TRUMAN STATE UNIVERSITY
Kirkville 63501

OFFICIAL MINUTES
OF THE
BOARD OF GOVERNORS

The Board of Governors for Truman State University conducted a conference call meeting on Tuesday, May 26, 2009. The conference call meeting was held in the conference room of the President’s Office located in McClain Hall 200 on the University campus in Kirkville, Missouri. The open session of the meeting was called to order shortly after 1:00 p.m. by the Chair of the Board of Governors, Cheryl J. Cozette.

A quorum was present with all seven voting members in attendance: Cheryl J. Cozette, Mike Greenwell, Karen Haber, Matthew W. Potter, Kenneth L. Read, John W. Siscel, III, and Mark S. Wasinger.

Also in attendance for the meeting were all three non-voting members: Cody Sumter, the student representative, and Peter T. Ewell and John Hilton, the two out-of-state members.

Call to Order
Dr. Cozette opened the meeting by extending a welcome to all in attendance.

Enrollment Management Software
Mr. Read moved the adoption of the following resolution:

BE IT RESOLVED that the proposal from SunGard Higher Education Services to provide enrollment management software at a cost of $356,000 be approved; and

BE IT FURTHER RESOLVED that the President of the University, or his designee, be authorized to execute a contract with the vendor for the product.

The motion was seconded by Ms. Haber and carried by a unanimous vote of 7 to 0. Dr. Cozette then declared the motion to be duly adopted.

Design Services—Power Plant Small Boiler and Campus Utility System Plan
Ms. Haber moved the adoption of the following resolution:

BE IT RESOLVED that the proposal from McClure Engineering Associates, of St. Louis, Missouri, to provide professional services for the Power Plant Small Boiler and Campus Utility System Plan with the fees and work for such services to be within the guidelines of the proposal, be approved; and

BE IT FURTHER RESOLVED that the President of the University, or his designee, be authorized to execute a contract with the firm for the project; and

BE IT FURTHER RESOLVED that a copy of the proposal be attached to and made a part of the minutes of this meeting.

The motion was seconded by Mr. Greenwell and carried by a unanimous vote of 7 to 0. Dr. Cozette then declared the motion to be duly adopted, and the Secretary designated a copy of the proposal as Exhibit A.

There being no further business, Mr. Read moved that the meeting be adjourned. The motion was seconded by Mr. Potter and carried by a unanimous vote of 7 to 0. Dr. Cozette then declared the motion to be duly adopted, and the meeting adjourned shortly after 1:30 p.m.
I hereby certify that the foregoing minutes were approved by the Board of Governors on the 20th day of June, 2009.

Cheryl J. Cozette
Chair of the Board of Governors
McCLURE ENGINEERING

May 19, 2009

Mr. Mark Schultz
Campus Planning
McClain Hall 201
100 East Normal
Kirksville, MO  63501-4221

Re: Proposal for Engineering Services
Truman State University
Detailed Study for Installation of a Trim Boiler

Dear Mark:

We are pleased to present you with this proposal to provide professional engineering services for the project referenced above. Below is our understanding of the project along with our Scope of Work and Fee.

Description of Project

We understand that the University would like to modify the central steam plant to add a low-load, trim boiler. Currently the facility is served for nearly all hours of operation by a single 40,000 lb/hr steam boiler. The University is in the process of removing buildings from the central steam plant and anticipates difficulty and inefficiencies in operating one large boiler during summer operation. In addition to installing a trim boiler, the university would like to remove the existing coal hopper, replace the boiler controls (including oxygen control), install automation to coordinate control of the boilers, replace the plant condensate receiver and demolish an existing 100,000 lb/hr steam boiler. This work will also require modifying the exterior of the building to permit demolition and installation of a boiler.

Scope of Work

We propose the following Scope of Work:

1) Visit the site and prepare a detailed steam flow diagram of the facility.

2) Utilizing the heating load data collected as part of the Utility Master Plan project and historical gas usage, determine the most appropriate size of boiler to install. This analysis will focus on ensuring that the boiler is not too small to serve enough hours of the year, while ensuring that the boiler is not too large to function during low summer heating loads. Provide a cost opinion for the construction work involved with installing the recommended boiler.

3) Investigate options for replacing the condensate receiver. These options could include locating the receiver immediately adjacent to the existing receiver or relocating to another portion of the plant.
4) Investigate the feasibility and cost savings associated with modifying the boiler feedwater pumps. During our inspection, it appeared that the pumps were pumping a significantly higher head than was required for the current required steam pressure.

5) Investigate options for modifying the exterior of the building to accommodate demolition and installation of the trim boiler. Provide a cost opinion for the construction work involved.

6) Investigate building structural aspects associated with removed the coal bunker. Provide a cost opinion for the construction work involved.

7) Prepare an informal memorandum style report to describe the results of the study and to present a final recommendation on how to proceed. Meet with the Owner to discuss the study.

Additional Services

Additional Services include all services that are not part of the Scope of Work as described above. This includes those services that arise as a result of unforeseen circumstances and will require an additional fee. Typical items included in Additional Services are as follows:

a. Services resulting from changes in scope or magnitude of the project as described and agreed to under the Scope of Work.

b. Services in connection with a public hearing, arbitration, or legal proceedings.

c. Preparation of construction documents for the work described in the study.

Project Team:

I will act as principal engineer in charge of the work. Erich Blaufuss, P.E. will act as project manager and project mechanical engineer. Mike Strathman will act as project electrical engineer. Architectural and structural consulting will be performed by Hastings and Chivetta.

Fee:

We propose to perform the above Scope of Work for a Fixed Fee of $16,500 (Sixteen Thousand Five Hundred Dollars). In addition, reimbursable expenses will be billed for the actual amount for direct costs that are directly attributable to the performance of the work such as subconsultants, drawing reproduction, express deliveries, photo development, rental cars for travel, meals, travel miles to site and meetings. A breakdown of the fees is included below. Additional services will be billed based on the attached rate schedule (dated January 1, 2009).

Based on the outcome of the above study, a proposal would be prepared specifically for the scope of work identified. We would propose that our fee for the design project would be calculated based on the fee schedule listed below:
FIGURE 1: Proposed Design Fee Schedule (not including reimbursables)

<table>
<thead>
<tr>
<th>Estimated Construction Cost</th>
<th>Proposed Design Fee (Percentage of Estimated Construction Cost)</th>
</tr>
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<tbody>
<tr>
<td>$50,000</td>
<td>14.4%</td>
</tr>
<tr>
<td>$100,000</td>
<td>14.0%</td>
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<tr>
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<tr>
<td>$900,000</td>
<td>10.1%</td>
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<td>$1,000,000</td>
<td>9.8%</td>
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<tr>
<td>$1,500,000</td>
<td>9.4%</td>
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<td>$2,000,000</td>
<td>9.1%</td>
</tr>
<tr>
<td>$3,000,000</td>
<td>8.8%</td>
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</table>

The above fee is valid for a period of 90 days from the date of this proposal, after which McClure Engineering reserves the right to retain or modify it to reflect changing economic conditions. We will invoice for our services on a monthly basis as the work progresses, and invoices are payable net 30 days.

Please call me if you have any questions regarding this proposal.

Sincerely,

Eric Utterson

Enclosure: Rate Schedule (dated January 1, 2009)
**McClure Engineering**

January 1, 2009

**FEE SCHEDULE**

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Reimbursable expenses are in addition to hourly fees and include expenses incurred by McClure Engineering in the interest of the project. Unless otherwise defined by contract, reimbursable expenses shall be invoiced and include the following:

- Travel at cost.
- Automobile mileage at the published IRS Standard Mileage Rate.
- Reproductions of drawings, specifications, and other documents at cost.
- Courier and delivery charges at cost.
- Fees paid for securing permits and approvals.
- Sub-consultant expenses at cost plus 5%.
Dear Mark:

We are pleased to present you with this proposal to provide professional engineering services for the project referenced above. Below is our understanding of the project along with our Scope of Work and Fee.

Description of Project

We understand that the University would like a master plan created for site utilities across the Truman State University campus. The utilities to be considered in this study include:

**Mechanical Utilities**
- Central Steam (heating)
- Central Chilled Water
- Building Automation
- Natural Gas

**Civil Utilities**
- Domestic Cold Water
- Sanitary Sewer
- Storm Sewer

**Electrical Utilities**
- Electrical Power
- Telephone
- Data (Fiber)
- Fire Alarm

This master planning effort will include:

- Updating site utility plans (initial effort by TSU) to reflect a schematic relationship of utilities across the campus to the point of entering (or passing through) each building.

- Assess the condition of the existing utilities for the purpose of determining which utilities have exceeded their useful life.

- Prepare multiple options for addressing each utility in the Master Plan. Provide cost opinions for the work involved in implementing these options. Analyze lifecycle cost associated with proposed heating and cooling systems. Meet with the University to discuss the advantages and disadvantages and to finalize the Master Plan approach.

- Prepare a report detailing the master plan intent which will identify planned routing of utilities as well as provide diagrams for how new or modified buildings are integrated into campus networks (chilled water, heating water, building automation and power).
Scope of Work

We propose the following Scope of Work:

Mechanical Utilities

1) Collect all relevant mechanical drawings of the facility. Identify the sizes and locations of piping systems entering and leaving each building. Identify the sizes and locations of all major HVAC equipment. Perform a field inspection to determine the condition of the central heating and cooling distribution equipment (pumps stations and heat exchanger stations). Develop campus flow diagrams for steam, hydronic heating and cooling systems (from main distribution equipment to connection at each building).

2) Update site base maps to reflect the size and location of existing utilities as well as identifying the overall condition of each utility.

3) Meet with facility staff to determine usage patterns for each building (this is needed to accurately determine the HVAC loads). Perform heating and cooling load calculations on each building to determine the block heating and cooling loads. Collect all gas utility bills for the past two years.

4) As a minimum, investigate the feasibility (in terms of constructability and maintainability) of the following options for addressing the heating, cooling and natural gas utilities:

   Chilled Water:
   a) Extension of the campus chilled water loops to all buildings (on the main campus) into a fully distributed chilled water loop with automation in place to coordinate control.
   b) Construction of a central chilled water plant and extension of chilled water to each building.

   Heating:
   a) Systematic replacement of the steam plant and steam heating system with a hydronic heating system.
   b) Installation of a hydronic heating water loop across campus and a central heating water boiler plant. Installation of a heat recovery chiller to provide simultaneous heating and cooling to the facility.
   c) For comparison purposes: evaluate the replacement cost of steam plant piping distribution system.

   Natural Gas:
   Investigate options for replacing infrastructure as part of the other work proposed in the Master Plan and as required to serve the heating Master Plan.

As we look at the facility during the study, we will likely find more options (and combinations of options) to investigate. Additionally, if the University staff would like us to look at other options, we will do so as part of the scope of work.
5) Prepare construction cost opinions for each proposed option. Model the energy usage of each proposed option for the purpose analyzing the relative energy cost / lifecycle cost between options.

6) For building automation master planning, we will conduct a thorough inventory of the types of systems installed throughout campus. Additionally, we will interview facility staff to determine the comfort level with each type of system for the purpose of determining the most effective method of master planning the building automation. Construction cost opinions will be developed for the replacing controls in buildings that are not planned to be modified (upgraded) in the near future.

Civil Utilities

7) Field Verification, Investigation, and Management
   a) Attend meetings in Kirksville to review priorities, concerns, system problems, and coordination.
   b) Review University System Mapping and data base. Prepare data for master planning.
   c) Review system facilities to confirm sizes, materials, depths of sewer systems, etc.
   d) Reconcile observed data with mapping, research archive information to confirm / correct disagreements
   e) Tabulate, update, and expand spread sheet

8) Storm Sewerage Master Plan
   a) Using system map and topographic mapping determine sub-basins within the campus and calculate peak design flows for desired design storm (typically 25-year, 24-hour storm)
   b) Model ideal system based upon design flows. Determine the required pipe sizes to convey the flow.
   c) Compare required pipe sizes to existing system, determine improvements to convey the flow or install detention to lower peaks to existing pipe capacities where possible.
   d) Prepare preliminary upgrade improvement costs and recommended priorities.

9) Sanitary Sewer Master Plan
   a) Determine building flows for current or planned facilities.
   b) Determine existing system capacities.
   c) Evaluate the existing system and determine improvements to convey the flow.
   d) Prepare preliminary upgrade improvement costs and recommended priorities.

10) Potable Water System
    a) Obtain water system information from the City of Kirksville. This will be for part or all the community dependent on source and storage locations. Take pressure and flow information around the campus if not available. Create base hydraulic model.
    b) Add University system layout / system.
    c) Determine building demand and fire demand for buildings.
    d) Evaluate the existing system with fire flows. Determine improvements to system.
    e) Prepare preliminary upgrade improvement costs and recommended priorities.
Electrical Utilities

11) Collect all relevant electrical drawings of the facility. Verify the sizes and locations of building electrical feeds and services. Perform a field inspection to determine the condition of the central power distribution equipment. Develop a one-line drawing power riser for the campus (from Ameren connection to main distribution in each building).

12) Verify the sizes and locations of building emergency power generators. Perform a field inspection to determine the condition of the emergency generators.

13) Update site base maps to reflect the size and location of existing power, data and phone utilities as well as identifying the overall condition of the utility.

14) Collect all available historic metered electrical data that the campus has already collected. Measure power demand on recently renovated buildings and estimate power demand for buildings that are planned to be remodeled or added. Measure or estimate power demand on emergency power systems on existing and new buildings.

15) As a minimum, investigate the feasibility (in terms of constructability and maintainability) of the following options for addressing electrical utilities:

Power Distribution:
   a) Replace the existing 5kV distribution with 15kV. Replace building transformers across campus as required to implement this.
   b) Replace the existing 5kV distribution in kind. Replace conduit, wire and equipment as required to extend the life of the system for another 50 years.
   c) Replace existing building emergency power generators with a central emergency power generator.
   d) Retain existing method of providing emergency power on site and replace worn components.

Data and Telephone:
Investigate options for replacing infrastructure as part of the other work proposed in the Master Plan. Install conduits in duct banks as required for Master Plan expansion. Arrange new systems to provide a loop for redundancy.

As we look at the facility during the study, we will likely find more options (and combinations of options) to investigate. Additionally, if the University staff would like us to look at other options, we will do so as part of the scope of work.

16) For fire alarm master planning, we will conduct a thorough inventory of the types of systems installed throughout campus. Additionally, we will interview facility staff to determine the comfort level with each type of system for the purpose of determining the most effective method of master planning the fire alarm system. Construction cost opinions will be developed for the replacing fire alarm systems in buildings that are not planned to be modified (upgraded) in the near future.
17) Prepare construction cost opinions for each proposed option. Model the energy usage of each proposed option for the purpose analyzing the relative energy cost / lifecycle cost between options.

Master Plan Report
18) Prepare a report summarizing the results of the study. The report will include updated base maps for the utilities included in the study (existing conditions), would include schematic base maps describing the proposed implementation of the master plan for each utility, and would include descriptions for how cooling, heating, building automation and electrical is connected at each building.

19) Meet with the University to discuss the final report.

Owner Provided Assistance
Conducting the field work and preparing drawings illustrating existing conditions will require the assistance of the Owner. This proposal assumes that the Owner will provide the following:

a. Current AutoCAD aerial / topographic mapping of campus with overlap at a maximum mapping scale of 1"=100’ with 2-ft contour intervals. We believe the campus is about 160-acres.

b. Utility system mapping showing the location, size, and material of City and University facilities within the campus.

c. Numbering of all utility structures on campus with data assembled in an Excel or similar spread sheet.

d. Staff escort and assistance, including confined space access if needed, for access to steam, electric, and telecommunications facilities.

Additional Services
Additional Services include all services that are not part of the Scope of Work as described above. This includes those services that arise as a result of unforeseen circumstances and will require an additional fee. Typical items included in Additional Services are as follows:

a. Services resulting from changes in scope or magnitude of the project as described and agreed to under the Scope of Work.

b. Services in connection with a public hearing, arbitration, or legal proceedings.

c. Additional effort to assess the condition of facilities in areas where visual inspection is not possible

d. Subsurface inspection of sanitary or storm sewers by television methods
e. Aerial / topographic mapping of the campus and near surrounding area

f. Rate studies of specific utilities to create internal billing / funding for system improvements

g. Engineering or boundary surveys

h. Construction documents for work resulting from Master Utility Plan study.

**Project Team:**
I will act as principal engineer in charge of the work. Peter McDonnell, P.E. will act as project manager and project mechanical engineer. Keith Cooper, P.E. and Mike Strathman will act as project electrical engineer. Civil Engineering work will be performed by Trabue, Hansen and Hinsaw, Inc.

**Fee:**
We propose to perform the above Scope of Work for a **Fixed Fee of $275,000 (Two Hundred and Seventy Five Thousand Dollars)**. In addition, reimbursable expenses will be billed for the actual amount for direct costs that are directly attributable to the performance of the work such as subconsultants, drawing reproduction, express deliveries, photo development, rental cars for travel, meals, travel miles to site and meetings. Please note that this fee is estimated assuming that the utilities base map provided by TSU is missing significant amounts of information. If the data is found to be more complete, we will be happy to revisit the fee. A breakdown of the fees is included below. Additional services will be billed based on the attached rate schedule (dated January 1, 2009).

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<thead>
<tr>
<th>Updates to Base Map for Mechanical Utilities</th>
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<tbody>
<tr>
<td>Mechanical Master Plan</td>
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</tr>
<tr>
<td>Updates to Base Map for Electrical Utilities</td>
<td>$13,000</td>
</tr>
<tr>
<td>Electrical Master Plan</td>
<td>$37,000</td>
</tr>
<tr>
<td>Civil Master Plan</td>
<td>$144,000</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$275,000</strong></td>
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</tbody>
</table>

Less Civil Master Plan $\text{($144,000$)}$

$\text{131,000}$
The above fee is valid for a period of 90 days from the date of this proposal, after which McClure Engineering reserves the right to retain or modify it to reflect changing economic conditions. We will invoice for our services on a monthly basis as the work progresses, and invoices are payable net 30 days.

Please call me if you have any questions regarding this proposal.

Sincerely,

Eric Uttersón

Enclosure: Rate Schedule (dated January 1, 2009)
**FEE SCHEDULE**

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- Sub-consultant expenses at cost plus 5%.