

Board of Trustees Agenda Report

For the Trustee Meeting Date of September 16, 2008

ITEM TITLE: *(Please define the subject; e.g., change order – Berkeley City College)*

Contract Approval – Environmental Control Technology Program

SPECIFIC BOARD ACTION REQUESTED:

Approve contract for the installation of a control system as part of a multi-vendor controls system educational laboratory. Contractor: TAC. Contract value: \$37,100. TAC, an active industry partner with the ECT program, is donating an additional \$24,500 in software and services.

ITEM SUMMARY: *(PLEASE DISCUSS THIS ITEM)*

The Environmental Control Technology program is proceeding with the implementation phase of the multi-vendor educational control integration system for the simulated commercial HVAC lab. This project is funded as part of a State Chancellor's Office's Industry Driven Regional Collaborative (IDRC) grant. TAC submitted a proposal to provide software and services in the value of \$37,100 with an additional \$24,500 donation in software and services.

BACKGROUND/ANALYSIS:

TAC will be responsible for furnishing an I/A Series WorkPlace Tech Controller Software Programming Tool, I/A Services BACnet DDC Temperature Control Panels and field devices for two air handling units, and fabricate and install three DDC Temperature Control Panels. Please see contractor proposal for details.

The contract is part of a unique and cutting-edge multi-vendor control system installation at Laney's HVAC lab. Facility Dynamics, a nationally renowned control engineering firm, designed the controls integration system to optimize educational value of the lab. The latest control system devices on the market will operate in unison with each other to support HVAC training equipment in the lab. The different systems will be fully integrated through an interoperable network, simulating current conditions and trends in building automation. The system will allow instructors to simulate multiple scenarios of a typical building, program faults, and design case studies, allowing students to develop the systems-thinking and problem-solving skills required of today's building technicians.

Building controls account for over 60% of LEED (Leadership in Energy and Environmental Design) certification points. They are key to energy savings in commercial buildings which account for over 1/3 of California's electricity consumption. This lab will help prepare Laney's student population for the critical green workforce needs of the coming decades.

ALTERNATIVES/OPTIONS:

EVALUATION AND RECOMMENDED ACTION:

SOURCE OF FUNDS (AND FISCAL/BUDGETARY IMPACT):

CALIFORNIA STATE CHANCELLOR'S OFFICE INDUSTRY-DRIVEN REGIONAL COLLABORATIVE GRANT. NO IMPACT ON GENERAL FUND BUDGET.

OTHER DEPARTMENTS IMPACTED BY THIS ACTION (E.G. INFORMATION TECHNOLOGY):

YES _____ NO X

COMMENTS:

WHO WILL BE PRESENTING THIS ITEM AT THE BOARD MEETING?

PETER CRABTRE, DEAN VOCATIONAL TECHNOLOGY

DID A BOARD STANDING COMMITTEE RECOMMEND THE ITEM? YES _____ NO X

IF "YES", PLEASE INCLUDE THAT INFORMATION IN YOUR SUMMARY.

(****Board contract approval is subject to negotiation and execution by the Chancellor of the District-approved contract.)

PLEASE ACQUIRE SIGNATURES IN THIS ORDER:

DOCUMENT PREPARED BY:

Prepared by:  Date: 9/8/08
[Enter Your Name and Title of Individual]

DOCUMENT PRESENTED BY:

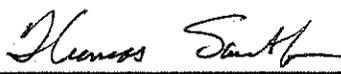
Prepared by:  Date: 9/8/08
[Enter Name of College President or Vice-Chancellor or Manager, and Title of Individual]

FINANCE DEPARTMENT REVIEW

Finance review required Finance review *not* required

If Finance review is required, determination is: Approved Not Approved

If not approved, please give reason: _____

Signature:  Date: 9.9.08
Thomas Smith, Vice Chancellor for Finance and Administration

GENERAL COUNSEL (Legality and Format/adherence to Education Codes):

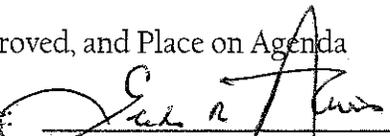
Legal review required Legal review *not* required

If Legal review is required, determination is: Approved Not Approved

Signature: _____ Date: _____
Thuy T. Nguyen, General Counsel

CHANCELLOR'S OFFICE APPROVAL

Approved, and Place on Agenda Not Approved, but Place on Agenda

Signature:  Date: 9/8/08
Elihu Harris, Chancellor



Laney College
Office of the Vocational Dean

900 Fallon Street • Oakland, California 94607
Tel. (510) 464-3218 • Fax (510) 464-3231

MEMORANDUM

DATE: September 2, 2008
TO: File
FROM: Peter Crabtree, Dean of Instruction
SUBJECT: Sole Source Contract Justification for T.A.C. America, Inc.

T.A.C. has been an active industry partner with Laney College for the past four years as part of our National Science Foundation-sponsored program in Environmental Control Technology at the college. T.A.C. has continued its partnership as the college has continued this critical work through a State Chancellor's Office Industry-Driven Regional Collaborative grant in advanced control systems technician training through the ECT program. T.A.C. representatives have played a key role in advising the college in direct digital control systems curriculum.

T.A.C. will be responsible for furnishing an I/A Series WorkPlace Tech Controller Software Programming Tool, I/A Services BACnet DDC Temperature Control Panels and field devices for two air handling units, and fabricate and install three DDC Temperature Control Panels. Donations amount to \$24,500 or 63% of the total contract value.

T.A.C.'s contract is part of a unique multi-vendor control systems installation at Laney's HVAC lab. The latest devices on the market will operate in unison with each other to support HVAC training equipment in the lab. The different systems will be fully integrated through an interoperable network, simulating the latest trend in building automation. The systems will allow instructors to simulate multiple scenarios of a typical building, program faults, and design case studies, allowing students to develop the systems-thinking and problem-solving skills required of today's building technicians.

Building controls account for over 60% of LEED (Leadership in Energy and Environmental Design) certification points. They are key to energy savings in commercial buildings which account for over 1/3 of California's electricity consumption. This lab will help prepare Laney's student population for the critical green workforce needs of the coming decades.

Ms. Barbara Widhalm, MCRP
NSF Project Manager, Advanced Technology Education Initiative
Environmental Control Technology Program
Laney College, Peralta Community College District
Oakland, CA

August 28, 2008

Project: Laney College BAS Lab

Dear Ms. Widhalm,

Thank you for the opportunity to participate on the Laney College BAS Lab team. Pursuant to your request we are pleased to provide this proposal to provide the equipment, labor and professional services listed below. Our proposal is based on Facility Dynamic Engineering Roles and Responsibilities Memo, the Laney Network Diagram REV-1, both dated June 6, 2008, incorporating the following scope of work description, clarifications, assumptions, and exclusions.

SCOPE OF WORK #1 DESCRIPTION

- > Furnish (2ea) t.a.c. I/A Series WorkPlace Tech Controller Software Programming Tool.
- > Furnish, install, and terminate (2ea) t.a.c. I/A Series BACnet DDC Temperature Control Panels for the following systems:
 - ⇒ (1ea) AHU-1 "Common" VAV Air Handling Unit
 - ⇒ (1ea) AHU-2 VAV Air Handling Unit
- > Furnish, install and terminate field devices as listed in Roles and Responsibilities Memo for AHU-1, and AHU-2.
- > Furnish design and engineered shop drawings.
- > Provide (8) hours training.
- > Provide (1) year parts warrantee.
- > Provide (8) copies owners and operators manuals.
- > The following equipment is furnished and installed by others and monitored by the ECS:

Equipment	*Software Interface	Hardwire Interface
Variable Frequency Drives	X	X
Control Valves		X

*All Software Interfaces must be BACnet or LON and require no special software tools. If software tools are required, equipment supplier must tools and associated programming labor.

PRICING SCOPE OF WORK #1:.....\$35,260.00

SCOPE OF WORK #2 DESCRIPTION

- > Fabricate and install the following DDC Temperature Control Panels:
 - ⇒ (2ea) Dual Duct Air Handling Systems - (ALC)
 - ⇒ (1ea) Chilled Water System - (Trane)
 - ⇒ (1ea) Condenser Water System - (Trane)

PRICING SCOPE OF WORK #2:.....\$1,840.00

SCOPE OF WORK CLARIFICATIONS

- > The following is the equipment is furnished and installed by others:
 - ⇒ Control Valves.
 - ⇒ Variable Frequency Drives.
 - ⇒ Motor Starters.
 - ⇒ Gas Meters.
 - ⇒ BTU Meters.

- > The following is the equipment is installed by t.a.c., furnished and terminated by others:
 - ⇒ (1ea) Tridium AX Building Controller - (Controlco)
 - ⇒ (2ea) Building Network Controllers - (ALC, Trane)
 - ⇒ (2ea) Dual Duct Air Handling System DDC Controls and associated field devices - (ALC)
 - ⇒ (6ea) VAV Box DDC Controllers and associated field devices - (ALC, Trane)
 - ⇒ (1ea) Chilled Water System and associated field devices - (Trane)
 - ⇒ (1ea) Condenser Water System and associated field devices - (Trane)

GENERAL CLARIFICATIONS

- > Scope of Work #1 price reflects a donation of \$16,200.00 by t.a.c. to Laney College for the I/A Workplace Tech DDC Controller Software packages and associated professional services.
- > Scope of Work #2 price reflects a donation of \$8,300.00 labor and material donation by t.a.c. to Laney College for trade material services.
- > Price does not include Controls for Hot Water System, Primary Heat Exchanger, and Primary Hot Water Pump; this item was duplicated between the Architecture Diagram and Scope Narrative and was confirmed by Facility Dynamics as ALC scope.

- Price does not include a Proprietary Building Network Controller which is not essential to the I/A System operation. Our Field bus will provide a BACnet IP connection to the Tridium AX provided by Controlco. Controlco shall be responsible for schedule and graphic integration to the I/A System.
- Price is based on Trane and ALC providing engineered wiring diagrams that are acceptable for panel fabrication by t.a.c..
- Price is based on Trane and ALC providing 120/24VAC power supplies for panel mounting by t.a.c..
- Price is based on the owner providing 120VAC power circuit for connection by t.a.c. within 25 feet of closest TCP.
- Price is based on Tridium BAS Server to be located a maximum of 20 feet from closest Building Network Controller.
- Price includes t.a.c. providing Enclosures and Panels for Trane and ALC DDC Controllers.
- Price includes t.a.c. providing VAV Box Controller Enclosures.
- Price includes coordination and support for t.a.c. point for Tridium integration to graphics.
- Scope includes commissioning by t.a.c. for t.a.c. equipment; price does not include supporting 3rd party commissioning, and/or Trane and ALC equipment.
- Invoicing and payment:
 - ⇒ Payment terms are net 30 days, with 0% retention.
- Pricing does not include a payment and performance bond.
- Additions to contract amount by change order are subject to 15% markup. Deductive change orders will be at t.a.c. cost.
- Price includes (1) year warrantee for equipment we install; warrantee period shall commence of the date of beneficial usage.

EXCLUSIONS

- Tridium, ALC, and Trane Hardware, Software, and field devices.
- Tridium programming and graphics.
- Laptop Computers.
- Fire Life Safety Systems including but not limited to, Fire Smoke Dampers, Duct Smoke Detectors, Fire Alarm Systems, Smoke Control Systems.
- Dampers.
- Control Valves.
- Pneumatic work.
- Instrumentation and Gauges



Proposal
Revision 4a
Scope 1 and 2

- Architectural cutting, patching, painting.
- Hazardous material handling and removal.

Thank you for considering TAC Americas/Yamas Controls Inc. for this project. We look forward to working with Laney College, Facility Dynamic Engineering, Controlco, ALC, and Trane.

Phil Bakarich
Senior Sales Executive
Cell: (925) 858-8863
E-mail: phil.bakarich@tac.com

This proposal includes the following Terms and Conditions: TERMS: Equipment sale only (30 days net), Equipment sale including installation and or supervision (90% 30 days from date of shipment/invoice date, balance 30 days after final inspection). This quotation, when signed by the purchaser or his representative, implies an acceptance of the above terms and conditions and becomes a contract in full force and effect. Cancellation of all or part of this order is not permissible after work has been started. All quotations are for prompt acceptance and are subject to change without notice after 30 days. This company will not be bound by any agreement not herein specified. NOTE: If either party becomes involved in litigation arising out of this contract or the performance thereof, the court in such litigation, or in a separate suit, shall award reasonable costs and expensed, including attorneys' fees, to the party justly entitled thereto. In awarding attorneys' fees, the court will not be bound by any court fee schedule, but shall if it is in the interest of justice to do so, award the full amount of costs, expenses, and attorney fees paid or incurred in good faith.

This proposal, and any exhibits and attachments hereto, (collectively, this "Proposal") and any information contained herein, is the property of TAC Americas, Inc. ("TAC") and shall constitute proprietary and confidential information. The party to whom this Proposal is addressed (the "Receiving Party") acknowledges the confidential nature of this Proposal and agrees to take all necessary precautions to ensure the confidential treatment of this Proposal and all information contained herein. This Proposal is intended solely for the employees, representatives, and agents of the Receiving Party (the "Receiving Party Representatives"); provided, however, that this Proposal is only to be disclosed to those Receiving Party Representatives on a "need-to-know" basis. Except for the Receiving Party Representatives, this Proposal will not be used, copied, reproduced, disclosed or otherwise made available, directly or indirectly, to any other person, firm, corporation, governmental unit, association or entity, for any purpose whatsoever, without the prior written consent of TAC.

This proposal is hereby accepted:

Billing Address:

Name Printed

Company

Signature

Street

Purchase Order Number

State, Zip Code



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Service

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TAC Lifecycle Services



TAC takes responsibility for our customers, their buildings and the comfort of the end users of the buildings. With our long experience within building management we can offer a wide scope of services and give you the best support, tailored to your needs.

Operational Services

We want to make sure that your building management system gives you the best outcome in terms of efficiency in building operation. By always being at hand with support and alarm handling we can guarantee that your system is always performing at optimal levels. Should you require a man on site to take on the responsibility of operating the system, or only want the security of having someone to call when needed, TAC offers services to suit your particular needs.

Maintenance Services

Our main target is to keep the value of your building at a strategic level. With yearly adjustments and optimization of the system you can be assured of peak performance. And, with regular maintenance and exchange of spare parts according to a planned maintenance schedule, you do not have to worry about unexpected costs that are not budgeted for.

Consulting Services

TAC has over 80 years of building automation management expertise. We offer a range of consulting services, from training of your staff, to energy and indoor climate audits, to the analysis and documentation of your building's status. We are committed to helping you adapt to new technologies and solutions as they become available so that over time, your buildings grow in value and continue to provide comfortable and cost-effective environments.

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TAC Energy Services

Tap into TAC's energy expertise to drive down your energy costs, improve building performance and increase employee productivity. We have helped hundreds of customers around the globe save millions of dollars with our comprehensive energy services.

TAC EnergyEdge program is tailored to customers who wish to focus on building improvement opportunities that are measured and sustained with a fast payback. We use our proven expertise to identify specific and realistic energy saving opportunities and institute measures to ensure that customers realize sustained savings.

Energy Solutions provides an efficient and effective means of maintaining facilities, backed by our guaranteed energy savings programs. TAC's Energy Solutions program includes utility audits, project financing, remote monitoring and control, as well as utility contracts.

Going Green is a realistic, attainable goal with the help of TAC. As a global leader in environmental control, we are uniquely positioned to help customers design and implement green building strategies that comply with regulations and optimize environmental performance, cost-effectiveness and overall building health.

Want to jumpstart your energy savings program?

- Learn [seven simple ways to reduce energy use in your facility](#)
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Virginia Community College System Invests \$40 Million In Energy Efficiency Improvements Installed by TAC

March 27, 2007

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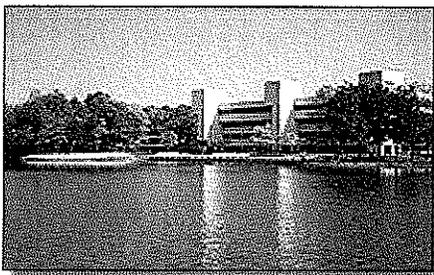


Photo courtesy of Northern Virginia Community College

Projects on 15 Campuses Guaranteed to Save \$1.2 Million Yearly, Future Phases Could save \$2 Million Annually

Richmond, Va. – March 27, 2007 – The Virginia Community College System (VCCS), which provides comprehensive higher education and workforce training programs in Virginia for 230,000 full and part-time students, has partnered with the Energy Solutions division of TAC to provide energy saving improvements at campuses across the commonwealth.

TAC, a world leader in building automation, security systems and energy solutions, has begun or completed projects at 15

VCCS campuses since July 2004. Valued at more than \$40 million, these projects will save the colleges at least \$1.2 million in utility costs annually and address capital improvement needs while dramatically improving the indoor environment for faculty and students. Development has already begun for additional projects. TAC estimates that completing \$60 million in energy efficiency improvements on all 40 VCCS campuses will provide annual savings of more than \$2 million.

TAC is delivering these projects through performance contracting, a turnkey contracting method whereby the design, construction, commissioning and performance measurement are incorporated into one guaranteed fixed price. The projects are funded through a combination of general obligation bond funds, maintenance reserve funds, and financing secured against guaranteed energy savings. TAC guarantees the amount of savings the colleges will achieve and agrees to pay the difference if that amount is not realized.

The projects implemented at VCCS campuses typically include redesigning and/or replacing heating, ventilation and air conditioning (HVAC) systems; adding building control systems for effective energy management; installing energy efficient lighting; reducing air leaks in building envelopes; replacing roofs and windows; and upgrading inefficient plumbing fixtures to conserve water. At each VCCS campus, TAC combines sustainable design principles and accountability through building and system commissioning to design projects with comfort and total cost of ownership in mind. Once completed, the projects enable the VCCS to maximize energy efficiency, generate utility savings and improve occupant comfort at campus facilities.

"VCCS, like most major public institutions, was suffering from poor performance of the design/bid/build approach on major mechanical systems. Shortfalls in funding and a 'first cost', low-bid mentality resulted in renovations that fixed symptoms rather than causes, and new buildings that suffered from comfort issues and high energy bills from the day the doors opened," said Wes McDaniel, vice president of TAC Energy Solutions. "By partnering with TAC to manage all major mechanical projects throughout the system, VCCS can leverage the savings potential when projects are engineered, installed, and commissioned properly through performance contracting."

"Not only does TAC offer single-source responsibility and accountability for major mechanical renovations and operational results, they provide a solution for funding shortfalls. Leveraging the energy savings dollars creates a funding supplement that allows VCCS to complete our major mechanical upgrade projects," said Ed Watson, P.E., associate vice chancellor for Facilities Management Services for the VCCS. "Through their involvement in all of our campuses, TAC has gained important institutional knowledge of our system as a whole. Because they have as much knowledge of our needs and challenges as our own staff, we rely on TAC to help us make wise choices regarding our facility improvements."

The 15 VCCS campuses that have begun or completed energy saving projects are Danville Community College in Danville; John Tyler Community College campuses in Chester and Midlothian; Patrick Henry Community College in Martinsville; Piedmont Virginia Community College in Charlottesville; Southwest Virginia Community College in Richlands; Thomas Nelson Community College in Hampton; Virginia Highlands Community College in Abingdon; Wytheville Community College in Wytheville; Blue Ridge Community College in Weyers Cave; Lord Fairfax Community College campuses in Warrenton and Middletown; and the Northern Virginia Community College campuses in Annandale, Manassas, and Woodbridge.

For more information, contact:

Jeannie H. Birdwell

Communications Manager

TAC

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TAC is a leading provider of building automation solutions based on Open Integrated Systems for Building IT. TAC's mission is to provide added value through building environment services for indoor climate, security and use of energy, delivered with advanced technology to end users and property owners throughout the world. With over 80 years of experience in the HVAC, building automation and security arenas, TAC employs more than 5,000 people worldwide, with partners and branches in 80 countries. TAC's parent company, Schneider Electric, is the world leader in automation and electricity management, with 112,000 employees worldwide and operations in 190 countries.

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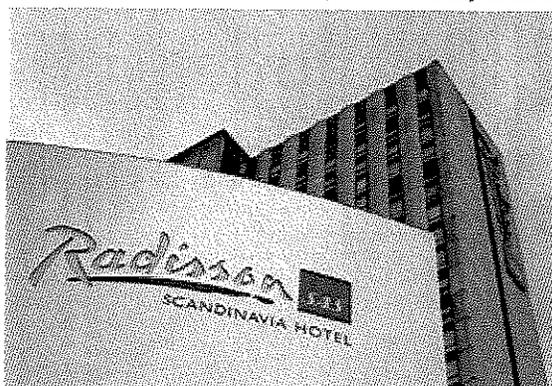
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Radisson SAS Copenhagen

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Thanks to the TAC Vista Facility Management system, maintenance problems are now registered by chambermaids using the hotel's Pay TV system, allowing for automated issuing of service orders to the correct personnel, registration and tracking of all service orders, and the ability to schedule routine maintenance tasks based on statistics.



"Today it's quite rare that anything is overlooked. And that's something that we value, because we want to do our part in maintaining the hotel's high quality standards."

*Dagfinn Risum,
Engineer
Radisson SAS*

Industry
Hotel

Solution
Building Automation

Country
Denmark

City
Copenhagen

Contact

More Information

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The Radisson SAS Scandinavia Hotel in Copenhagen is almost an entire community in itself, running 24 hours a day with no fewer than 542 rooms, a range of elegant suites, 14 large conference facilities, four international restaurants and Casino Copenhagen.

A four-star hotel is a business where the "output" consists, among other things, of maintaining the hotel rooms in optimal condition. Everything must function perfectly from when guests arrive to when they leave the hotel. Chambermaids play a significant role in this as they prepare the rooms and are responsible for ensuring that everything is in proper working order. Problems must be rectified as soon as possible.

THE CHALLENGE

Previously, most problems were written down on paper and submitted to the maintenance department. Often there was only a vague description of the job that needed to be done, and therefore the individual work order was sometimes imprecise. In addition, paper carries the risk of being lost or misplaced over the course of a hectic working day. On average, the hotel dealt with approximately 5,700 work orders each year.

A more efficient means of control was therefore necessary. Additionally, the engineer in charge of building operations wanted to gather statistics for long-term scheduling for the various service tasks at the hotel.

Thanks to the TAC Vista Facility Management system, maintenance problems are now registered by chambermaids using the hotel's Pay TV system, allowing for automated issuing of service orders to the correct personnel

allowing for automated issuing of service orders to the correct personnel, registration and tracking of all service orders, and the ability to schedule routine maintenance tasks based on statistics.

PROJECT AT A GLANCE

Project Type: Building Management System

Location: Copenhagen, Denmark

Applications:

- Building management
- Automated service orders
- Automated maintenance scheduling
- Data collection and maintenance reporting

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