Facilities Management Evaluation Program

Final Report — July 2011

The Facilities Management Evaluation Program is a service of APPA: Leadership in Educational Facilities

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APPA: Leadership in Educational Facilities is an international association dedicated to the development of leadership and professional management applicable to the planning, design, construction, maintenance, and operation of the facilities required for quality teaching, research, and public service.

APPA
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Alexandria, VA 22314-2818

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The appraisal of the institution is made in relationship to the criteria and guidelines of APPA’s Facilities Management Evaluation Program (FMEP). The evaluation report comments on the strengths of the institution and, when appropriate, offers suggestions and recommendations for improvements of performance. The report constitutes no endorsement or denial of endorsement, of the institution by APPA or by the members of the evaluation team. This document was created for the exclusive use of the institution named. All contents are confidential.
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Introduction

This report reflects the observations and recommendations of a team of facility management professionals who were asked to visit the University of Texas at Austin, located in Austin, Texas, from July 24, 2011 through July 29, 2011, to conduct an evaluation of the Campus Planning and Facilities Management (CPFM).

CPFM operates within the portfolio of Senior Associate Vice President Steven Kraal, Ph.D. This review was conducted at his request. The mission of CPFM is to “Provide high quality management in the areas of planning, construction, and operation of the facilities essential to the teaching, research, and public service functions of The University of Texas at Austin.”

The review was structured in accordance with the Facilities Management Evaluation Program (FMEP) of APPA: Leadership in Educational Facilities. Facilities professionals with specific expertise were selected for the evaluation team based on their experience in the management of comparable facilities organizations. The following were members of the review team:

**Team Leader**
Doug Christensen, APPA Fellow
Retired - Director of Administrative Solutions & Compliance for Physical Facilities
Brigham Young University
Orem, Utah

**Team Members**
Harvey Chace
Retired - Associate Director for Maintenance and Planning
University of New Mexico
Albuquerque, New Mexico

Robert Hascall
Retired - Vice President, Campus Services
Emory University
Villa Rica, Georgia

Henry Johnstone, P.E.
Director, Mechanical Engineering
GLHN Architects & Engineers
Tucson, Arizona
During its visit to the campus, the review team interviewed the following principal administrators, faculty, and staff members (both external and internal) in the CPFM organization:

Jim Adair  Vickie Cicchese  Eduardo Gutierrez  Steve Kraal
Zach Adcock  Alice Clayton  Darrell Halstead  Jordon Kramsky
Tom Akin  Pat Clubb  Kristy Hamrick  Butch Kuecks
Kevin Alexander  Mindy Cool-Hughes  Shannon Hanney  Kevin Kuretich
Dean Appling  Kim Corn  Ann Harasimowitz  Nancy Kurio
Robert Arredondo  Richard Costa  Windy Hardaway  Lucas Larson
Jeanne Ayers  Dan Costello  Bob Harkins  Chris Latham
Jeff Bachschmid  Neil Crump  Steven Harrison  Will Laubach
James Bailey  Scott Cummings  Michael Hatfield  David Laude
Alex Baldwin  Janice Daman  Don Havins  Bo Lawrence
Grant Garger  Michael Debow  Timothy Hawkins  Martha Lee
Sylvia Barrientos  Roberto Del Real  Daniel Heath  Stephen Lefner
Jeff Basile  Stephanie Dussault  Bud Hensley  Laurie Lentz
Kimberly Bier  John Ekerdt  Robert R. Hernandez  Sharon Lohse
Tom Blackwell  Nicole Evans  Jesse Hill  Linda Longo
Chani Blake  Mike Farmer  Loren Hinkle-Roberts  Benita Longoria
Armando Blanco  John Fay  Mike Holeman  Clay Looney
Bridget Blizzard  Lester Felder  Randy Hooper  Alfredo Lopez
Charles Bonner  Debrah Fields  Rich Janes  Debra Madden
David Braley  Kristi Fisher  Jill Kaderly  Albert Mahler
Cindy Brewer  Scott French  Kurt Kern  Michael Manoucheri
Susie Brown  Leonard Friesenhahn  Roger Kile  Marla Martinez
Donna Budge  Steve Giannascoli  Gary Killinger  Paula May
Sue Campbell  Juan Gonzalez  Marie King  Steve McCracken
Debbie Carrington  Robyn Green  Mary Knight  Richard McDaniel
Tandi Certa  Jaime Guerra  Cathy Kothlow  Jim McElroy
The review team thanks all those interviewed. It was tough lining up so many interviews over a short three-day period. We wish to recognize the committee (listed on the next page) that put together this self-study/visit. They did an excellent job.

Acknowledgments
The APPA Review Team gives a Texas-size thank you to CPFM for completing an exemplary self-study. The effort of the committee in writing the self-evaluation and the document attachments made this self-evaluation very meaningful and complete. Campus Planning and Facilities Management should be very proud of the work that was completed. Our experience would suggest that you learned a great deal going through the process. It is our opinion your self-study ranks as one of the best completed at APPA.

A special thanks also goes to the team that prepared the schedules, drove the vans, and acted as guides for us during the visit. Much more was accomplished because of this effort. Thanks again from the visiting evaluation team.

Thank you for the hospitality and assistance we received during the campus visit. The wonderful accomplishments by CPFM were reflected in the way we were hosted. The actions of those members with whom we met spoke volumes about who you are, and this report reflects the observations and recommendations of this very professional team. It was our pleasure to be with such a dynamic group of individuals focused on the cause of doing it right. We hope to bring insight from this process to encourage an even higher level of performance that will exceed stakeholder’s expectations by CPFM.
Many CPFM employees have devoted significant time to creating, reviewing and finalizing this self-evaluation. The following employees were involved in the effort:

FMEP Operational Champion: Michael A. Miller, P.E.
FMEP Core Team Sponsor: Donna Budge
FMEP Core Team: Jennifer Heath, Robyn Green, Isidora Sanchez, Ben Reid

### FMEP Criteria Teams

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### Overview

**The University of Texas at Austin**

The University of Texas at Austin is one of the largest public universities in the United States and is the largest institution of the nine universities within the University of Texas System. Founded in 1883, the university has grown from a single building, eight teachers, two departments, and 221 students to more than 900 acres on the main campus and J. J. Pickle Research Campus with more than 430 buildings, 17 colleges and schools, approximately 24,000 faculty and staff, and nearly 50,000 students. Currently, there are more than 450,000 living alumni.
Mission
The mission of The University of Texas at Austin is to achieve excellence in the interrelated areas of undergraduate education, graduate education, research, and public service. The university provides superior and comprehensive educational opportunities at the baccalaureate through doctoral and special professional educational levels.

Core Values
The core purpose of the university is to transform lives for the benefit of society. The core values of the university are learning, discovery, freedom, leadership, individual opportunity, and responsibility.
Executive Summary

APPA: Leadership in Educational Facilities conducted a complete facilities management evaluation for The University of Texas at Austin (UT Austin) at the request of the Senior Associate Vice President for Campus Planning and Facilities Management (CPFM), Dr. Steven A. Kraal. Using the seven objective criteria developed as part of APPA’s Facilities Management Evaluation Program (FMEP), a review team assembled by APPA examined CPFM, UT Austin self-study with respect to its clarity and adequacy in the following areas:

- Leadership
- Facilities Strategic and Operational Planning
- Customer Focus
- Assessment and Information Analysis
- Development and Management of Human Resources
- Process Management
- Performance Results
- Other Considerations

We were impressed with the quality and strength of the leadership of Dr. Steven A. Kraal, senior associate vice-president of CPFM, in which he has assembled an effective leadership team that consists of Michael A. Miller, director of Facilities Services; Juan Ontiveros, executive director of Utilities and Energy Management; William H. Throop, director of Project Management and Construction Services; David Rea, director of Office of Campus Planning; Rogelio Ruiz, director of Technology Resources and Jim Walker, director of Office of Sustainability. These directors are excellent in their areas of expertise, and their professionalism will lead the organization to even higher levels of performance. CPFM is a large organization and requires continual effort to keep the staff motivated and improving at all levels.

The University of Texas at Austin is blessed to have Dr. Steven A. Kraal as the senior leader over CPFM. He is loved and respected by the university community. Behind every successful leader is an organization that knows and trusts its leaders. The organization definitely trusts Dr. Kraal’s leadership and aligns itself accordingly. His stature as a facility professional stands tall in APPA and in the other associations he is engaged with. Dr. Kraal deals very effectively with the present, and, at the same time, he continually looks to the future for better ways to accomplish various tasks. He knows and understands UT Austin—its needs and its spirit. Given UT Austin’s leadership role as a key institution of higher learning in the world, it is critical that this organization’s leadership and wisdom be reflective of this role. We found the organization to be a beacon of truth exuding the wisdom and leadership needed to meet this role.

The self-study report was well-written, giving an accurate representation of current processes and practices. For those who served on the CPFM self-evaluation team, the
review team viewed this evaluation as one of the most professional self-studies produced. Care was taken to address each issue with accuracy and reality, along with strengths and suggested areas of improvement. The review team clearly benefitted from this stellar work.

The clarity of the self-study report, along with the comprehensive interviews, brought strength to the review team’s findings and recommendations. Clearly, the review team was very careful not to include comments expressed once or twice in the final set of findings or recommendations. We are also pleased to report that most of what we heard was positive, especially given the depth and breadth of responsibilities. You are doing a great job managing such a large area of responsibility. We chose to act as a sounding board on those issues that would bring about the best performance as a whole, with strong consideration for change, alignment, or improvement. These recommendations are offered as advice and general guidance to the CPFM leadership team. The team needs to determine what will work best in the future. Therefore, we encourage that these recommendations be considered within the strategic goals and objectives.

Most members of the campus community hold the overall performance of the CPFM organization in high regard and noted impressive improvements that have already been made over the past several years. During the four-day visit to campus, the review team was impressed that CPFM is in alignment with the university’s vision and mission, as well as meeting the institution’s needs.

As part of the oral report on the last day of the visit, the review team presented some basic principles from the visit. These basic principles encompassed all of the findings and recommendations listed in the report, which are:

- Synergism
- Specialization
- Accountability
- Customer-centered Processes
- Employee Development/Productivity
- Organizational Values in Pursuit of the Vision
- Establishment of a Learning Organization
- Development of Total Cost of Ownership Principles

Each one of these principles was used by the team to test and focus our recommendations. The review team would encourage the CPFM leadership team to understand these principles, improve the standing of each, and encompass them within the recommendations.

Given the uncertainty of the economy, it is clear that CPFM and the institution are entering an era where expectations and resources will likely be mismatched. The campus community’s expectations will not likely diminish to a level that corresponds with the anticipated decline in resources. In fact, the demand for services is growing, driven by two
major institutional factors. The first is an increasing emphasis on research and outreach programs with the attendant need to be responsive, timely, knowledgeable, and economical in the delivery of its services. The second is the additional workload placed on CPFM by the growth in new and remodeled campus facilities. Each major project requires extensive integration and coordination of efforts within CPFM. As the review team looked at the messages from within and around the university community, a theme of management silos became obvious. It is a concern for the review team.

Thus, it is the overall recommendation of the review team that CPFM increase their effort to consider action to resolve the issue of management silos. CPFM has the leadership, talent, and maturity to look at the situation objectively and resolve it over the long term. At some levels of the organization, collaboration works well. However, there are some barriers and, as someone said, “There is a wall that can only be penetrated at the top levels of management.” We recognize these are not easy issues. This kind of thinking could help to eliminate the management silo concern and allow the organization to grow, become more collaborative, more customer-centered, and better prepared to meet the challenges of the future.

**LEADERSHIP**

The University of Texas at Austin is fortunate to have developed, through a strategic planning process, a vision for what the institution can become and how it plans to get there. Through the encouragement of Vice President of University Operations, Patricia Clubb, the institution’s hallmarks of tradition, change, and excellence have been brought into sharp focus. CPFM’s role is to integrate the programming, planning, and design functions with the architectural and engineering functions, the utility needs, the facilities maintenance and operation function, and the additional role of technical resources for university operations to all work together to better meet the needs of the institution. CPFM needs to develop a strategic plan. This plan will align the roles and allow it to speak with one voice.

The campus community and several internal members of CPFM view the organization as good, but it could become more collaborative and create more synergy if some services that are classified as department services are gathered together and then provided as a department support group. Action by the leadership on this issue would bring about added benefits and more synergy. This action would also allow the organization to be functionally stronger, better coordinated, and structurally organized for current and future campus issues and needs. We have provided the review team insight as to how that grouping of resources and support services could take place. This is not a recommendation but a consideration.

The organization wants to see more of its leadership. Many comments were made that they need to get their feedback directly and not always through the chain of command. There were groups that wanted to be surveyed so they could have more input. There was a lot of
praise that the leadership was creative and willing to make changes. This is a big
organization and change can be slow. The attitude given the budget adjustments was good.
The morale issues we experienced seemed to all relate to the recent layoffs. Everyone in the
lower levels of the organization felt uneasy about resource shortages. Parts of the
organization felt like they were self-leaders because they were excited about learning
innovation and dealing with personal growth plus being motivated to be the best they
could be. These are solid people who just want to know how to contribute and get some
pats on the back for their effort. Everyone needs to feel like they can be a leader and
produce meaningful change. Within CPFM, that is not always a position.

We are in the middle of information overload. More and more current data is going to be
shared and, in some cases, more data will be needed. We suggest that a division plan be
developed to find out what data is needed, who and how you share it with, and how that
need should be developed. Examples of this need showed up on rate request discussions
and space requests users for more data. It seemed that the space data need has grown and
exceeds what CPFM generates. Time needs to be spent on getting control of this situation.
Data can be a blessing and a curse. Choose wisely how data are used and also the accuracy
and reliability of the methods used to obtain it. Sharing data is important to the future
success of CPFM, which needs to adopt the concepts and management principles of total
cost of ownership (TCO), the best long-range approach to develop investment strategies.
TCO focuses on the project delivery of an asset from design through construction, making
sure the end product can be maintained and that proven assets are used during the next
planning process. TCO also manages the recapitalization costs so that proper decisions are
made when more investment is needed in retrofit, improvements, or replacements. We
encourage CPFM to apply these principles. You have all of the pieces, such as smart leaders
and staff, to make it work. You will find return on investment (ROI). Establish a learning
organization culture where all assets teach staff members something about themselves and
how they benefit the entire organization.

Performance measures are encouraged and used. There is always room for measuring even
more performance. Keep close to the customers and see if there is anything they would like
to measure you by. There are many ideas that are simple if you have the data. This task
may be something that helps you understand what is critical for them to know. Another
area of measuring performance is the results achieved by process. We would recommend
that every 5 to 7 years each process owned by CPFM is reviewed and modified. Those who
use the process ought to be those who evaluate it. Another performance issue is working
closer with leadership to meet the challenge of keeping the talent pools available for the
skilled areas. This kind of leadership performance sets the stage for the future and is
worthy of spending time and effort. Care needs to be taken as to how this will be
accomplished. A set of minimum skill requirements for a job should be available along with
a scope of work. The challenge is to get each position to a full skill level. Labor
requirements for the future will be critical. The team also suggests that leadership carefully
review the employee requirements for those 55 years and older. This will give leaders the
perspective and the beginning of a succession plan to work toward. Even though the same job might not be needed for the future, a plan will guide leaders to other strategic opportunities.

**STRATEGIC AND OPERATIONAL PLANNING**

The Campus Planning and Facilities Management does a good job of strategic planning in the departments and sharing it with the administration. The CPFM needs to create its own strategic and operational plan and have the departments rewrite their plans to align with the CPFM. It was obvious with most customers that we visited with that there has been an emphasis on customer service. The faculty and most service and support units served by CPFM were pleased with the effort. There is a need to supply better data in a timely way so other decisions can be made by those served. The customers really like the billing process and say it is faster and more accurate than the maintenance system. Customers asked why these two systems were separate. The team was impressed with the efforts being made in sustainability. This will take time to see all of the benefits. There is a campus awareness of this effort, and when discussed, there was campus support.

A critical issue that came up a number of times was the need for the top two leaders, the senior associate vice president and director of Facilities Services, to spend more time with the staff members that they do not normally see or meet with. Effort to visit with these folks will pay dividends over time. There needs to be better alignment between goals and objectives and the workers within the organization. It is getting the message to the end of the row. An overall communication strategy needs to be in place to ensure that the correct message is delivered and received to all in a timely manner. Do they all have equal access? There are great things happening here; we know from the study that you are aware of this. It doesn’t need to be a big party but celebrate your success.

The budgeting situation seems to be a real hindrance to properly tracking and reporting performance. There are a lot of unnecessary hoops that business support groups need to go through to be successful. Adjustments in the budgeting process are part of the recommendations with a separation of funding types suggested. Customers need to be aware of what part of CPFM’s budget is for maintenance of the campus and what part needs to be billed to the customer. Questions about how consistently that is applied around campus were also suggested. We were pleased that an effort is underway to update the master plan. We encourage completion of a new master plan that should include an infrastructure plan, a listing of cash flow requirements for existing buildings, and a plan to take care of the existing assets.

**CUSTOMER FOCUS**

CPFM exhibits a strong commitment to “customer focus” in all of its campus support activities. There appears to be momentum in all departments to improve on current
customer outreach efforts. The senior associate vice president’s tri-annual facilities forum meetings reinforce individual division customer service initiatives, where key campus clients are encouraged to offer feedback on the quality of service and project outcomes. CPFM’s customer service efforts could become a pace setting, “best practices” program, with minor policy, administrative, and organizational adjustments.

This report encourages organization leaders to consider changes in three areas. First, we suggest that customer service initiatives should be driven by a common CPFM strategy, goals, and key performance indicators (KPIs) for department directors. Second, the disparate customer communications initiatives should be centrally monitored and coordinated. Third, a new consolidated customer outreach effort should be modeled after Project Management and Construction Services’ highly effective capital project update briefings to deans and other key clients. Targeted, full-spectrum CPFM service reviews tailored to each college would offer opportunities to clarify expectations and to demonstrate superior support efforts by all departments.

CPFM should also consider shoring up these initiatives with a renewed focus on both technological and logistical improvements to service delivery and internal business processes. These changes should include streamlining the process for rapidly deploying better skilled service delivery and repair staff to trouble spots. In-service technical training, faster transport, and easier building access will enhance the probability of a “fix-on-first-visit” mentality and increase the productivity of a workforce whose size is constrained by budget. Further, all business processes, from service requests to project close out, must be supported by software and documentation protocols that are staff and customer friendly.

**INFORMATION AND ANALYSIS**

This section focuses on how well information is being used. The amount of information used by CPFM is representative of what is needed to manage all of the needs of the institution. Data is available from design and construction, maintenance and operations, and recapitalization. This is referred to as the total cost of ownership (TCO). APPA believes this is the framework that determines the level of data needed to cover the total investment in assets. CPFM needs to review all of its data and see where it stands in meeting the TCO, current processes, and customer needs. As CPFM develops their data sharing plan and technology master plan, they will be meeting the objective of this section. The recommendation in Section 6: Process Management is that a data plan be created and computerized so that proper access and management can be applied. This should be done before any further investment in technology takes place. The information technology paradigm has shifted. A serious look at all the needs of today and the future must be done. Then, an evaluation of existing technology to determine what to save and where to make changes needs to take place. This is an important step in the process of developing a comprehensive strategic technology plan. This plan should then be the guide moving forward.
There is a need to get personal performance measurements. This needs to be a one-on-one situation. As employees were interviewed, it became apparent that there was a need to focus on individual goals. The leadership team needs to find ways to encourage management to set employee goals, find ways to monitor the goals, and then reward success. There is a real need for management to interact with the employees. Currently, there are programs in place to support this direction. The budget reporting and sharing of information from FAMIS is getting better. For the review team, FAMIS seemed to be an answer and a question in our findings. In fact, there are some detailed recommendations in the report about this. CPFM has to determine its needs and how the information obtained should work; this is more important than the hardware itself. Do not design your use of data around hardware. Your current needs must be your goal. There are more customer needs and probably more internal needs for sharing data that the current hardware may struggle with.

DEVELOPMENT AND MANAGEMENT OF HUMAN RESOURCES

There are a lot of excellent things happening in the area of Human Resources. All of the positions are well documented, and they are evaluated against the outside market. The challenge of any organization is when budgets are cut. CPFM has done a great job to date dealing with this issue. However, a situation was reported a number of times: when positions were cut, the customers were not notified. This kind of notification means something to the customers; it says a whole lot about how they are served. They are interested in how they are being treated. Keep them in the loop. Another issue came up that needs to be addressed. Because of the number of budget cuts to lower-tier staff members, the ratio of management to workers may be getting out of balance. It would be a good idea to compare this against other institutions (and possibly consider span of control) and to be aware of the challenge that UT Austin faces.

The apprentice program was given high marks. It is recommended that additional apprentice jobs be added. There seems to be a need for skill training in the zones. This came up in the report as an issue that CPFM will want to deal with. We agree. Some great training and development opportunities are available, but there seems to be a need for skilled groups to be trained together, particularly on new skills. Please review those recommendations. A great idea came up as we were discussing these issues. Try and find some links between technical skills needed and organizational metrics and ways to show and credit job improvement. Finding that link and then working it into the annual performance would place skill training in a proactive and meaningful role. Things are really changing fast in the skills area and staying on top of this will be a major plus.

There seems to be an issue about having enough technology so the lower ends of the organization get the message. We were not able to completely test this out, but we are making it a recommendation. Also, there needs to be a clear understanding of how to send
messages up the organizational channels. See our recommendation concerning this. Every effort you can make to knock down the silos will be your challenge from this report. We heard it and felt it as we met with internal staff and administrators. This is a big organization; it needs structure and hopefully this structure will help to make any silos invisible. The idea of adding more CEUs to the annual performance goals will assist in providing the advanced learning that can keep an institution alive and well. It would also reward those wanting to improve their skills. Perfect the climate survey. This was your first try. You surely learned from it. Remember, this survey is very different than most surveys. When you are asking employees for recommendations, you need to address each one or the value of a climate survey will be lost. CPFM has an excellent recognition program, as well as a strong recruitment and retention program. Utilities and Energy Management (UEM) teaming up with UT Austin’s School of Engineering is a real plus. CPFM does an overall excellent job with people.

**PROCESS MANAGEMENT**

Processes are in place to get the job done. Being such a large organization, it is critical that processes and collaboration are working. One area where improvement can be made is measuring the different processes between units. This crossover in roles and the different standards expected impacts the effectiveness of unit management. There is a need to provide standard management tools to Project Management and Construction Services. It is also important that, along with a data distribution plan, a computerization plan needs be reviewed and recommended. The institution needs to decide what it wants to be in a particular technology area, define the roles, and then find the technology. This is an important step in keeping the processes current and maximized. The recommendation suggests a way this can be accomplished. CPFM is at a crossroads where new technology is knocking on the door and could refocus the next five years of technology direction.

Better use of the engineering team that works in UEM needs to be established. Most institutions would have that team working on planning and engineering issues and assisting the building maintenance employees, as well as keeping the utilities going. This is an excellent staff that needs to be utilized throughout the entire organization in order to get maximum production.

CPFM needs to address the issues surrounding using building information modeling (BIM) and 3-D modeling in the design and construction industry. This technology will spread to include the whole CPFM organization. This kind of planning needs to be in the computerization plan. It is an ideal time to consider this change since the market is pushing only the design and construction side. It is the review team’s suggestion that the new technology be based on the TCO and not just the design and construction areas. The technology needs to bridge the natural silos and bring a shared and unified approach. This is a long-term commitment and needs a long-term plan. This will bring a learning organization concept to CPFM. The learning that takes place over the life of an asset will be
of value to help refine and provide a clear understanding of what is needed for long-term management and leadership.

Consider the development of an estimating group within CPFM in order to standardize the process and provide consistency in cost estimates. Combine the institutional standards and the design guidelines together. Focus on a design review process using the BIM principles of collaboration as the first steps in a collaborative design and construction process. We predict that there will be savings and that the speed of projects will increase but with less expenses overall.

There was a strong feeling that progress is being made on getting key information out of FAMIS. There are concerns on how complicated it is to share data and information. The key budget information seemed to be available in a timely manner but not up to standard. Concerns from unit leaders suggested this is not timely enough. The focus should be on getting key information to key workers when they need it.

**PERFORMANCE RESULTS**

As mentioned earlier, the design guidelines need updating. There needs to be a current master plan; an update is underway. The OSI cleaning system works. The building entrances are clean. Restrooms were cared for. The only complaint was the decision to cut back on office care. It was the shot heard around the campus. We recommend the decision be revisited just to get some support from the campus community. The infrastructure and delivery systems were great and in very reliable condition. The institution should be proud of the investment in infrastructure it has made for its long-term success.

We roughly determined that the current level of funding for facilities may result in a deferred maintenance and capital renewal problem. We learned that the institution does respond to critical priority needs; the infrastructure funding for the utility systems was a great example. Even though it looks like it could be an issue, we will assume care will be taken to address these needs as they become high priorities. The staff seems motivated, but the morale is low. This could be because of the recent layoffs. It became a concern with the reductions, but hope carried the staff members on and now they want to do even better with less. That works for a short time with a great staff. Leadership needs to find ways to ensure standards are reviewed if there are further cuts. Our observation is that there is little room to stretch by increasing employee performance. Therefore, the team will need to study the impact on standards if additional budget reductions are forthcoming. Clear communication will be key when discussing the rationale for actions taken.

CPFM does keep up-to-date with programs from APPA and other skill development opportunities. This was demonstrated in the interviews where people talked about issues they are aware of and have experienced. This continued investment will pay off not only in
performance but in building future leaders. We recommend the organization carry on conversations about current and motivational issues that challenge the employees.

**OTHER CONSIDERATIONS**

**Sustainability or Natural Resources Management & Conservation**

The study committee asked the team to look at the recent work being done in sustainability with an emphasis on natural resources and conservation. The Office of Sustainability is tied to the leadership structure of the institution and is expected to play a role in the future. Even though the 20-year outlook for the campus is important and about right, it needs to have shorter, pointed goals so the long-term goals can be met. This is something that will create a new culture over time and will have a lasting influence on the values of the institution. It is nice to see an organization focus on this issue in a steady, even-keeled way. The director position is exactly what is needed within CPFM.

As you consider opportunities for high profile sustainability projects, we would encourage the adoption of the TCO to each project. This will allow investors and donors to really understand all of the issues around sustainability, especially if the projects are high priorities in the beginning and less as they show they are hard to maintain. This discussion ties into the ROI and economic investments. Honor the results of taking a risk.

The collaboration effort with the academic community to develop cross-disciplinary interest and enthusiasm was found to be high and working well. The tackling of issues like energy, water, and wastewater are in place. As you move to trash and waste stream management, the challenge is to get it right.
Summary of Recommendations

1.0 LEADERSHIP

Recommendation 1A
Improve efforts to ensure communications get to front-line employees. Top leaders need to be understood and have the message clear and correct with the accuracy needed to build trust and confidence as well as ensuring all are working as a team.

Recommendation 1B
Top leaders in the organization need to spend more time with those employees they do not see or talk to on a regular basis. There is a strong desire to know who you really are. You need to define yourself to the employees and not let the action and policy changes label you. The employees want to see their leaders.

Recommendation 1C
There was a request in the self-study that more survey opportunities are given to other groups within the organization. We did not define “other groups.” We would recommend that you identify these groups and get their feedback.

Recommendation 1D
Develop a CPMF strategic plan that ties together with the university mission, vision, and values statements. Then incorporate departmental strategic plans into the overall CPMF plan.

Recommendation 1E
Consider what elements of the TCO you can incorporate in CPMF.

Recommendation 1F
Customers are requesting more data from CPMF. First, study what each customer needs and then determine what you might be able to give them access to. You will want to provide customers with the right kind of data. Sharing data is a tricky business because you need to know how it is being used and that it is accurate and reliable.

Recommendation 1G
Customers want access to your data when they need it. CPMF needs to have a campus scheme as to what and how data will be delivered. We would recommend that a data distribution master plan be developed that will guide CPMF in its distribution. In addition, this could also be a guide to the strategic information technology plan recommended later on in this report.
Recommendation 1H
We recommend that the space management program be expanded to meet all the campus needs and that it remain within CPFM to manage.

Recommendation 1I
It was obvious to the team that more work is needed in breaking down the communication silos. After further review by the team, it seemed as if the key functions of the mission of CPFM need realignment. This would create synergy and strengthen the organization. We would suggest that consideration be given to a realignment of functions to balance some of the workload and provide strong functional ties. This would also ensure that staff members work closer together and eliminate the communications silos. [We would not make this suggestion if the organization were not mature enough to explore the possibility.]

Recommendation 1J
We recommend that CPFM establish a five-year repeatable schedule to review the Employee Policy Manual for organizational processes and procedures with internal and external users. The purpose will be to promote, self-direct, innovate, and allow for better decision-making levels.

Recommendation 1K
Find a way to help key technical and skilled employees stay informed of current trends and practices that relate to their industry.

Recommendation 1L
Complete the core strategy to create multiple levels of trade, supervisory, and management positions.

2.0 STRATEGIC AND OPERATIONAL PLANNING

Recommendation 2A
The leadership of CPFM should develop an overarching strategic plan with specific goals and objectives for the organization. This should be done in conjunction with the administration and key stakeholders for CPFM.

Recommendation 2B
Each department head should update his or her current plan or create one where none exists to align with the CPFM strategy. Each department should include internal and external stakeholders in creating their individual unit strategic plans.
Recommendation 2C
Both the senior associate vice president and the director of Facilities Services within CPFM should develop plans to become more visible and present these plans to key customer and employee stakeholders on a regular basis.

Recommendation 2D
Each CPFM unit should review and revise its goals and key performance indicators to align with the organization’s newly developed strategic plan.

Recommendation 2E
Once these goals and performance indicators have been developed and agreed upon they need to be communicated to the entire CPFM workforce on a regular basis. Also, the workforce needs to be made aware of what is expected of them in the way of attaining the levels of performance and/or each unit’s goals. Finally, the entire leadership of CPFM must begin holding their employees accountable for achieving related goals and performance targets.

Recommendation 2F
Develop a communication strategy for the department that standardizes how the new goals and performance measures are to be reported to the organization so that they can be understood by all internal stakeholders.

Recommendation 2G
Find ways to celebrate the departments’ progress in goal attainment and/or performance improvement results by engaging everyone who contributed to those positive outcomes.

Recommendation 2H
Negotiate a fixed annual budget transfer to the vice president for University Operations such that the lapsed salaries that accumulate above that amount can be retained in Facilities Services to augment their maintenance, operations, and equipment accounts.

Recommendation 2I
Clarify what services are provided to Education and General (E&G) spaces at no cost to the departments and which services are refillable or not covered by E&G funding. Communicate this information to your clients and to your front-line employees so there is no confusion or misunderstanding between the service providers and the customers they serve.

Recommendation 2J
Create revolving accounts for PMCS and make their project management and construction services fully billable to their clients.

Recommendation 2K
Update the campus design standards especially in the sections covering elevators and escalators, mechanical, electrical, plumbing, and fire protection. PMCS needs to appoint
someone within the department to own the responsibility for keeping these standards updated in concert with the review and updating by Utilities & Energy Management, Facilities Services, and Campus Planning. The standards should be updated annually at a minimum.

Recommendation 2L
The campus master plan update should also include an infrastructure master plan for chilled water, steam, electricity, domestic water, and fire protection, and a storm water master plan for the campus. The updated master plan should incorporate the campus’ sustainability principles as it relates to future growth and development of the campus.

Recommendation 2M
Each CPFM department needs to develop a succession plan and strategies to ensure the continuity of their services in the event of staff turnover and/or disruptions. This plan should be updated regularly to ensure its relevance at the time unexpected events occur.

3.0 CUSTOMER FOCUS

Recommendation 3A
The senior AVP should create an overarching strategic plan for the CPFM organization that includes a strategy and goals for customer service and communications. Development of uniform trans-divisional customer service standards should be emphasized.

Recommendation 3B
The search for genuine gains in customer service will be stimulated by the development of commensurate KPIs for department directors.

Recommendation 3C
The senior AVP should consider a single customer relations and communications office. This office would bear the responsibility for gathering and analyzing all customer feedback, updating and fielding customer surveys, providing a valuable customer perspective to all business process reviews, providing directors with timely information on trends, and coaching new customers on CPFM service delivery goals, standards, and the means for accessing service processes.

Recommendation 3D
Customer confusion about the true cost of services should be addressed by creating a fully burdened shop rate for each unique group of service delivery personnel (within the parameters the university generally applies to such calculations). This shop rate should be uniformly applied to both E&G funded and reimbursable work and should also be the basis of internal resource allocation decisions.
Recommendation 3E
We strongly endorse the plan to establish a one-call service center to aid clients seeking service. However, before rollout, you should carefully review the call center’s charter for solving customer problems. Will it document the service request and create the work order or simply offer a telephone referral to the appropriate CPFM desk? Will other requests be accepted and a prompt call back from the responsible party in CPFM be promised or will the center’s staff simply offer a staffer’s name and phone number? Will the center carry the responsibility for accepting, documenting, and categorizing customer complaints? We also suggest that a corresponding survey instrument and metrics be in place to measure customer reaction to the new call center.

Recommendation 3F
We suggest that you consider the success of the PMCS customer outreach program and the past successes of the Facilities Forum and create a new format for individual college and auxiliary program director semiannual visitations. The agenda should include the full gamut of CPFM services provided to that college or activity (a current facility assessment review, explanation of the character and cost of routine preventive maintenance, service call activity and trends, landscape care, custodial services, processed utilities, utility distribution maintenance, building system life extension or replacement strategy, and facility projects in the queue). Such periodic, tailored briefings create an opportunity to build appreciation for the true cost of facility support and the nature of essential but unseen services.

Recommendation 3G
Look to process refinement, current technology, and software to reduce the amount of nonproductive time for high shop rate personnel and project managers (i.e., bar code buildings and components, employ PDA work-order/project management devices, modify landscape plans to provide CPFM electric cart parking near every major campus faculty, consider IDIQ contract services as a supplement to Central Stores, etc.).

Recommendation 3H
Enhance the quality of project delivery services by acquiring software that will improve customer access to current information and more effectively track project progress and progressive fiscal obligations.

Recommendation 3I
Consider policy development that would reinforce the expectation that
- every service delivery process has an (accountable) “owner,”
- pursuit of efficiency and enhanced customer services drives process changes,
- business process improvements drive software modifications, and
- from a business standpoint, existing software is a “sunk cost.”

Recommendation 3J
Exercise available customer update options in FAMIS.
Recommendation 3K
Review and modify the project cost-posting process to assure prompt posting of both contract and in-house generated obligations.

Recommendation 3L
Extend the use of customer service feedback instruments to noncapital projects.

Recommendation 3M
Consider adding a customer relations and communications office to the Business Services Department. This office should collaborate with department directors in determining the cause of customer dissatisfaction: miscommunication on roles, responsibilities, and expectations, employee performance, lack of employee training, business process shortcomings, etc. Trends, and recommendations, and follow-up actions should be summarized and presented to the senior AVP in periodic metric reviews.

Recommendation 3N
Modifying the agenda of current facility forums to present the full spectrum of CPFM services to deans and their chairs and to other key clients presents an opportunity to shine the spotlight on the unrecognized, but critical services of the Facilities Services Department and UEM’s system maintainers.

4.0 INFORMATION AND ANALYSIS

Recommendation 4A
Consider using additional metrics that identify more internal processes for improvement. The APPA FPI Survey looks at high-level, common metrics that are good comparators with other institutions but may not provide a detailed enough look at the internal operations of the campus. See some examples in other recommendations below.

Recommendation 4B
Consider requiring a report from every person attending a conference or other inter-institutional meeting to return with at least one idea for benchmarking or improving the CPFM organization. The reports may result in additional data sharing with other institutions or may identify best practices from elsewhere that can be implemented at UT Austin without much difficulty relative to the benefit.

Recommendation 4C
Develop internal metrics to measure staff performance and identify opportunities for process improvement. These metrics do not need to be focused on individual employees or single processes; they may be global within the organization and change over time as the processes are improved. Examples of metrics that may yield process improvement opportunities include:
time spent acquiring non-stock items; total distance traveled acquiring non-stock items; and
number of non-stock acquisitions per week. These metrics are recommended based on comments
from maintenance staff that seemed to focus on problems with the Procard process and
frustrations with a limited inventory. There may be other areas for possible measurement and
improvement, but the acquisition of parts to maintain the campus affects virtually all areas of
CPFM.

Recommendation 4D
Consider the development of some high-level but targeted metrics to ensure the organization is
working smoothly. Examples include: individual building O&M expenditure reports based on
all maintenance services delivered to the building; time studies of maintenance employees to
ensure an expected amount of productive time is available or to identify where unacceptable
levels of time are expended; and processing time for high-volume activities.

Recommendation 4E
Consider setting a fixed utility rate for the entire fiscal year and address any mandatory rate
fluctuations with a year-end tune up. The monthly changes in utility rates lead to confusion
among the departments receiving invoices. A constant utility rate for the year will help
eliminate confusion.

Recommendation 4F
Simplify the utility invoice to auxiliaries. When asked if they understood their utility invoice,
many of the auxiliary units interviewed responded “no.” This is an opportunity to make the
utility invoice similar to what a homeowner gets. While large institutions often have more
complex utility structures, developing a way to make the utility costs more consistent,
transparent, and simple will improve customer service.

Recommendation 4G
Create energy reports for each building on an annual basis and move to monthly reporting.
Reports of energy consumption, by building, create metrics that can be used in multiple ways.
Understanding how a building consumes energy over time should lead to identification of
buildings with equipment problems and provide the maintenance employees with an early
warning about significant building problems.

Recommendation 4H
Develop a utility “invoice” for state-aided units. Nothing grabs the attention of a utility
consumer more than a utility bill. When people see what they are consuming on a monthly
basis and understand the costs, they will be more likely to help conserve energy.
Recommendation 5A
Benchmark overhead positions against peer organizations of similar size. Given the size of the organization, it is appropriate to review the number of overhead staff (including management, business services, customer relations, TRecs, etc.) per direct service delivery employees.

Recommendation 5B
Encourage all CPFM departments to have some positions identified for apprentice opportunities. Developmental programs have been found to increase employee satisfaction and to increase employee loyalty to the institution.

Recommendation 5C
Develop a link between increased technical skills and organization metrics. Investing in an employee's training builds loyalty to the organization and can bolster morale. But employees are quick to accept the proposition that sponsored training is not provided solely to increase the individual's marketability. To the extent that is practical, organizational sponsored acquisition of technical skills and certifications should be more closely linked by strategy and metrics to the goal of the organization.

Recommendation 5D
Consider development of a system that incorporates annual training goals and expectations into the annual review process to ensure employee and supervisory buy-in and commitment. This may be in the form of a clear list of training goals that must be completed or reference to a menu of training items. In addition, a clear plan of off-campus continuing education opportunities such as APPA, CAPPA, and TAPPA meetings will coordinate both employee and employer expectations for the coming year and allow clear measurement the following year.

Recommendation 5E
Knock down the silos. The CPFM’s new strategic plan should emphasize the pursuit of inter-division, synergistic solutions to the challenge of sustaining the campus facilities portfolio with reduced resources.

Recommendation 5F
Consider incorporating an employee focus article in a departmental newsletter or other communication vehicle that allows the employee to describe what he or she does. The feature article may have the same readership problems that the current communication channels have but because the article focuses on a peer, there may be an increase in readership and a corresponding increase in awareness of intra-organizational operations.

Recommendation 5G
Consider organizing a monthly stand-up meeting within small work groups to go over highlights of recent safety statistics and appropriate corrective actions. These meetings do not
need to be long or complex and can be incorporated into another periodic meeting with the supervisor and front-line workers.

Recommendation 5H
Encourage employees to identify safety hazards and reward those who are able to identify a safety improvement that costs little or nothing. Providing an incentive to identify safety hazards should heighten employee awareness and reduce accidents. The reward does not have to be costly; it could be simple recognition.

Recommendation 5I
The organization should explore the establishment of career ladders in the construction and maintenance job families and in other areas where employees need more advancement clarity and opportunity.

Recommendation 5J
Create a system where multiple people perform critical tasks or where employees are cross trained. Cross training employees to do multiple jobs reduces the risk that a critical task will not be completed in a given week or month. It also increases operational efficiency, since as employees learn more about what others do, this can help them identify process improvements that might not be seen without this shared knowledge.

Recommendation 5K
Consider making career development a two-way street by incorporating both employee and supervisory continuing education goals for the employee in annual evaluations. When both the employee and supervisor agree to a continuing education goal in writing, there is a greater likelihood the employee will complete the training and the organization will benefit from a better educated employee.

Recommendation 5L
CPFM should adopt a standard work climate survey for all work centers. Employing the same survey will identify where additional leadership effort may result in quick gains in worker confidence and unit effectiveness. Note that the highest accuracy in employment climate surveys is achieved when a written survey instrument is administered in a neutral environment, proctored by staff that is not in the employee’s chain of command.

6.0 PROCESS MANAGEMENT

Recommendation 6A
Encourage those dealing with utilities to find ways to optimize energy efficiency throughout campus.
Recommendation 6B
Determine with PMCS the standard management tools needed to be efficient and effective in building information modeling (BIM) in the A/E and construction industry.

Recommendation 6C
Develop a comprehensive plan for data management and a plan to computerize processes that improves management effectiveness and sharing while adopting the principles of TCO. This plan must align with the mission and vision of CPFM and the institution.

Recommendation 6D
Consider means to better utilize the engineering resources of UEM in improving operation of building systems and assisting project management and construction in developing design guidelines, reviewing designs, and troubleshooting technical problems.

Recommendation 6E
Consider ways to expand collaboration and equitably distribute the technical, business, and management resources of UEM among Facilities Services, PCMS and perhaps TRecs.

Recommendation 6F
Evaluate how the units of CPFM might plan for the advent of building information management. Conversations with the vice provost and associate vice provost for Information Management revealed their intense desire to accumulate just this sort of data for use in strategic academic planning. While the provost’s office probably does not actually recognize the potential of facility BIM as an ultimate data warehouse, and while actual, practical implementation of BIM for productive use in facilities management on the scale of UT at Austin is clearly a few years in the future, the team recommends PMCS, in concert with TRecs and their initiative to improve the space planning database, begin to consider its inevitable conversion to BIM (see Recommendations 6B and 6C).

Recommendation 6G
Consider developing an estimating group within PMCS or establishing a relationship with a professional estimator. Facilities Services and UEM could share this service.

Recommendation 6H
Consider consolidating development of institutional standards and design guidelines between UEM and PMCS and place more focus on the design review process and participation in OFPC projects.

Recommendation 6I
Once the FAMIS to DEFINE accounting interface has been validated, review the application of budgetary controls and approvals process with operating efficiency and perception of trust in mind (see Recommendations 6B and 6C).
7.0 PERFORMANCE RESULTS

Recommendation 7A
As mentioned elsewhere in this report the campus design guidelines need to be updated and kept current. This is an important tool for assuring that future campus development evolves in ways that complement the current campus environment.

Recommendation 7B
CPFM should reevaluate the level of office cleaning frequency.

Recommendation 7C
Improve communication with front-line workers in CPFM. It is recommended that newsletters and other departmental communications be presented to employees in both electronic and written forms to address those employees who don't have access to computers and/or don't feel comfortable with them. It is also important to present communications in languages other than English, for those non-English speaking employees.

Recommendation 7D
Consider implementing a front-line employee advisory board to improve communications within the department. This board would be comprised of representatives from all departmental areas and would be charged with being liaisons between the departments and CPFM leadership, developing methods for improving communications from top to bottom and bottom to top, providing input on strategic planning efforts within the departments, committing to participate in a positive and constructive way, and focusing on solutions and not problems.

8.0 OTHER CONSIDERATIONS

Recommendation 8A
Many elements of the university's sustainability effort are measurable and can be tracked on a year-to-year basis. The President’s Sustainability Steering Committee (PSSC) has established 10-year goals. Tracking shorter-term CPFM specific targets, perhaps on an annual basis, is recommended to maintain focus. AASHE’s Stars program or other similar institutional benchmarking tools could become a part of this annual review.

Recommendation 8B
The director of Sustainability has limited staff and structurally little direct control over resource allocation but a broad interdepartmental mission. We support and find effective the course laid out on the governance for sustainability. It’s the right approach and we commend Dr. Kraal for this method. Ongoing success in advancing the university’s sustainability and natural resource conservation plan relies heavily on the leadership and influence of the director, along with continued support of CPFM senior leadership. Maintaining interest and
enthusiasm to integrate sustainability goals into the day-to-day operation of Facilities Services, UEM, and PMCS is likely to be an ongoing challenge.

Recommendation 8C
There may be additional near-term opportunities to extend the UEM return-on-investment and TCO methodology to other aspects of the CPFM portfolio. Recent installation of a campus-wide energy metering system will provide building energy use data essential to evaluating alternative investments in building infrastructure. These could include energy management and control systems, air handler replacement, lighting upgrades, and others. The ROI and TCO analysis approach could also be extended to investment in fleet vehicle technology, public transportation infrastructure, and green cleaning.
1.0 LEADERSHIP

The facilities organization’s senior leaders should set direction and establish customer focus, clear and visible values, and high expectations in line with campus mission, vision, and core values. Leaders inspire the people in the organization and create an environment that stimulates personal growth. They encourage involvement, development, learning, innovation and creativity.

The quality of leadership, more than any other single factor, determines the success or failure of an organization. Leaders should inspire and motivate the entire workforce and encourage involvement, development, learning, innovation, and creativity by all employees. With the advent of the 21st century, the need for quality leadership is more critical than ever before. We must consider the rapid advances in technology, redefined work rules and work roles, the challenges associated with downsizing and budget reductions, dealing with ever-changing priorities, pressures to embrace privatization, and changing customer and client expectations.

Good leaders within a facilities management organization must have a solid grasp of the fundamentals of organizational structure and management. They must understand the mission of the institution and establish a vision for fulfilling the institution’s physical needs. They must make decisions that will serve now and well into the future.

The facilities organization itself must be developed and configured in a way that effectively meets the demands placed upon it. The right processes and procedures must be put into place. Good leaders make informed decisions and communicate with clients, customers, and their own staff in a clear, concise, and timely manner. They are able to make a candid evaluation of the facilities organization and implement necessary change. Good leaders make the difference between a mediocre and an outstanding facilities management organization.

1.1 Leadership roles and responsibilities are clearly defined.

Leadership roles and responsibilities are clearly defined within Campus Planning and Facilities Management (CPFM). The senior associate vice president leads CPM with clearly defined roles and responsibilities. The reporting line to the vice president for University Operations is trusted and has clear communications. Directors reporting to the senior associate vice president have defined roles and responsibilities and complete their roles in a very professional manner. All communications were open and direct. Websites are used to define organizations and encourage proper communication. All employees have defined performance objectives. Staff members are evaluated formally each year.
Organizational charts, employee policy manuals, and strategic plans were in place and understood in each part of the department.

1.2 The leadership system is understood by and communicated among all levels. The leadership system includes mechanisms for the leaders to conduct self-examination, receive feedback, and make improvements.

CPFM leadership positions have well defined lines of communication, both formal and informal. It was reported by lower parts of the organization that the message does not always get to the end of the line. For example, several interviewees had no idea why they were coming to the interview. One employee thought it was to be fired. The organization is big and complicated, with a lot of people needing to know and feel like they are part of the action. This is an ongoing challenge. All employees are encouraged to use the university president’s “Ideas of Texas” website for suggestions and feedback. CPFM has its own “electronic suggestion box” website known as CPFM Feedback Forum. Employees at all levels of the organization feel free to provide suggestions. Some CPFM leaders use 360-degree surveys for areas of improvement. Other groups of employees can use online surveys. It was recommended in the self-study that opportunities for using other surveys and survey results with the other groups would be important. Facility service’s Employee Environment Survey and New Employee Orientation were added to help communicate with employees. The quarterly meetings with senior leaders in custodial is a great idea. The biennial Leader Performance Feedback survey of 22 leadership competencies by Project Management and Construction Services (PMCS) is important. PMCS employees participate in climate surveys. Regular staff meetings are held. The overall level of self-examination and feedback works well. There is a consistent effort to seek employee input and use it to improve the organization.

Recommendation 1A

*Improve efforts to ensure communications get to front-line employees. Top leaders need to be understood and have the message clear and correct with the accuracy needed to build trust and confidence as well as ensuring all are working as a team.*

Recommendation 1B

*Top leaders in the organization need to spend more time with those employees they do not see or talk to on a regular basis. There is a strong desire to know who you really are. You need to define yourself to the employees and not let the action and policy changes label you. The employees want to see their leaders.*

Recommendation 1C

*There was a request in the self-study that more survey opportunities are given to other groups within the organization. We did not define “other groups.” We would recommend that you identify these groups and get their feedback.*
1.3 The organization has clearly aligned its mission, vision, and values statements with those of the campus. Regularly communicates with employees, customers, suppliers, and other stakeholders.

CPFM is aligned with the university mission, vision, and values statements. The four largest areas have a strategic plan. A review of these strategic plans proved that they were aligned, meaningful, obtainable, and measureable. Other areas do some planning and set objectives. However, CPFM needs a strategic plan that serves to bind the organization together and is in alignment with the university. This strategic plan should involve as many staff as feasible and be communicated broadly. Of particular note, there are mass notification e-mails, quarterly FAMIS forums, newsletters, a Facebook page, forums at J. J. Pickle Research Campus, employee and customer feedback forms, targeted customer meetings, customer project meetings, conferences, an annual sustainability conference, socials, new employee orientations, etc. Yet, “there may be so many ways employees are being talked to that they are in a state of information overload or holding onto news that should be timely but cannot happen.” Therefore, CPFM needs to find ways to get the message out to everyone in a timely way even though this is difficult with such a large organization. There are multiple ways that news needs to get out. However, making it important news helps keep it important.

SITES is an excellent program already in place that recognizes those employees who demonstrate the following values – Service, Integrity, Teamwork, Excellence, and Stewardship. The review team suggested that a similar program for managers and above be implemented to recognize employees for performing actions in their stewardship areas that would further the values of the organization.

PMCS proactively promotes the use of historically underutilized businesses (HUBs) in all purchasing and contracting operations through various means, including the annual construction departments “HUB Forum.” This organization is aligned with the university and communicates well.

**Recommendation 1D**
Develop a CPFM strategic plan that ties together with the university mission, vision and values statements. Then incorporate departmental strategic plans into the overall CPFM plan.

**Recommendation 1E**
Consider what elements of the TCO you can incorporate in CPFM.

1.4 Facilities management leaders spend time on a regular basis with their customers and front-line staff.
CPFM leaders do spend time with customers and with front-line staff. Observations suggest that more time and data need to be presented to customers. They are starving for information. Not so much a personal visit, as a place to go to get answers. Some of the websites help, but there is a need for more sharing. The self-service era is here. Some customers feel that CPFM does not have the data to share. This may be true with space management because the university has matured to a level where more data is needed. That problem needs to be solved. The question of rates and what to charge also needs to be solved. CPFM leaders need to get ahead of the game and visit with customers so they can anticipate the need before it becomes an issue. All the customer wants is enough data to get their job done. The owner’s project requirements (OPR) meetings are very important. Continue the regular walking tours of campus and grounds. Invite vice presidents and deans to walk with you so that customers can see the staff when there is not a crisis. Town Hall meetings are a wonderful idea. Initiate regular meetings with the provost, the vice presidents, as well as other top key administrators to provide direct communications and promote leadership building that will keep you well informed. Evaluate all of your communications systems — do you have too many? Remember, although they are all important, quality is better than quantity. The “ENURGY” programs and the energy dashboards are first class and great examples of ways to help employees and customers stay informed. The review team noticed that silo communications dominate certain designated working groups and that most communications did not flow between the work groups. Incorporating roles that will break down silos so that the work can be shared among the various work groups will build trust and will improve an organization. The associate directors are already demonstrating this type of sharing and communicating that is needed.

**Recommendation 1F**

Customers are requesting more data from CPFM. First, study what each customer needs and then determine what you might be able to give them access. You will want to provide customers with the right kind of data. Sharing data is a tricky business because you need to know how it is being used and that it is accurate and reliable.

**Recommendation 1G**

Customers want access to your data when they need it. CPFM needs to have a campus scheme as to what and how data will be delivered. We would recommend that a data distribution master plan be developed that will guide CPFM in its distribution. In addition, this could also be a guide to the strategic information technology plan recommended later on in this report.

**Recommendation 1H**

We recommend that the space management program be expanded to meet all the campus needs and that it remain within CPFM to manage.
Recommendation 11
It was obvious to the team that more work is needed in breaking down the communication silos. After further review by the team, it seemed as if the key functions of the mission of CPFM need realignment. This would create synergy and strengthen the organization. We would suggest that consideration be given to a realignment of functions to balance some of the workload and provide strong functional ties. This would also ensure that staff members work closer together and eliminate the communications silo. [We would not make this suggestion if the organization were not mature enough to explore the possibility.]

1.5 Performance measures at each level of the organization are clearly defined.

CPFM clearly defines performance measures at each level of the organization. Departments hold quarterly performance measures meetings. The Facilities Services Department has a quarterly management metrics review (MMR) with shared examples of the variety of tracking taking place. Leaders have organizational measures that result from lower level reporting. PMCS uses quarterly review and analysis (QRA) and shares results. The measures are clearly defined and are within the CPFM organization. When the CPFM strategic plan is written, additional CPFM performance measures can be added. The Technology Resources (TRecs) website that lists all of the department measures is also a great way to share performance results. The Utilities and Energy Management (UEM) Department provides excellent reporting to all concerned.

1.6 Senior leaders establish and reinforce an environment where shared values support self-direction, innovation, and decentralized decision making.

CPFM is a large organization. There are policies and procedures at all levels that help guide management. The environment encourages employees and leaders to be innovative and self-directed. This fine self-study is a great example of how a committee of employees throughout CPFM can work creatively in producing it. Examples of this innovative spirit show up in many parts of the organization. The only distraction was the obvious impact organizational silos are having. However, one of the best innovations was where those silos were crossed; then the silos became invisible. This encouraged an environment of shared values. The use of SITES helps to keep that in front of the employees and leaders. A formal effort to reassess the Employee Policy Manual of organizational processes and procedures with the overall goal of promoting self-direction, innovation, and decentralized decision making represents an opportunity for organizational improvement. We encourage this effort. All CPFM processes should be on a regular review schedule with internal and external reviews of each process. The self-study recognized a key point that the levels of funding approvals have been rising, which shows increased trust and decentralized decision making.
**Recommendation 1J**

We recommend that CPFM establish a five-year repeatable schedule to review the Employee Policy Manual for organizational processes and procedures with internal and external users. The purpose will be to promote, self-direct, innovate, and allow for better decision-making levels.

### 1.7 Informed of current trends and practices in the industry.

CPFM needs special recognition in their efforts to keep informed of current trends and practices. They do a great job. The following came from the self-study report:

“CPFM departments stay informed of current trends and practices in the industry. Departments actively seek opportunities to visit and host peer institutions, such as Pennsylvania State University, University of Southern California, University of Michigan, Texas A&M University, Wake Forest University, and Washington University, for benchmarking purposes. CPFM regularly participates in APPA, CAPPA, and TAPPA, Big 10 and Friends, Big XII and Friends, facility conferences, including making presentations. In 2008, the university hosted the TAPPA conference. CPFM provides opportunities for professional development through benchmarking private sector and industry trends and practices so that opportunities can be identified, developed, and possibly provided. Professional development and evolution of industry practices needs to be expanded to include technical staff in a meaningful way.”

This last sentence showed up in the interviews. Not only does technical staff need a program to learn current practices, so do the other skilled employees. New products give the employees an opportunity to learn new equipment and processes. Better ways of doing tasks is one of the keys. It’s the custodial management program, OS1, where the science of cleaning is applied to the old process. CPFM leadership needs to find ways to help the skill level of all employees.

**Recommendation 1K**

Find a way to help key technical and skilled employees stay informed of current trends and practices that relate to their industry.

### 1.8 A succession plan is in place to ensure continuity of leadership.

CPFM does not have a formal succession plan in place. The Utilities and Energy Management (UEM) plan applies to managers and below; no formal succession plan is in place for Executive Director Juan Ontiveros and his associate directors. Because of the nature of the utilities operation, a form of succession planning is necessary. A succession plan prepares and ensures that the functionality of utilities will be reliable and managed properly. The CPFM Leadership Development Program exists to train future leaders in need skills and challenges. The mentoring program assists in getting key replacement
personnel ready. The informal backfill plans are in place for critical employees. The overall protection to the university in the event of a needed replacement is informally prepared for. The self-study states that “A core strategy is to create multiple levels of trade positions and supervisory and management positions. Because the skills needed to perform the duties in the department are extremely specialized and technical, the multiple levels create an organizational structure that encourages employees to move from entry or lower level to more technically competent positions.” We support this effort. It will give added continuity to CPFM and university functions. The challenge is the number of key people approaching retirement. The best-laid plans must include employees that will be retiring. The team did not see anything addressing this concern in writing.

Recommendation 1L
Complete the core strategy to create multiple levels of trade, supervisory, and management positions.

2.0 STRATEGIC AND OPERATIONAL PLANNING

Strategic and operational planning consists of the planning process, the identification of goals and actions necessary to achieve success, and the deployment of those actions to align the work of the organization. The facilities organization should anticipate many factors in its strategic planning efforts: changing customer expectations, business and partnering opportunities, technological developments, evolving regulatory requirements, and societal expectations, to name but a few.

2.1 A strategic plan exists that includes the goals and objectives of the department.

The CPFM does not have an overarching strategic plan. The individual departments of Facilities Services (FS), UEM, PMCS, and TRecs each have a strategic plan for their respective areas of responsibility. However, the individual department’s plans, with the exception of the plan created by Facilities Services, are not current. That is, PMCS’s plan is dated 2009, UEM’s plan was created in 2001, and the TRec’s plan is dated 2006. Campus Planning (CP) does not currently have a strategic plan.

Recommendation 2A
The leadership of CPFM should develop an overarching strategic plan with specific goals and objectives for the organization. This should be done in conjunction with the administration and key stakeholders for CPFM.

Recommendation 2B
Each department head should update his or her current plan or create one where none exists to align with the CPFM strategy. Each department should include internal and external stakeholders in creating their individual unit strategic plans.
2.2 The strategic plan was developed with participation from internal and external stakeholders, approved by the administration, and effectively communicated.

See comments in criterion 2.1.

2.3 Customer needs and expectations serve as major drivers for setting strategic direction.

The CPFM organization has an excellent customer focus throughout its various departmental units. Facilities Services engaged customers in the development of their current strategic plan and has recently begun implementing customer surveys and face-to-face meetings with key customer stakeholders on campus by the department director. Project Management and Construction Services has a long history of surveying their customer base and utilizing the findings to make adjustments in their service delivery approach and/or effectiveness. Additionally, the director of PMCS is personally on campus interacting with key stakeholders on a regular or as-needed basis. The FMEP review team was very impressed with the visible style of leadership this director is consistently demonstrating for CPFM.

Additionally, CPFM holds facility forums several times each year to obtain feedback from customer stakeholders on the department’s service delivery effectiveness. Customer contact by leadership in UEM and CP is principally related to planning efforts on campus infrastructure and/or capital improvements. And, TRec’s leadership has developed a plan to meet its internal customer needs while the Office of Sustainability works closely with the Campus Environmental Center and the President’s Sustainability Steering Committee to meet the needs of various sustainability stakeholders.

In the course of this review, employees of CPFM and key customer stakeholders expressed a desire to interact personally with CPFM’s senior associate vice president and the director of Facilities Services more frequently than they do now.

Recommendation 2C
Both the senior associate vice president and the director of Facilities Services within CPFM should develop plans to become more visible and present these plans to key customer and employee stakeholders on a regular basis.

2.4 Goals and key performance measures are understood by all and periodically reviewed.

According to the excellent self-study report, the organization has goals and key performance measures for each unit within CPFM. These are designed to support each unit’s strategic plan. The periodic reporting of key performance indicator status and the communication of progress on them is variable by department. That is, they are discussed in quarterly metric review meetings, town hall meetings, and through various reports.
However, the review team did not get a sense that the front-line employees of CPFM were aware of these performance indicators and were being held accountable for helping to achieve successful outcomes and results related to them.

**Recommendation 2D**
Each CPFM unit should review and revise its goals and key performance indicators to align with the organization’s newly developed strategic plan.

**Recommendation 2E**
Once these goals and performance indicators have been developed and agreed upon they need to be communicated to the entire CPFM workforce on a regular basis. Also, the workforce needs to be made aware of what is expected of them in the way of attaining the levels of performance and/or each unit’s goals. Finally, the entire leadership of CPFM must begin holding their employees accountable for achieving related goals and performance targets.

**Recommendation 2F**
Develop a communication strategy for the department that standardizes how the new goals and performance measures are to be reported to the organization so that they can be understood by all internal stakeholders.

**Recommendation 2G**
Find ways to celebrate the departments’ progress in goal attainment and/or performance improvement results by engaging everyone who contributed to those positive outcomes.

### 2.5 Performance measures at each level of the organization are used to meet goals.

See criterion 2.4.

### 2.6 A budget is developed with input from staff that reflects historic expenditures, an analysis of needs, effective allocation of available resources to support the organization’s goals and objectives, and seeks new and innovative measures to leverage resources.

Multiple levels of CPFM leadership participate in developing a budget based on the funds needed for operations. The senior associate vice president, together with his directors, review departmental budgets and make decisions about shifting resources internally within CPFM to meet specific departmental needs. An example of this is the inter-departmental transfer (IDT) where income generated by PMCS and Facilities Services is used to cover maintenance, operations, and equipment needs for both departments.
Recommendation 2H
Negotiate a fixed annual budget transfer to the vice president for University Operations such that the lapsed salaries that accumulate above that amount can be retained to augment their maintenance, operations, and equipment accounts.

Recommendation 2I
Clarify which services are provided to Education and General (E&G) spaces at no cost to the departments and which services are refillable or not covered by E&G funding. Communicate this information to your clients and to your front-line employees so there is no confusion or misunderstanding between the service providers and the customers they serve.

Recommendation 2J
Create revolving accounts for PMCS and make their project management and construction services fully billable to their clients.

2.7 Standards have been defined for overall operational performance, built environment, and landscape.

The campus design standards need to be updated. CFPM utilizes a number of standards to inform their operations and strategies. These include OS1 standards for cleaning and management, grounds standards developed by the Professional Grounds Management Society, campus design standards, construction and equipment standards for utility infrastructure and operations, computer hardware and software standards, and new building funding model utilizing APPA standards.

Recommendation 2K
Update the campus design standards especially in the sections covering elevators and escalators, mechanical, electrical, plumbing, and fire protection. PMCS needs to appoint someone within the department to own the responsibility for keeping these standards updated in concert with the review and updating by Utilities & Energy Management, Facilities Services, and Campus Planning. The standards should be updated annually at a minimum.

2.8 A campus master plan is in place, current, and utilized for decision making.

The campus has a master plan that was developed in 1999. CPFM has been authorized to update the existing master plan that has been largely implemented over the past 12 years.

Recommendation 2L
The campus master plan update should also include an infrastructure master plan for chilled water, steam, electricity, domestic water, and fire protection,
and a storm water master plan for the campus. The updated master plan should incorporate the campus' sustainability principles as it relates to future growth and development of the campus.

2.9 The operational units participate in the development of the construction program and are active participants in the acceptance of completed projects.

Many CPFM departments are active participants in the design and acceptance of all capital projects managed by the Office of Facilities Planning and Construction and all renovation projects under the cost of $4 million that are designed and managed under the leadership of PMCS.

Campus Planning is involved with the client in defining and programming all capital projects. UEM, Facilities Services, and PMCS are all responsible for reviewing and evaluating capital project designs. Additionally, Facilities Services provides commissioning services for these project types.

UEM, Campus Planning, and Facilities Services, including custodial, landscaping and building maintenance, and campus safety and security, all review renovation projects of $4 million or less.

2.10 Strategies and processes are in place to ensure continuity of functions in the event of staff turnover or other disruption.

Most CPFM departments have standard operating procedures in place but only UEM and TRecs have strategies and procedures in place to ensure continuity of services in the event of staff turnover or unexpected disruptions or disasters. UEM has an excellent career ladder and staff training program within their department to assure a smooth and logical succession plan. They also have developed redundancy in infrastructure systems to ensure that utility services can be provided to the campus without major disruptions. Facilities Services is currently working on such a plan now but requires resources to complete it.

Recommendation 2M
Each CPFM department needs to develop a succession plan and strategies to ensure the continuity of their services in the event of staff turnover and/or disruptions. This plan should be updated regularly to ensure its relevance at the time unexpected events occur.

2.11 Emergency response plans are in place, current, and communicated to facilities employees and the campus community as required.

All the CPFM operating departments have a current emergency response plan in place, and they have communicated that plan to their respective employee and client constituents.
Both Facilities Services and PMCS are currently fleshing out more details in their existing plans.

### 3.0 CUSTOMER FOCUS

Customer focus is a key component of effective facilities management. Various stakeholders (faculty, student, staff, and other administrative departments) must feel their needs are heard, understood, and acted upon. Various tools must be in place to ensure customer communication, assess and assimilate what is said, and implement procedures to act on expressed needs.

In this era of shrinking higher education budgets, sustaining a commitment to world-class, campus-customer service is a daunting challenge. To succeed, facility service organizations must lead the shift to a new customer expectation paradigm; one where essential and affordable services continue to be provided with great skill and where employees at all levels are empowered to mitigate service challenges through creativity and innovation.

In the current fiscal environment, the need for close customer collaboration has never been higher. Similarly, the need for fielding transparent budgets and streamlined business processes has never been more essential. And the emphasis on enhancing the productivity of a shrinking workforce has become a top priority. This new perspective on sustaining the higher education environment is the lens through which we viewed the effectiveness of CPFM’s customer service efforts.

#### 3.1 Surveys, tools, and other methods are used to identify customer requirements, expectations, and satisfaction levels.

Many tools for identifying customer requirements, expectations, and satisfaction levels are being employed, some with great success. But tools are inconsistently applied across departments. In Facilities Services, the implementation of a survey tool at the completion of each work order is still a department goal. By contrast PMCS has been employing a post-project completion customer service survey for several years with good results. The PMCS director insists that his team follow up on negative comments. Customer feedback trends are reported in quarterly metric reviews. However, PMCS customers who receive non-project work orders are not surveyed. This is a curious inconsistency.

The use of customer service survey tools in PMCS is overshadowed by the department’s extraordinarily comprehensive customer communication program. The director personally leads his project management teams in weekly progress meetings with key customers such as the vice provost. He also conducts update briefings in the offices of each capital project customer on a periodic schedule. His well-schooled project managers provide supplemental communications in the interim. Despite these precedent-setting
communications efforts, several project customers noted inconsistencies in the quality of services provided by individual staff project managers.

UEM customer interaction is limited to elevator calls and billing auxiliary customers for utilities. Several utility customers sited difficulties interpreting utility bills from UEM and were occasionally successful in getting charges recomputed. UEM offers training in utility program management for auxiliary account managers.

TRecs uses a formal customer survey system (SysAid), but the system does not collect feedback from CPFМ staff clients who must interact with legacy software systems.

Other customer service information gathering efforts such as the tri-annual Facilities Forum offer clients the opportunity to air concerns. But there is no evidence that, at the CPFМ level, customer feedback is uniformly gathered, issue resolution tracked, or trends analyzed across department boundaries. Further, the lack of customer service related KPIs for department directors hampers the senior AVP’s attempts to accurately measure customer satisfaction, to set customer service goals for directors, or to benchmark progress.

**Recommendation 3A**

*The senior AVP should create an overarching strategic plan for the CPFМ organization that includes a strategy and goals for customer service and communications. Development of uniform trans-divisional customer service standards should be emphasized.*

**Recommendation 3B**

*The search for genuine gains in customer service will be stimulated by the development of commensurate KPIs for department directors.*

**Recommendation 3C**

*The senior AVP should consider a single customer relations and communications office. This office would bear the responsibility for gathering and analyzing all customer feedback, updating and fielding customer surveys, providing a valuable customer perspective to all business process reviews, providing directors with timely information on trends, and coaching new customers on CPFМ service delivery goals, standards, and the means for accessing service processes.*

### 3.2 The roles, responsibilities, and services provided by the facilities department are well defined, communicated, and understood within the department and by all communities served.

During interviews with campus clients we discovered that a significant number were confused about the distinction between E&G funded and reimbursable services. This has led to occasional consternation about charges for billed services. Similarly, we noted a
degree of concern among a significant number of campus customers regarding the impact of recent CPFM budget reductions and the resulting curtailment of services. Many are incredulous about the apparent disproportionately severe reduction in custodial services. Although the focused cuts in custodial ranks preserved other essential building services and that strategy was endorsed at the vice president level, campus leaders did not effectively communicate the dilemma or the necessity of the actions taken.

This outcome reveals general campus ignorance about the cost and value of the essential facility services that were not significantly cut. Campus customers seem to know very little about the extraordinary efforts being made to sustain and extend the service life of capital assets, landscape, hardscape, and utility infrastructure. Nor do they appreciate the value of those services. This misunderstanding of mission and strategy needs to be addressed.

We also noted a degree of difficulty navigating CPFM’s department specific websites. As in most facilities services organizations, department boundaries are created based on funding source and the unique technological nature of the packaged service and not on the integrated needs of any particular customer. Navigating overlapping websites in search of services is difficult for unsophisticated customers who are looking for one of many building services. The establishment of the new one-call service center should mitigate that customer communication problem.

Some customers also don’t understand how CPFM integrates the facility maintenance effort, e.g., daily service call responses and the capital asset renewal effort. Some feel they must aggressively intervene to get recurring problems to move to the repair project list. This suggests a tune-up in coordination between shop personnel and the CPFM engineering staff is needed, along with a reassessment of responsibility for keeping the customer informed. On whose desk does the monkey reside—that of the zone maintenance manager or that of the engineer or that of the project programmer?

**Recommendation 3D**

Customer confusion about the true cost of services should be addressed by creating a fully burdened shop rate for each unique group of service delivery personnel (within the parameters the university generally applies to such calculations). This shop rate should be uniformly applied to both E&G funded and reimbursable work and should also be the basis of internal resource allocation decisions.

**Recommendation 3E**

We strongly endorse the plan to establish a one-call service center to aid clients seeking service. However, before rollout, you should carefully review the call center’s charter for solving customer problems. Will it document the service request and create the work order or simply offer a telephone referral to the appropriate CPFM desk? Will other requests be accepted and a prompt call back
from the responsible party in CPFM be promised or will the center’s staff simply offer a staffer’s name and phone number? Will the center carry the responsibility for accepting, documenting, and categorizing customer complaints? We also suggest that a corresponding survey instrument and metrics be in place to measure customer reaction to the new call center.

Recommendation 3F
We suggest that you consider the success of the PMCS customer outreach program and the past successes of the Facilities Forum and create a new format for individual college and auxiliary program director semi-annual visitations. The agenda should include the full gamut of CPFM services provided to that college or activity (a current facility assessment review, explanation of the character and cost of routine preventive maintenance, service call activity and trends, landscape care, custodial services, processed utilities, utility distribution maintenance, building system life extension or replacement strategy, and facility projects in the queue). Such periodic, tailored briefings create an opportunity to build appreciation for the true cost of facility support and the nature of essential but unseen services.

3.3 Levels of service are set to exceed customer expectations and are defined in terms that can be understood by the administration, building users, and facilities staff.

Despite several years of budget and program reductions, employees in facility service departments uniformly continue to exhibit a passion for delivering exceptional service. Some morale issues exist, but loyalty to and concern for campus customers remains strong. First-line supervisors appear eager to engage in process reviews and technological changes that may offset resource reductions.

One of the most aggressive customer advocates is the manager of zone maintenance. He lobbies for more streamlined processes for the acquisition of repair parts and is focused on the important underpinnings of facility repair and preventive maintenance program success, transportation, skill training, efficient work documentation, and field communications. Similarly, the landscaping and grounds care group is boldly coping with a record-breaking drought. Appropriate triage of landscape assets is underway with emphasis on sustaining the campus’s priceless inventory of mature native trees. In addition, the switch from labor intensive and water sensitive annuals to attractive xeriscape (environmental sensitive grounds) alternatives is well under way.

Several addressable resource and administrative impediments are preventing CPFM customer service programs from becoming national pace setters. In Facilities Services, zone workers lack: a) quick vehicle parking access to building work sites; b) advanced skill training necessary to cope with state-of-the-art control systems embedded in new buildings; c) reliable communications across the breadth of the campus; and d) currently
available, technological solutions that will facilitate work documentation on the fly. Such improvements will be essential for elevating the tempo of work-order completions in an enterprise that is operating well below APPA staffing standards. A review of the payback from a modest ten percent improvement in technical workforce productivity (applying a properly burdened hourly shop rate) will easily support such investments.

Similarly, PMCS’s productivity is compromised by reliance on inappropriate software. While the PMCS leader’s personal customer outreach efforts are laudable, they may be masking a fundamental shortcoming in the department’s inability to achieve higher productivity from staff project managers. Note, in many cases where we observed opportunities for process change, we encountered either subtle or explicit reluctance to confront the need for commensurate software adjustments. There seems to be a cultural bias in the organization to continue existing data recovery protocols rather than insist that software adapt to accommodate best business practices.

**Recommendation 3G**

*Look to process refinement, current technology, and software to reduce the amount of nonproductive time for high shop rate personnel and project managers (i.e., bar code buildings and components, employ PDA work-order/project management devices, modify landscape plans to provide CPFM electric cart parking near every major campus faculty, consider IDIQ contract services as a supplement to Central Stores, etc.).*

**Recommendation 3H**

*Enhance the quality of project delivery services by acquiring software that will improve customer access to current information and more effectively track project progress and progressive fiscal obligations.*

**Recommendation 3I**

*Consider policy development that would reinforce the expectation that*

- *every service delivery process has an (accountable) “owner,”*
- *pursuit of efficiency and enhanced customer services drives process changes,*
- *business process improvements drive software modifications, and*
- *from a business standpoint, existing software is a “sunk cost.”*

### 3.4 The communities served know how to obtain, monitor, and evaluate services offered.

During interviews with campus clients, we found a general high level of satisfaction with the efforts of the CPFM organization. Most department facility coordinators have learned to navigate the FAMIS customer interface portal, but most expressed some irritation with the software or its reporting options. Several opinion trends noted below suggest that easily executable process and software changes will elevate customer satisfaction even higher.
First, we noted that not all of the FAMIS work-order update options (automatically generated e-mail updates to the customer) are being exercised. These include work-order acceptance/activation and the assigned WO number, work complete, and work-order closed. Customers also complained about delays between when the date funds are declared available and the opening (posting) of the project work order. Most annoying to customers is the inability of the project management process to assure that all outstanding obligations are promptly posted to the project file. Customers complained that project managers generally could not accurately reveal the amount of obligations at the 80 percent complete point. This prevented customers from exercising scope changes based on available funds. In other cases, customers complained about mysterious charges being posted to the project months after the work was complete. Project customers appreciated the opportunity to comment on post-completion surveys of customer satisfaction, but surveys are not used on non-project work orders.

**Recommendation 3J**
*Exercise available customer update options in FAMIS.*

**Recommendation 3K**
*Review and modify the project cost-posting process to assure prompt posting of both contract and in-house generated obligations.*

**Recommendation 3L**
*Extend the use of customer service feedback instruments to non-project work orders.*

### 3.5 Customer feedback is used to build positive relationships, drive processes, and effect improvements.

The organization is making a strong effort to collect and apply customer feedback through post-work completed surveys, interviews, and e-mail solicitations. Additionally, CPFM conducts tri-annual Facilities Forums where key clients (auxiliary enterprise directors, deans, AVPs, etc.) are briefed on current facility management issues and customer feedback is encouraged. Similarly, special customer outreach efforts are conducted at the J. J. Pickle Research Campus. Further, both PMCS and UEM are making special outreach efforts to project customers and utility customers.

Resolution of customer service issues remains a department director responsibility. Little cross-departmental feedback or trend analysis is conducted and the emphasis is on solving individual complaints. Customer service and communications staff assets are distributed among departments. The CPFM organization does not have a single office-of-primary-responsibility for collecting customer feedback and for assuring that customer concerns are categorized and applied globally to CPFM business process reviews.
Recommendation 3M
Consider adding a customer relations and communications office to the Business Services Department. This office should collaborate with department directors in determining the cause of customer dissatisfaction: miscommunication on roles, responsibilities, and expectations, employee performance, lack of employee training, business process shortcomings, etc. Trends, and recommendations, and follow-up actions should be summarized and presented to the senior AVP in periodic metric reviews.

3.6 Campus users have a clear understanding and positive view of services provided by the facilities organization.

The senior AVP is a skilled and articulate spokesman for facilities services at UT Austin. Much of the positive customer feedback from campus customers is based on this person’s long established collegial relationship with fellow campus leaders. Key clients trust the senior AVP’s judgment, and they have confidence that he is making the correct resource decisions. Similarly, the director of UEM has won the respect of campus thought leaders by winning national accolades for his efforts in creating modern, efficient campus utility systems. The Facilities Services Department has been less successful in garnering praise from the campus community because much of its significant contribution to sustaining the university capital portfolio is transparent to its customers. But, if properly presented to key campus clients, the contribution of maintainers, grounds staff, and custodians could further enhance the CPFM’s reputation and bolster morale in the Facilities Services Department.

Recommendation 3N
Modifying the agenda of current facility forums to present the full spectrum of CPFM services to deans and their chairs and to other key clients presents an opportunity to shine the spotlight on the unrecognized, but critical services of the Facilities Services Department and UEM’s system maintainers.

4.0 INFORMATION AND ANALYSIS

4.1 A systematic process is in place for identifying and prioritizing performance indicators, comparative information, and benchmarking studies for the most critical areas.

The campus uses the APPA Facility Performance Indicators (FPI) Survey, customer surveys, energy metrics, and other comparative measures to ensure compliance with the campus and departmental strategic plans. These measures are used to help identify new initiatives and continuing strategic improvements to the organization.
Recommendation 4A
Consider using additional metrics that identify more internal processes for improvement. The APPA FPI Survey looks at high-level, common metrics that are good comparators with other institutions but may not provide a detailed enough look at the internal operations of the campus. See some examples in other recommendations below.

4.2 Benchmarking results, comparisons and performance indicators are tracked and used to drive action within the organization.

The department utilizes the APPA FPI Survey to benchmark itself and against other universities. The department has participated in the survey since its start. The department also has taken advantage of numerous information sharing opportunities through annual and other periodic meetings of higher education facilities organizations. The informal information sharing at inter-institutional meetings provides significant data for organizational improvements but may not be gathered adequately to be truly effective.

Recommendation 4B
Consider requiring a report from every person attending a conference or other inter-institutional meeting to return with at least one idea for benchmarking or improving the CPFM organization. The reports may result in additional data sharing with other institutions or may identify best practices from elsewhere that can be implemented at UT Austin without much difficulty relative to the benefit.

4.3 The department ensures that data and information are communicated and accessible to all appropriate users. The required data and information have all the characteristics users need, such as reliability, accuracy, timeliness, and appropriate levels of security and confidentiality.

There are electronic displays at key entrances and in break areas that provide significant information to employees and passers-by about various organizational metrics. Some of the metrics observed included safety statistics and volume of work handled by the department. The information appeared current. The challenge with the presentation in the areas shown is that not all CPFM employees are able to visit these locations regularly because their work does not always take them to the areas where the screens are located. The team did not visit many of the work areas in the CPFM compound so it was not possible to verify that all groups had access to the same information observed in the office areas.

Other key metrics that might be provided to employees that would demonstrate management concerns or attention to key areas include: percentage of material requests filled from the CPFM inventory, number of non-inventory purchases, number of Procard transactions, a GPS study of Procard transactions, and estimates of the amount of time
spent acquiring materials versus the total hours in a year. While the department has utilized many external metrics to compare against university and other maintenance standards, it has not taken advantage of identifying and measuring internal metrics that would quickly identify process improvements. The campus is large and complex; there are many opportunities to identify metrics and areas for improvements.

**Recommendation 4C**

*Develop internal metrics to measure staff performance and identify opportunities for process improvement. These metrics do not need to be focused on individual employees or single processes; they may be global within the organization and change over time as the processes are improved. Examples of metrics that may yield process improvement opportunities include: time spent acquiring non-stock items; total distance traveled acquiring non-stock items; and number of non-stock acquisitions per week. These metrics are recommended based on comments from maintenance staff that seemed to focus on problems with the Procard process and frustrations with a limited inventory. There may be other areas for possible measurement and improvement, but the acquisition of parts to maintain the campus affects virtually all areas of CPFM.*

**4.4 An effective facilities inspection or audit program is in place that provides a regular appraisal of facilities conditions, identifies maintenance and repair needs, and quantifies facilities maintenance resource requirements.**

CPFM has utilized the services of Vanderweil Facility Assessments (VFA) to assess the condition of campus facilities. The results of the survey are used to develop annual capital renewal projects to ensure campus facilities are meeting the needs of the campus community. While there is no question about the accuracy of the VFA report or the selection of projects, it is not clear that the projects recommended address the needs of internal customers thus affecting the campus customers. For instance, energy related equipment within buildings may not be operating properly leading to energy inefficiencies. Coordination of a capital renewal project with UEM may identify a second list of capital renewal projects that can be self-funded out of energy savings.

Given that capital renewal projects can be as significant as some campus development projects, it is important to have the Campus Planning group involved in the prioritization of renewal projects. While the Campus Planning group may not get a “vote” in the renewal list, they can, at least, identify those facilities that are slated for demolition or a capital improvement project in the near future, thus avoiding a renewal expenditure that will be used for its full life. Similarly, the capital renewal list provides some important information for Campus Planning as they program new projects.

Include UEM and Campus Planning in the R&R Project Prioritization and Selection Focus Group. Including these two groups within CPFM will bring added knowledge and
awareness of the condition and use of facilities for the prioritization group and may also bring additional funds, through energy conservation, leveraging the available renewal resources.

### 4.5 An expenditure report is available to managers on a regular basis and is used to effectively evaluate and control expenditures in assigned subunits.

While managers have information to manage and control expenditures in their area, they lack some key specific information to ensure the organization is operating effectively. The university is so large that it is easy to have some significant inefficiency while still appearing to have a well-run organization. More detailed management reports are needed, such as metrics about normal activities that many employees must do every day.

**Recommendation 4D**

Consider the development of some high-level but targeted metrics to ensure the organization is working smoothly. Examples include: individual building O&M expenditure reports based on all maintenance services delivered to the building; time studies of maintenance employees to ensure an expected amount of productive time is available or to identify where unacceptable levels of time are expended; and processing time for high-volume activities.

### 4.6 An effective system of measuring and recording utility data is in place and is used to establish trends, minimize costs, promote energy conservation, and encourage environmental preservation.

Utility data within the power plant is measured through a number of devices and collected centrally. The data are used to ensure efficient operation of the power plant and remote chiller stations. Utility consumption data are collected for auxiliary units and most Education and General (E&G) facilities (there are a few remaining facilities to meter). Utility costs are charged to auxiliary units monthly; E&G units are not charged. The monthly utility statement to auxiliary units details units consumed and cost per unit, which changes monthly. However, the statement is difficult to read and understand according to users.

**Recommendation 4E**

Consider setting a fixed utility rate for the entire fiscal year and address any mandatory rate fluctuations with a year-end tune up. The monthly changes in utility rates lead to confusion among the departments receiving invoices. A constant utility rate for the year will help eliminate confusion.

**Recommendation 4F**

Simplify the utility invoice to auxiliaries. When asked if they understood their utility invoice, many of the auxiliary units interviewed responded “no.” This is
an opportunity to make the utility invoice similar to what a homeowner gets. While large institutions often have more complex utility structures, developing a way to make the utility costs more consistent, transparent, and simple will improve customer service.

Recommendation 4G
Create energy reports for each building on an annual basis and move to monthly reporting. Reports of energy consumption, by building, create metrics that can be used in multiple ways. Understanding how a building consumes energy over time should lead to identification of buildings with equipment problems and provide the maintenance employees with an early warning about significant building problems.

Recommendation 4H
Develop a utility “invoice” for state-aided units. Nothing grabs the attention of a utility consumer more than a utility bill. When people see what they are consuming on a monthly basis and understand the costs, they will be more likely to help conserve energy.

4.7 The organization has a process to ensure that hardware and software systems are user-friendly, reliable, up-to-date, and meet the needs of the users.

Computer hardware for most areas appeared to be up-to-date and was meeting the needs of most office users. It was unclear if the shop areas had adequate computer hardware for their needs. There were some concerns expressed that hardware was out-of-date and inadequate, but there was no clear indication that upgrade requests were being denied.

Software systems in CPMF are plentiful and wide ranging. There were a large number of applications being used and managed, more than could be counted easily in the visit. There were systems that interfaced with the primary data management software FAMIS. There were other systems used for purposes that often appeared to be duplicative or limited in use. Interviews with some of the technical support staff indicated that according to the technical experts, there were more systems in use than really needed to do the job efficiently.

There appeared to be a propensity to implement a technological solution before examining the problem or process to see if there were nontechnical improvements that could be made first that would limit the number of applications requiring support.

Some employees maintain critical operational details in individual spreadsheets rather than rely on the main data system, FAMIS, resulting in duplicate (at a minimum) entry of information. In some cases, multiple entries of the same information were necessary to get
all the systems to work together. In addition, some project managers did not appear comfortable with the information in the primary system.

5.0 DEVELOPMENT AND MANAGEMENT OF HUMAN RESOURCES

An organization’s success depends increasingly on the knowledge, skills, innovative creativity, and motivation of its employees and partners. This section addresses the ways in which the facilities organization ensures an environment of continued learning through communications, policies, recognition, training, professional development opportunities, and other methods.

In a resource-constrained environment, the skill level and motivation of each member of the team takes on paramount importance. Investments in human resources pay immediate dividends by increasing work accuracy, individual productivity, and loyalty to the organization’s mission. Loyalty, in turn, spawns interest in innovation and creativity, qualities that can’t be purchased at any price. Highly effective facilities services organizations share a common trait, an uncommon commitment to human development in the face of an uncertain fiscal future.

Jim Collins, the author of the management science best seller, Good to Great, suggests that the art of managing the organization’s human resource means “getting the right people on the bus and then getting the people on the bus in the right seats.” Getting your best talent in the right seats requires thoughtful policy development and smart human resource program administration. Opportunities for self-improvement must be sufficiently broad to capture the imagination of all potential process and organization leaders while being sufficiently focused to link training costs with measurable improvements in organizational effectiveness. Unconstrained by cost concerns, well-developed recognition programs can infect the organization with prideful disciples of the value of exceeding expectations. These themes guided our review of CPFM’s human resource programs.

5.1 Staff positions are properly classified and allocated in adequate numbers to meet the standards for the targeted level of service.

The university has a coordinated staff classification program, and all positions are reviewed and classified in accordance with that system. Any request to review and/or reclassify a position is initiated by the department, with reviews based on information provided by the department. The university has a system to review positions against market rates; these reviews are conducted periodically.

CPFM has done a very credible job of absorbing budget reductions while preserving essential services. But as noted earlier in this report, customer reaction to cuts in custodial services suggests that CPFM staff should devote greater effort to managing customer expectations (see Recommendation 3F). In addition, a greater emphasis on reminding
deans, chairs, program directors, and vice presidents, etc., at periodic meetings about the full spectrum and cost of all facilities services will help drive home an appreciation for the value of critical, but often unseen activities whose reduction would result in immediate degradation of facility usability.

Differences in the evolution and culture of each university and its facility service group result in understandable and rational differences in organizational structures and staffing patterns across APPA’s member institutions. However, benchmarking other successful programs through the APPA FPI Survey or through direct partnering efforts remains a valuable tool for assessing local allocation of resources. At least one group in CPFM has created an apprentice program to encourage outsiders to apply for positions. This program ties objective measures to position advancement and raises.

CPFM’s HR personnel have done an admirable job of facilitating corrective actions emanating from the university reclassification effort of 2007. Periodic reviews and reassessments continue at a timely pace. The HR staff appears to be very responsive to requests for span of control, reviews, and reclassification requests. Care must continue to be exercised in review of equity issues.

**Recommendation 5A**
*Benchmark overhead positions against peer organizations of similar size. Given the size of the organization, it is appropriate to review the number of overhead staff (including management, business services, customer relations, TRecs, etc.) per direct service delivery employees.*

**Recommendation 5B**
*Encourage all CPFM departments to have some positions identified for apprentice opportunities. Developmental programs have been found to increase employee satisfaction and to increase employee loyalty to the institution.*

### 5.2 Training programs provide for new employee orientation and technical skills enhancement for all staff.

The array of employee development and training opportunities for the CPFM staff has few parallels in higher education facility management organizations. From English as a Second Language training, GED assistance, and special training for aspiring executives, opportunities are available to all who are interested in self-improvement. The training regimen is particularly well defined and administered in the UEM Department. PMCS, TRecs, and Facilities Services also provide generous assistance to employees seeking additional licenses and certifications. However, policy refinement could make the CPFM training investment a more effective tool for improving productivity and mission effectiveness.
The shared characteristic of most employee development programs is the role of the individual employee in identifying training opportunities beyond the mandatory annual refresher training of the organization or university. There seems to be little oversight in assessing the relationship between the chosen technical, computer, or management training and the near-term CPFM or department productivity and effectiveness goals. Pursuit of an academic degree that will make an employee eligible to apply for a leadership position may be beyond scrutiny. But lesser pursuits should be rationalized.

Other looming technological challenges suggest investments in department-directed training for entire groups of employees. One example is the need to educate electricians and HVAC zone maintenance personnel on digital controls, variable frequency drives (VFDs), and the trouble-shooting video screen tools built into a building’s energy management systems. This training and certification will be costly. The payback should be viewed against potential reductions in expenditures for contractor support and the time spent by engineering professionals on building system diagnosis and adjustment tasks.

Currently most department training metrics focus on the number of employees trained or the hours each employee spends in training. Neither of these metrics measures the effectiveness of the training. If the organization’s goal is to improve the quality of output in a single department (i.e., successful diagnosis and repair on first service request) or the accuracy of work on a single organization-wide challenge (i.e., the quality of annual employee performance reports), then the effectiveness of the training should be measured against post-education error rates.

**Recommendation 5C**

_Develop a link between increased technical skills and organization metrics._

_Investing in an employee’s training builds loyalty to the organization and can bolster morale. Employees are quick to accept the proposition that sponsored training is not provided solely to increase the individual’s marketability. To the extent that is practical, organizational sponsored acquisition of technical skills and certifications should be more closely linked by strategy and metrics to the goal of the organization._

**Recommendation 5D**

_ConSIDER development of a system that incorporates annual training goals and expectations into the annual review process to ensure employee and supervisory buy-in and commitment. This may be in the form of a clear list of training goals that must be completed or reference to a menu of training items. In addition, a clear plan of off-campus continuing education opportunities such as APPA, CAPPA, and TAPPA meetings will coordinate both employee and employer expectations for the coming year and allow clear measurement the following year._
5.3 An effective communications system exists within the department to ensure that each employee knows his or her role in the department, the role of related areas, and the overall role of the department.

A proliferation of postings on websites, inclusion in employee manuals and bulletins, and coverage during department “all-hands” gatherings ensure that the organization’s mission is well publicized. Further, the agendas of periodic department status meetings in Facilities Services, PMCS, and UEM include a review of department strategic plans, goals, and progress to date. The CPFM organization has a communications staff position that carries the responsibility for crafting and distributing information updates for employees.

Despite these aggressive communications efforts, the lower tiers of employees (particularly those who do not have routine access to computer stations and those for whom English is a second language) express the highest level of dissatisfaction with the flow of timely information about the health of the organization and current challenges. In some organization venues, communication is sporadic and inconsistent. Some employee groups interviewed were discovering what each other did for the first time. There was limited awareness of how everyone worked together in the same unit. This was particularly evident in the business-oriented work groups interviewed, whether across groups or within the same group. While the trades appeared most aware of what each other was doing, this was likely due to the uniformity of the work.

Unchallenged, traditional mission boundaries between departments and the lack of an overarching CPFM strategic plan and vision statement inhibit closer collaboration between department staffs. Unifying CPFM strategic goals and creating shared metrics would encourage higher levels of cooperation. Similarly, the consolidation of all business support staff under the senior AVP would facilitate uniformity in customer communications and would create greater reliance on, and trust in cross department communications.

Another potential source of friction between departments is the growth of independent department engineering staffs. Without central leadership, independent professionals are prone to develop uncoordinated design approaches and different equipment preferences and performance standards. Only a unified engineering office can ensure that consistent maintenance, retrofit, and construction standards are implemented and appropriately updated.

Recommendation 5E

Knock down the silos. The CPFM’s new strategic plan should emphasize the pursuit of inter-division, synergistic solutions to the challenge of sustaining the campus facilities portfolio with reduced resources.
Recommendation 5F  
Consider incorporating an employee focus article in a departmental newsletter or other communication vehicle that allows the employee to describe what he or she does. The feature article may have the same readership problems that the current communication channels have but because the article focuses on a peer, there may be an increase in readership and a corresponding increase in awareness of intra-organizational operations.

5.4. Safety policies and procedures have been established, written, and communicated to all staff.

The organization is doing an excellent job of promoting safety awareness and delivering recurring safety training. Typical promotion avenues, such as work center posters, shop safety briefings, and periodic safety meetings, are heavily exploited. These efforts are reinforced by the organization’s choice to establish safety coordinator positions in each department. The department-level safety coordinators monitor work sites to ensure continuous safety compliance, provide shop level training on OSHA standards, investigate workplace accidents, and monitor procedural follow up. The assignment of safety coordinators to each department, without affiliation with an organization-level safety manager, may limit opportunities for knowledge sharing, cross-department accident trend analysis, coverage of safety responsibilities during staff absences, and the development of a safety policy free from the influence of department staffs.

Safety is recognized as an important part of the workday, and management has programs that emphasize its importance. The annual safety fair, held during work hours, is attended by less than half of the staff. While disappointing, management appears to be doing many of the right things to focus attention on safety. Statistics about safe work practices and accidents are displayed with other information on electronic screens throughout the department.

Recommendation 5G  
Consider organizing a monthly stand-up meeting within small work groups to go over highlights of recent safety statistics and appropriate corrective actions. These meetings do not need to be long or complex and can be incorporated into another periodic meeting with the supervisor and front-line workers.

5.5 Accident records are maintained, reducing their numbers. The records help identify needs for special attention.

The CPFM division staff members seem to be placing the appropriate emphasis on accident reporting, documentation, and record keeping. Incident reporting actions comply with Texas Department of Insurance guidelines. Department safety coordinators perform follow-up investigations and collaborate with shop supervisors in determining causes and
lessons learned. Results are shared with the department staff. However, there does not seem to be a mechanism for sharing hazard identification or lessons learned across department boundaries. Nor is it apparent that there is any organization-wide trend analysis.

**Recommendation 5H**

*Encourage employees to identify safety hazards and reward those who are able to identify a safety improvement that costs little or nothing. Providing an incentive to identify safety hazards should heighten employee awareness and reduce accidents. The reward does not have to be costly; it could be simple recognition.*

### 5.6 The organization promotes employee and professional development through formal education, training, and on-the-job training such as rotational assignments, internships, or job exchange programs.

The organization facilitates employee involvement in numerous development programs. In addition, all departments offer fiscal and mentoring support for employees seeking higher levels of education, licensure, and certification. Both the Leadership Development Program and the Executive Leadership Programs are industry pace setting efforts. Educational benefit policies are well developed and well communicated.

It is important to note that (particularly in the construction and facility maintenance job families) opportunities for advancement are limited to merit pay raises. Such narrow windows of opportunity are a bit out of step with the more common, industry-wide use of career ladders. Career ladders (supported by a job description hierarchy that links licensure levels and certifications with broader duties and higher levels of responsibility) can become a catalyst for wider interest in advanced skill training. Acquisition of advanced skills can become the basis of future “in-sourcing,” e.g., the movement of more sophisticated testing, diagnostics, and repair work away from costly contractors and back into CPFM shops. The integration of career ladder advancement protocols and current merit pay practices would reduce the appearance of favoritism in selection for additional compensation.

The aforementioned apprenticeship program is an excellent example of employee development. The program has been in place for several years and many employees in the department have benefited from the growth opportunities. In addition, the department has benefited by having employees dedicated to the institution and the department; they have identified numerous ways the department can reduce its operating costs and benefit the entire campus.

Jobs appear to be pigeon holed or siloed significantly in non-trades areas. These specialized positions, while potentially appropriate in a large organization, create natural silos of information and responsibility that can harm the organization over time. For instance, if an
employee is out with an extended illness, important work steps may not get done or may be done poorly with numerous errors. This job specialization and lack of apparent rotation of work assignments can result in serious gaps in the organization or make it vulnerable to problems if an employee leaves unexpectedly or decides to cause trouble.

**Recommendation 5I**
The organization should explore the establishment of career ladders in the construction and maintenance job families and in other areas where employees need more advancement clarity and opportunity.

**Recommendation 5J**
Create a system where multiple people perform critical tasks or where employees are cross trained. Cross training employees to do multiple jobs reduces the risk that a critical task will not be completed in a given week or month. It also increases operational efficiency, since as employees learn more about what others do, this can help them identify process improvements that might not be seen without this shared knowledge.

### 5.7 Career development is supported through involvement in job related and professional organizations in addition to opportunities to advance within the department.

The senior AVP’s involvement and leadership roles in APPA, CAPPA, and TAPPA have set a fine example and a high standard for the organization’s management personnel. Unique in-house employee development programs also offer easy access to leadership and management skill improvement. Given the size and complexity of the organization, participation of select staff in NACUBO, SCUP, and professional engineering organizations would add a valuable dimension to the quest for higher executive skills and best industry practices.

CPFPM encourages continuing education through several venues and allows employees to take courses that will help them advance their career. There was general satisfaction with the career development opportunities available to employees at all levels, even when employees admitted not taking advantage of these opportunities.

**Recommendation 5K**
Consider making career development a two-way street by incorporating both employee and supervisory continuing education goals for the employee in annual evaluations. When both the employee and supervisor agree to a continuing education goal in writing, there is a greater likelihood the employee will complete the training and the organization will benefit from a better educated employee.
5.8 Work performance and attendance tracking measures are in place, are understood by staff members, and are used by supervisors to assess performance.

The organization observes appropriately formal protocols regarding employee performance management and periodic appraisal. Standardized rules govern the scoring of employee performance appraisals. Merit pay adjustments are tied directly to numerical performance scores. This evaluation system underpins the reputation of the organization as a fair and results-oriented employer.

Supervisors at every level track attendance and place a high emphasis on the accuracy of time reporting. The organization provides special leave-balance tracking service to custodial employees. Individuals receive a timely notice when leave balances are about to be exceeded. If these warnings are computer software generated, perhaps the service could easily be extended to all employees and then shared with supervisors.

5.9 The organization uses both formal and informal assessment methods and measures to determine employee well-being, employee satisfaction, and motivation. Assessment findings are linked to performance results in order to identify priorities for improving the work environment, employee support climate, and the supervisor’s effectiveness (coaching).

The CPFM organization’s leaders are making a great effort through frequent meetings and briefings to assure effective downward communication on strategy, goals, and pertinent organization news. However, the avenues for upward communication (employee feedback) are not as well designed or accessible. PMCS appears to employ the most effective combination of work climate surveys, analysis, and process modification. UEM relies on standard shop meetings and frequent, informal supervisor/worker one-on-one sessions to reveal employee perceptions of fairness, trust, advancement opportunities, recognition, and other closely held feelings that ultimately affect performance.

The Facilities Services Department has recently completed its first employee work climate survey. However, the accuracy of this survey may be compromised by a relatively low response rate (perhaps because the responses were forwarded via workplace computer terminals where privacy is not ensured). In sum, attempts to assess the health of the CPFM organization workplace climate is somewhat hampered by independent department-level survey attempts using a number of different survey approaches. Research and experience has reinforced the premise that employees at all levels share the same important basic workplace needs: fair treatment, opportunity for development, individual respect, clear direction, and honest and timely feedback. This commonality of basic employment “hygiene” issues suggests that a standard employment satisfaction survey instrument could be used for all employees. APPA provides a very comprehensive survey instrument that explores the full spectrum of worker satisfaction issues and is generic enough to be a valid tool for assessing the concerns of professionals, managers, and service delivery
personnel alike. Employing the same survey instrument across departments and work groups would provide the senior AVP with valuable insights about variations in worker satisfaction and motivation. It would also reveal where local managers/leaders are being successful in gaining employee trust and where improvement is needed. Applying the same survey year to year reveals the effectiveness of leaders’ efforts to improve the work climate over time.

**Recommendation 5L**

*CPFM should adopt a standard work climate survey for all work centers.*

*Employing the same survey will identify where additional leadership effort may result in quick gains in worker confidence and unit effectiveness. Note that the highest accuracy in employment climate surveys is achieved when a written survey instrument is administered in a neutral environment, proctored by staff that is not in the employee’s chain of command.*

5.10 **Employee recognition programs are in place for individuals and groups (may include community service).**

After a review of the organization’s formal recognition programs and the protocols that govern them, it is obvious why the organization garnered a 2009 Effective and Innovative Practices Award for their pace-setting program. The SITES Award program is professionally administered. It both recognizes the organization’s best while reminding the staff about the lofty organization values that guide each year’s search for a winner. The inclusion of previous winners on the annual selection committee helps assure that high standards are maintained. The addition of a SITES group award and the creation of a less formal On-the-Spot Award, demonstrate an ongoing leadership commitment to continuously improving recognition opportunities for deserving employees.

5.11 **Processes are in place to determine the effectiveness of recruitment and retention programs and to identify areas of improvement.**

Recruitment and retention programs across all departments are strong and effective. The delicate task of integrating new hires into the workforce at the appropriate wage seems to be handled with great finesse. Similarly, use of exit surveys to discover causes of dissatisfaction is a courageous and necessary effort.

UEM has been particularly successful in partnering with UT Austin’s School of Engineering and with a local community college to launch work/study and intern programs that have brought aspiring new technicians and junior professionals into the workplace. The program has resulted in several permanent additions to the UEM staff.
6.0 PROCESS MANAGEMENT

Effective process management addresses how the facilities organization manages key product and service design and delivery processes. Process management includes various systems such as work management, performance standards, estimating systems, planning and design of new facilities, and other key processes that affect facilities functions.

6.1 Processes are in place to ensure that departmental facilities and equipment are adequate for the provision of effective and efficient services.

Much of the CPFM operation for the main campus is centralized in a compound east of the freeway. Buildings in the compound appear to be adequately sized to house administrative offices and shops, although parking for CPFM vehicles is rather tight. The vehicle route from the CPFM compound to the main campus crosses a portion of a neighborhood and the ramps of a major public thoroughfare, making for less than ideal travel times and introducing a risk to routine use of light vehicles and electric carts.

Facilities Services
The team observed very well maintained and organized facilities services shops. Zone shops, serving up to four million square feet of space are strategically placed on the main campus. A significant impediment to the efficiency of the department is the lack of on-campus parking. Search for service vehicle parking and rigid parking and transportation enforcement policies limit the ability to park service vehicles adjacent to the building work areas; this adds substantial time and inefficiency to service call response.

The team observed remarkably little infrastructure in place to manage building energy use. A large portion of campus building energy is controlled by pneumatic systems or aging hybrid pneumatic-digital systems without remote monitoring and with limited functionality in regard to occupancy or reset control. Recent implementation of a building utility metering system is likely to promote heightened awareness of building energy use and to generate greater interest in its management. Currently the institution or CPFM budgeting does not provide direct incentives to minimize building energy use. This is an institutional need since most academic buildings have a university function.

PMCS
Office and administrative space for PMCS appeared to be well thought out and fully utilized. The department has not adopted 3-D modeling as a tool for design or construction documentation. Computerized management software provided to the department does not include the sort of project management or scheduling tools in use throughout the architectural, engineering, and construction community. A concern raised by a number of PMCS staff is that not only are current management process inefficient (through lack of up-to-date tools), but that the staff knowledge base is falling behind their industry peers. This not only will make future adoption of technology more difficult but, perhaps more
importantly, limits the ability of PMCS to engage with the architectural, engineering, and contractors in an integrated project delivery approach.

**UEM**

The central location of the Hal Weaver Power Plant is well suited for efficient distribution of utility services. Layout of plant floor space appears to provide adequate laydown area for major equipment overhaul. Construction of a large-scale computer facility adjacent to the site has reduced the potential for further plant expansion. Future improvements to the plant will involve removing aging turbines and boilers and reallocating internal space. Production equipment and distribution is generally adequate to meet current campus loads although several “pinch points” that cause inefficiencies in central chilled water pumping were noted, and recent addition of the cooling load from the Hackerman Laboratory required construction of a large-bore chilled water pipe extension through a difficult region of campus.

**TRecs**

No significant issues with the physical facilities serving the TRecs organization were noted. In the near term, the efforts and skill of the TRecs staff have been able to meet the information management needs of CPFM and the Office of the Provost.

*Recommendation 6A*

**Encourage those dealing with utilities to find ways to optimize energy efficiency throughout campus.**

*Recommendation 6B*

**Determine with PMCS the standard management tools needed to be efficient and effective in building information modeling (BIM) in the A/E and construction industry.**

*Recommendation 6C*

**Develop a comprehensive plan for data management and a plan to computerize processes that improves management effectiveness and sharing while adopting the principles of TCO. This plan must align with the mission and vision of CPFM and the institution.**

**6.2 An effective work management system is in place to identify, report, correct, and document substandard conditions and maintenance requirements.**

The CPFM self-evaluation identified an essential connection between work management and the campus master plan. Given main campus site constraints, it appears likely that future campus development will occur through major renovation or replacement of existing buildings. A thorough understanding of the condition and costs to improve existing facilities will be essential to future long-range planning. While the previous
campus master plan provided depth and imagery in areas of architecture and landscape, the next plan needs to provide focused insight on the correlations between development of the academic program and improvements to physical infrastructure.

Facilities Services
As front-line responder to campus repair and maintenance issues, Facilities Services make direct use of the WORQS space database system. The process of routing issues through the zone shops appeared to be fairly efficient and effective in identifying and dispatching the right resources, then following through with implementation. Absence of formal “follow up” or “close out” with the customer after completion was thought by the evaluators to be a deficiency in process. An interesting observation is that the zone shop dispatcher reports that even though an online WORQS request option is available, roughly 50 percent of zone work-order requests are still received by telephone. It may be that human touch and interpersonal relationships are an essential component in the effectiveness of the system.

Longer range planning for major repair and renovation is done through a prioritization process. The evaluation team was impressed with this process that seemed to cross departmental lines and engage a broad section of CPFM. The process makes limited use of the VFA data at high level. This assessment projects close to $800 million of renewal need across the main campus. The annual renewal and replacement (R&R) budget is typically on the order of $12 to $14 million, distributed across a wide range of needs. Recently there have been additional allocations of $14.3 million for HVAC replacement and improvements. The R&R team has developed a process to fold input from scheduled zone audits done by Facilities Services with input on potential companion projects and impending change of use by project management and construction services, with input from fire protection and others into an overall risk and reward prioritization routine (using “pair-wise comparison”) and provide recommendations to senior management.

PMCS
PMCS teams undertake very challenging, “one off” campus construction projects, often working within occupied buildings housing sensitive programs. Installation of ventilation at the pool surface of the aquatic center and replacement of the HVAC system serving the UT Tower are examples of the success of PMCS in accomplishing unique projects that require not only architectural and engineering creativity and technical expertise but also collaboration with the larger campus community and tight control over schedule and budget. Consideration of the long-term campus plan with the VFA building assessment results implies an increasing backlog of projects focused on correction of substandard conditions. If performance results of the UT Tower HVAC and pool ventilation project are at all indicative of the capabilities of PMCS to accomplish large challenges, the department is well suited to this task. Developing a video of the HVAC replacement project for the iconic UT Tower was a masterstroke, educating the campus community in the challenges and difficulties that face this sort of impending renewal project while celebrating the success of the PMCS team. The current $4 million delimitation between CPFM managed
projects and Office of Facilities Planning and Construction (OFPC) managed projects appears to be an artificial constraint. A better definition of the distinction in project management would recognize the importance of using CPFM resources for projects involving significant campus or building disruption, or close coordination with Facilities Services, regardless of project cost magnitude.

**UEM**

Because its focus is limited to power production and distribution, Utilities appears to have a tight grasp on real-time conditions and is able to plan near- and long-term maintenance schedules. The ability of leadership to procure infrastructure renewal funding on the basis of efficiency improvements leading to utility cost reductions has created a remarkably efficient campus energy production system. The quality of the real-time energy monitoring tools, dedication of staff in applying these tools in daily operation, and an ongoing maintenance program that strives to meet quantitative performance measures must be applauded. The single biggest concern noted by the evaluation team is the apparent imbalance in engineering and economic resources applied to the operation of production and distribution of energy (by UEM) compared to that utilized in operating building systems (by FS). With the university’s vision of plant efficiency improvement now largely complete, focus may need to shift toward renewal of aging building systems and optimizing the entire energy chain.

The elevator group within UEM is limited to providing inspection and managing a campus-wide maintenance contract. Operation of the elevator shop function out of utilities has some historical precedence, and its operation appears to be a well-organized and disciplined effort. The elevator shop is not integrated into Facilities Services, the CPFM computerized management system, or WORQS, meaning it functions as a largely standalone business unit. There may be long-term advantages in better integrating this group into Facilities Services.

**TRecs**

The evaluation team did not identify any particular concerns with the effectiveness of work management of the TREC's unit.

**Recommendation 6D**

*Consider means to better utilize the engineering resources of UEM in improving operation of building systems and assisting project management and construction in developing design guidelines, reviewing designs, and troubleshooting technical problems.*

### 6.3 Work authorization and scheduling procedures have been established that are consistent with the identified role of each work unit and achieve an equitable distribution of resources.
Facilities Services
Aside from concern over complications with the user interfaces to the FAMIS system (heard across the board), the Facilities Services work authorization and scheduling procedures appear to function effectively. The need for multiple signatures and frequent need to go outside Central Stores to procure materials were identified as potential areas of improvement. Use of OSI to manage custodial services was thought to be a good tool. The team heard strong indication that the general campus community does not understand a recent Facilities Services budget-cutting decision regarding custodial services and is reacting negatively to less frequent office cleaning.

PMCS
The team heard a number of concerns from PMCS staff over the inadequacy of their tools in scheduling and managing their work. Individual project managers are frustrated by their inability to integrate the tools used in the A/E and construction industry with FAMIS. A number are using Microsoft Project, Excel, and even Microsoft Access as side bar programs to track and monitor their work and to communicate efficiently with the rest of the project team.

UEM
UEM functions as a standalone business unit in a number of ways. Maintaining its own work authorization and scheduling functions, UEM carries its own administration, engineering, project management, maintenance, billing, and contracting functions. There is relatively little overlap between the procedures and tools used by UEM to those in place in other CPFM departments. While this has been an extremely effective structure in planning for and delivering a decade-long major capital investment program in the plant (and perhaps more importantly, performing on the promised efficiency driven utility cost savings), the evaluation team believes it may be time to reassess the overall distribution of resources and functions between UEM and the other CPFM units.

TRecs
The team did not identify any particular process management issues. There was an overall sense, however, that clever software solutions may, in some cases, be serving as a substitute for rational process planning. The intellectual resources of TRecs and its ability to enact programming level modification to the FAMIS source code were impressive and, no doubt, produced effective patches and work-around solutions to achieve immediate data driven needs. The bigger question is whether the business processes of CPFM are negatively influenced by the limitations of the software. The evaluation team suggests that the outline of organization and management of process be derived, vetted, and accepted first, before adaptation of new software or development of programming.
Recommendation 6E
Consider ways to expand collaboration and equitably distribute the technical, business, and management resources of UEM among Facilities Services, PMCS and perhaps TRecs.

6.4 An effective preventive maintenance (PM) program is in place to provide regular inspection and servicing of facilities equipment to assure maximum service life, reliability, and operation.

Facilities Services
An effective PM program for the assets controlled by Facilities Services appears to be in place and is embraced by staff from the bottom to the top of the organization.

PMCS
PM is not in the current purview of the project management and construction services group.

A recurrent theme of the facility management evaluation is to suggest that CPFM become open to the opportunities of BIM. The A/E industry is now in the final stages of converting preparation of construction documents from 2-D images to 3-D virtual models. It is likely that PMCS will be increasingly pressured by its A/E vendors and construction contractors to adopt this industry change. Currently, 3-D modeling is done primarily for speed of implementation and quality control, particularly in those areas related to the physical dimensions of overlying systems. With the conversion to a building model “Little BIM” (the design and construction side of BIM), however, there now exists the opportunity to populate the virtual building (and ultimately, virtual campus) with much broader sets of information that relate to the entire building life cycle and include not only physical dimensions and equipment parameters, but PM schedules, parts lists and bills of material, trouble call logs and maintenance expenditures, user occupancy characteristics, energy use, and the wide range of data necessary to accurately assess total, life cycle, and cost of ownership “Big BIM” (the total life cycle).

UEM
UEM has established a stable process for PM. This process appears to be well staffed and managed by UEM personnel. A high level of expertise and technical training is required to maintain the prime moving equipment. Given the scale of the operation, UEM believes it is prudent to support technical maintenance in-house, in lieu of relying on service contractors and consultants.

It is an interesting contrast that PM on roughly 480 elevators, lifts, and escalators on campus is accomplished entirely through an outside contractor. There is a great deal more continuity and regularity in the PM activities for this sort of equipment than for turbine generators, chillers, and boilers.
TRecs
Not applicable.

Recommendation 6F
Evaluate how the units of CPFM might plan for the advent of building information management. Conversations with the vice provost and associate vice provost for Information Management revealed their intense desire to accumulate just this sort of data for use in strategic academic planning. While the provost’s office probably does not actually recognize the potential of facility BIM as an ultimate data warehouse, and while actual, practical implementation of BIM for productive use in facilities management on the scale of UT at Austin is clearly a few years in the future, the team recommends PMCS, in concert with TRecs and their initiative to improve the space planning database, begin to consider its inevitable conversion to BIM (see Recommendations 6B and 6C).

6.5 An estimating system is used that provides accurate estimates of labor and material requirements in order to plan and schedule the execution of work and to determine the causes of significant deviations between actual costs and estimated costs.

Facilities Services
Estimating within the shops is generally done at the supervisor level and based primarily on experience. This is reported to work reasonably well. When questioned, the supervisors were not confident in the value of using FAMIS data to develop estimates. There does not appear to be any rigorous controls or feedback on the shop level estimates. Estimates for repair orders involving multiple trades are accomplished by cumulating those of the individual trades. Facilities Services does not use a single estimating group.

PMCS
Estimates for construction projects are the responsibility of the project manager who uses vendor quotes, the R.S. Mean database, and experience to develop a viable project cost. The initial cost estimate is often an important go/no go parameter for the customer and was noted by a number of staff as a significant factor in the ultimate success of a project and a factor in their own performance evaluation. In a group meeting with project managers, the desire for a departmental estimator or estimating group, particularly for use in complex projects, generated much discussion and some emotion. Apparently there is some in-house estimating expertise, but this individual (or individuals) is also assigned to projects and can offer assistance only when available.

UEM
UEM uses a combination of in-house historical data, equipment vendor’s quotes, and professional estimates from A/E consultants. Recent experience with design/build/construction contracting revealed the difficulty in balancing the university’s long-term performance objectives with fixed bid pricing.
Many of the purchases made by TRecs are based on previously negotiated pricing, as indicated in the self-evaluation.

**Recommendation 6G**

Consider developing an estimating group within PMCS or establishing a relationship with a professional estimator. Facilities Services and UEM could share this service.

**6.6 Design guidelines that incorporate such elements as energy consumption, operating costs, environmental concerns, maintainability, sustainability, accessibility, and safety have been prepared, updated and are utilized.**

**Facilities Services**

Facilities Services staff up and down the line acknowledged that university standards and design guidelines exist and are used in repair, renovation, and new construction. A question on how a new technology (chilled beams) was accepted by the Facilities Services group suggests that the building maintenance staff had the opportunity to review and understand the concept, discuss with designers, and consider the pros and cons before allowing the design to move forward. This is a healthy process.

**PMCS**

The project management group has control over university design guidelines that are reported to be in various states. MEP (mechanical, electric, and plumbing) has recently been updated and architectural standards updates are in progress. Campus standards are applied directly in PMCS projects and turned over to the Office of Planning and Construction (OFPC) for use in larger scale, new building construction. Problems with OFPC project compliance to university standards were noted. A potentially significant concern raised in meetings with PMCS staff is that time allocated to internal design review, particularly time expended on large scale OFPC projects is limited, and the quality of the campus review suffers.

PMCS may wish to consider extending its design guidelines in the future to include greater participation in establishing owner project requirements, setting minimum building performance parameters (including peak demand and consumption targets), and requiring operating copies of the designers’ building energy models (along with perhaps the building Revit, a 3-D software model). Many universities are providing strong guidance on the prioritization of the LEED matrix, to assure that long-term campus interests coincide with the short-term desire to acquire LEED status.

**UEM**

UEM applies its own project management approach to plant and distribution construction projects. Because it operates as a single, unified system, UEM is able to dictate much more
specific technical requirements to materials and products installed in its “grid.” Purchase of new, high-voltage electrical gear, for example, is subject to carefully written and time tested technical specifications. The impressive depth of the engineering staff at UEM and its ability to allocate sufficient time to participate in and review, not only new design but ongoing operations, are likely to have been significant factors in the long-term success of the investment in plant improvements.

TRecs
Not Applicable.

Recommendation 6H
Consider consolidating development of institutional standards and design guidelines between UEM and PMCS and place more focus on the design review process and participation in OFPC projects.

6.7 The delegation of budgetary responsibilities for management of subunits of the budget is effective in controlling expenditures.

Facilities Services
The evaluation team found many budgetary controls are in place throughout the Facilities Services organization. High standards of accountability appear to be in place, with frequent review and oversight from the top down. A concern, heard in more than one interview, was that the presence of multiple controls and approvals creates a perception of a lack of trust by senior management.

PMCS
Project management budgetary controls are monitored through FAMIS. Attention has recently been paid to improving the data exchange between FAMIS and the university accounting software, DEFINE. It is thought that this will greatly improve previous issues involving lack of timely reconciliation between reports available to the project management group and those carried in accounting.

UEM
UEM operates under its own budgeting process.

TRecs
Not applicable.

Recommendation 6I
Once the FAMIS to DEFINE accounting interface has been validated, review the application of budgetary controls and approvals process with operating efficiency and perception of trust in mind (see Recommendations 6B and 6C).
7.0 PERFORMANCE RESULTS

The facility organization’s performance can be assessed through campus appearance, employee satisfaction and motivation, effectiveness of systems operations, customer satisfaction, financial results, and supplier/business partner results. Where feasible, it is helpful to have measurement tools in place to assess performance in these areas.

7.1 The appearance of the buildings and grounds is in keeping with the surrounding community as well as the desired image of the institution.

The campus is beautiful in its design and upkeep. The Campus Planning Office has done a marvelous job of maintaining the architectural integrity of the campus and in carefully placing buildings so there are ample green spaces and areas of respite in a very urban campus setting. CPFM leadership has done an excellent job of maintaining architectural guidelines that deliver consistency in materials, forms, and character for the campus. Buildings, large trees, courtyards, green spaces, and roads and pathways graciously define the campus’s spatial organization, making it a very cohesive composition.

Recommendation 7A
As mentioned elsewhere in this report the campus design guidelines need to be updated and kept current. This is an important tool for assuring that future campus development evolves in ways that complement the current campus environment.

7.2 The condition and cleanliness of facilities are in keeping with the image and standard adopted by the institution as well as activities associated with its mission and programs.

The campus environment is clean and well maintained. The landscape is manicured and there is very little trash that is noticeable on the campus. Building entrances are clean and inviting, and public spaces within campus buildings, such as corridors, elevator lobbies, restrooms, classrooms, etc., are all very clean and tidy. The review team would like to compliment CPFM’s landscape and custodial staff on the work they do to keep the grounds and buildings clean and well maintained. Compliments are also in order for the CPFM top leadership team that takes monthly walking tours of the campus to identify and fix areas of concern. This proactive approach to assuring that the campus appearance is in keeping with the quality of the institution itself is noticed and acknowledged by many of your academic colleagues.

During campus interviews with academic departments, the review team heard a consistent concern/complaint being expressed about the revised frequency of cleaning and trash disposal within faculty and staff offices. There is uniform understanding about why cuts in service delivery were necessary but unanimity of dissatisfaction with the draconian approach imposed on them. Ultimately, this service change shifted trash emptying and
vacuuming responsibilities to office occupants because of their concern for the tidiness and cleanliness of their work environment.

Recommendation 7B
CPFM should reevaluate the level of office cleaning frequency.

7.3 Building systems and infrastructure are maintained and operated at a level of reliability that contributes to the successful implementation of the institution’s mission and programs.

The review team believes that the campus infrastructure and building systems are operated at an extremely reliable level. Facilities Services has its maintenance staff organized in zones, which contributes to high levels of customer interaction and satisfaction while improving maintenance service delivery overall by having zone teams take ownership for facilities within their assignment area. Additionally, Facilities Services is utilizing PM tools to identify potential problems before failures occur, thus assuring reliable building operations. UEM has designed and implemented infrastructure system reliability second to none.

7.4 Funding resources are effectively used and are adequate to support a level of facilities maintenance that prevents the deferral of major maintenance and repairs.

It was clear to the review team that all the funding resources made available to CPFM are being deployed effectively. However, it is evident that the level of resources available to them is inadequate to prevent a continued growth in the campus’s deferred maintenance and repair backlog. The base maintenance funding for operations, maintenance, and equipment, as well as new buildings/spaces, is not adequate, and reliance on refillable income from other units within CPFM to partially fill this maintenance-funding gap is very risky in the present down economy.

7.5 Staff is highly motivated and productive, taking pride in the accomplishment of their duties.

The staff members of CPFM are uniformly loyal and committed to the University of Texas, Austin, and they are very motivated to provide the best possible service for the institution in general and for CPFM in particular. The leadership of University Operations and CPFM do an excellent job of acknowledging outstanding efforts on the part of their employees. The On-the-Spot Awards, SLICE (service, leadership, creativity, and excellence), and SITES awards are excellent examples of employee recognition programs. Additionally, the training opportunities offered to existing and potential organizational leaders through APPA development programs, the CPFM Leader Development Program, and the CPFM Executive Leadership Program are all designed to develop the next generation of leaders, hone the skills of existing leaders, and provide venues for employee growth and
development. All these initiatives help create a learning environment and motivate employees by demonstrating they are valued and worthy of career growth and development.

Both Facilities Services and PMCS groups perform organizational climate surveys to gauge the morale in their respective employee groups. Also, these surveys are designed to collect data about other issues within the organization that may be hindering productivity and performance. The leaders of both groups are responding to the survey results and following up to address the issues that were identified. The review team commends CPFM leadership in making themselves vulnerable by implementing such surveys and caring enough about the welfare of their workforce to be willing to ask them questions and deal with the feedback they receive.

During several employee focus group interviews, the morale of each workgroup was quantified by the rather unscientific method of asking them to individually rate the morale of their workgroup on a scale of 1 to 10, with 10 being the best morale rating. The average ratings in UEM and PMCS were in the 8 to 9 range, while the ratings in Facilities Services were well below that level. It is clear that the recent budget reduction within Facilities Services, in particular, and the employee speculation about more to come, has played a major role in influencing their assessment at the time of the interviews.

**Recommendation 7C**

*Improve communication with front-line workers in CPFM. It is recommended that newsletters and other departmental communications be presented to employees in both electronic and written forms to address those employees who don’t have access to computers and/or don’t feel comfortable with them. It is also important to present communications in languages other than English, for those non-English speaking employees.*

**Recommendation 7D**

*Consider implementing a front-line employee advisory board to improve communications within the department. This board would be comprised of representatives from all departmental areas and would be charged with being liaisons between the departments and CPFM leadership, developing methods for improving communications from top to bottom and bottom to top, providing input on strategic planning efforts within the departments, committing to participate in a positive and constructive way, and focusing on solutions and not problems.*

7.6 Customer satisfaction measures ensure that the levels of service are consistent with customer needs and requirements and within the facilities departments’ capability.
CPFM does an excellent job of providing good customer service to their campus stakeholders. The only exception to this statement is in the office cleaning frequency discussed in criterion 7.2. Customers interviewed were very complimentary of CPFM overall, and PMCS and Facilities Services departments in particular. These two departments, along with TRecs, use surveys to assess customer satisfaction levels and to identify unaddressed needs. Although UEM does not have direct customer service delivery interface, they provide outstanding service as measured by their plant reliability, which is essentially 100 percent. During interviews with campus customers, Steve Kraal, Bill Throop, and Mike Miller were named as CPFM leaders who provide great service, who are accessible if the need arises, and who make themselves visible on campus to inquire about service delivery and to address specific problems when they arise. These gentlemen were uniformly acknowledged for their outstanding focus on customer service and responsiveness.

7.7 Managers and supervisors stay in touch with the needs of higher education.

CPFM does an outstanding job of staying in touch with the needs of higher education through interacting with professional organizations such as APPA, peer institutions, faculty, students, and leaders of UT Austin’s administration. Numerous leaders within CPFM attend conferences, workshops, and seminars to gain information on topics germane to higher education and network with fellow leaders from peer institutions throughout the country. In addition, each leader within CPFM has staff meetings with their employees where they share information about UT Austin and its strategies and priorities, as well as trends in higher education that they glean from interaction with their peers and professional organizations.

8.0 OTHER CONSIDERATIONS

Sustainability or Natural Resources Management & Conservation

The organization values and evaluates the environmental impact of all its activities, incorporates green building and design methods, optimizes the efficiencies of its operations and services, and promotes natural resource conservation through outreach programs, while minimizing its wastes and environmental footprint.

8.1 Sustainability goals exist and are documented, communicated, and understood by all and periodically reviewed.

Creation of the position of director of Sustainability, University Operations at the CPFM Director level is indicative of the emphasis the University Administration and Campus Planning and Facilities Management place in achieving this university goal. Although the university’s definition of sustainability encompasses a wider scope than contained within
CPFM, the mission of the sustainability director appears to be clearly understood by the upper management. The scope and exposure of the director is broad. Communication and coordination must cross not only departmental lines within CPFM but institutional lines, as the role involves direct interface with academic, research, student, and community groups. The goals of the department are tied to those of the President’s Sustainability Steering Committee (PSSC), the University Sustainability Policy, and the UT System Policy on Sustainable Procedure (UTS 169). The PSSC 2010-2011 Annual Report contains a clear statement of near- and long-term university goals and objectives. Among these is establishing a natural resource conservation plan to reduce campus energy and resource consumption, produce lower operating costs, and expand the sustainable energy portfolio by 2020. In years to come, the PSSC Annual Report will serve as a public forum for periodic review of progress.

Quantitative resource use goals in areas under the purview of CPFM are established in the PSSC Annual Report. The challenge for demonstrating that university operations maintains power conversion efficiency heat rate and achieves specific targets for demand side energy reduction, transportation related fuel combustion, water use, and waste recycling now falls under the director of Sustainability. These are measurable activities. Other departmental goals are more qualitative and more difficult to track. These include involvement in outreach, education, and research programs, and participation in student and academic research activities.

**Recommendation 8A**

*Many elements of the university’s sustainability effort are measurable and can be tracked on a year-to-year basis. The PSSC has established 10-year goals. Tracking shorter-term CPFM specific targets, perhaps on an annual basis, is recommended to maintain focus. AASHE’s Stars program or other similar institutional benchmarking tools could become a part of this annual review.*

### 8.2 Sustainability goals and initiatives are valued and incorporated in day-to-day operations and long-term planning.

Implementation of many of the goals and initiatives of the Office of Sustainability are the responsibility of the CPFM directors. An example is the plant improvement program at UEM over the past decade, which, although driven by energy and operations cost savings within the UEM unit, has yielded substantial reductions in greenhouse gas emissions. Other examples include demand side energy reduction initiatives undertaken by Facilities Services and adoption of LEED criteria in new buildings. The director of Sustainability is taking responsibility to conceive, coordinate, and move forward new programs. Although this office has limited staff and little budget for direct implementation, it is positioned to influence decision making within the other CPFM units. The assessment team was impressed with the communication skills and leadership of the current director along with the level of respect and confidence given to the Office of Sustainability by other CPFM
Directors and staff in Facilities Services, PMCS, and UEM have cited a number of specific and successful recent programs.

A large number of examples of implementation of sustainability goals into day-to-day and long-term planning are described in the UT Austin self-evaluation. Some of these initiatives are relatively new, but many predate the creation of the Office of Sustainability and the more recent emphasis of the PSSC. Decades-long investment in water conservation through recovery and recycling; heating, cooling, and electric power plant energy efficiency improvements; and improving campus utilization of public transportation as described in the self-study are examples of long-term CPFM commitment to best value and TCO principles. The Office of Sustainability now serves as a central point for acquisition, processing, and integration of the sustainable attributes of these individual programs into a cohesive university-wide statement.

More recent initiatives include participation with student groups, active participation in a greenhouse gas inventory, implementation of building energy metering systems, and climate action planning. Application of the principal of “triple bottom line,” in which economic return is valued along with social and economic benefit, is a common thread through descriptions of the program in the self-evaluation and in discussion with CPFM staff.

**Recommendation 8B**

The director of Sustainability has limited staff and structurally little direct control over resource allocation but a broad interdepartmental mission. We support and find effective the course laid out on the governance for sustainability. It’s the right approach and we commend Dr. Kraal for this method. Ongoing success in advancing the university’s sustainability and natural resource conservation plan relies heavily on the leadership and influence of the director, along with continued support of CPFM senior leadership. Maintaining interest and enthusiasm to integrate sustainability goals into the day-to-day operation of Facilities Services, UEM, and PMCS is likely to be an ongoing challenge.

### 8.3 Student Engagement

Interface between CPFM and the student body through sponsorship of the Trash to Treasure campaign, Sustainability Week, and Orange Bike programs serve the dual purpose of achieving quantifiable results and enhancing the public image of the operations groups’ support of university sustainability goals.
8.4 The organization seeks opportunities for high profile sustainability projects.

The assessment team viewed a recently completed solar photovoltaic project at J. J. Pickle Research Campus. Funded through a State Energy Conservation Office grant, this sort of demonstration project provides visible evidence of the university’s commitment to its natural resource conservation plan without compromising the principal of prudent investment in sustainable projects with an expectation of economic return.

8.5 Assessment methods and tools are in place to measure return-on-investment and viability of sustainability efforts and programs.

Economic investment analysis was a key element in the UEM plant improvement plan. Purchased energy cost savings resulting from installation of more efficient energy conversion technologies are used to pay down debt service and lower annual operating costs. The UT Austin plant improvement program has yielded annual operating efficiencies that equal or better equivalent university campus plants across the United States. The use of ROI analysis for plant improvement has been a success. The CPFM focus on economic value as a key determinant in pursuit of sustainable goals is evident across its units. The economic value principle is described in the self-assessment and was heard repeatedly in staff interviews.

Recommendation 8C

There may be additional near-term opportunities to extend the UEM return-on-investment and TCO methodology to other aspects of the CPFM portfolio. Recent installation of a campus-wide energy metering system will provide building energy use data essential to evaluating alternative investments in building infrastructure. These could include energy management and control systems, air handler replacement, lighting upgrades, and others. The ROI and TCO analysis approach could also be extended to investment in fleet vehicle technology, public transportation infrastructure, and green cleaning.

8.6 The organization collaborates with academics in support of university sustainability signature courses.

The assessment team learned of a number of examples of interface between CPFM and academic research. Participation of the director of Sustainability with PSSC is representative of this sort of collaboration.

8.7 Sustainability goals and initiatives operate at a level that is commensurate or superior to programs at like universities across the country.

Although the role of director of Sustainability at UT Austin is developing, the level of cross-disciplinary interest and enthusiasm was found to be high. University goals and initiatives,
as described in the Presidents Sustainability Steering Committee Annual Report are clear and aggressive and at or above levels at similar institutions across the country. Carbon emission inventory and tracking methodologies are in place, natural resource conservation goals are clearly stated, and rational programs to address the primary elements of sustainability (energy, water, waste) are in place. A program to benchmark and track institutional results has begun. CPFM is actively engaging the broader campus student and faculty community in recycling and reuse programs and plays a role in further enhancing the impressive public transportation interface to campus.
Conclusion

It has been a wonderful professional experience for each of the team members to have experienced the hospitality and professionalism that exists in the CPFM and at University of Texas at Austin. We will be ever grateful for the time you spent preparing for and engaging in this evaluation process. Your willingness to engage and learn helped us know more about your organization. A careful review of the findings and recommendations will aid in your journey of continuous improvement and the goal of achieving your greatest potential. We hope this report will motivate and cause positive change. If so, then all of our effort will have been for the good.