

# STATE FACILITIES QUARTERLY

*"Provide and protect public assets"*

Official Newsletter of the National Association of State Facilities Administrators  
An organization of planning, development, operations and maintenance officials

## The Grades Are In On State Capital Management

Source: *Government Performance Project Press Release, Feb. 2, 1999*  
and <<http://www.maxwell.syr.edu/gpp/>>

The Maxwell School of Citizenship and Public Affairs at Syracuse University and *Governing* and *Government Executive* magazines recently completed the Government Performance Project, a two-year endeavor which graded all 50 state governments and 15 federal agencies on the effectiveness of their management systems. State governments and the federal agencies received grades in five critical management areas: financial management, human resources management, information technology management, capital management and managing for results.

The average grade among the 50 state governments in capital management was a B-. Four states—Missouri, Utah, Virginia, and Washington—received A's for their capital management efforts. Five states—Kentucky, Maryland, Minnesota, Nebraska and Wisconsin—were close behind with each receiving an A-

Missouri uses five-year capital plans that include repair and rehabilitation of existing facilities, as well as new construction projects. This effort is made more realistic since the state has moved to biennial capital budgeting. A 1996 constitutional amendment created a facilities maintenance reserve fund, which will eventually reach a funding level of one percent of net general revenue collections. This will allow money to be set aside to complete preventive efforts, thus reducing costs in the future.

Legislation mandates that in Utah condition assessments for state-owned buildings must take place twice per decade. The first assessments took place in 1997 and revealed about \$10 million in urgent capital repair needs. Nearly half of this was funded immediately. Utah's exemplary approach to maintenance stems from a state law requiring that before money may be provided for new facilities or even for major renovation work, maintenance funding must be provided at a level equal to at least 0.9 percent of the replacement cost of existing facilities.

Virginia was recently identified as a leader in capital decision-making by a U.S. General Accounting Office study. It took special note of its maintenance reserve program, which sets aside general fund dollars for agencies' needs. Each year, agencies submit plans that identify complete maintenance requirements, report on progress in completing projects and

prioritize all active maintenance work. The state then allots money based on agency needs, compared with those of the state.

Washington's capital planning process emphasizes a long-term approach. Agencies prepare a ten-year strategic plan of projects and capital investments, which allows excellent pre-design work on major projects. Condition assessments on their facilities are completed by agencies, and executive and legislative officials make frequent site visits.

Kentucky's Capital Planning Advisory Board, with members from all three branches of government, prepares the state capital improvement plan and makes recommendations for funding. Maryland creates five-year plans based on agency submissions. Minnesota's six-year capital plans are integrated into six-year strategic plans. Wisconsin's highly evolved six-year capital management planning process is bipartisan and involves both the executive and legislative branches. Nebraska's approach to overseeing capital projects is brand new, and it includes a four-year plan and a broad-based committee to set priorities.

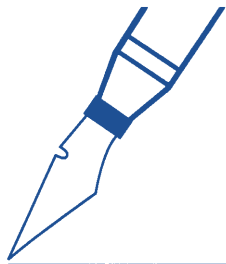
It takes a long time to design and construct state facilities, and planning must begin years in advance.

The good news is that more states are beginning to realize that regular maintenance and large-scale reconstruction projects are the keys to maintaining their facilities. An increasing number of states are now emphasizing regular facility audits that show them a complete picture of what their needs are.

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## PRESIDENT'S LETTER

If your agency is like ours, you are encountering many growth-related problems. One of the most serious is the emergence of uncoordinated technology in the facilities construction and management industry. The challenge is how to manage the integration and coordination of such technological growth in ways that will motivate exchange between those who have and those who use the information.

NASFA is struggling with this information exchange challenge. How can information get from those who create and warehouse it to those who can use that information to be better informed and make better decisions? NASFA has dedicated this issue of the *State Facilities Quarterly* to the topic of Automation in Facilities Management. Specifically this issue will focus on what states are doing to bridge the information gap and how states are using automated technology to solve facilities problems or to help them to better manage facilities.

NASFA has been active in addressing this problem and has created two important assets to assist members in requesting and receiving information about facilities issues. One of these, the NASFA Listserv, enables members to receive information in a rapid electronic response environment and provides information when it is needed.

Likewise, innovative advancements in the field of facilities construction and management are shared through *E-xtra*, NASFA's monthly electronic newsletter. *E-xtra* gathers information from state home pages and provides Internet links, allowing quick electronic browsing and downloading. This

newly created feature is a fast and efficient way to announce the existence of information on innovative facilities programs and to pass that information on to interested parties instantaneously without a paper exchange.

The rapid introduction of new technology will continue to offer new ways of doing things. The challenge is not only to embrace automation and use it in the ways it was intended, but also to modify technology to fit other organizational needs. The Listserv and *E-xtra* have taken standard automation associated with the Internet and applied it to fit NASFA's needs. By challenging conventional thinking we can modify good ideas and make them great ones that suit our specific organizational requirements.

The Listserv and *E-xtra*, in addition to the possibility of transitioning the NASFA Document Clearinghouse to a hyperlink/hypertext program using state home pages, are examples of the potential of technology and represent a step towards meeting one of the fundamental objectives of our organization, "Creating forums for the exchange of information on the topic of facilities construction and management."

A handwritten signature in dark ink, appearing to read "Jack Quintana". The signature is fluid and cursive.

Jack Quintana (UT)  
NASFA President

## STATE NEWS

### Kansas Capitol Complex Acquires Police Dog

Source: *Kansasgram*, January 1999

State employees and those conducting business at state facilities in Topeka have noticed a recent addition to the capitol police force. The police, a branch of the Kansas Highway Patrol, have acquired a dual-trained police service dog.

Rocky, a four-year-old, male, Belgian Malinois, is trained as both an explosive detection and patrol canine. His abilities include the detection of explosive materials, human and evidence tracking, building searches and officer safety. After being placed with a trooper in northeast Kansas for nearly a year, he has now been transferred to the capitol police to be used primarily in and around the capitol complex.

The capitol police have implemented a bicycle patrol for the capitol complex and placed x-ray machines in the capitol and judicial center for scanning mail and packages delivered to those facilities in recent years. The addition of a dual-trained police dog is one more way to insure the highest level of safety in these areas. The patrol is extremely dedicated to the safety and security of state employees, elected officials and visitors who utilize the state facilities.

### Connecticut Office Building Receives Facelift

Source: *DAS Times*, March 25, 1999

After a year of planning, the renovation of the historic Connecticut State Office Building is well underway. Offices have packed up, and groups are relocating. The current phase includes removing asbestos from the fifth floor and relocating those employees to swing space on the second and fourth floors.

The much-needed renovation will give an entirely new look to the fifth floor. Both main corridors will be widened to enable open office space and bring some added bonuses including a lunch room, coffee room and conference rooms. A new HVAC system will also be installed to allow better airflow, circulation and ventilation.

The open space will also allow groups to work together rather than behind closed doors. The workstations will be new, consistent and easily arranged. The goal is that the newly designed space will have a domino effect and will eventually be used throughout the whole building.

The renovation effort has been led by a strong team, which has made all the difference. Weekly meetings are held with a construction team to cover all the bases. So far, all moves have gone smoothly and quickly.



## Committee Chair's Corner

By Bob MacKenzie, plant operations manager, Washington Division of A&E Services

“Imagine if you will...,” intoned Rod Serling as he introduced another tantalizing episode of *The Twilight Zone*. Now, imagine the facilities management arena transformed in ways previously thought as only grist for Serling’s scriptwriters. The automation zone has forever changed the way we do business. The challenge is going to be how to optimize the opportunities that lay ahead.

The state-of-the-art in facilities management is changing so rapidly we find it hard to read each new system-operating manual before we must purchase and learn the next. The Internet, document imaging, facilities management software and CAD/CAFM systems are all converging at an ever-accelerating pace to create some real and unheard-of opportunities. There are software applications that enable Internet users the ability to launch targeted searches of dozens of “search engines” simultaneously. Software packages can be programmed to complete their work after-hours so that the data is available to the requester the following morning. Some searches can yield more than 300 web sites matching the researcher’s parameters!

Other automation innovations enable users to record complex facility images on disk and in other microprocessor media. Still other technological advances in the arenas of video imaging and digital photography provide creative ways to capture our facilities data and depict in record time to a mass

audience. It is important that we continue to harness automation, to serve our staff rather than becoming slaves to that very technology.

The potent power of the automation may cause facility administrators some degree of anxiety, but should not be viewed as beyond our horizons. The time to enter cyberspace and to maximize use of technology is now. The facilities management arena can and should be a leading advocate for the use of technology to enhance our public service missions.

The focus section for this spring *Quarterly* is Automation in Facilities Management. A number of uses of technology from NASFA members are presented, both to highlight innovative and imaginative use of technology in their daily jobs and to entice others to follow suit. We’ve tried to cover a broad array of automation-related areas and are thankful for articles submitted from Washington to New York and many points in between.

We hope that the lessons learned and best practices highlighted in the focus section will be useful as you enter into this new and exciting automation zone. Obviously, this is a dynamic ever-changing environment and we hope to provide updates to NASFA membership as technology and our demanding jobs require. The summer *Quarterly* issue will cover events and topics related to the NASFA Annual Conference and Trade Show in Jackson Hole, Wyoming. Hope to see you there!



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## NASFA CALENDAR OF EVENTS

(Visit the association’s web site at [www.nasfa.net](http://www.nasfa.net) for more information.)

### NASFA 12th Annual Conference & Trade Show

June 12-16, 1999  
Snow King Resort  
Jackson Hole, Wyoming  
Contact: Marcia Stone, (606) 244-8181

### NASFA Great Plains Regional Conference

September 19-21, 1999  
Drury Inn at Union Station  
St. Louis, Missouri  
Contact: Michael Berendzen, (573) 751-2898

### NASFA Southeast Regional Conference

October 7-8, 1999  
Williamsburg Hospitality House  
Williamsburg, Virginia  
Contact: Henry Shirley, (804) 786-3367

### NASFA Western Regional Conference

October 20-22, 1999  
Salt Lake City Marriott University Park Hotel  
Salt Lake City, Utah  
Contact: Teena Scholte, (801) 537-9212

### NASFA 13th Annual Conference & Trade Show

June 24-28, 2000  
Radisson Burlington Hotel  
Burlington, Vermont  
Contact: Marcia Stone, (606) 244-8181

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## State Facilities Quarterly

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*The objective of the State Facilities Quarterly newsletter is to provide a broad perspective on issues affecting all aspects of state facilities management. Your ideas and topic suggestions are welcome at all times and will be invaluable to other state facilities managers. Please send information about studies, new projects, legislation, etc. to:*

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The National Association of State Facilities Administrators is an organization which brings together state officials involved in the planning, development, operations and maintenance of state facilities. The association was formed in 1987 to provide a forum for sharing information on effective facility administration, as well as for the sharing of problems and solutions with peers on a national level.

Any state is eligible for membership in NASFA. Annual dues entitles your state to select the individuals you want to be involved with the association. All facility administration personnel can access the information network, receive the newsletter and other mailings, and attend the association's annual meeting. Many states have elected to divide the membership fee among several departments interested in active membership.

If you are interested in obtaining more information about NASFA, contact NASFA Staff, The Council of State Governments, 2760 Research Park Drive, P.O. Box 11910, Lexington, KY 40578-1910, (606) 244-8181

## Attention States!!

Share your good ideas with your colleagues in the summer issue of *State Facilities Quarterly*.

**The deadline is July 16, 1999.**

Contact Lisa Anderson at (606) 244-8179 or e-mail her at [landerson@csg.org](mailto:landerson@csg.org) for more details.

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# AUTOMATION IN FACILITIES MANAGEMENT

## FOCUS SECTION

Spring 1999

### Show Me State Launches Electronic Bidding Initiative

By Rudolph S.P. Cardenas, AIA, Missouri Division of Design & Construction

The Missouri Division of Design and Construction (D&C) has set in motion a plan to replace the traditional issuing of plans and specifications in paper media with Electronic Bid Sets produced and distributed on CD-ROM. D&C uses a noteworthy amount of funds annually in the printing and distribution of traditional bid sets. Converting to an electronic format will show significant savings each year.

With the assistance of the Jefferson City office of the Builders Association of Missouri (BAM) and Mid-West CAD, a pilot project has been implemented to explore the different options of distributing media to the contractors. For purposes of this pilot project, CDs will be distributed along with paper copies. The Builders Association will also post the bid documents on their web pages.

The first step in the pilot was to have the different components of the project placed into a single bid document directory by the individual author. When this was completed, the Drawing Document Manager (DDM) was notified by e-mail that the specific drawings and technical documents were ready for the bidding process. The bid documents include Division 0, Division 1 and Division 2-16 Technical Specifications and the project drawings. The documents were then translated to a read-only format. At this point, the DDM burned the master CD and delivered it to the BAM. The BAM incorporated the viewing software and prepared the CD for final pressing. The pressed CD will be returned to the state printing office for distribution along with a hard copy of the bid documents.

The most significant problem that arose during the pilot project was conflicting communication as documents were moved from preliminary to final status. The security of the drawings was also a problem and manual conversion time was extensive. Before the process goes into effect in the future, batch utilities and a dedicated computer will be added.

For future projects, several formats for the electronic versions are being considered and an immediate need has been determined for document management software to track these documents and ensure their integrity and security are maintained. A system of technical document management will be implemented, and the internal processes will be revamped to provide an improved method of collecting the documents included in a bid set.

This document management system will provide the safeguards necessary to insure that bid documents are secure and will consolidate the information into a format that will be distributed on CD or through BAM's web site and eventually on the Division of Design and Construction's web site.

By moving from paper distribution to electronic distribution the division will save a significant percentage in printing and distribution costs. It will simplify the process of collecting the documents, which make up a bid set, reduce the time it takes to

distribute bid sets and provide better information to the contractors and vendors bidding on projects.

For more information, contact Rudolph Cardenas, AIA, Missouri Division of Design & Construction, at (573) 751-3179 or e-mail at <carder@mail.oe.state.mo.us>.

### Georgia's Virtual Gallery

By John H. Starr, Lord, Aeck & Sargent, Educational Design Group Director

In 1997, Georgia's secretary of state and its legislature envisioned improving the educational value of visits to the state capitol by creating a technology-laden education center. By the end of 1999, that vision will be a reality when the \$10.1 million Capitol Education Center is fully open and functioning. Partially opened in the spring of 1999, the education center acts as a virtual extension of the House and Senate chambers with the help of Georgia Public Television and over \$3 million of audio-visual equipment and exhibits.

Located across the street from the capitol, yet connected by miles of fiber-optic cables, the education center will be the first stop for the hundreds of school children and adults who visit the capitol each day of the legislative session. Tour guides will lead groups into the center's 300 seat multimedia auditorium, where they will see a 17 minute video about the capitol. The video was engineered in HDTV format and is replayed on a Sony digital hybrid player, which was one of only two available in the United States when it was ordered. At the end of the video, live television feeds from the House and Senate chambers and the Appropriations Room let visitors see and hear the legislative process in action on a 12 foot high screen. Tour guides can switch views and mute the audio to discuss key points about government.

With the flip of a few switches, visitors move from the capitol to virtually anywhere in the world through links to Georgia's Statewide Academic and Medical System, one of the world's largest two-way interactive videoconferencing networks. This network provides direct two-way audio and video links to over 400 participating sites in Georgia and indirect links to any compatible video conference site in the world. At the center's inaugural videoconference in February 1999, over 150 high school students from Georgia's Achievers International import business "visited" with their partners in Scotland.

After leaving the electronic virtual world of the Capitol Education Center, the well-prepared visitors will be led through a scenic park to the real world splendor of the gold domed capitol.

For more information, contact John Starr, AIA, Lord, Aeck & Sargent, Inc., at (404) 253-1410 or e-mail at <jstarr@lasarchitect.com>.

## Community College Facilities Enhanced by Automation

Source: Shop Talk, Spring 1999

Lower Columbia College (LCC) is nestled in a beautiful area of the Great Northwest, in Longview, Washington. The college's small maintenance staff has to "do more with less" to keep up with a student population of 2,400, 35 acres and 300,000 square feet within 25 buildings. Benchmate software for facilities maintenance management is now an integral part of LCC's internal computer network and provides a top-notch tool to keep ahead of the workload.

Dave Turpen, Campus Services Manager at LCC, has spent the better part of eight years trying to use equipment maintenance software that was cumbersome and time-consuming. A year ago, he stepped away from the state-provided software for community colleges and selected Benchmate® as the college's maintenance management software. He believed the software had the right mix of features for LCC, not too big and not too small.

"Before Benchmate®, we were using a software that was too big for our needs. It had bells and whistles and lots of links. My maintenance guys couldn't use it. I had to hire a full time office person just to run the program – put in data, generate reports, and close work orders," said Turpen. "I wanted a system that any maintenance person without computer training could use, and it had to be networkable so that people across campus could access it."

Turpen started sifting through software packages, looking for a full-featured program that wouldn't require a computer degree to operate. "As soon as I saw the Benchmate® system, I knew it would work for us," he said.

Today, 28 people use the system in campus services, which includes shipping/receiving, maintenance, grounds, custodial, mail, security, motor pool, print, inventory and environment quality.

The system is modular, allowing LCC Campus Services to specific functions at the right times. Its six components cover equipment, service log, spare parts, preventative maintenance, work orders and trouble calls. Currently, all departments within Campus Services use the system primarily for work orders and equipment maintenance. The software can also be used for preventative maintenance scheduling and tracking as well. The system is part of the LCC internal network enabling staff across the campus to fill out and track work orders.

"I've found that the size of the college makes a difference in what maintenance software is most useful. For LCC, with limited budgets and resources, Benchmate® is more appropriate," said Turpen.

"The maintenance management software has saved us time, money, and paperwork, because anyone can electronically initiate and complete a work order."

With this system, LCC gets a user-friendly, modular system that works. Turpin and a growing number of plant operations support consortium members have found the system effective and the Bellevue, Washington-based company responsive to their needs.

*For more information on the Benchmate® maintenance management software, contact Bob Nichols at (425) 391-2752 or visit Benchmate's® web site at <[www.benchmate.com](http://www.benchmate.com)>.*

## Buildings on a Disk

By Chuck Leyster, facilities planner, Washington Division of Engineering and Architectural Services

Digitized, linked and easily retrievable documentation of a building's architectural and engineering systems is crucial to any facility director who wants a complete and efficient facilities management system. Over the last year, professionals from the Washington Division of Engineering and Architectural Services (E&AS) and the Department of General Administration have been learning how facility operations information and manuals are acquired, stored and retrieved for use by facilities management and service personnel. A review began by focusing on what data could be and is digitally stored, accessed and retrieved from standard computer maintenance management systems (CMMS).

CMMS were once thought of as only work order systems, but is now taking on new and productive meanings. Today's CMMS provide rapid information access, retrieval and reporting as they continue to move from departmentalized solutions to a system that can contribute to an institution's overall strategic goals. Typically, reporting and analysis is done in individual modules, such as equipment, asset, inventory, personnel and work orders.

Maintenance departments are now expected to contribute directly to the institution's strategies by improving product quality and making better use of existing resources. Departments become more economical by decreasing costs to maintain equipment and better utilization of personnel resources by increasing labor productivity.

With CMMS, much of a facility's statistical data can be digitally stored and retrieved. However, according to maintenance department needs, there was one obvious missing component of information. This crucial missing link was the easy storage and retrieval of technical operations and maintenance drawings and manuals.

During E & A Services' research and development of a system to provide this missing technological link, a number of management and maintenance department needs surfaced. Some of the most common problems identified by facility maintenance management and personnel were how to organize the vast variety of technical information sources used to operate and maintain a facility and make it easily retrievable and document the personal knowledge gained and retained by individuals who have long and productive histories with the facility.

Washington's E & A Services is now offering other institutions an Operational Document (OD) Retrieval System. The OD Retrieval System is a freestanding system that can be used with or without the facility using a CMMS. The system is complementary to a CMMS but does not directly integrate with the system. It uses existing computers and printers without upgrades or additional cost and allows quick and easy retrieval and referencing of critical drawings and documents to management and service personnel.

*For more information, contact Chuck Leyster, E & A Services, Department of General Administration, at 360-902-7236 or e-mail <[cleyste@ga.wa.gov](mailto:cleyste@ga.wa.gov)>.*

## Idaho Maximizes Electronic Support

Source: Idaho Division of Public Works

The efficient operation of modern office buildings is becoming a complex task. The Idaho Capitol Mall Complex is relying more on computer systems to manage its buildings. In the last few years a new preventive maintenance system, facilities space management system and a facilities control system have been added.

Eagle Technology's Expert Maintenance Manager is currently being used as the preventive maintenance system. With this software all preventive maintenance (PM) work can be effectively scheduled, prolonging the useful life of the equipment. When new facility equipment, such as fans, motors, electronics, etc., is added to the capitol mall, it can be easily added to the PM program. With this software, repair histories can be documented, inventory usage tracked, equipment downtime anticipated, history details added and the efficient use of the maintenance staff planned in advance. It allows the recording of the "bill of materials" for each piece of equipment, entering "tips and tricks" about a particular PM job and make copies of similar records. Maintenance performance can also be monitored by recording time and resources dedicated to the job. From this information, responsible decisions to enhance maintenance services are made.

The system is currently used primarily as a scheduling tool, but data is being collected that can be used to make comprehensive maintenance decisions in the future. Demand maintenance requests are mostly received through e-mail and then transferred to the PM system. In the future, the software will allow customers to directly make inputs into the PM system and automatically create a work order. There is also a plan to integrate the facility space management system and the PM system. This will allow access to PM data by simply "mouse clicking" on a building graphic.

The capitol mall office space requirements are managed with Aperture Space Manager software, which measures the gross, core, common and assigned space of each floor. Using this software, occupants are accurately charged for space costs and analyzed for space utilization. Various reports can be generated that help make good decisions on office space requirements.

In the future, this system will be used to manage parking and control keys at the capitol mall. Access to the system from the Internet is also being considered, so tenant agencies can review their own office spaces.

The Windows-based system METASYS, a product of Johnson Controls Inc., is used to manage and control the complex building systems. This wide-ranging system enables staff to provide environmental control, energy management, fire management, access control, lighting control, video camera control and overall facility monitoring for outbuildings.

Variables such as pressure, humidity and temperature can be controlled to meet the needs of the occupants. For instance, the computer can sense a building zone temperature and then respond by cooling or heating it just enough to accurately control the zone temperature setpoint while using the least amount of energy. System fans, pumps, air conditioning and heating systems can be turned on and off as needed to optimize efficiency.

Energy use is more easily managed since the temperature

and humidity records are tracked, and equipment runtimes determine energy usage. This data can then be analyzed to see where energy dollars are being spent. Energy management is easier since the usage. The data can be analyzed to see where energy dollars are being spent.

The fire management system is used to quickly alert occupants when any of the fire systems in the buildings report trouble or alarm conditions.

The feature of access control allows the monitoring of who enters the buildings at what times and allows facility workers to schedule in what conditions entry would trigger an alarm.

Lighting control allows the lighting to go on and off to accommodate working hours and custodial work times. There is a plan to connect into a digital photo sensor to help automate controls of outside lighting.

The METASYS system is hooked into the security monitoring and alarm system. In the event of an alarm, the system automatically swings a camera to the location of the alarm and displays a graphic picture of the building location. A security officer views this information and can deploy other security resources to that location.

*For more information, contact the following employees of the Idaho Division of Public Works, Monty Leinberger, preventive maintenance manager, via e-mail at <mleinber@adm.state.id.us> or Tommy Brock, facilities coordinator, at <tbrock@adm.state.id.us>.*

## Minnesota Seeks to Maximize Computer Aided Facilities Management

By Bill Olson, Minnesota Department of Administration

The Minnesota Department of Administration (Admin) is in the process of implementing a Computer Aided Facilities Management (CAFM) system. Admin has custodial control of 20 buildings representing approximately 3.5 million square feet in the capitol complex area.

An implementation team was formed to ensure the success of the CAFM system. The team consists of representatives from each of the four Admin Facilities Management Bureau Divisions: Building Construction, Plant Management, Real Estate Management and Building Codes and Standards.

While information managed by individual divisions is often required to support other divisions, data is not always compatible or readily available. The goal is to provide a comprehensive program that will integrate the data information into a uniform management tool.

CAFM systems are capable of providing management of a variety of facilities issues. The implementation team is initially focusing on two modules, space management and work order/preventative maintenance. The space management module will provide Admin the opportunity to better track lease space and lease rates. The work order system will track all work orders and provide workload forecasting.

In selecting the CAFM software for this project, research was done on a variety of software packages. The criteria for final selection were based on, but not limited to, the following scope and qualifications:

- Ability to interface with AutoCAD version 14

- Ability to integrate with the statewide accounting system, Minnesota Accounting and Procurement System (MAPS)
- Ability to integrate Minnesota Facility Audit program
- Integrated work order system
- Open architecture of system to allow customization if required
- Ability for custom reporting and integrate with Crystal Reports
- Ability to integrate with Sema4 accounting system
- Interface with Microsoft Access database

After evaluating the software products, ARCHIBUS/FM<sup>®</sup> was selected as the CAFM system to be used.

Work groups were then formed to determine the resources required to implement the program. The work groups are space, work order/preventative maintenance, data collection and input, technology and training and report their findings to the implementation team at biweekly meetings.

A pilot program was established to work on two buildings in the capitol complex, the Administration Office Building, built in 1967 and the Revenue Building, built in 1998. Mechanical and electrical equipment have been surveyed in the two buildings and existing CAD drawings are being updated to provide background data for management use. The system is expected to be operational by the end of June 1999.

Once the space and work order modules are operational, additional modules will be implemented. The administration department is certain the CAFM system will provide many benefits, not only to its department, but to other state agencies as well.

*For additional information about the Minnesota Department of Administration CAFM system, contact Bill Olson at (651) 282-5004, fax (651) 296-7650 or e-mail bill.olson@state.mn.us>.*

## Automation “Makes it Simpler” at Empire State Plaza

*By Harry Adalian, supervisor, New York Office of General Services*

Managing a large, multi-building facility such as the Empire State Plaza in Albany, New York can pose several challenges. The facility staff seeks to maximize automation to assist with managing the legislative building, justice building, office tower, health lab, Egg Performance Theaters, agency buildings, Alfred E. Smith Building, Capitol Building, concourse and lower levels. Two other off-site buildings are also included.

A building automated control system, and the robust network architecture have made the tasks of managing building performance a lot simpler by streamlining information management from multiple systems. Building performance and reducing operating costs can be optimized. System downtime and increasing system operations personnel productivity can also be minimized.

The system helps realize the strategic objective in which numerous benefits to the facility are accomplished, more specifically in terms of operating efficiencies and cost reduction, both short and long term. It provides the building management staff with unprecedented control and detailed, real time information about the facility’s operation. The system also

allows a savings in operations time and money by reducing the number of heat calls that the building engineers need to respond on any given day.

The Empire State Plaza is building an infrastructure to meet the needs of its tenants. The first rung of the ladder is the physical network. Office of General Services (OGS) personnel have been installing fiber optics in conjunction with all of embedded systems being installed or upgraded at the facilities. The principal is to have a stable high band backbone with an environment that applications can be built on. The next step is to have applications communicate on a common platform. It is the strategic path to get the application to communicate as soon as the end device will allow. The last step is to have applications communicate with Microsoft SQL server as a tool for decision support and to allow for a common interface.

All applications report to two main facilities, the Central Automation Control Facility (CACF) and the Central Security System (CSS). The CACF includes an HVAC EMS system that has an excess of 60,000 physical points and plant automation for boiler and chill plant control. The CSS monitors some 3,600 fire and security alarms and 178 cameras throughout the facility.

Historically, systems communicated with their own proprietary networks. Operators had to have several PC workstations on their desktops to be able to communicate with the system. All the information was stored in several places and in many instances different operating systems. It is the goal to incorporate the technology advances in the communication field to bring cost effective solutions to the operators.

The benefits of using the building management system are significantly increased when the network capabilities are fully utilized. It has enabled the department to keep up with the increasing demands of being the provider of choice while incurring the burden of a decreased workforce. It is moving towards integrating all of its systems into a secure network and has seen the benefits of obtaining real time data from its building systems. It automatically links them to maintenance information and work orders generation through third party software packages. These reports enable building principals to track labor and material costs, manage parts inventory and schedule preventive maintenance checks.

Satisfying the facility population with a safe and secure environment is the department’s most important mission. It is now doing a better job of controlling and promoting the work environment with sophisticated, yet relatively easy to use automation tools.

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