GSA Office of Governmentwide Policy

Real Property Policysite

Best Practices
Special Edition 2008

Office of Real Property Management

10•08 OCT • 2008

Award program winner GSA's Public Buildings Service's new San Francisco Federal Building is "...a unique structure that capitalizes on San Francisco's temperate climate, relying heavily on natural ventilation and lighting for much of its cooling and lighting needs, thereby dramatically reducing energy consumption..."

(photo:Tim Griffith/Esto)

2008 GSA Achievement Award for Real Property Innovation

MESSAGE

A Message from Carolyn Austin-Diggs

Deputy Associate Administrator for the Office of Real Property Management

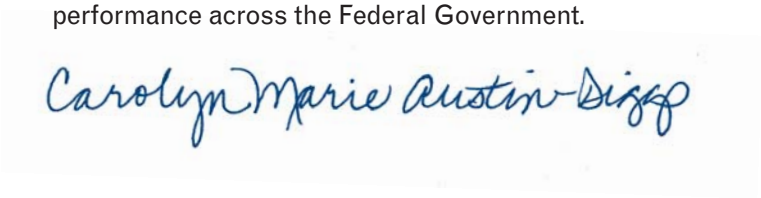
The U.S. General Services Administration (GSA) is pleased to recognize the entries submitted as part of the Twelfth GSA Achievement Award for Real Property Innovation in this POLICYSITE Best Practices Special Edition.

This year's Awards program requested entries demonstrating innovation, creativity, and leading practices in Federal real property asset management and sustainability. The ideas submitted cover a broad range of real property areas, technical specialties, and geographic locations; some focus on a single facility while others describe wide-ranging frameworks that are national in scope.

In its first eleven years, this program has generated and shared a substantial number of great business ideas within the real property community. This identification and dissemination of good practices is a vital component to the vision of a results-oriented Government.

We are aware that a variety of the previous entry concepts have been adopted, emulated, expanded, and tailored to meet local conditions by other Federal agencies. We expect that the results of the program's twelfth year will be no different. Such leading practices serve as a catalyst for improved asset management and sustainability; we encourage the continued replication of more good practices in order to achieve notable and demonstrable results.

Thank you for your interest in the innovations that inspire change and improve performance across the Federal Government.



(Cover Photos)

Award Program Winners:

- *GSA's Public Buildings Service's "New San Francisco Federal Building"*
- *Department of Energy's National Nuclear Security Administration's (NNSA) "Roof Asset Management Program (RAMP)" (NNSA Lawrence Livermore Natl. Lab, CA site)*

www.gsa.gov/realpropertypolicy

2008 GSA Achievement Award for Real Property Innovation

INDEX

Table of Contents

Best Practices in Asset Management and Sustainability Fall 2008

This twelfth annual Best Practices Special Edition of POLICYSITE is made possible through the collaborative efforts of the U.S. General Services Administration's (GSA) Office of Real Property Management and the Federal agencies which participated in the 2008 GSA Achievement Award for Real Property Innovation program. POLICYSITE newsletter features the latest cutting edge trends, initiatives and practices in the real estate and workplace industry. The Best Practices Special Edition highlights and recognizes best practices in Federal asset management and sustainability submitted as part of the annual Award program and communicates them to agencies striving to improve asset management.

The Best Practices Special Edition POLICYSITE newsletter is a publication of GSA's Office of Governmentwide Policy's (OGP) Office of Real Property Management in Washington, DC. OGP is led by Acting Associate Administrator Kevin Messner, with Stanley F. Kaczmarczyk as OGP Principal Deputy Associate Administrator, and Carolyn Austin-Diggs as Deputy Associate Administrator for the Office of Real Property Management. The newsletter is produced by the Regulations Management Division, Stanley C. Langfeld, Director and Editor-in-Chief.

For more information about POLICYSITE, contact Senior Realty Specialist and Managing Editor: Richard M. Ornburn at richard.ornburn@gsa.gov. Graphic design is provided by GSA's Office of Citizen Services and Communications: Graphic Designer - David L. Alexander.

For information about the GSA Achievement Award for Real Property Innovation, please contact the Award Program Manager: Patrice Walker at patrice.walker@gsa.gov.

Please visit our website for more information about the Office of Real Property Management and its innovative real estate and workplace initiatives at: www.gsa.gov/realpropertypolicy. ■

2008 GSA Achievement Award for Real Property Innovation

Winning Entries

Asset Management

WINNER

Roof Asset Management Program (RAMP)

U.S Department of Energy, National Nuclear Security Administration (NNSA)

FINALIST

Construction Operations Building Information Exchange (COBIE)

U.S. Army Corps of Engineers

Design Excellence Program/National Register of Peer Professionals

U.S. General Services Administration, Public Buildings Service (PBS)

TSA Real Estate – Continuous Improvement Program

U.S. Department of Homeland Security, Transportation Security Administration (TSA)

HONORABLE MENTION

DOT's President's Management Agenda Real Property Team

U.S. Department of Transportation (DOT)

Associate Training

U.S. General Services Administration, PBS Heartland Region

Energy Savings through Use of Electrical Timers

U.S. General Services Administration, PBS Great Lakes Region

Sustainability

WINNER

New San Francisco Federal Building

U.S. General Services Administration, PBS Pacific Rim Region

FINALIST

Retro-Commissioning Lite – Reaching the Energy Target

U.S. General Services Administration, PBS Mid-Atlantic Region

HONORABLE MENTION

Denver Federal Center – One Megawatt Solar Park

U.S. General Services Administration, PBS Rocky Mountain Region

1. SMITHSONIAN INSTITUTION

Smithsonian Institution Fast-Tracks "ESPC" at American History Museum

A-20-08

The challenge: In the fall of 2006, the Smithsonian Institution (SI) initiated a project to update the domestic hot water system in the National Museum of American History. The master plan for the museum indicated growing demand for cooling capacity, but no appropriated funds were available to upgrade the 22 year old chiller plant. In late 2006, SI managers became aware that the planned upgrade of the domestic hot water system could yield more than $150,000 per year in energy savings. They also recognized that the planned closing of the museum for architectural renovations could be a convenient opportunity to perform the major work required to replace the chiller plant. How could this be accomplished?

The Smithsonian Institution met the challenging requirement by using an *Energy Savings Performance Contract (ESPC)* to provide a new, energy efficient chiller plant for the National Museum of American History.

The new plant was in service only nine months after contract award. Construction was performed simultaneously with the major architectural renovation of the museum, among other challenges.

The project was the first ESPC executed at one of SI's museums, and it incorporated other energy efficiency improvements:

- domestic hot water system upgrade,
- upgrade of approximately 15,000 lighting fixtures, and

- energy-saving alterations to the chiller plant and major air-handling systems in the National Museum of Natural History.

The project is self-financing, with an implementation cost of $19,908,000, with first year guaranteed savings of $1,545,657, and a 20-year term.

Multiple methods are included to address quality control and help ensure that new systems perform as expected.

Addressing a known and important infrastructure need helped secure internal support and fast approvals for the project. In addition to meeting this need, the project contributes significantly to meeting energy and environmental goals, including removal and disposal of more than 8,000 lbs. of obsolete, ozone-depleting refrigerants. ■

Contact:

David Hauk

Energy Management Branch Chief

Smithsonian Institution

haukd@si.edu

New chiller plant - interior power room, and National Museum of American History, Washington, DC

Smithsonian Institution's Reliability Centered Maintenance (RCM) Approach

A-12-08

Protecting Smithsonian's collections of more that 136 million objects, artworks and specimens...

The Smithsonian Institution (SI) contains 12 million square feet located within 769 maintained facilities and structures of varying size, age and architectural variety in eight states, Washington, DC, and Panama.

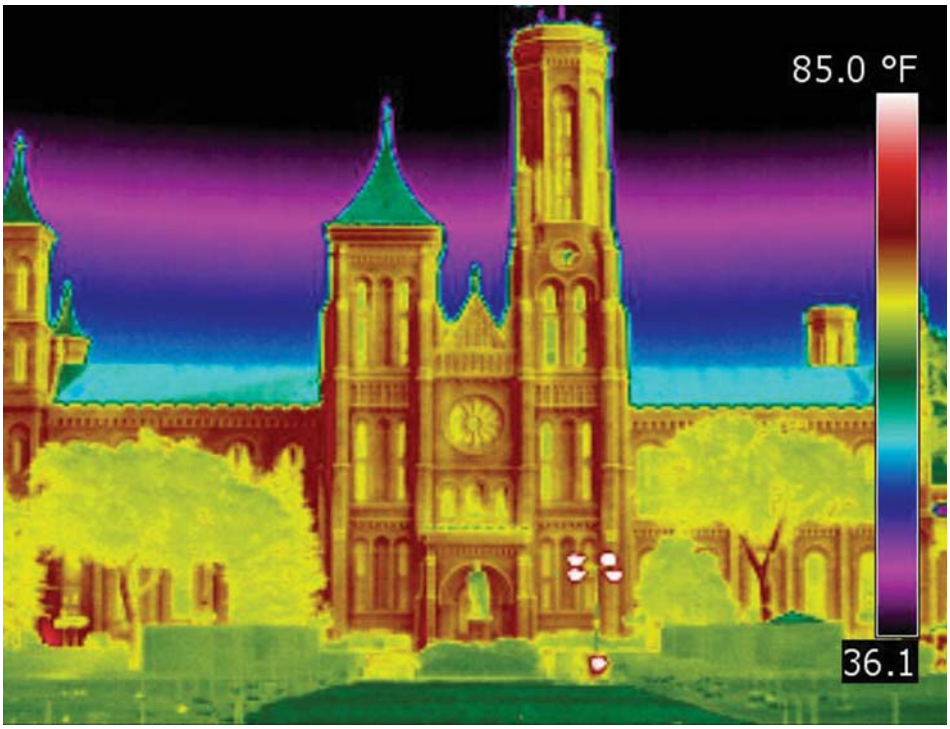
Our facilities include:

- 19 museums,
- nine active research centers with laboratories and dormitories,
- state-of-the-art storage and restoration facilities, and
- venues for public and private gatherings.

A majority of SI equipment assets are operating past or fast approaching the end of their life cycle, with an average age of 30 years. We have a depleted work force and have not received maintenance budget increases large enough to meet our maintenance needs. To head off the catastrophic consequences of multiple equipment failures, we defined a 4 point maintenance program that first and foremost is reliability centered maintenance (RCM) based, includes preventive maintenance, periodic testing and inspection (PT&I), and programmed maintenance. RCM focuses on identifying and establishing the operational, maintenance, and capital improvement policies that will manage the risks of equipment failure most effectively.

RCM was developed by the airline industry in the 1960s to reduce the cost of their strategy of periodic overhaul of planes coupled with costly repairs and improve reliability and safety. Airlines found that performing maintenance just because the calendar says you should did not improve safety records or reliability, and in some cases introduced more failure. Instead they developed what is now called RCM, which determines the functions of the asset; studies how an asset fails, what causes those failures and the consequences of each failure. A maintenance strategy including tasks and intervals, and possible workarounds if there are no preventive tasks to be found, is developed from those studies. RCM is kept live throughout the life of the equipment, where the effectiveness of the maintenance is kept under constant review and adjusted as conditions change. Other industries adopted RCM after noting its success with the airlines.

Though we do not have a tangible product or production bottom line as other industries have, we do produce a tightly controlled environment that is critical to protecting our one-of-a-kind treasures of artistic, historical and scientific significance and adds to the enjoyment of our 25 million



annual visitors. We use RCM technologies and analysis to maintain what we have as well as to commission new equipment and systems installed during repair, in new construction, and as part of major renovation. Our efforts ensure that new equipment is installed properly, including precision alignment of critical assets, and is running at optimum efficiency.

We also use RCM to re-commission environmental systems to help keep them operating as close to original design parameters as possible. Our work includes an extensive point-to-point survey and recommendations to return the system to design operation. This work directly results in significant improvements in our ability to keep environmental conditions in our facilities within prescribed tight operating bands to protect our artifacts.

(Note: The infrared image of the Smithsonian Institution's Castle building is an example of Infrared Thermography, a key component of SI's Reliability Centered Maintenance program). ■

Contact:

Daren Kennedy

Reliability Branch Manager

Office of Facilities Engineering and Operations

Smithsonian Institution

kennedyd@si.edu

TENNESSEE VALLEY AUTHORITY

TVA's Chattanooga Workplace Decision Project

A-2-08

The most innovative component of this project was the commitment to analyze the Total Occupancy Cost (TOC) of facilities rather than focusing solely on the lease cost or purchase price to meet workspace needs...

The Tennessee Valley Authority's (TVA) largest office building is the Chattanooga Office Complex (COC) (see photo) located in Chattanooga, Tennessee. The COC includes four buildings (five and one-half stories each) with approximately 1.05 million rentable square feet of office space. The property is owned by an investment group located in Chicago, IL. The Chattanooga Workplace Decision Project focused on achieving the best value for TVA's long-term office space needs using leveraged negotiations with the COC ownership through the Request for Information (RFI) and Request for Proposal (RFP) process. Most importantly, the project employed a new financial analysis technique for TVA's Facilities Management — calculating and evaluating Total Occupancy Cost (TOC) over the projected twenty-year life of the project

The COC prime lease term is from December 1, 1985 through January 1, 2011. The lease expense is fixed each year and has escalated to approximately $52 million a year through the end of 2010 under triple net terms (TVA is responsible for all the building costs). There are six five-year extension terms beginning January 1, 2011 with contractually established lease rates, the first of which is approximately $22 million per year on a triple net basis. Although the lease rate declines in the first extension period, it remains significantly greater than projected market rates.

In January 2006, TVA management met with the COC ownership to negotiate a voluntary lease restructure. The options TVA presented to the ownership included negotiating for less square footage within the COC (TVA no longer required the entire 1.05 million square feet) and/or negotiating for lease costs more closely aligned with market rates. The ownership did not respond favorably to TVA's proposals.

While negotiations continued with the COC ownership, TVA issued an RFI for a developer to construct a build-to-suit facility or to renovate

existing downtown space to fulfill TVA's 2010 through 2030 office space requirements in Chattanooga. From the RFI respondents, TVA identified seven developers to whom to issue an RFP and two proposals were received in January 2007. A proposal to construct a 503,000 square foot build-to-suit office facility on TVA-owned land was selected as the preferred alternative and negotiations were initiated with the developer. As the RFP process continued, the COC ownership began to negotiate in earnest with TVA and countered with more competitive offers.

Working closely with TVA's Chief Financial Officer's organization, a financial model was developed using the discounted cash flow method to analyze approximately twenty options and sub-options for the Chattanooga office space TOC for the twenty-year period. The best business decisions for TVA were identified. Final negotiations with the COC ownership and the developer were initiated utilizing information from the TOC analysis. In the end, TVA agreed to purchase the COC for $22 million, achieving a sustainable TOC avoidance of more than $200 million on a present value basis and $450 million in cash over the twenty year above-market extension options under the current COC lease. The purchase will be effective immediately at the end of the current term. ■

Contact:

Peggy Jenkins

Senior Strategic Asset Manager

Tennessee Valley Authority

pljenkins@tva.gov

3. U.S. ARMY CORPS OF ENGINEERS

ASSET MGMT

Finalist

Construction Operations and Building Information Exchange (COBIE)

A-4-08

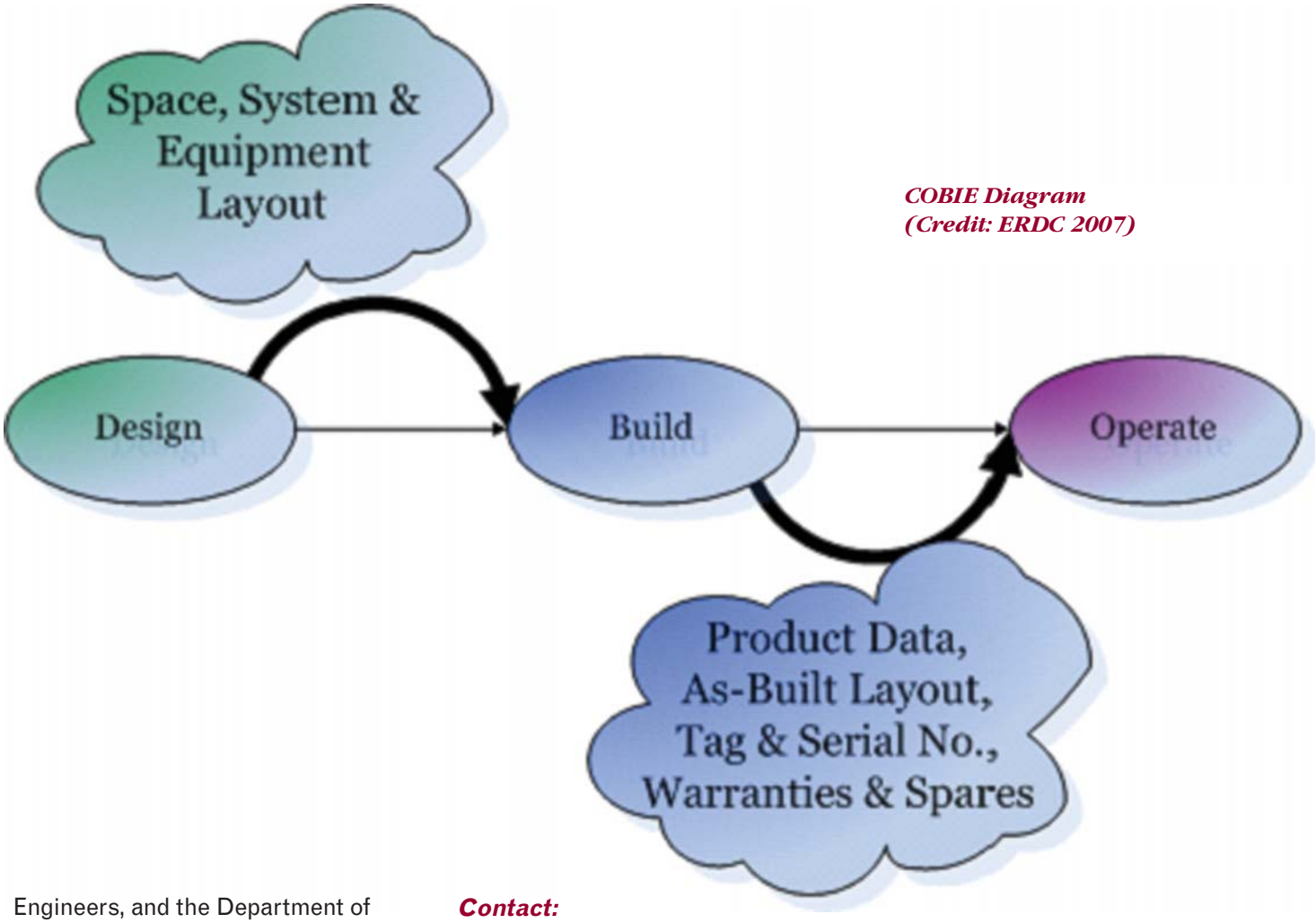
Consider this challenge. Following fiscal completion of a construction project, contractors deliver boxes of papers containing the documents describing the materials, products, equipment, and systems installed in the building. One national design/build firm charges $40,000 simply to scan these paper documents and compile a CD (compact disk) with this data. These electronic paper efforts also produce data that can be used by facility operators and managers. In most cases, the owner must pay for an expensive "job crawl" to identify what equipment is present and where it is located. The General Services Administration (GSA), in fact, pays again for this information since building operating contractors' first task is often to conduct a building survey to evaluate maintenance requirements.

The solution? The Construction Operations and Building Information Exchange (COBIE) - which was developed through an open-standards process in conjunction with the buildingSMART Alliance (buildingSMART Alliance is a participating organization of the worldwide International Alliance for Interoperability promoting open interoperability and full lifecycle implementation of building information models). COBIE is an information exchange format to capture the information created during design, construction, and commissioning and allows this information to be passed directly to the building operator.

COBIE data can be created manually by designers and builders, or exported automatically through the use of commercial CADD (Computer-Aided Design and Drafting) or BIM (Building Information Modeling) software. Each party adds their own information. For example, the architect identifies areas and room number; mechanical consultants identify equipment location, type, and number; shop drawings/submittals approved during construction include equipment specifics such as manufacturer, rating, and maintenance requirements; and commissioning agents provide start-up/shut-down, safety tasks, and maintenance job plan information.

To ensure that COBIE can be widely adopted, the COBIE data can be captured directly using a template spreadsheet. If needed, data from CADD and BIM software can be directly exported into this spreadsheet. At project turnover, the COBIE spreadsheet can be directly loaded into the commercial maintenance management system (CMMS) selected by the building operator and an owner's BIM of the project.

GSA, the U.S. Army Corps of



COBIE Diagram
(Credit: ERDC 2007)

Engineers, and the Department of State's Overseas Building Operations currently require the delivery of COBIE data in their contracts. During 2008, CADD and CMMS vendors are demonstrating the automated creation of COBIE data at the National Academies of Science.

The benefits from GSA-wide COBIE adoption are the consistent delivery of correct building installed equipment information without any additional cost. COBIE eliminates the cost of the "first" step in a building operator's contract. In addition, no additional data reformatting or collection expense will be required as COBIE data can also be directly loaded into any maintenance management system or third party software that is compliant with this NBIMS (National Building Information Modeling Standard). ■

Contact:

William East

Research Civil Engineer

U.S. Army Engineer Research and Development Center

U.S. Army Corps of Engineers (USACE)
Champaign, IL

Bill.W.East@usace.army.mil

U.S. DEPARTMENT OF THE AIR FORCE

Early Transfer with Cleanup Privatization of a National Priority List Site

A-18-08

The former McClellan Air Force Base captured national attention in August 2007 with the completion of the nation's first successful Early Transfer with Privatized Cleanup agreement at a Department of Defense (DoD) site listed on the Environmental Protection Agency's (EPA) National Priorities List (NPL). The project is a milestone achievement and will serve as a template for similar projects in the future at McClellan and around the country.

The Air Force Real Property Agency (AFRPA) carried out the groundbreaking efforts in completing the nation's first Early Transfer with Privatized Cleanup at the NPL site (the NPL is the list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and is intended primarily to guide the EPA in determining which sites warrant further investigation). The agreement culminated a complex two-year effort that pulled together representatives from the Air Force, local community and multiple regulatory agencies to complete the early transfer of 62 acres of BRAC (Base Closure and Realignment Commission) property at the former McClellan Air Force Base, insured fixed-price environmental cleanup, and transfer of lead agency responsibility to the EPA.

The agreement leverages the synergy of combining property redevelopment with property transfer and environment cleanup to accelerate schedules and reduce the overall cost to the taxpayer and the property recipient. This initial effort includes a relatively small 62 acre parcel with 12 restoration sites at a cost of $11.2 million; however, the templates generated will be instrumental in the future fence-to-fence privatization that will complete the transfer and cleanup of the balance of McClellan Air Force Base including in excess of 3,000 acres, over 300 restoration sites, and a projected environmental liability of over $400 million.

This project benefits the Air Force by accelerating property transfer, eliminating cost uncertainty, reducing overall cost, and reducing administrative overhead for management of the property and environmental cleanup.

Lastly, this deal is extremely significant to the local community. The privatized cleanup and early transfer puts the cleanup and redevelopment schedules under local control. This allows the local development community to balance their development priorities with the cleanup of contaminated property optimizing the schedule for making property available for beneficial reuse and redevelopment. ■

Contact:
Philip Mook
Senior Representative
Air Force Real Property Agency
U.S. Department of the Air Force
philip.mook@afrpa.pentagon.af.mil

Photo: Officials from U.S. Dept. of the Air Force, Sacramento County, the State of California and U.S. Environmental Protection Agency (EPA) sign privatization documents, August 2007.

(Front row, left to right: Linda Adams, Director, California EPA; Keith Takata, Superfund Director, U.S. EPA Region IX; Kathryn Halvorson, Director, Air Force Real Property Agency; and Don Nottoli, Chairman, Sacramento County Board of Supervisors. Back row, left to right: Pamela Creedon, Central Valley Regional Water Quality Control Board; Maureen Gorsen, California Department of Toxic Substances Control; Kathleen Johnson, U.S. EPA Region IX; Yvonne Fong, U.S. EPA Region IX; Philip Mook, Air Force Real Property Agency; Rob Leonard, Sacramento County Office of Economic Development.)

ASSET MGMT

Ensuring Real Property Asset Data Quality Through Data Validation

A-14-08

Accurate real property data is a prerequisite of good decision making, but how do we know the data is accurate?

Like many Federal agencies, the U.S. Department of Energy (DOE) manages a large and diverse portfolio of real property. Accurate real property data is a prerequisite of good decision making, but how do we know the data is accurate? This is a real challenge with a large inventory database. We needed to develop a portfolio-wide method to audit the data and assess its accuracy. But with over 40 major sites encompassing some 20,000 buildings and structures on 3.1 million acres of land, auditing the data would be time and resource-intensive. The solution at DOE was the development of a statistical standard for determining the accuracy of the data at the site level. Each site is required to apply the process annually and DOE Headquarters performs quality control at approximately 20 percent of the sites each year.

The process begins with selection of a random sample of real property assets at the site. The sample size is dependent on the number of assets at the site and is designed to achieve a 90 percent confidence level in the resulting assessment. Our corporate facility database, the Facilities Information Management System (FIMS) contains a standard report that automates the selection of the sample facilities set and produces a spreadsheet for each selected facility showing the current value in FIMS for each of the 24 Federal Real Property Profile (FRPP) data elements (the FRPP is the government's database of Federal

owned and leased assets including buildings, land, and structures and administered by the General Services Administration). Another FIMS standard report identifies additional outliers to be added to the random sample. These are facility records with apparent anomalies such as very high or very low replacement plant value (RPV), gross square feet, or deferred maintenance.

The next step is a desk validation which compares the current value in FIMS for each data element to the source document used by the FIMS administrator at the site to update FIMS. If the values do not match, a variance is noted and if the difference between the two is 10 percent or greater, it is a material variance (a variance in a non-numeric data element, e.g. legal interest, is always material). Based upon the frequency of material variance in the sample (number of material variances/number of records sampled), a red/yellow/green score is assigned to each element and based on the individual element scores, an overall red/yellow/green scorecard is assigned to the site. The desk validation is followed by a walkthrough of a subset of the sample facilities as a check on how accurately the FIMS values reflect observed field conditions.

If a site scores "red" it must develop a Corrective Action Plan and repeat the validation process at six month intervals until it improves its score. Scorecards are sent to DOE Headquarters, creating visibility and incentive for improvement.

DOE's validation process has reinforced the importance of real property data for effective management decision-making. Two years after implementation, DOE has observed significant improvement in data quality, with most sites now achieving a green score. ■

Contact:

Phil Dalby

Facilities Engineer

Office of Engineering and Construction Management

U.S. Department of Energy

Phil.Dalby@hq.doe.gov

Winner

Roof Asset Management Program (RAMP)

A-8-08

Innovative National Nuclear Security Administration (NNSA) Roof Asset Management Program Saves Energy

The Roof Asset Management Program (RAMP) is the Department of Energy's (DOE) National Nuclear Security Administration (NNSA) effort initiated in October 2005. This innovative and unique process manages roofing repairs and replacements at six sites, as a single portfolio, under one contract.

Partners (the six sites) in this innovative program include:

- Kansas City Plant (Kansas City, MO),
- Pantex (Pantex Plant, Carson County, TX),
- Y-12 (Y-12 National Security Complex, Oak Ridge, TN),
- Los Alamos National Laboratory (Los Alamos, NM),
- Lawrence Livermore National Laboratory (Livermore, CA), and
- Nevada Test Site (Las Vegas, NV).

The contractor selected for the program was Building Technology Associates, Inc. (BTA), an experienced Roof Asset Management firm based In Michigan.

The program uses a single database and centralized management for 4,700 separate roof areas, totaling over 16 million square feet, for these six sites. This is the first multi-site facilities management program instituted for the NNSA and has delivered outstanding results and is considered a model for other programs within NNSA.

Key program attributes include:

- A unique team management approach, using NNSA site and headquarters representatives working closely with BTA employing proven processes and user-friendly technology.
- Emphasis on strategic, proactive repairs to extend roof life.
- Ensures proper use of HQ (headquarters) funding through a single prioritized list of roofing needs.
- New centralized tools and technology (using historical and actuarial roof data) to analyze our roofs, prioritize repairs and replacements, and identify opportunities for planning, quality, and savings.

NNSA site - Lawrence Livermore National Laboratory, CA

- Increased bidding competition, prequalified contractors, and consistent construction standards.
- Use of sustainable construction materials and methods, and reduction in energy usage.
- Regular reviews of program performance, opportunities for improvement, discussion of new directions, and sharing of lessons learned.

Prior to the program, appropriations went to individual sites, to spend as they saw fit. Our roofing concerns were often addressed only when critical operations were interrupted by roof leaks. This reactive approach to roof leaks often resulted in premature replacement of the roof, the use of a limited number of roofing contractors, and a higher cost of roof replacements. We now view roof leaks as opportunities for repair and life extension rather than a large capital investment in reroofing, and we now use funding previously spent on a few select roof replacements to instead extend the life of hundreds of roof areas.

- Key RAMP accomplishments and benefits to date include:
- Added $19.3 million in value to our roofing portfolio through life extending repairs.
- Saved $7 million in construction costs.
- Increased average remaining life of roof inventory by 25 percent.
- Replaced 1.9 million square feet of roof with more energy efficient sustainable roofs.
- Eliminated $46 million in deferred maintenance from the 2003 congressional baseline.
- Realized energy cost savings exceeding 50 percent.
- Achieved exceptional safety record.

RAMP has allowed NNSA to more effectively manage this $370 million portfolio of roof assets. This is a mature, flexible, and very effective management process that can be applied to other agencies with limited modifications. ■

Contact:

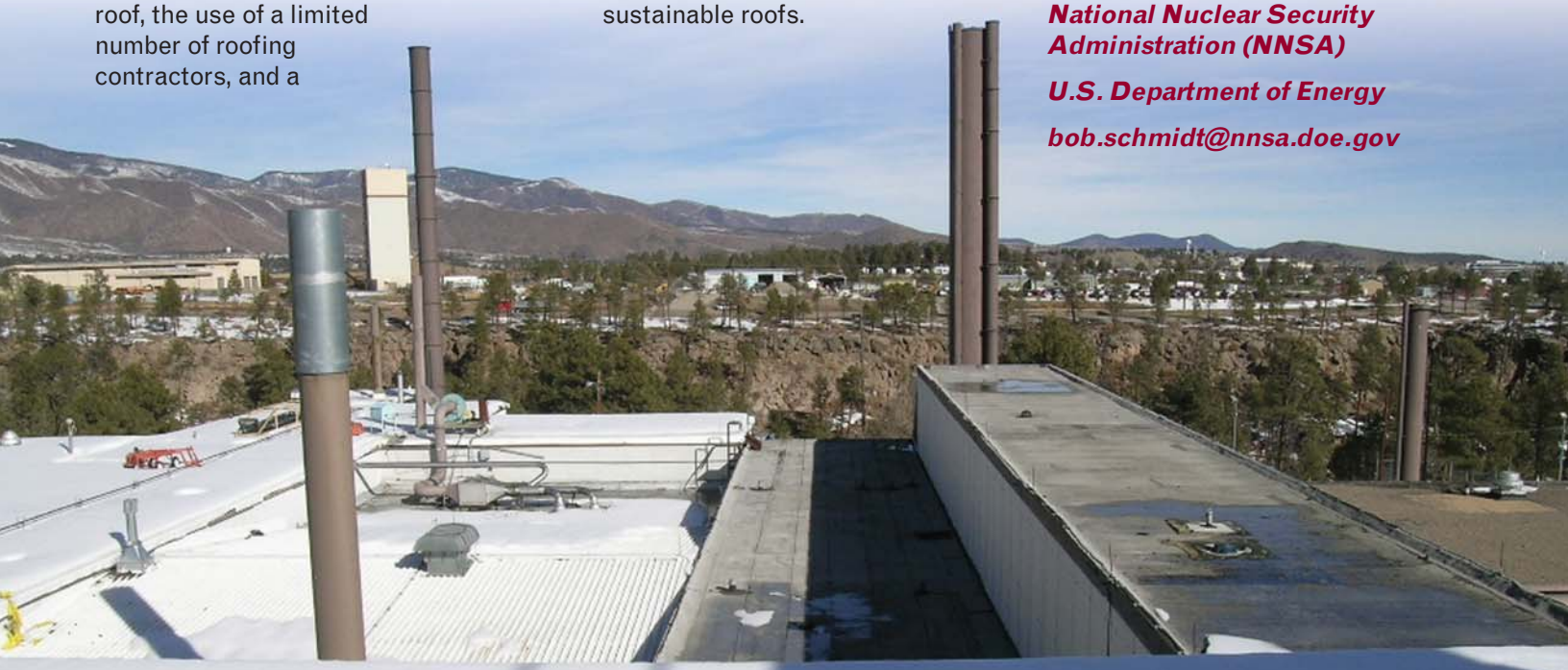
Robert Schmidt

RTBF and Construction Program Manager

National Nuclear Security Administration (NNSA)

U.S. Department of Energy

bob.schmidt@nnsa.doe.gov



Example of roof showing benefits of increased insulation as part of "RAMP"

6. U.S. DEPARTMENT OF HOMELAND SECURITY

ASSET MGMT

Finalist

TSA Real Estate - Continuous Improvement Program

A-16-08

All of us use budgets and benchmarks, schedules and milestones as tools to track our progress as a business enterprise - but in the end, success can only be legitimately measured through the satisfaction and perception of the customer.

The Transportation Security Administration's (TSA) Office of Real Estate Services has fully embraced this philosophy, through the development of a customer survey process making use of web-based electronic tools, and continuous improvement strategies based on direct customer feedback.

The results in customer satisfaction have been dramatic. TSA has been asked to share its methodology in several forums this year, and the customer-intensive program has helped TSA achieve a green rating in real estate on the President's Management Agenda for the last 10 consecutive quarters. The members of the Department of Homeland Security's Real Property Management Committee have asked TSA to lead discussion as a best-practices agency in the area of real estate customer satisfaction.

TSA's success in this area was brought about through a combination of close study and adjustment of business processes, a well-developed customer survey program, and an aggressive survey follow-up that ensures every single issue identified through the customer surveys is discussed, analyzed, addressed and resolved. All too often, customer survey results are simply acknowledged and then put away without action, because it is difficult to face, discuss and resolve the issues. TSA's customer-oriented program meets the problems head-on and reports back to the customers on specific actions taken to address and resolve their issues.

In the three years since these programs have been implemented, overall real estate customer satisfaction at the TSA field offices has increased by an increment of 43 percent - from a 51 percent satisfaction rate in 2006 to 70 percent in 2007 and yet further to the 73 percent satisfaction level in the

recently completed 2008 survey. Particularly rewarding to TSA real estate managers were the customers' ratings of the performance and professionalism of the real estate staff. Initially, only 47 percent of the respondents in 2006 were satisfied with the real estate staff. Over the next two years, customer perception has improved to yield a 74 percent satisfaction rate in 2008. That represents an incremental improvement of 57 percent in staff performance in only two years.

In each instance, the results of the annual survey have been used to develop corresponding action plans to address deficiencies noted by the customers. The action plans are always shared with the customers so they can monitor progress along with the Office of Real Estate Services. In pursuit of continuous improvement, the survey cycle will repeat every year and will continue as a long-term strategic tool toward ever-improving services in the TSA Office of Real Estate Services. ■

Contact:

Reinaldo Junquera

Assistant Director

Office of Real Estate Services

Transportation Security Administration

U.S. Department of Homeland Security

rey.junquera@dhs.gov

Transportation Security Administration

U.S. DEPARTMENT OF STATE

INTEGRATED REAL PROPERTY MANAGEMENT SYSTEM (IRPMS)

A-23-08

IRPMS is now a fully integrated data management system, capable of providing reports on all aspects of project and real property asset management.

The U.S. Department of State's (State) Office of Real Property Management (RPM) manages approximately 8 million square feet of the agency's domestic real property assets in over 100 office buildings and warehouses nationwide. Facilities include commercial leased space, Federally-owned and agency-owned buildings.

Annually, RPM manages approximately $20 million in facility renovations. RPM provides project and construction management; architectural, engineering and space design; selection, procurement and installation of furniture and finishes; and assures compliance with life-safety regulations and security requirements for all domestic State organizations.

Prior to the Integrated Real Property Management System (IRPMS), cuff or spreadsheet reports were used to track real property assets but these were not linked to billing records. No comprehensive program allowed for the consolidation of current and historical lease components or monthly General Services Administration (GSA) ROW (Rent-On-Web) statements. Maintenance of records on space occupancy by organization or office was labor-intensive and the end result was often inaccurate.

No single program or database existed which allowed us to document and integrate all phases of our renovation projects, including tracking of funds, to include obligations and expenditures. As a consequence, project tracking was often incomplete, or inaccurate, which severely inhibited our ability to provide adequate oversight and management of our real property assets.

As a result of this need, and our inability to find an "off the shelf" solution, RPM developed IRPMS. It simplifies and enhances work flow processes, eliminates duplication of effort, is user friendly, and provides management with easy, quick, and up-to-date project data. IRPMS provides the user the ability to create customized reports. Security is maintained by restricting sensitive information to only those with a

"need-to-know" while providing the "client" the capability to review the status of their project on a "read only" basis.

IRPMS is comprised of the following:

- Building, Lease, and Rent Module
  - Building Data
  - Lease, Supplement Lease Agreement (SLA), Occupancy Agreement and Rent Data
  - Project Funding
  - Project Management
- In Development
  - Migrating the system to a web-based application
  - Merging building and space project data with floor plan database
  - Provide historic building information ■

Contact:

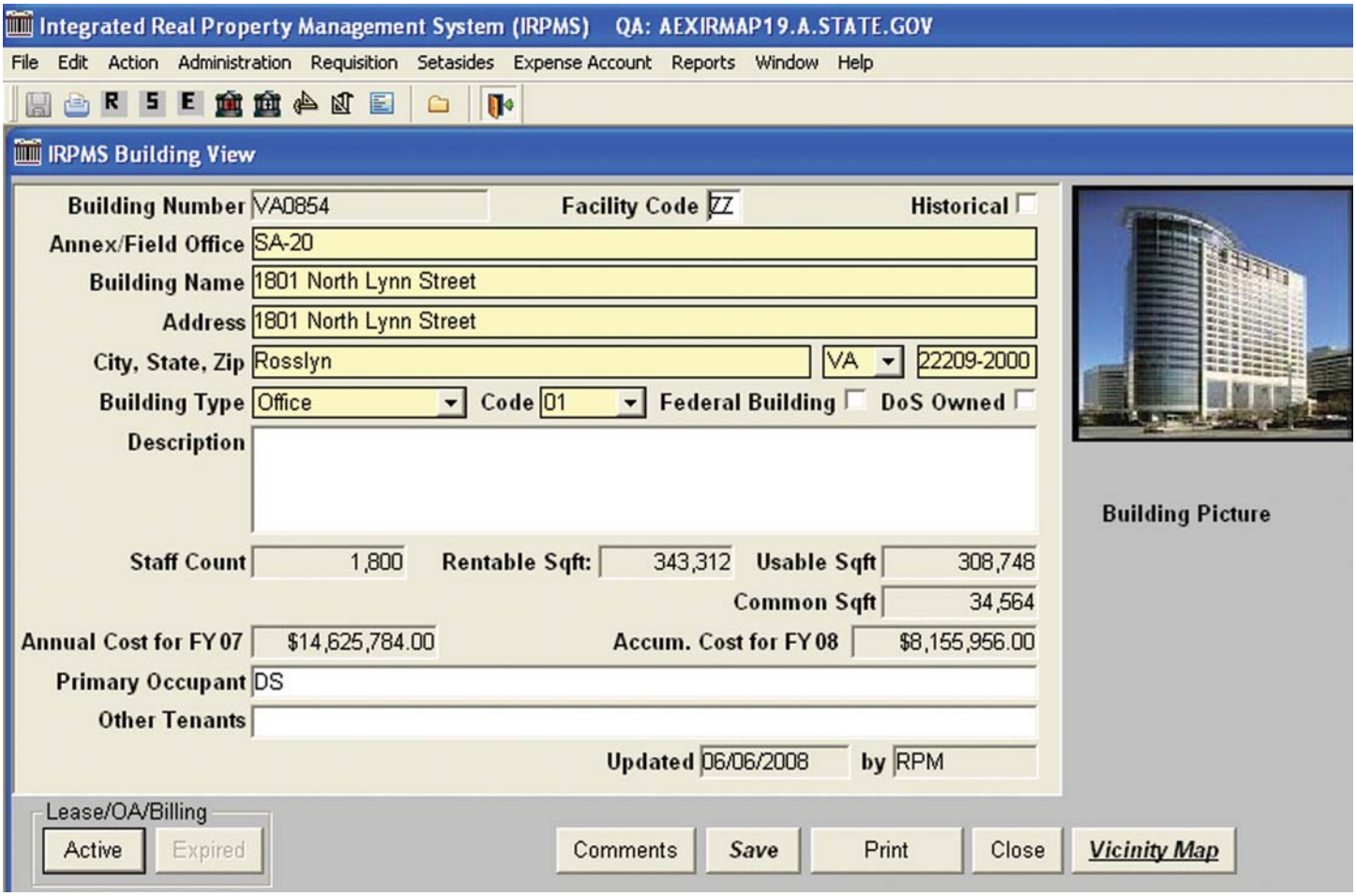
Ms. Lynn Wheat

Deputy Director

Office of Real Property Management

U.S. Department of State

WheatLM@state.gov



U.S. DEPARTMENT OF TRANSPORTATION

Construction of Airport Traffic Control Tower at Dulles International Airport under FAA Construction-Leaseback Program (CLP)

A-24-08

FAA's CLP program saves the Federal government money by using innovative airport owner financing and economies of scale of airport construction projects.

On July 16, 2007, Federal Aviation Administration's (FAA) air traffic controllers began guiding planes from the new Airport Traffic Control Tower (tower) at the Dulles International Airport (Dulles). The tower is nearly twice as tall as it predecessor which was far too short to accommodate airport terminal and runway expansions planned by the Metropolitan Washington Airports Authority (MWAA). The new tower is 325 feet high with a two-story base building of 17,312 square feet housing controllers and technicians and the latest communications, visual and navigational aids.

There are close to 500 towers nationwide, half of which are at least 30 year old. Because of increased air traffic operations and construction of new buildings and runways at airports, towers are become functionally obsolete relatively quickly. Normally, the FAA depends almost exclusively on direct Federal construction. There is only enough funding available to replace about seven towers each year, leaving a large backlog of projects. Thus the FAA developed the Construction-Leaseback Program (CLP).

Although the FAA had conducted about five construction-leaseback projects over the ten-year interval prior to the Dulles Airport Project on an ad-hoc basis, the first case under the formal CLP was the Dulles tower. The FAA developed a comprehensive CLP Guideline that leads both FAA and airport owner officials and personnel through the process involving planning, financing, approvals, construction and acceptance. In order for a tower construction-leaseback project to be approved by the FAA, it must be more cost-effective than direct FAA construction.

Under CLP, the airport owner itself would construct the replacement tower in accordance with FAA-approved specifications, using its own source of capital, and then lease it to the FAA at a rate that would fully amortize all construction and financing costs and provide for maintenance and capital replacement charges over a 20-year period. So as to avoid classification as a lease-purchase, the FAA would not acquire any ownership interest in the facility either during or at the end of the lease period.

The total tower project costs as estimated by the FAA under direct Federal construction for the new Dulles tower was $49.974 million including both soft and hard costs (soft costs include taxes; hard costs include actual construction costs such as materials). Through very close cooperation, MWAA was able to lower the project to $43.701 million, thus reflecting a savings of over 12.5 percent from government estimates. The overall project costs of $43.701 million were financed by MWAA

Contact:

Skip Bona

Manager

Air Traffic Organization (ATO), Corporate Real Estate Office

Federal Aviation Administration (FAA)

U.S. Department of Transportation

skip.bona@faa.gov

through a combination of fixed-rate and variable-rate instruments saving an additional 10.1 percent over 20 years. The third source of savings to the FAA is the result of the fact that FAA is a tenant and does not bear demolition costs at the end of the tower life, thereby saving another 2.3 percent. In all, a total savings of close to 25 percent or $12.5 million is being achieved on the Dulles tower project by using CLP. ■

Honorable Mention

DOT's President's Management Agenda Real Property Team

A-3-08

The variety and complexity of the Department of Transportation's (DOT) missions presented special real property asset management challenges. The most immediate challenges to DOT centered on establishing defined, consistent, repeatable processes for maintaining and using the asset data in daily decision-making activities. To meet these challenges, DOT designed, developed and deployed a "family" of innovative, state-of-the-art applications unique among all Federal agencies.

Three separate applications were developed to interface with DOT's core real property inventory database—the Real Estate Management System (REMS). REMS contains inventory data at the constructed asset level for more than 68,500 assets located from border-to-border and from coast-to-coast...many in remote or isolated areas. All of the required data elements are maintained in REMS and the data is updated through a three-year rolling inventory process. The data includes the performance measures defined by the Federal Real Property Council (FRPC). In addition, REMS has built-in interfaces with DOT's accounting and financial systems.

Managing the real property inventory data in a method that enhances and supports daily decision-making activities was accomplished through the development of the following tools:

Real Property Performance Dashboard. This web-based application provides real property managers with a real-time display of asset conditions, annual operating costs, utilization rates, geographical trends, organizational challenges and budgetary recommendations. The Dashboard is updated every 30 minutes through its REMS interface. Data is displayed through on-line graphical user interfaces that provide exceptionally clear, concise, colorful status displays to property managers and decision-makers at all levels of DOT.

Automated Disposition Decision Tree. This on-line program allows real property managers to measure performance against the FRPC goals and those established by DOT's President's Management Agenda (PMA) oversight committees. Excess property, non-mission dependent assets, underused properties, assets in need of improved facility conditions, and real property with high annual operating costs are identified in a matter of seconds and become candidates for disposal or increased management attention. Assets can be identified by performance measure, geographical area, organization or asset type.

Again, the data is displayed through user-friendly displays that are continually updated for accuracy.

Knowledge Services Network (KSN) Portal. This on-line application that provides standardized processes, procedures and policies for managing real property across 13 organizations with a wide variety of missions, tasks and priorities. This portal contains defined, repeatable guidance to real property managers and is available "24/7" (24 hours a day/7 days a week) to real property professionals. The KSN site is also the repository for current and archived records and information through a series of documentation libraries.

The programs listed above are at the core of DOT's success in real property management and contributed to the agency's "Double GREEN" rating awarded by the Office of Management and Budget for the PMA initiative for real property. In addition, use of these programs has resulted in DOT being recognized as the highest non-Department of Defense agency for asset disposal during fiscal year 2007.

These innovative, state-of-the-art programs reflect a high degree of professional achievement and potential within DOT's real property management. ■

Contact:

John R. Block

Director, Aviation Logistics Organization

Federal Aviation Administration

U.S. Department of Transportation

john.block@faa.gov

Atlanta-Hartsfield (GA) International Airport's out-dated air traffic control tower demolished and replaced by new state-of-the-art control facility as part of DOT asset management program.

9. U.S. GENERAL SERVICES ADMINISTRATION, PUBLIC BUILDINGS SERVICE

ASSET MGMT

Honorable Mention

Associate Training

A-6-08

Public Buildings Service Heartland Region

The Associate Training Matrix (ATM) ... provides management with a tool to know at a glance where to put limited training dollars.

The General Services Administration's (GSA) Public Buildings Service's St. Louis (St. Louis, MO) Field Office (FO) has long recognized that the key to successful asset management and proficient customer service is by having competent and highly trained associates.

The FO has associates assigned to 10 different disciplinary functional areas at varying grade levels. Assessing the organizational skill levels of all associates has been a daunting task. Being a customer service organization requires associates to possess numerous general and technical competencies. Skill levels for these competencies must be developed and maintained at high levels to ensure success.

To address this issue, the FO developed a matrix which it labeled the Associate Training Matrix (ATM). The ATM identified over 100 competencies in which each associate must be skilled. Required levels of skill were established for each area of competency.

Levels varied for each different job description. For example, a facilities mechanical operations specialist would not need the same skill level in communications as a building manager who deals constantly with the customer. After the required skill levels were established, each associate evaluated themselves as to the current skill level they possessed for each competency. The supervisor also evaluated each associate's level of skill independently.

The supervisor and associate then mutually agreed on the current skill level possessed by each associate. The skill level was then recorded on the ATM with a color code to reflect the varying levels of training needed by each associate in each of the over 100 competency areas, e.g. a red code would reflect an urgent training need, and so on.

Associates and managers update the ATM twice annually. They use the ATM to readily identify training needs, skill levels associates possess for unique tasks, competencies needed for job applicants, targeting of limited training funds, and other information.

The FO has found the ATM to have an indirect impact on all operations. The resultant highly skilled associates have the resultant "positive" direct impact. ■

Contact:

Charles Meyer

Director

St. Louis Field Office

Public Buildings Service

Heartland Region

U.S. General Services Administration

charlie.meyer@gsa.gov

Associate Training Matrix (excerpt)

See other worksheets (tabs) in this workbook for guidance in use of this form!		FOM		SR. BM		SR. BM		SR. BM
COMPETENCY	TLU	CLU	TLU	CLU	TLU	CLU	TLU	CLU
Project Technical (Design)								
Architectural/Structural	BU	SA	BU	BU	BU	BU	BU	BU
Electrical	BU	BU	BU	BU	BU	BU	BU	BU
Environmental	BU	WK	BU	BU	BU	BU	BU	BU
Estimating	BU	SA	BU	BU	BU	BU	BU	BU
Fee Calculation	BU	SA	BU	BU	BU	BU	BU	BU
Mechanical	BU	BU	BU	BU	BU	BU	BU	BU
Specification Development	WK	SA	WK	WK	WK	WK	WK	WK
Building Technical (Operations)								
Energy Conservation Techniques	WK	WK	WK	WK	WK	WK	WK	WK
HVAC Operations	BU	BU	BU	WK	BU	BU	BU	BU
Electrical Operations	BU	BU	BU	WK	BU	BU	BU	BU
Hazardous Waste Management	WK	WK	WK	WK	WK	BU	WK	BU
Safety	WK	WK	WK	WK	WK	WK	WK	WK

Denver Federal Center Redevelopment Project

A-9-08

Public Buildings Service Rocky Mountain Region

While the Denver Federal Center Redevelopment Project is a unique project to GSA... there is certainly the opportunity to use this business model at other government facilities and at all levels of government as well.

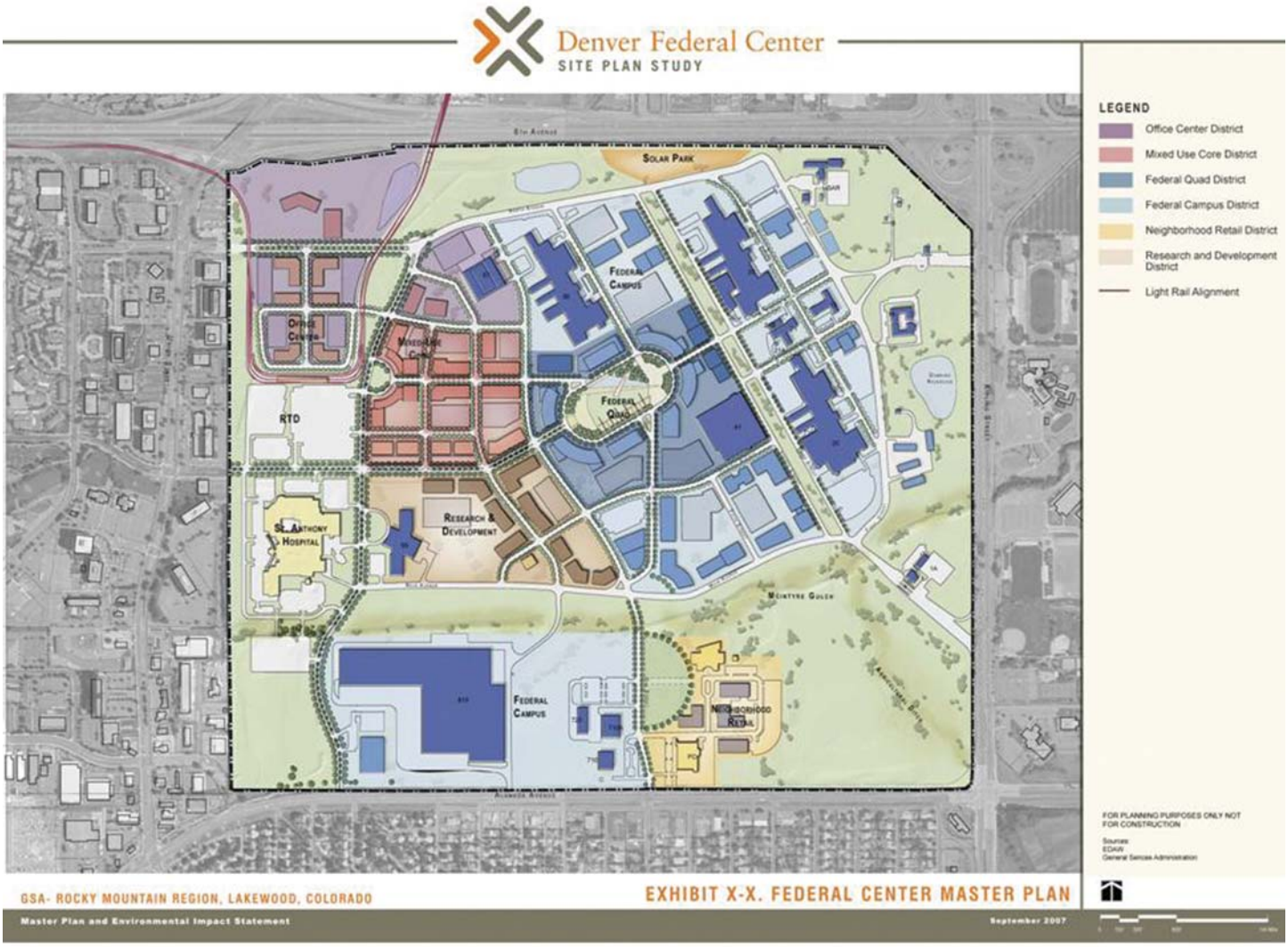
The Denver Federal Center Redevelopment Project is a multi-year, multi-organizational effort of the General Services Administration (GSA) that has resulted, and will continue to result, in achievements across all areas of asset management. This monumental project is representative of sound asset management planning and inventory management, portfolio performance management, utilization and disposal of real property, transportation and infrastructure improvement, and portfolio optimization.

The project consists of three primary initiatives led by GSA's Rocky Mountain Region (with regional headquarters in the Denver Federal Center), with involvement from GSA's National Office (in Washington, DC) and Public Buildings Service's (PBS) Office of Real Property Disposal. These three initiatives include:

- The sale of 65 acres of land on the Denver Federal Center in 2007 to the City of Lakewood, CO, for construction of a new community hospital and regional multi-modal transit facility, with reinvestment of sale proceeds into Denver Federal Center infrastructure systems.
- The completion of a detailed Master Site Plan and Environmental Impact Statement to set the asset management vision and strategy of the Denver Federal Center for the next 20 plus years.
- Communication, adoption and implementation of the redevelopment plan through various projects involving GSA, the City of Lakewood, CO, and other parties.

The Denver Federal Center has a rich and unique place in history and in the Denver community. Once ranch and agricultural land, the Federal Center became the Denver Ordnance Plant during World War II, manufacturing small arms ammunition on the facility over a three-year period. Upon closure of the Ordnance Plant, many of the 2,000 plus acres were sold or donated, and the remaining square mile of property was to be managed by the newly formed GSA to house various Federal agencies. Today, the Denver Federal Center is a 600 acre Federal facility in Lakewood, Colorado, that houses close to 6,000 Federal tenants of over 25 different agencies.

While new facilities have been constructed, many of the original Ordnance Plant buildings remain on the site and are occupied, in addition to much of the original utility infrastructure system. The aging 60-year portfolio and infrastructure of the site, along with significant environmental contamination issues



from prior site uses, created unique challenges for GSA particularly as the capital needs for the facility continued to grow rapidly while available funding for reinvestment remain stagnant or decreased. GSA's Rocky Mountain Region struggled with determining how it could continue to provide space and services for almost 6,000 Federal tenants, and essentially keep the Denver Federal Center "open for business."

However, along with these challenges also came some unique opportunities. With a surprisingly low vacancy rate of only four percent, a significant amount of vacant land and a desirable location close to downtown Denver, and strong partnership with the surrounding local and regional community, GSA began to strategize about what could be possible to not only sustain the site on a day to day basis, but renew the entire facility and position it as a major real estate force in the greater Denver community. The result was the multi-year, multi-million dollar Denver Federal Center Redevelopment Project. ■

Contact:

Lisa Dorsey Wild, AICP

Senior Project Manager

Denver Federal Center

Public Buildings Service

Rocky Mountain Region

U.S. General Services Administration

lisa.wild@gsa.gov

Finalist

Design Excellence Program/ National Register of Peer Professionals

A-13-08

Public Buildings Service Central Office

In 1994, the Office of the Chief Architect [then the Office of Fee Development] initiated the Design Excellence Program in the General Services Administration's (GSA) Public Buildings Service (PBS) to improve the quality of the work environments of its Federal customers and provide Federal buildings that instilled a sense of civic pride and value to their communities, thereby increasing the economic and social value of GSA's real estate portfolio.

The Design Excellence Program revolutionized (1) the way GSA hires architect/engineering (A/E) teams to design new and to modernize existing GSA facilities and (2) the process for developing the designs for capital projects. The program streamlined and reduced the cost of the A/E selection process, focusing on the key element in producing high quality Federal buildings — the talent and creativity of the lead designer, the person who is going to design the building and direct the A/E team, and then to hold that individual accountable for the quality of the design and meeting the programmatic requirements.

An innovative component of the Design Excellence Program is the use of distinguished private sector design professionals, i.e., ***national peers -***

- to help GSA evaluate the portfolio of the lead designer and his/her time in order to select the best team for the project, and
- to participate in reviews throughout the process to critique the design concept and its development in order to achieve the best design solution for the given budget.

National peers are appointed biennially by the Commissioner of PBS, on the recommendation of the PBS Chief Architect, to the National Register of Peer Professionals. At the outset of the Design Excellence Program, 23 people were appointed to the register—all were architects. Since then, leading private-sector professionals have grown in number and types of expertise to broaden the scope and depth of expertise of the Design Excellence Program. Today, the National Register is comprised of more than 650 distinguished professionals in every field of design and engineering, in art, and in construction management.

Since the inception of the Design Excellence Program, more than 250 buildings have been designed and constructed. The public profile of the program encompasses a stunning series of contemporary courthouses across the country, a new paradigm for land ports of entry, and leadership in sustainability with innovative buildings like the new

Federal Building in San Francisco, CA; and the new U.S. Census Bureau headquarters and the NOAA (National Oceanic and Atmospheric Administration) Satellite Operations Facility, both at the Federal Center in Suitland, MD.

The success of the Design Excellence Program is evidenced by its receipt of numerous awards, including (1) a 2003 National Design Award from the Cooper-Hewitt National Design Museum (New York, NY) for using design as a strategic tool of GSA' s mission, (2) the 2004 Keystone Award from the American Architectural Foundation (Washington, DC) for exemplary leadership that increases the value of architecture and design in the nation's culture, and (3) a 2007 Collaborative Achievement Award from the American Institute of Architects (Washington, DC) for the program's beneficial influence on and advancement of the architecture profession. ■

Contact:

Thomas Grooms

Director, Design Excellence and the Arts

Public Buildings Service

Central Office

U.S. General Services Administration

thomas.grooms@gsa.gov

DFAS Indianapolis Reconfiguration/ Compression for BRAC Migrating Workload

A-19-08 Public Buildings Service Great Lakes Region

The General Services Administration (GSA) is helping the Defense Finance and Accounting Services (DFAS) at the Major General Emmett J. Bean Federal Center (Bean Center) in Indianapolis, IN, use its resources more effectively and efficiently to better serve its customers. DFAS is the accounting organization of the Department of Defense.

The Bean Center is the largest office building in GSA's regional inventory with more than 1.6 million square feet of Federal tenant space. DFAS is the building's primary tenant, occupying nearly 1.2 million square feet.

The closing of several DFAS sites through the 2005 Base Realignment and Closure (BRAC) process caused approximately 1,700 DFAS personnel to be relocated to the Bean Center. With the influx of the new personnel, GSA worked with DFAS to determine the best course of action to help DFAS meet its office needs.

Moving the new employees to a location off site would run counter to the BRAC recommendations, and moving all of DFAS to a new location would be cost prohibitive.

The project team chose to reconfigure the existing office space. There would be many benefits to reconfiguring the DFAS space, including housing all DFAS employees in the same location. There also would be substantial savings, and it would increase organization efficiency.

These multi-phased projects require planning, design, contracting, and coordination of multiple contractors. Throughout the process, each team member focused on providing exemplary customer service by obtaining and negotiating cost effective services, ensuring consistent communication, and meeting all project deadlines. Their efforts have allowed significant savings for DFAS and further solidified the relationship and tenancy of DFAS in GSA's Federally-owned inventory.

At the beginning of fiscal year (FY) 2007, the Bean Center housed approximately 3,500 DFAS employees. Over the next three years, approximately 1,700 DFAS employees will be moving into the Bean Center. The reconfiguration project was initiated in FY 2007 when the project team worked with DFAS to reconfigure the existing 416 workstations in 97,000 square feet of office space to house 595 workstations. In FY 2008, we are reconfiguring 147,000 square feet of office space to house 737 workstations in space that currently houses 579. And next fiscal year, we plan to reconfigure nearly 300,000 square feet of office space that currently has 1,353 workstations to

allow for 1,594 workstations. All told, more than 541,000 square feet of office space will be reconfigured to house 24 percent more employees.

GSA would have needed more than 116,000 square feet of new office space for the almost 600 people. The annual rent for these employees would be nearly $1.5 million on top of the initial $4.8 million investment. Instead, GSA is spending $3.7 million on reconfigured workspaces to save more than $2.5 million initially and $8.35 million over the first five years.

Besides the financial benefits and the increased efficiency, this approach is very practical. Reconfiguring existing office space saves time and money and is transferable to virtually any workspace. DFAS is so pleased with the results of the reconfigured space in the Bean Center, that it is considering its offices in Cleveland for existing space reconfiguration to make their operations more efficient. ■

Contact:

Jill Lindquist

Project Director

Public Buildings Service

Great Lakes Region

U.S. General Services Administration

jill.lindquist@gsa.gov

Honorable Mention

Energy Savings Through Use of Electrical Timers

A-7-08

Public Buildings Service Great Lakes Region

The Public Buildings Service's (PBS) Great Lakes Region of the General Services Administration (GSA) is committed to energy conservation in the management of its Federal properties.

The GSA PBS Property Management office (Office) in the GSA E. Ross Adair Federal Building in Ft. Wayne, IN, developed a new strategy for energy conservation to add to its existing array of practices.

The Office was searching for additional energy savings at the E. Ross Adair Federal Courthouse, and reviewed every energy-consumption device to see where additional savings could be obtained.

The Office had already installed motion-detection light switches, set the adjustment of hot water in the facility to the lowest safe level, maintained the HVAC (heating, ventilating and air conditioning) system at the most efficient level while still maintaining customer satisfaction, replaced T-12 lights with energy saving T-8 lights (linear fluorescent lamps are specified by diameter size in 1/8ths of an inch — a T-8 lamp is a one-inch diameter lamp and a T-12 lamp is a one and one-half inch diameter lamp), changed various electrical motors to E-motors (energy-saving motors), and numerous other practices.

The Office concluded that it could also further improve its energy conservation efforts by addressing energy consumption by the electric water fountains. These fountains run "24/7" ("24" hours a day/"7" days a week) and cycle six to ten times per hour, consuming about 1.5 kw-hrs/day (kilowatt hours per day).

Since the Federal facility primarily operates only ten hours daily, the Office concluded that energy used for continuous water-cooling was being wasted.

The Office installed simple mechanical timers on all of the water fountains in the historic courthouse facility, saving 0.75 kw-hrs (kilowatt hours) for each unit every day without sacrificing customer satisfaction since there was no

Historic E. Ross Adair Federal Building, Ft. Wayne, IN (photo: Carol M. Highsmith Photography, Inc.)

customer presence in the building outside of business hours.

Using a conservative cost estimate of $0.10/kw-hr, the 20 water fountains in the facility use about 25 kw/hrs daily which costs about $2.50 daily. Using timers — which cost about $3.00 each and limit the usage hours to 10 hours daily — will yield a savings of about $1.50 per day. After an initial investment of $60.00 in the equipment, the payback will be in less than 40 days.

With this energy conservation practice employed in even larger Federal buildings, an even greater cost savings would be realized without affecting the usability of the drinking fountains or customer service. ■

Contact:

Kenneth Jacobson

Property Manager

Public Buildings Service

Great Lakes Region

U.S. General Services Administration

kenneth.jacobson@gsa.gov

Facility Assessment Model for Effective Portfolio Management

A-11-08

Public Buildings Service Southeast Sunbelt Region

"COMET" provides valuable facility data that can be used for facility and asset management.

The Southeast Sunbelt Region of General Services Administration's (GSA) Public Buildings Service (PBS) has developed an innovative "Level 3.5" Building Evaluation Report (BER), which fills a portfolio management need not met by either the level 3.0 Physical Condition Surveys (PCS) or the level 4.0 BERs. Through the establishment of the level 3.5 BER, the Southeast Sunbelt Region is able to enhance assessment quality by professionally conducting onsite inspections for all of the region's facilities in a cost effective manner. This new facility assessment approach is designed to provide more detail than the level 3.0 PCS at a much lower cost than the level 4.0 BERs.

Currently, GSA's Southeast Sunbelt Region has 122 facilities with level 3.5 BERs stored online within an application called Condition Management Estimation Technology (COMET). This system provides all of PBS with valuable facility data that can be used for facility and asset management. This web-based system assists with everything from ongoing facility project planning to special emergency disaster recovery efforts. Having the data online also greatly increases worker productivity by saving associates time and effort required to search for facility assessment data.

COMET provides a large amount of information through an easy to navigate interface. Data throughout COMET can be filtered to efficiently query information. COMET offers the capability to run reports, examine financial scenarios, and collaboratively plan projects. Assessment data includes information on current condition and deficiencies which GSA uses to derive a Facility Condition Index (FCI) for each facility. FCI can be used as one of the measures to estimate the necessary funding amounts for each building, or for the region as a whole.

For other GSA regions to replicate this model, the greatest initial challenge is to get all the facilities within the system and maintain a cyclical assessment schedule in

coordination with all GSA regional planners. However, the payoff is the availability of critical facility condition data that can be used to wisely plan for future projects based on factual data. The ability to more effectively apply renovation funds translates to more satisfied customers with less major issues within their work facilities.

The financial benefits offered by this system include the knowledge of the scope of work and cost of repairs for all facilities, providing an accurate reflection of GSA regional funding demands. The establishment of the level 3.5 BER and the COMET application has greatly improved the region's knowledge of the facility conditions for the entire portfolio, and the resources required to provide GSA's customers with class "A" tenant space. ■

Contact:

Ana Rawson

General Engineer

Public Buildings Service

Southeast Sunbelt Region

U.S. General Services Administration

Ana.Rawson@gsa.gov

GSA To Main Street

A-5-08

Public Buildings Service National Capital Region

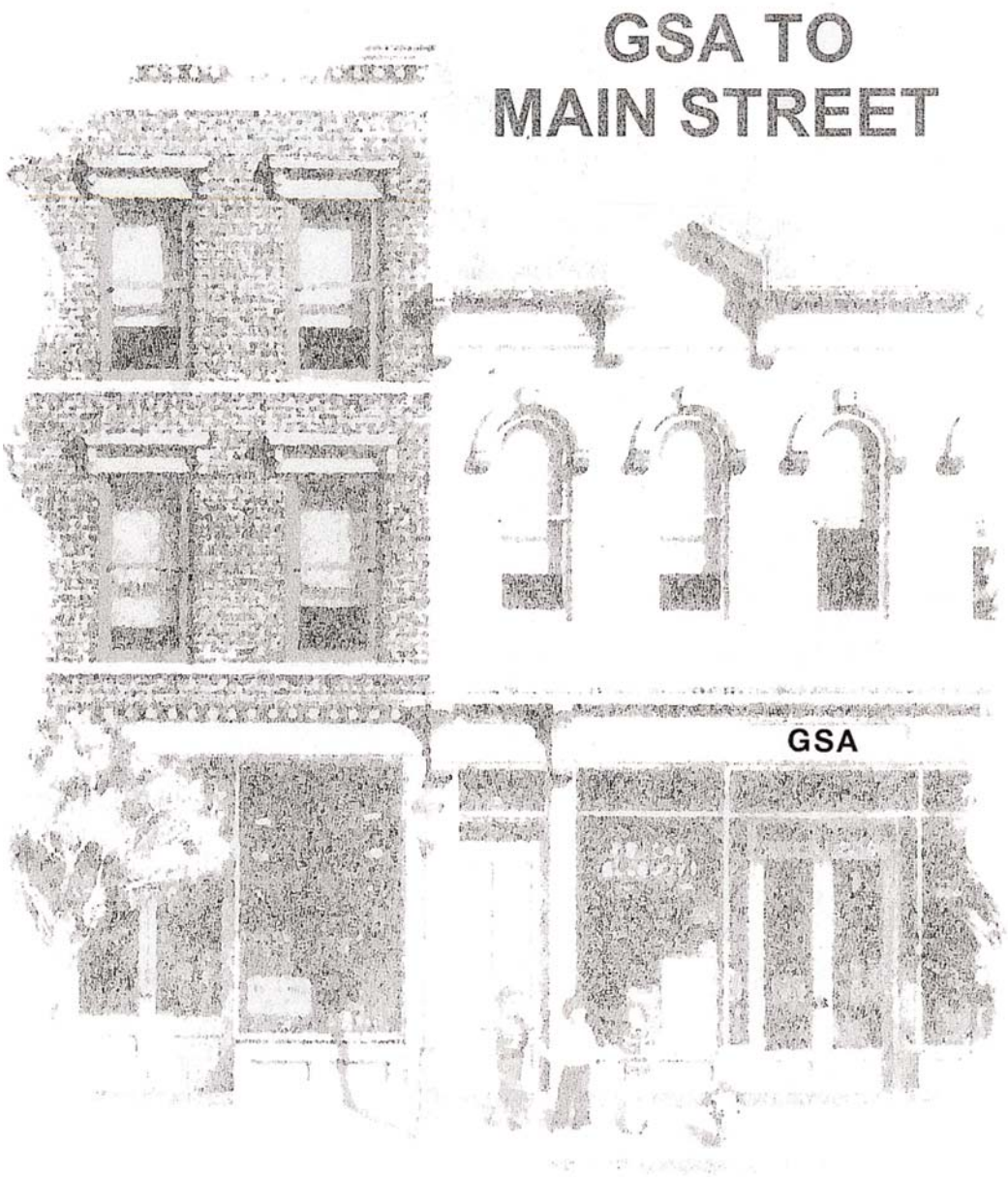
GSA To Main Street is a comprehensive program that is intended to leverage the "One GSA" philosophy toward maximizing the impact on the General Services Administration's (GSA) request for goods and services to the local level along "Main Street America." ("One GSA" is GSA's "One GSA, One Voice" business philosophy - it means that whenever GSA undertakes a project, parts of GSA partner with each other to strive for customers to see and hear only "one GSA", with one voice). These procurements are targeted to small businesses, which will additionally help to facilitate an economic revitalization locally.

GSA To Main Street is intended to bring the face of the Federal agency to the community centers of America through the establishment of state-of-the-art technological GSA Business Centers (Centers) in the top 75 Metropolitan Statistical Areas (MSA) across the urbanized United States by fiscal year (FY) 2012. (MSA - a county or group of contiguous counties that contains at least one city with a population of 50,000 or more or a Census Bureau-defined urbanized area of at least 50,000 with a metropolitan population of at least 100,000.) The Centers will meet a variety of small business and governmental purposes from providing bid rooms to telework stations for Federal employees. The Center will feature hi-speed digital connectivity, electronic security, docking stations and a computer lab. Groups served include GSA, participating Federal agencies, local small businesses and the military community.

Most entrepreneurs know that it is small businesses that move this country's economy. GSA procures over $300 billion of goods and services annually. What better way to assist small businesses and to become a catalyst for the local economy, than by doing business with the Federal government.

This proactive approach will result in an increased amount of competition that will lower the pricing the government must pay and saving the taxpayers monies.

GSA To Main Street is a long-term investment by the Federal government. This is projected to cost on an average of approximately $56 million annually, after an estimated initial investment of $11 million to setup all the Centers. This approach helps out the Federal government, as this will increase the amount of competition for goods and services, which should result in lower pricing and save the Federal government monies in the future. It is estimated that participating Federal agencies can contribute over 20 percent of the Centers' operating costs.



Prepared By:
Michael McAvinn, AICP, EDEP, RPA
GSA, National Capital Region - WPJ

February 19, 2008

There are three business development programs targeted to the military community and residents in local neighborhoods, to enhance local economic revitalization - Made-In-America Vet Business Pilot Program; Adopt-A-Vet Business Program and Home Cottage Small Business Development Program.

Also, the GSA To Main Street proactively demonstrates alternative and cost saving solutions for Federal agencies to meet their telework and COOP (Continuity of Operations) requirements. ■

Contact:

Michael McAvinn

Realty Specialist

Public Buildings Service

National Capital Region

U.S. General Services Administration

michael.mcavinn@gsa.gov

Heartland CAB Program Improves PBS

A-17-08

Public Buildings Service Heartland Region

The Public Buildings Service (PBS) Heartland Regional Office created the Customer Asset Business (CAB) Program to:

1. improve communications,
2. encourage collaboration,
3. promote intra-regional consistency,
4. foster strategic thinking, and
5. institutionalize business process improvement.

PBS's CAB has five market-based service delivery teams in the General Services Administration's (GSA) Heartland Region. The teams bring together subject matter experts from all PBS business lines to address current customer issues and anticipate future needs and changing conditions. This collaborative environment helps PBS deliver customer-focused solutions.

In addition to meeting regularly, CAB teams are supported through an on-line Dashboard developed specifically for CAB. Dashboard is a communication tool evolving into a one-stop shop housing the annual and strategic plans, measures information, current project status, standardized business processes, helpful research links, and management alerts. The Dashboard is both real-time and collaborative — helping PBS associates work together regardless of their physical location (whether in the office, teleworking, or in the field).

A truly innovative aspect of CAB is its grassroots approach to business process improvement. CAB encourages employees at every level to share their expertise in making PBS more efficient internally and more effective in our customers' eyes. Annually, associates brainstorm both individually and within their business units to propose projects that they believe will transform PBS into a better organization. CAB has applied the PBS national portfolio model as its primary review matrix — projects are evaluated based on customer factors, asset factors, market conditions, and other relevant data with a SWOT (strengths, weaknesses, opportunities, threats) analysis.

In fiscal year (FY) 2008, CAB's first full year of operation, 88 projects were submitted for consideration. Business cases were prepared and the proposals were vetted openly with all associates. Business cases and projects were improved. Boldly, 19 projects were chosen as priorities. The teams then developed action plans based on those priorities. All projects are tracked on the Dashboard, so information can be shared. At the region's Quarterly Performance Reviews (QPRs), management and CAB team leaders also share results. A mid-

management team provides governance over the process. Regional upper management is not only supportive, but praises the outcomes.

The 19 projects chosen range from "reducing building energy and water usage" to "building customer relationships." In most cases, the associates who proposed a project are on the project team, adding value and empowering them to continue to voice their opinions.

The CAB Program is built for long-term sustainability, through flexibility and accountability. The CAB Leadership Team and the five stakeholder groups review the program annually. The first review was conducted in March 2008. ■

Note: CAB Project - CAB Stakeholders identified the Whittaker Courthouse in Kansas City, MO (see photo) to be an objective for FY 2009. The objective calls for close coordination of an upcoming roof project between the project team, facilities support team and the customer relations team while setting appropriate expectations for the building tenants.

Contact:

Jill Paulsen

Communication Specialist

Organizational Resources Division

Public Buildings Service

Heartland Region

U.S. General Services Administration

jill.paulsen@gsa.gov

ID/IQ CMc Contracts Improve Cost Estimating and Project Delivery within Budget

A-22-08 Public Buildings Service Heartland Region

The GSA Heartland Region has innovatively adapted the Construction Manager as Constructor (CMc) project delivery method, previously used only on capital projects (i.e., those above the General Services Administration's (GSA) prospectus limitation of approximately $2.6 million) to below prospectus projects, through multiple award indefinite delivery/indefinite quantity (ID/IQ) contracts. (Prospectus - as part of the funding authorization process for new construction or leasing proposals valued at a certain level, GSA is required to submit a formal document, or prospectus, containing project and cost specifications to the Office of Management and Budget (OMB) and Congress). Since contract award, several projects have been completed in construction after using CMc review during the design stage and guaranteed maximum prices (GMP) to ensure delivery within budget.

For these projects, the ID/IQ CMc delivery method has:

1. lowered project change order rates from historic rates of 10-15 percent to 0.0-1.5 percent;
2. shaved two to three months off a normal six to eight month delivery process, which has lowered construction costs (through reduced overhead) and increased funds from operations for those projects by starting rent earlier;
3. virtually eliminated "bid busts," with their associated added time for re-design and lowered customer satisfaction from delivering less than what the customer was initially offered;
4. increased customer involvement, partnering and satisfaction in the design and construction process; and
5. increased the number of highly-qualified construction contractors who participate in the below-prospectus project delivery process.

CMc project delivery is not new, but it had never been applied to below prospectus repair and alterations projects on a repeated basis, through multiple award ID/IQ contracts. Key to the application has been use of "mini source selections," in which a minimal number of selection criteria are used to quickly select the best contractor for a project, based upon previous experience in the particular project type, proposed project management plan (including quality control and schedule, etc.). The use of the mini source selections has allowed GSA to award to highly-qualified contractors with experience in accurately estimating construction costs and skills in partnering and customer service. The selections have been based upon the quality of the contractors' past performance and the experience of their personnel.

Customers have been included in the selection panels, increasing their awareness of the process and the capabilities of the CMc contractors in the competitions.

The GSA Heartland Region previously used geographic-based ID/IQ construction contracts to deliver the BA54 program (below prospectus (Budget Activity 54, or BA54) program) and below prospectus level BA80 projects (below prospectus level customer funded (Budget Activity 80, or BA80) projects) for a number of years. The philosophy embraced having a group of pre-qualified construction contractors who competitively bid (lump sum proposals) each individual project at 100 percent design. While adequate, the process did not leverage the construction contractors' expertise of actual construction means and methods during the design phase to streamline designs and take advantage of alternative materials for ease of construction.

Even more importantly, that process did not take advantage of the construction contractors' intimate knowledge of material and labor costs, avoiding the design of project features that the tenants could not afford within their allowances. The result was that many projects experienced "bid busts," resulting in time-consuming re-designs and disappointed customers.

To solve this problem, the Heartland Region created new geographic based ID/IQ CMc contracts to leverage the contractors' knowledge of market conditions and increase customer satisfaction.

The innovative part of the new ID/IQ CMc contracts comes from their adaptation and application to projects previously thought to be too small to benefit from design review and cost estimating by highly qualified contractors during the design phase.

(Note: Photo illustrates project done under the floor finish ID/IQ CMc contract at Zorinsky Federal Building in Omaha, NE) ■

Contact:

Jill Paulsen

Communications Specialist

Public Buildings Service

Heartland Region

U.S. General Services Administration

jill.paulsen@gsa.gov

Lease Administration and Management Program (LAMP)

A-1-08
Public Buildings Service
Northeast and Caribbean Region

The Lease Administration and Management Program (LAMP) was developed in response to the General Services Administration's (GSA) Northeast and Caribbean Region's need to document its lease inspections. There was no way for offices to effectively track tenant concerns as well as lessor performance. This tool, which now contains over 700 leases and 10,000 inspections, has enabled GSA to focus its efforts in addressing tenant concerns which has resulted in improved customer satisfaction scores.

The automated lease administration program is both secure and interactive. The system was designed to be both a repository of critical information as well as a tool for tracking lease deficiencies with the ultimate goal of improving customer satisfaction scores in leased locations. It is anticipated that this program developed and utilized in this GSA region will become a national GSA program. Initial work has begun on this effort.

As an informational tool, each of the GSA Public Buildings Service's (PBS) service centers (each customer agency is served by a regional PBS service center which provides comprehensive property management services) can input items such as the name, address and telephone numbers of the customer and landlords, the square footage, lease and building numbers, full time employees (FTE's), locations' customer satisfaction scores and even the services that are provided by the government. The system then allows the user to intelligently analyze the leased inventory by office. Those locations that are performing below the national average can now be identified with the touch of a button.

Need to know what has been done in the past to improve the scores? Take a look at the actions taken to resolve customers concerns. We can track all utility contracts to ensure new orders are issued prior to expiration. We can also track periodic services. This enables us to ensure the lessors are providing such things as painting and carpeting in accordance with the terms of the lease. Any new employee can get an excellent overview of any lease by looking in the program without having to read hundreds of pages from the lease itself.

As a tool to improve the customer satisfaction scores, the system was designed for the service centers to input the complaints, by location, in a chronological sequence together with the specific actions taken to rectify the problem. There is a field that enables other divisions to also document responses/solutions to our customers needs. When the lease

comes up for renewal and the location is considered as a possible offeror, the GSA PBS realty specialist can use this system as an additional tool to analyze past performance. Since everyone has access to the system, any inquiry can be quickly and easily addressed. There is never a need to wait for a specific individual to obtain the status of a given issue.

Because this system was programmed using Oracle (a software relational database management system), it is easy to replicate in other GSA regions. GSA's headquarters office is considering rolling the tool out nationwide and has even included screen shots of the LAMP in PBS's Lease Administration Desk Guide. ■

Contact:

Jeffrey Sussman

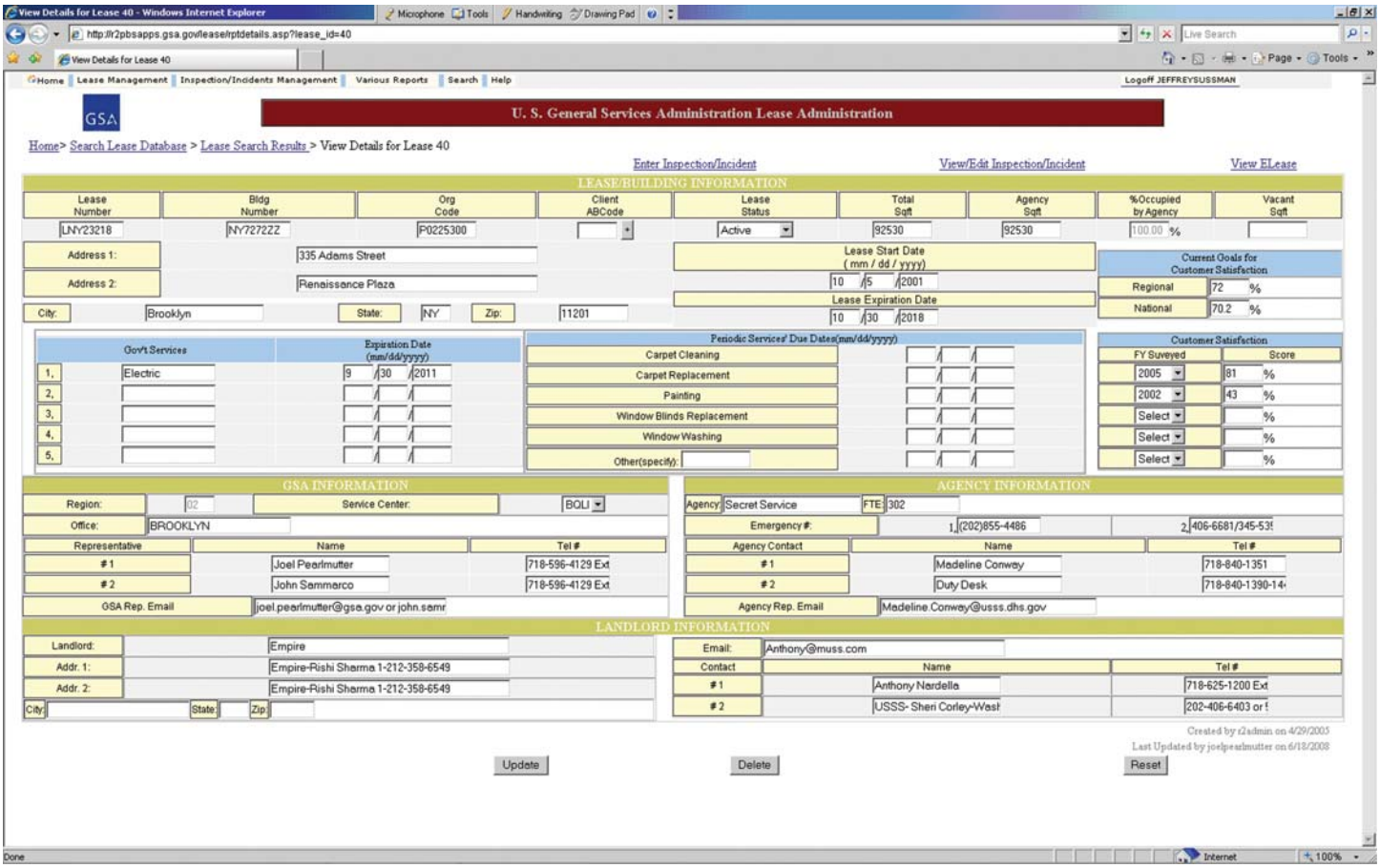
Senior Property Manager

Public Buildings Service

Northeast and Caribbean Region

U.S. General Services Administration

jeffrey.sussman@gsa.gov



Rebirth of DC's Southeast Federal Center under GSA

A-15-08

Public Buildings Service National Capital Region

The Yards at Southeast Federal Center (SEFC), in Washington, DC, represents an unprecedented effort by the General Services Administration (GSA) to redevelop an industrial site as a mixed use project that will revitalize a heretofore neglected area of the city. Operating under the authority of groundbreaking legislation passed in 2000, GSA has joined with the private sector to redevelop 42 acres of underutilized land along the Anacostia River in Washington, DC. This will create a new neighborhood consisting of two million square feet of commercial office space, 2,600 residential units, retail, cultural spaces and a six-acre waterfront park, as well as restoring and reusing six historic properties.

GSA acquired custody and control of the SEFC in 1962 and envisioned a Federal office enclave of 5.6 million square feet. The vision never materialized due to a lack of funding and the reluctance of Federal tenants to relocate to a blighted area, which caused the property to sit idle for four decades.

Following passage of the Southeast Federal Center Public-Private Development Act of 2000, GSA began a systematic process for utilizing the best practices in the private sector to redevelop the site. The legislation authorized GSA to enter into agreements with private entities to provide for the acquisition, construction, rehabilitation, operation, maintenance and use of the SEFC.

GSA began a multi-faceted process to determine the best use for the site, beginning with ULI (Urban Land Institute) sponsored workshops. GSA developed a Site Plan (GSA Plan), a zoning overlay, a programmatic agreement with historic design guidelines, parcel availability, and information on infrastructure, cultural resources, environmental remediation and flood plains. GSA collaborated with the Washington, DC's Office of Planning to develop a zoning package, partnered with the Environmental Protection Agency to design a complex remediation process, negotiated unique review procedures with the National Capital Planning Commission (NCPC) and Commission of Fine Arts (CFA) and co-sponsored the Anacostia Waterfront Initiative, along with other Federal and local agencies, to plan the revitalization of the Anacostia River shoreline.

GSA solicited developer qualifications through an enhanced Request for Qualifications (RFQ) and Request for Proposals (RFP) that required respondents to submit for master development in phases with two types of financial transaction offers (land sale and

land leases). The selection process was an open, competitive process considering a variety of factors including key personnel, site plan, design concept, schedule, financial capacity, financial offer and apprenticeship programs. Because of the complexity of the financial offers and large residential component, the selection board included members from the Federal Deposit Insurance Corporation (FDIC), Department of Defense (DoD), Patent and Trademark Office (PTO) (of the Department of Commerce) and the Department of Housing and Urban Development (HUD). Notables such as Dean of the Graduate School of Fine Arts of the University of Pennsylvania, and an Ernst & Young Urban Architect and Partner in Street-Works Development and Consulting Group, provided technical guidance to the board members.

The GSA Plan was the starting point for the developer's submission. Each developer's plan had to show in reasonable detail how the mixed used development could be achieved and how it would be consistent with GSA's goals and vision, the SEFC Act, Anacostia Waterfront Initiative and the NCPC's Legacy Plan (a plan for DC encouraging Federal building throughout the city). GSA then negotiated a detailed development agreement with the selected developer. This development project is expected to take 16 years. ■

Contact:

Victoria Hartke

Director, Property Disposal Division

Public Buildings Service

National Capital Region

U.S. General Services Administration

victoria.hartke@gsa.gov

Strategic Asset Management Solution (SAMS)

A-21-08

Public Buildings Service National Capital Region

The General Services Administration (GSA) is a leader in Building Information Model (BIM) design technology. The benefits of BIM, however, extend through the entire lifecycle of a facility — design, construction, commissioning, operations and maintenance (O&M), and disposal. BIM provides a starting point, but integrating BIM 3-D/4-D (3-dimensional/4-dimensional) drawings and information into the technology systems used to operate buildings and manage portfolios is critical to strategic asset management.

These technology systems include Computerized Maintenance Management Systems (CMMS) and Computer Aided Facilities Management (CAFM) systems to manage the building operations, Geographical Information Systems (GIS) to manage buildings over a portfolio and, of course, standard accounting and financial systems. Integration is not solely a technology problem but there are no products that successfully deliver cradle-to-grave strategic asset management.

In August 2004, the National Institute of Standards and Technology (NIST) (in the Department of Commerce) published "Cost Analysis of Inadequate Interoperability in the U.S. Capital Facilities Industry" (publication "NIST GCR 04-867").

NIST calculated that the lack of interoperability cost the facilities industry $15.8 billion per year. The study concluded that BIMs connected to facilities management systems would provide more effective management of facilities across all life-cycle phases. GSA's Public Buildings Service's National Capital Region (NCR), with its emphasis on innovation and strategic asset management, took on the challenge of moving BIM beyond design and construction and into strategic asset management.

NCR's Strategic Asset Management Solution (SAMS) provides the framework, technology, standards, methodologies and procedures for creating interoperability across disparate technology systems used throughout the life-cycle of a building. Starting with accurate, standard BIMs in the design phase and consistently updating and changing the information model through construction, operations and maintenance, renovation projects, assignment changes, and modernizations will result in efficiencies and costs savings.

As an example, consider a piece of equipment that has a generic specification at design. During construction, the contractor provides a specific piece of equipment (associated with make, model, serial number, warranty, preventive

SAMS Team photo ((from left to right) Kevin Luk, Kevin St. Clair, Terry Forline, Horatio McDowney, Robert Keady)

maintenance, replacement parts, etc.). The BIM will be updated with this information in a format that can be used by the CMMS used to operate and maintain the building. The piece of equipment along with all other building equipment will become a building inventory of assets and the CMMS is updated with this information. An O&M scope can be created based on an accurate inventory. Preventive maintenance will automatically be scheduled. If the equipment doesn't perform as expected, warranty information can be extracted from the BIM as well. In an emergency, that piece of equipment can be identified through a GIS with an exact location and information on whether it is working. During a renovation, that piece of equipment is replaced with new equipment, and the changes flow through the BIM into the CMMS — preventive maintenance begins on the new equipment and ceases for the retired equipment.

Accomplishing even this simplistic scenario requires a great deal of work setting up standards, naming conventions, technical interoperability, business processes and procedures. This is the important foundation work that NCR'S SAMS has accomplished. ■

Contact:

Terry Forline

Branch Chief

Business Solutions

Public Buildings Service

National Capital Region

U.S. General Services Administration

terry.forline@gsa.gov

1. U.S. DEPARTMENT OF ENERGY

Standard Approach to Measuring Compliance with Sustainability Requirements of EO 13423

S-13-08

Executive Order (EO) 13423, Strengthening Federal Environmental, Energy, and Transportation Management, requires Federal agencies to incorporate sustainable initiatives into their building inventories so that by 2015, a minimum of 15 percent comply with the Guiding Principles* for high performance sustainable buildings. The EO defines the outcome but does not specify the "how" of meeting the outcome.

The Department of Energy (DOE) developed a protocol that combines the assessment, tracking and reporting of progress toward meeting the sustainability goals of the EO. DOE tracks progress toward goal attainment using its corporate real property database, the Facilities Information Management System (FIMS). Because the EO establishes a governmentwide goal with implications for all Federal real property, the process was designed to work with existing real property management data elements established by the Federal Real Property Council (the FRPC was created according to provisions in Executive Order 13327, "Federal Real Property Asset Management," signed on February 4, 2004) and to leverage the Federal Real Property Profile (FRPP) database (the FRPP is a database of all real property under the custody and control of all executive branch agencies, except when otherwise required for reasons of national security, in accordance with EO 13327) through the addition of new data elements to track asset-level compliance with the goals contained in the EO. During the development of this new approach, a "Sustainability Index" was established as an outcome measure to assess agency and governmentwide progress toward meeting the EO sustainability goals.

The process begins with an initial assessment to identify buildings that cannot economically be made to meet the goals of the EO. These buildings are then accounted for within the 85 percent not meeting the guiding principles and eliminated from further consideration. The remaining buildings are subjected to a desktop evaluation to compile a prioritized list of buildings for detailed assessment by trained assessors using the Leadership for Energy and Environmental Design Existing Building (LEED® -EB) criteria. The detailed assessment yields a LEED®-EB point total for each building. Then, using a crosswalk methodology developed at DOE between LEED®-EB criteria and the Guiding Principles, the facility manager can: 1) identify buildings that already meet the guiding principles (and count toward the 15 percent goal), and 2) identify those that are close to meeting the guiding principles and can cost-effectively be upgraded.

By assigning LEED®-EB points to specific buildings, DOE can track progress in improving the sustainability of specific buildings or classes of buildings. Classes of buildings include by usage type (e.g. administrative), owning program, site or geographic location. This type of data is invaluable for setting meaningful interim goals toward meeting the 15 percent compliance target. By integrating the assessment within FIMS, the outcomes are readily visible and the progress readily transparent to the stakeholders.

Although these assessments are still on-going, significant buy-in from the DOE real property owning programs and site activities has been observed. Pilot testing is complete and the tools have been made available to each site.

(*As defined in the 2006 "Federal Leadership in High Performance and Sustainable Buildings" Memorandum of Understanding.) ■

Contact:

Peter O'Kunski

Director, Facilities and Infrastructure Policy

U.S. Department of Energy

peter.okunski@hq.doe.gov

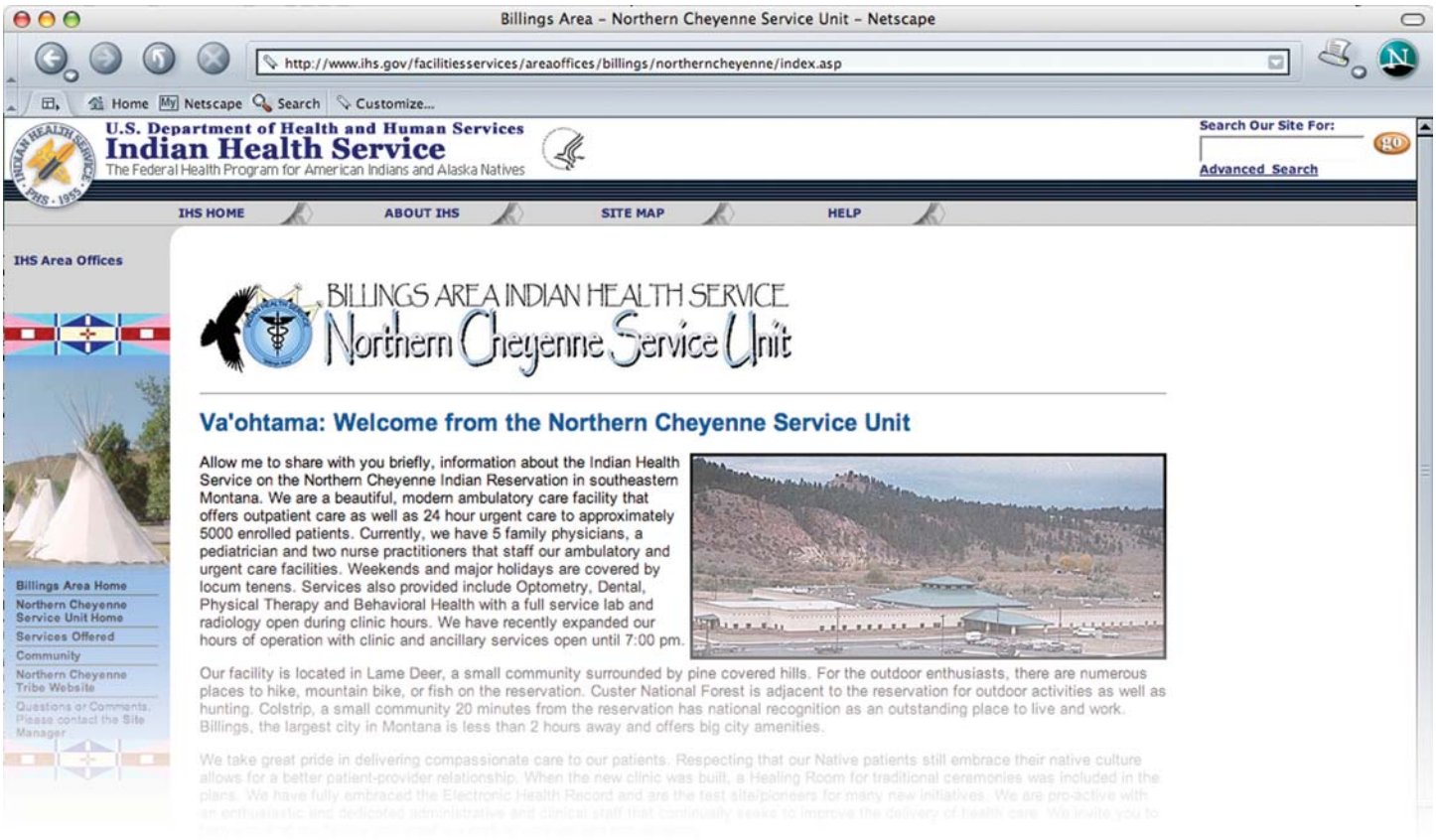
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Indian Health Service
Northern Cheyenne Service Unit
S-15-08

The Northern Cheyenne Service Unit Engineering and Maintenance Department provides an exceptional, comprehensive sustainability program for the daily successful operation of the Indian Health Service facility on the Northern Cheyenne Reservation in Lame Deer, Montana.

The sustainability program includes a variety of practices leading to healthy and high performance work environments throughout the facility.

A state of the art surveillance system, complete with recording hardware/software and interior/exterior cameras was installed providing a safer and healthier work environment for employees. This helped to foster the ability to provide extended clinic hours to the community. Touch free sensor driven sinks have been installed and maintained, improving water utilization. Lighting throughout the building has been upgraded with the conversion to energy efficient bulbs.



This department also effectively organizes our annual garbage pickup of the surrounding community. A nurse call system was installed throughout our emergency and outpatient departments to aid in patient care with efficiency and accuracy. Domestic cold water improvements in ecosystem friendly-style have been completed to provide better drinking water in the facility. They have also been integral in making our grounds a smoke-free environment.

Several large infrastructure improvements have largely contributed to the higher performance work environments. Renovation of the Environmental Health and Supply Departments provided the necessary functional division of these spaces promoting the work environment needed for their diverse responsibilities. This included installation of fire walls, wiring, ductwork, fire suppression, signage and flooring. Renovating the Health Information Management Systems Department created increased efficiency in this department. The implementation of the electronic health record system prompted the need for layout and workspace changes for function and efficiency. An outstanding layout was developed by altering current space that included an entirely new filing system that significantly increased productivity. This redesign also encompassed a paperless system, saving on resources and decreasing waste. Renovating the Physical Therapy Department provided the space for the department to acquire new equipment and go forward with new program development. This has and will continue to provide more access to the community for physical therapy services.

The Department's efforts save the facility time and money. The Department takes 100 percent care of the pristine outside facility grounds, on-campus housing and the General Services Administration's fleet of vehicles. The Department spends countless hours maintaining the buildings and grounds in perfect working condition saving on electricity, fuels, and replacement costs. The landscaping at the facility is exceptional and increases employee morale. The Department is continuously finding ways to reuse materials and is extremely cost minded and efficient. The Department's role in the success as a health care facility is behind the scenes, but the facility could not provide the services, customer satisfaction, or employee satisfaction that it does, without the Department's contributions. ■

Contact:

John Jordan

Mechanical Engineer

Northern Cheyenne Service Unit

Indian Health Service

U.S. Department of Health and Human Services

john.jordan@ihs.gov

U.S. Department of Health and Human Services
Indian Health Service
The Federal Health Program for American Indians and Alaska Natives

3. U.S. DEPARTMENT OF THE INTERIOR

Nulhegan Basin Administration Building and Visitor Contact Facility, Silvio O. Conte National Fish and Wildlife Refuge, Brunswick, VT

S-1-08

SUSTAINABILITY

FWS gets LEED® Silver for National Wildlife Refuge Facility.

The U.S. Fish and Wildlife Service's (FWS) sustainable Nulhegan Basin Administration Building and Visitor Contact Facility at the Silvio O. Conte National Fish and Wildlife Refuge, VT, was constructed on a formerly used site. It is FWS' first ENERGY STAR building (an ENERGY STAR rating means the building meets energy efficiency guidelines set by the Environmental Protection Agency and Department of Energy).

The FWS's project employed innovative approaches to maximize use of an existing site that had previously been used for commercial purposes and waste disposal.

Daylighting, energy-efficient lighting and occupancy sensors throughout, together with operable windows and a high-efficiency furnace optimize energy performance.

Landscaping with native plant species and use of low-flow fixtures conserves water. A total of 23,390

BTU/gsf (British thermal unit per gross square foot) (from the industry average) and 4,700 gallons of water were saved in fiscal year (FY) 2007, and 200 million BTU in renewable energy was used.

Building designers took a whole-building approach to sustainability with extensive use of regional, recycled, salvaged, low-emitting, and non-toxic materials. Local materials such as Vermont slate flooring and local quarter-sawn clapboards for exterior siding were used extensively. Rapidly renewable resources such as glue-laminated columns and beams for structural members reduced the need to harvest old growth trees. Wood counters salvaged from the site's previous building were used in the lobby. Materials in carpet, ceiling tiles and gypsum wallboard have a high recycled content.

Further, materials that produce toxins during their manufacture, use, and disposal were avoided to ensure the health of building occupants. Paint systems and formaldehyde-free products that emit no harmful gases guarantee excellent indoor air quality.

On April 25, 2008, the building was awarded a LEED® Silver designation under LEED®-EB v2.0 (Leadership in Energy and Environmental Design - Existing Building, version 2.0). The building has since won several more architectural design awards. ■

Contact:

David Guthrie, P.E.

Service Energy Coordinator

Division of Engineering

U.S. Fish and Wildlife Service

U.S. Department of the Interior

Arlington, VA

david_guthrie@fws.gov

Visitor Center, Ottawa National Wildlife Refuge, Oak Harbor, OH

S-3-08

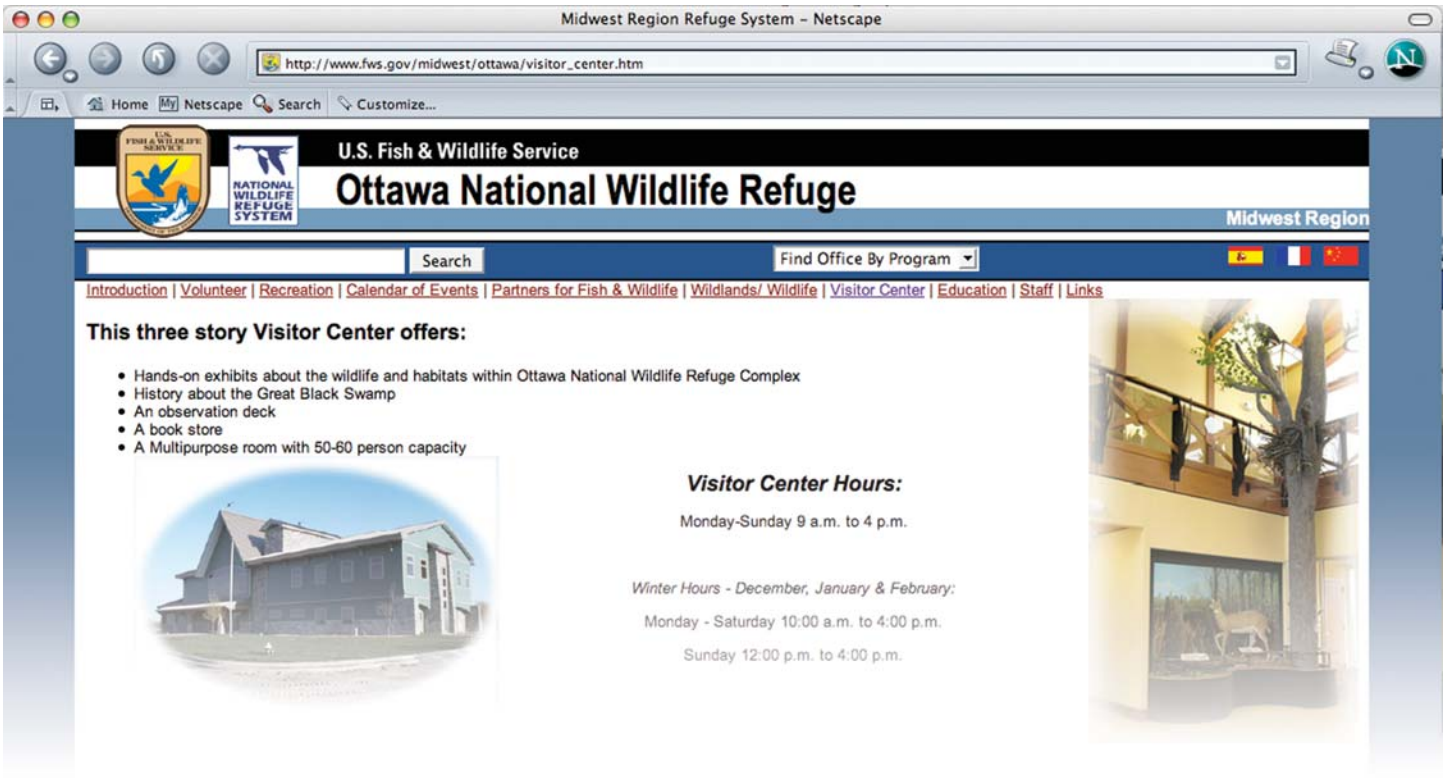
This project serves as a model illustrating and educating others about the feasibility of sustainable, high-performance building design.

The U.S. Fish and Wildlife Service's (FWS) new Visitor Center at Ottawa National Wildlife Refuge, Oak Harbor, OH, is a remarkable sustainable, high performance building showcase, designed to be equivalent to LEED® "Silver" (LEED® - Leadership in Energy and Environmental Design).

The whole-building design approach resulted in outstanding achievements that included selection of recycled materials, efficient use of energy, water conservation and runoff treatment.

Substantial energy savings were realized due to the 30-ton pond-loop geothermal heat pump system (geothermal heat pumps use the earth as a heat source or sink by means of a circulating water loop), and other energy efficiency features such as:

- an air-to-air heat exchanger,
- in-floor radiant tube heating,



- instantaneous electric hot water heaters,
- "super insulation",
- a computerized Energy Management System and associated controls,
- occupancy and daylight sensors,
- energy-efficient lighting,
- low "E" (low "E" (emissivity) glass works by reflecting heat back to its source) windows, and
- tinted window glazing.

A total of 50,222 BTU/gsf (British thermal unit per gross square foot) and 7,100 gallons of water were saved in fiscal year (FY) 2007, and 78.2 MWh (Megawatt-hour) of renewable energy was used. In addition, the building incorporates Hardie Plank siding; linoleum containing natural and recycled materials; low-VOC (volatile organic compounds) off-gassing for adhesives, laminates, and other materials; exterior decking made of recycled plastic; concrete mix containing fly ash; and high-content recycled steel in the rebar (reinforcing bar in concrete).

FWS anticipates 160,000 visitors to Ottawa National Wildlife Refuge in FY 2008. The Visitor Center will showcase the benefits of sustainability and energy efficiency and the outstanding results achieved. ■

Contact:

David Guthrie, P.E.

Service Energy Coordinator

Division of Engineering

U.S. Fish and Wildlife Service

U.S. Department of the Interior

Arlington, VA

david_guthrie@fws.gov

4. U.S. GENERAL SERVICES ADMINISTRATION, PUBLIC BUILDINGS SERVICE

Honorable Mention

Denver Federal Center - One Megawatt Solar Park

S-10-08

Public Buildings Service Rocky Mountain Region

SUSTAINABILITY

The project was conceived to help meet the Denver Federal Center's vision and goal to be "the most sustainable campus in the country by 2020"....

The Denver Federal Center (DFC) is a 600-acre secured Federal facility located in the city of Lakewood, Colorado. It is operated by the U.S. General Services Administration (GSA). The DFC was acquired in 1941 by the U.S. government and is currently used for office, research, and administrative purposes by 26 Federal agencies. There are approximately 50 active buildings and 6,000 on-site employees at the DFC. GSA is striving to make this facility the most sustainable business park in the country and pursues opportunities for sustainable development while actively employing sustainable management practices.

This project takes advantage of the plentiful solar energy available in Colorado and the opportunity that Colorado voters provided through the passage of Amendment 37 (Colorado voters passed Amendment 37, Renewable Energy Requirement, in 2004) which created a renewable energy standard for large electric utilities. This project will also help the DFC meet its obligations under the Energy Policy Act of 2005, Executive Orders 13432 (Strengthening Federal Environmental, Energy, and Transportation Management) and GSA's energy reduction goals.

The project is a one-megawatt photovoltaic solar array. It is composed of 6,192 solar panels mounted in fixed rows, facing south and tilted 20 degrees. The rows occupy a six-acre site and the energy production is estimated at 1.6 million kWh (Kilowatt hours) of electricity and renewable energy credits per year.

This project was initiated in response to a Request for Proposal (RFP) from the utility company, Xcel Energy, of Colorado. The project goal was to produce and sell the renewable energy credits from a one-megawatt solar array to the utility company while utilizing the power produced to reduce utility power demand at the DFC. The power produced during the sunny parts of the day from the solar array will reduce the DFC's peak power demand by about 10 percent. This project, while making good financial sense, is also helping the DFC campus become more sustainable and reduces its reliance on fossil fuel. The reduced reliance on fossil fuel as a result of this project results in a measurable reduction in carbon emissions.

This design-build project (design build is a design and construction process wherein a single entity is hired to perform both architectural design and construction services) was completed in six months and went online January 4, 2008. SunEdison, of Beltsville, Maryland,

was the design-build contractor who performed the work.

After six months online, the solar array is performing better than expected. More power has been produced than anticipated and this will reduce the project payback period and reduce the need for coal-generated electrical power. An interpretive path with educational waysides (roadside areas for stopping) has been installed adjacent to the array to inform visitors of the projects details and objectives. Educational tours of the facility for school groups, business groups, and the interested public are regularly scheduled and have been highly successful in displaying the project's successful performance. A public access web site is being developed to display the power produced and power production history along with information on the components and the physics behind solar power production. ■

Contact:

Douglas Porter

Program Manager

Denver Federal Center Service Center

Public Buildings Service,

Rocky Mountain Region

U.S. General Services Administration

douglas.porter@gsa.gov

Energy Initiative: Innovations in Electrical Lighting

S-12-08

Public Buildings Service Great Lakes Region

The Southern Illinois/Indiana Property Management Service Center (Center), which operates 17 Federal buildings and oversees 230 Federal lease locations, has played a major innovative role in the energy efficiency initiatives of the General Services Administration's (GSA) Great Lakes Region (Region).

Since lighting accounts for about 40 percent of a building's energy use, the Center was examining the relamping of its buildings. Only one manufacturer had a 25-watt, 41K bulb that was a direct replacement for a 32-watt four-foot fluorescent bulb. Since installing more than 20,000 of the 25-watt bulbs, the Center has received both tenant compliments and energy savings.

It was then decided to replace existing flag pole and exterior building signage lights (150-watt average) with 13-watt LED (Light-emitting diode) fixtures at most locations in the Center. At the Peoria and Carbondale Federal Buildings, we also completed replacements of exterior building accent lights (150-watt halogens) with 32-watt LED light fixtures and both parking lot and exterior building security lights (250 watts each) with 32-watt LED fixtures. We doubled the number of parking lot fixtures, creating more light than ever before while dramatically lowering energy consumption.

Finally, the Center upgraded outdated stairwell lights with unique motion sensor controlled fixtures that provide safe and dependable illumination while conserving energy. These new slim-line lights replace old fixtures that protruded from the wall three times as much. The new fixtures are UL-listed and available in a variety of standby and sensor modes for optimal energy savings.

Similarly, the Center has participated in the Region's traditional lighting efficiency efforts, which include:

- retrofitting light fixtures with reflectors and lower-wattage (32 watt) bulbs throughout office spaces, mechanical areas, and stairwells;
- installing motion sensors in restrooms, conference rooms, storage areas and other areas of infrequent use;
- using automatic controls to turn off building lights after work hours and on weekends;
- replacing traditional exit signs with ones lit with high efficiency LED lamps; and
- installing "electrical misers" on refrigerated vending machines to reduce their energy consumption by 50 percent.

The fluorescent bulb replacement has a very short two-year payback, giving the Center a total 13 percent reduction in lighting energy usage and a $30,600 per year cost savings. After we shared the technology with our lessors, they applied it to our leased buildings and gave very positive feedback. The exterior lighting LED bulbs have a full replacement warranty of three years and a life cycle of 10 years, or twice the life of the replaced bulbs. The LED bulbs have reduced energy usage by 85 percent for these fixtures, while the stairwell motion sensor lighting has reduced energy usage for these fixtures by 70 percent. The results have been measurable energy savings, improved tenant satisfaction, and meeting the Presidential mandate for GSA to reduce energy use and take the lead in energy conservation in commercial buildings. The Presidential mandate (Energy Independence and Security Act of 2007 (EISA)) requiring Federal agencies to reduce energy consumption per square foot of their buildings by three percent each year, or 30 percent by 2015 compared to 2003 energy intensity levels, is a challenge that this GSA initiative is helping to meet. ■

Contact:

Chris Fleming

Supervisory Property Manager

Public Buildings Service

Great Lakes Region

U.S. General Services Administration

chris.fleming@gsa.gov

Energy Savings through Advanced Metering and Data Harvesting

S-6-08

Public Buildings Service Greater Southwest Region

Energy Savings at Large Government Owned Buildings Through Advanced Metering and Data Harvesting

Significant energy savings result when government owned buildings are managed to avoid wasting energy. However, immediate energy data is critical in order to be able to recognize energy inefficiencies and ensure timely correction.

By the end of fiscal year (FY) 2007, the Greater Southwest Region (Region) of General Services Administration's (GSA) Public Buildings Service (PBS) had installed "advanced" digital utility metering equipment at 67 of the Region's largest buildings. The meters show building energy use on 15-minute intervals. The data is collected, stored and analyzed to determine optimal building operations and energy consumption. Data, such as outside air temperature, relative humidity, and information from building equipment (chillers, boilers, pumps and motors) are transmitted at least daily to the PBS regional headquarters office in Fort Worth, TX. The system is also connected with each building's Energy Management System. This allows equipment operating status and temperatures to be displayed graphically for any selected time period.

Using the Region's software program (known as "Dashboard"), information can be displayed, graphed, collated and evaluated from any desktop computer in GSA. The Region currently has one full time contract employee reviewing data and alerting PBS building managers of the potential for more efficient operations or about equipment problems. For example, data from the system will indicate if the air conditioning and heating are on at the same time. The problem is immediately corrected, not months later after money has been lost.

The Region began installing advanced metering equipment well before the Energy Policy Act of 2005 (Act) required Federal agencies to install advanced metering equipment in their facilities to the maximum extent practicable by the year 2012. The Region is the only GSA Region in the United States that we are aware of, to have met the Act's requirements to install such metering.

The benefits of our initiative are the following:

1. Eliminates wasted energy and reduces cost by correcting problems immediately.
2. Improves the building's operational performance.
3. Helps train building staff and contract employees on proper building operation.
4. The agency gets a better price on utility/electricity purchases due to

better building load profiles (a load profile indicates energy usage, or load, during a set time period for a building) and use history.

5. Alerts GSA regional staff to building operation or equipment that needs attention either from additional training of building operating engineers or stronger contract language and requirements.

6. Allows for more accurate tracking of the performance of energy savings measures installed at buildings.

7. Allows rapid generation of reports, or comparison evaluations of various buildings, or groups of buildings, in the Region's inventory. ■

Contact:

Jeff Nedderman

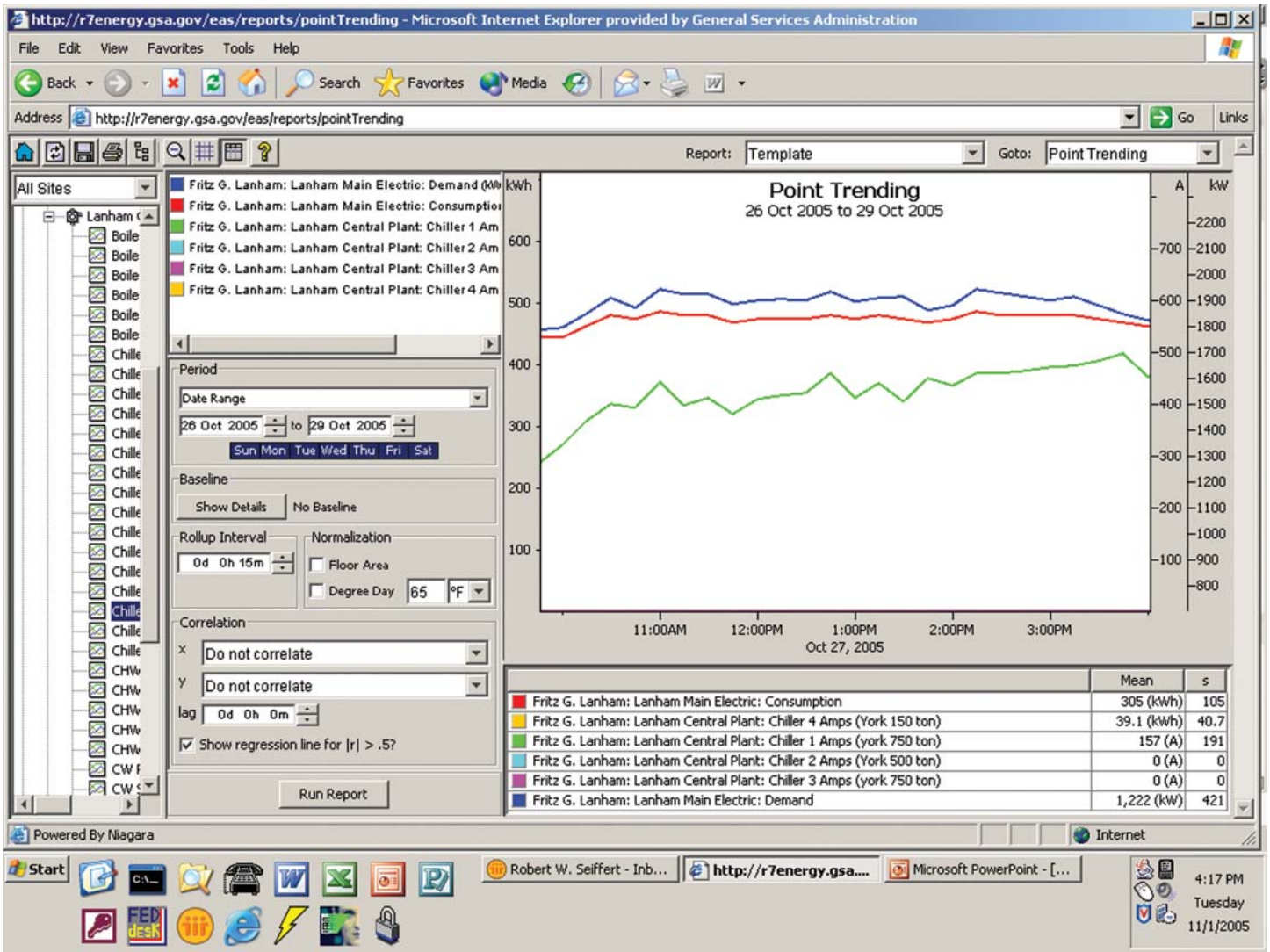
Program Support Officer

Public Buildings Service

Greater Southwest Region

U.S. General Services Administration

jeff.nedderman@gsa.gov



Field Office Information Card - Leased Facilities

S-2-08

Public Buildings Service Northwest/Arctic Region

A simple idea with huge paybacks through an informational handout — enhancing post occupancy for customers.

The Northwest/Arctic Region Eastern Service Center (ESC) Field Office of the General Services Administration's (GSA) Public Buildings Service (PBS) produced an information card to serve as notification to customers that a new office had been set up (Eastern WA/ID (Washington/Idaho) Field Office). The card advised that within this office there was a new dedicated phone number and e-mail address established that provided GSA's tenants in leased facilities easy and convenient access to the GSA Field Office.

This card provided basic steps that a tenant could follow to obtain assistance in their facility. The card listed the property management POC (point of contact), the GSA inspection POC, the Lease Administration Manager POC and all new Field Office information. The card was distributed to facility tenants during subsequent lease inspections and/or sent out via the U.S. Postal Service.

The goal of this handout was to enhance post occupancy lease administration services.

The inside of the card reads as follows:

Dear Valued Client:

This handout is being provided as a friendly reminder to you on how to obtain support for facility related issues in your leased workspace.

Option #1 (preferred and quickest method): To report any maintenance, repair or janitorial problems in your facility, please contact your building landlord: [insert name] at [insert phone no.] or [insert email address] or your designated building property manager: [insert name] at [insert phone no.] or [insert email address].

Option #2: If you are unable to contact your building landlord or designated property manager as mentioned above, please contact your GSA representative: Mr./Ms. Great Service Advocate, at (XXX) XXX-XXX or greatserviceadvocate@gsa.gov.

Option #3: In an effort to provide improved customer service, the General Services Administration (GSA) has implemented a direct Field Office contact number and e-mail address for our leased facility clients. In addition to the above "preferred" methods, you now also have the opportunity to contact the GSA Field Office directly by the following methods:

Phone: 509.353.0715 or E-mail: EasternWA.ID.servicecenter@gsa.gov

We look forward to providing you improved customer service.

"The best people, with the best business practices, providing the best work environments for customers."

Northwest/Arctic Region PBS Vision Statement

The information card initiative was shared with all four of the service centers in the GSA PBS Northwest/Arctic Region area of operations. The idea was adopted by each service center and plans to implement the idea are ongoing. ■

Contact:

Susan Brudnicki

Lease Administration Manager

Public Buildings Service

Northwest/Arctic Region

U.S. General Services Administration

susan.brudnicki@gsa.gov

GSA is Forecasting "Green" Skies at the SSA Headquarters in Woodlawn, MD

S-9-08

Public Buildings Service Mid-Atlantic Region

GSA's Social Security Administration (SSA) Operations Building Renovation Project

The Social Security Administration (SSA) Operations Building, one of nine buildings on the SSA Headquarters Campus in Woodlawn, MD, is in the closing stages of a $140 million renovation project that incorporated innovative and repeatable, sustainable and "green" building practices.

The project was substantially complete in September 2007, and included the replacement of a majority of the building systems:

- facades (including new windows),
- roofing systems,
- interior finishes,
- mechanical systems (including HVAC systems (heating, ventilating and air conditioning)),
- building automation system,
- power distribution,
- branch circuit wiring,
- emergency power,
- lighting,
- LAN/WAN (computer network designs - Local Area Network/Wide Area Network),
- telephone and data lines,
- fire protection branch piping and heads,
- domestic water distribution, and
- green landscaping (minimizes harm to the environment and conserves natural resources).

The Operations Building renovation design began in 1996 and the team began their work incorporating sustainable design as a cornerstone before the General Services Administration (GSA) required LEED® (Leadership in Energy and Environmental Design) certification for construction projects—before the U.S. Green Building Council (USGBC) even implemented the LEED® certification program! The project team's foresight into the building industry's direction toward sustainability has allowed this project and team to serve as trailblazers in sustainable construction, not only for the GSA Mid-Atlantic Region, but for the agency as a whole.

GSA, SSA, and all contracting parties worked together in an effort to provide the Operations Building tenants a facility that not only meets operational requirements, but is also environmentally friendly. This is the third building on the SSA Campus, and part of the SSA Master Plan that will achieve LEED® certification since 2002. The predecessors - the Annex Building Renovation and the new Child Care Center - were the first and third GSA buildings nationally to receive LEED® certification, helping to develop the standards now required for GSA

construction projects. Sustainability is a way of life on the SSA Headquarters Campus, and has been facilitated through this project team.

For the Operations Building renovation, more than $31 million in post-consumer and post-industrial recycled content building materials were purchased for this renovation project, including recycled content furniture and certified wood products. By incorporating construction materials recycling, the project diverted 71 percent of construction waste from going to a landfill. By featuring daylighting throughout the space, purchasing green power (electricity generated from "green" sources such as solar or wind), and educating current and future tenants about the advantages of being environmentally responsible, the project team delivered a building that is 15 percent more energy efficient than traditional industry-accepted building standards would anticipate. This all helps to contribute to the building as an inviting, healthier, and more productive working environment. Through these efforts, the Operations Building project is in line to achieve a LEED® Certified rating.

The success of this Operations Building Renovation for the SSA was truly a team endeavor. The myriad of issues and challenges associated with achieving LEED® certification were minimized with the partnering effort to achieve our common goals. The entire team's dedication, drive, and determination serves as an innovative playbook for future projects to emulate. ■

Contact:

Kyle Assed

Communications Specialist

Public Buildings Service

Mid-Atlantic Region

U.S. General Services Administration

kyle.assed@gsa.gov

Iowa Gives Energy Top Priority

S-14-08

Public Buildings Service Heartland Region

In response to the Energy Policy Act of 2005 (Energy Act) and the Executive Order 13423 (Strengthening Federal Environmental, Energy, and Transportation Management), the General Services Administration's (GSA) Heartland Region's Iowa Field Office developed an operational approach to energy management in its Federal buildings.

The Iowa Field Office took the need to meet the Energy Act's goal of reducing building energy use by 3 percent annually or 30 percent by 2015 to heart.

The GSA goal for 2015 is 53,516 Btu/GSF (British thermal unit/Gross Square Foot) and the Heartland Region goal is 58,704 Btu/GSF. For fiscal year 2008, the Heartland Region is trying to achieve 74,119 Btu/GSF.

The Iowa Field Office realized they could not reach this goal just through standard energy-saving programs, since many of the projects had already been done. They needed to go beyond and improve their operations as well as enlist help from its tenants and from local utility partnerships.

Through an aggressive training program, the Iowa Field Office educated associates embracing new methods of tracking and evaluating energy use, and partnered with outside agencies and companies.

By expanding communications, targeting specific training and improving operations, the Iowa Field Office developed an innovative business methodology for both asset management and sustainability with tremendous promise for energy reduction. These methods have paved the way for the rest of the region to replicate. ■

Contact:

Jill Paulsen

Communications Specialist

Public Buildings Service

Heartland Region

U.S. General Services Administration

jill.paulsen@gsa.gov

Winner

New San Francisco Federal Building

S-16-08

Public Buildings Service Pacific Rim Region

The building's innovative design has been lauded by the Federal government, industry leaders, local government, non-governmental organizations, professional organizations, and academics nationwide as being a model for sustainable buildings.

The new San Francisco Federal Building at 90 Seventh Street, San Francisco, CA, is an example of best practices in real property management and how, through the use of sustainable design and execution by a dedicated project team, the General Services Administration's (GSA) Pacific Rim Region is leading the way in developing healthy, high performance work environments.

Constructed at a cost of $144 million and comprising approximately 650,000 gross square feet, this 18 story edifice redefines what an office building can be, in terms of:

- reaching out to the neighboring community,
- reducing its ecological footprint through sustainable design features and performance, and
- setting forth a new paradigm for a more creative, productive and healthy workplace.

Photo: Ronald Halbe

The leadership and vision of GSA's project team, coupled with the creativity and innovation of the Pritzker-winning design team of Morphosis, produced a unique structure that capitalizes on San Francisco's temperate climate, relying heavily on natural ventilation and lighting for much of its cooling and lighting needs, thereby dramatically reducing energy consumption and cost while providing a healthy environment for the building's more than 1,500 workers. The 18 story tower and four story annex face a 35,000 square foot public plaza, which offers a welcome open space for the public as well as building tenants. In addition to the plaza, the facility includes a cafe, child-care center and conference center that are available for public use.

The San Francisco Federal Building has transformed the skyline of the Civic Center area of the city with its beautiful scrim-covered tower, visible from the freeway (Interstate 80) to the south. The tower stands out, dotted with unique architectural features such as the (outdoor) rectangular "sky garden", banded at night by

James Turrell's neon light show (light installation), and four square skip-stop elevator lobbies, that appear to look out over the "South of Market" (SoMa) area (a neighborhood south of Market Street) like surreal eyes.

It is left to the observer as to which aspect of the building is most important - its impact on the surrounding community and city, its environmental sustainability, or its healthy, "nurturing" work environment. That the building can mean so much to so many may be its ultimate tribute. ■

Contact:

Maria Ciprazo

Project Executive

Public Buildings Service

Pacific Rim Region

U.S. General Services Administration

maria.ciprazo@gsa.gov

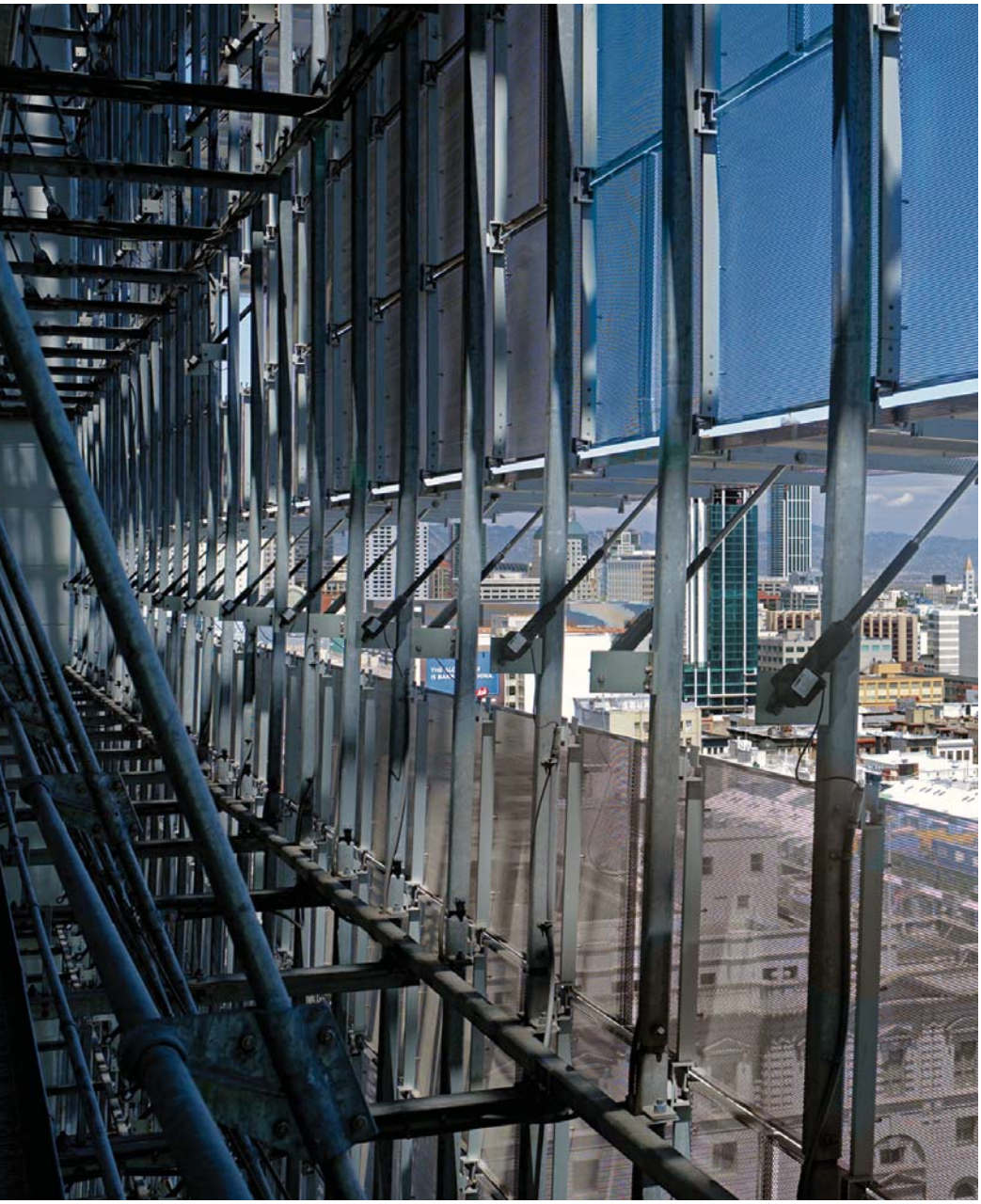


Photo: Tim Griffith/Esto

Finalist

Retro-Commissioning Lite - Reaching the Energy Target

S-8-08

Public Buildings Service Mid-Atlantic Region

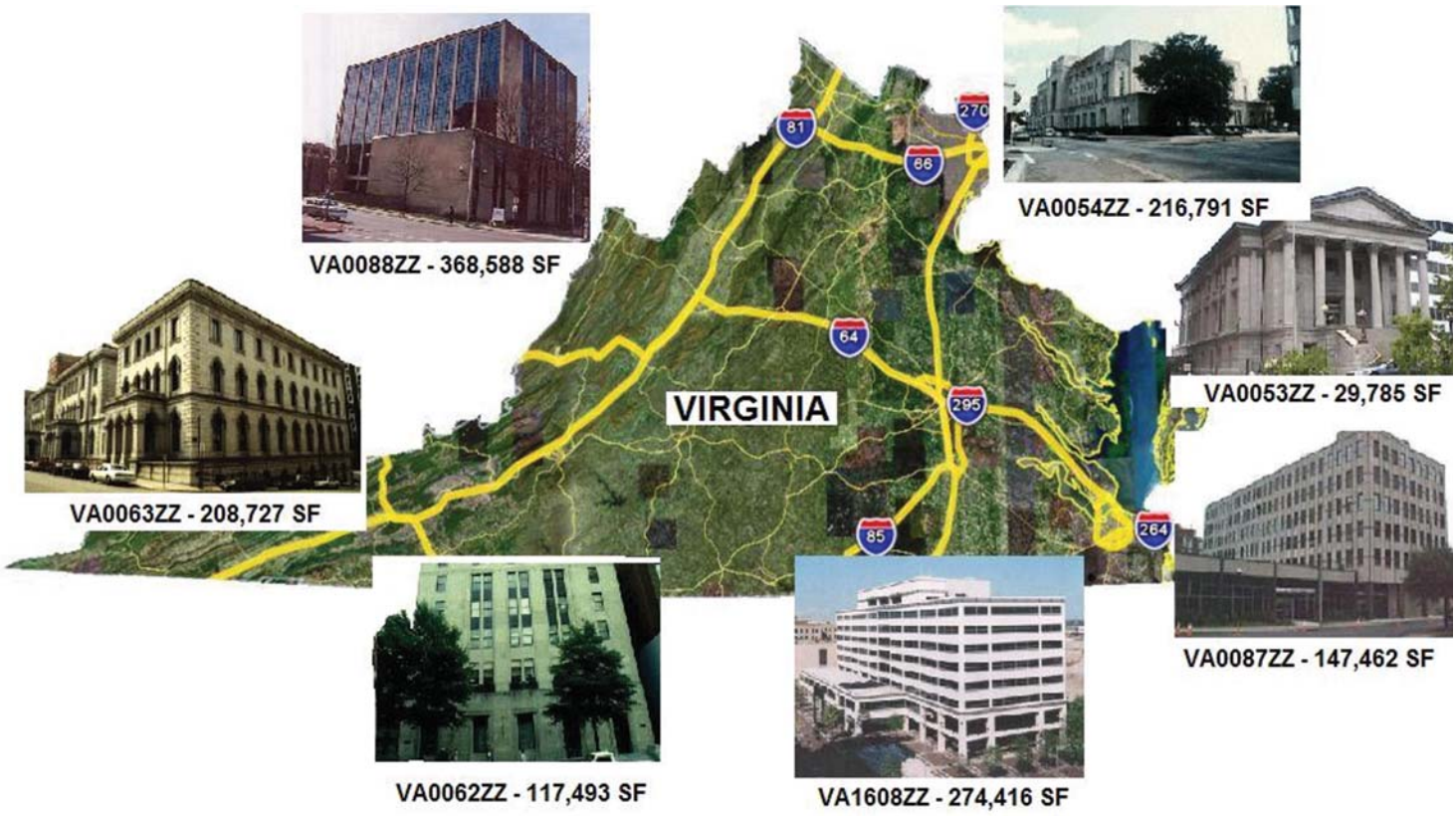
Retro-Commissioning Lite is a limited commissioning process focused on resolving the known operational shortcomings of heating, ventilating, and air conditioning (HVAC) systems to get better system performance, improve tenant satisfaction, reduce energy consumption, and control costs.

Retro-Commissioning Lite differs from the more traditional Re-Commissioning or Retro-Commissioning, in that the Lite concept considers most HVAC functions work well and generally only specific areas need focused attention. On the other hand, full scale Re-CommissioningIRetro-Commissioning have extensive requirements that look at the operation of every component of the HVAC system. This difference gives Retro-Commissioning Lite an advantage in meeting mandated energy goals quickly and cost effectively. However, the primary benefit is improved tenant satisfaction and occupant productivity witnessed by reduced complaints of poor thermal comfort and indoor air quality. After completing Retro-Commissioning Lite, many buildings obtain the added value of an ENERGY STAR rating (the rating means the building meets energy efficiency guidelines set by the Environmental Protection Agency and Department of Energy). The bronze Energy Star plaque provides both owners and tenants a positive sign of a well-managed building.

As a measure of the results of this unique approach, system performance improved along with a substantial reduction in energy consumption for the entire building inventory associated with the GSA Richmond Field office (of the Public Buildings Service's Mid-Atlantic Region). The field office achieved a 35 percent aggregate energy reduction for seven buildings totaling approximately 1.4 million square feet when compared to the fiscal year (FY) 2003 baseline. (see photo)

The Richmond Federal Building alone removed nearly 4,550 metric tons of greenhouse gas production in the last three years equaling the annual energy use of 400 family homes. The same strategies were applied between FY 2006 thru 2007 to three large Virginia facilities totaling approximately 700,000 square feet (SF) reducing their electrical usage by 1.175 million KWh (Kilowatt hour) and their natural gas consumption by 3.23 million cubic feet (32,000 therms (a therm is a unit of heat energy equal to 100,000 British thermal units or Btu)) for an additional 976 metric tons of greenhouse gas reduction. The deferred cost savings for this effort was $975,000 over the last three years.

Why use Retro-Commissioning Lite?



Retro-Commissioning Lite - Reaching the Energy Target

The program is quick and effective in reducing energy costs and improving tenant satisfaction. The Lite program is substantially less expensive than traditional recommissioning. On recent solicitations bidding for both full commissioning and Lite commissioning, the bid results were $296.836 and $89,451 respectively. This added benefit allows more buildings to be repaired at lower costs, moving our buildings towards efficient operations.

Although the intent of Retro-Commissioning Lite is not to find and solve all HVAC issues, it does reduce building energy consumption to a true baseline. Retro-Commissioning Lite finds and corrects obvious HVAC problems that are consistently reported. These include dampers not connected, schedules overridden, equipment operating in hand (manual) mode, exhaust fans operating "24/7" ("24" hours a day/"7" days a week), simultaneous heating and cooling and various other problems. The Lite concept fixes these problems, allowing the building to operate closer to the intended design. The implementation of Retro-Commissioning Lite offers GSA and other building owners the opportunity to move closer to our energy reduction targets while improving operations and controlling costs. ■

Contact:

Michael Sullivan

Mechanical Engineer

Public Buildings Service

Mid-Atlantic Region

U.S. General Services Administration

michael.sullivan@gsa.gov

U.S. Census Bureau Headquarters - A Showcase of Sustainable Building Design

S-7-08

GSA Public Buildings Service National Capital Region

...there is no other building complex like this in the world.

The 1.5 million square foot U.S. Census Bureau Headquarters, Suitland, MD, was designed to be the architectural expression of "sustainability" and a showcase of sustainable building design for the General Services Administration and the Federal government.

Set in an 80-acre woodland preserve, the two buildings comprising the Headquarters have been conceptually "cleaved" from a single mass and constructed around a central garden courtyard and other sustainably landscaped gardens.

Woodland-facing facades are clad in a unique, sustainable-oak architectural sunshade that mimics forest shapes and allows the buildings to blend into the wooded setting. Courtyard-facing facades are clad in glass embedded with a shading frit (a shading frit is made by adding ground glass particles to glass, creating integral shading), mimicking the curved shapes of the wooden sunshade. Parking structure green screens feature three seasonal varieties of climbing ivy, which act as a highly permeable "skin" of light-filtering leaves, increase oxygen levels in the garage, and allow for natural ventilation.

Scenic views are brought into the workplace year-round as the natural foliage of the woodland and landscaped gardens changes.

The interior concept features a "Mainstreet" concourse (a main underground concourse) illuminated by colors of the spectrum, which animates the spaces and assists wayfinding (navigating the space). Employee amenities along "Mainstreet" include an auditorium, library, conference center, credit union, and a cafeteria. In woodland-abutting spaces, where the outdoors provides orientation, interior color scheme is subdued natural hues.

The project was designed to LEED®

(Leadership in Energy and Environmental Design) Silver standards. According to the final Energy Analysis Report by the designer/builder, the project saves an estimated 15.8 percent in energy use as compared to traditionally designed buildings. Sustainable features include:

- water efficient landscaping;
- water retention ponds 100 percent available for onsite landscape irrigation;
- waterless urinals and low-flow faucets that reduce water use by 36.2 percent;
- green roofs (doubling as vertical pedestrian parks) that cover 50 percent of total roof area;
- regional materials (50 percent from within 500 miles);
- 75 percent (or more) recycling or salvage of construction waste;
- 10 percent recycled content in building materials;
- low-VOC (volatile organic compounds) paints and non-urea formaldehyde products;
- maximized natural daylight;
- self-dimming illumination and energy-saving lighting motion sensors;
- innovative exterior sunshade of FSC-certified wood (FSC - Forest Stewardship Council);
- garages' green screens that improve air quality;
- minimal land disturbance (buildings occupy only 50 percent of the site); and
- direct access to Metrorail (subway), and parking limited to 3,000 cars, 310 bike racks, and travel-reducing onsite employee amenities.

In short, there is no other building complex like this in the world. The complex stands as a model for future offices of the Federal government and has already become a cherished part of its setting. ■

Contact:

Jag Bhargava

Project Executive

Project Development Division

Public Buildings Service

National Capital Region

U.S. General Services Administration

jag.bhargava@gsa.gov

Photo:
Edward Hueber/archphoto.com

Wind Energy Procurement

S-5-08

Public Buildings Service Greater Southwest Region

Innovative GSA Procurement Method for Wind Energy Uses "Reverse Auction"

The General Services Administration (GSA) purchases bulk power for operating government owned buildings. Energy costs are unpredictable, volatile, and difficult to plan and budget. Through innovative wind power procurement, GSA's Greater Southwest Region (Region) is using the deregulated Texas energy market to reduce Federal expenditures for fuel and increase the use of renewable wind energy.

GSA conducted innovative competitive renewable energy wind power procurement for 103 Federal buildings located in deregulated parts of Texas (statewide). This is the first time a Federal agency purchased large scale wind generated power for widely distributed Federal facilities. This was not a "one building" public relations ploy, but a serious attempt to achieve policy goals, and to save taxpayer money, the environment and energy. These buildings have a total annual consumption of approximately 137 million kWhs (kilowatt hours) or around $12 to $15 million at prices established three years ago.

The GSA procurement package required power companies to provide at least 50 percent wind power, with the opportunity to offer more renewable energy if able to do so. Pricing is obtained on three-year, five-year, and ten-year terms. The vendors had to demonstrate technical qualifications, reliability, a hedging plan (to identify and measure risk), and show there were no adverse price impacts associated with the renewable resource (power companies often mark-up prices of "green fuels" so they are priced the same as, or higher than, fossil fuels).

GSA used a reverse auction approach, which in itself is innovative (with the reverse approach, bids decrease as suppliers compete, with the lowest bidder winning the award). In an earlier reverse auction for power, GSA saved almost $10 million. GSA became even more inventive by developing the ability to host their own reverse auctions - the first Federal agency to do so; saving well over $0.5 million in reverse auction fees in a single auction.

The Region widely publicized its wind energy procurement reverse auction and accepted proposals through June 16, 2008. On June 18, 2008, the Region pre-tested the reverse auction software tool. The reverse auction was held on June 30, 2008. The Region was very satisfied with the fact that the goals and objectives of the reverse auction were exceeded.

The benefits of this renewable wind energy procurement are many, including the following:

1. Use of renewable energy acts as a complete or partial hedge against volatile "fossil fuel" generated energy prices.
2. Generation costs for wind energy is competitive with fossil fuels.
3. Unlike fossil fuels, wind energy costs the same from year to year and is renewable.
4. The action meets statutory requirements to use more "clean" renewable energy.
5. Promotes energy independence and security.
6. Provides jobs and benefits to the local economy.
7. Greater accuracy in planning utility budgets.
8. Contributes to improvement of air quality and the meeting of environmental goals including "GHG" (green house gas) emissions reduction.
9. Establishes GSA as a national leader in effective, positive and business like environmental action.
10. Creates a new transaction model for government purchases of renewable power, which may be replicated in other competitive markets. ■

Contact:

Jeff Nedderman

Program Support Officer

Public Buildings Service

Greater Southwest Region

U.S. General Services Administration

jeff.nedderman@gsa.gov

Wind Resource Study for Land Port of Entry

S-4-08

Public Buildings Service Greater Southwest Region

Supplying electric power to the Mexico/United States (U.S.) border Land Ports of Entry (LPOE) has been a challenge to the General Services Administration's (GSA) Greater Southwest Region. In response to new national policies regarding U.S. borders, existing border facilities are being expanded and more facilities are being constructed. Many of these are remote facilities and upgrading or building new higher voltage electric transmission lines is cost prohibitive.

GSA's task is to evaluate individual remote facilities and find the most cost-effective and efficient energy source. Possible options include fuel cells, on-site generation, solar, wind, geothermal and other kinds of distributed generation, as well as upgrading, or installing, new transmission lines.

GSA project managers noted that steady and consistent winds occurred at the Land Port of Entry sites to be constructed near McAllen, TX and near Donna, TX. While the Project Managers speculated that wind energy was a viable source for the ports' electricity generation, there was insufficient information to make a business decision.

GSA chose to conduct a "wind resource study." If the study indicates that the wind resource is adequate, the agency can invest in a wind turbine installation with confidence. The Region used funding from GSA's Office of Applied Science to conduct the study for one site and from GSA Greater Southwest Region's energy funds for the other study. The Region contracted with the Department of Energy's National Renewable Energy Laboratory (NREL) for an on-site met tower (a tower used to measure the wind resource). NREL will conduct a year-long multi-season wind resource assessment and evaluation. GSA will use the study results in its business decision.

If the agency elects to proceed with an installation, the turbines will provide part or all of the LPOE's electricity supply. This action would also advance agency renewable energy use goals required under Extended Industry Standard Architecture (EISA), and by executive order (Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management) and national policy (Energy Policy Act of 2005).

Anticipated benefits from this initiative are:

1. Development of information needed to make an intelligent investment decision in wind generation of electricity on site.
2. Promotes use of clean renewable wind energy in a border region that suffers from poor air quality conditions (air quality non-attainment area (areas of the country where air pollution levels persistently exceed the national ambient air quality standards may be designated "nonattainment")).
3. Limits the expense to the government of constructing utility lines if the results of the study are favorable and discloses the "least cost" alternative to be wind generation.
4. Promotes progress toward the agency renewable energy target goals.
5. Provides a measure of independent operation from the electric utility grid in the event of loss of the grid.
6. Avoids some of the fossil fuel price risk associated with use of non-renewable energy.
7. Positions the facility to obtain Leadership in Energy and Environmental Design (LEED®) credit points using of renewable energy.
8. Acts as a "hedge" against the volatile fossil fuel energy costs that would be incurred if clean renewable energy were not to be utilized.
9. Demonstrates national leadership in use of renewable energy resources and promotes economic opportunity for "green" jobs (jobs related to the improvement of environmental quality) in the U.S.
10. Limits the agencies utility expenses going upward after construction of a wind turbine generation unit. ■

Contact:

Jeff Nedderman

Program Support Officer

Public Buildings Service

Greater Southwest Region

U.S. General Services Administration

jeff.nedderman@gsa.gov

Met tower used to measure wind resource for a U.S. border Land Port of Entry site.

Jury Information

Asset Management

Vickie Berry, Assistant Vice President for Corporate Real Estate, AT&T, Dallas, TX.

Eric Bowles, Research Director, CoreNet Global, Atlanta, GA.

Jan LeBlanc, Director, DGS (Department of General Services) Annex Complex, Pennsylvania DGS, Harrisburg, PA.

Bonnie MacKenzie, Director General, Engineering Assets Strategy Directorate, Public Works and Government Services Canada, Vancouver, British Columbia, Canada.

Sustainability

Margaret Boyce, Manager, Sustainable Buildings and Communities, Public Works and Government Services Canada, Gatineau, Quebec, Canada.

Dan Burgoyne, Sustainability Manager, (U.S. Green Building Council Board), California Department of General Services, Sacramento, CA.

Tom Newton, Private Consultant (former CertainTeed Corporation), (Sustainable Buildings Industry Council), (Board of Energy Conservation Agency of Philadelphia and Affordable Comfort, Inc.), Haverton, PA.

Lisa Shpritz, Vice President and Environmental Manager, (U.S. Green Building Council Board), Bank of America, Charlotte, NC.

Best Practices

Check out this electronic resource of over 300 asset management and workplace development best practices submitted to the GSA Achievement Award for Real Property Innovation program and available for your agency to adapt and use by checking out our website below and clicking on "award entry archives." ■

www.gsa.gov/realpropertyawards

Award program winner DOE's National Nuclear Security Administration's (NNSA) innovative Roof Asset Management Program "...has allowed NNSA to more effectively manage its $370 million portfolio of roof assets..." at six sites nationwide. (Lawrence Livermore National Laboratory, CA site shown)

U.S. General Services Administration
GSA Office of Governmentwide Policy
Regulations Management Division (MPR)
1800 F Street, NW
Washington, DC 20405