Structure</td>
</tr>
<tr>
<td>William S. White</td>
<td>2002</td>
<td>177,400</td>
<td>$44,689,266</td>
<td>Classroom/ Faculty Office</td>
</tr>
<tr>
<td>First Street Residence Hall</td>
<td>2008</td>
<td>101,481</td>
<td>$14,558,666</td>
<td>Residential</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td></td>
<td><strong>1,906,330</strong></td>
<td><strong>$307,980,322</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: UM-F Department of Facilities Management, October 2012
A summary of the University's Capital Renewal/Deferred Maintenance Plan is outlined in Table 2 below and indicates that $12,842,689 must be invested today to properly maintain campus buildings, property, and roads, including $3,532,306 which has been identified as “critical” repairs and maintenance. These “critical” items require immediate attention and include 30+ year old boilers (slated for replacement as described in this plan), roof replacement/repair, extensive masonry and façade repairs, water intrusion, fire/safety systems, emergency phones, campus lighting, and environmental related issues. In addition, the plan calls for an investment of $11,570,063 over the next five years (FY2014-FY2018) to properly maintain existing buildings and property, and keep utility systems and infrastructure such as roads, walkways and grounds safe and in good working order. Finally, we anticipate that another $13,431,990 will be required to address FY2019-FY2023 capital renewal projects. In total, $37,844,742 (in today’s dollars) will be required between FY2013 and FY2023 to properly address required deferred maintenance/capital renewal, infrastructure and repair related issues on the UM-Flint campus.

Table 2: Capital Outlay - 2013 Campus Deferred/Capital Renewal Summary

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>David M. French Hall</td>
<td>$90,640</td>
<td>$321,552</td>
<td>$290,696</td>
<td>$111,143</td>
<td>$814,030</td>
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<tr>
<td>Harding Mott University Center</td>
<td>$0</td>
<td>$649,618</td>
<td>$218,428</td>
<td>$598,343</td>
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<td>Murchie Science Building</td>
<td>$0</td>
<td>$2,557,050</td>
<td>$2,927,366</td>
<td>$1,093,950</td>
<td>$6,578,366</td>
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<tr>
<td>University Pavilion</td>
<td>$63,945</td>
<td>$477,050</td>
<td>$744,770</td>
<td>$1,215,500</td>
<td>$2,501,265</td>
</tr>
<tr>
<td>Pavilion Annex</td>
<td>$0</td>
<td>$37,570</td>
<td>$22,100</td>
<td>$194,480</td>
<td>$254,150</td>
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<tr>
<td>Thompson Library</td>
<td>$0</td>
<td>$74,095</td>
<td>$263,675</td>
<td>$666,855</td>
<td>$1,004,625</td>
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<tr>
<td>Recreation Center</td>
<td>$0</td>
<td>$256,747</td>
<td>$835,469</td>
<td>$364,385</td>
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<tr>
<td>Hubbard Building</td>
<td>$3,553</td>
<td>$215,180</td>
<td>$443,083</td>
<td>$85,768</td>
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<tr>
<td>Central Energy Plant</td>
<td>$2,633,925</td>
<td>$222,285</td>
<td>$1,439,270</td>
<td>$1,304,275</td>
<td>$5,599,755</td>
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<tr>
<td>Ross House</td>
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<td>$134,386</td>
<td>$25,984</td>
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<td>Northbank Center</td>
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<td>$3,114,528</td>
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<td>$4,313,750</td>
<td>$9,748,060</td>
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<tr>
<td>William S. White</td>
<td>$0</td>
<td>$264,408</td>
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<td>$319,725</td>
<td>$877,772</td>
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<td>Harrison Street Parking Structure</td>
<td>$17,864</td>
<td>$181,279</td>
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<td>Mill Street Parking Structure</td>
<td>$8,628</td>
<td>$247,254</td>
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<td>$789,670</td>
<td>$1,595,479</td>
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<tr>
<td>University Pavilion Parking Structure</td>
<td>$41,615</td>
<td>$50,547</td>
<td>$224,011</td>
<td>$304,297</td>
<td>$620,470</td>
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<td>Parking Lots: A, E, G, P, Q, R, S</td>
<td>$20,000</td>
<td>$315,000</td>
<td>$189,805</td>
<td>$652,645</td>
<td>$1,177,450</td>
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<tr>
<td>Exterior Riverfront Grounds and Facilities</td>
<td>$451,675</td>
<td>$191,835</td>
<td>$347,130</td>
<td>$279,125</td>
<td>$1,269,765</td>
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<tr>
<td>First Street Residence Hall</td>
<td>$65,975</td>
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<td>$0</td>
<td>$50,000</td>
<td>$115,975</td>
</tr>
<tr>
<td></td>
<td>$3,532,306</td>
<td>$9,310,383</td>
<td>$11,570,063</td>
<td>$13,431,990</td>
<td>$37,844,742</td>
</tr>
</tbody>
</table>

The University of Michigan-Flint deferred maintenance summary prepared October 2012 (Costs based on 2012 dollars)
Capital Renewal/Deferred Maintenance Overview

In an effort to develop comprehensive scheduled maintenance plans, the University (in the 2008 – 2009 timeframe) engaged professional engineering firms to assist in the development of various maintenance and replacement programs. These surveys included:

- An all-inclusive roof sampling and evaluation; five year recommendations and considerations.
- An efficiency study of the Central Energy Plant boiler and chillers systems, including recommendations and proposed replacement schedule.
- Campus-wide outdoor lighting analysis and assessment
- Parking deck survey, analysis, and repairs
- Road infrastructure maintenance/replacement study

The roof study concluded that the University was faced with three structures that needed roof replacements within the next three years: French Hall roof was replaced in early FY2010 at a cost of $343,000; Murchie Science Building roof, with the exception of the west penthouse roof, was replaced during FY2010 at a cost of $490,000, and the University Center roof was replaced in early FY2012 at a total cost of $842,000. In addition to these completed roofing projects, the Central Energy Plant (CEP) roof is scheduled for 2014 restoration in conjunction with the boiler project (described below) at an estimated cost of $120,000. A portion of the Northbank Center roof will be in need of replacement within the next one to two years at an estimated cost of $550,000. The age of these roof structures range from 1977 through 1988 respectively, and the projected roofing replacement five year costs are estimated to be approximately $1.9 to $2.2 million.

A detailed CEP study noted the excellent overall condition of the CEP boilers based upon an aggressive repair and preventive maintenance program, but documented the high rate of boiler inefficiency and noted that three of the four boilers are now over thirty years old. The chilled water system, while sufficient in capacity, lacks efficient measurement and control. The University is planning for replacement of the steam system in phases, with complete replacement by 2013.

External campus lighting is inefficient and, in many areas, below recommended light (lumen) levels. Many of the outdoor fixtures are obsolete and replacement components are no longer available. Phase one of the re-lamping schedule using LED lighting is completed in the area surrounding the First Street Student Residence Hall, Willson Park and Student Lot T surface parking. During FY2011, walkway lighting south of the Flint River and across the pedestrian bridge was also upgraded to LED technology. Further major lighting retrofits were performed in FY2012 including Lot A, McKinnon Plaza and the University Pavilion Ramp. This momentum will continue into FY2013 with the planned upgrades of Lots P, Q, R and S along with continuation of walkway lighting retrofits. However, the University will need to continue to secure funding in order to complete the remainder of the campus; costs are estimated at $400,000-$500,000 with estimated payback in less than 12 years.

The University parking decks and flat lots continue to be sampled, repaired, and expanded as the University population grows and the structures age. The Harrison deck, which is over 40 years old, is now on a scheduled program (along with each of the other parking ramps) for tendon
survey, repair, and aggregate analysis. In FY2013, the Mill Street Deck will be undergoing scheduled repairs at a cost of $210,000. Additional sampling of salt penetration levels and top coating are performed annually. This is also true for the Mill Deck, NBC Deck and University Pavilion Deck. In 2011, Flat lot A was partially resurfaced, resealed, and restriped in order to maintain the number of current parking spaces and meet the demands of the university’s student population.

The University of Michigan Flint owns 4.58 miles of roadways and sidewalks on our campus. With sustained traffic on campus, there is a need to begin to replace and resurface roadways, gutters, storm drains, and curbs within our responsibility. During the summer of 2012, Kearsley Street and Wallenberg Street underwent a full asphalt milling and resurfacing at the cost of $227,000.00. The campus road surfaces are approximately 65% asphalt and 35% concrete, and campus sidewalks consist of 100% concrete material. Of those roadways, approximately half of the asphalt roads and half of the concrete roads will need major repair and or resurfacing over the next seven years. The estimated cost for these repairs/replacements project is between $1.2 to 1.5 million.

At the University of Michigan-Flint campus, safety and campus-wide communications have always been a high priority. In 2008-09, to ensure a safe and informed learning environment, the integrated public address (PA) system in each building was updated and new audio equipment installed. This integrated PA system is tested monthly and certified annually, and allows the DPS dispatcher to make an announcement at all main campus buildings simultaneously or to any building individually, e.g. evacuation, sheltering drills, etc. For safety reasons, and due to the nature of sheltering and evacuation requirements in Residence Hall, the PA system has recently been enhanced in that facility for StormReady compliance to allow for a custom alert when conditions warrant. The University will continue to enhance the system as technology and campus safety needs evolve.

In the narrative below, several of the FY2011 and FY2012 completed projects are outlined. Also included are projects currently in progress.

**Utility System and Facility Condition Review by Building**

**Central Energy Plant (CEP) & Distribution System**

An engineering study for the Central Energy Plant was completed in 2009. This study consisted of chilled water and steam utilization. Given the University’s goal for continued campus growth, and a commitment to energy conservation/efficiency and sustainability, a proposal for new high-efficiency boilers was approved and engineering has since been initiated. Current probable cost for a phased boiler replacement installation is $2.5 million. The first phase of the installation began during FY2012 utilizing in-house staff. Completion of this project is estimated to be late-FY2013.

Continuous upgrades were performed in the CEP prior to the project. These consisted of Centrifugal Chiller control modernization, boiler feed water pump replacements along with the installation of Variable Frequency Drives (VFDs).
• Control Systems: CEP software modernization will be one of the main focus items for the boiler upgrade project. This will include a utility tracking and trending package that will help with energy optimization.
• The emergency generator for the CEP is aging and replacement should be considered within the next two to five years; cost and installation is estimated at $300,000.
• Heat exchangers for domestic water need replacement with a projected cost of $30,000.
• Primary Electrical – Very little preventive and deferred maintenance had been done to the high voltage system, substations, or high voltage (HV) cables on campus in earlier years. Therefore, the University has implemented a HV maintenance plan. Currently, the plan is being implemented in phases as follows:

  *Phase I* - The main campus substation located in the CEP is the feed for two main circuits which supply subsequent substations in each structure on the south side of the campus. They include French Hall, The University Center, The Recreation Center, Murchie Science Building, Thompson Library, Mill St. Parking Deck, and Hubbard Building. The University secured a bid for FY2008, and in 2010 high voltage testing was completed at the substations located in the buildings listed above.

  *Phase II* - During FY2009 the remaining campus buildings were tested (late spring 2009). These buildings included – University Pavilion, William S White Building, and Northbank Center (both substations). The cost for Phase II was approximately $50,000.

  *Phase III* - The third year of the plan called for the testing of the cables; cost $50,000. The Phase III cables were tested in 2010. The three phase plan will repeat in future years, which will allow for planned and controlled costs, while keeping the equipment operating optimally. Additionally, as conditions are diagnosed, planned repairs can be scheduled.

• Utility Distribution System (UDS) - The UDS tunnel and duct bank system for delivery of heating, cooling, and electrical to most of the buildings on campus south of the river are generally in good condition although some water intrusion has occurred into the tunnel system. Cable testing and inspection will be required to fully assess any water intrusion damage. Several repairs to steam traps and valves have been repaired or rebuilt and are on a continuous maintenance program. Tunnel steam expansion joints have been evaluated and are being replaced per a recent evaluation. As part of the University’s commitment to energy conservation/efficiency and sustainability, the new residence hall’s heating and cooling needs are provided by the CEP. This was accomplished by constructing a short connector tunnel between the residence hall and the main utility distribution tunnel. In addition, water and IT services are also distributed to student housing via this connector tunnel.

  *French Hall*

  • Mechanical - Cooling concerns on the 2nd and 3rd floors have been resolved through the course of the Capital Outlay Project. These two floors have new ductwork, new insulation and new variable air volume (VAV) controls. However, heating and cooling issues remain on the 1st, 4th, and 5th floors. Duct insulation on these floors has deteriorated and will need to be replaced in order to maintain correct air flow and desired
comfort levels. This is projected to be completed in 2013 at a cost of $60,000. Additionally, new VAV controls on these floors are needed and should include the Theatre wing of French Hall. The Theatre is in need of replacement fans, heating coils, valves, dampers, and actuators. For safety and potential energy savings, CO-2 sensors have been installed on the ventilation system.

- Controls – The building management system has been allowing for optimum system control and timing. This is an ongoing process to keep current with internal building renovation and expansion. Fire protection system and controls were also updated on the renovated floors as part of the French Hall capital outlay funding. A new fire control panel was installed in July 2008.

- Plumbing – The Capital Outlay project included updated plumbing upgrades for 1st, 2nd and 3rd floors. However, the cast piping on the others floors (4th and 5th) was also found cracked and has been replaced; the cost of these updates and repairs were in excess of $10,000. The remaining supply piping is copper and remains adequate. Restroom upgrades for 1st, 4th, and 5th floors have been completed; these upgrades included waterless urinals, automatic flush toilets, tile repair, and sink and faucet upgrades.

- Lighting – Recital stage lighting has been changed to LED technology.

- Theatre – Renovations to the Theatre space were not included in the scope of the capital outlay funding although several urgent matters required attention: replacement of exhaust fans, heating valves and coils, and repair to the duct insulation. The exhaust fan replacement has been completed, along with a much needed replacement of theatre rolling doors. Modernization of the Theatre area has also been completed. This entailed converting existing space to add a new Box Office and Concession Area. Project cost - $85,000.

- Miscellaneous improvements - 4th floor surface and general upgrades were completed recently including carpet, painting and lighting. Final cost - $106,000

**Harding Mott University Center**

- Electrical – Pool lighting was added to building lighting control system. Energy savings are estimated to be $12,000+ annually. Lighting upgrades, however, are needed throughout the rest of the building and are scheduled for FY2013. The scope will include new LED down light fixtures along with T8 ballast and bulb retrofits. The probable cost for the project will be $50,000 with an anticipated energy savings of $9,000 annually.

- Plumbing – Modifications have been made to the hot water system. An instantaneous water heater was installed to improve efficiency and also save energy. Drain piping is going to be addressed in the men’s and woman’s locker rooms. The probable cost of this project will be $70,000.

- In August 2008, the University Center’s kitchen and food service area underwent a major renovation. Phase I renovation resulted in several upgrades to the fire suppression system and lighting, and the addition of new food preparation equipment. This equipment is energy efficient compared to the aged equipment which it replaced. Additional modifications and repairs were made to the plumbing and to electrical service to accommodate the newly remodeled kitchen and food service area. Phase II dining service expansion was completed in 2010 and included additional dining and food court areas. Phase II expansion targeted enhanced student centeredness by alleviating congestion in these areas.
• Kitchen – An instantaneous water heater was installed in 2012. This was a replacement for a water tank heat exchange unit. Project cost - $30,000 with anticipated energy savings of $6,000 per year.
• Pool - New pool pumps have been installed to optimize efficiency. The total project cost was $20,000.
• Pool (future consideration) – Replace current filter with sand filter; cost is estimated to be $60,000.
• Roof – Construction was performed during fall 2011; this project also included repair to the parapet wall that surrounds the perimeter of the roof. Total project cost - $842,000
• Ventilation – The University further reduced energy costs by placing CO-2 monitors on the return air; potential reduction of excess outside air means less reheat. New outside air dampers on the main air supply unit were installed for energy savings. Project cost - $30,000. In addition, the UCEN’s rooftop exhaust fans were replaced in 2011 at a cost of $8,000.
• Variable frequency drives have been installed on air handlers. The VFD’s will be tied into the CO-2 devices for further air quality control and energy savings.
• Fire panel upgrade - full alarm system upgrade has been completed and is in operation. Project cost - $165,000.
• Infrastructure and architectural improvements have been completed for the KIVA and Happenings Rooms. Project cost - $145,000. Michigan Rooms are slated to be completed in 2012. Project cost - $258,000
• Carpet – the UCEN stairway carpeting has been replaced with a poured non-slip coating to enhance health and safety and reduce regular carpet replacement due to intense high student traffic. Project Cost - $12,000

Recreation and Fitness Center
• Ventilation – Heating and cooling are provided through the CEP, however the building is not air conditioned and becomes very warm in the summer months. Damper controls have been added to the ceiling and controls on the relief air damper have been replaced to help maintain a more equalized pressure in the building. A feasibility study was recently conducted to assess cost/benefit of adding air conditioning in selected areas to improve user comfort level during hot weather periods. Cost to install air conditioning - $250,000
• Plumbing – Underground piping and drainage systems have been compromised by ground water intrusion. This piping will need to be replaced and rerouted. Expected costs will exceed $150,000. The entire building is at a low elevation and water intrusion continues to be an ongoing concern. Sump pumps and low volume water pumps must be maintained to sustain a dry building on the lower level. This continues to be a challenge. To promote sustainability and energy savings, an instantaneous water heater (pilot project) was installed for domestic water in 2011. Project cost - $30,000 with anticipated energy savings of $6,000 per year.
• Locker Rooms – The women’s locker rooms remain outdated and in need of remodeling. Updating these locker spaces will include low flow showers, toilets and urinals, new tile, lockers and benches as well as energy efficient lighting. The men’s locker room was renovated to address similar issues in summer 2011 at a project cost of $145,000. The woman’s locker room renovation is projected to be done in 2013.
Roof – Repair and replacement to the Recreation and Fitness Center to cease water intrusion and prevent further structural damage must be done soon. Required repairs have been made to enable us to defer replacement for approximately three years. Estimated cost $500,000.00. Projected start date - 2015.

William S. White
- The recent relocation of the School of Management from this building to Riverfront Center has created growth opportunities for the School of Health Professions and Studies (SHPS). Plans for 2nd and 3rd floor renovations have been developed, some new carpet and painting has been completed with further renovations planned to be done throughout FY2013.
- Major William S. White building planning efforts are underway with regard to major renovation and enlargement of the building footprint. (See Section V, Implementation Plan, Priority 1)

Hubbard Building
- A new Evidence Room was recently constructed for the Department of Public Safety on the first level in FY2012. Project cost - $30,000
- Security and Fire Protection – Outdated alarm was upgraded during the spring of 2012. Cost of this project - $30,000.
- Remodeling - Hubbard Building’s garage and shop floor areas have been addressed recently to improve workplace safety, along with cooling and containment project work. Project cost - $15,000. An additional garage door will be installed to minimize shop congestion and increase work efficiency in FY2013. Projected cost - $18,000
- Office reconfiguration – Plans are being finalized to modify the front office area to improve the use of the space and enhance the efficiency of office operations for both Facilities & Operations and Public Safety. Work will be completed during FY2013. Estimated project cost - $20,000.
- Roof Restoration - Due to the age and the deterioration of the Hubbard Building’s roof, the roof is targeted for restoration in 2014. Estimated cost for this project is $125,000.

Murchie Science Building (MSB)
With the recent legislative approval of UM-Flint’s capital outlay priority request for a $22.2 million upgrade of MSB, plans are being put into place to address a number of deferred maintenance issues within the scope of this project as described later in this plan. However, various facility project needs will remain in the deferred maintenance backlog, as follows:

- Electrical - Substation requires testing as noted in the earlier CEP section. The west wing of the building needs to be re-lamped with T-8 electronic ballasts. Currently there are T-12s throughout the building which will be obsolete within the next five years. Lighting upgrade expected costs $85,000. $5,000/year is anticipated to be saved as a result of the improved energy efficiency.
- Aesthetics - Carpet has been replaced in several different areas including first and third floors. Painting of MSB corridors/hallways and select spaces is ongoing. Carpeting will need to be replaced in lecture halls 107 and 109. Estimated cost to replace - $50,000
- MSB is also home to many computer science labs and servers rooms. Currently we are at cooling capacity for these areas. Future expansion of these technologies will require
additional AC units and upgraded pump and delivery systems in order to meet cooling
demands; cost estimate $350,000. In general, this building’s heating, cooling, and
building insulation systems are of great concern and will require detailed study, analysis
and thoughtful coordinated planning to determine future IT server and scientific
laboratory equipment utilization needs and to avoid costly repairs. Emergency power was
recently installed to accommodate server room air conditioning system needs. This will
be a great benefit during power outages. The servers themselves are on back-up
emergency power.

- Elevators – An elevator feasibility study is needed to determine if an elevator can be
installed economically in the west wing of the building based upon student, faculty and
staff usage, and internal building traffic patterns. In addition, it would allow persons with
disabilities to move about the building with greater ease, and in a more user friendly
manner.
- Roof – the west penthouse roof will eventually need to be replaced. Estimated cost -
$90,000.

**Northbank Center**

- Elevators – In 2009, an elevator assessment was done by the University elevator
contractor. The condition of the Northbank Centers 40+ year old elevators is such that
they must be replaced. The current cost estimate for the North building (13 stories) is
$2,100,000; construction for this project is currently in process and planned to be
completed in late-FY2013. The South building elevators will need replacement in the
near future; probable cost $1,000,000.
- Electrical/Mechanical – The substation in the South building was obsolete, unreliable,
and out of code compliance. As a result, this substation was replaced in 2009 at a cost of
$50,000. Additionally, the south building’s two AC/heating package units were recently
replaced which eliminated the need for a cooling tower. This replacement effort
conserved energy and dramatically lowered water consumption; project cost $60,000.
Total savings estimated to be $10,000 annually. These improvements do not include
replacement of any piping or wiring internal to the building.
- Lighting – Building high efficiency lighting retrofits are to be scheduled for the north and
south buildings. Project cost - $90,000. Anticipated savings - $31,000 annually
- The ballroom lighting was upgraded to LED lighting during FY2012 to increase lighting
and reduce energy consumption. Project cost - $5,000
- Boilers - South Building boiler and supporting steam system project was completed in
2011. Project cost - $95,000.
- Boilers - North Building boilers are in need of replacement. Estimated cost - $70,000.
Savings will be $8,000 annually.
- Outside facade repair – external building repairs on the South Building brick and
masonry have been completed; cost $75,000.
- Structural (masonry) repairs to north and south buildings at roof level were recently
completed to sustain the integrity of the high-rise and the safety of those below. Project
costs were approximately $70,000. Further work may be required in the future to
maintain the integrity of the buildings.
A portion of North Building roof is projected for replacement in 2014 at an estimated cost of $550,000.

**University Pavilion (UPAV)**
- The UPAV cooling tower was replaced in late 2011. Project cost - $130,000
- Generator – Completed study for a generator to support the University Pavilion. Estimated cost to install - $300,000
- Mechanical – Reheat heating equipment was replaced in fall 2011 with higher efficiency units. Project cost - $30,000
- Mechanical - Chillers are in need of replacement. Projected cost - $400,000
- Lighting – Building high efficiency lighting retrofit is needed. Project costs - $77,000

**Parking Decks – Mill Deck, University Pavilion, Harrison Deck, Northbank Center**
The University is the sole owner of three parking decks (Mill, Harrison, and Northbank) and also owns one-third of another deck (University Pavilion). The Harrison deck was built in the mid 60’s and transferred from the City of Flint to the University in 1979; it is the oldest parking structure on campus. The Mill Deck, built in 1988, is the newest. Each deck has been, or is currently being, assessed for structural repairs as well as considerations for lighting, fire safety, and overall condition. It is important to note that the structural repairs and maintenance for each deck need to be done, to varying degrees, each year. However, at a minimum the University will need to spend approximately $350,000 – 500,000 each year on an ongoing basis to adequately and safely maintain these structures.

- Northbank Center Parking Deck – Partial tendon excavation and repair in addition to structural repairs and sealants, concrete repairs, and joint repairs were critical for FY2009. In FY2010 the two upper decks were coated with a 3m sealer to prohibit chlorides from entering the concrete. The University sought expertise from a professional engineering firm to determine cost and urgency; estimated critical repairs for FY2010 - $313,500.
- Mill Street Deck – Current critical repairs include full and partial depth concrete repairs in addition to correcting water intrusion and replacement of emergency and stairwell lighting. These critical repairs total approximately $210,000. Significant repairs will need to occur over the next five years and are estimated to be $606,000.
- Harrison Street Deck – Extensive tendon repair and excavation was completed in 2008. In addition, sealant top coating was applied to one-third of the deck and stairwell repairs, striping, exterior and interior painting were also completed. In 2010, the University demolished an obsolete spiral helix exit ramp connected to the Harrison Deck, which allowed for expansion of student parking Lot T. In FY2015, the University will need to continue excavation and repair of structural tendons. This will be critical given the age of this parking deck (40 years old). Current critical costs are $210,000 while the five year projection is $689,000.
- University Pavilion Deck – Co-owned with the State of Michigan, the University owns one-third of the ramp. Numerous structural repairs were made to this deck in 2010 including expansion joints, tendon repairs, deck repairs, drain replacements etc. In 2012, there was a cross joint tendon failure identified on the second deck. Repairs are estimated at $25,000.00 and will be performed during this fiscal year. This ramp requires...
fire safety upgrades as well as lighting; both systems are failing and outdated. Consequently, the University has been collaborating with the State to address the most critical issues. The lighting and fire protection have increased deck repair/replacement costs for FY2012 to more than $100,000; however, projected annual costs for the University are in the range of $70,000/year.

**Energy, Resource Conservation, Sustainability and the Environment**

The University of Michigan-Flint has long been an advocate for the environment and an energy conservationist, as demonstrated in previous capital outlay plan updates. Since 1999, the University has aggressively pursued, through its Facilities and Operations and Procurement staffs, short payback energy conservation projects of less than four years, as well as futures-purchasing of natural gas.

During FY2011, to further its commitment to improving energy efficiency campus-wide, the University began implementation of a Smart Buildings Program sponsored by and in partnership with Consumers Energy. This program initially provided a focused assessment of three buildings, the University Pavilion, University Center and French Hall, and consisted of a comprehensive evaluation of these buildings to review systems and infrastructure in the context of energy efficiency and potential improvements. The assessment also included a Facility IQ Test that encompassed a comprehensive list of energy saving Facility Improvement Measures (FIM’s). All of the recommendations that surfaced through this program, including additional lighting upgrades, additional VFDs, and building management system adjustments, have been implemented.

As a comparable measure, Facilities & Operations elected to perform a separate energy audit of Thompson Library during FY2011 utilizing the services of Johnson Controls, Inc., and taking advantage of the existing partnership built around our building management systems and the services Johnson offers related to those systems and energy savings. This program validated system operating efficiencies and gave us data in several areas, such as variable air volume (VAV) systems, variable speed pumping, and chiller optimization.

Both programs, also referred to as retro-commissioning, have additionally given us information on valuable financial incentives that both Consumers Energy and Johnson Controls can provide when the measures are implemented. And, both programs have provided the following benefits:

- Low and No cost – quick payback measures with a maximum of four years.
- Prioritization of energy efficiency improvements/ planning
- Identify potential and best path for ENERGY STAR certification

As a result of the success of these programs for the three initial buildings (with Consumers) and Thompson Library (with Johnson Controls), the University intends to continue the program implementation in the remaining campus buildings in the coming years. During FY2013, the University will be working with Consumers Energy to perform Smart Buildings assessments of Northbank Center and William S. White Building.
Recently as well, the University has broadened its environmental approach to embrace sustainability and aggressively seeking out environmentally conscious partners, such as the State of Michigan and Consumers Energy. In addition, the University is strategically seeking out and collaborating with local and regional partners through the recently formed City of Flint/Genesee County Regional Chamber of Commerce energy council, This council, formally introduced in 2011, is known as E3 Innovation Network (energy, environment, economy), a growing network of more than 85 diverse members (including the University of Michigan-Flint) in Genesee, Lapeer, and Shiawassee Counties and is designed to grow the green economy through various collaborative strategies and approaches. Click here for more details. Through this effort, and other similar efforts, it is hoped that the University can further enhance its ability to lower cost, conserve, and become less reliant upon fossil fuels, with the stated goal to protect and conserve precious resources including dollar resources, energy, and the environment. The University also hopes that, through its active involvement in this consortium (as of FY2012, the University is also a participating member of the E3 Advisory Committee), it will be able to play its part to grow the green economy, increase awareness of E3’s mission and reduce carbon footprint for the betterment of our community, our economy and our state.

Specific Examples of Campus Energy and Utility-Related Enhancements:
Upgrades in our energy management system have allowed the campus to reduce electrical consumption by 5% (1/M kilowatts) and control “in advance” critical peak loads and improve further upon power factors at various campus building locations. Partnering with us in this area has been CMS Energy (Consumers Energy) who also introduced the campus to a sustainable renewable energy program using biomass and wind power resources. Currently, the University pays a 3% electrical premium that supports renewable energy for CMS Energy, and hopes to expand this to 10% in the near future.

During FY2011, the University began the process of investing in a new irrigation system that is designed to conserve up to 60% of the water used on campus to maintain our grounds. The Ann Arbor campus recently purchased and installed a similar system and is realizing savings of up to 65% water usage in the first two years of operation. This system has been purchased and will be installed by an outside contractor during the fall of 2013. The return on investment for this particular system is anticipated to be approximately seven years on our initial investment of $70,000.

Some other recent cost saving/conservation initiatives that have been completed or are underway include replacement of the air dampers at University Center and installation of variable frequency drives (VFDs) on building mechanical systems at various campus locations. To date, VFDs have been installed on the mechanical system in the Thompson Library, the chilled water system at William S. White Building and in the Central Energy Plant.

The University continues to explore lighting upgrades campus-wide to improve energy conservation and efficiency, safety and aesthetics. Recently, the Thompson Library and University Pavilion Ramp lighting has been replaced with energy efficient lighting, and the Student Walkway south of and across the Flint River was upgraded to LED lighting. Other recent outdoor LED installations include McKinnon Plaza, Willson Park, and Student Parking Lots T and A. Lighting upgrades being planned or under consideration include conversion of
Lots Q, R, S and T to LED, further walkway lighting upgrades to LED, and retrofitting of Thompson Library study table lighting to LED including individual motion sensors at each table. Additionally, upgrading our emergency lighting, including exit lighting (planned to be completed in FY2013) and signage campus-wide to LED technology (also under consideration), will minimize energy use, reduce maintenance cost and increase the reliability of code-required safety lighting. These projects are representative of the University’s aggressive overall approach to reducing utility usage, which has resulted in a 5.5% reduction in electric and gas consumption the past 3 years.

Other strategies to reduce campus utility costs have included purchasing natural gas futures. As a result of this strategy, the University has purchased over 80% of its anticipated natural gas needs through spring 2013. Not only has this future-buying strategy resulted in substantial savings but has given the University a fixed cost projection for this volatile commodity.

Campus energy improvements for FY2012 included:
- Retrofitting to LED fixtures in McKinnon Plaza.
- Parking Lot A– Retrofitted existing fixtures with LED lighting
- University Pavilion Ramp – Retrofitted existing ramp fixtures with LED lighting
- University Pavilion cooling system – Replaced the cooling tower to improve operating efficiency
- Thompson Library – Complete lighting retrofit, upgrading to T8 lighting; also replaced existing study table task lighting with LED lighting and motion sensors.
- Energy Management System – Upgraded Johnson Control system across campus to new technology.
- University Center – Light harvesting sensors have been installed on 2nd and 3rd floors.
- Thompson Library – Variable frequency drives have been installed on make-up air and exhaust systems.
- Central Energy Plant – installed new chiller controls for better chilled water system management
- Campus-wide – Continued upgrades to the outside walkway lighting.
- Campus-wide – Continued steam trap survey and trap rebuilds
- Campus-wide – standardized electric metering to receive valuable trending data.
- Northbank Center – Continuation of lighting retrofits.
- University Center – Replaced inefficient tank-type water heater with a new instantaneous water heater in the kitchen.

Going forward, the University will continue to focus on energy efficiency opportunities throughout the campus, and particular those projects with paybacks less than five years. Based on the energy efficient improvements planned for completion in 2012 and 2013, it is anticipated that this group of projects (including the new boilers, lighting improvements and other projects referenced in this plan) will reduce utilities expenses $350,000 - $400,000 annually, or approximately 7.5% of 2012 projected utility budget.
Classroom Usage/Utilization Rates based upon Fall 2011 data

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Classroom Utilization</th>
<th>Seat Fill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak (Monday-Friday, 10:00 a.m. ---3:00 p.m.)</td>
<td>68.2%</td>
<td>50.83%</td>
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<tr>
<td>Off Peak (Monday-Friday, 8:00 a.m.—10:00a.m.)</td>
<td>52.63%</td>
<td>46.59%</td>
</tr>
<tr>
<td>Off Peak (Monday-Friday, 3:00 p.m. ---5:00p.m.)</td>
<td>86.95%</td>
<td>48.21%</td>
</tr>
<tr>
<td>Evenings (Monday-Friday, 5:00 p.m. ---10:00a.m.)</td>
<td>37.78%</td>
<td>48.36%</td>
</tr>
<tr>
<td>Weekends (Saturday, 9:00 a.m. ---1:00p.m)</td>
<td>1.3%</td>
<td>0.22%</td>
</tr>
<tr>
<td>Weekends (Sunday, 9:00 a.m. ---1:00p.m)</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

Note: Classes meeting 9:30 – 10:45am and 12:30 – 3:15 are included in the Peak utilization % above.

It should be noted that mixed mode and English Language Program courses are excluded from the above percentages.

Due to the Universities standardized time slots overlapping the time frames above, there will be some class duplication within the percentages.

It should also be noted that because of the robust growth in both online and mix-mode classes, on-campus classroom utilization is lower than it would otherwise be --- e.g. in 2011-12 there were 14,607 online course enrollments.

**Bonding on Existing Buildings**

The $7.5 million Mill Street Parking Ramp bond issue was retired in 2011 and the F. W. Thompson Library’s $6 million bond issue will be retired in 2013. The more recent $17 million First Street student housing bond issue will retire in 2038.

State Capital Outlay project bonding commitments for the William S. White Building and French Hall will be retired and ownership returned to the University in 2032 and 2038, respectively.

**SECTION V. --- IMPLEMENNTATION PLAN: PLANNED OR CONSIDERED MAJOR RENOVATION AND NEW CONSTRUCTION PROJECTS FOR BY 2013-BY2023**

**Priority Request 1: Campus Academic Buildings Expansion and Renovation Request – William S. White Building (WSW)**

(No capital outlay funding requested at this time)

The University of Michigan-Flint proposes to renovate and design an addition for the William S. White Building. Originally constructed in 2002, the building currently houses programs such as early childhood development, Urban Health Clinic, the School of Health Professions and Studies, the Department of Communication and Visual Arts, and more. Growth of the Genesee Early College program (GEC), the Early Childhood Development Center (ECDC) and the School of Health Professions and Studies (SHPS) has prioritized this project for inclusion in the
State of Michigan Five Year Capital Outlay Plan by the University. The current lack of classrooms and laboratories limit the development of both academic degree-granting programs and community-based education.

The William S. White Building addition and renovation project seeks to achieve the following three main goals:

1. Expand spaces for the SHPS to accommodate current growth, potential new programs and other departments. Spaces such as larger, computerized classrooms to accommodate 60-80 Nursing students, general classrooms, faculty offices, quiet student study areas, additional Nursing clinical simulation labs, and clinical research space are greatly needed. Students have been choosing SHPS majors in explosive numbers. Undergraduate majors increased from 415 students in 2003 to 1,261 students in 2011. That’s an increase of 180%. Graduate majors have also increased by 240%.

2. Expand and relocate the growing GEC program into an addition. Develop shared lab spaces that would allow student work during the day from the GEC program and work in the evening from SHPS. The expanded GEC program will accommodate 400 students in flexible and innovative teaching spaces.

3. Expand and relocate the ECDC due to the current shortage of space and locate for more autonomy.

A preliminary program was developed based on input from University administration. The work scope for the William S. White Building renovation and addition project can be divided into two major categories:

<table>
<thead>
<tr>
<th>Category</th>
<th>Square Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addition</td>
<td>63,000 GSF</td>
</tr>
<tr>
<td>Renovations</td>
<td>40,000 GSF</td>
</tr>
</tbody>
</table>

**Addition**

The creation of the addition will meet the needs for the expanding GEC program as well as the ECDC.

The goal for the growing GEC program is to expose students to the new model of health care practice that emphasizes team care for patients. These high school students will have the ability to learn and practice in environments that mimic modern, high-tech laboratories, clinics and hospitals within the community. The innovative approach for the new GEC’s design will include flexible spaces for multitasking, workspace for interdisciplinary teaming and collaborative spaces to support project-based learning.

The addition will also house the ECDC. The design will allow the positioning of the ECDC to be a part of the William S. White Building yet, more autonomous. Extra care will be integrated into the design to insure a loving and safe environment for the children. The philosophy and inspiration driven by the Reggio Emilia Approach will continue to be a part of the new Center.
Plans will include eleven classrooms, multi-purpose rooms, a small gymnasium/muscle room and all required support spaces including administrative offices, kitchen, workrooms, storage, toilet rooms, etc.

The addition will have the ability to work with ever-changing technologies to insure students of all ages are learning in a current environment.

To accommodate the growth of these two programs, an additional 63,000 gross square feet is projected. Construction costs will range between $300 and $350 per square foot, resulting in a construction cost range between $18,900,000 and $22,050,000. When project soft costs are included, the cost range for the addition is between $26,460,000 and $30,870,000.

**Renovations**

The addition will free up approximately 15,000 square feet of space in the existing William S. White Building. These vacated spaces will then be available to accommodate the growth of SHPS and Communication and Visual Arts (CVA). The following are some of the highlights of the renovation scope of work that will make significant improvements to the quality of education that can be provided within the building:

- Expansion of the existing Urban Health Clinic that serves the community and student population. The clinic will be expanded to operate as an “urgent care center” and will provide wellness focused health care. Significant growth of this operation to meet the unmet health needs of the student body and the Flint area patients and families is anticipated due to the Affordable Care Act.
- A portion of the existing heating and air conditioning equipment and ventilation systems are nearing the end of their useful life and will include upgrades. Replacement and redistribution of these systems is also required to support the needs of the renovated spaces and future programs.
- Additional adjunct faculty offices for SHPS.
- Additional Public Health & Health Science Classrooms.
- The creation of two (2) classrooms that accommodate 60-80 students for use by Physical Therapy and Nursing programs.
- A dedicated, quiet, study area for students.
- Creation of Clinical research area for the Nursing program.
- One additional simulation lab for SHPS.
- Renovations to accommodate new program development within SHPS.
- Expansion of CVA through space re-allocation and enlargement.

Construction costs will range between $150 and $175 per square foot depending on the intensity of the work. Renovation costs will range between $6,000,000 and $7,000,000. When project soft costs are included, the range for the renovations is between $8,400,000 and $9,800,000.

*(Estimated Cost: $40.7 million)*
Priority Request 2: Campus Academic Buildings Renovation Request --- French Hall (FH) and Murchie Science Building (MSB)

(No capital outlay funding requested at this time)

Because sufficient State of Michigan capital outlay funding was not available in our original request to renovate both French Hall and the Murchie Science Buildings completely, it was necessary to prioritize the project work into three phases: Phase 1 – Renovate French Hall Classrooms for the Future, 1st through 3rd Floors; Phase 2 – Renovate Murchie Science Building’s Laboratories and Classrooms for the Future and Phase 3 – Expand Murchie Science Building to Create Additional Instructional and Collaborative Spaces.

Phase 1 (completed) ---Renovate French Hall Classrooms for the Future
This $9.35 million Phase 1 project was funded through the State of Michigan’s capital outlay process with construction beginning in May 2007 and ending October 2010, and included renovation of FH’s 1st, 2nd, and 3rd floors.

Phase 2---Renovate and Reconfigure Murchie Science Building’s Laboratories and Classrooms for the Future (legislatively approved and in process of design completion)
This Phase 2 renovation request has been the University of Michigan-Flint’s top capital outlay priority request for the past several years. It should be noted that, in June 2012, Governor Rick Snyder signed legislation committing more than $300 million to higher education construction projects across Michigan. Included in that legislation (House Bill 5541) and, thereby, approved was this $22.2 million UM-Flint priority request for Murchie Science Building. Accordingly, UM-Flint is currently preparing to complete the design and construction processes for this major renovation project. The background of this project is provided, as follows, for reference purposes.

Background
Since opening in 1988, the Murchie Science Building (MSB) has provided excellent space for the laboratory science programs at UM-Flint. Approximately one-half of the building features wet labs, approximately 90,000 sq. ft. Our laboratory science programs are flourishing and offering new degree programs (e.g. BS/MS Bio-chemistry, BS major in Sustainability and the Environment), with excellent accomplishments by our faculty and students including many undergraduate research opportunities. MSB, however, was designed for much smaller scientific programs than we have today and for a different generation of scientific equipment. The condition and design of the current laboratories impedes critical goals of the University. Specifically, the University of Michigan-Flint has made expansion of its programs to train future scientists and science educators a top priority. Further, the University is committed to working with K-12 students and educators throughout our region to meet State of Michigan goals to increase the supply of citizens in Science/Technology/Engineering/Mathematics (STEM) careers. The University is expanding its offering of science and math camps and other STEM promotion activities. The University is also the lead higher education partner with the Genesee Intermediate School District in planning an early/middle health professions college. Our
programs in Biology and Chemistry are experiencing a substantial increase in demand, spurred by the needs of employers. The increased demand and the concomitant increased utilization of the laboratories have created an academic bottleneck for students in the sciences and related health fields. We need to reconfigure space to add several additional instructional labs for chemistry and biology plus attendant equipment storage space. Our Chemistry Department cannot admit additional students in organic chemistry because of the lack of laboratory space. The Biology Department, which has recently added a Master of Science program, requires an additional 24-student lab to accommodate student demand at the undergraduate and graduate levels.

As the UM-Flint campus continues to plan for the future, in addition to providing state-of-the-art classrooms, we envision a state-of-the-art environmentally “green” designed science laboratory building. Such a state-of-the-art science/education building would create ideal space for future science teachers to learn how to teach science, would provide aspiring undergraduate students the facilities they will find in industry and in research universities, would provide our scientists research labs in which to involve undergraduate and graduate students, and would enable us to bring thousands of K-12 students from throughout the region to experience the thrill of science with hands-on activities on Super Science Fridays and at Summer Science camps. In short, a science laboratory building that will enable UM-Flint to help better prepare K-12 science teachers, excite younger students about becoming scientists and teachers of science, and better prepare our students for STEM careers. Such a building will be particularly important as we grow the early health professions college, a partnership with the Genesee Intermediate School District and, as we collaborate with the Ann Arbor campus to grow our cooperative programs in engineering.

**Phase 3 - Expand Murchie Science Building to Create Additional Instructional and Collaborative Spaces**

The scope of the Phase 2 project focuses on renovations within the existing footprint of the Murchie Science Building. The renovations are intended to address the most critical, current programmatic needs. Priority has been placed on providing much needed updates to instructional lab spaces in the building to enable them to meet the needs of today’s students. The following are some of the highlights of the scope of work:

- Selective renovation of instructional spaces within the building. Approximately 75% of the total 117,000 net assignable square feet in the building will be renovated to some degree.
- Instructional labs for chemistry and biology will be reconfigured to enable improved teaching methodologies and “hands on” activities by the students. Approximately 115 fume hoods will be replaced in order to facilitate a safer environment for students and to improve energy efficiency.
- The creation of two (2) new interactive classrooms and general improvements to all classrooms including additional instructional writing surfaces.
- Cosmetic upgrades to common areas (corridors and student collaborative spaces) will be implemented.
- A new cold room will be created to provide proper storage for cadavers in the gross anatomy lab.
• Accessibility improvements will be made to restroom facilities.
• Facility improvements will include a new fire alarm system, electrical upgrades and new information technology infrastructure throughout the building.

While the renovations to the Murchie Science Building will make significant improvements to the quality of education that can be provided within the building, increased enrollment growth will not be possible without creating additional instructional and collaborative spaces. Therefore, an expansion of the Murchie Science Building is proposed as the next priority (Priority Request #2) for the University of Michigan-Flint. The building expansion will complement the renovations that will be implemented as part of initial scope of work and will provide additional space to enable UM-Flint to address growth patterns which have occurred since the mid-2000’s, including:

• Physics/Engineering: Majors have increased from 111 in 2005 to 221 in 2011.
• Biology: Majors have increased from 261 in 2003 to 525 in 2011.
• Earth & Resource Sciences: Majors have increased from 8 in 2004 to 76 in 2011.
• Mathematics: Majors have increased from 54 in 2004 to 89 in 2011.
• Computer Science/Information Systems: Majors have increased from 84 in 2005 to 317 in 2011.
• Chemistry: Majors have increased from 69 in 2005 to 102 in 2011.

In total, since the mid-2000s, UM-Flint students majoring in STEM-subject disciplines have increased by more than 500 students. To sustain growth patterns such as those outlined above, additional space is required. An expansion to the existing Murchie Science Building will provide the following:

• New state of the art instructional teaching labs that will foster interactive learning in the sciences as a result of the opportunity to merge lecture and lab formats into a unified “studio lab” concept.
• Flexible dry lab space that can be assigned based on need and can adapt as needs change over time.
• Increased opportunities for transparency between public areas and lab spaces that will put “science on display”. This will help foster increased interest in the sciences, especially by high school students that may be attending an event in the facility.
• Properly outfitted lab support spaces.
• Increased opportunities for faculty/student research and interdisciplinary collaboration through the provision of dedicated research lab space.
• Student collaborative areas that will include small group study rooms for team activities and comfortable lounge seating. We propose to create collaborative areas in both the new building as well as in the connecting link between the classroom and lab portions of
the original building. (This area is proposed to be excluded from the scope of Priority Request #1)

The expansion will contain new instructional space that will be accessible to students attending classes in all of the departments housed within the building. The concept for the expansion would call for a vertically-stacked approach with new laboratory and collaborative space located on each of the five floors as an extension of the lab portion of the existing building. To accommodate the growth patterns that have been identified above, an addition of approximately 30,000 square feet will be needed.

(Estimated Cost: $19.0 million)

Priority Request 3: Department of Public Safety Facility

(No capital outlay funding is requested)

Architectural Design Group (ADG) who specializes in law enforcement and police facilities is conducting a feasibility study regarding the consolidation of several DPS activities into one building location for the purpose of improving officer and staff safety as well as departmental efficiency and effectiveness. ADG’s initial review was completed in FY2012 and their findings were incorporated into the updated Sasaki campus master plan for the University of Michigan-Flint campus.

(Estimated Cost: TBD)

Priority Request 4: Campus Utility and Critical Deferred Maintenance Infrastructure Projects

(No capital outlay funding is requested)

As described within this document, the campus requires critical deferred maintenance and infrastructure replacement/upgrades to central energy plant, including replacement of inefficient and aging boilers; outdoor campus lighting including parking deck and lot lighting; and roof replacements.

(Estimated Cost: $12.9 million)

Priority Request 5: University Student Center Renovation

(No capital outlay funding is requested)

The University Center was opened in 1979 and has many of the traditional facility elements required to serve the needs of a small 1980’s commuter campus population. In fall 2012, University of Michigan-Flint enrollment reached 8,289 students with over 300 students living on campus. This transition from a strictly commuter campus to a more commuter-residential focus has changed how the student university center is utilized.
With such a shift, identifying a campus center or cultural Mecca becomes that much more important. To paraphrase former University of Pennsylvania president Judith Rodin—*A true campus center should be one that embodies the University’s goals for the new millennium—a seamless integration of students’ academic pursuits, extracurricular activities, and their day to day lives.* Such a project might incorporate a cafeteria, student run coffee shop, bookstore, student government offices, student service offices, student organization offices, faculty offices, seminar rooms, and recreation, fitness, activity and social spaces.

By jointly planning the Recreation Center (see narrative below) and University Student Center projects, it will be possible to achieve economies of scale in planning and renovation, while at the same time, provide an opportunity to integrated programming and operational linkages.

*(Estimated Cost TBD)*

**Priority Request 6: Recreation Center**

(No capital outlay funding is requested)

As the University anticipates enrollment growth to 10,000 students and the potential for additional student housing, continuous improvements to the Recreation Center will be required. According to the UM-Flint Campus Master Plan Update 2011 published by Sasaki, the Recreation Center is large enough to accommodate the 10,000 student headcount; however, the ever-increasing emphasis on health and wellness may demand higher quality facilities in future years (page 23, UM-Flint Campus Master Plan). TMP Architects has prepared floor plans with additional square footage to accommodate weight and fitness equipment and programs, as well as a new pool. The existing pool is located in the University Center (access gained via the Recreation Center) and, although various repairs were completed in early FY2012, further major repairs and possible renovations will be needed on an ongoing basis in the future. Replacing it with a smaller pool in closer proximity to the Recreation Center may be a more practical option, thereby freeing up space for enhanced student-related programming in the University Center.

The condition and appearance of the Recreation Center has deteriorated significantly over the past 30 years because of inadequate funding for capital improvements and repairs. In addition, renovations and upgrades necessary to accommodate changes in fitness industry trends and research have, to a great extent, not been possible. Facility needs have included repairs to stop water intrusion from the roof, windows and expansion joints and upgrade of electrical to prevent power outages. Lighting systems have been upgraded for better visibility and energy savings. Work has also included replacement of worn out and outdated carpeting; repairs to walls, floors and other surfaces throughout the facility, including paint; and upgrade of security systems including cameras and exit alarms.

In addition, major facility renovations are needed to meet current consumer demands for health, fitness and recreation including making the facility accessible for those with physical disabilities; reconfiguring facility entrance to improve appearance, customer service and membership sales; resurfacing indoor track; expanding free weight and cardio areas; installing air conditioning; adding areas designed to better accommodate children; converting one racquetball court to a
squash court; creating a cross-fitness room; and developing areas for expanded retail sales and refreshments.

Required minimum Recreation Center renovation total $4.3 million and includes:

Add Welcome Center Entrance
Reconfigure and expand existing office suite
Reconfigure and expand existing reception area
Add new office for membership sales
Add new storage area under stairs
Add air conditioning to Fitness/Courts area and locker rooms (probable cost - $250,000)
Upgrade lower level corridor as “Main Street”
Renovate custodial area
Renovate Multi-purpose and wellness rooms (Room 11 & 15)
Upgrade locker rooms (Women’s locker rooms only; Men’s locker room renovation completed in early FY2012))
Sauna doors have been modified for ADA compliance
Air condition locker rooms (Rec locker rooms)
Replace glass curtain wall (pool area/UCEN Lobby)

*(Total Estimated Renovation and Expansion Cost: $23.1 million)*

**Priority Request 7: Student Housing**

(No capital outlay funding is requested)

Phase I on-campus student housing successfully opened its door to 310 new students, primarily freshman, August 24, 2008.

Philosophy: Housing and Residential Life at the University of Michigan-Flint is fully dedicated to the creation of a learning-centered community where inclusiveness, academic excellence, personal growth, and the free exchange of divergent ideas are highly valued. Student residents are encouraged to actively shape their community and are expected to balance individual and collective needs with civility and honesty. Our foundation is built upon a presumption of goodwill and the belief that mutual respect is a fundamental right of every human being.

As we look three, five, seven, ten years into the future, the feasibility of adding another 300-400+ additional beds to our on-campus student housing inventory is a consideration. As part of this consideration, the University must factor into the equation the roughly 650 private beds that have become available adjacent to campus on Saginaw Street in the last two years by private providers. Future student demand for additional on-campus housing and the University’s desire to house more freshman and sophomore students will play a major role in these deliberations.

Additional information pertaining to on-campus student housing is available by clicking: [here](#).

*(Estimated Cost: TBD)*
Priority Request 8: Music Performance Space

(No capital outlay funding is requested)

In order for the University of Michigan-Flint to provide the highest quality instruction in music and music education, it is necessary that we construct a facility that will provide an acoustically sound performance space seating of 400-600, state-of-the-art classrooms, adequate student practice space, and appropriate faculty offices. An added benefit of the performance space is its availability to the community, including the Flint Institute of Music. Existing spaces are cramped, acoustically questionable, and not in compliance with specifications set by music’s accrediting body, the National Association of Schools of Music. In order to enhance enrollment and student learning, a new facility is necessary.

(Estimated Cost TBD)

Priority Request 9: Northbank Center (NBC) Complex Deferred Maintenance

(No capital outlay funding is requested)

The 162,210 square foot Northbank Center building complex was acquired in February 1999 with a $450,000 gift-grant from the C. S. Mott Foundation. In addition to the buildings, a 265 space parking ramp was included and is attached to the building complex via a skywalk. To assist the University in determining how to best utilize a $3 million grant from the State of Michigan, a thorough facility architectural and engineering (A/E) study was commissioned. The purpose of the study was to determine how to maximize the Northbank Center's assets to the fullest possible extent and to prioritize needed renovations. Requirements of life, safety and code compliance were the primary drivers of the analysis. The 1999 Harley Ellington A/E study determined that a minimum of $9.85 million (excluding elevators), or $60.53 per square foot, was required to make all three buildings useful to the University. The $3 million grant from the State provided for sprinkling all 12 floors of the building, installing a new emergency fire pump and fire control center, and adding a new exit stairwell. An elevator review was conducted separately from the A/E study. Today, it is estimated that elevator replacement/modernization expense will cost approximately $2.1 million to complete. This project is currently under construction. Construction and full modernization is expected to be completed by late-FY2013, bringing all north building elevators into full code compliance.

In addition to the renovations recommended in the 1999 study, fiber connectivity was recommended. Comcast Cable completed this project in 2003. Any cost associated with private tenant access to the Internet was borne by the tenants themselves.

The 1998 A/E study concluded that there were two major benefits from the University’s acquisition of the Northbank Center Complex. The first is the availability of essential new space (cited by the 1990 NCA report as a necessity), whether utilized as office or instructional space and the use of the parking ramp. The second benefit is the receipt of rent payments from non-
University tenants, many of who are private businesses, to help offset building operating expenses. Since the State of Michigan ceased providing universities with new facility operating funds years ago, universities have been required to seek innovative and creative approaches to fund basic operations within their existing resources.

In Winter 2006, because of additional space needs, the Office of the Vice Chancellor for Institutional Advancement, which consisted of University Outreach (Center for Applied Environmental Research, Center for Civic Engagement, Center for Entrepreneurship, and American Democracy Project), Development Unit, Corporate and Foundation Relations, and Special Events Office, relocated to the NBC. Academic programs located at Northbank include the College of Arts and Sciences’ Dance program and Communication and Visual Arts programs. A small general fund subsidy was initiated to support operating expenses for University departments.

In 2006/2007, two other University departments moved into the Northbank Center--Information Technology Services and University Relations. Tenant occupancy for fall 2008 was 28% Non-University, 32% University, 17% finished vacant space and 22% vacant unfinished space.

After renovation in late summer of 2009, University of Michigan-Flint’s Theatre Department officially moved into the basement of Northbank Center for practices. University of Michigan-Flint, Office of Contracts and Procurement moved to a new and larger space on the 8th floor. Non-University tenants moving into NBC included Counseling for All Ages, Flint Physical Therapy, Lockwood, Andrews and Newman, Inc., and Attorney Carl Bekofske. The University of Michigan, Department of Psychiatry, Health Services Research, moved to a new office within NBC, thereby allowing a new tenant, Chapter 13 Trustee, to renovate sufficient space in the south building for their downtown office relocation, taking occupancy in June 2010.

Renovations during FY2011 allowed for the relocation of the offices of Environment, Health and Safety from University Pavilion to 8th floor NBC, and expansion of the ITS offices on 9th floor NBC. Renovations also included the 2nd Floor Community Room which is frequently used by University Departments, Northbank Center tenants, and various community groups. Non-University tenants moving into Northbank Center during that year included Mobiusoft with Lutheran Social Services expanding their space. New University of Michigan-Flint tenants at Northbank Center included the Department of Nursing (UMFind Grant), Institutional Analysis and Genesee Early College (storage only).

FY2012 renovations have included the renovation of ITS space on the 9th floor and construction of a Wellness Room on the 4th floor. In addition to the Wellness Room, non-University tenants that have moved into Northbank Center during FY2012 included the Bureau of Alcohol, Tobacco and Firearms (ATF), which is a temporary expansion, and Cochran, Foley & Associates, PC. There were no new University tenants during the same timeframe.

A study is currently underway to determine the feasibility and cost of relocating the growing English Language Program (ELP) to the NBC with the goal of relocating the program by mid to lateFY2012.
Tenant occupancy (not including the potential relocation of the ELP) is currently 25.88% Non-University, 46.40% University, 12.91% finished vacant space and 14.81% vacant unfinished space.

General fund support for University academic and administrative programs housed in NBC along with rental income generated from non-University tenant help offsets NBC’s operating expenses, thereby allowing the facility to breakeven. A funding source for growing deferred building maintenance must be identified in the very near future, as more than $9.7 million will be required over the next 10 years, 2013-2023, to adequately maintain the building and its aging infrastructure.

(Estimated Cost: $9.7 million)

Priority Request 10: Campus Parking Expansion

(No capital outlay funding is requested)

As on-campus enrollment grows, additional parking may be required for students, faculty, staff and visitors. It is anticipated that 250-400 additional on-campus parking spaces may be needed as enrollment grows to 8,000-8,500 students, based upon a Walker parking study completed spring/summer 2009. An additional 165 student parking spaces were added in fall 2009 along with an additional 112 student parking spaces in fall 2010.

(Estimated Cost TBD)

Status of State Building Authority Projects in Progress

The University’s recent capital outlay funded project, French Hall Classrooms for the Future project, was closed-out with the State DMTB October 2010.

As noted earlier in this plan, the University recently received legislative approval for capital outlay funding for our highest priority project request, Expand Murchie Science Building to Create Additional Instructional and Collaborative Spaces. The University is currently in the process of working with the Professional Service Contractor (Smith Group JJR) to complete the design phase of this project and make preparations for construction.