

Middle Tennessee State University  
Facilities Services

# *Summary of Services*

**Annual Report**  
**July 2009—June 2010**

BUILDING ON THE  
**Blueprint**  
for Excellence

**MIDDLE  
TENNESSEE**  
STATE UNIVERSITY

## **FACILITIES SERVICES DEPARTMENT**

Middle Tennessee State University | PO Box 32  
Murfreesboro, Tennessee 37132  
Phone 615-898-2414 | Fax 615-898-5071  
[www.mtsu.edu/~facserv](http://www.mtsu.edu/~facserv)

Early Edition 9.21.10




---

**ASSISTANT VICE PRESIDENT'S SUMMARY**

<i>Assistance Vice President's Summary</i>	3
--	---

---

**CENTRAL ADMINISTRATION**

<i>Accounting Information Services</i>	5
<i>Center for Energy Efficiency</i>	6
<i>Employee Development Services</i>	9
<i>Recycling Program</i>	7
<i>Work Order Services</i>	8

---

**CONSTRUCTION ADMINISTRATION**

<i>Construction Administration / Capital Maintenance Services</i>	14
---	----

---

**CUSTODIAL SERVICES**

<i>Custodial Services</i>	16
---------------------------	----

---

**ENERGY SERVICES**

<i>Central Plant</i>	10
<i>HVAC</i>	11
<i>Performance Measures</i>	11

---

**ENGINEERING AND BUILDING SERVICES**

<i>Building Services</i>	12
<i>Construction / Renovation Services</i>	12
<i>Environmental Health and Safety</i>	12
<i>Key Shop</i>	13
<i>Performance Measures</i>	13

---

**FEATURES**

<i>Campus Master Plan Excerpts</i>	19
<i>Capital Maintenance Project List</i>	20
<i>MTSU Sustainable Campus Fee Project List</i>	21
<i>What 2 Watch 4</i>	18

---

**GROUNDS SERVICES AND GREENHOUSE SERVICES**

<i>Grounds Services and Greenhouse Services</i>	15
---	----

---

**MOTOR POOL SERVICES**

<i>Motor Pool Services</i>	16
----------------------------	----

---

**MTSU**  
**Facilities**  
**SERVICES**

Facilities Services is a department reporting to Senior Vice President John Cothorn of the Division of Business and Finance.



**MIDDLE**  
**TENNESSEE**  
 STATE UNIVERSITY

A Tennessee Board of Regents University, Middle Tennessee State University is an equal opportunity, non-racially identifiable, educational institution that does not discriminate against individuals with disabilities.

***Fiscal Year 09/10*** is in the books. The year was paradoxical in many ways. Federal Stimulus funding preserved most of the budget levels for Facilities Services. However, several initiatives and services reductions were enacted in preparation for the budget reductions that will remain once the temporary funding is gone (FY 2011/2012). On the other side of the coin, student enrollment is up and there are several capital projects in either design or construction. So, the campus continues to grow at a time when operating budgets, and subsequently facilities management services, continue to shrink. Managing customer expectations during times like these is challenging. Productivity, innovation, informed decision making, and effective communications are at a premium.

Still, FY 09/10 was a year of significant achievement for Facilities Services. This report will highlight many accomplishments for the department, update the O&M and capital budget situations, revise deferred capital renewal projections, and address the impending actions called for in the Positioning the University for the Future Initiative. Following is a sample of the Accomplishments and Challenges.

## Accomplishments

### *Performance Metrics*

The Summary of Services report from the previous FY identified a combined total of 75 individual goals across the departmental work units for the FY 09/10. Overall, 68 of the goals were completely met or had substantial progress toward their completion providing for a success rate of approximately 90.7%.

### *Capital Projects and Construction/Renovation Projects*

- Nine capital construction projects were completed totaling \$8.51 million
- Two-hundred and twenty-two renovation projects were completed totaling \$1.93 million
- Construction began for the new College of Education and the Student Union projects



### *Customer Service and Communication*

- All work units combined to complete just over 16,400 work orders for the year
- Facilities Services held an informational meeting with academic and administrative personnel to discuss campus maintenance and operations and work order processing

### *Management and Productivity*

- Quarterly meetings were conducted for every work unit within the department
- Extensive training was performed throughout the department
- The custodial contract was re-bid and a new service provider received the award and has successfully transitioned to work on campus

### *Positioning for the Future*

- Facilities Services began enacting several measures identified in the Positioning the University for the Future initiative in an effort to reduce cost, increase efficiency, etc.

## Challenges

### *Budgets*

Operations and maintenance (O&M) budgets are for basic operational needs such as custodial services, grounds services, central utilities services, light bulb changing, etc., and routine maintenance and repair of facility systems such as HVAC, electrical, etc. The

(Continued on page 4)

*The mission of Facilities Services is to prepare and present the facilities/grounds to the university tenants and the public in a safe, clean, and functional condition while managing the resources and assets in accordance with applicable requirements, procedures, and constraints.*

(Continued from page 4)

O&M budgets for Facilities Services have been fairly flat over the years. FY 09/10 saw no increases in O&M funding.

Capital maintenance projects are submitted each year, typically totaling \$10 million - \$13 million, to provide for the major repair and replacement needs of the campus. Funding formulas indicate an annual need of approximately \$8 million just to remain level. Recent funding history shows annual funding received in the amounts of \$3.5 million – \$4.5 million. Due to State budget cuts, there has been on a steep downward trajectory for capital maintenance funding. **In FY 09/10 MTSU received no funding for capital maintenance.** This under funding of capital maintenance accumulates over time to a condition referred to as “deferred capital renewal.” Deferred capital renewal puts an increased burden on the O&M needs because systems that need to be replaced remain in operation and are subject to more failures. As stated above, this condition is reported on in the Campus Master Plan and highlighted in the body of this report.

### Utilities/Energy Cost Increases

On the whole, energy and utility costs reduced. Natural gas volatility is still the norm for the post-Katrina era. The lower rates that began in the end of FY 08/09 continued through FY 09/10. This was a welcomed development considering the reliance on natural gas to fuel the 5 mw turbine/cogeneration system. In addition, the Tennessee Valley Authority continues to adjust (net increases) electrical rates. These increases create additional incentive to be judicious in our utilities operations

and more efficient in every aspect of energy usage management. Expect seasonal rates schedules to be enacted next FY leading the way to seasonal time-of-use rates in the future.

‘..we strive to maintain  
the campus in a safe, clean, and  
functional manner...’  
-the FSD mission

### New Buildings

New buildings add to the O&M and utility needs of the campus. Since capital funding for a project does not ensure adequate operational funding for operating the facility, the recent growth has substantially stretched the O&M services as well as the infrastructure capacity. Construction on the College of Education project is progressing rapidly and the Student Union is not far behind.

### Sustainability

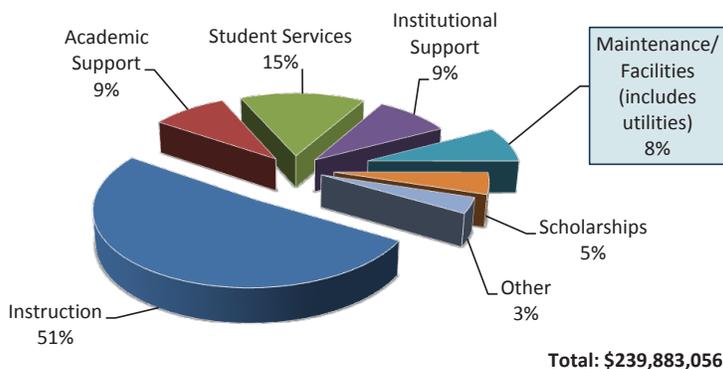
Sustainability is both an opportunity and challenge for the campus. There are many initiatives designed to increase the greening of the campus such as the Sustainable Campus Fee program, the Tennessee Sustainable Design Guidelines for capital projects, the recycling program, etc. These programs and initiatives are effective but are also limited by economic factors such as first costs and paybacks. Energy and environmental regulations are expected to increase in the near term that should produce higher utility costs – straining resources further.

### Summary

In summary, we continue striving to maintain the campus in a safe, clean, and functional manner while aligning the department with the University mission and the Academic Master Plan. As we pursue these goals, it is important that we hear from our customers. Please review this document (as well as our website) for our service delivery. As always, feel free to contact us and let us know how we may better serve you.

*David Gray*

### MTSU E&G Expenditures 2009/2010



## Accomplishments & Highlights 2009/2010

- Initiated request to have Mainsaver directly feed departmental charges to Banner
- Provided regular budget reports to each director/manager
- Implemented monthly billing for Campus School maintenance
- Began to scan support documents to Banner for journal vouchers
- Updated allocation to auxiliaries for maintenance contracts
- Coordinated wireless telephone allowance program in FSD
- Switched from rental to purchase of uniforms
- Provide Supplemental Schedule 3 for annual financial report
- Implemented new plan for replacement of vehicles and capital equipment
- Revised Leave Request Form for all FSD employees
- Verified that all FSD employees viewed the Information Security Tutorial
- Provided purchasing assistance (writing specifications, requisitions, sole source)
- Provided plant costs data for Miller Coliseum and TN Livestock Center
- Worked with University Counsel to issue updated Motor Pool Policy
- Installed ID card scanner to verify Motor Pool drivers are MTSU employees
- Assisted Motor Pool to place new liability certificate in all vehicles

**E & G**  
**Maintenance and Operations Budget**  
2009/2010 by Quarter



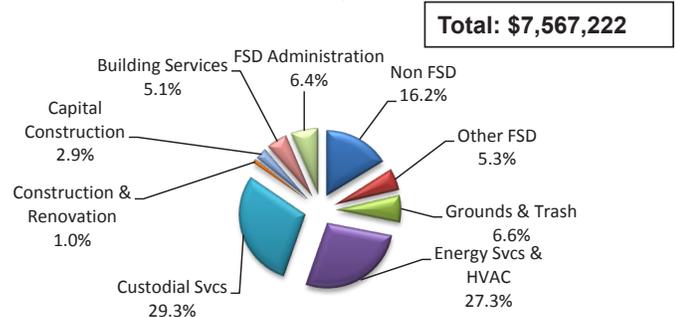
2009/2010	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Annual Totals
* Total M & O Expenditures	\$ 3,551,998	\$ 2,976,538	\$ 3,147,011	\$ 3,076,750	\$ 12,752,297
Work for Others	\$ (1,058,175)	\$ (1,151,861)	\$ (915,823)	\$ (1,941,329)	\$ (5,067,188)
Net E & G Expenditures	\$ 2,493,823	\$ 1,824,677	\$ 2,231,188	\$ 1,135,421	\$ 7,685,109
E & G Budget	\$ 7,287,601	\$ 7,287,601	\$ 7,287,601	\$ 7,287,601	\$ 7,287,601
% of Budget	34.22%	25.04%	30.62%	15.58%	105.45%

\* M&O function minus longevity and benefits

## Goals 2010/2011

- Continue investigating ways to more efficiently reconcile to Banner
- Partner with Cintas to develop on-line ordering of uniforms
- Continue investigating ways to automate manual accounting processes
- Use part-time employee(s) to supplement full-time work force

**Net E & G Expenditures by M&O Function**  
2009/2010



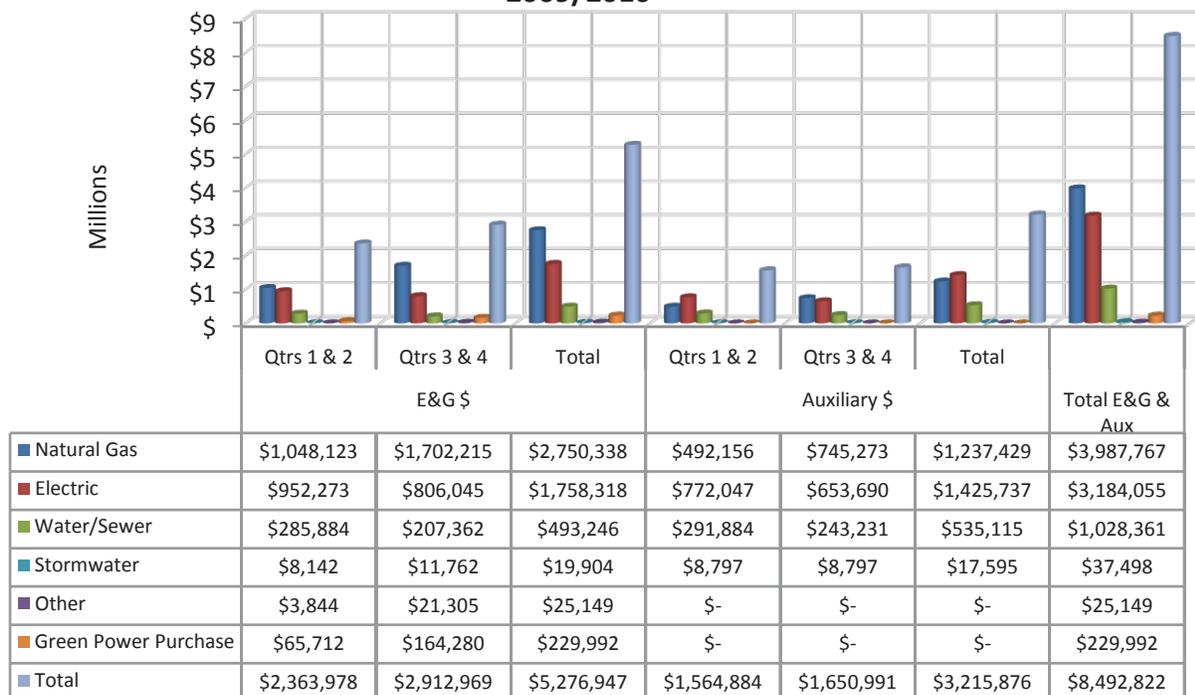
## Accomplishments & Highlights 2009/2010

- Negotiated utility related contracts with Tennessee Valley Authority and Murfreesboro Electric
  - 5MR utility contract
  - Generation Partners
  - Green Power Purchase Agreement (yearly)
- Began preliminary work on University Energy Management Policy
- Worked with underground electrical project pertaining to IDGS (Interactive Distributed Generation System)
- Completed a campus utilities audit and irrigation plan (Positioning the University for the Future)
- Resolved issues and completed energy metering options for College Heights satellite chilling plant
- Develop and implement a multi-facility energy management system project using ARRA funding
- Completed THEC and NCAA annual reporting
- Supported utilities and recycling planning for Student Union and College of Education and Behavioral Sciences Buildings
- Provided utilities cost analysis supporting university budget adjustments
- Published article for Facilities Manager Magazine (J Whitefield), receiving recognition award for the article
- Presented at the APPA Institute for Facilities Management (J Whitefield)
- Supported Pittard Campus School renovations
- Continued working with the MTSU Sustainable Campus Fee Committee (page 21)
- Updated Facility Surveys for TBR and Construction Administration
- Continued on the President's Commission on the Status of Women
- Continued serving on planning and funding committees for Tennessee Higher Education Sustainability Association (L Hardymon)
- Published Summary of Services Annual Report for 08/09
- Attended TNAPPA

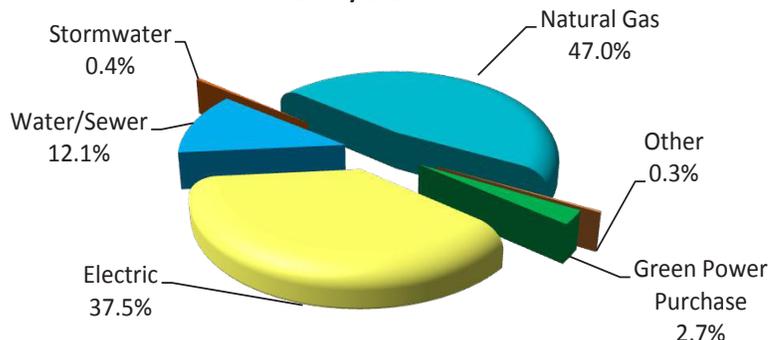
## Goals 2010/2011

- Continue to provide utility and energy management support to university departments
- Complete irrigation case study
- Continue support of MTSU Sustainable Campus Fee Program
- Continue serving on Tennessee Higher Education Sustainability Association committees
- Continue to support Engineering Technology, and other classroom instruction and projects where possible (on-going)
- Support and develop energy efficiency projects for Positioning for the Future Initiative involving lights out campaign, recycling,
- Continue training and professional development

## Campus Utilities 2009/2010



**Total Utilities: E&G and Auxiliary  
2009/2010**



**Recycling Program - MTSU Recycles**

Linda Hardymon

**Accomplishments & Highlights 2009/2010**

- Received honorable mention in 2010 Governor’s Environmental Stewardship Award, Green Schools – Higher Education category
- Maintained recycling program to meet campus needs employing student workers
- Utilized MTSU Sustainable Campus Fee project funds for improvements to the recycling program (bins and equipment)
- Supported recycling planning for Student Union and College of Education and Behavioral Sciences Buildings
- Developed a plan for vehicle replacement
- Worked with accounting information services to transitioned Recycling Program from agency fund to budgeted Public Service index
- Entertained proposal of single stream recycling on campus
- Incorporated plastic in all campus buildings into the recycling program
- Participated in ‘Lights Out Campaign’ for the University Positioning for the Future Initiative
- Attended workshops and tours geared towards recycling education
- Supported Construction/Renovation projects
- Provided safety training for recycling staff
- Attended TNAPPA



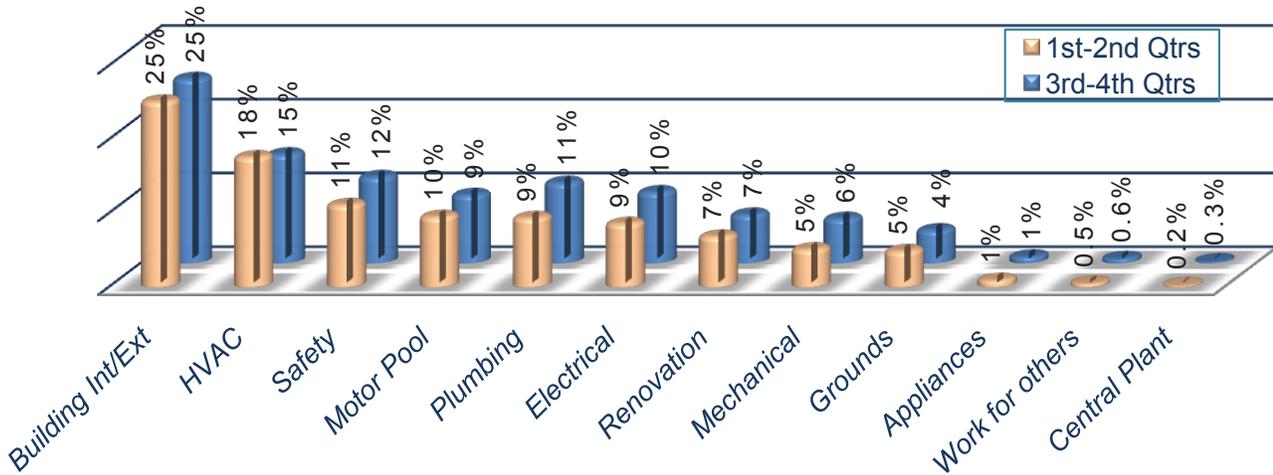
**Goals 2010/2011**

- Continue to upgrade appearance of recycling containers on campus
- Continue to support Construction/Renovation project work
- Continue working with MTSU Sustainable Campus Fee Program for recycling for special events on campus (BRAA, athletics, housing)
- Continue involvement with Tennessee Higher Education Sustainability Association
- Continue exploring new initiatives: ink cartridge collection for housing, wooden pallet recycling
- Continue to grow the program through increased volumes and revenues
- Continue to provide classroom support
- Continue participation in training and development programs
- Support the Positioning the University for the Future Initiative

Recycling Program Collections 2009/2010	
Commodity	Pounds
Aluminum	8,485
Mixed/White Paper	299,460
Newspaper/ Magazines	287,273
Maintenance metals	48,240
Cardboard	319,920
E-waste	50,000
Plastics	66,804
Units	
Batteries	1,537
Ink cartridges	785



## Work Orders Originated 2009/2010



### Accomplishments & Highlights 2009/2010

- Coordinated computer replacement project for Facilities Services
- Hired and trained new work order clerk and part time employee
- Supported Positioning for the Future Initiative
- Supported year-end billing and reporting process, warehouse inventory and Summary of Services

### Goals 2010/2011

- Investigate mobile computing options
- Work with ITD and others to develop Banner / Mainsaver interface
- Assist in migrating Mainsaver to new server in ITD
- Assist in installing new version of Mainsaver on server and client PCs
- Continue to offer computer support with installing software and troubleshooting minor software and hardware issues
- Serve on MTSU Classified Employee Recognition Committee
- Assist with technology issues related to relocation of offices in Holmes Building, Holmes Mod and Bayer Travis

### 2009/2010 WORK ORDERS ORIGINATED

	1st Qtr		2nd Qtr		3rd Qtr		4th Qtr		Annual Totals	
	# WO	% of Total	# WO	% of Total						
Appliances	44	1%	33	1%	36	1%	36	1%	149	1%
Building Interior/Exterior	1087	25%	960	25%	1,003	25%	1,040	25%	4,090	25%
Central Plant	11	0.3%	9	0.2%	11	0.3%	10	0.2%	41	0.2%
Electrical	366	8%	332	9%	424	10%	296	7%	1,418	9%
Grounds	195	5%	202	5%	149	4%	210	5%	756	5%
HVAC	854	20%	579	15%	580	14%	722	17%	2,735	17%
Mechanical	205	5%	212	6%	261	6%	209	5%	887	5%
Motor Pool	418	10%	357	9%	370	9%	545	13%	1,690	10%
Plumbing	363	8%	400	11%	456	11%	315	7%	1,534	9%
Renovation	321	7%	238	6%	279	7%	328	8%	1,166	7%
Work for others	16	0.4%	26	0.7%	24	0.6%	33	0.8%	99	1%
Safety	446	10%	460	12%	458	11%	472	11%	1,836	11%
<b>Total</b>	<b>4,326</b>	<b>100%</b>	<b>3,808</b>	<b>100%</b>	<b>4,051</b>	<b>100%</b>	<b>4,216</b>	<b>100%</b>	<b>16,401</b>	<b>100%</b>

# Central Administration: Employee Development Services

Joe Whitefield Connie Hagberg



## Accomplishments & Highlights 2009/2010 Goals 2010/2011

- Facilitated employee training sessions for FSD work units
- Coordinated Forklift and Aerial Lift hands-on training sessions by certified trainers, and offered enrollment to employees in other University departments
- Attended SRAPPA (October 2009) and TNAPPA (May 2010)
- Continue to organize and coordinate training sessions for FSD work units, including “workplace civility” course
- Continue to review FSD “Task Force” for specific cleaning tasks and grounds work, with overall focus on improved campus facility and grounds cleanliness and appearance
- Continue maintenance and productivity studies for FSD with emphasis on custodial services
- Attend professional development and leadership training

### FSD Staff Training Records - 2008-2009

		Leadership / Professional Development			Technical Training		
By Training Type	Employees (Full-Time)	Employees Trained	Total Hours		Employees Trained	Total Hours	
			In-House	Conference		In-House	Conference
Central Administration							
-Assistant Vice President's Office	2	2	3.5	14.0			
- Accounting Services	2	2	13.0		1	5.0	
-Center for Energy Efficiency	2	2	17.5	41.0	2	9.0	20.5
-Work Order Services	3	3	20.0				
-Employee Development	1	1	2.0	32.0			
Engineering & Building Services	30	29	107.5	60.0	29	240.5	15.0
Energy Services	14	14	50.5	29.0	14	103.0	
Construction Administration	4	4	25.0				
Grounds Services/Motor Pool	17	17	39.5	21.0	17	153.5	
Custodial Services	25	25	92.5		24	111.0	
Total	100	99	371.0	197.0	87	622.0	35.5

Number of Employees Per Total Hours Trained	Employees	0 Hrs	1-10 Hrs	11-20 Hrs	>20 Hrs
Central Administration					
-Assistant Vice President's Office	2		1	1	
- Accounting Services	2		1	1	
-Center for Energy Efficiency	2				2
-Work Order Services	3		2	1	
-Employee Development	1				1
Engineering & Building Services	30		9	18	3
Energy Services	14		6	6	2
Construction Administration	4		3	1	
Grounds Services/Motor Pool	17		6	9	2
Custodial Services	25		25		
Total	100	0	53	37	10

Accomplishments & Highlights 2009/2010

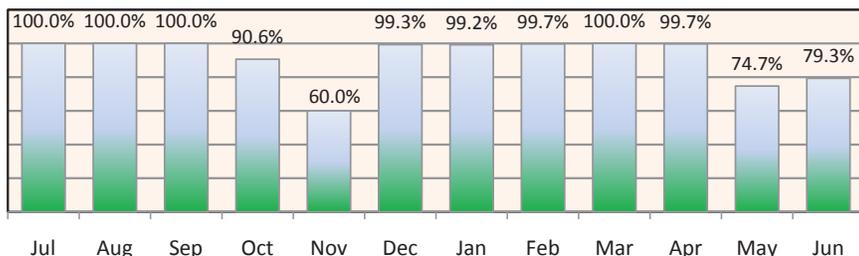
Goals 2010/2011

- Managed 255 callbacks
- Supported capital construction efforts for the College of Education and Behavioral Science and the Student Union Building
- Initiated the reverse osmosis water treatment and control system projects
- Began operation of the satellite chilling plant
- Continued to evaluate operating schedules for the natural gas turbine generator with respect to natural gas and electric pricing
- Continued to support the University Positioning for the Future initiative

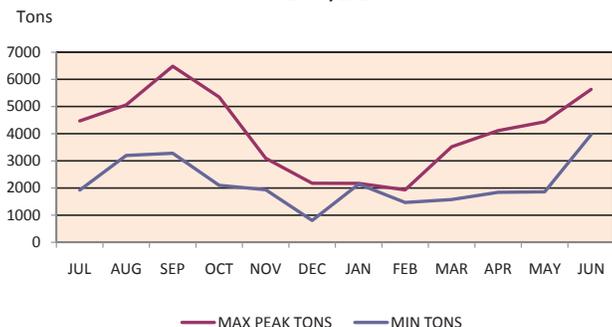
- Develop protocol on operating main chilling plant in conjunction with satellite plant
- Continue completion of safety training
- Continue to support capital and construction/ renovation projects on campus
- Continue to investigate special types of filters to improve HVAC units operation
- Continue to investigate TNAPPA and SRAPPA training opportunities
- Plan training schedules to maintain compliance regarding confined space and code issues
- Support the replacement of steam line "D" this year

- Continue exploring recovery of loop system condensate
- Hire and train three replacement operators for the Central Plant

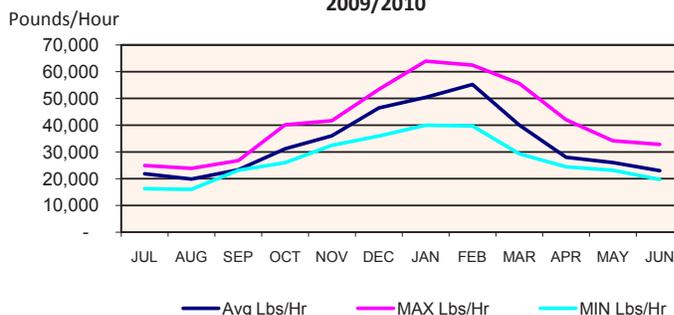
Turbine: Percent Runtime by Month  
2009/2010



Chilled Water Tonnage  
2009/2010



Steam Production  
2009/2010



Central Plant Equipment Peak Operational Levels 2009/2010

Natural Gas Fired Turbine/ Generator					Steam Boilers					Chillers				
5MW (nominal)					85,000 Pounds/Hour (peak)					6,000 Tons (peak)				
	Mid-Year	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	Annual		Mid-Year	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	Annual		Mid-Year	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	Annual
Peak MW	5.01	5.02	5.00	5.02						Peak Tons	6,483	5,348	3,519	5,632
Avg MW	4.44	4.81	4.36	4.52	Avg LBS/Hr	35,132	60,680	36,347	44,053					
Total MWH	18,007	10,340	8,052	36,399	Peak LBS/Hr	53,417	63,958	42,042	63,958					

Purchased power: 35,500.1 MWH

## Accomplishments & Highlights 2009/2010

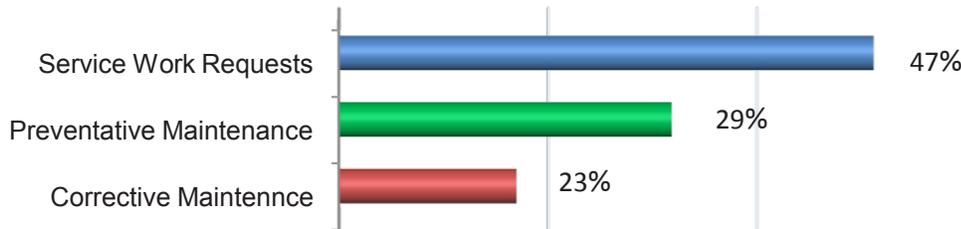
- Managed 72 callbacks
- Successfully gained 410A refrigerant certification
- Improved HVAC building air filtering system in parallel with the MTSU Sustainable Campus Fee program
- Supported the University Positioning for the Future Initiative
- Reviewed the implementation procedures on services to auxiliaries and on zone maintenance

## Goals 2010/2011

- Support and participate in TNAPPA and SRAPPA programs during the calendar year
- Support construction of College of Education and Behavioral Science and the Student Union Building
- Continue improving HVAC filtering systems
- Prepare new project applications for the MTSU Sustainable Campus Fee program
- Continue to support the University in regarding Positioning for the Future
- Continue participation in additional training for HVAC staff

- Continue support of construction/renovation projects
- Continue to monitor construction projects for “out of warranty” state

### Energy Services Total Work Order Hours 2009/2010



PERFORMANCE MEASURES: Energy Services									
2009/2010		#Work Orders Completed		Man Hours		Avg Man Hours/ Work Orders		% Closed Past Due	
CORRECTIVE MAINTENANCE (CM)		Mid-Year	Annual	Mid-Year	Annual	Mid-Year	Annual	Mid-Year	Annual
	Appliances	16	26	206	244	12.8	9.4	18.8%	11.5%
	Central Plant	0	0	0.0	0	0.0	0.0	0.0%	0.0%
	HVAC	667	1,138	1,928	3,268	2.9	2.9	5.7%	6.3%
	Mechanical	66	135	413	765	6.3	5.7	1.5%	6.7%
	<b>Total</b>	<b>749</b>	<b>1,299</b>	<b>2,546</b>	<b>4,276</b>	<b>3.4</b>	<b>3.3</b>	<b>5.6%</b>	<b>6.5%</b>
PREVENTIVE MAINTENANCE (PM)		Mid-Year	Annual	Mid-Year	Annual	Mid-Year	Annual	Mid-Year	Annual
	Appliances	5	12	4	11	0.8	0.9	0.0%	0.0%
	Central Plant	7	17	1,157	2,595	165.3	152.6	14.3%	5.9%
	HVAC	448	874	1,721	3,395	3.8	3.9	13.2%	18.1%
	Mechanical	335	704	1,079	2,008	3.2	2.9	0.0%	0.0%
	<b>Total</b>	<b>795</b>	<b>1,607</b>	<b>3,961</b>	<b>8,008</b>	<b>5.0</b>	<b>5.0</b>	<b>7.5%</b>	<b>9.9%</b>
SERVICE WORK ORDERS		Mid-Year	Annual	Mid-Year	Annual	Mid-Year	Annual	Mid-Year	Annual
	Appliances	6	15	3	18	0.5	1.2	0.0%	13.3%
	Central Plant	12	22	4,416	8,246	368.0	374.8	0.0%	0.0%
	HVAC	272	630	1,538	4,110	5.7	6.5	4.8%	9.4%
	Mechanical	19	48	71	497	3.7	10.4	10.5%	8.3%
	<b>Total</b>	<b>309</b>	<b>715</b>	<b>6,028</b>	<b>12,870</b>	<b>19.5</b>	<b>18.0</b>	<b>4.9%</b>	<b>9.1%</b>

## Accomplishments &amp; Highlights 2009/2010

**Building Services**

- Continued training of technicians and testing of backflow devices; reported results as required to city and county water departments
- Completed 6,109 work orders or approximately 24 work orders per workday or approximately one work order for every 4 students
- Developed bid specifications and completed procurement process for new lift truck
- Trained technicians for use of new GPS equipment and GIS data bas
- Implemented use of an electronic Data Logger for electrical evaluations
- Inventoried building electrical panels for Arc Flash Study

**Estimating, Planning and Scheduling**

- Provided various estimates and functioned as a consultant for Campus Planning on various projects
- Provided a total of 188 estimates for Construction/Renovation and Campus Planning

**Construction/Renovation**

- 222 projects were completed for an average of 81 projects for each designer
- Total value of all projects completed was \$1,930,705 for an average of about \$350,000 per designer
- In-house Construction Guidelines were updated as needed
- Renovated Haynes-Turner carpenter shop to offices and a conference room
- Completed 5 major TAF projects

**EH&S**

- Hired an Industrial Hygienist and initiated a laboratory safety inspection program
- Created EHS Chemical Hazards Training Course for employees and faculty/per TDEC compliance issues and conducted 12 training classes throughout the year; 70 persons trained
- Work in progress on EHS computer based safety training modules program with MTSU and ETSU Information Technology Division staffs
- Developed and implemented an EH&S website
- Continued working on the MTSU Environmental Health & Safety Services Master Plan & MTSU Environmental Handbook
- Safety and Industrial Hygiene services were provided to numerous departments and work units on campus

**Key Shop**

- Completed 1,884 work orders
- Supported projects for Residential Life, Construction Administration and Construction/Renovation requiring construction cores and/or rekeying.
- Consulted with architects and designers on security issues for the new student union and education buildings

**Goals 2010/2011**

- Continue to monitor opportunities for improved services to all areas of the University by reviewing performance and evaluating opportunities for improvement
- Implement reorganization of Engineering, Building Services, Construction/Renovation and EH&S work units

**Construction/Renovation Project Summary 2009/2010**

	1st Qtr		2nd Qtr		3rd Qtr		4th Qtr		Annual Totals	
	# Projects	Value of Projects	# Projects	Value of Projects						
Beginning Active Projects	169	\$1,141,346	172	\$1,037,412	166	\$1,387,625	153	\$1,853,777	169	\$1,141,346
Added Projects	52	\$318,606	66	\$812,449	50	\$980,637	57	\$661,553	225	\$2,773,245
Completed Projects	49	\$422,540	72	\$462,236	63	\$514,485	38	\$531,444	222	\$1,930,705
Ending Active Projects	172	\$1,037,412	166	\$1,387,625	153	\$1,853,777	172	\$1,983,886	172	\$1,983,886

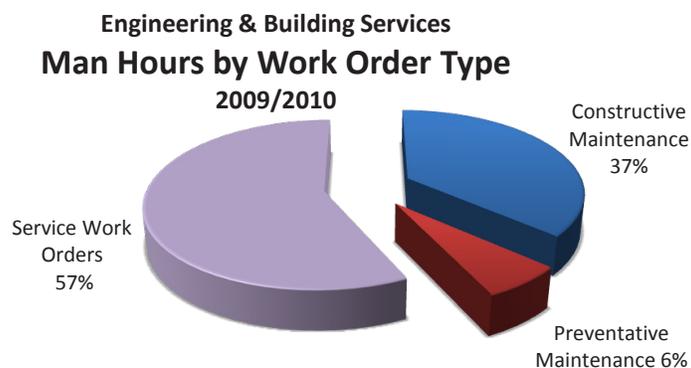
PERFORMANCE MEASURES: Engineering and Building Services									
2009/2010		# Work Orders Completed		Man Hours		Avg Man Hours/WO		% Closed Past Due	
CORRECTIVE MAINTENANCE (CM)		Mid-Year	Annual	Mid-Year	Annual	Mid-Year	Annual	Mid-Year	Annual
	Appliances	23	50	78	245	3.4	4.9	4.3%	8.0%
	Building Interior/Exterior	376	828	1,063	2,069	2.8	2.5	7.7%	6.9%
	Electrical	505	1,038	1,953	4,090	2.8	2.5	7.7%	6.9%
	Key Shop	615	1,185	1,114	2,347	1.8	2.0	3.1%	5.8%
	Plumbing	629	1,168	1,292	2,379	2.1	2.0	1.3%	1.8%
	Safety	65	128	101	248	1.5	1.9	6.2%	9.4%
	<b>Total</b>	<b>2,213</b>	<b>4,397</b>	<b>5,600</b>	<b>11,377</b>	<b>2.5</b>	<b>2.6</b>	<b>3.2%</b>	<b>4.5%</b>
PREVENTIVE MAINTENANCE (PM)		Mid-Year	Annual	Mid-Year	Annual	Mid-Year	Annual	Mid-Year	Annual
	Building Interior/Exterior	88	153	259	426	2.9	2.8	22.7%	15.0%
	Electrical *	32	66	22	65	0.7	1.0	0.0%	3.0%
	Plumbing	40	147	101	246	2.5	1.7	17.5%	47.6%
	<b>Total</b>	<b>937</b>	<b>1,875</b>	<b>1,074</b>	<b>1,993</b>	<b>1.1</b>	<b>1.1</b>	<b>2.9%</b>	<b>5.2%</b>

\* includes generator PMs performed by Motor Pool Services

SERVICE WORK ORDERS		Mid-Year	Annual	Mid-Year	Annual	Mid-Year	Annual	Mid-Year	Annual
	Appliances	5	8	5	6	1.0	0.8	0.0%	0.0%
	Building Interior/Exterior	594	1,212	2,061	4,596	3.5	3.8	8.1%	9.2%
	Electrical	117	265	329	542	2.8	2.0	7.7%	7.5%
	Key Shop	272	581	597	1,185	2.2	2.0	4.8%	5.5%
	Plumbing	99	211	161	326	1.6	1.5	5.1%	2.8%
	Renovation	559	1,153	3,498	10,929	6.3	9.5	8.1%	8.3%
	<b>Total</b>	<b>1,691</b>	<b>3,572</b>	<b>6,739</b>	<b>17,802</b>	<b>4.0</b>	<b>5.0</b>	<b>7.1%</b>	<b>7.8%</b>

### Goals 2009/2010 (continued)

- Continue to review and report on recommendations on services to auxiliaries, zone maintenance, runners and shift work
- Continue development of the University EH&S program and develop position for an Environmental Engineer
- Obtain permitting for the University under the new MS4 EPA Stormwater requirements
- Maintain and continue to refine the process flow charts for Construction/ Renovation that are compatible with the TBR In-House Construction Guidelines
- Manage work units to obtain optimum productivity and quality while dealing with reduced budgets and manpower
- Continue training and professional development through APPA, SRAPPA and TNAPPA
- Interview and fill industrial hygienist position
- Support Positioning for the Future Initiative



**Accomplishments & Highlights 2009/2010**

- Continued to take advantage of education opportunities
- Completed Capital Maintenance Budget request for 2011-2012
- On-going accomplishment and next year's goal is to continue with efforts for a more cooperative relationship with City Codes and other City Departments
- Continued activities related to updating Campus Standards for Facilities

**Goals 2010/2011**

- Continue to take advantage of educational opportunities
- Continue staff participation in APPA International educational programs
- Continue to initiate participation in "Green" status for capital projects
- Continue to support the University Positioning for the Future Initiatives
- Continue to have communications meetings with Construction Administration personnel

Capital Projects Review 2009/2010		
	New Projects	Completed Projects
July - September	<ul style="list-style-type: none"> <li>▪ Fume Hood Upgrades - Davis Science &amp; Wiser Patten</li> <li>▪ College of Education and Behavior Sciences Building</li> </ul>	<ul style="list-style-type: none"> <li>▪ Stark Ag Elevator</li> <li>▪ Stark Ag Fire Alarm System</li> <li>▪ Murphy Center Fire Alarm</li> <li>▪ Underground Electrical Phase IV</li> </ul>
October - December	<ul style="list-style-type: none"> <li>▪ Tucker Theater Renovation</li> <li>▪ Student Union Building</li> <li>▪ Blue Raider Drive Sidewalk - Lane Womack Apartments</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fume Hood Upgrades - Davis Science &amp; Wiser Patten</li> <li>▪ Veteran's Memorial Wall</li> <li>▪ Cope Administration Building HVAC Update</li> </ul>
January - March		<ul style="list-style-type: none"> <li>▪ Blue Raider Drive Sidewalk - Lane Womack Apartments</li> </ul>
April - June	<ul style="list-style-type: none"> <li>▪ Jones Hall HVAC Updates</li> <li>▪ Deere Hall &amp; Nicks Hall Renovation</li> <li>▪ Wiser Patten Sewer Line Replacement</li> <li>▪ Fiber Redundant Ring</li> <li>▪ Rutledge Hall Porch Demo</li> <li>▪ Rutledge Hall Porch Reconstruction</li> </ul>	<ul style="list-style-type: none"> <li>▪ Rutledge Hall Porch Demo</li> </ul>



**Underground Electrical Project**



**Student Union Construction**



**Education Building Construction**

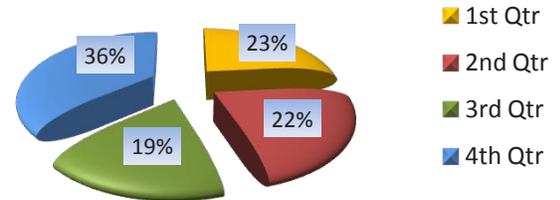


Construction Administration Capital Projects Summary 2009/2010										
	1st Qtr		2nd Qtr		3rd Qtr		4th Qtr		Annual Totals	
	# Projects	Value of Projects	# Projects	Value of Projects						
Beginning Active Projects	7	\$28,307,000	5	\$50,361,500	5	\$129,330,000	4	\$129,280,000	7	\$28,307,000
Added Projects	2	\$29,968,500	3	\$79,450,000	0	\$0	6	\$2,192,019	11	\$111,610,519
Completed Projects	4	\$7,914,000	3	\$481,500	1	\$50,000	1	\$60,000	9	\$8,505,500
Ending Active Projects	5	\$50,361,500	5	\$129,330,000	4	\$129,280,000	9	\$131,412,019	9	\$131,412,019

## Accomplishments & Highlights 2009/2010

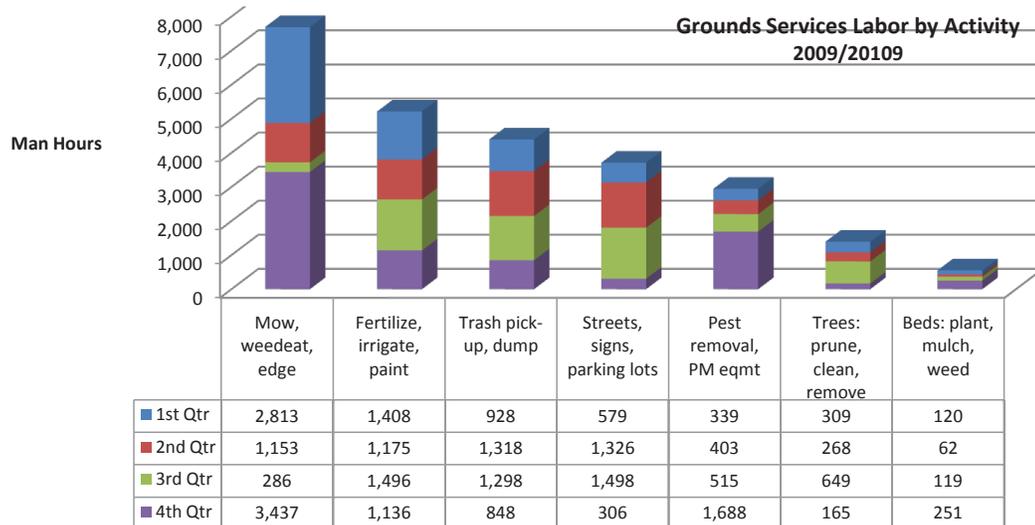
- Continued to improve playing surfaces on athletic fields
- Continued design review on new construction
- Developed and implemented new strategies to improve the quality and efficiency of trash removal
- Effectively managed tree trimming, stump removal, and mowing activities for an overall look of campus
- Improved appearances of shrub beds; developed a three year pruning schedule
- Greenhouse continued providing plants and greenhouse support for events on campus
- Accomplished cross training in Ground Services positions
- Participated in the Positioning the University for the Future
- Continue to work with Campus Planning in regards to replacement of trees as older ones need replacement

**Grounds  
Routine Work Order Hours  
per Quarter  
2009/2010**



## Goals 2010/2011

- Develop new landscape specifications for campus designer guideline standards (on-going)
- Provide design review on new construction projects and the use of rain garden/bioretenion projects where suitable
- Continue to improve communication with the athletic department regarding playing surfaces
- Explore and provide improvements to athletic field playing surfaces
- Investigate ways of improving tree trimming, tree replacement, and mowing activities
- Greenhouse support will be addressed as an on-going activity
- Maintain quarterly communications, required training, and cross-training activities
- Research and develop plans for new salvage lay down area



Performance Measures: Grounds								
2009/10	# Work Orders		# Man Hours		Avg Man Hours /WO		% Closed Past Due	
	Mid-Year	Annual	Mid-Year	Annual	Mid-Year	Annual	Mid-Year	Annual
Maintenance	62	109	245	401	4.0	3.7	16.1%	11.9%
Preventative (PM)	9	9	45	45	5.0	5.0	33.3%	33.3%
Corrective (CM)	53	100	200	356	3.8	3.6	13.2%	10.0%
Service	338	642	3,817	29,421	11.3	43.4	11.5%	9.8%
Routine	338	634	3,817	8,481	11.3	13.4	11.5%	9.9%
Annual	0	8	0	19,364	0	2,420.5	0.0%	0.0%
Total	400	751	4,062	28,246	10.2	37.6	12.3%	10.1%

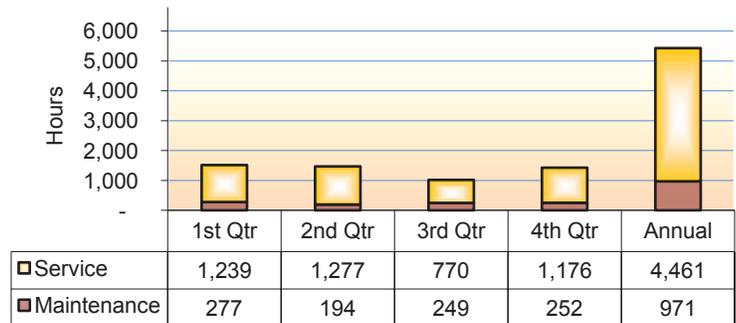
### Accomplishments & Highlights 2009/2010

- Continued to work with other FSD shops and departments insuring repair and upkeep of machines and vehicles
- Successfully updated diagnostic machine
- Continued to take advantage of training and educational opportunities
- Successfully set up replacement vehicles within departments
- Provided onsite emissions testing of University vehicles

### Goals 2010/2011

- Continue to work with authorities regarding underground storage fuel tanks
- Set up on-site emissions testing for certain vehicles
- Continue training opportunities
- Support the University Position for the Future Initiative

Motor Pool Man Hours  
2009/2010



Performance Measures: Motor Pool								
2009/2010	# Work Orders		# Man Hours		Avg Man Hours /WO		% Closed Past Due	
	Mid-Year	Annual	Mid-Year	Annual	Mid-Year	Annual	Mid-Year	Annual
Maintenance	345	745	472	971	1.4	1.3	0.3%	3.6%
Preventative (PM)	328	706	447	919	1.4	1.3	0.3%	3.8%
Corrective (CM)	18	39	25	52	1.4	1.3	0.0%	0.0%
Service	407	821	2,515	4,461	6.2	5.4	3.2%	4.4%
Total	753	1,566	2,987	5,432	4.0	3.5	1.9%	4.0%

### Custodial Services

Joe Whitefield Connie Hagberg  
David Feagans Linda Jordan John Knox

### Accomplishments & Highlights 2009/2010

- Awarded Custodial Services contract, working with new contractor regarding transition for new operations effective December 2009
- Worked with out-going contractor to transition operations on campus, including schedules, collection of all facility keys, and employee ID cards
- Transferred Walker Library from custodial contractor service to FSD Custodial Services (evening shift), with cost savings to FSD budget
- Amended Custodial Services contract to provide service for Murphy Center Complex facilities
- Transferred MTSU custodial staff assigned to Pittard Campus School and Alumni Memorial Gym to FSD Custodial Services (evening shift)

E&G Space 2009/2010	Gross Square Feet	Cleanable Square Feet	% Cleanable Square Feet
Facilities Services			
In-house	777,465	417,736	22%
Contract Labor	1,315,610	944,745	51%
Murphy Center Complex			
In-house	502,158	420,834	23%
Contract Labor	102,300	79,697	4%
Total	2,697,533	1,863,012	100%

### Goals 2010/2011

- Ensure custodial contractor service is completed according to contract terms
- Review reduction of custodial services for budget purposes
- Transfer nine custodial employees from Murphy Center to FSD Custodial Services (evening shift)
- Continue taskforce inspections of facilities

---

## Features

What 2 Watch 4: Positioning the University for the Future

Excerpts from Campus Master Plan December 2007

Capital Maintenance Project List

MTSU Sustainable Campus Fee Project List

---

The MTSU Positioning the University for the Future Initiative began in April 2008 with brainstorming sessions, including academic chairs, deans, vice presidents, and the Faculty Senate President. An oversight steering committee explored suggestions and ideas generated during the sessions resulting in the development of four strategic work groups. Those recommendations submitted by the work groups that the president has approved for Facilities Services are included below.

## Positioning the University for the Future

### Facilities Services Initiatives

#### Recommendations Approved by our President as of May 2009

#### Energy / Utilities

##### Immediate Savings

- 1 (A): Lights Out Campaign
- 1 (B): Reset Temperature Set-points—Occupied Hours
- 1 (C): Reset Temperature Set-points—Unoccupied Hours
- 1 (D): Reduce Plug Load Energy
- 1 (E): De-lamp Campus Vending Machines

##### Positioning for the Future

- 2 (A): Provide/Expand Opportunities for Energy Efficient Projects
- 2 (B): Implement Watering/Irrigation Strategy to Reduce Watering Costs
- 2 (C): Incorporate Economically Sound Sustainability Initiatives in New Construction

#### Physical Resources/Physical Plant

##### Immediate Savings

- 3 (A): Reduce Cleaning Standards for E&G Facilities
- 3 (B): Rebid Custodial Contract
- 3 (C): Reduce Grounds/Greenhouse Services to E&G
- 3 (F): Update Chargeback Procedures to Auxiliaries for Trash Services

##### Positioning for the Future

- 4 (B): Implement Watering/Irrigation Strategy to Reduce Watering Costs

For additional information, go to Positioning for the Future at [www.mtsu.edu/strategic/docs/Complete\\_Response\\_Document\\_052109\\_2.pdf](http://www.mtsu.edu/strategic/docs/Complete_Response_Document_052109_2.pdf)

### New Construction Underway at MTSU

New classrooms, class labs, and centralized facilities for the College of Education and Behavioral Science

College of Education & Behavioral Science



New facilities for Student Union functions, indoor and outdoor food court, expanded student organization areas, student activities, retail, ballroom, SGA offices, and copy center

# Excerpts from Campus Master Plan December 2007--

The following information categorizes the Education and General (E&G) facilities according to condition and quantifies the overall level of deferred maintenance.

## Existing Building Analysis: Education and General Facilities

Building Name	Year Constructed	Bldg ID	Current Condition (1)	Potential Value (2)	Overall Building Rating (3)	Net SF	Gross SF
Alumni Relations House (2259 Middle Tennessee Boulevard)	1908	P0174	99.8	High	A	5,598	10,105
President's Home **	1910	P0001	87.0	High	B	7,015	7,794
Tom H. Jackson Building **	1911	P0003	86.0	High	B	4,921	8,792
Kirksey Old Main **	1911	P0002	69.8	High	C	45,772	83,705
Jones Hall **	1921	P0005	82.3	High	B	21,110	39,855
Pittard Campus School **	1927	P0007	65.5	High	C	29,805	52,424
Ellington Human Science Annex	1928	P0018	77.6	Low	D	7,254	10,276
Wiser-Patten Science Hall	1932	P0008	83.0	Medium	B	27,991	41,116
Voorhies Industrial Studies	1942	P0009	89.4	Medium	B	28,516	39,289
ROTC Annex	1942	P0010	60.2	Low	D	8,574	10,143
Alumni Office (2263 Middle Tennessee Boulevard)	1948	P0172	100	High	A	1,869	2,796
1114 East Lytle Street (Lytle House)	1948	P0171	95.1	High	A	1,379	1,874
Sam H. Ingram Building (2269 Middle Tennessee Boulevard)	1951	P0169	98.6	High	A	18,907	27,498
Parking Services Building (1403 East Main Street)	1951	P0158	98.2	High	A	7,349	12,099
James Union Building	1952	P0015	84.5	Medium	B	37,101	59,351
Forrest Hall	1954	P0017	90.3	Low	D	8,562	14,177
Photography Building	1957	P0046	76.0	Low	D	8,196	11,873
Todd Hall	1958	P0019	96.0	High	A	65,598	114,388
Saunders Fine Art	1959	P0022	89.6	Medium	B	20,088	32,870
E.W. Midgett Building	1959	P0076	65.0	Low	D	10,804	18,326
Fairview Building	1962	P0149	90.5	Medium	A	22,584	38,250
Ellington Human Science	1962	P0025	83.6	Medium	B	10,828	15,509
Boutwell Dramatic Arts	1964	P0031	81.4	Medium	B	37,655	59,876
Cope Administration Building	1965	P0034	89.4	High	B	30,815	51,184
Keathley University Center	1967	P0042	84.4	Medium	B	78,973	122,671
Davis Science Building	1967	P0041	82.7	Medium	B	44,411	75,258

**Notes:**

- 1.) Current condition - Facility Survey Score as of 10/07
- 2.) Potential Value determined by factors including: various land use, program suitability, code issues, original campus structure
- 3.) Overall building rating combines the current condition and potential values

Building Name	Year Constructed	Bldg ID	Current Condition (1)	Potential Value (2)	Overall Building Rating (3)	Net SF	Gross SF
Stark Agribusiness and Agriscience Center	1968	P0045	89.3	High	B	15,059	24,813
Peck Hall	1968	P0044	84.0	Medium	B	52,724	110,440
McFarland Health Service	1969	P0054	81.4	Low	D	6,873	10,285
Tennessee Livestock Center	1972	P0070	91.8	Low	D	135,079	158,191
Ezell Hall	1973	P0072	78.5	Low	D	32,497	52,452
Greenhouse	1975	P0073	100	Low	D	4,709	4,774
Ned McWherter Learning Resources Center	1975	P0074	85.1	High	B	41,763	65,865
Vocational Agriculture	1979	P0080	90.9	Low	D	5,217	6,000
Wright Music Building	1980	P0081	92.8	Medium	A	20,802	31,141
Telescope Building	1986	P0106	n/a	Low	D	328	412
ProjectHELP	1986	P0088	100	High	A	3,258	4,568
John Bragg Mass Communication Building	1990	P0083	95.5	High	A	53,735	91,114
Cason-Kennedy Nursing Building	1994	P0084	97.3	High	A	18,755	31,494
Telecomm Building	1997	P0089	100	High	A	5,957	10,267
Business & Aerospace Building	1997	P0091	99.3	High	A	100,973	184,931
Horticulture Facility	1997	P0093	94.0	Low	D	6,458	9,002
James E. Walker Library	1998	P0094	99.3	High	A	172,928	254,596
Tennessee Center for the Study and Treatment of Dyslexia	2000	P0155	94.0	High	A	4,148	7,169
Wood-Stegall Center	2001	P0156	100	High	A	4,636	10,142
Paul W. Martin, Sr. Honors Building	2003	P0166	100	High	A	11,605	20,720
Printing Services Building	2005	P0175	100	Low	D	3,927	4,320
Nursing Building Addition	2006	P084A	100	High	A	13,924	24,044

\*\* Original campus structure

Overall Building Rating - Current Condition				
Potential Value	High	90-100	80-90	<80
High	A	B	C	
Medium	A	B	C	
Low	D	D	D	

## Deferred Maintenance

Educational and General (includes maintenance, utilities, and athletics)		
Overall Buildings Ratings	Square Footage	20-year Deferred Maintenance (1)
A	1,212,841	\$15,758,902
B	1,031,907	\$57,839,731
C	297,334	\$32,098,524
D	95,614	\$6,215,084
Other	67,808	\$2,038,594
Infrastructure		\$28,487,709
20-YR Capital Maintenance Funding		\$(24,380,000)
<b>Totals</b>	<b>2,705,504</b>	<b>\$118,058,544</b>

(1) 20-YR Deferred Maintenance is the sum of the Annual Capital Maintenance calculations for the most recent 20 year period for each facility. The Annual Capital Maintenance formula is:

$$ACM = 2/3 (\text{Building Current Replacement Value}) * \text{Building Age}/1275$$

Like many universities and colleges, MTSU has experienced significant growth and associated financial needs over many years. These conditions have led to a postponement of major repairs and replacements of facilities and infrastructure. The delay, combined with the age of the facilities, is leading to a deterioration of the facilities and an increased backlog of maintenance and capital renewal projects. This backlog is commonly referred to as "deferred maintenance".

The E&G Deferred Maintenance table summarizes the estimated cost of 20 years of accumulated deferred maintenance for the Education and General facilities and the infrastructure on campus according to Overall Building Rating category, the 20-year total of capital maintenance funding, and the net deferred maintenance.

MTSU Capital Maintenance				
List of Projects for Capital Budget Request				
2008 - 2009	Priority	Project Name	FY 08-09 Request	Appropriated Funding
	1	Pittard Campus School Renovation	\$ 1,000,000	\$ 1,000,000
	2	Underground Electrical Phase V (7.1)	\$ 2,000,000	\$ -
	3	Underground Electrical Phase VI (7.2)	\$ 1,500,000	\$ -
	4	Domestic Water/Sewer System Updates	\$ 250,000	\$ -
	5	Several Buildings Envelope Repair	\$ 650,000	\$ -
	6	Several Buildings Roof Replacement	\$ 400,000	\$ -
	7	Peck Hall HVAC Updates Phase 2 - VAV	\$ 410,000	\$ -
	8	Murphy Center Exterior Door Repair/Replacement	\$ 350,000	\$ -
	9	Murphy Center Arena HVAC	\$ 975,000	\$ -
	10	Business/Aerospace Roof Replacement	\$ 680,000	\$ -
	11	Walker Library Roof Replacement	\$ 600,000	\$ -
	12	Murphy Center Roof Replacement	\$ 1,500,000	\$ -
	13	Several Buildings Life Safety	\$ 500,000	\$ -
<b>Total:</b>			<b>\$ 10,815,000</b>	<b>\$ 1,000,000</b>
2009 - 2010	Priority	Project Name	FY 09/10 Request	Appropriated Funding
	1	Underground Electrical Phase V	\$ 2,700,000	\$ -
	2	Boiler Feed System & Steam Line Improvements	\$ 1,475,000	\$ -
	3	Several Buildings Roof Replacement	\$ 450,000	\$ -
	4	Domestic Water/Sewer System Updates	\$ 300,000	\$ -
	5	Several Buildings Envelope Repair	\$ 750,000	\$ -
	6	Peck Hall HVAC Updates Phase 2 - VAV	\$ 460,000	\$ -
	7	Murphy Center Exterior Door Repair/Replacement	\$ 400,000	\$ -
	8	Murphy Center Arena HVAC	\$ 1,100,000	\$ -
	9	Underground Electrical Phase VI	\$ 1,235,000	\$ -
	10	Business/Aerospace Roof Replacement	\$ 785,000	\$ -
	11	Walker Library Roof Replacement	\$ 700,000	\$ -
12	Murphy Center Roof Replacement	\$ 1,725,000	\$ -	
<b>Total:</b>			<b>\$ 12,080,000</b>	<b>\$0</b>
2000 - 2011	Priority	Project Name	FY 10/11 Request	Appropriated Funding
	1	"D" Steam Line Replacement	\$ 850,000	\$ 850,000
	2	Underground Electrical Phase V	\$ 3,105,000	\$ 3,110,000
	3	Several Buildings Roof Replacement	\$ 750,000	\$ 750,000
	4	Boiler Feed System & Steam Line Improvements	\$ 1,698,000	\$ -
	5	Several Buildings Envelope Repair	\$ 865,000	\$ -
	6	Domestic Water/Sewer System Updates	\$ 400,000	\$ -
	7	Peck Hall HVAC Updates Phase II - VAV	\$ 550,000	\$ -
	8	Murphy Center Exterior Door Repair/Replacement	\$ 500,000	\$ -
	9	Murphy Center HVAC	\$ 1,275,000	\$ -
	10	Underground Electrical Phase VI	\$ 1,425,000	\$ -
	11	Business/Aerospace Roof Replacement	\$ 925,000	\$ -
	12	Walker Library Roof Replacement	\$ 825,000	\$ -
13	Murphy Center Roof Replacement	\$ 1,990,000	\$ -	
<b>Total:</b>			<b>\$ 15,158,000</b>	<b>\$ 41,705,000</b>
2011 - 2012	Priority	Project Name	FY 11/12 Request	Appropriated Funding
	1	Boiler Feed System & Steam Line Improvements	\$ 1,690,000	TBD
	2	Several Buildings Envelope Repair	\$ 1,285,000	TBD
	3	Domestic Water/Sewer System Updates	\$ 460,000	TBD
	4	Sauders Fine Arts HVAC	\$ 900,000	TBD
	5	Peck Hall HVAC Updates Phase II - VAV	\$ 635,000	TBD
	6	Murphy Center Exterior Door Repair/Replacement	\$ 575,000	TBD
	7	Murphy Center Arena HVAC	\$ 1,470,000	TBD
	8	Underground Electrical Phase VI	\$ 1,640,000	TBD
	9	Walker Library Roof Replacement	\$ 950,000	TBD
10	Murphy Center Roof Replacement	\$ 2,289,000	TBD	
<b>Total:</b>			<b>\$ 11,894,000</b>	<b>TBD</b>

# MTSU Sustainable Campus Fee Project List

Joe Whitefield Linda Hardyman

Funded by a fee initiated by the student body, administered by the Division of Student Affairs, and supported by the Tennessee Board of Regents, the intent of the MTSU Sustainable Campus Fee Program is to decrease consumption on the campus of non-renewable energy. A portion of the fee is designated for purchasing 'green power' to facilitate production of electricity from wind, solar power, and methane gas as a clean alternative to traditional energy sources. The remainder of the funds generated by the fee provides support for campus projects that increase or improve energy efficiency on campus, such as retrofitting older systems, lowering consumption and decreasing energy expenses. Projects approved support energy and environmental sustainability. The following table lists the approved projects.



MTSU Sustainable Campus Fee Program				
Approved Project Listing	2006-07	2007-08	2008-09	2009-10
Green Power Purchase	\$ 220,000	\$ 230,000	\$ 230,000	\$ 230,000
Blade servers- Server consolidation/Virtualization (two pairs)			\$ 20,000	\$ 21,000
Bus conversion to run on used cooking oil	\$ 15,000			
Chilling plant: pressure gauges installation	\$ 1,000			
Cleaning of coils in the JUB and Fairview Building				\$ 4,490
Cleaning of coils in the KUC and Telecommunication Buildings				\$ 3,000
Closed loop sediment filtering system in the library				\$ 15,450
Closed loop sediment filtering system Voorhies			\$ 14,450	
Closed loop sediment filtering system KUC		\$ 12,000		
Closed loop sediment filtering system Mass Comm			\$ 14,450	
Coil Cleaning Multiple Buildings (AMG, Mass Comm, Forest Hall, Voorhies)			\$ 10,288	
Conduct light level studies in Todd, Mass Comm, BAS and Peck Bldgs				\$ 5,500
Conversion of vehicle to operate on natural gas/installation of compressed gas station				\$ 8,500
Creation of a rain garden to assist with storm water run off				\$ 3,000
Development of flex-fueled engine (sun and hydrogen)	\$ 13,000	\$ 14,000		
Development of flex-fueled engine 2 (sun and hydrogen)		\$ 27,000		
DRIPS Project (Development and Research into Pervious Surfaces)		\$ 13,500		
FLIR i7 compact infrared camera for energy audits				\$ 3,450
Golf cart (electric to solar)		\$ 8,000		
Golf cart conversion (electric to solar) Safety and suspension upgrade		\$ 2,500		
Hot/chilled water valve assessment		\$ 5,000		
HVAC controls replacement Wright Music	\$ 29,950			
HVAC pocket filter project BAS			\$ 6,250	
Hybrid/Alternative fuel vehicle purchase (subsidy)	\$ 17,250			
Installation of a closed loop sediment filtering system in Learning Resource Cntr				\$ 15,450
Installation of a FilterPave Porous Pavement in parking lot on Champions Way				\$ 18,665
Installation of a geothermal cooler system on the MTSU farm				\$ 27,150
Installation of programmable thermostats in F/S maintenance shops	\$ 1,200			
Installation of synthetic pocket filters in Honors, Davis Science, Todd Buildings				\$ 15,758
Installation of synthetic pocket filters in McFarland, Stark Ag, LRC, Holmes Bldgs				\$ 10,845
Kenaf Agriculture for Sustainable Community (Alternative energy crop)			\$ 5,935	
Lamp crusher	\$ 4,000			
Library book purchase			\$ 4,500	
Light switch plate cover replacement	\$ 2,500			
Multi-fuel bus emission testing project		\$ 10,944		
Occupancy Sensors Honors Building			\$ 3,372	
Permeable Pavers for Sustainable Learning Environment (Forest Hall)			\$ 13,050	
Phase 2 installation of synthetic pocket filters in the BAS Building				\$ 14,904
Poster campaign and Earthwise Reusable Bag Project		\$ 18,160		
Installation of variable speed compressor in the Central Utilities Plant				\$ 24,000
Purchase of organic dyes to be used in organic dye sensitized solar cells			\$ 1,100	
Purchase of recycling containers for MTSU Recycling Program	\$ 1,500	\$ 5,000	\$ 5,500	\$ 6,000
Re-caulk exterior windows (Davis Science Building)		\$ 14,000		
Recycling - community drop-off relocation/expansion	\$ 3,000			
Re-lamp Cason Kennedy Nursing Building (existing portion)	\$ 30,600			
Re-lamp Fairview Building		\$ 30,600		
Replacement of exterior windows McFarland Building			\$ 25,000	
Replacement of 21 exterior windows Holmes Building		\$ 35,000		
ReRev Cardio System elliptical machines in Rec Center				\$ 30,000
Studio lighting installed in Mass Comm and LRC			\$ 22,960	
Sub-metering for Chilling Plant	\$ 4,000			
Sub-metering for Murphy Center	\$ 4,000			
Turning manure into gold				\$ 1,000
Ultrasonic transmitters Midgett			\$ 18,130	
<b>Annual Total:</b>	<b>\$ 303,900</b>	<b>\$ 322,944</b>	<b>\$ 322,295</b>	<b>\$ 458,162</b>



Porous pavement in parking lot



Recycling bins



ReRev Cardio System Elliptical machines



Closed loop sediment filter system



## *Summary of Services 2009/2010 Annual Report*

This report is produced by the FSD assistant vice president and staff and published by FSD Central Administration.

Linda Hardymon, Editor/Publishing Coordinator

### **FACILITIES SERVICES DEPARTMENT**

*Middle Tennessee State University*

*PO Box 32*

*Murfreesboro, Tennessee 37132*

*Phone 615-898-2414*

*Fax 615-898-5071*

*Email: [cee@mtsu.edu](mailto:cee@mtsu.edu)*

*Web page: [www.mtsu.edu/~facserv](http://www.mtsu.edu/~facserv)*

**MIDDLE  
TENNESSEE**  
STATE UNIVERSITY

