June 23, 2014

TO: Members of the Finance/Facilities/Technology Committee

FR: Tracy B. Bigney, Clerk of the Board

RE: June 30, 2014 Finance/Facilities/Technology Committee Meeting

The Finance/Facilities/Technology Committee will meet from **9:00 am to 12:00 pm on Monday, June 30, 2014.** The meeting will be held in the Rudman Board Room at the System Office in Bangor. Polycom will also be available at the following locations:

- UM – Alumni Conference Room
- UMA – Alumni Center – Executive Conference Room
- UMF – 103 Merrill Hall
- UMFK – Alumni Conference Room
- UMM – Executive Conference Room, Powers Hall
- UMPI – Executive Conference Room, Preble Hall
- USM – 327 Wiscasset Center, Portland

The agenda and background materials are enclosed. These materials will be posted on the Board of Trustees website (http://www.maine.edu/about-the-system/board-of-trustees/meeting-agendas/finance-facilities-committee/) by June 24th. If you have questions about the meeting materials please call me at 973-3234.

If you have any questions or desire additional information about the agenda items, please call Rebecca Wyke at 973-3351.

Encl.

cc: James Page, Chancellor
    Presidents
    Rebecca Wyke
    Susan Hunter
    David Stevens
    Dick Thompson
    Tracy Elliott
    Chip Gavin
    Miriam White
    Ryan Low
Board of Trustees

Finance/Facilities & Technology Committee

Monday, June 30, 2014
9:00 a.m. – 12:00 p.m.
University of Maine System Office
Rudman Board Room, 3rd Floor
16 Central Street, Bangor

AGENDA

9:00 – 10:00  Finance Items

• Approval of Additional $2.5 Million Budget Reduction, USM… TAB 1

10:00 – 11:30  Facilities Items

• Capital Project Status Report……………………………………. TAB 2
• Cell Tower Lease Approval, USM………………………………. TAB 3
• Authorization to Dispose of Stone House, USM…………………. TAB 4
• Science Lab Renovations, UMF…………………………………. TAB 5
• Natural Gas Central Heating Plant, UMF……………..REVISED… TAB 6
• Compressed Natural Gas Conversion, UMM……REVISED… TAB 7

11:30 – 12:00  Technology Items

• Data Center Capacity and Security Project Updates……………. TAB 8
• Approval to Complete Upgrade of IT Telecommunications Services, UM………………………………………………. TAB 9

Items for Committee decisions and recommendations are noted in red.
Note: Times are estimated based upon the anticipated length for presentation or discussion of a particular topic.
An item may be brought up earlier or the order of items changed for effective deliberation of matters before the Committee.
AGENDA ITEM SUMMARY

1. NAME OF ITEM: Approval of $2.5 Million FY15 Budget Reduction, USM

2. INITIATED BY: Norman L. Fournier, Chair

3. BOARD INFORMATION: BOARD ACTION: X

4. BACKGROUND:

On May 19th the Board of Trustees approved the FY15 Unified Operating Budget for the University of Maine System. This budget included an unallocated reduction of $2.5 million for the University of Southern Maine with the understanding that the Treasurer would bring forward a plan to allocate that reduction to the July 21, 2014 Board of Trustees Meeting.

The allocation plan as prepared by the University of Southern Maine is as follows:

CLOSING FY 2015

USM has an estimated $14 million structural budget gap for FY15. Previously, the Board of Trustees approved $4.5 million in savings that included: positions left vacant, 26 staff layoffs during the last year, and flat funding of deferred maintenance, plus a one-time infusion of $7 million from the System’s Budget Stabilization Fund, for a total reduction of $11.5 million.

USM has identified the remaining $2.5 million needed to close the gap, as follows:

1. $1,575,000 by reducing the amount budgeted for positions. While the funds come from reductions in many areas, the four largest reductions are:
   - $605,000 from the voluntary separations of 5 faculty who were previously identified for retrenchment.
   - $247,000 by eliminating funding held to cover the cost of faculty in administrative positions who decide to return to the faculty positions.
   - $200,000 by not replacing administrative positions.
   - $222,000 created by the opportunity to replace retiring faculty and staff with new employees who will be paid less.
2. $483,000 by reducing amount of funds we pool through not immediately filling positions, etc. These pooled funds are invested in new positions.

3. $446,000 from expenditures for non-compensation expenses. These reductions came from a wide range of areas. The three largest reductions were:
   - $151,000 finance and facilities from energy savings and delaying equipment replacements (e.g., delaying replacement of vehicles, decreasing number of vehicles).
   - $107,000 in funds budgeted to support faculty research awards, awards for service and other requests.
   - $38,000 by reducing the use of external consultants.

Closing the remaining $2.5 million gap for the FY15 budget involved five voluntary separations, 11 faculty retirements, and one staff layoff.

5. TEXT OF PROPOSED RESOLUTION:

That the Finance, Facilities and Technology Committee forward this item to the Consent Agenda at the July 21, 2014 Board of Trustees meeting for approval of the following resolution:

That the Board of Trustees approve the additional $2.5 million FY15 budget reduction at USM as presented.

06/20/2014
AGENDA ITEM SUMMARY

1. NAME OF ITEM: Capital Project Status Report

2. INITIATED BY: Norman L. Fournier, Chair

3. BOARD INFORMATION: X BOARD ACTION:

4. BACKGROUND:

Attached is the Capital Project Status Report for the June 30, 2014 meeting of the Finance/Facilities/Technology Committee.

The report reflects a net total of 22 projects. No projects have been removed since the last report. Five projects have been added per prior Board or Committee actions.

The five new projects appearing on the report for the first time are Forestry Geographic Information System Technologies Lab/Nursing Lab Renovation/Teleconference Center Upgrade, UMFK (3100029/30/31), Payson Smith Laboratory Renovation, USM (6100236), Bailey Hall Science Laboratories, USM (6100237), LAC Nursing Laboratory Renovation, USM (6100238) and Science Building Laboratory Upgrade, USM (6100240).

Other updates are as noted on the list.
# Capital Project Status Report

**Board Approved Projects**  
**July 2014 Board of Trustee**

With Grand Totals and % of Current Approved Estimates

<table>
<thead>
<tr>
<th>Campus, Project Name (Project ID)</th>
<th>Funding Source(s) &amp; each source's share of expenditures to date</th>
<th>Status</th>
<th>Original Estimated Completion</th>
<th>Current Est. Completion</th>
<th>Original Approved Estimate</th>
<th>Current Approved Estimate</th>
<th>% Expended of Current Approved Estimate</th>
<th>Prior Actions, Information &amp; Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UM</strong></td>
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</tr>
<tr>
<td>Fogler Library HVAC Upgrades (5100216)</td>
<td>2007 State Bond (93%), E&amp;G Reserves (7%)</td>
<td>Construction in Progress</td>
<td>2010</td>
<td>2014</td>
<td>$1,200,000</td>
<td>$1,470,000</td>
<td>88%</td>
<td>Board approved $1.2M in May 2009 and an increase to $1.47M in May 2011.</td>
</tr>
<tr>
<td>Aquaculture Research Center Fish Lab (5100277)</td>
<td>MTAF Grant (100%)</td>
<td>Design In Progress</td>
<td>2012</td>
<td>2014</td>
<td>$600,000</td>
<td>$600,000</td>
<td>10%</td>
<td>Finance and Facilities Committee approved $600K in May 2011.</td>
</tr>
<tr>
<td>Planetarium and Observatory (5100146)</td>
<td>Gift and Fund Raising (95%), Campus Funds: E&amp;G Funds (5%)</td>
<td>Construction in Progress</td>
<td>2014</td>
<td>2014</td>
<td>$5,200,000</td>
<td>$5,200,000</td>
<td>71%</td>
<td>Board approved $5.2M in July 2011</td>
</tr>
<tr>
<td>Field House/Memorial Gym Complex (5100255)</td>
<td>2012 Revenue Bond (63%), Gifts and Fund Raising (35%), E&amp;G Funds (2%)</td>
<td>Construction in Progress</td>
<td>2014</td>
<td>2014</td>
<td>$14,000,000</td>
<td>$15,665,000</td>
<td>74%</td>
<td>Board approved $14M in November 2011. Board approved additional $1M in March 2013. Finance Facilities &amp; Technology Committee approved $665K in March 2014.</td>
</tr>
<tr>
<td>**Advanced Structures and Composites Center Expansion (5100316)</td>
<td>U.S. EDA Grant (60%), E&amp;G Funds (0%), 2010 State Energy Bond (40%)</td>
<td>Design In Progress</td>
<td>2014</td>
<td>2015</td>
<td>$6,400,000</td>
<td>$8,000,000</td>
<td>6%</td>
<td>Board Approved $6.4M in November, 2012. Board approved $1.6M in March 2014.</td>
</tr>
<tr>
<td>**Estabrooke Repurposing &amp; Renovation and International Study Center (5100302)</td>
<td>Campus Funds: E&amp;G Funds (100%)</td>
<td>Construction Complete</td>
<td>2014</td>
<td>2014</td>
<td>$3,200,000</td>
<td>$4,200,000</td>
<td>90%</td>
<td>Board Approved $3.2M in January 2013; Board approved additional $1M in May in part in connection with the International Study Center, 2013.</td>
</tr>
<tr>
<td>**Morse Field Scoreboard Upgrade (5100364)</td>
<td>Gift and Fund Raising (100%)</td>
<td>Construction in Progress</td>
<td>2015</td>
<td>2015</td>
<td>$800,000</td>
<td>$800,000</td>
<td>82%</td>
<td>Finance/Facilities/Technology Committee approved $800K in January 2014.</td>
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<tr>
<td><strong>UMF</strong></td>
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<tr>
<td>Merrill Hall Heating Boiler Replacement (2100039)</td>
<td>Campus Funds: E&amp;G Funds (100 %)</td>
<td>Construction in Progress</td>
<td>2012</td>
<td>2014</td>
<td>$650,000</td>
<td>$710,666</td>
<td>95%</td>
<td>Board approved $650K in January 2013. Total current approved estimated to $71,666 to accurately report pre-existing feasibility costs.</td>
</tr>
<tr>
<td>Mantor Green Geothermal Well Field (2100046)</td>
<td>Campus Funds: E&amp;G Funds (100 %)</td>
<td>Construction in Progress</td>
<td>2013</td>
<td>2014</td>
<td>$1,550,000</td>
<td>$1,550,000</td>
<td>97%</td>
<td>Board approved $1.55M in January 2013.</td>
</tr>
<tr>
<td>Dearborn Gymnasium Renovation (2100035)</td>
<td>Campus Funds: E&amp;G Funds (100 %)</td>
<td>Design in Progress</td>
<td>2014</td>
<td>2014</td>
<td>$1,200,000</td>
<td>$1,200,000</td>
<td>2%</td>
<td>Board approved $1.2M in March 2014.</td>
</tr>
<tr>
<td><strong>UMFK</strong></td>
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<tr>
<td>Renewable District Biomass Heating Plant (3100026)</td>
<td>Federal Grant (88%), System Loan (12%)</td>
<td>Construction in Progress</td>
<td>2013</td>
<td>2014</td>
<td>$3,000,724</td>
<td>$5,500,000</td>
<td>69%</td>
<td>Board approved $3M in May 2012; Change in project cost to $5.5M approved by Board in September, 2013 and estimated completion updated to 2014.</td>
</tr>
<tr>
<td>* Forestry Geographic Info Sys Tech Labs/Nursing Lab Renov/Teleconf Ctr Upgrades (3100029 3100030 3100031)</td>
<td>2013 Lab &amp; Class State Bond (0%)</td>
<td>Design in Progress</td>
<td>2014</td>
<td>2015</td>
<td>$1,200,000</td>
<td>$1,200,000</td>
<td>0%</td>
<td>Board approved $1.2M in May 2014.</td>
</tr>
<tr>
<td>Campus, Project Name (Project ID)</td>
<td>Funding Source(s) &amp; each source’s share of expenditures to date</td>
<td>Status</td>
<td>Original Estimated Completion</td>
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</tr>
<tr>
<td>UMM ** Powers Hall Exterior and Masonry (4100026)</td>
<td>2013 Lab &amp; Class State Bond (0%), Campus Funds: E&amp;G Funds (100%)</td>
<td>Design in Progress</td>
<td>2014</td>
<td>2014</td>
<td>$680,000</td>
<td>$1,508,221</td>
<td>3%</td>
<td>Finance &amp; Facilities Committee Approved $680K in January, 2014. Board approved increase to $1,508,221 in May 2014.</td>
</tr>
<tr>
<td>Science Building Laboratory Upgrades (4100027)</td>
<td>2013 Lab &amp; Class State Bond (0%) E&amp;G Funds (100%)</td>
<td>Design in Progress</td>
<td>2014</td>
<td>2014</td>
<td>$600,000</td>
<td>$600,000</td>
<td>7%</td>
<td>Finance &amp; Facilities Committee Approved $600K in January, 2014.</td>
</tr>
<tr>
<td>Folsom/Pullen Science Classroom &amp; Laboratory Upgrades (7100009)</td>
<td>2013 Lab &amp; Class State Bond (0%)</td>
<td>Design in Progress</td>
<td>2015</td>
<td>2015</td>
<td>$1,200,000</td>
<td>$1,200,000</td>
<td>0%</td>
<td>Board approved $1.2M in March 2014.</td>
</tr>
<tr>
<td>USM Gorham Central Heat Plant Replacement (6100196)</td>
<td>Campus E&amp;G Funds (100%)</td>
<td>Construction Complete</td>
<td>2013</td>
<td>2014</td>
<td>$2,700,000</td>
<td>$2,700,000</td>
<td>96%</td>
<td>Board approved $2.7M in November, 2012.</td>
</tr>
<tr>
<td>Gorham Water Tank Refurbishment (6100207)</td>
<td>Campus E&amp;G Funds (100%)</td>
<td>Construction Complete</td>
<td>2013</td>
<td>2014</td>
<td>$625,000</td>
<td>$625,000</td>
<td>72%</td>
<td>Finance &amp; Facilities Committee Approved $625K in November, 2012.</td>
</tr>
<tr>
<td>International Study Center (6100225)</td>
<td>Campus E&amp;G Funds (100%)</td>
<td>Construction in Progress</td>
<td>2013</td>
<td>2014</td>
<td>$800,000</td>
<td>$800,000</td>
<td>74%</td>
<td>Board approved $800K in May, 2013.</td>
</tr>
<tr>
<td>* Payson Smith Lab Renovation (6100236)</td>
<td>2013 Lab &amp; Class State Bond (0%)</td>
<td>Design in Progress</td>
<td>2014</td>
<td>2015</td>
<td>$1,250,000</td>
<td>$1,250,000</td>
<td>0%</td>
<td>Board approved $1.25M in May 2014.</td>
</tr>
<tr>
<td>* Bailey Hall Lab Renovation (6100237)</td>
<td>2013 Lab &amp; Class State Bond (0%)</td>
<td>Design in Progress</td>
<td>2014</td>
<td>2015</td>
<td>$1,250,000</td>
<td>$1,250,000</td>
<td>0%</td>
<td>Board approved $1.25M in May 2014.</td>
</tr>
<tr>
<td>* LAC Nursing Lab Renovation (6100238)</td>
<td>2013 Lab &amp; Class State Bond (0%)</td>
<td>Design in Progress</td>
<td>2014</td>
<td>2015</td>
<td>$800,000</td>
<td>$800,000</td>
<td>0%</td>
<td>Board approved $800K in May, 2014.</td>
</tr>
<tr>
<td>* Science Building Lab Upgrade (6100240)</td>
<td>2013 Lab &amp; Class State Bond (0%)</td>
<td>Design in Progress</td>
<td>2014</td>
<td>2015</td>
<td>$700,000</td>
<td>$700,000</td>
<td>0%</td>
<td>Board approved $700K in May, 2014.</td>
</tr>
</tbody>
</table>

Explanatory Notes:
* Project is new as of this report.
** Details of this project include updates since the last report.
*** This project has been completed since the last report and is not expected to appear on the next report.

Funding source(s) reflects primary source(s) for project. Calendar Year unless otherwise noted. Percentage expended reflects total expended as of May 31, 2014, as a percentage of the current approved project estimate.
AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Cell Tower Lease Approval, USM

2. **INITIATED BY:** Norman L. Fournier, Chair

3. **BOARD INFORMATION:**

   **BOARD ACTION:** X

4. **BACKGROUND:**

   The University of Southern Maine requests authorization pursuant to Board of Trustees Policy 802 to lease tower space of approximately 325 square feet on the top of the water tower and approximately 2,500 sq. ft. of ground space adjacent to the water tower located at 52 University Way on the Gorham Campus to Portland Cellular Partnership.

   Board Policy 802 requires approval of the Trustees whenever a lease exceeds 10 years. This has a potential term of 25 years including optional renewals. This lease, with total lease payments of approximately $1.01 million if all optional renewals are exercised, also exceeds the value threshold which requires Board consideration.

   Portland Cellular Partnership is a Maine general partnership d/b/a Verizon Wireless and would be entering the lease for the transmission and reception of communications signals for an initial term of five years with four optional renewal terms of five years each. Portland Cellular Partnership is understood to be entering this lease in connection with use of the facility by Verizon Wireless.

   Portland Cellular Partnership will pay the University of Southern Maine an annual fee of $30,000 for the initial term. Portland Cellular Partnership will pay for the electrical consumption for the installed equipment. In addition, Portland Cellular Partnership will pay the University of Southern Maine a one-time fee of $8,000 for the loss of two (2) parking spaces. The University intends to replace these spaces at another location. For the optional renewal periods, the annual fee will be increased by 15 percent from the rent paid during the previous term.

   Currently, the University of Southern Maine leases space for communication towers at six different sites at Portland and Gorham locations, including two already on top of the Water Tower. The average annual rent received from these locations is $22,983.

   There will be no increased University operating cost for this installation.
5. TEXT OF PROPOSED RESOLUTION:

That the Finance, Facilities and Technology Committee forward this item to the Consent Agenda at the July 21, 2014 Board of Trustees meeting for approval of the following resolution:

That the Board of Trustees authorizes the leasing of space at the Water Tower at 52 University Way on the Portland Campus to Portland Cellular Partnership for an initial period of up to five years with the option to renew for as many as four additional periods of up to five years each. The final terms, including rate, associated costs and other terms, shall be negotiated by the University of Southern Maine in the best economic interest of the University, subject to review and approval by the University of Maine System Vice Chancellor of Finance and Administration and General Counsel.
AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Authorization to dispose of Stone House, USM

2. **INITIATED BY:** Norman L. Fournier, Chair

3. **BOARD INFORMATION:**
   **BOARD ACTION:** X

4. **BACKGROUND:**

The University of Southern Maine requests permission pursuant to Board of Trustee Policy 802 to dispose of the property at 642 Wolfe’s Neck Road, Freeport, Maine, consisting of an approximately 4 acre lot and a 10,000 square foot building known as the Stone House. Policy 802 requires approval of the Board of Trustees for the sale or other transfer of real property whenever the value is greater than $50,000. This parcel and structure are expected to exceed that threshold.

The Stone House is located approximately 22.5 miles from USM’s Portland campus. The primary use of the property is for 40 days a year between June 15th and October 15th, and then again during the month of January. The total number of people utilizing the property over the 40 days of use is approximately 250. The primary uses are for an MFA in Creative Writing, the Stone Coast Writers’ Conference and a summer Book Arts program. These programs can be relocated to a campus location or to suitable off campus sites.

As with Portland Hall (sale approved by the Board of Trustees at the July 2007 meeting) and 68 High Street (sale approved by the Board of Trustees at the May 2009 meeting), the Stone House is under-utilized and needs extensive renewal. The Stone House is the largest USM facility identified by Sightlines as having a low utilization rate and being in poor condition. Because USM’s over-abundance of buildings that are in the “over fifty year old” renovation age category, which includes this building, and the much higher than normal levels and rate of accrual of deferred maintenance such buildings demand, USM is taking steps to reduce the number of square footage in this age category.

This is the third major building in the last five years to be disposed of by a sale. The National Landmark Home was designed by renowned Maine architect John Calvin Stevens as a summer residence and occupies a location with deeded water views of both the Harraseeket River and Casco Bay.
The building and property have significant deferred maintenance and major infrastructure improvements needed. Though in working order for a seasonal house designed more than 95 years ago, it needs extensive work to make it suitable as a year round conference center or meeting location. The estimated amount of maintenance and infrastructure work is approximately $8,500,000. Additionally, a property of this type as a University facility would require an annual operation/maintenance budget of between $75,000 and $110,000, after all systems and the building were restored so that it would not again fall into disrepair.

The property is limited, by deed restrictions and zoning requirements. Changes to the exterior of the house are limited by deed and, because of the environmentally and regulatory sensitive nature of the land, care will need to be taken when working on the septic and water systems. Additionally, because of the history of the house and the close association with the Wolfe’s Neck Farm Foundation, care must be taken to ensure the property maintains the special characteristics of such a diverse piece of property (ecology, conservation, marine life, land use planning, and coastline development).

The April 23, 1984 (amended August 16, 1985) Memorandum of Agreement between Mrs. Smith, the American Farm Land Trust, and the University of Southern Maine states that the Board of Directors of the Wolfe’s Neck Farm Foundation shall direct appropriate disposition of the house. Upon approval of the necessary resolution by the Board of Trustees, USM will work with the Wolfe’s Neck Farm Foundation to do so in a manner that secures the best return while preserving the uniqueness of the house and property. USM will regularly report on the sale’s status.

The University would seek two appraisals of the property to help determine its value. The Town of Freeport Assessor’s Office values the property at $1.15 million.

5. **TEXT OF PROPOSED RESOLUTION:**

That the Finance, Facilities and Technology Committee forward this item to the Consent Agenda at the July 21, 2014 Board of Trustees meeting for the following resolution:

That the Board of Trustees authorizes the sale of property located at 642 Wolfe’s Neck Road, Freeport, Maine, subject to review and approval of the Treasurer and General Counsel of the final terms and conditions, with the proceeds to be used for purposes that support the University of Southern Maine’s growth into a sustainable urban Metropolitan University.

06/20/2014
AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Science Lab Renovations, UMF

2. **INITIATED BY:** Norman L. Fournier, Chair

3. **BOARD INFORMATION:**
   **BOARD ACTION:** X

4. **BACKGROUND:**

The University of Maine at Farmington requests approval to spend up to $1.377 million, including $1.2 million in General Obligation Bond funds approved by voters in November 2013 and approximately $177,000 in grants and other funds, to renovate science laboratory space in Preble Hall and Ricker Hall. These laboratory spaces are the heart of the science facilities at UMF and include natural sciences, genetics and computer sciences.

This request is pursuant to Board Policy 701 which requires projects with a total cost of more than $500,000 to be considered by the Board of Trustees or its Finance, Facilities and Technology Committee. In this case, the request is to approve and to forward this matter to the consent agenda of the Board of Trustees.

This authorization will allow the renovation of up to ten laboratories within the facilities to improve the learning environment and the infrastructure on which the facilities depend.

Approximately $400,000 will be invested in existing space in Preble Hall, a multi-story, steel and masonry building constructed in 1963. The project consists of the renovation of two general classrooms and one Anatomy and Physiology classroom/laboratory on the first floor with a total area of approximately 2,007 square feet. The renovation will include flooring, ceilings, wall coverings, electrical, projectors and boards, life safety, windows and doors, furniture, and ADA accommodations.

Approximately $977,000 will be invested in Ricker Hall, a multi-story, steel and masonry building constructed in 1962. The project consists of the renovation of one Biology classroom/laboratory on the second floor, one Geology computer laboratory and four Geology classrooms/laboratories on the third floor with a total area of approximately 4,556 square feet. The renovation will include flooring, ceilings, wall coverings, electrical, projectors and boards, life safety, windows and doors, furniture, and ADA accommodations.
This project does not increase facility space or the use of the space. Any change in operating costs is expected to be negligible. Construction is expected to be complete by September 2015.

5. **TEXT OF PROPOSED RESOLUTION:**

That the Finance, Facilities and Technology Committee forward this item to the Consent Agenda at the July 21, 2014 Board of Trustees meeting for approval of the following resolution:

That the Board of Trustees authorizes the expenditure of up to $1,377,000, including up to $1.2 million in General Obligation Bond funds, $120,000 from grant funds and $57,000 from campus reserves, to renovate Preble Hall and Ricker Hall science laboratories.
AGENDA ITEM SUMMARY

1. NAME OF ITEM: Natural Gas Central Heating Plant, UMF

2. INITIATED BY: Norman L. Fournier, Chair

3. BOARD INFORMATION: BOARD ACTION: X

4. BACKGROUND:

This is a request pursuant to Board of Trustees Policy 701 and other applicable policies to contract for the construction of a natural gas-fired central heating plant on Farmington campus to consume natural gas in lieu of heating oil.

At its January 6, 2014 Committee meeting, the Finance, Facilities and Technology Committee recommended approval of UMF entering into an agreement to provide natural gas to the campus. This recommendation was moved to the consent agenda at the January 29, 2014 Board of Trustee meeting and accepted. A copy of that prior agenda item is attached. The minutes from the Board meeting read:

“The Board of Trustees approved the recommendation to authorize the University of Maine System, acting through the University of Maine at Farmington to enter such agreements as may be necessary but not to exceed a term of 15-years to secure the delivery of natural gas to the campus and the facility improvements on campus necessary to consume that energy. The final terms, including rate, associated costs and other terms, shall be negotiated by the University of Maine at Farmington in the best economic interest of the University, subject to review and approval by the University of Maine System Vice Chancellor of Finance and Administration and General Counsel.”

Pursuant to this earlier approval, The University of Maine at Farmington now hereby requests Board approval to increase the scope and approved maximum expenditure for the approved Natural Gas Conversion project on the Farmington campus, financed through System resources or outside third-party financers.
Recent Progress

Following the Board approval, UMF issued Notice of Intent letters with Summit Natural Gas and Trane Energy Services from the outcome of UMS RFP 11-13. Summit Natural Gas has made a commitment to have natural gas to the Farmington area by October 2015, and Trane Energy Services has provided a gap-analysis of the campus as well as high-level cost proposals for alternate heating scenarios for the campus.

Originally, UMF was looking to expend between $2M-$4M to convert 46 individual boilers/burners on the campus to accept natural gas. Although this initial project was expected to save the University $4M in fuel cost savings over ten years, have a simple payback of less than five years, and to generate a positive operating cash flow potentially as soon as its first year of operation, the project did not address the six existing steam plants on campus that are beyond the end of their useful life and are not able to be retrofitted to accept natural gas fuel due to their age and construction. Aside from steam system inefficiency, these existing systems are in dire need of replacement in the next three years, at an estimated cost of $5M.

As UMF got deeper into the design stage, it became clear that the campus would not get the full and universal benefit of changing to natural gas from heating oil by not accommodating these steam plant buildings. In addition, UMF would still have approximately 34 individual heating plants to maintain, which is labor intensive to yearly operations and maintenance budgets. If UMF does not convert these steam plants, it will have a mixture of heating systems to maintain as well as old and new technology. Converting these six facilities to modern hydronic heating systems is projected to increase their overall efficiency by 28% and provide a simple payback of 7.9 years on these systems alone.

In light of the infrastructure needs, UMF went back to the RFP submissions and reconsidered a central heating plant option that would service the entire campus. Aside from the financial advantages further discussed below, there are several tangible qualitative advantages to this option, as follows:

- **Dual-fuel.** The central plant option provides for dual-fuel capacity. Not all buildings can accept dual-fuel burner retrofits on existing equipment. This gives the University flexibility to select fuel based on commodity prices and have a backup fuel in the event of an outage or service interruption.
- **Capital equipment.** Centralizing the heating plant will reduce the equipment unit count on campus, resulting in less administrative management of capital assets.
- **Existing fuel storage.** The existing, mostly underground fuel tanks can be removed with the central heating plant option. This reduces risk of leakage, yearly DEP-mandated administrative reporting, and maintenance.
- **Future campus buildings.** A centralized heating plant and distribution system will provide capacity to accommodate future building projects on campus. As the heating system will be provided already, the capital construction costs can be reduced, as they will not need to include a separate heating system.

- **Emissions.** The central plant’s carbon emissions are projected to be less than the sum-total of the entire individual heating plants burning natural gas.

- **Biomass Expansion.** UMF’s energy team, made up of faculty, staff, students and community members is very interested in a biomass option for heating the campus. The central heating plant would allow for the addition of a biomass boiler plant in the future.

**Financial Analysis and Findings**

Given the potential increased project conversion cost, the project team elected to go back to the results of the RFP and evaluate all of the options on a simple payback basis. UMF engaged third-party energy consultants to provide an impartial analysis of the various options. Their cost model includes current commodity rates, inflation rates, available incentives, FTE reductions, efficiency gains, and updated capital project cost estimates from Trane. (Attachment A)

**Payback.** The results of this numerical analysis show that the original project (Option 2) still has the quickest simple payback, but ignores the approximate $5M in steam conversions that will need to be otherwise funded. Choosing to remedy the steam conversion issue with this project, the numbers show that converting all of the steam systems (Option 1) or constructing a central heating plant (Option 3 or 4) provides nearly equal payback.

**Capital Investment.** The revised project is projected to have an approximate cost of $11M (depending on final design), save the University approximately $8.6 million in fuel costs over ten years, and, depending on final costs, have a simple payback of less than 9.89 years. **Modeling has shown that this project would be entirely self-funding over 15 years with an estimated positive $3.3 million cash flow in year 15.** The final debt service will be determined by overall budgetary and other strategic considerations and matching the life of the asset.

**Efficiency Improvements.** The efficiency improvements over the entire campus associated with the conversion to natural gas are anticipated to reduce our thermal energy consumption by the equivalent of 106,800 gallons of No. 2 Oil. The savings created will allow UMF to achieve badly needed capital improvements, to reduce our ongoing operations and maintenance costs, and to have a fuel-flexible central heating plant – all paid for through a project that is structured to be entirely self-funding.

**Building Area.** UMF acknowledges that construction of a Central Plant will add approximately 7,500gsf (50’ x 150’) to the campus footprint. At this time, UMF has identified approximately 4,000gsf to remove from the campus within the next two
years. However, there may be additional reductions that will occur when the campus master plan is complete.

**Financing.** Multiple financing options have been considered including third-party private and direct bonding options. Final financing will be determined in consultation with the University of Maine System Director of Finance subject to approval by the Treasurer. The likely choice is revenue bonding by the University and, in that case, the request for that specific authority would be brought before the Trustees as required for approval at a future meeting apart from this project approval. The intent is to issue debt not to exceed the useful life of the asset. Once the financing is fully repaid, cash flow will be increased even more for the balance of the 40-year anticipated lifespan of the central heating plant equipment.

**Recommendation**

UMF is recommending a change of focus from the original campus-wide natural gas distribution project, and instead constructing a natural gas-fired central heating plant with a hot water distribution system on campus. A central heating plant will allow UMF to be more flexible in the future when it comes to commodity cost, having the ability to easily switch between natural gas and oil (and biomass solid fuel in the future). As previously described, this agreement is not expected to be a traditional design, bid, build construction agreement but rather is expected potentially to involve an energy services agreement or other alternative contracting methods. In part, this is because the natural gas pipeline is yet to be built and the agreement will involve the University benefiting in facility infrastructure improvements on campus while paying for those improvements from its energy savings rather than as an up-front capital investment of University funds.

5. **TEXT OF PROPOSED RESOLUTION:**

That the Finance, Facilities and Technology Committee forward this item to the Consent Agenda at the July 21, 2014 Board of Trustees meeting for approval of the following resolution:

That the Board of Trustees authorizes the University of Maine System, on behalf of the University of Maine at Farmington, to increase the scope and approved maximum expenditure of $11M to build a central plant and distribution system that is dual-fuel, which is natural gas with a #2 oil backup, with the capacity to add a biomass boiler after five years. The final term, including rate, associated costs and other terms, shall be negotiated by the University of Maine at Farmington in the best economic interest of the University, subject to review and approval by the University of Maine System Treasurer and General Counsel.

06/27/2014
AGENDA ITEM SUMMARY

1. **NAME OF ITEM:** Natural Gas Conversion, UMF

2. **INITIATED BY:** James H. Page, Chancellor

3. **BOARD INFORMATION:**
   **BOARD ACTION:** X

4. **BACKGROUND:**

   This is a request pursuant to Board of Trustee Policy 701 and other applicable policies to contract for the delivery of natural gas to the University of Maine at Farmington and to enter other such agreements as may be necessary to make the infrastructure improvements on campus to consume that energy in lieu of heating oil.

   This project is estimated by outside energy specialists to save the University $4 million over ten years, to have a simple payback of less than five years, and to generate a positive operating cash flow potentially as soon as its first year of operation, with the final fiscal impact to be determined by the final plans and agreements for this project. The option being pursued by the University also was determined by third-party energy advisors to have the highest estimated net present value.

   This request is a follow-up to the prior approval granted by Trustees to proceed with a non-traditional public solicitation for the conversion of UMF and other campuses which currently use heating oil to instead use more cost-effective energy sources. A copy of that prior agenda sheet is attached.

   As previously described, this agreement is not expected to be a traditional design, bid, build construction agreement but rather is expected potentially to involve an energy services agreement or other alternative contracting methods. In part, this is because the natural gas pipeline is yet to be built and the agreement will involve the University benefiting in facility improvements on campus while paying for those improvements from its energy savings rather than as an up-front capital investment of University funds.

   The total facility investments to be made by a third-party on campus are expected to be in the $2 million to $4 million range. While the University does not currently expect to expend those funds directly or up-front, Trustee approval is being sought as described in the prior agenda sheet because of the overall scale of the initiative.
This request follows a publicly-advertised solicitation in which the University selected Summit Natural and Trane U.S. Inc. to carry out this project at UMF. Summit’s role will be focused on providing natural gas service to the campus. Trane’s role will be focused on the work needed to convert University facilities to use natural gas instead of heating oil.

In addition to the cost savings, the use of natural gas is estimated to reduce UMF’s carbon emissions by approximately 28 percent per every unit of heating oil that is displaced by natural gas. This is the equivalent of removing approximately 60 passenger cars from the road for every 100,000 gallons of heating oil that is displaced by natural gas, according to published EPA carbon equivalency calculators.

The Finance, Facilities and Technology Committee approved this recommendation to be forwarded to the Consent Agenda for Board of Trustees approval.

5. **TEXT OF PROPOSED RESOLUTION:**

That the Board of Trustees approve the recommendation to authorize the University of Maine System acting through the University of Maine at Farmington to enter such agreements as may be necessary but not to exceed a term of 15-years to secure the delivery of natural gas to the campus and the facility improvements on campus necessary to consume that energy. The final terms, including rate, associated costs and other terms, shall be negotiated by the University of Maine at Farmington in the best economic interest of the University, subject to review and approval by the University of Maine System Vice Chancellor of Finance and Administration and University Counsel.
Cash Flow Tables List:
1) Distributed Gas - Full Boiler Replacement or Burner Conversion & Steam to HW Conversion
2) Distributed Gas - Full Boiler Replacement or Burner Conversion Only (No Steam to HW Conversions )
3) Trane Heating Plant - Dual Fuel, natural gas & #2 oil backup
4) Trane Heating Plant - Tri-fuel, natural gas, #2 oil, & biomass: switch to biomass after 5 years
5) Steam to HW Conversion Only - fuel usage only for affected buildings
1a) Distributed Gas - Full Boiler Replacement or Burner Conversion & Steam to HW Conversion - no GHG incentive
3a) Trane Heating Plant - Dual Fuel, natural gas & #2 oil backup - no GHG incentives
4a) Trane Heating Plant - Tri-fuel, natural gas, #2 oil, & biomass: switch to biomass after 5 years - no GHG incentives
3b) Trane Heating Plant - Dual Fuel, natural gas & #2 oil backup - no steam to HW CAPEX
4b) Trane Heating Plant - Tri-fuel, natural gas, #2 oil, & biomass: switch to biomass after 5 years - no steam to HW CAPEX

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<tr>
<th>Cash Flows - Summit Inctv Adj.</th>
<th>CAPEX</th>
<th>Payback</th>
<th>FTE* Reduction</th>
<th>Notes</th>
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<td>2 for 1st 5 years; 1 thereafter</td>
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*FTE cost set at $44,000/year
AGENDA ITEM SUMMARY

1. NAME OF ITEM: Compressed Natural Gas Conversion, UMM
2. INITIATED BY: Norman L. Fournier, Chair
3. BOARD INFORMATION: BOARD ACTION: X
4. BACKGROUND:

This is a request pursuant to Board of Trustees Policy 701 and other applicable policies to contract for the delivery of compressed natural gas to the University of Maine at Machias and to enter other such agreements as may be necessary to make the infrastructure improvements on campus to consume that energy in lieu of heating oil.

This project is estimated by outside energy specialists to save the University $2.58 million over ten years, to have a simple payback of 7.6 years, and to generate a positive cash flow potentially as soon as the first full year of operation, with the final fiscal impact to be determined by the final plans and agreements for this project. The option being pursued by the University also was determined by third-party energy advisors to have the highest estimated net present value.

This request is to follow-up to the prior approval granted by Trustees to proceed with a non-traditional public solicitation for the conversion of UMM and other campuses which currently use heating oil, to instead use more cost-effective energy sources. A copy of that prior agenda item is attached.

As previously described, this agreement is not expected to be a traditional design, bid, build construction agreement but rather involves a fuel purchase agreement (FPA) with alternative contracting methods. The cost proposal of $1.8M distributed gas system includes a decompression station, distributed piping, boiler replacements, and building conversion work. The project will provide a dual-fuel capability. Multiple financing options have been considered including third-party private and direct bonding options. Final financing will be determined in consultation with the University of Maine System Director of Finance subject to approval by the Treasurer. The likely choice is revenue bonding by the University and, in that case, the request for that specific authority would be brought before the Trustees as required for approval at a future
meeting apart from this project approval. The intent is to issue debt not to exceed the useful life of the asset.

This request follows a publicly-advertised solicitation in which UMM selected XNG to carry out the project. XNG will provide the FPA for the first five years and XNG will sub-contract with Trane to carry out the infrastructure project.

In addition to the cost savings, the use of natural gas is estimated to reduce UMM’s carbon emissions by approximately 28 percent per every unit of heating that is displaced by natural gas.

5. TEXT OF PROPOSED RESOLUTION:

That the Finance/Facilities/Technology Committee forward this item to the Consent Agenda at the July 21, 2014 Board of Trustees meeting for approval of the following resolution:

That the Board of Trustees authorize the University of Maine System acting through the University of Maine at Machias to enter such agreements as may be necessary but not to exceed a term of 15-years to secure delivery of compressed natural gas to the campus and facility improvements on campus necessary to consume that energy. The final terms, including rate, associated costs and other terms, shall be negotiated by the University of Maine at Machias in the best economic interest of the University, subject to review and approval by the University of Maine System Treasurer and General Counsel.

06/27/2014
AGENDA ITEM SUMMARY

1. NAME OF ITEM: Multi-Campus Power Purchase Authorization
2. INITIATED BY: Norman L. Fournier, Chair
3. BOARD INFORMATION: BOARD ACTION: X
4. BACKGROUND:

The University of Maine System under Policies 701 and 801 is pursuing new thermal energy agreements at as many as four campuses through the Systemwide Energy Team.

The initiative specifically seeks to use alternative contracting approaches to assist multiple campuses in converting existing heating oil consumption to economically advantageous natural gas or related products even in the absence of a natural gas pipeline. Using a thermal energy agreement approach will allow private partners, rather than the University, to make the initial capital investments that may be necessary to accomplish the conversion.

The core goals are to maximize energy savings and to minimize the need for initial capital investment by the University. Additional benefits, such as an improved environmental footprint, also are possible. Current expectations indicate the project could cost-effectively displace as much as 200,000 gallons of heating oil.

This initiative ultimately may generate agreements that involve capital projects valued at more than $500,000 and leases sufficient in scope to require Board review. In certain circumstances, the Board would approve such a capital project before it is advertised for public bidding. In this case, the contracting process is different and information sufficient to present any particular project to the Board will not be available until after the initiative solicits proposals from private sector partners. Consequently, approval to proceed to that point is being requested.

The campuses directly involved at this project are the University of Maine at Presque Isle, the University of Maine at Machias, the University of Maine at Augusta and the University of Maine at Farmington.

The University of Southern Maine and the University of Maine already use or are in the process of converting to natural gas or related products. The University of Maine at Fort Kent is in the process of converting nearly all of its energy to biomass. All campuses have participated in the dialogue that has resulted in the initiative coming forward.
5. **TEXT OF PROPOSED RESOLUTION**

That the Finance/Facilities Committee forward this item to the Consent Agenda for Board of Trustee approval at its November 4-5, 2012 meeting to authorize the following resolution:

That the Board of Trustees authorizes the thermal energy initiative to proceed in principle contingent on the return to the Board of any specific project that would warrant further specific consideration by the Board per Policy 701 or 801.

10/19/2012
AGENDA ITEM SUMMARY

1. NAME OF ITEM: Data Center Capacity and Security Projects Introduction

2. INITIATED BY: Norman L. Fournier, Chair

3. BOARD INFORMATION: X BOARD ACTION:

4. BACKGROUND:

This agenda item introduces a project which starts immediately and will be reported on to the Finance, Facilities and Technology Committee as part of the IT Projects over $250,000. This project combines initiatives to expand the data center’s capacity and information security enhancements recommended by Presidio. The data center expansion is necessary in order to meet goals outlined in Information Technologies’ Administrative Review. The Finance, Facilities, and Technology Committee and Audit Committee have already acknowledged the need to proceed with the information security initiatives.
Status Update

Data Center Capacity and Security Projects

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<td>Budget status:</td>
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<tr>
<td>Schedule status:</td>
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Overview

This project consolidates several initiatives which impact the data centers. The projects are being combined for coordination and management of the projects collectively. These initiatives will build upon the facilities renovation of the data centers in Orono and Portland and will respond to the information security recommendations provided by Presidio.

The data center expansion is funded at $250,000. It will provide support for additional servers and data storage equipment in the Orono data center in order to consolidate current campus-based services as outlined in the IT Transformation plan. The project provides two additional 10 Gigabit per second switches, an additional 16 terabytes of storage and five server blades are needed.

The information security projects funded at $410,000 include secure network engineering and boundary controls; configuration and account management; and centralized logging.

<table>
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<th>Initiation Date</th>
<th>Sponsor</th>
<th>Original Estimated Completion Date</th>
<th>Current Estimated Completion Date</th>
<th>Estimated Budget</th>
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Status

This project is at the initiation phase.

Risks

None identified at this time.
Capacity Expansion Actions

The renovation of the two data centers, Orono and Portland, was a huge step towards being able to consolidate the University’s computer servers and data storage needs into robust, reliable facilities. The renovations refreshed the mechanical systems adding power and cooling capacity along with physical security to both facilities. However, they did not outfit the data centers to support additional servers and data storage equipment beyond what already existed in the data centers previous to the renovations.

We need to expand the amount of available compute and storage capacity to consolidate current campus based services into the Orono data center. To support and house these additional servers and storage systems, additional cabinets, Power Distribution Units (PDUs), and network equipment have been purchased over the past 18 months to prepare for the consolidation. We have also moved two server chassis and multiple server blades purchased by UMA to Orono. We've invested $87K from Networkmaine's E&G budget to buy this equipment. The cost of the UMA provided server chassis / blades was $50K.

The server chassis/blades mentioned above along with existing storage capacity should be sufficient to move systems currently housed at UMA. USM services will continue to be served out of the Portland data center on the existing platforms. However, we are to the point where big ticket items need to be purchased in support of UMF, UMFK, UMM UMPI and to some unknown extent, UMaine.

We estimate that we need at least 16 terabytes of storage and 5 server blades to get started with the consolidation of campus based services to the data center in Orono. I do not yet know what we will need in total as the other US:IT groups have not had the opportunity gather the information they need to provide that level of detail.

Additional funding needed:

$ 30K - 2 10 Gbps network switches
$ 85K - 5 Server blades with VMWare licensing
$135K - Data Storage (16 terabytes)

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$250K Total
Information Security Actions

The security portion of this project involves response actions to the majority of the recommendations addressed by Presidio in their review of the Data Center Information Security. The initiatives from the UMS plan that appropriate for completion in FY 15 can be grouped in major categories that align with areas of risk: 1) secure network engineering and boundary controls, 2) configuration management, and 3) centralized logging.

Secure Network Engineering and Boundary Controls

The emphasis with these initiatives is to segment the network within the data center into zones to limit the attack surface. This is done through several measures that each contributes to a defense in depth response: end-user VPN, web proxy server, management firewall and VPN, network firewall and the secure network engineering.

A virtual private network (VPN) extends a private network across a public network. As a prerequisite to a firewall, the VPN allows users and administrators a secure method to access non-public servers located behind firewalls. Use of VPN will allow UMS to place servers in protected zones rather than on publicly reachable addresses to prevent hackers from having direct access to them from off-network.

A proxy server acts as an intermediary between a user on the Internet seeking resources and the server that provides the resources. This will filter web traffic and prevents direct connection external users and protected servers on a data center network and facilitates the use of private address space for servers that need Internet access for software updates.

This “out-of-band” separate firewall solution will be used to administer security infrastructure components. This will limit access to administrative functions of applicable devices to small subset of IT staff and in essence give the highest security to those systems that protect other systems.

A high-availability firewall will control high-speed network traffic based on applied rule sets. The firewall will filter the traffic and allow only bona fide packets to pass through. This will facilitate the implementation of multiple zones that will be developed in the secure network engineering phase. The network firewall will result in base-level of protection that is available in most data centers.

Configuration and Account Management

The emphasis with these areas is to ensure that machines are built and managed to a consistent standard that minimizes exposure to risk and to actively manage accounts that are assigned to people in the university and as they leave the university. Most of this work is practice-based.

In addition to configuration management processes, a unified production-oriented configuration management software tool will be put in place. It is estimated that at least 500 nodes (licenses) can be obtained. The will drive a baseline configuration, result in adherence to configuration standards, and ultimately improve the efficiency of deployed configuration changes.

Centralized Logging

A centralized log management solution ensures that critical systems are logged, and puts the logs in one central place protecting the log files from systems that might be compromised – a best practice in logging and information security. This will provide an opportunity for event monitoring and correlation and may support PCI log requirements.
Funding needed:

$ 40K - End-user VPN
$ 10K - Web proxy server
$ 10K - Management firewall and VPN
$250K - Network firewall and secure network engineering
$ 50K - Configuration management
$ 50K - Centralized logging

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$410K Total
AGENDA ITEM SUMMARY

1. NAME OF ITEM: Approval to Complete Upgrade of IT Telecommunications Services, UM

2. INITIATED BY: Norman L. Fournier, Chair

3. BOARD INFORMATION: BOARD ACTION: X

4. BACKGROUND:

University Services: Information Technology is requesting approval to expend up to $2,100,000 to complete the upgrade of the University of Maine Information Technologies telecommunications services.

In 2009, the University of Maine began the implementation of the University of Maine Information Technologies Telecommunications Services Roadmap 2010–2015. The University of Maine’s telephone system has been in continuous service since December 6, 1991. In January of 2009, the vendor went bankrupt leaving the University of Maine with an aged system and without support. The combination of technological changes, loss of manufacturer support, and the age of the hardware in service at the University of Maine necessitated updating the technology.

As of this writing US:IT has installed 1,380 IP telephones in 42 buildings and portions of six more on the University of Maine campus. In addition, 61 VoIP telephones have been installed at the Darling Marine Center in Walpole and 58 VoIP telephones have been installed at the Hutchinson Center in Belfast.

Approximately 1,300 digital telephones and approximately 800 analog telephone ports remain to be replaced at the University of Maine. It is recommended that this process proceed as outlined in the attached University Services: Information Technologies’ University of Maine Voice Services Roadmap 2014–2016 (June 2014).

Project expenses will include the upgrade of the local area network (LAN) wiring infrastructure in some of these buildings as well as the purchase of telephones, licenses, LAN switches, and power protection to serve these remaining locations. University Services estimates that the maximum expenditure to complete the networking infrastructure upgrade and telephone system replacement will be $2,100,000.
The University of Maine has a telecommunications reserve fund containing $1,600,000 to support this project. The work will be prioritized and managed to the reserve fund amount. However we will be looking for other funding opportunities such as grants to fund the remainder of the project, as well as reduce spending from the reserve account.

**TEXT OF PROPOSED RESOLUTION:**

That the Finance, Facilities and Technology Committee forward this item to the Consent Agenda at the July 21, 2014 Board of Trustees meeting for approval of the following resolution:

That the Board of Trustees authorize the University of Maine to expend up to $2.1 million to complete the upgrade of the University of Maine Information Technologies telecommunications services subject to review and approval of final terms and conditions by the Treasurer and General Counsel.
University Services: Information Technologies

University of Maine Voice Services Roadmap 2014 – 2016 Summary (June 18, 2014)

The University of Maine Information Technologies Telecommunications Services Roadmap 2010 – 2015 (Version II, December 15, 2009) presented the University with a plan to replace 900 digital telephones in thirty-five buildings with Voice-over-Internet Protocol (VoIP) telephones by the end of calendar year 2015. As of this writing US:IT has installed 1,380 IP telephones in 42 buildings and portions of six more on the University of Maine campus. In addition, 61 VoIP telephones have been installed at the Darling Marine Center in Walpole and 58 VoIP telephones have been installed at the Hutchinson Center in Belfast.

The replacement of most of the remaining 1,300 digital telephones with Cisco VoIP telephones will need to follow a mixed strategy of cable replacement and cable re-use along with the conversion of some digital telephones to analog telephones. The telephones to be replaced are in 58 buildings ranging from the Small Animal Facility with one telephone to Chadbourne Hall with 100 telephones. There is an average of twenty-three telephones per building.

US:IT recommends replacing communications cabling in fourteen buildings which contain fifty-five percent (719) of the remaining digital telephones to be replaced.

To date, cable re-use strategies employed in some of our smaller buildings have been successful and Cisco VoIP telephones have been supported on independent (telephone only) Category 3 data cable. There are twenty-one buildings on campus that the US:IT staff recommends for Category 3 cable re-use. These 21 buildings contain 251 digital telephones.

Cable re-use strategies may not be effective in all cases. The condition of the existing cable plant including the lengths of installed cables may prevent cable re-use. The US:IT staff carefully considered the buildings placed in this category.

There remain five VoIP-ready buildings on campus containing 82 telephones.

In any building lacking LAN infrastructure or in buildings better suited to simple analog telephones replacing digital telephones with analog telephones may be a preferred and more cost-effective strategy.

The University of Maine System wrestled with the costs versus benefits of continuing to provide analog dial tone to the student rooms in the residence halls at the University of Maine. Many institutions of higher education have elected to discontinue telephone service to the student rooms in
their residence halls. A study performed by Ball State University in 2010 determined that 99.8% of incoming first year students brought cellular telephones to campus.

A telephone usage survey conducted in the fall of 2009 showed an 18% utilization rate for University-provided telephone service in student rooms in UMaine’s residence halls. The same survey indicated that 97% of the surveyed UMaine students considered their cellular telephone their primary communications device.

Representatives of University Services met with representatives of the University of Maine’s Auxiliary Services group in February of 2014 to discuss the future of University-provided telephone service in student rooms in UMaine’s residence halls. Central to this discussion was an analysis of the options and costs associated with replacing the existing analog telephone service in student rooms. Representatives of both organizations reached an agreement to target the beginning of Fiscal Year 2016 for cessation of analog telephone service to all student rooms in the residence halls at the University of Maine.

The elimination of the need to purchase the equipment to provide approximately 2,400 analog telephone ports will substantially reduce the overall cost of the project.

Project expenses will include the upgrade of the local area network (LAN) wiring infrastructure in some of these buildings as well as the purchase of telephones, licenses, LAN switches, and power protection to serve these remaining locations. University Services estimates that the maximum expenditure to complete the networking infrastructure upgrade and telephone system replacement for the University of Maine will be $2,100,000.