



AUDIT OF
FACILITIES MANAGEMENT
WORK ORDER PROCESSING

Exit Conference Date: February 14, 2006

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Report No. 06 – 09

CITY OF ORLANDO

OFFICE OF AUDIT SERVICES AND MANAGEMENT SUPPORT

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CITY OF ORLANDO

MEMORANDUM

To: Larry Simmons, Facilities Management Division Manager

From: Beryl H. Davis, CPA, CGFM, Director
Office of Audit Services and Management Support

Date: Exit Conference: February 14, 2006; Report Issued: March 6, 2006

Subject: Audit of Facilities Management Work Order Processing
(Audit Report No. 06-09)

In accordance with our annual operations plan, the Office of Audit Services and Management Support has performed an audit of the Facilities Management Division (Facilities) Work Order Processing. Our objectives were to evaluate the following: the adequacy of the work order system for timeliness of completion, efficiency of automation and consistent prioritization by urgency of need; the efficiency and utilization of staff; the adequacy and timeliness of preventive maintenance; and the usefulness of the Division's performance measures.

Our examination was conducted in accordance with generally accepted government auditing standards, except that we did not perform tests of data gathered from computer-based resources. We obtained and analyzed a listing of all work order transactions initiated during the audit period of October 1, 2004 through March 31, 2005. Our procedures also included a review of City Policies & Procedures, inquiries of staff of the Facilities Management Division, and such other auditing procedures as we considered necessary in the circumstances.

During our review, we were impressed with the level of care and concern from the Division Manager and his skill in assessing the condition of the Division and level of effort needed to improve the operation. It appears that the staff of the Division is dedicated to providing quality service in a timely fashion.

Overall, we found that the systems and procedures used by Facilities reviewed under the objectives listed above are adequate. However, we noted some opportunities to improve and enhance the effectiveness and efficiency of the current processes. In general, we found that the Division does not fully analyze and document the reason for work orders that are not completed in a timely manner. In addition, some information entered into the work order system is not descriptive enough to assist in the proper response and actions needed to complete the work order. We believe the recommendations in this report can serve to enhance existing procedures, and we encourage their implementation as soon as possible.

We would like to express our appreciation to the Facilities employees consulted during this audit for their courtesy and cooperation.

BHD/am

c: **Honorable Buddy Dyer, Mayor**
 Cheryl J. Henry, Chief of Staff
 Byron W. Brooks, Chief Administrative Officer
 Rebecca W. Sutton, Chief Financial Officer
 Kevin J. Edmonds, General Administration Department Director
 Conrad C. Cross, Chief Information Officer

EXECUTIVE SUMMARY

Objectives, Scope, and Methodology

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The objectives of this audit were to evaluate the following aspects of the Facilities Management Division (Facilities) work order system: the adequacy of the system for timeliness of completion, efficiency of automation and consistent prioritization by urgency of need; the efficiency and utilization of staff; the adequacy and timeliness of preventive maintenance; and the usefulness of the Division's performance measures.

The scope of this audit is all work order transactions initiated during the period of October 1, 2004 through March 31, 2005.

Our procedures included obtaining the detailed electronic information regarding all work order transactions contained in the Facilities database, "Archibus." We did not test the accuracy of the data entered into this database but rather, utilized the information to obtain an understanding of the type of work performed and the timeframes in which it was completed.

Extract Reports and Develop Plans to Clear "Backlogs"

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We found that, during the audit period of October 1, 2004 through March 31, 2005, the Facilities Management Division processed 4,905 work orders. The average number of days that work orders are open is 25 and the Division has a benchmark of completing work orders within 90 days.

We found that 4,685 (or 96%) of the work orders we reviewed were closed within this established timeframe. We inquired about the process of analyzing and reviewing the work orders that are open longer than 90 days. We were informed that the Division Manager meets informally with the Trades Maintenance Chiefs to discuss delays and problems. No formal or regular process exists to document the delays or report status to the Division's clients.

We also reviewed the most recent Internal Customer Assessment Survey that indicated that "overall satisfaction"

with Facilities Management ranked between “Good” and “Fair.” This indicates that Facilities clients are somewhat dissatisfied and continued enhancement in the timely completion of work orders is needed.

The data in the work order system is valuable and could be “mined” to bring to the attention of management open work orders that need further attention and resolution. This analysis could include developing Archibus reports that “stratify” the information by priority, type of work and number of days the work order is open to identify the work orders that need increased attention from management. The Department Director should be made aware of the most important and challenging work orders so that he is informed and can respond to inquiries from other department directors.

**Improve
Documentation
of Work Order
Information and
Review
Adherence to
Standards**

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We found that the work order information in the Archibus system contains a data field titled “Priority” and that this data field is not used to identify priority, but rather the type of work being performed. We found that some priorities do not note the circumstances of the problem or the time frame for addressing the situation. That is, the definitions do not identify the number of hours, days or weeks that should be the standard for completing the project.

We discussed this finding with management and learned that the information entered in the work order system is, in many cases, not detailed enough to alert staff to the exact urgency of the problem. Facilities management stated that improvements have been made in this system, but that additional improvements are necessary.

We believe that the “Priority” field in the work order database should be simplified. As an example, a three-tiered system (i.e., Red, Yellow, Green or 1,2,3) would make this information more useful to those using it and assist managers and supervisors to direct their attention to the highest priorities. Once the information is improved, Facilities can begin a process of

periodically reviewing and reporting to management its ability to effectively address/resolve work orders within the standards set for each priority.

**Increase
Analysis and
Reporting of
Preventive
Maintenance
Program Results**

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The Division has determined the preventive maintenance (PM) intervals based on the managers and supervisors knowledge of the various systems in use in the City's facilities (i.e., air conditioning, roofing, plumbing, electrical, etc.). We noted that the work order system documents the preventive maintenance performed and contains information on the timely performance of PM work orders. We inquired with Division management if the clients of Facilities Management are informed of the effectiveness (i.e., the prevention or delay in facility or equipment failure and the extension of the useful life of facilities and equipment) of the PM program. We found that no regular or formal reports to the clients are created that show the PM actions taken on each facility and the assessment of Facilities staff on the serviceability of the City's facilities and components (air conditioning systems, alarm systems, etc.).

Reporting to management is a commonly accepted practice in maintaining quality and safety in the maintenance of government facilities. We believe that the results of PM work and observations made by staff should be included in periodic reports to City management to inform them whether preventive maintenance is being performed in a reasonable timeframe and is effective in extending the useful life of the facilities. We believe that such reporting should also include a periodic assessment of City facilities that have experienced a high number of service calls which indicate a need to consider the replacement of the facility or its major components.

Other Issues

Our audit raises several additional issues and makes recommendations for the Division to improve its understanding of its core responsibilities and continue to study possible technological enhancements that may create future efficiencies.

BACKGROUND

The Facilities Management Division (Facilities) of the City of Orlando's General Administration Department is a service support division that maintains and repairs the City's buildings to achieve their maximum expected design life and to ensure a safe environment for employees and the public. Facilities' clients are City managers and employees, and it provides plumbing, air conditioning, painting, electrical, locksmith and general construction services for both existing facilities and new construction. Its mission is "to provide efficient and cost effective maintenance and repair services for all buildings to all City Departments, Divisions and Offices."

The Division is organized into two General Fund programs: #703, City Hall Maintenance and #749, Facilities Management. According to the Facilities Division Manager, Facilities is responsible for approximately 731 buildings and structures containing a total of 4.2 million square feet of space. Over the past 3 years, the total square footage maintained by Facilities Management has increased by 8 percent.

The Division's budget for fiscal year 2004-05 was \$6,681,826, and represents about 29% of the total General Administration Department General Fund budget. Facilities actual expenditures for FY 04-05 were \$6,625,047; or 99% of its budget. The Division has 48 authorized positions, or 24% of the total General Administration Department General Fund staffing level. The Division is managed by a Division Manager and the day-to-day activities are supervised by three Trades Maintenance Chiefs. The trades people who act upon work orders have recently been changed from working 4 ten-hour days to working 5 eight-hour days. Over the past 3 years, the number of authorized positions in the Facilities Management has decreased by 29 percent, chiefly due to losing 20 positions in the 2003 reduction in force.

The Division manages its work through the use of an automated database, "Archibus." This information system maintains the detailed information on all work orders created and managed by the Division. The Division opens a work order for all work. Several individual work requests for each of the individual trades (plumbing, air conditioning, painting, electrical, locksmith and general construction) may be opened under each work order. The labor hours and materials used on the work orders are entered into the system by administrative staff.

The work performed by Facilities for non-general fund programs is reimbursed to the Division at a flat labor rate, actual materials costs and materials "markup."

SUMMARY OF RECOMMENDATIONS AND RESPONSES

RECOMMENDATIONS	RESPONSES
1. The Facilities Management Division Manager should periodically extract reports of “backlogged” work orders from the database, develop plans to clear these backlogs and document the backlog management process.	Concur
2. The Facilities Management Division Manager should create reports that inform the General Administration Department Director of “backlogged” work orders and the Division’s plan for clearing the backlog.	Concur
3. The Facilities Management Division Manager should revise the standards for the “Priority” and “Problem Type” entered in the work order system to more effectively document the urgency and specificity of the problem.	Concur with Reservations
4. The Facilities Management Division Manager should begin to review and report by priority category whether it is adhering to its standards for response and resolution of such priorities.	Concur
5. The Facilities Management Division Manager should create a useful and timely summary of the performance of preventive maintenance to alert management of concerns and matters that need increased attention.	Concur with Reservations
6. The Facilities Management Division Manager should periodically report its assessment of facilities that have experienced a high number of service calls indicating a need to consider the replacement of the facility or its components.	Concur with Reservations
7. The Facilities Management Division Manager should meet with clients and managers to understand their expectations for the Division and document its responsibilities in a formal “memoranda of understanding” or “service level agreement.”	Concur

8. The Facilities Management Division Manager should create a proposal outlining the efficiencies expected from technical enhancements so that executive management can make an informed decision to pursue such enhancements.

Concur

ISSUES AND RECOMMENDATIONS

Objectives The objectives of this audit were to evaluate the following aspects of the Facilities Management Division (Facilities) work order system: the adequacy of the system for timeliness of completion, efficiency of automation and consistent prioritization by urgency of need; the efficiency and utilization of staff; the adequacy and timeliness of preventive maintenance; and the usefulness of the Division's performance measures.

Scope The scope of this audit is all work order transactions initiated during the period of October 1, 2004 through March 31, 2005.

Methodology Our procedures included obtaining the detailed electronic information regarding all work order transactions contained in the Facilities database, "Archibus." We used an automated "data-extraction" tool (ACL) to analyze this information to determine the timeliness of work order completion and if preventive maintenance is performed as specified. We did not test the accuracy of the data entered into this database but rather, utilized the information to obtain an understanding of the type of work performed and the timeframes in which it was completed. We also held several discussions of current procedures and practices with Facilities staff, and conducted a review of City Policies & Procedures.

**Extract Reports
and Develop
Plans to Clear
“Backlogs”**

We found that, during the audit period of October 1, 2004 through March 31, 2005, the Facilities Management Division processed 4,905 work orders. This information was extracted from Archibus through an automated data-extraction tool (ACL). The total number of days these requests were open was 123,644, or an average of 25 days of work for each work order. It should be noted that, because of limitations in the Archibus software, at the end of each fiscal year all open work orders are cancelled and converted to new work orders. For this reason, a few of the work orders we reviewed may have been open prior to October 1, 2004 under a different work order number. We expect this number of converted work orders to be small in number and the impact on our statistics not significant.

We were informed that the Division has created a new benchmark to complete most work orders within 90 days. This benchmark is included on the Division’s FY 2005-06 Business Plan. We found that 4,685 (or 96%) of the work orders we reviewed were closed within this established timeframe. We inquired about the process of analyzing and reviewing the work orders that are open longer than 90 days. We were informed that the Division Manager receives reports of work orders over 90-days old and meets with the Trades Maintenance Chiefs on an “as needed basis” to discuss delays and problems. We found that no formal or regular process exists to document the delays or report status to the Division’s clients. We were told that, in some cases, the delays may be warranted due to unexpected conditions or the work orders remaining open are merely an administrative error. However, no formal reporting of these activities is performed.

As a result, we found that there are no regularly scheduled reports extracted from the Archibus database to alert the Facilities Management Division Manager of work orders extending beyond the 90-day threshold (i.e., “backlogs”). In addition, no reports of backlogs are created for the General Administration Department Director.

During this review, we also obtained and reviewed the results of the Internal Customer Assessment Survey coordinated by the City's Performance Optimization Program and last issued in May 2005. This survey indicated that "overall satisfaction" with Facilities Management ranked between "Good" and "Fair" (an average score of 2.81 on a scale where ratings were defined as: 4=Excellent, 3=Good, 2=Fair, and 1=Poor). An average score of 2.87 was received on performance related to the "Timely Completion of Repairs." These results indicate that the clients of Facilities are somewhat dissatisfied with the services provided and indicate the need for continued enhancement in the management and analysis of the timely completion of work orders.

Facilities management states that they are not inclined to formalize the review process due to several circumstances. First, the information contained in the Archibus database is not specific enough to isolate and extract the work orders that are indicated as problems that need immediate attention. While the database contains information on actions taken to date, there is no easy way to isolate this data for an effective report. Second, a formal meeting and documentation process would remove key personnel from their core duties and cause further delays.

We assert that the data in the work order system is valuable and could be "mined" to bring to the attention of management only those work orders that need further analysis, discussion and resolution. This analysis should include developing Archibus reports that "stratify" the information by priority, type of work and number of days the work order is open. Then, the work orders that are identified can be analyzed and plans made to more timely complete the work. We believe that work orders over a certain number of days, for key facilities or departments, affecting key trades (air conditioning, plumbing, electrical, etc.) should be extracted and formally reviewed so that management can demonstrate that actions are being taken to close the work orders. In addition, the Department Director should be made aware of the most important and challenging work orders so that he is informed and can respond to inquiries from other

department directors.

Recommendation 1.

We recommend that the Facilities Management Division Manager periodically extract reports of “backlogged” work orders from the database, develop plans to clear these backlogs and document the backlog management process.

Response

Concur.

Current Status: Planned for Implementation.

Implementation Date: Estimated implementation is October 1, 2006.

Responsible Party for Implementation: Facilities Management with assistance from Technology Management staff.

Comments: Since October 2003, Facilities Management has used a number of work order activity and aging reports to evaluate and monitor work productivity and volume. These reports were looked upon as being somewhat reliable, bearing in mind what is noted in item #3. The work type and priority information entered might not have been as accurate as Facilities would have liked, nevertheless, it did provide data to analyze work volume and effectiveness.

Until the loss of an administrative staff due to retirement and not being able to reclassify an existing staff position that we felt could have benefited in maintaining administrative support levels, reports were generated on a periodic basis. Aging reports were used to “clean up” outstanding work orders in order to keep the monthly productivity report current. In addition, reports were used to analyze the use of labor resources.

It should also be noted that the current method to recover revenues is through the use of the work order (W/O) system (Archibus). At the beginning of each the fiscal year (FY), revenue W/Os are issued per account and remain open throughout the FY.

Facilities would like to explore a more effective method in which

to recover revenues not requiring a work order. Facilities considers productivity reports as useful tools and will continue to increase their utilization.

Recommendation 2.

We recommend that the Facilities Management Division Manager create reports that inform the General Administration Department Director of “backlogged” work orders and the Division’s plan for clearing the backlog.

Response

Concur.

Current Status: Planned for Implementation.

Implementation Date: Estimated implementation is October 1, 2006.

Responsible Party for Implementation: Facilities Management.

Comments: Refer to item #1. Beginning in FY 05/06, a 90-day backlogged performance was introduced as one of Facilities Management’s performance measures.

**Improve
Documentation
of Work Order
Information and
Review
Adherence to
Standards**

We found that the work order information in the Archibus system contains a data field titled “Priority” and that this data field is not used to identify priority, but rather the type of work being performed. The information defining priority number 1, named “Service”, states “something is broken and is a safety factor, is a security problem or can cause further damage.” The document goes on to state that the work needs to be done on the same day. While this definition works well to document work that needs immediate action, the other priorities do not note the circumstances of the problem or the time frame for addressing the situation. For example, the definitions for priorities 2 through 10 do not identify the number of hours, days or weeks that should be the standard for completing the project.

Another field in the work order system is “Problem Type.” During our analysis of work order information, we found that 80

of the 220 work orders (or 40%) identified as open after the 90-day timeframe were coded as Problem Type “General.” The next largest percentage (16%) was coded as “Plumbing.” We inquired about the types of work coded as “General” and were told that tasks such as carpentry, locks, paint, pressure washing, roofing and welding were assigned to this Problem Type.

When we discussed this finding with management they concurred with these issues and stated that other data fields used to describe the problems that generate the work orders are not detailed enough to alert staff to the exact nature of the problem. Facilities management stated that improvements have been made in this system, but acknowledged that additional improvements are necessary.

As a result, the information entered initially into Archibus by the person who received the request from a client (i.e., the service writer) does not differentiate the urgency of the work orders or alert the Trades Maintenance Chiefs of the specific needs of the clients. It should be noted that we were informed that the Service Writer, who receives emails or phone calls from the clients reporting emergencies, is effectively communicating this information to those in Facilities who can timely respond and act on the emergency. However, the use of 10 different “Priority” codes and the overuse of the “General” problem type has caused a dilution in the effectiveness of the information entered into the work order system and may contribute to a misunderstanding of the work order priority or the trades needed on the project.

These circumstances do not allow the Division to determine appropriate standards for response and action on varying priority levels. Also, no exception reporting can be made to identify the priority calls that were not acted upon within standard. Therefore, no follow-up and revision of practices is made to improve response times when they may be lacking.

Apparently the use of the Priority and Problem Type data fields has changed several times over the years and has resulted in data in the system that is not as informative as it could be. While the definitions of the priorities are documented, the standards

for each are not noted, and the number of priorities (10) has grown to a size where the information is not meaningful. Similarly, the number of different types of work coded to “General” has diluted the effectiveness of this data.

We believe that the Priority field in the work order database should be among the first items seen by the users of the database and should alert the staff to the projects they should accomplish immediately, within 48 hours or within one week. Simplifying to three priorities (Red, Yellow, Green or 1,2,3) would make this information more functional to those using it and assist managers and supervisors to isolate their attention on the highest priorities. Also, the addition of several new Problem Types will assist the users of the information to quickly identify the maintenance issue so that the proper trades people respond to the service request.

Accurate and useful information will help document a reliable historic record, which can be manipulated to identify the facilities with the most priority 1 emergencies or with recurring problems to determine whether additional resources should be dedicated to preventive maintenance of such facilities. In addition, after defining work order standards by priority, the Division can begin to review and report to management whether it is adhering to these standards and responding and resolving the highest priorities within the appropriate standard (e.g., “95% of Priority 1 work orders are addressed/resolved within 24 hours”).

Recommendation 3. We recommend that the Facilities Management Division Manager revise the standards for the “Priority” and “Problem Type” entered in the work order system to more effectively document the urgency and specificity of the problem.

Response Concur with Reservations.

Current Status: Planned for Implementation.

Implementation Date: Est. implementation is October 1, 2006.

Responsible Party for Implementation: Facilities Management with assistance from Technology Management staff.

Comments: Facilities Management has already begun the process of revising the work order codes and parameters. The current software, Archibus, has been in use by the Facilities organization for approximately eight (8) years. It appears over the years, the software has been updated and has gone through numerous changes in its format. It is our opinion the current software in its configuration is not proficient enough to be an effective work management tool. Nevertheless further evaluation, refer to item #8, will need to take place in order to introduce a new system.

We feel it is as equally important to identify work order types i.e. services, repairs, and planned maintenance in order to determine budgets and anticipate service levels.

Recommendation 4. We recommend that the Facilities Management Division Manager begin to review and report by priority category whether it is adhering to its standards for response and resolution of such priorities.

Response Concur.

Current Status: Planned for Implementation.

Implementation Date: Estimated implementation is October 1, 2006.

Responsible Party for Implementation: Facilities Management with assistance from Technology Management staff.

Comments: Productivity reports will be developed and reviewed. As referred in the audit, we are concerned how effective Facilities will be without an increase in facilities professional staff.

**Increase
Analysis and
Reporting of
Preventive
Maintenance
Program Results**

We found that beyond the information contained in the Archibus system, there are no extractions or analysis of this information to report to the Division Manager on the effectiveness of the division's preventive maintenance (PM) program. The Division has determined the PM intervals based on the managers and supervisors knowledge of the various systems in use in the City's facilities (i.e., air conditioning, roofing, plumbing, electrical, etc.). We were informed that the requirements of equipment manufacturers are also used to set PM schedules.

Our analysis of the information in Archibus on PM work orders showed a total of 1,311 PM work orders in the audit period. We found that 959 PM work orders (73%) were open after the 90-day threshold. These results indicate that PM work orders are a lower priority than the other work performed by the Division and are often delayed or postponed. This indicates a need to understand the effects of postponing such work on the ability of the Division to extend the useful life of the City's facilities.

We inquired whether management is informed of the results of the PM program. By results, we connote whether PM tasks are: preventing or delaying facility or equipment failure, extending the useful life of facilities and equipment, and adding value greater than the cost of performing the PM task. We found that no regular or formal reports or summaries are created to document the PM actions being taken, whether they were delayed due to other priorities, and how these actions are expected to affect the prevention of system failure or the extension of the life of the facility. It should be noted that the Division posts to a common computer network file its monthly reports of work orders closed in the previous month. While this information is useful, and explains the cost to perform work orders, it is quite extensive and could be more effective if summarized into a form more useful to executive management.

One example of the information that could be shared with City executive management is a recent survey conducted by the Facilities Management Division. The Division Manager

explained that he tasked his trades people to fully inspect the City's facilities in order to determine an estimate of the amount of work needed to keep the operation and appearance of the City's current facilities to an acceptable standard. This process resulted in an estimate of \$15M of work that needs to be completed in the next 5 to 8 years.

Another example of the information that could be shared expands upon the information gathered above and includes an assessment of the cost of repairs to certain facilities and the conclusions of Facilities management personnel regarding whether these costs indicate a need to replace expensive systems or facilities.

We discussed the reporting of PM practices and results with Facilities management and they explained that they do not have a staff member available that could review the work order information to create reports that would summarize the time, cost, successes or failures of the current PM practices and procedures of the division. The Division Manager stated that during his previous employment at the facilities management sections of both Orange County Government and the University of Central Florida he experienced the use of "project coordinators" or "maintenance scheduler/planners" whose primary duties are to design, manage and report on the effectiveness of PM programs.

The Division Manager stated that Facilities has received some positive feedback from the Federal Emergency Management Agency (FEMA), regarding the PM program for the roofs on the City's facilities affected by recent hurricanes. We were informed that the information provided to FEMA from the Archibus system was more than sufficient to document that the proper level of care had been given to these roofs.

However, the information in the Archibus system is not available to all affected City managers. In addition, this information is not in a form that would be useful to management to make business decisions about the current level of care needed for the facilities and equipment in use in the facilities. We believe that the results

of PM work and observations made by staff should be included in reports to City management in a reasonable timeframe. We acknowledge that this may be a challenge due to the staffing limitations at Facilities, but suggest that Facilities begin this practice by concentrating on the more critical City facilities and components (air conditioning systems, alarm systems, sprinkler systems, etc.).

The preventive maintenance of City facilities is a very important function of the Division. Information on the successes and shortcomings of the program is key data that can be utilized by executive management to realign resources, identify needs and better manage the City's assets.

Recommendation 5.

We recommend that the Facilities Management Division Manager create a useful and timely summary of the preventive maintenance work orders completed each month to inform managers of the present condition of their facilities.

Response

Concur with Reservations.

Current Status: Planned for Implementation.

Implementation Date: Estimated implementation is October 1, 2006.

Responsible Party for Implementation: Facilities Management with assistance from Technology Management staff.

Comments: Refer to Item #6.

Recommendation 6.

We recommend that the Facilities Management Division Manager periodically report its assessment of facilities that have experienced a high number of service calls indicating a need to consider the replacement of the facility or its components.

Response

Concur with Reservations.

Current Status: Planned for Implementation.

Implementation Date: Partial implementation by Oct. 1, 2006.

Responsible Party for Implementation: Facilities Management with assistance from Technology Management staff.

Comments: Facilities agrees that periodic review of Preventive Maintenance (PM) work orders can enhance the assessment of building components and systems conditions. In addition PM reports can aid in examining and determining operating costs.

A more effective method is periodic facility assessments audits, generally considering both operating costs and evaluation of the physical conditions of the building components. In order to complete such an audit, resources would have to be devoted from within the organization or procured from outside consulting services. As noted in the audit, another local public sector facility organization has greater wealth of resources in professional staff to perform these assessments.

The facilities management industry has begun utilizing a parameter that illustrates a degree of condition of a facility. This parameter is called Facilities Condition Index (FCI). FCI represents the ratio of the cost to correct a facility's deficiencies to the current replacement value of the facility. General industry guidelines are: 0 - 5% is good; 5.01 - 10% is fair; and greater than 10% is poor. As an example, one City's building currently demonstrates a FCI rating of 12 percent.

Even with limited professional staff, Facilities Management has made efforts to identify approximately \$15 million in renewal and replacement (R/R) needs for the next 5 to 8 years. We estimate this amount will increase as Facilities continue to collect data. Facilities will submit in the upcoming fiscal year budget, requests for additional professional staff and an increase in operation and CIP to address these needs.

**Confirm Client
Expectations
and Codify into
Policies and
Procedures**

During discussions with Facilities management, we found that the Division does not have a “memoranda of understanding” or “service level agreements.” These documents could serve as a broad outline of both the responsibilities of the Division and the areas of facilities maintenance that are the responsibility of other City departments. For example, we learned through discussions with management that Facilities is responsible for inspecting and repairing the City’s playground equipment and replacing ball field lighting, and boarding-up private property that has been cited by Code Enforcement. It is not responsible for the repair and maintenance of elevators or custodial services of the City’s facilities. The managers related that the services provided to Code Enforcement (i.e., board-up services) usually cause overtime pay expenses, but are not reimbursed from this General Fund program.

In addition, the managers related a difficulty regarding aesthetic issues, such as the proper time to replace the carpets in City facilities. In these cases, there may be a difference of opinion between Facilities and the client regarding the need to replace the carpet. In these cases, if the division or department that wants the carpet can pay for the service, it may be done before Facilities believes it is necessary.

We also found that the City Policies and Procedures for Facilities are limited and do not define in any detail what the Division does and does not do regarding the City’s facilities and building assets. We inquired of Technology Management and Fleet Management to determine if either area has documented the services it provides and does not provide to its “clients.” We learned that Fleet Management has detailed City Policies and Procedures that define its responsibilities and Technology Management presents “service level agreements” to the Information Technology Executive Committee that go into greater detail in documenting the services provided by Technology Management. In addition, we learned that Orange County Facilities Management utilizes “Memoranda of Understanding” to document the responsibilities of the maintenance staff and in some cases has documented each of the

maintenance elements and assigned responsibility for these elements among the affected parties (i.e., client, Facilities Management and others).

While Facilities' mission is stated, "to provide efficient and cost effective maintenance and repair services for all buildings to all City Departments, Divisions, and Offices," a detailed memoranda of understanding or service level agreement, as well as associated City Policies and Procedures or internal policies and procedures would clarify the Division's responsibilities and define how these responsibilities will be accomplished.

We believe that Facilities Management should assess its current responsibilities, review other responsibilities it should be charged with and meet with City executive management to define and document its "memoranda of understanding" or "service level." After this is accomplished, the Division Manager should refine City Policies and Procedures for the Division to document for all City managers their responsibilities and, finally, prepare an internal policies and procedures document to ensure Facilities staff understands these responsibilities, how to properly accomplish them and the goals and objectives of the Division.

Recommendation 7. We recommend that the Facilities Management Division Manager meet with clients and managers to understand their expectations for the Division and document its responsibilities in a formal "memoranda of understanding" or "service level agreement."

Response Concur.

Current Status: Planned for Implementation.

Implementation Date: Estimated implementation is October 1, 2006.

Responsible Party for Implementation: Facilities Management in harmony from other city programs.

Comments: Facilities Management agrees to work with city programs to develop service levels agreements.

**Continue
Investigating
Innovative
Technological
Enhancements**

During our review, we learned that the Facilities Management Division Manager has initiated a project to investigate the consolidation of the databases used throughout the City by various departments that need to store and analyze information related to City facilities. In addition to Facilities Management, the Risk Management program and the Real Estate Management program maintain information on City facilities in the course of their responsibilities. The Facilities Management Division Manager has expressed a need for additional capabilities for the information technology tools currently in use, primarily the Archibus system, which is predominantly a financial database and works well to manage the costs associated with work orders.

We inquired of the Division Manager how the information in the Archibus system is used to manage the personnel of the Division, specifically how the information is used to analyze whether the work assigned to the trades people is being completed in the most efficient manner. We learned that the Division uses two measures to analyze the efficiency of the Division. Its Business Plan lists the objectives: Increase Productive Awareness (defined as the percentage of work requests completed to the total number of work requests) and Cost Per Square Foot (defined as the annual average cost per gross square foot to maintain City facilities). We also learned that the Division does not break this information down into any individual or crew efficiency indicators. The Division Manager is of the opinion that Archibus is not an effective tool to perform reviews of the efficiency of the Facilities staff.

When we discussed efficiencies with the Division Manager, he stated that he believes that one step in the process of charging the cost of materials to individual work orders, referred to as the "Control Log," could be eliminated through the use of an

alternative facilities management application that also has modules that would be useful to both Risk Management and Real Estate Management. If this is true, it may be possible for each section to utilize the same base information on the City's building and land assets.

We should note that in previous audit reports of Facilities Management, we identified other problems with the use of the Control Log. While the Control Log helps to manage and account for the many individual purchases of materials made by the Facilities work crews performing services throughout the City on any given day, we were informed by the Facilities Management Division Manager that entering the information from the Control Log into Archibus takes 2 to 4 hours per day by an administrative employee. In addition, the Control Log requires coordination between Facilities and the Purchasing Division, which is contacted before each purchase is made to authorize the purchase and issue the Control Log number for these purchases.

We believe that the Facilities Management Division Manager should continue to pursue enhancements to the information technology and associated work processes, especially if this information can be used to increase the efficiency of Division staff. If these enhancements can make the Division more efficient, while maintaining strong internal control over materials purchases, it appears that an investment in new technology could be cost-beneficial. This is especially true if the enhancement would also benefit other departments that utilize facilities data in their daily operations. We recommend that the Facilities Management Division Manager create a formal proposal that outlines the benefits (i.e., efficiencies) and costs of the technological enhancements currently being considered so that City executive management can make a complete evaluation and decision on this enhancement.

Recommendation 8.

We recommend that the Facilities Management Division Manager create a proposal outlining the efficiencies expected from technical enhancements so that executive management can make an informed decision to pursue such enhancements.

Response

Concur.

Current Status: Planned for Implementation.

Implementation Date: Estimated implementation is January 1, 2007.

Responsible Party for Implementation: Facilities Management with assistance from Technology Management.

Comments: Facilities Management agrees to develop strategies and a business plan to address technology enhancements to manage city's property, plant, and equipment assets.
