

**FOLLOW UP  
ON  
DEFERRED MAINTENANCE  
IN THE  
COMMONWEALTH**

**DECEMBER 2009**

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**Auditor of  
Public Accounts**

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**COMMONWEALTH OF VIRGINIA**

## **AUDIT SUMMARY**

Our audit of the Facility Inventory Condition Assessment System at the Department of General Services found:

- The Commonwealth's recorded deferred maintenance has increased by \$1.85 billion since the 2005 "Review of Deferred Maintenance in the Commonwealth – Final Report." In addition, agencies and institutions have recorded 871 more buildings into the Facility Inventory and Condition Assessment System (FICAS).
- Forty percent of the agencies and institutions with data currently in FICAS are not using the system as required and 44 percent are not updating data in the system due to budget restraints or lack of interest.
- The Departments of General Services and Planning and Budget are working together to make FICAS an integral part of the capital budgeting process.

We have the following recommendation for our audit of the Facility Inventory Condition Assessment System:

- Planning and Budget and General Services should continue their collaborative effort to ensure that FICAS information remains a part of the capital budget decision process, especially as Planning and Budget works to acquire a new budgeting system.
- Agencies and institutions should use the FICAS system as required by the General Assembly within current budget restraints.
- The General Assembly should consider funding the license fees for agencies and institutions use of FICAS.
- General Services should continue its efforts to ensure that all state agencies, including those not using the system, are aware of the existence of FICAS, the requirements to use it, and the support available for users.
- The State Council of Higher Education for Virginia should update their Facility Condition Reporting Guidelines, so that Council only accepts facility condition information from FICAS to ensure consistency and comparability of data between institutions.

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## FICAS BACKGROUND

The 2004 Special Session of the General Assembly directed the Auditor of Public Accounts to conduct an audit to determine the amount of deferred maintenance in the Commonwealth and propose options to fund the backlog of deferred maintenance and the ongoing major maintenance needs of the Commonwealth. We completed this audit in two phases. The first phase of the review included significant recommendations to reengineer the capital outlay and maintenance processes in the Commonwealth. In addition, we identified a means to adequately determine the deferred maintenance costs in the Commonwealth. The second phase included the acquisition of software to develop and implement a facility inventory and condition assessment system throughout all state agencies and institutions to gather information on the maintenance and capital renewal needs of all Commonwealth owned buildings. It also included oversight of the collection, analysis, and prioritization of the building assessment data needed to audit deferred maintenance costs.

Upon completion of the second phase of the audit, the Department of General Services (General Services) took ownership of the FICAS software acquired by the Auditor of Public Accounts. This report will discuss how General Services has performed their responsibilities as system and program administrator, the status of the amount of deferred maintenance in the Commonwealth, as well as recommendations on how to further the use of FICAS within the capital budget process.

The following is a summary of the first phase from the report “Interim Review of Deferred Maintenance in the Commonwealth” issued December 2004 as well as the second phase from the report “Review of Deferred Maintenance in the Commonwealth – Final Report” issued December 2005.

### ***Summary of Interim Review of Deferred Maintenance in the Commonwealth***

During the “Interim Review of Deferred Maintenance in the Commonwealth,” we identified that there was not a complete inventory of all Commonwealth-owned buildings, their components, and their current physical condition. In addition, the Commonwealth did not provide agencies and institutions with any policies or guidance on how to maintain facilities. The Commonwealth’s capital outlay and maintenance processes were not functioning as intended and would continue to accelerate the growing deferred maintenance backlog if not reformed.

The Commonwealth also approaches building ownership as if the buildings have an infinite life. Most agencies did not analyze the benefits of replacing an old building with a newer, more efficient building. In addition, not only are the Commonwealth’s buildings deteriorating; they do not fulfill the needs of the agencies’ and institutions’ missions. Technological advancements, programmatic and social changes, and economic fluctuations over the years have changed the way the Commonwealth does business and the resources needed to do business.

### ***Summary of Review of Deferred Maintenance in the Commonwealth – Final Report***

During the final “Review of Deferred Maintenance in the Commonwealth,” we acquired software and personnel training to develop and implement a facility inventory and condition

assessment system for all state agencies and institutions. We determined that the best method of collecting this information was through facility condition assessments and that the results of these assessments should reside in an automated central system. We acquired and deployed Vanderweil Facility Advisors' (VFA) Facility Inventory and Condition Assessment System (FICAS). To help increase consistency and reliability of the assessment data, each participant in the program received training on how to perform assessments and use the system.

The Directors of the Departments of General Services and Planning and Budget issued criteria on June 16, 2005 defining which facilities were the subject of data collection. These criteria not only defined those facilities for which condition assessments are not necessary but provided guidance on which facilities to assess.

These criteria required all state agencies and higher education institutions to record the following information in FICAS by September 1, 2005:

1. An inventory record for every facility for which they are responsible.
2. Condition information obtained through either a life cycle assessment or facility condition assessment for every facility for which they had made a capital request for the 2006 - 2012 period.

We performed extensive audit testing at eleven agencies and institutions of higher education based on preliminary analysis of the data entered into FICAS. This audit included assessment observations, LCA tool reviews, existing assessment data import analysis, and analytical reviews of assessment data entered into FICAS.

In addition to the detailed testing mentioned above, we completed additional analytical procedures for all other agencies and institutions that had data in FICAS. These procedures included reviewing the asset size, year constructed, asset numbers, asset use, cost models assigned, system name, requirements, actions, and costs.

Through the building assessment process and population of FICAS, we were able to determine vital statistics for the Commonwealth's buildings. As of October 11, 2005, there was \$1.492 billion in deferred maintenance in FICAS, with a total of \$1.844 billion in requirements. The Commonwealth owned over 10,449 buildings, which included approximately 128.2 million square feet of building space. The buildings had a replacement value in FICAS of \$9.2 billion.

We recommended the following items for consideration in the final Deferred Maintenance report:

- requiring periodic detailed facility assessments for every Commonwealth-owned building.
- requiring agencies to perform a life cycle cost analysis, not only during the planning phase of a building, but once the building reaches the point when it is time to replace major systems and no later than when the cumulative cost of the

needed repairs and replacements reach 60 percent of the current replacement value of the building, or has a Requirements Index of 0.60.

- establishing policies and procedures for agencies and higher education institutions to collect, summarize, maintain, and update building assessment information by building tailored for the Commonwealth based on the manuals and guidance used during the initial population of FICAS.
- requiring all agencies to complete at a minimum a life cycle assessment, but preferably a facility condition assessment.
- establishing one uniform and consistent reporting mechanism across all state agencies and institutions of higher education to request capital outlay while making use of the FICAS system and the information it contains.

## FICAS IMPLEMENTATION AND USE

### *General Services Internal Changes*

When General Services first undertook responsibility of FICAS in May 2006, the Chief of Maintenance and Operations in the Bureau of Facilities Management was in charge of the system. The Chief of Maintenance and Operations developed the first FICAS Implementation Committee in 2006 in order to get agency participation in furthering system implementation. After the development of the FICAS Implementation Committee, General Services did very little to move the implementation of the system forward. The Committee only met a few times during 2006. The progression of the system slowed for approximately two years.

At the same time as acquiring the system, General Services underwent some significant changes in personnel, which had a direct effect on the system's utilization. The Director of the Division of Engineering and Buildings became the Director of General Services in January 2006 and hired a new Director of Engineering and Buildings in December 2006. In October 2007, the Director of Engineering and Buildings established a new FICAS Implementation Committee to kick-start the use of the FICAS system since agencies were not using the system as required. The Chief of Maintenance and Operations was on extended leave and officially retired in November 2008.

At that point, FICAS responsibilities moved to the Project Management Division within the Bureau of Facilities Management at General Services. At the end of 2008, the Director of Engineering and Buildings decided that his Office would have a role in the FICAS system to ensure that they maintained a statewide perspective. The Bureau of Facilities Management provides guidance for the system from a technical perspective and functions as the General Services and statewide FICAS coordinator. The Director of Engineering and Buildings' Office is responsible for FICAS contract administration and statewide agency use of the FICAS system.

## ***FICAS Implementation Committee***

In March 2009, the FICAS Implementation Committee became the FICAS Steering Committee. The Steering Committee has twenty members from 15 state agencies and institutions of higher education as well as a member from VFA. The purpose of the Steering Committee is to make sure that FICAS meets the needs of the user agencies and institutions of higher education as well as the needs of General Services and the central agencies that implemented FICAS. The Steering Committee meets every three to six months or as needed. Sub-committees may meet individually and then report to the Steering Committee at the next meeting.

The Steering Committee has helped develop the FICAS policies and procedures manual as well as the maintenance reserve and capital budget planning tool within FICAS. Various members of a FICAS sub-committee including James Madison University performed beta tests of VFA.auditor, which replaced the Life Cycle Analysis tool, to determine if it met the needs of the Commonwealth. We discuss these items in more detail later in this report.

James Madison University is also in the process of working with VFA on an interface between VFA's Assetfusion, which is a module within FICAS, and James Madison's AssetWorks FacilityMAX, which is a work order based computerized maintenance management system. This project is currently in the design and development phase and will take approximately one year to complete. Currently James Madison plans maintenance work in FICAS and executes the work in AssetWorks. The goal is to synchronize data in the two systems instead of manually re-entering data to create work orders or projects in AssetWorks. James Madison is absorbing the cost of this project because they believe in the benefits and efficiencies it will provide. FICAS has the ability to interface with any computerized maintenance management system. However, General Services has not made this a requirement.

The FICAS Steering Committee has been an integral part in furthering the use of FICAS. As a result, we recommend that General Services continue to use the FICAS Steering Committee to address FICAS system use, improvements, and concerns.

*Recommendation #1: We recommend that the Department of General Services continue to use the FICAS Steering Committee to address the FICAS system use, improvements, and concerns.*

## ***System Requirements***

The FICAS Steering Committee developed FICAS policies and procedures that outline the requirements for agencies and institution's use of the FICAS system. The requirements are:

- Take immediate action to record building condition information in the FICAS system.
- Enter all buildings and their condition information for which agencies will be making capital budget requests in 2010 in FICAS no later than September 2009.
- Enter all other buildings and condition information into FICAS by May 2010.

- Re-assess facilities every five years, at a minimum. Preferably, one-fifth of an agency's real estate portfolio should be re-assessed each year. A re-assessment may be a full facility condition assessment performed by trained professionals (in-house or contracted) or a VFA.auditor survey.
- Record all state-owned buildings in the FICAS system.
- A full facility condition assessment or equivalent should be completed and recorded in FICAS for all facilities, within the limits of available resources, unless one of the following conditions applies:
  - No evaluation is necessary and the facility does not need to be recorded in FICAS:
    - if the facility is abandoned or condemned and there is no planned future use based on the agency or institution's land use plan; or
    - for any other covered facility that the agency or institution chooses to exclude and has been specifically requested and approved by the Department of Engineering and Buildings.
- An evaluation short of a full condition assessment is acceptable if:
  - a facility is less than ten years old;
  - the facility totals less than 2,500 gross square feet; or
  - the facility is small or specialized in nature, such as a Virginia Department of Transportation chemical dome or spreader rack, picnic shelter, barns and storage sheds, monuments, utilities infrastructure systems, or any facility with a temporary occupancy permit or any structure that is constructed which does not require a building permit.
- If an asset does not meet the criteria outlined above, agencies and institutions should determine which assets are in need of assessment by observing the system and requirement records. Agencies and institutions must assess the asset if:
  - no system records exist for an asset in FICAS,
  - no requirement records exist for an asset in FICAS and the facility is more than ten years old, or
  - requirement records exist and the "Inspector" field is "LCA Tool."

- Agencies and institutions have specific requirements they have to enter in FICAS for each assessment requirement.
- Line items used to develop requirement costs should include, when possible, all construction related costs, including demolition, using the RSMeans costing database that is imbedded in FICAS. Line item costs should not include design, contingency, or other “soft costs” related to a requirement.
- Agencies and institutions should complete quality control reviews annually to ensure data are accurate and relevant.
- Once agencies and institutions enter building and condition information into FICAS, they must update it when maintenance work or project work is completed.

General Services does not require agencies and institutions to include the percentage of funding sources related to the building. The percentage of funding sources for a building should be required because the Department of Planning and Budget, House Appropriations, and Senate Finance need to be able to distinguish between funding sources since they make funding decisions based on the source of project funding. The decision making process is not meaningful if the funding sources are not considered. We recommend that General Services make the percentage of building that is general fund, special fund, auxiliary fund, or other a required field in FICAS.

*Recommendation #2: We recommend that General Services make the funding source percentage a required field in FICAS.*

### ***System Support***

General Services has provided many different support mechanisms for state agencies to continue using the FICAS system. These support mechanisms include a FICAS website, General Services’ FICAS email account, technical staff support, FICAS coordinators for each agency, no cost FICAS trainings, streamlined FICAS trainings, and a FICAS practice site.

#### FICAS Website

The FICAS website ([www.dgs.virginia.gov/FICAS](http://www.dgs.virginia.gov/FICAS)) includes information regarding the implementation of FICAS by the Auditor of Public Accounts, a listing of FICAS Coordinators for agencies and how to contact them, trainings provided, policies and procedures, a link to the FICAS email account (explained in detail below), contact information for individuals at the Division of Engineering and Buildings, and a link to the FICAS system log-on.

#### FICAS Email Account

General Services developed a FICAS email account, [FICAS@dgs.virginia.gov](mailto:FICAS@dgs.virginia.gov), where FICAS Coordinators, FICAS users, or agency and institution staff can email questions regarding the FICAS system. However, VFA handles all technical issues or system operation questions.

## Technical Staff Support

Engineering and Buildings has two employees that have responsibility for FICAS. They work together with the Director of Engineering and Buildings to answer agency questions regarding the system. They have direct access to the FICAS email account mentioned above.

## FICAS Coordinators

Engineering and Buildings contacted each agency and asked them to designate a FICAS Coordinator. The FICAS Coordinator is responsible for answering FICAS questions within the agency, acting as a resource for other FICAS Coordinators, maintaining agency FICAS access needs, and receiving billing information for FICAS licenses. A listing of the FICAS Coordinator's and their contact information is included on the FICAS website mentioned above.

As of May 2009, 47 out of 52 agencies and institutions with detailed data currently in FICAS have designated FICAS Coordinators. There are 43 other agencies with only building inventories in FICAS that do not have coordinators.

## Training

General Services has held nine basic FICAS training sessions since the issuance of the "Review of Deferred Maintenance in the Commonwealth – Final Report" in December 2005 with the most recent training taking place in October 2009. The basic training sessions consist of a two-day class covering the use of the entire FICAS software product, including the most recent updates. It covers aspects of the asset, funding, reports, projects, and budget modules, thus enabling participants to manage and modify existing data, pull reports using existing data, run what-if funding scenarios, and understand how to combine requirements into projects.

In addition to these training sessions, Virginia Polytechnic Institute and State University held Facility Infrastructure Certification Program training in 2007 for its employees and the Department of Transportation held four Facility Infrastructure Certification Program trainings in 2008 for its employees. The Facility Infrastructure Certification Program certifies employees to perform facility condition assessments and enter data into the FICAS system.

Currently, General Services offers FICAS training when there are enough interested individuals to fill a classroom. If individuals need training, they contact their FICAS Coordinator and have them submit a training request form using the link on General Services' FICAS website. General Services will contact the agency with training dates and times once they schedule the next class.

General Services and VFA recently released a new FICAS training program for agencies. The Introduction to FICAS is on-line and available through the Commonwealth's Knowledge Center. This course is a prerequisite to become a FICAS user. Once an individual completes the on-line training, they can attend a one-day Basic Training, which is an onsite training class conducted by VFA. There are also On Demand Training Modules and Advanced Training. The On Demand

Training Modules are recorded web-based demos that users access through the FICAS system or General Services' FICAS website. Topics currently include "How to Login to FICAS," "Basic Navigation," and "Productivity Tools."

### FICAS Practice Site

General Services worked with VFA to develop a practice site where users can log in and practice entering data into FICAS without affecting the data maintained in the system. As of April 2009, VFA made this site available to all users through a link on the FICAS home page. Once a user has logged into FICAS there will be a link on the right hand side of the home page for the FICAS Practice Site. You must log on to the practice site using that link then anything entered into the system will be entered into the practice site. There are locations and buildings preloaded on the practice site but users can copy others over to the site.

### ***FICAS Policies and Procedures Manual***

In March 2009, the Department of Engineering and Buildings developed a draft FICAS policies and procedures manual based on meeting with the Steering Committee. General Services presented the manual to the Steering Committee and central agencies that implemented FICAS for review and comments to ensure all of the desired elements were included in the manual. The Department of Engineering and Buildings distributed the final version of the FICAS policies and procedures manual to all state agencies and institutions of higher education in May 2009.

The manual included requirements for using the FICAS system as well as system basics and administration, adding and editing information in FICAS, and definitions relating to the system and acronyms used in the manual. We discuss the requirements in the "System Use" section of this report.

In 2005, General Services entered data into FICAS for agencies with few buildings if they met the requirements. This process has since changed and the final manual does not specifically outline current requirements for these agencies. If the agencies are unaware of the requirements, they will neglect updating the information in the system. We recommend that General Services formally notify these agencies of their FICAS requirements.

<p><i>Recommendation #3: We recommend that General Services formally notify agencies with few buildings of their FICAS requirements given the fact that General Services does not specifically outline their requirements in the FICAS policies and procedures manual.</i></p>
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### ***System Changes***

FICAS is a web-enabled Oracle database application, which is a configurable "out of the box" application hosted by VFA and requires licensed users to have only a web browser and internet connection to use the application. Each year FICAS goes through regular system upgrades which are not requested by the Commonwealth and do not cost anything for the users. There have been approximately eight FICAS system upgrades issued globally to all users since 2005, which have

brought about many system changes and improvements. Appendix A discusses system changes and improvements.

## DEFERRED MAINTENANCE UPDATE

### *Status of Agency and Institution Use*

During our review, we surveyed 52 of the 95 agencies and institutions with buildings or data currently in FICAS to determine how they use the system. We received responses to this survey from all of the agencies and institutions including eight Department of Transportation Districts and the Central Office as well as 15 of the Commonwealth's Community Colleges. We determined that 21 agencies and institutions (or 40 percent) are not using the FICAS system as required and 18 agencies and institutions (or 35 percent) are not updating data in the system. In addition, seven of the Transportation Districts (or 88 percent) are not using the FICAS system as required nor updating data in the system. Agencies not using the FICAS system as required had initial building information and some building assessments included in FICAS but the agency has not touched FICAS since the initial implementation.

The chart on the next page shows agencies and institutions as well as Transportation Districts that are not using FICAS as required nor updating data in FICAS.

Many of the agencies and institutions cited budget cuts or lack of funding as a reason for not using the system as required. However, a few agencies and institutions stated they were not using the system by choice. In today's economy, it is understandable that agencies and institutions will need to make cuts. However, using FICAS will allow agencies and institutions to better assess the conditions of their buildings and in turn help in determining what capital budget requests are critical. Using the system could result in additional funding for a building project because of a more accurate assessment.

We recommend that agencies and institutions use the FICAS system as required by the General Assembly within the current budget constraints. Agencies and institutions should at least perform a full facility condition assessment on those buildings that they are submitting capital budget requests for during the 2010 – 2016 capital budget period. Once these buildings have been assessed agencies and institutions should cycle assessments for buildings until they have assessed all of their buildings. In addition, we recommend that the General Assembly consider funding the license fees for agencies and institutions to use the FICAS system.

<b>Summary of Status of Use</b>		
<b>Agency/Institution not using FICAS as required</b>	<b>Agency/Institution not updating data in FICAS</b>	<b>Transportation Districts not using nor updating data in FICAS</b>
Department of Alcohol and Beverage Control	Department of Alcohol and Beverage Control	Department of Transportation – Bristol
Department of Aviation	Department of Aviation	Department of Transportation – Culpeper
Department of Conservation and Recreation	Department for the Blind and Vision Impaired	Department of Transportation – Fredericksburg
Department of Forestry	Department of Forestry	Department of Transportation - Lynchburg
Department of Game and Inland Fisheries	Department of Military Affairs	Department of Transportation – Northern Virginia
Department of Juvenile Justice	Department of Behavioral Health and Developmental Services	Department of Transportation – Richmond
Department of Military Affairs	Department of Mines, Minerals, and Energy	Department of Transportation – Salem
Department of Taxation	Department of Taxation	
Frontier Culture Museum of Virginia	Library of Virginia	
Gunston Hall	Marine Resources Commission	
Library of Virginia	Science Museum of Virginia	
Marine Resources Commission	State Corporation Commission	
Richard Bland College	Virginia Institute of Marine Science	
Science Museum of Virginia	Virginia Museum of Fine Arts	
State Corporation Commission	Virginia Port Authority	
Virginia Institute of Marine Science	Virginia Retirement System	
Virginia Museum of Fine Arts	Department of Veterans Services	
Virginia Port Authority	Woodrow Wilson Rehabilitation Center	
Virginia Retirement System		
Virginia School for the Deaf and Blind – Staunton		
Department of Veterans Services		

*Recommendation #4: We recommend that agencies and institutions use the FICAS system as required by the General Assembly within the current budget constraints. Agencies and institutions should at least perform a full facility condition assessment on those buildings that they are submitting capital budget requests for during the 2010 – 2016 capital budget period. Once these buildings have been assessed agencies and institutions should cycle assessments for buildings until they have assessed all of their buildings.*

*Recommendation #5: The General Assembly may wish to consider funding the license fees for agencies and institutions use of FICAS.*

As of March 2009, there were 4,400 unassessed buildings in FICAS. These buildings only have inventory records in FICAS. The agencies mentioned above account for 2,566 (or 58 percent) of these buildings. The rest are small agencies with few buildings each. The majority of the buildings are associated with the Department of Conservation and Recreation and the Department of Transportation. We recommend that agencies and institutions assess all of their remaining buildings and record the results in FICAS. Without this information in FICAS, the Commonwealth does not have a complete understanding of its maintenance needs, which could lead to inadequate or misdirected funding.

*Recommendation #6: We recommend that agencies and institutions assess all of their remaining buildings and record the results in FICAS.*

In 2009, the State Council of Higher Education for Virginia (Council) changed their method of collecting facility condition data from the Higher Education Institutions. The Council gave the institutions the option of using FICAS to obtain the facility condition index data or submitting the old facility condition report used prior to implementation of FICAS. Only a few institutions did not use FICAS for their facility condition index data. However, it appears that all higher education institutions are using and updating FICAS. The Council has not documented this change in their Facility Condition Reporting Guidelines. We recommend that the Council update these guidelines so that they reflect the current procedures. We also recommend that Council only accept facility condition information from FICAS to ensure consistency and comparability of data between institutions.

*Recommendation #7: We recommend that the State Council of Higher Education for Virginia update their Facility Condition Reporting Guidelines so that Council only accepts facility condition information from FICAS to ensure consistency and comparability of data between institutions.*

### ***Comparison of Current Data to 2005 Data***

The Commonwealth owns over 11,320 buildings, which includes approximately 133.5 million square feet of building space. The buildings have a replacement value in FICAS of \$24.7 billion. The chart below compares the significant vital statistics of the Commonwealth's facility portfolio in FICAS in 2005 as reported in "Review of Deferred Maintenance in the Commonwealth – Final Report" to 2009.

Based on the comparison, we found that the number of buildings recorded in FICAS increased by 871, which includes approximately 5.4 million additional square feet of building space. The buildings replacement value increased in FICAS by \$15.4 billion. These increases are a result of agencies recording additional buildings in FICAS and performing condition assessments that they had not previously recorded in the system. In addition, values have increased in the system because VFA adjusts the RS Means cost data for inflation each year.

<b>Vital Statistics of FICAS</b>			
	<b>As of October 11, 2005</b>	<b>As of March 25, 2009</b>	<b>Variance</b>
Total amount of deferred maintenance*	\$1,492,383,978	\$3,342,436,180	\$1,850,052,202
Total number of buildings	10,449	11,320	871
Total building square footage	128,180,246	133,587,528	5,407,282
Average age of building	36 years	52 years	16 years
Total replacement value*	\$9,240,241,351	\$24,708,160,454	\$15,467,919,103
Number of requirements	48,630	94,172	45,542
Total cost of requirements*	\$1,844,071,744	\$5,614,828,777	\$3,770,757,033
Total number of users	208	189	(19)
Total number of state employees trained**	273	402	129

\*Amounts include construction costs only; no soft costs.

\*\*Some of the attendees in the 2005 training sessions attended both the Assessor and Manager training classes. The above numbers reflect the number of students who attended each class, including people who may have attended more than one class.

The chart below shows a comparison of the requirements by priority and their total costs for 2005 as shown in the “Review of Deferred Maintenance in the Commonwealth – Final Report” and 2009. A requirement is a facility need including deferred maintenance, code compliance issues, functional requirements, and capital improvements. A user assigns a priority to each requirement. A priority is the severity of a requirement and the scheduled time frame for correcting the deficiency.

The assessment data populated in the system brings to light the ever-growing backlog of deferred maintenance. As of March 25, 2009, the assessed buildings comprise the total backlog of deferred maintenance of \$3.34 billion. Of this backlog, there are approximately \$2.1 billion in requirements that need immediate attention. The \$2.1 billion consists of those requirements assigned a priority one. Approximately half of those requirements with a priority one are for distribution systems, electrical service and distribution, exterior windows, floor finishes, and plumbing fixtures. Upon comparing the 2009 data to the 2005 data, we found that the Commonwealth’s deferred maintenance, which includes priorities one through three below, increased by \$1.8 billion. Total requirements increased by \$3.7 billion.

<b>Summary of Requirements Priorities</b>			
	<b>As of October 11, 2005</b>	<b>As of March 25, 2009</b>	<b>Variance</b>
1- Currently critical (Immediate)	\$1,149,284,423	\$2,154,888,072	\$1,005,603,649
2- Potentially critical (Within 12 mos.)	142,229,613	421,078,260	278,848,647
3- Necessary - not yet critical (within 13-24 mos.)	200,869,942	766,469,848	565,599,906
4- Recommended (within 25-72 mos.)	279,821,649	2,099,386,718	1,819,565,069
5- Does not meet current codes / standards	71,866,117	173,005,879	101,139,762
<b>Total of all priorities</b>	<b>\$1,844,071,744</b>	<b>\$5,614,828,777</b>	<b>\$3,770,757,033</b>

The comparison above shows that there is definitely a need for tracking the facilities condition within the Commonwealth. Our buildings continue to get older and costs to repair them continue to increase. In addition, agencies and institutions are entering more buildings into FICAS and having facility condition assessments performed on those buildings which increases the identified maintenance costs. However, because of agency budget cuts and a lack of interest in the system, the number of FICAS system users is decreasing. We recommend that General Services continue with the positive progress they have made in the last two years to promote and encourage use of the FICAS system. General Services should continue to develop requirements and guidelines for entering information into FICAS while providing agencies with the support they need to use the system.

*Recommendation #8: We recommend that General Services continue with the positive progress they have made in the last two years to promote and encourage use of the FICAS system. General Services should continue to develop requirements and guidelines for entering information into FICAS while providing agencies with the support they need to use the system.*

### FICAS FUTURE USE

#### *System Use*

In 2005, the Department of Planning and Budget used the information in FICAS to help determine the maintenance reserve funding allocation for all state agencies. For the 2010 – 2016 capital budget planning process, Planning and Budget required that agencies and institutions record all pertinent information in FICAS for any building for which the agency requests funding to make improvements to the building or to replace or upgrade building systems. In addition, for

maintenance reserve funding, Planning and Budget required that agencies record all pertinent information in FICAS for any building affected by maintenance reserve funding.

Planning and Budget and General Services are working together to make FICAS an integral part of the capital budgeting process. Although Planning and Budget has only one FICAS user, they work with General Services to obtain the information from FICAS necessary to review and evaluate maintenance reserve and capital budget requests. We encourage Planning and Budget and General Services to continue this collaborative effort to ensure that FICAS information remains a part of the capital budget decision process, especially as Planning and Budget works to acquire a new budgeting system.

*Recommendation #9: We encourage Planning and Budget and General Services to continue their collaborative effort to ensure that FICAS information remains a part of the capital budget decision process, especially as Planning and Budget works to acquire a new budgeting system.*

Even with all of the efforts that General Services has made to date to inform agencies about FICAS and its requirements, many agencies and institutions are still unaware of the FICAS system and the FICAS support available to them. There are a total of 95 agencies and institutions with buildings listed in FAACS. However, there are only 52 agencies and institutions with data in FICAS and many of those agencies are not using the FICAS system as required, as discussed in the previous section. We recommend that General Services continue its efforts ensure that all state agencies are aware of the FICAS system and the support available for the FICAS system. All agencies and institutions, including those agencies and institutions not currently using the system, should be aware that it is available for use. In addition, these agencies and institutions should be aware of the requirements for using the system.

*Recommendation #10: We recommend that General Services continue its efforts ensure that all state agencies, including those not using the system, are aware of the existence of FICAS, the requirements to use it, and the support available for users.*

### ***Future System Changes***

In March 2009, VFA, General Services, and a sub-committee made up of Steering Committee members developed a maintenance reserve/capital budget planning tool within FICAS that agencies can use to prepare their capital budget requests for submission to Planning and Budget. General Services met with Planning and Budget to discuss this tool and explained that it is an automated tool for agencies to develop their capital budget plans using information in FICAS and does not take the place of the capital budget submission process. However, there are agencies and institutions that plan to use this tool to submit capital budget requests in the future. General Services has told agencies that they can use this tool to submit capital budget requests whereas Planning and Budget has stated that they will not require agencies and institutions to use this tool to submit capital budget requests.

VFA will release the tool for all agencies and institutions to use in the near future. Once VFA releases the tool, agencies and institutions will be able to go into FICAS and select their project then click on the Budget Request button and add any information that has not been auto-populated

from information in FICAS. There are tabs for General Information, Funding, Cost, Scope, Capital Lease, Subproject Information, and Justifications. Once this information is completed, the agency can print or save an excel file for the DPB forms MR-1, MR-2, MR-3, CNJ, and H-1 used in capital budget submissions.



Walter J. Kucharski, Auditor

# Commonwealth of Virginia

Auditor of Public Accounts  
P.O. Box 1295  
Richmond, Virginia 23218

January 8, 2010

The Honorable Robert F. McDonnell  
Governor of Virginia

The Honorable M. Kirkland Cox  
Chairman, Joint Legislative Audit  
and Review Commission

We have audited the Commonwealth's Facility Inventory Condition and Assessment System (FICAS) and Program and are pleased to submit our report entitled **Follow Up on Deferred Maintenance in the Commonwealth**. We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

This report is a follow up to our "Review of Deferred Maintenance in the Commonwealth – Final Report" issued December 2005. Upon completion of that report, the Department of General Services took ownership of the FICAS software acquired by the Auditor of Public Accounts. This report will discuss how General Services has performed their responsibilities as system and program administrator as well as system changes and uses by state agencies and institutions.

## Objectives

1. Determine what the Department of General Services has accomplished since taking over responsibility for FICAS.
2. Determine what changes General Services has implemented internally and statewide.
3. Determine the support that General Services has provided to agencies so that they could continue using FICAS.
4. Determine if General Services has given further instructions to state agencies and institutions as to what information they are required to input in FICAS.
5. Determine what agencies are currently using FICAS and the extent of their use.

6. Determine if the State Council of Higher Education for Virginia requires higher education institutions to use FICAS for reporting purposes. Determine what information the institutions report to SCHEV. Determine if this information is up to date in FICAS.
7. Determine what progress is being made to further the use of the capital planning/budgeting tool developed by VFA.
8. Determine how the FICAS system has changed since General Services took over responsibility.
9. Determine how Department of Planning and Budget uses FICAS.
10. Determine the status of the FICAS policies and procedures manual.
11. Determine the status of the FICAS Implementation Committee.

### Scope and Methodology

Our main objective in this audit was to document and analyze the progress the Commonwealth and the Department of General Services has made with FICAS since taking over responsibility. We interviewed key personnel at General Services and Planning and Budget. We surveyed 52 agencies and institutions with data currently in FICAS to determine how they use the system. We analyzed data in FICAS and compared it to 2005 data.

### Results

We determined that the Commonwealth's recorded deferred maintenance has increased by \$1.85 billion since the 2005 "Review of Deferred Maintenance in the Commonwealth – Final Report." In addition, agencies and institutions have recorded 871 more buildings into FICAS. We found that some agencies are not using or updating the system as required due to budget restraints or lack of interest. Finally, General Services and Planning and Budget are working together to make FICAS an integral part of the capital budgeting process.

We have the following recommendations:

- Planning and Budget and General Services should continue their collaborative effort to ensure that FICAS information remains a part of the capital budget decision process, especially as Planning and Budget works to acquire a new budgeting system.
- Agencies and institutions should use the FICAS system as required by the General Assembly within current budget restraints.

- The General Assembly should consider funding the license fees for agencies and institutions use of FICAS.
- General Services should continue its efforts to ensure that all state agencies, including those not using the system, are aware of the existence of FICAS, the requirements to use it, and the support available for users.
- The State Council of Higher Education for Virginia should update their Facility Condition Reporting Guidelines so that Council only accepts facility condition information from FICAS to ensure consistency and comparability of data between institutions.

#### Exit Conference and Report Distribution

We discussed this report with management of General Services and Planning and Budget. General Services' response has been included at the end of this report. Planning and Budget agreed with the recommendations but chose not to provide a response for inclusion in the report.

This report is intended for the information and use of the Governor and General Assembly, management, and the citizens of the Commonwealth of Virginia and is a public record.

AUDITOR OF PUBLIC ACCOUNTS

DBC/clj

**Appendix A**  
**System Updates**

## APPENDIX A

### System Updates

The following paragraphs discuss the highlights of the system changes and improvements.

#### ***RS Means Updates***

Annually VFA adjusts the RSMeans line items in FICAS to agree to the RSMeans Cost Estimating Database published by RSMeans. They also adjust Non-Means Line Item costs by the annual construction cost inflation rate. This process ensures that the costs shown in FICAS reflect any increases or decreases in costs due to economic changes. Beginning in July 2008, the RSMeans Cost Estimating Database contained more than 300 new assemblies and over 7,000 unit price line items for green materials and products. The Estimator displays a "Green Building" checkbox to allow filtering for Green Building line items. Green Building is discussed further in the VFA.facility Green section below.

#### ***New Reports***

There have been several new reports made available within the FICAS system. In March 2007, VFA released a funding needs report and an asset snapshot report in FICAS. The funding needs report indicates the funding levels needed to cover upcoming renewals and requirements per year. The asset snapshot report is similar to the Asset Detail Report. This comprehensive report supplements systems-based facility assessments, including additional information about systems and requirements. FICAS now maintains Selection Criteria when switching between reports.

In December 2007, VFA added new options to all reports and established a new category of portfolio-wide reports with the Executive Portfolio Summary Report and Benchmarking Report.

In April 2009, VFA developed a new reporting interface that lets users organize reports into public and shared folders, schedule reports to run at specific times, automatically email reports to recipients, and more. Report Center provides new reports along with all the standard and custom reports available in the previous system version. Report Author, which is an optional tool, now provides a simple drag-and-drop interface that allows the user to create reports or customize existing ones.

#### ***VFA.auditor***

VFA developed VFA.auditor, a tool within FICAS that replaces the Life Cycle Analysis Tool, during the fourth quarter of 2006. The Life Cycle Analysis Tool was a Microsoft Excel spreadsheet whereas VFA.auditor is a software product, which is part of the FICAS system. In the past, VFA had to import each Life Cycle Analysis tool completed on a building into FICAS manually. VFA.auditor is part of the software and therefore auto populates FICAS with no importing. VFA.auditor also has workflow and notification functionality to keep track of the assignment, progress and approval or rejection of condition assessment surveys. Users can also use the glossary of terms supported by photos of systems to help in the decision-making process when

deciding what type of system to select in FICAS. VFA.auditor also has a series of reports associated with it to help manage condition assessment resources, schedules, and assignments.

The Commonwealth has just released the VFA.auditor tool for use in July 2009. Beta testing and customizing this tool in the Commonwealth began in July 2008. VFA performed beta testing at James Madison University between July and November 2008. Engineering and Buildings has negotiated with VFA to use this tool and get the information uploaded into FICAS in the most cost effective way. Agencies will pay for each survey based on the square foot size of the building surveyed.

### ***Budget Module***

In December 2007, VFA created a new Budget module that provides Ranking Strategy and Budget planning features within FICAS. The Budget Module lets users create budgets using Ranking Strategies to see the effects of various strategies on funded requirements. VFA enhanced the Budgeting module within FICAS in April 2009 so that users can use an expanded set of criteria to rank capital needs, including properties in Regions, Campuses, Assets, Systems, Requirements, and Prime Actions.

The Commonwealth chose not to use the Budget module feature within FICAS because it did not meet the needs of the Commonwealth. They instead negotiated a custom Budget module for the Commonwealth, which will be available for use in the near future. For additional information regarding the budget enhancements created specifically for the Commonwealth, see the Future System Changes section below.

### ***FCI Configuration***

In October 2008, VFA updated the Facility Condition Index (FCI) configuration to include system renewal events with two years or less of observed useful life remaining. In addition, VFA updated FICAS to create Renewal Requirements automatically from facilities system data to identify those systems due for renewal within the next two years. Prior to October 2008, renewal costs were not included in the FCI. Only requirement cost data with an action date of two years or less were included. Agencies that used the system renewal data within FICAS at that time were not displaying or reporting an FCI that included system renewals. In order to fully analyze the condition of a building and take full advantage of the FICAS Capital Renewal software, system renewals have to be included in the FCI calculation and become actionable at the requirement level. All facilities that agencies assessed three years prior to October 2008 used the requirement renewal method. Therefore, VFA reviewed the facility system models to ensure that a double funding event did not occur when they adjusted the FCI calculation. Because of these changes, many of the buildings FCI's were increased showing that the building is actually in worse condition than originally thought.

### ***VFA.facility Green***

In November 2008, VFA made VFA.facility Green available within FICAS. Green functionality allows organizations to collect the data associated with Green Building initiatives in

order to estimate the costs and simple payback of sustainable building construction and operations. The functionality includes support for multiple Green Rating systems (LEED-EB, Green Globes, EO13423, Green Guide to Healthcare, and a generic standard system), sustainability fields that support Green data collection on Requirement and Action records, and two new reports that display Green Building data and allow users to evaluate the impact of the tradeoffs between conventional actions and green alternatives. By default, all sites will have Green functionality enabled and the generic standard system selected (with the exception of sites that have previously been custom configured. These sites will remain unchanged).



**COMMONWEALTH of VIRGINIA**  
*Department of General Services*

Richard F. Sliwoski, P.E.  
Director

Joseph F. Damico  
Deputy Director

1100 Bank Street  
Suite 420  
Richmond, Virginia 23219  
Voice (804) 786-3311  
FAX (804) 371-8305

January 22, 2010

Walter J. Kucharski  
Auditor of Public Accounts  
P. O. Box 1295  
Richmond, VA 23219

Dear Mr. Kucharski:

The Department of General Services (DGS) appreciates the time and effort the staff of the Auditor of Public Accounts (APA) spent reviewing the FICAS Program and generally agrees with the comments and recommendations contained in the report.

Sincerely,

  
Richard F. Sliwoski, P. E.

RESPONSIBLE OFFICIALS

DEPARTMENT OF GENERAL SERVICES

Richard F. Sliwoski  
Director

Joe Damico  
Deputy Director

Bert Jones  
Director of Division of Engineering and Buildings

DEPARTMENT OF PLANNING AND BUDGET

Daniel Timberlake  
Director

Don Darr  
Associate Director Budget Operations