

Facilities Project Management Audit:
An Opportunity to Rebuild

September 2013

Steve March
Multnomah County Auditor

Audit Staff
Fran Davison
Jennifer McGuirk





Office of Multnomah County Auditor

Steve March
County Auditor

501 SE Hawthorne Room 601
Portland, Oregon 97214
Phone: (503) 988-3320

Fran Davison
Judith DeVilliers
Nicole Dewees
Craig Hunt
Jennifer McGuirk
Marc Rose
Mark Ulanowicz

Date: September 10, 2013

To: Multnomah County Chair
Multnomah County Commissioners

From: Steve March, Multnomah County Auditor

Re: Facilities Project Management Audit:
An Opportunity to Rebuild

Facilities, as an organization, has undergone numerous changes in recent years, including being assigned to three different departments and having a succession of four directors, a number of layoffs and reductions, along with other management changes. Through it all, staff has been able to track and manage to completion a heavy workload under less than ideal circumstances which includes an inventory of aging buildings. The current Director started last year and is committed to building a stronger organization using best practices as a guide; to that end, this report details a list of best practices and the current state we found during our review. The Director has already started plans to do "Project Management 101" training and work process evaluations. As he continues with developing this part and the rest of the organization we encourage him to continue to work with stake holders outside Facilities to explore opportunities for streamlining project work and to review with human resources his staffing and job classifications. We believe this is an excellent opportunity to rebuild.

The FY 2013 adopted capital budget included nearly \$22 million for routine capital projects involving the maintenance and repair of existing structures or systems. Project managers handle around 200 routine projects a year and best practices are designed to reduce risks related to capital projects and the money involved. While the project management staff appear to be dedicated and working in the best interests of the County, instituting best practices and providing systems and support will only enhance the work being done.

This audit was conducted by Fran Davison and Jennifer McGuirk. We appreciate the assistance we received from the Department of County Assets and the Facilities and Property Management Division, and in particular the management and staff involved.

CC; Sherry Swackhamer
Michael Bowers
Joanne Fuller

Table of Contents

Executive Summary	1
Background	2
Results	4
Topic 1: Tone at the Top and Expectations	5
Topic 2: Standardized Processes for Project Management	6
Topic 3: Tailoring Practices to Project Type	8
Topic 4: Staff Workload	8
Topic 5: Professional Development	9
Topic 6: Communication and Stakeholder Management	9
Topic 7: Project Planning, Scoping and Scheduling	10
Topic 8: Reporting and Monitoring.....	12
Topic 9: Cost Monitoring	13
Topic10: Documentation and Information Storage	14
Topic 11: Learning From Work Completed	15
Recommendations	17
Scope and Methodology	19
Response to Audit	23

Facilities Project Management: An Opportunity to Rebuild

Executive Summary

Multnomah County's FY 2013 adopted capital budget for Facilities and Property Management (Facilities) provided more than \$37 million for routine and non-routine capital projects, including \$21.7 million for routine capital projects that involved the repair or maintenance of existing structures or systems. Facilities project managers manage approximately 200 routine projects each year. These projects take place primarily in the more than 70 County-owned properties and impact dozens of County programs. The large number of projects and the millions of dollars spent on them generate risks for the County and challenge its ability to manage public dollars and provide services without disruption. A primary purpose of project management is to reduce these risks. Our audit objectives were to identify impediments to achieving project goals and determine if Facilities project management is following best practices.

In recent years, Facilities has undergone many changes that have contributed to an environment with unclear standards and expectations. The current director has an opportunity to set a stable tone at the top, establish a shared vision and improve practices, including project management practices.

Project management staff appear to be dedicated and working in the best interests of the County, but don't have good systems to support their efforts. We found current project management practices to be inconsistent with best practices. We could not determine how well Facilities is meeting its project goals because documentation is fragmented, project management practices are inconsistent and there is no formal evaluation of how well projects met goals. In addition, stakeholders outside Facilities may impact Facilities' ability to deliver projects.

We recommend Facilities:

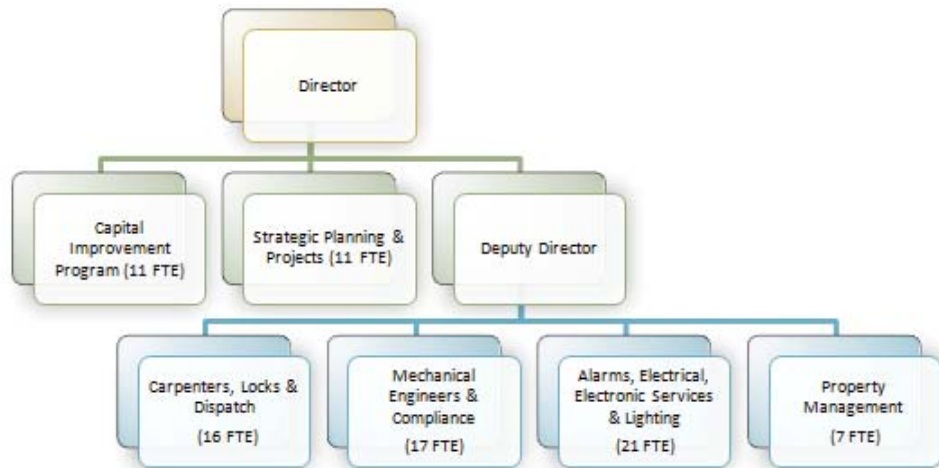
- (1) Strengthen organizational policies and procedures in order to clarify standards and expectations for project management;
- (2) standardize project management according to best practices and perceived risks;
- (3) standardize project documentation to ensure completeness and accessibility of information;
- (4) develop a process for evaluating project performance and applying lessons learned; and
- (5) establish a shared foundation for project management practices among those with project management responsibilities.

Background

Facilities and Property Management (Facilities), a division of the Department of County Assets, includes the Capital Program, Strategic Planning and Projects, Operations and Maintenance and Property Management sections.

Exhibit A

Facilities and Property Management Organizational Chart



Source: County Facilities and Property Management

Facilities is responsible for acquiring, providing and maintaining the County's more than 3 million square feet of owned and leased space. As it meets this responsibility, Facilities carries out routine projects that involve the repair or maintenance of existing structures or systems, and non-routine capital projects that result in new buildings or systems. In FY 2013, the adopted capital budget for Facilities was more than \$37 million for non-routine and routine capital projects. Each year, staff from across Facilities are involved in scheduled routine and non-routine projects. They also undertake unscheduled projects at the request of County departments. Management shared that the significant number and combination of projects requires staff to continually balance priorities.

The Capital Program section, commonly referred to as CIP, manages the County's long-term replacement plan for the major building systems in all County-owned buildings. CIP assesses facility needs and prioritizes required work within available resources. The section provides management and oversight of construction, renovation and

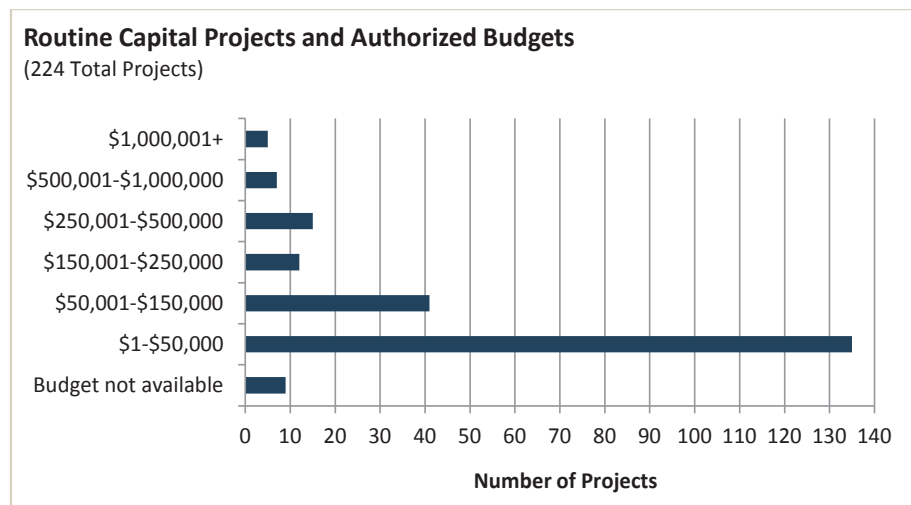
capital maintenance work in these buildings. The majority of funding for the section comes from Capital Improvement Program fees and Asset Preservation fees. County programs and departments pay these fees from their budgets based on a square footage charge.

CIP employs nine project managers who manage the majority of routine capital projects. The goals for CIP project managers are to ensure that projects are completed as planned and within approved budgets. According to recent program offers, they oversee planning, design and construction, and coordinate activities with consultants, contractors and building users.

Our audit focused on projects active during calendar year 2012, which crossed fiscal years 2012 and 2013. The FY 2013 adopted capital budget authorized spending up to \$21.7 million for specified routine capital projects, as well as for specific types of work, such as Emergency Repairs, American Disabilities Act upgrades, Interior Finishes and Fire Life Safety.

The volume of routine capital projects is significant. For example, during the period we reviewed, there were 224 active projects as reported in Data Tracker, a database that integrates budget information and project updates. CIP project managers managed 82% of these projects, with Property Managers, Operations and Maintenance Supervisors and other staff managing the remainder. The *majority* of these routine projects were under \$50,000, as shown in Exhibit B.

Exhibit B



Source: January-November 2012 Aggregated Monthly Status Reports

More than one-third of the 224 projects were active in more than one fiscal year. The projects took place at nearly 50 locations and impacted a variety of County programs. The number of projects and the millions of dollars spent on them generate potential service-disruption and financial risks for the County.

Routine projects range widely in size and complexity and take place in buildings across the County. Examples of the variety of projects include elevator upgrades, roof replacements, interior finishes and flooring replacements, new security systems and heating, ventilation and air conditioning repairs and replacements. In addition to capital projects, project managers manage many service requests, or requests for routine maintenance, including repairs and individual department-sponsored projects such as remodels or moves and reconfigurations, known as moves, adds and changes.

Our review of Facilities project management had two objectives:

1. identify impediments, if any, to achieving Facilities' project goals, and
2. determine if project management is following best practices.

Our scope focused on routine capital projects that were active during calendar year 2012, which included projects from fiscal years 2012 and 2013. The audit scope concentrated on CIP project management processes for capital-funded and department-funded projects.

We used a case-study methodology, which included 13 in-depth case study reviews. A detailed discussion of scope and methodology is at the end of this report.

Results

We looked at Facilities' current practices to see how they align with best practices for project management. We reviewed the project management processes and found some that work well and others that do not. There are also areas outside of Facilities that impact Facilities' ability to deliver projects. In general, project managers are working in the best interests of the County, and managing most projects through completion within authorized budgets. But the systems to support their work need improvement. Management is aware of many of the issues and is reviewing processes to identify areas for improvement. Areas that need attention may be the result of organizational flux, changes in County business processes, layoffs and staff turnover, inconsistent standards for project management and the lack of an integrated tool for project managers, such as project management software.

Topic 1: Tone at the Top and Expectations

Best Practices: The leader sets the tone of the organization. Best practices state that the tone at the top is a primary source for clarifying how an organization expects to put its values, principles and business standards into practice. Management sets and reinforces expectations through organizational policies and procedures.

Current State: There have been several Facilities directors in recent years. As a result, there has not been a consistent tone at the top to represent the Division's business values or ensure that managers reinforce these expectations with their staffs.

Leadership changes, reorganizations and staff movement have been common in Facilities over the past few years. County leadership relocated Facilities from the Department of Community Services to the Department of County Management in FY 2007, and relocated Facilities again to the Department of County Assets when it was created in FY 2012. Since FY 2008, Facilities has had four different directors; other positions were reorganized when senior managers retired. The current director started in July of 2012.

The creation of the Strategic Planning and Projects section in FY 2012 shifted a number of roles, and teams broke apart when Facilities' fiscal and contracting staff moved to the Administrative Hub in another building. There have also been budget cuts resulting in staff reductions and some attempts to re-engineer business processes.

In addition, there have been multiple attempts to assess or improve project management. In 2010 the Coraggio Group consulting agency held sessions and work groups with Facilities staff, yet according to project managers, few suggestions were implemented. Staff and external consultants began creating a new CIP project management manual, but the manual was not finished. Past efforts and time invested in exploring solutions did not result in improvements.

One outcome of these many recent changes is that Facilities lacks clear standards for how its operations are to work. In interviews with staff we found that they have different ideas about which sections are responsible for which kinds of projects. Project managers described confusion about whether there are distinctions between projects and maintenance jobs and how the initial budgets they receive are determined. Project managers expressed frustration that not all staff with project management responsibilities are aware of or are following County protocols for processes such as contracting.

Additionally, there does not appear to be ongoing supervisory oversight to ensure accountability and consistent project management. While performance reviews appear to take place in CIP and management seems responsive to project manager questions, we found project managers are not held accountable for required documentation or following practices as described in the project manual. For example, project managers shared that no one reviews their project files, so they do not actually need to develop required documents. The lack of ongoing oversight means project managers aren't held accountable for following established practices, enabling inconsistent project management that increases project risk.

The current director is aware of many of these challenges, is taking steps to improve the Facilities division and has invited staff to share their concerns and suggestions for improvements.

Topic 2: Standardized Processes for Project Management

Projects and the Project Manager's Role

Best practices describe projects as temporary and resulting in unique products, services or results. In the case of CIP project management, the product or result may be a new roof, remodeled work space, upgraded lighting or a new security system. Project management is the application of knowledge, skills and techniques to execute projects effectively and efficiently. Project managers typically determine project specifications; manage stakeholders; and balance needs among scope, quality, schedule, budget, resources and risks.

Best Practices

Best practices recommend standardized processes and tools, such as a project management plan template or an evaluation form, to enable the project manager to work efficiently and effectively and minimize project risks. The Project Management Institute has established widely recognized standards that define project management in terms of processes, which fall into five groups: 1) defining new projects or project phases; 2) planning project scope, objectives and activities; 3) implementing the plan; 4) monitoring and managing project progress and performance; and 5) finalizing activities to formally close a project or project phase. These processes are repeatable and include activities for planning, assessing risk, scheduling, contracting for services, monitoring, reporting progress and documenting lessons learned.

According to best practices, projects that follow standardized practices are more likely to:

- Meet project goals and stay on budget and on schedule more frequently.
- Reduce the risk of unanticipated problems that would result in increased budgets and schedule slippage.
- Enable consistency in management from project manager to project manager and from project to project.
- Help stakeholders, including clients, know what to expect.
- Facilitate performance measurement because standards and processes are clear and the right information is documented.
- Enable lessons learned to be systematically applied to future projects.
- Help build and sustain a positive reputation.

Current State We found current project management practices to be inconsistent. The existing CIP project management manual states that “Project Management Institute guidelines are followed and used as a basis for section procedures,” and the manual has been adapted to conform to County policies and processes. However, the manual does not fully address current best practices and is not always followed. For example, none of the 13 case studies included required communication plans or updated project management plans. Further, the manual doesn’t always provide clear guidance and it is not kept current.

Project management practices vary widely from project manager to project manager. Basic processes such as scheduling, reporting and communicating are highly dependent on the project manager. These inconsistent practices can have consequences. For example, they make project planning and implementation unpredictable for clients and difficult to monitor. They increase risks that schedules will slip, services may be disrupted and budgets will be exceeded.

Inconsistent practices also hinder Facilities’ ability to measure performance across projects. In contrast, consistent processes lead to more predictable outcomes and enable system-wide measurement and improvement.

We were told that management is aware of inconsistent practices and has plans to implement a “Project Management 101” program. In early FY 2014, the director brought on a certified Project Management Professional to establish a common approach to project management that is based on best practices.

Topic 3: Tailoring Practices to Project Type

Best Practices Best practices discuss selecting processes that are tailored to the specific project. Projects vary in size and complexity, and the level of management should be appropriate for each project. While there may be different standardized practices for different types of projects, there should be core practices common to the organization.

Current State Staff manage many different kinds of projects, in terms of project type, size and complexity. Different kinds of projects require different levels of control, scheduling, management and complexity of contracting. For example, the reconfiguration of one office does not need the same level of management or documentation as a re-roofing project or a large remodeling project. The project manual does not provide guidelines or criteria for tailoring practices to the needs of the project.

Standardized processes should be risk based. More than half of the projects in our review period had authorized budgets less than \$50,000. There did not appear to be consistent practices related to the level of risk. For example, projects with lower risk, such as those with smaller budgets or little impact on departments and programs, did not have consistent practices related to the level of risk.

Topic 4: Staff Workload

Best Practices Best practices for planning, developing and managing project teams include determining whether personnel are available to work on projects within the necessary time period.

Current State Project managers may have been over-assigned. As reported in Data Tracker for calendar year 2012, Facilities staff managed 224 routine capital projects and 200 individual department service requests, including more than 100 moves, adds and changes. Service requests tend to occur with little advance notice. Considered together, routine capital improvement projects and service requests present a significant workload for CIP project managers. Due to the large volume of routine projects, some are assigned to other sections in Facilities. In addition, project manager workload may include participation in non-routine projects.

Project managers may manage multiple routine projects in a building at one time. This bundling can allow them to streamline management and minimize disruption to County programs. However, each project manager's total workload may mean that they do not have the available hours to effectively manage their assigned projects. For example,

one project manager was responsible for 28 projects and 18 service requests during calendar year 2012, while another was responsible for 19 projects and 21 service requests. Workload may mean that project managers do not have time to follow stated procedures or best practices.

Topic 5: Professional Development

Best Practices	Best practices recommend having a process to develop project management competency and providing training on the use of project management tools and techniques.
Current State	The majority of project managers have gone through the state's Project Management Certification Program, but there is no ongoing training to help them apply these skills to their work. CIP also partners new project managers with outgoing ones to help them learn their jobs, but this orientation appeared to vary in content. There are few ongoing training opportunities for all project managers that support skill building in areas such as customer relations or contractor management. Facilities did not have an ongoing training program for its project managers that clarified expectations and helped them grow professionally. We also found instances where project management terminology was inconsistent. The director's plans for a "Project Management 101" program could help set the foundation for ongoing training that helps Facilities build common project management practices and terms.

Topic 6: Communication and Stakeholder Management

Best Practices	Communication and stakeholder engagement are keys to project success. Stakeholders can be internal to Facilities, including Operations and Maintenance staff and property managers, or they can be external, including departments and contracted firms. To engage stakeholders, project managers need to communicate with them often and effectively.
Current State	We found communication practices to vary from project manager to project manager and from client to client. Inconsistent communications and stakeholder involvement can result in misunderstandings, and impact budgets and schedules.

Many projects impact County programs and operations. Effective communication between the project manager and the client can help minimize disruption to the department or program by ensuring clients know what to expect, and can clarify client responsibilities

for communicating relevant project information to their staffs. Regular communication gives clients the chance to make sure project managers know about program protocols that can impact the project, such as the security clearance requirements that come with working in inmate facilities. Some project managers and clients shared that these communication practices were not consistent on projects.

Clients reported that project managers do not consistently establish expectations for project manager and client areas of responsibility. This has resulted in clients taking on unanticipated duties, for example, ensuring employee and contractor safety.

Some project managers communicate better than others. In interviews, clients said that they want to work with project managers who communicate well. These project managers include them in regular meetings and are on-site frequently to monitor contracted staff and solve problems.

In addition to experiencing inconsistent communication practices among project managers, clients shared that Facilities staff from different sections of the Division communicate infrequently and inconsistently with each other during project implementation. These practices have negatively affected client perceptions of the Division.

Topic 7: Project Planning, Scoping and Scheduling

Best Practices Documentation is key to successful project management. Best practices say the project management plan defines the basis of all project work, such as activities to manage scope, time, costs and quality. Changes in the project time line, stakeholder needs or available resources could all necessitate a change to the project management plan. This plan should be continually revisited and updated during a project to help achieve project objectives and reduce risks.

Best practices present scope development in relation to project initiation and planning. During initiation, the vision for the project is set, and its initial scope is documented. Then, through planning processes, all aspects of a project's scope are explored. Managing project scope involves ensuring that projects include all required work, and only required work, to complete projects successfully. Scope represents a risk because a flawed scope can compromise an entire project.

Current State Time management best practices include identifying and sequencing project activities, and developing and controlling project schedules.

Project Management Plans

The majority of the projects in our case study reviews did not have a project management plan in the project folder, and for those that did, project plans were not updated as scope, schedules and budgets changed.

Planning and Scoping

CIP project managers reported that they are often not involved in initial scoping and planning. They frequently receive assignments that begin with inaccurate plans, which suggests that initial scoping and planning practices vary in quality. In many of the projects in our case study, there was evidence of inaccurate scoping and planning that appeared to negatively affect project budget and/or schedule.

For example, the FY 2012 adopted capital budget included a project with an estimated construction cost of nearly \$200,000. After the contracted architecture and engineering firm completed design, construction firms interested in bidding told the project manager that the project would be much cheaper than anticipated. The project manager followed the suggestions of the contract professionals and construction bids for this project came in at less than \$40,000, saving the County well over \$100,000 in construction costs.

However, projects at this level of construction cost are not required to go through formal bidding and contracting processes. The project manager estimated that if he had received the project with a better plan and scope, he could have saved the County up to eight months on the unnecessary formal bidding process and many hours of staff time.

Because initial planning and scoping can be flawed, verification is critical. While project managers are expected to be experts in project management, they are not necessarily skilled cost estimators who can ensure that a project's budget fits its scope. Some project managers walk project sites with Operations and Maintenance staff members, contracting consultants or both. However, there is no consistent process across project managers to ensure that scope is accurate. When there is a mismatch between a project's budget and scope, there is an increased risk that dollars will not be spent effectively or that a project will not be successful.

Schedules

The majority of projects we reviewed did not adhere to the original schedule. Most department representatives reported that delays were

a major problem on their projects. Project delays can impact County operations and service delivery to County residents.

Some of the schedule changes during our review were due to delays in contracting and not under the control of project management staff. A combination of factors contributed to these delays, including turnover in contracting staff, movement of Facilities contract staff to the Administrative Hub staff implementation of a new contracting system and new procedures in procurement. Facilities and Contracts are aware that the contracting process can be an impediment to project management and are working on improvements. In addition to delays related to the contracting process, schedules may also be impacted when project managers or Operations and Maintenance staff involved in project implementation are needed for emerging projects or high-priority client requests.

We found that project managers did not use consistent practices to manage project time lines. In many of our case study reviews, schedules appeared to be those that contracted firms developed for their portions of a project. A lack of project manager generated or managed schedules may be one reason that project managers did not consistently hold contracted firms to proposed time lines.

For example, on one project we saw no evidence that the project manager created any time management tools, such as schedules. The project manager also failed to hold the architecture and engineering firm closely to their proposed schedule. The firm submitted design documents that were necessary for the construction bidding process three months after the due date.

Topic 8: Reporting and Monitoring

Best Practices	Best practices recommend producing project status reports for stakeholders. They should be consistent and use plain language. Reports should provide a comparison of actual results to the project plan including project budget expended, as well as progress on key project milestones and significant changes to project scope and budget.
Current State	The Data Tracker database provides management with reports for monitoring project progress and budgets. Several years ago, managers and analysts worked with Information Technology staff to develop Data Tracker, which replaced a time-consuming and cumbersome process of preparing Capital Improvement Project updates for Facilities management. Analysts input approved budget

data and import data from SAP (the County's enterprise system) into Data Tracker, and project managers update project status. Based on these various updates, the CIP data analyst produces monthly and quarterly reports for Facilities managers and supervisors to review. Reports are also posted on the County website where stakeholders may review the CIP project list.

IT staff added capabilities to Data Tracker so that project managers could generate more detailed project status reports, including a color code that project managers select from to describe project health and the health of scope, schedule, budget and resources. There are also places to include basis for ratings, mitigation plans, next steps and general comments.

Although detailed status reports could be of value to managers and stakeholders, project managers seem to use them infrequently. We observed only one instance of a project status report in our case study reviews, and project managers did not mention them in our interviews. Additionally, our review of monthly reports found that project managers used the color code indicators inconsistently and report information was incomplete. Project managers consistently said Data Tracker does not help them manage their projects. For example, they may be more likely to use vendor invoices and reports from SAP to monitor and track project budgets than to use Data Tracker. Project managers do not have an integrated tool that helps them monitor or track their projects.

Topic 9: Cost Monitoring

Best Practices	Best practices say that cost monitoring should comply with organizational financial procedures. Cost monitoring also should include a review of project-related expenditures "both in relation to the current budget, and over the entire project life." Looking at projects only within the current budget cycle masks overall project costs, especially for large or complex projects that may be in process more than one year.
Current State	Data Tracker is configured to report financial information only within the current fiscal year. During the year budgets may be adjusted to reflect remaining funds and at the end of the fiscal year, budgets are adjusted to reflect available funding for the new fiscal year. In July 2012 there were nearly 50 budget reductions in Data Tracker, and during the year there were many funds transferred from projects with excess budgets to projects in need of a budget increase. This fiscal year orientation may not be readily apparent in Data Tracker reports.

Data Tracker reports may not include a project's total authorized budget as well as a fiscal year allocation, which makes it difficult to determine whether budget changes reflect a change in total authorized budget or current funds available. While it is important to track expenses against the remaining budget, Data Tracker reports can be difficult to follow from month to month, and reports do not provide information that corresponds to the life of the project.

County Administrative Procedure

Multnomah County Administrative Procedure FIN-15 requires semi-annual reporting of the adopted project list and status of each including *actual expenditures to date*. CIP provides semi-annual reports which include active projects from past and current adopted budgets; however, they may not include costs over the life of the project. This makes it challenging to follow budget changes and overall costs for the life of the project, and provides no final reporting on total project costs.

For example, one project in our case study was active during three budget years and appeared in two capital budgets. Each year the budget was adjusted to account for increased costs, yet the capital reports included only the budget and expenses incurred during the fiscal year reporting cycle.

Topic 10: Documentation and Information Storage

Best Practices Best practices acknowledge that more than one system or technological solution may be required to address all information requirements. A tool that ties together information from various sources helps people access project information easily and supports analysis of project performance and transferring knowledge to other projects.

Current State Project managers do not have an effective records management system. Project data are stored in many different places, and project managers may store the same kind of information in different ways. These practices resulted in no clear audit trail for our case study projects. In order to piece together each project's story, we had to use multiple sources, including hard copy or personal project manager electronic project files, printed email messages, Data Tracker, SAP, adopted budgets and interviews. The information systems that support project management are fragmented.

For one project we reviewed, one manila folder contained documents for three projects in the same building. We did not observe project management plans, and invoices for the three projects were

intermingled. It was only after reviewing the file, talking to the client and the project manager and reviewing SAP documentation that we gained an understanding of the various projects and some of the issues surrounding each.

Another project had a mix of hard copy and electronic project files. The hard copy files were primarily permits and correspondence. The electronic files were in 11 subfolders along with 32 documents in the main directory, not filed in a subfolder; budget authorization requests were on file, but not all approved authorizations were in the file and different naming conventions were used for the same type of document. This project had been in process for three years and had accumulated more than 200 associated documents. We were unable to find all required documentation on this project.

In addition to being difficult to find, project information is difficult to access. For example, clients do not have direct access to Data Tracker although monthly reports are available on the County website. Access to project-related emails is limited, as is access to any information that project managers maintain on their private drives; saving project data on private drives makes it difficult for supervisors or others to access project information and files. The limited access to many project information sources means that access can also be limited to knowing why a project's budget or schedule slipped. We believe the fragmented way in which information has been stored obscures knowing what happened on a project and inhibits the ability to transfer knowledge from one project to another.

Topic 11: Learning From Work Completed

Best Practices	Best practices say that capturing lessons learned is an integral part of the project management process and recommend developing a strategy so that key information is passed on to other projects. Documentation should include highlights of what happened during the project. Lessons learned can be used as part of project planning for similar projects in order to determine what problems occurred, how those problems were handled and how they may be avoided in the future. Additionally, this can serve to detail what went well and why, so that other project managers may benefit from these actions. The lessons learned process may include a review session conducted after a project is completed to gather feedback from team members and stakeholders. Project managers could also use the information to determine appropriate contacts.
Current State	There was not a process in place to learn from work completed. We couldn't determine how well Facilities was meeting its project goals

because documentation was incomplete, project manager practices were inconsistent and there was no consistent evaluation of how well projects met goals. We found that while there was much data collected and reported to managers, data were not analyzed to identify areas for improvement of the project management process. The varying approaches to project management made it challenging to measure the effectiveness of project management procedures.

When a project ended, project managers completed an internal closeout process. In some cases managers worked with stakeholders to identify, document and share lessons learned, but this was not a routine process. In addition, project evaluations were not part of the close-out process. There may have been challenges or barriers to gathering lessons learned, such as the lack of time to capture or submit lessons.

Analysis of some of the following areas could lead to improvements in the project management process:

- Scope deviations
- Project duration or schedule slippage
- Budget changes
- Amount of project manager time required to complete projects
- Lessons learned
- Total project cost

Current systems do not support analysis in these areas. The director has plans to conduct some analyses to better understand the reasons for differences in budgets and schedules, which would provide a good start to consistent analysis.

A major problem with the practices we observed was that there was no consistent documentation to explain why projects developed as they did. For example, although budget change documentation was available, the rationale for such changes may have been minimal and not stored in a way that allowed for ready analysis. Without consistent documentation, the ability to analyze information, identify areas for improvement and incorporate them into practice is limited.

Recommendations

Strengthen Facilities' tone at the top to help project managers achieve Facilities' project goals.

The Facilities director has plans for improving project management. For example, the director has implemented a project management group to improve processes. However, he needs to take measurable steps to strengthen organizational standards and expectations, including:

- Clarify the responsibilities of each section in the Division, including which sections manage which kinds of projects;
- Implement a performance measurement system that is based on expectations and ensures supervisory monitoring; and
- Periodically identify and evaluate any gaps between the Division's stated standards and practices and actual practices.

Standardize project management across Facilities to make it consistent, predictable and measurable.

- Offer measurable, frequent opportunities for all staff with project management responsibilities, particularly all CIP project managers, to contribute to the standardization of project management.
- Identify and generally define the typical types of projects that Facilities manages. Types could be based on total project budget and/or complexity, for example. Determine the best practices that are relevant to each type.
- Develop and implement consistent project management practices based on best practices and County policies relevant to project management.
 - o For example, develop methods that ensure Facilities staff work with stakeholders to efficiently deliver Facilities projects. These stakeholders would include staff in the Administrative Hub and in other Department of County Assets and Management divisions.

Standardize project documentation and information storage to ensure completeness and accessibility of information.

- Facilities should create or update a few common forms based on project management best practices to reflect required minimum levels of documentation for each project type. The end goal should be a base set of tools that help project managers do their jobs and communicate with stakeholders.
 - o Project types and minimum documentation requirements could be codified in an updated CIP project management manual.

- CIP project management should move to electronic file storage for minimum required documents, with all required documents stored on a shared folder using standard naming conventions. For example, there could be a suggested file structure with at least one required folder for the minimum required documents. Project managers should be trained in County document storage requirements and streamlined methods of storing emails to project folders. A central repository would support knowledge transfer.

Evaluate project performance and apply lessons learned.

- Lessons learned should be documented consistently. A standardized project evaluation template could be used to document project history including causes of variances in scope, schedule, budget and other project details. The template also could incorporate information from a session with stakeholders.
- Determine project types that will require a formal evaluation during the required close-out process. Establish a consistent and well-defined project evaluation process that results in a summary of how the project unfolded, includes lessons learned and, when feasible, an in-person feedback session with project stakeholders including department staff.

Assess the project workload for Facilities staff with project management responsibilities.

The project workloads for Facilities staff appear to be unrealistic, especially if staff are expected to carry out project management best practices. Workload levels may need to be adjusted over time as project managers gain efficiencies with project management tools.

Facilities should also explore other opportunities for streamlining project work, such as:

- Increasing its bundling of projects to minimize disruptions to departments and maximize efficiencies within a building.
- Working with stakeholders including clients, Finance and Contracts to identify areas for increased efficiency.

Create a shared foundation of project management practices.

Provide the following professional development opportunities and any others needed to ensure project managers manage projects in accordance with County procedures and project management best practices:

- Project management standards, including scope, time and stakeholder management
- Document management
- Protocols and regulations of County programs

To ensure a shared understanding of project management practices, we encourage the Division to bring in an outside certified Project Management Professional experienced in construction projects for a workshop to guide project managers through best practices, and to be available for ongoing consultation and support. The workshop could include, for example, setting customer expectations; managing contractors; and budgeting, monitoring and scheduling techniques.

Consider the following:

- After Facilities determines required documentation and procedures, it should investigate a project management tool(s) that will assist with document management, automated status reports, budgeting, scheduling and variance analysis to support project management and continuous learning.
- Identify project management processes where project managers may benefit from external assistance. For example, consider using a professional estimator to improve the rigor in establishing initial scope and budget. The Project Engineers Facilities is hiring may be able to perform some of this work, but additional resources may be needed.

Scope and Methodology

Our scope focused on routine capital projects, which result in the repair or maintenance of existing structures or systems, and service requests that were active during calendar year 2012. The scope included projects and service requests that Facilities staff members reported on in Data Tracker, a database that integrates budget information and project updates. Scope did not include any projects and service requests not captured in Data Tracker. For the review period, Data Tracker included 224 projects and 200 service requests. CIP project managers managed 82% of these projects and 90% of these service requests, with Property Managers, Operations and Maintenance Supervisors and other staff managing the remainder. Accordingly, the audit scope concentrated on CIP project management.

The audit faced two limitations. First, inconsistent CIP project documentation limited our ability to assess how well the County meets project goals. Second, Facilities and Information Technology (IT) staff could not provide a monthly status report from Data Tracker for December 2012, which limited our status report analysis to January through November 2012.

Our audit findings were based on analyses, interviews and case studies. We examined project and financial data from Data Tracker obtained from CIP and IT staff and financial data from SAP (the County's enterprise system). We interviewed the Facilities director, section managers and staff from every section, as well as County staff in the Administrative Hub, Contracts and IT. We also interviewed individuals within and external to the County who are certified Project Management Professionals or who were clients on recent projects. We reviewed best practices for project management, project management software applications, change management and internal control.

Using a case-study methodology, we conducted 13 in-depth case studies that included interviews, hard-copy and electronic project file reviews and data analysis. The cases reflected the diversity of routine capital projects, including variations in scope, budget, schedule, location and project manager. During interviews, clients talked about these cases and other recent projects in their departments.

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.

Exhibit C

Case Study Projects

Project Location	Project Description	Authorized Budget
Animal Services	Upgrade existing security system	\$28,000
Edgefield Farm	Decommission farm property	\$113,444
Elections Building	Remodel lobby to comply with Americans with Disabilities Act (ADA)	\$14,900
Inverness Jail	Upgrade water heating system	\$325,000
Inverness Jail Laundry	Replace piping related to boiler upgrade	\$115,000
Justice Center	Rebuild/repair heating, ventilation and air conditioning air handler unit #3	\$15,000
Justice Center	Install and leak-test new gas piping	\$7,500
Mead Building	Replace building fire notification system	\$637,972
Multnomah Building	Upgrade building elevators	\$1,122,000
Multnomah County Courthouse	Upgrade generator ventilation	\$277,544
Roosevelt High School	Upgrade school-based health clinic	\$89,378*
Walnut Park	Remodel Aging & Disability Services (ADS) restrooms to comply with ADA requirements	\$99,307
Walnut Park	Upgrade interior finishes in ADS lobby and Loaves & Fishes dining area	\$53,100

Sources: Locations and descriptions: January-November 2012 Aggregated Monthly Status Reports

All authorized budget figures except *: Project Life spreadsheet as of April 13, 2013

Authorized budget figure *: County Health Department budget justification

Response to Audit

**Department of County Assets
Facilities and Property Management Division**



401 N Dixon Street

• Portland, Oregon 97227

• Phone (503) 988-3322

DATE: 10 September 2013
TO: Steve March, County Auditor
FROM: Michael Bowers, Facilities Director
SUBJECT: Response to Facilities Project Management Audit

The Department of County Assets and the Facilities and Property Management Division thank you for the time that you and your staff have invested in the review of the Facilities capital project management practices. Your findings and recommendations present opportunities to improve our service delivery to all County programs. We appreciate the thoroughness of your review and provide the following high-level response.

As you have ascertained, the Facilities Capital Program is responsible for a tremendous volume and value of construction and maintenance projects. The high demand for projects stems from numerous sources including: an aged portfolio of buildings with substantial and significant maintenance requirements; County program changes that require space modifications, moves and/or tenant improvements; industry and technological changes compelling upgrades; new code requirements and mandates; multiple organizational and leadership changes; and more than a decade of budget reductions. We recognize that the current volume of work has seriously impacted the support systems necessary to consistently deliver project management services in keeping with the best practices as you have identified. We are committed to rebuilding critical structure and processes in keeping with your recommendations.

We have several initiatives underway to address the root causes of project management inefficiencies. The launch of the "Project Management 101" process improvement project this month will focus on implementing tools to streamline and standardize processes, establish expectations, train staff, and provide consistent oversight and support for project managers. Additionally, as we develop this next fiscal year's capital program budget we will be looking for opportunities to combine or identify other innovative ways to reduce the workload to a more manageable level. Addressing the factors that generate the high volume of projects is the work of two ongoing initiatives: Phase 2 of the Facilities Asset Strategic Plan and the finalization of a new Asset Management Plan to replace an outdated system. Our staff is also working closely with County procurement and finance staff to prudently remove non-value added restrictions or impediments that will benefit business practices Countywide.

Further, as the County continues to dispose of excess properties via dispositions and development agreements, together with large capital projects to replace obsolete facilities – it will be important to dedicate talented project management staff to these complex tasks while concurrently improving delivery systems for the routine workload addressed in this audit report. As such, we will utilize best practices, as you have described and leading edge, innovative lessons from both private sector and public sector.

And finally, it is important to note that making the necessary changes described in your recommendations will require further investments in the Facilities and Property Management Division. We will evaluate options and implement the changes that are possible within the current FY 2014 funding and timeline. We will also evaluate and plan for the additional investments that will be proposed in the FY 2015 budget to support the necessary infrastructure and organization.

Thank you again for the time and effort taken to compile this report and make recommendations for improving our services. We look forward to providing updates on our progress as we implement solutions.

cc: Joanne Fuller, Chief Operating Officer
Sherry Swackhamer, Director, Department of County Assets