

**Management Audit**  
**of the**  
**Department of Public Works**

**Prepared for the**  
**Board of Supervisors**  
**of the City and County of San Francisco**

**by the**  
**San Francisco Budget Analyst**

**January 9, 2007**

CITY AND COUNTY



OF SAN FRANCISCO

## BOARD OF SUPERVISORS

### BUDGET ANALYST

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January 9, 2007

Honorable Aaron Peskin, President  
and Members of the Board of Supervisors  
City and County of San Francisco  
Room 244, City Hall  
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San Francisco, CA 94102-4689

Dear President Peskin and Members of the Board of Supervisors:

The Budget Analyst is pleased to submit this *Management Audit of the Department of Public Works*. On May 3, 2005, the Board of Supervisors adopted a motion directing the Budget Analyst to conduct a management audit of the Department of Public Works, pursuant to its powers of inquiry defined in Charter Section 16.114 (Motion No. M05-67). The purpose of the management audit has been to: (i) evaluate the economy, efficiency and effectiveness of the Department of Public Works' programs, activities, and functions and the Department of Public Works' compliance with applicable State and Federal laws, local ordinances, and City policies and procedures; and (ii) assess the appropriateness of established goals and objectives, strategies, and plans to accomplish such goals and objectives, the degree to which such goals and objectives are being accomplished, and the appropriateness of controls established to provide reasonable assurance that such goals and objectives will be accomplished. The scope of the management audit includes all of the Department of Public Works' programs, activities, and functions.

This management audit report reviews the Department of Public Works management of:

- The core responsibility to maintain the City's public right of ways, including street repair and improvement projects, street cleaning, graffiti removal, and urban forestry;
- Public right of way permitting and inspection functions;
- Capital project design, construction bids, schedules, accounting, and staffing;

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- Building maintenance and repair performance and customer service, including project management, materials and maintenance management, and fleet management;
- Health, safety, and environmental issues, including management of workers compensation costs; and
- Interdepartmental work order fund budgets and overhead.

The management audit was conducted in accordance with *Governmental Auditing Standards, 2003 Revision*, issued by the Comptroller General of the United States, U.S. Government Accountability Office. The management audit staff presented a draft report to the Director of Public Works on November 7, 2006, and held an exit conference with the General Manager and key members of the Department of Public Works' management staff on November 21, 2006, to discuss the draft report. Subsequent to careful consideration of the additional information provided by the Department of Public Works after submission of our draft report to the Department of Public Works, the management audit staff prepared a final report. The Department of Public Works has provided a written response to the Budget Analyst's *Management Audit of the Department of Public Works*, which is appended to this report, beginning on page 182.

## **The Department of Public Works' Performance Goals and Measures**

The Department of Public Works has insufficient procedures to set performance standards and measure performance against these standards. None of the Department's eight bureaus fully measures performance to ensure that the bureau achieves the best possible outcomes. The weaknesses in performance measurement can result from a variety of factors.

- The Bureau of Street and Sewer Repair cannot show that it delivers street projects cost-effectively because it does not track average project labor costs and productivity. Consequently, although the Bureau received \$500,000 in additional General Fund monies in FY 2005-2006 to patch streets and repair potholes, and \$3.4 million in additional General Fund monies in FY 2006-2007 to resurface streets, the Bureau cannot determine if these monies are used optimally to achieve intended results.
- The Bureau of Street Environmental Services lacks staff productivity standards, resulting in inefficient staffing plans. Further, the Bureau measures street cleanliness, including the presence of graffiti and cleanliness of trash receptacles, in accordance with Proposition C, which was approved by the voters in November 2003 and requires street maintenance standards that are published on the Department's web site. However, the Bureau has not used the information provided by these measurements to reallocate street cleaning schedules despite evidence that such reallocation would be productive.

- The Bureau of Urban Forestry lacks performance goals and measures and staff productivity standards. Currently, the Bureau has no performance measures related to its activities. Although Proposition C does not require the Department to publish maintenance schedules for tree maintenance, the Department does publish a pruning schedule on its web site. However, this published pruning schedule is the Bureau of Urban Forestry's goal for pruning street trees and does not reflect the actual maintenance schedule. The Department does not report its performance in pruning individual trees, as would be required by Proposition C for other types of park and street maintenance schedules. Nor does the Bureau keep records of its routine maintenance on its landscape properties that the Bureau is responsible for maintaining.
- The Bureau of Building Repair has inadequate performance measures and business processes. The Bureau does not measure the performance of its building repair and remodeling activities, and therefore cannot determine if it performs these activities efficiently. Nor does the Bureau measure customer satisfaction effectively. Consequently, the Bureau cannot gauge the quality of services that it provides to client departments.
- The Department's three bureaus responsible for capital projects – the Bureau of Architecture, Bureau of Engineering, and Bureau of Construction Management – do not measure some key performance indicators and lack consistent measures among the bureaus. For example, the Bureau of Engineering and the Bureau of Architecture do not currently track the number of construction contracts that have significant contract change orders and additional costs due to design errors and omissions, although this is a key indicator of performance. Also, the Bureau of Engineering and Bureau of Architecture have different performance standards to measure construction cost estimates against actual construction bids. Further, the Bureau of Construction Management's change order tracking system is intended to track the impact of construction contract change orders on project schedules and costs. However, system data is frequently inaccurate or insufficient to allow the Bureau to accurately track and report change order information.
- The Bureau of Street Use and Mapping is responsible for inspecting public streets to identify safety hazards, including notifying property owners of the need to eliminate identified safety hazards and re-inspecting hazards to ensure they have been removed or repaired to the standard described by the Public Works Code. Most of these inspections are initiated by calls from citizens who have observed a safety hazard. One of the Bureau of Street Use and Mapping's performance goals is to respond to 65 percent of complaints within 24 hours. According to the Controller's June 2006 performance measure report, as of December 2005, the Bureau responded to 63 percent of complaints within 24 hours. According to the Bureau's policy, district inspectors should conduct routine inspections to identify safety hazards and Code infractions as well as respond to citizen complaints, although under current practice and staffing levels, district inspectors conduct almost no routine inspections. The current approach results in more frequent inspections and citations in neighborhoods with a

high volume of calls, rather than high level of risk, leading to unequal enforcement of the Public Works Code.

## **Management Audit Recommendations**

This management audit report of the Department of Public Works includes 17 findings and 120 related recommendations prepared by the Budget Analyst. A list of the management audit recommendations is shown in the Attachment to this transmittal letter.

Proper implementation of the Budget Analyst's recommendations would result in cost savings, efficiency gains, and increased revenues of \$5,446,260, including \$2,545,000 in annual revenues and cost savings and \$2,901,260 in one-time savings. The Budget Analyst's recommendations include:

- Annual revenue increases of \$1,520,000 by increasing permit fees to recover the costs of permit processing;
- One time revenues of \$638,661 by collecting outstanding fines and penalties;
- Annual cost savings of \$845,000 through recommended position reductions and reductions in claim costs;
- One time capital project savings of approximately \$200,000;
- Annual efficiency improvements of approximately \$180,000; and
- One-time savings over time of approximately \$2,062,599 by reducing workers compensation costs.

The following sections summarize our findings and recommendations.

### **Section 1. Street Resurfacing and Pothole Repair Projects**

The Board of Supervisors appropriated \$500,000 in additional General Fund monies in the FY 2005-2006 budget to patch streets and repair potholes, increasing funding from \$1 million annually to \$1.5 million annually. The Board of Supervisors also appropriated \$15 million in new General Fund monies in the spring of FY 2005-2006 to fund street resurfacing projects.

Despite these new resources, the Department of Public Works cannot show that it is providing street repair projects cost-effectively. The Department does not routinely track average project labor costs and productivity to ensure that projects are completed efficiently.

Based on cost and productivity data provided by the Department, project labor costs for street resurfacing and patching projects vary widely from year to year and do not reflect projected

increases in salaries, benefits, and overhead. For example, the Bureau of Street and Sewer Repair's labor cost per square foot to patch streets decreased by 25.6 percent in FY 2004-2005, from \$1.76 per square foot in FY 2003-2004 to \$1.31 per square foot in FY 2004-2005, and increased by 45.8 percent in FY 2005-2006, from \$1.31 in FY 2004-2005 to \$1.91 in FY 2005-2006. The 45.8 percent increase in labor costs in FY 2005-2006 far exceeds increases due to salary, benefits and overhead. The Bureau of Street and Sewer Repair needs to evaluate the labor hours, labor costs, and productivity of street resurfacing and patching projects, including the accuracy of cost and productivity data, to ensure that these projects are delivered cost-effectively.

The Bureau of Street and Sewer Repair has a high rate of nonproductive hours. Approximately 12.3 percent, or 35,095 hours of the Bureau's scheduled hours of 285,664 are nonproductive paid and unpaid sick and disability leave. The Bureau, which has approximately 90 employees, lost the equivalent of 12.5 full time positions in FY 2005-2006 due to extended, unpaid sick and disability leave. This productivity loss is equivalent to more than \$1.1 million annually in salaries and benefits.

The Department incurs unexpected costs and delays from street improvement projects that incur design problems. For example, the Cesar Chavez Street Improvement Project incurred \$579,000 in contract change order costs, or 25.2 percent of the total construction contract amount of \$2.3 million, to pay for the redesign of a street bridge and compensate the contractor for overhead due to project delays. These costs could have been reduced or avoided if the Department had ensured adequate quality control over the project's design.

## **Section 2. Cleaning and Maintaining the City's Streets and Public Right of Ways**

The Department of Public Works' measures of the cleanliness of the public right of way show that the Department is not currently providing optimal service. For example, according to the Controller's Office Annual City Survey in 2005, less than half of resident respondents rate neighborhood street cleanliness as "good" or "very good" (49 percent), which is a decrease from the proportion finding neighborhood street cleanliness favorable in 2004 (52 percent).

Also, although the Department's goal is to resolve service requests within 48 hours, in FY 2005-2006 the Department did not resolve 18.6 percent of street cleaning service requests within that time frame, or 623 requests out of an average 3,347 requests each month. 68 percent of graffiti requests were not resolved within 48 hours, or 636 requests out of an average 935 requests each month.

Further, the Department referred 13,773 service requests that were called in on the Department's 28-CLEAN service request telephone line to other City departments and agencies from July 2004 through June 2006. Of these 13,773 service requests, 8,346 requests, or 60.6 percent, were not resolved within 48 hours.

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The Bureau of Street Environmental Services lacks staff productivity standards, adequate service request prioritization methods or other criteria to determine optimal allocation of resources, resulting in inefficient staffing plans and the aggravation of deferred maintenance issues.

Proposition C, which was approved by the voters in November 2003, required the Department of Public Works to set standards for street maintenance, publish maintenance schedules, and regularly evaluate Bureau performance based on the standards and schedules. Despite now having over a year's worth of data, the Bureau has not significantly shifted resources based upon the information learned from Proposition C evaluations. The Bureau has not used the data from the Proposition C evaluations to alter street cleaning schedules, despite evidence that such a reallocation would be productive.

The Bureau of Street Environmental Services does not adequately collect fines for litter citations. From June 16, 2003 through August 29, 2006, the Bureau levied 12,680 fines and citations. Of the \$1,290,800 amount due from the fines assessed during this approximately three-year period, including delinquent penalties and interest, the Department has only collected \$524,209, or 40.6 percent, of the fines, and waived \$167,930. This leaves \$598,661 in uncollected fines. The Department needs to aggressively pursue the collection of these fines.

The Department is responsible for the removal of graffiti on its own properties, which includes street surfaces and trash receptacles. When graffiti is on public structures and buildings that do not belong to the Department, such as mail boxes, street signs, etc., the Department notifies the appropriate public agencies, such as the Public Utilities Commission and the Municipal Transportation Agency, of the graffiti and of their responsibility to abate.

The Bureau of Street Environmental Services' graffiti crews abate graffiti on public properties not under its jurisdiction when they are working in the same area. However the Bureau was not previously billing other City departments for this service. In August of 2006, the Bureau began billing the Public Utilities Commission and the Municipal Transportation Agency for graffiti abatement. Only the Municipal Transportation Agency has given the Bureau funds (\$225,000) for graffiti removal. Unfortunately, the Bureau has been slow to implement this billing procedure and has not pursued the previously anticipated \$250,000 work order with the Public Utilities Commission.

The Bureau of Street Environmental Services experiences significant lost work time due to work related injury and illness, personal or family leave, and sick leave, contributing to reduced productivity and understaffing. Of the 51,547 hours that the Bureau's 340 employees were scheduled to work in the month from May 19 through June 16, 2006, only 38,063 hours, or 73.8 percent, were actually worked. 7.39 percent of the scheduled hours were taken as sick leave (paid and unpaid) and 4.22 percent were taken as disability leave (paid and unpaid). The Bureau of Street Environmental Services is only exceeded by the Bureau of Urban Forestry in its level of unproductive use of scheduled work hours, as noted below.

### **Section 3. Urban Forestry**

The Department of Public Works' Bureau of Urban Forestry manages City-owned street trees. Of an estimated 106,000 street trees on public rights-of-way, the Bureau of Urban Forestry manages approximately 26,000. The remaining trees are maintained by private property owners, in accordance with the Public Works Code.

The Department of Public Works' tracking, reporting and monitoring of street trees and maintenance is inadequate to manage tree planting and maintenance efficiently. The Bureau of Urban Forestry publishes a tree pruning schedule on the Department's website. However, this published pruning schedule is the Bureau of Urban Forestry's goal for pruning street trees and does not reflect the actual maintenance schedule. The average number of years between prunings for a department-maintained tree is seven years, compared to a goal of three years. The Department can estimate the average number of years between prunings by calculating the number of trees it maintains per year, but it does not have an overall picture of the actual pruning schedule of its street trees.

The Bureau of Urban Forestry's database of all trees that it maintains has several inadequacies that limit the ability of the Department to efficiently perform its work. For example, the database cannot generate important reports that would help it develop a work plan and allocate resources efficiently, such as a report listing the number of trees which haven't been pruned in a given number of years. Also, using its existing database, the Department cannot track the survival rate of newly planted trees, thereby missing potentially valuable information about patterns in tree mortality. The Bureau needs to reallocate resources or re-think planting strategies and young tree-maintenance.

Accurate street tree information, including tree location, condition, and maintenance history is especially important as the City moves forward with its goal is to plant an additional 5,000 trees each year. The Department of Public Works will need accurate information to efficiently allocate staff resources to planting and maintaining trees.

The Department of Public Works could do much more to increase tree and landscape maintenance productivity. The Department needs to establish performance goals and measures and enhance the productivity of its existing staff. For example, the Department needs to develop procedures to prioritize and coordinate routine maintenance with service requests. The Department also needs to better manage staff performance, attendance, and productivity.

The Department's ability to plant and maintain new street trees will impact the presence of street trees throughout the City. The *Urban Forest Plan* published by the Urban Forestry Council in February of 2006 found that street trees are not distributed equitably among neighborhoods. Aggravating this inequity is the cost burden for property owners to maintain street trees, resulting in more inequality in the status of the urban forest based on variations in economic status across the City's neighborhoods.

The Department does not adequately monitor street trees that are removed illegally or enforce citations and fines for doing so. In FY 2005-2006, the Department sent 103 fine letters for illegal tree removal or pruning. The Department states that approximately 65 percent of cases that are eventually followed up upon result from citizen complaints rather than proactive inspections by the Department. Further, as of August 2006, the Budget Analyst has calculated that the Department collected only \$13,740 in fines, or only 12.6 percent, out of \$109,364 for 103 citation letters sent during FY 2005-2006. \$36,120 of the remaining uncollected \$95,624 represents fines that have been waived or are pending administrative review. Therefore, \$59,504 in fines is unaccounted for, representing the amount not collected, not waived, or pending administrative review.

Interviews with supervisors of the Bureau indicate that employee productivity and quality of work are issues of concern to the Bureau. Further, in field visits with crews, it was observed that productivity was frequently lost due to absent staff. Of all bureaus in the Department, the Bureau of Urban Forestry has one of the highest rates of scheduled hours not worked due to absenteeism. In the 12 pay periods between December 18, 2004 through December 16, 2005, Bureau of Urban Forestry staff worked 148,965 of their scheduled 192,195 hours, or 77.5 percent. 14,335 hours, or 7.5 percent of scheduled hours, were taken in sick leave (paid and unpaid). 9,270 hours, or 4.8 percent of scheduled hours, were taken in disability leave (paid and unpaid).

#### **Section 4. Permit and Inspection Revenues and Performance**

Over the past four years, the Board of Supervisors has approved new or increased Department of Public Works fees, including excavation permit fees and street occupancy fees in 2002, 15 General Fund fees in 2003, and subdivision fees in 2005. In FY 2003-2004, the Board of Supervisors approved Public Works Code Article 2.1, establishing a new fee schedule for many of the Department of Public Works' General Fund fees and authorizing the Department to increase the fees annually based on the Consumer Price Index.

Although the Department of Public Works adjusts its fees annually by the Consumer Price Index, the Department's salary costs are increasing faster than the rate of inflation, causing the Department's fees to fall behind the growing costs to provide services. These revenue shortfalls are significant. For example, the Department's FY 2006-2007 General Fund fees fell short of the estimated costs to provide fee-based services by \$1.4 million.

The Department assesses a street improvement permit processing fee for property owners who have received a notice to repair the sidewalk fronting their property based on outdated Public Works Code language. In 2003 the Board of Supervisors authorized a \$540 processing fee for street improvement permits to reconstruct sidewalks, curbs, and parking strips fronting a property. The Department charges property owners who have received a notice to repair the sidewalk a \$165 permit processing fee under a 1987 Public Works Code revision rather than the \$540 permit processing fee charged to property owners who initiate sidewalk reconstruction projects. According to the City Attorney's Office, the Department is authorized to charge this \$165 fee under the Public Works Code. However, the Department cannot demonstrate that this

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fee, which was first authorized 19 years ago, recovers the costs of processing permits. The Department needs to evaluate the administrative costs to process this fee and submit a fee proposal to the Board of Supervisors for approval during the FY 2007-2008 budget review.

The Bureau of Street Use and Mapping assesses new construction projects the standard \$850 street improvement fee, which includes the \$540 permit processing fee and a \$310 permit inspection fee. If the street improvement project is large or requires additional inspections, the Bureau assesses additional inspection fees, equal to 7.5 percent of the estimated cost of the construction project. However, the Public Works Code specifies that the additional fees charged should be sufficient to recover the actual costs and should be charged on a time and materials basis. Because a fee based on a percentage of construction costs does not correspond to the Department's actual inspection costs, the percentage-based fee does not comply with this Public Works Code provision.

The Bureau of Street Use and Mapping's district inspectors conduct inspections of public streets to identify safety hazards. Most of these inspections are initiated by calls from citizens who have observed a safety hazard. According to the Bureau's policy, district inspectors should conduct routine inspections to identify safety hazards and Code infractions as well as respond to citizen complaints, although under current practice and staffing levels, district inspectors conduct almost no routine inspections. The current approach results in more frequent inspections and citations in neighborhoods with a high volume of calls, rather than neighborhoods with a high level of risk, leading to unequal enforcement of the Public Works Code.

## **Section 5. The Impact of Claims in the Public Right of Way**

The Department of Public Works paid \$2,848,511 in claims settlement costs in FY 2005-2006 from claims related to tree problems, sidewalk falls, vehicle accidents and other Department activities. The Department's number of claims settlements has increased by approximately 50 percent over the past ten years, from 415 claims settlements in FY 1996-1997 to 621 claims settlements in FY 2005-2006. The Department's claims settlement costs have increased by \$1,259,119 or 79 percent, from \$1,589,392 in FY 1996-1997 to \$2,848,511 in FY 2005-2006.

The Department of Public Works incurs high costs for claims settlements for tree-related incidents. \$1,661,936 in claims settlement costs in FY 2005-2006 resulted from tree problems, or 58.3 percent of the Department's total claims settlement amount of \$2,848,511. Sidewalks lifted and damaged by tree roots are the primary reason for the increase in tree problem settlements.

According to the Department, the Bureau of Urban Forestry assesses sidewalk damage due to tree problems and prioritizes sidewalk repairs based on this assessment. However, the cost of tree-related claims has increased significantly over the past 10 years. The number of tree-related claims settlements increased from 56 in FY 1996-1997 to 251 in FY 2005-2006, an increase of 348 percent. The claims settlement amount increased by \$1,503,930 or approximately 952 percent, from \$158,006 in FY 1996-1997 to \$1,661,936 in FY 2005-2006.

The Department should more thoroughly assess causes of tree-related claims to efficiently plan sidewalk repairs and reduce the incidence and costs of claims settlements resulting from tree problems.

## **Section 6. Capital Project Design Costs**

The Department of Public Works incurs increased construction costs for project design errors and omissions. Design errors and omissions, a preventable occurrence, accounted for \$2.1 million in increased construction contract costs, or approximately 2.9 percent of total construction costs for 49 construction contracts completed in 2004 and 2005 with total value of \$72.5 million.

Despite the impact of design errors and omissions on construction costs, the Department does not measure the impact. Although the Bureau of Engineering previously had a performance goal to limit construction contract cost increases due to design errors and omissions to 3 percent, the Bureau does not currently measure such increases. The Budget Analyst found that 11 of the 49 construction contracts sampled by the management audit, or 22.4 percent, had cost increases of more than 3 percent due to design errors and omissions.

The Department's Bureaus of Architecture and Engineering have project design quality assurance and control programs, but the Bureau of Engineering has not fully implemented their program. Further, the Department formed a task force to assess capital project quality assurance procedures but has not moved forward in evaluating or implementing the task force recommendations for the Department as a whole.

Projects designed by outside consultants have incurred high costs. For example, the recently completed Juvenile Hall construction project, designed by a consultant, is expected to incur \$9.3 million in additional costs due to design problems, equal to 18 percent of the \$51.7 million construction contract. Although the Department intends to pursue a claim for professional liability against the architectural and engineering design contractor, in many contracts the City and not the consultant pays the increased costs.

The Helen Wills Park construction project incurred \$164,700 in construction contract change orders, equal to 6.3 percent of construction contract costs of \$2.6 million, and more than 230 days in project delays. The project, which was designed by a consultant, required frequent modifications to meet American with Disabilities Act requirements and to accommodate the design to the actual site conditions.

## **Section 7. Construction Contract Bids and Awards**

Accurate construction cost estimates are important to ensure that a capital project can be achieved with available funds. The Department of Public Works has had to re-bid or re-define projects when the construction bid amounts have significantly exceeded the construction cost estimates and available funds.

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Although the Bureau of Engineering's FY 2005-2006 performance target was that 75 percent of all construction contract awards were to be less than 105 percent of the construction contract estimate, only 55 percent of construction contract awards met this target.

Although the Bureau of Architecture's FY 2005-2006 performance target was that 75 percent of all construction contract awards were to be less than 110 percent of the construction contract estimate, only 58 percent met this target.

City departments overall have reported that construction contract bids are high compared to construction contract estimates and that these high bids are due to a low number of contractors bidding on City construction projects. Although the number of construction contractors that bid on each project has declined citywide, the Department also needs to assess its cost estimating procedures.

The City Attorney's Office has taken the lead in forming a task force to address these issues, including improving the bid environment. The task force has looked at a variety of issues, and recommendations will most likely address departments' procedures as well as interdepartmental practices and City policies. The Department of Public Works should develop a plan and formal process to review, consider, and implement appropriate task force recommendations once the City Attorney's Office releases the report.

Several Department of Public Works construction projects have resulted in large cost overruns, significant delays and litigation. Department staff identified some of these potential problems during the contract bid, award, and negotiation process. However, the Department lacks procedures to identify and divert potential construction problems early in the process.

For example, Department of Public Works staff had concerns at the beginning of the Fourth Street Bridge construction project that the successful bidder, Mitchell Engineering/ Obayashi Corporation lacked sufficient experience in bridge building and large complex projects. Despite the contractor's delay in submitting required documents within the contractually required time frame, the Department chose not to cancel the contract. The contractor was also late in procuring materials, submitting shop drawings, and having sufficient staff in place to perform the job. The Fourth Street Bridge project has continued to have significant problems, delays and cost overruns. The original project scope anticipated an 18-month project, from April 2003 through September 2004, but the project was not substantially complete until May 2006, approximately one year and eight months after the originally scheduled completion date. The original contract amount was \$16.98 million. The City and contractor are currently in Dispute Review Board hearings. The contractor is seeking a total claim of \$22 million. Previously, the contractor filed nine claims against the City for a total of \$7 million. The Department is seeking liquidated damages of \$8.6 million.

The Department needs to identify potential problems with contractors and develop strategies to avert problems early in the project. The Department should work with the City Attorney's Office

to develop risk management protocols, allowing the Department to promptly identify and address potential problems with contractors, and make decisions on the best course of action.

## **Section 8. Construction Management Costs and Construction Project Timelines**

Most of the Bureau of Construction Management's construction projects are not completed on the originally scheduled completion date. In a review of 27 construction contracts completed in 2004 and 2005, only 22 percent, or six contracts, were completed by the original contract completion date. 78 percent, or 21 construction contracts, extended beyond the original contract completion date, ranging from two months to more than two years. When projects are not completed on time, not only does the project incur additional construction and construction management costs, but the City and the public are denied timely access to the facility.

The Bureau of Construction Management extends contract timelines due to weather delays, changes in work scope, and delays requested by the client or attributed to an outside factor. The Bureau generally documents time extensions through contract change orders. The Bureau of Construction Management's contract change order procedure specifies that the resident construction manager or engineer initiates construction change orders and routes the change order documentation through the appropriate engineering and management staff. Both the contractor and the Department of Public Works managers sign the change order, formally agreeing to additional work, costs, and time extensions.

In practice, the Bureau of Construction Management often approves time extensions after the fact. According to the Bureau of Construction Management Manager, the contractor proceeds with additional work requested by the Department of Public Works prior to change order approval to prevent unnecessary delays in the project. The Department of Public Works needs to re-evaluate construction project time extension approval and documentation procedures, including change order policies, procedures, and practices, to ensure that the written procedures provide sufficient project control over project timelines and that actual practices comply with procedures.

The Bureau of Construction Management's procedures to document construction contract time extensions varies significantly among projects. The Bureau often documents and approves time extensions after the completion of the contract, sometimes as much as 16 months after the contract completion. By not approving and documenting contract time extensions during the course of the construction project, the Bureau reduces its control over time extensions and cannot ensure that the construction project does not incur unnecessary costs and delays.

A review of the 21 contracts discussed above with extended timelines shows that:

- In only nine contracts, or 42.8 percent, did the Department formally approve contract time extensions through a change order signed by the Department managers and the contractor during the course of the construction project. However, in one of these nine contracts which

had a total 225 day extension, the Bureau formally approved 114 days of the 225 day time extension in change orders during the project, but did not approve the final change order to extend the contract by 101 days of the 225 day time extension until six months after the completion of the project.

- In six contracts, or 28.6 percent, the Department did not document approval for all the days included in the time extension. The contract extension days, or “overrun”, were included in the final time summary in the contract close out documents. For example, project 2019N timelines were extended by 546 days. The Department documented 293 days in time extensions in eight change orders approved and signed during the course of the project. However, according to the Bureau of Construction Management, the 253 (546 less 293) day overrun, which included 81 days for a holiday moratorium during the winter holiday period in which street projects can not be conducted in major commercial corridors and 172 days for delays attributed to PG&E and design changes, will be recommended in the time summary, on an after-the-fact basis, in the final close out documents.
- In the remaining six contracts, or 28.6 percent, the Department documented approval for all time extensions after the completion of the project. The Department documented these time extensions in change orders or in the time summary in the final close out documents from one month to 16 months after the completion of the project. For example, in project 0494J, the Department documented time extensions totaling 182 days (12 days for inclement weather and 170 days for additional work and client delays) in a change order that was approved one year after the completion of the project. In project 0390J, the Department documented time extensions totaling 92 days (17 days for inclement weather and 75 days for design changes) in a change order that was approved 16 months after the completion of the project.

## **Section 9. Capital Project Accounting and Closeout**

The Department of Public Works processes for accounting and reporting of capital projects does not facilitate effective project management. The Budget Analyst's review found several weaknesses that indicate a lack of internal controls surrounding the management of capital projects. These issues include: a) projects not being closed timely once complete or indefinitely delayed, resulting in labor charges after projects appear to be complete and significant unspent project balances, b) unclear project parameters, c) inconsistent treatment of labor spent on projects with no established funding source or insufficient funding, d) negative project funding balances, and e) inaccurate and incomplete project information in the Department's Project Management Database.

For example, the San Francisco Fire Department Boat Headquarters, which had a budget of \$1,724,238, had an original project start date of May 5, 1997 and an original project close date of October 24, 2001. The project was placed on hold and the last significant labor and non-labor charges were in May 2000, more than six years ago. Since that time, an additional 24 hours were charged to the project at a cost of \$2,671. Further, according to the project manager, \$26,643 in

outstanding encumbrances are for specialty engineering consultants used during the initial planning phase. Yet, these encumbrances remain open. Finally, on April 19, 2005, the project budget was reduced by \$487,610 to provide funding for supplemental appropriations for the San Bruno Jail and Juvenile Hall projects. It is the understanding of the Fire Department that these funds will be returned to the project.

Also, the War Memorial Opera House Seismic Upgrade, which had a budget of \$49,243,118, had an original project start date of February 1, 1993, and a project close date of September 5, 1997. In FY 2001-2002 the Project Management Database included \$48,420 in labor charges and it is unclear, given the project close date of September 5, 1997, whether these charges were appropriately charged to the project. The Director of the War Memorial reports that an email inquiry was made at the time of the charges for an explanation, but that the Department of Public Works did not respond. Additionally, the Project Management Database listed an individual that never worked on the main seismic project as the project manager. When contacted during this management audit, this individual was unable to comment on project status other than to indicate that the project may have been kept open to fund other projects. According to the Director of the War Memorial, the funding spent after the project close date and the remaining project balance were earmarked for capital improvements to the facility that could not be incorporated into the initial project due to the restricted project schedule. The Director attributed the ten-year delay for expending the final funds to a number of factors, including other repair and maintenance priorities that resulted from the initial construction project and the disintegration of the Department of Public Works project management team. However, the final component of this project, a fire sprinkler protection upgrade, has recently been initiated and is expected to utilize all remaining funding in this project.

These issues are due in large part, but not entirely, to the way capital projects are structured in FAMIS, the City's general ledger accounting system, in which management of a project and budgetary control can be shared by two or more responsible departments. These issues also stem from a lack of established and documented protocol for opening and closing projects, working on projects with no established funding source, maintaining budgetary control, and maintaining current data and information in the Project Management Database.

The annual reconciliation of inactive funds is not sufficient to mitigate these issues and a significant backlog of unreconciled projects at the Department of Public Works persists. The Director of Public Works, in consultation with the Controller, needs to address process issues and increase internal controls and standardization to the greatest extent possible. This is especially critical at this time given the City's renewed focus on the capital program and the development of the 10-Year Capital Plan.

## **Section 10. Engineering and Architecture Staff Resources**

The Department of Public Works is not able to plan long-term for its capital project staffing needs. Although some of the Department's capital project funding is stable or predictable, project funding and work provided by other City departments fluctuates. Consequently, the Department could potentially have insufficient project funding to pay for the Department's existing engineering and architecture staff, resulting in overstaffing.

For example, the Municipal Transportation Agency is performing more electrical engineering work in-house to provide sufficient work to its own engineering staff as the Agency's funding for large projects declines, and providing less electrical work to the Department of Public Works. As the Municipal Transportation Agency assumes more of its own electrical engineering work, the Department of Public Works, who expected to perform all such work, could be overstaffed with electrical engineers.

Also, beginning in October 2006 the Recreation and Park Department will hire project managers for Recreation and Park Department projects, potentially creating overstaffing in the Department of Public Works as its project managers, who previously managed Recreation and Park Department projects, return to their former classifications.

Currently, the Department of Public Works can only project sufficient project funding to pay for current staff for two months for electrical engineers to 12 months or more for engineers designing and managing street projects. A Citywide task force report in 2005 found that the City needs effective strategic planning for capital resources to prevent shifts in work load, overstaffing, and layoffs.

Although the City's capital program is decentralized, the City's Administrator is coordinating the Citywide capital planning process pursuant to 2005 Administrative Code provisions. The City Administrator should assist the City departments, including the Department of Public Works, in planning capital project staff resources as part of the capital planning process.

## **Section 11. The Bureau of Building Repair's Performance and Customer Service**

The Bureau of Building Repair has inadequate performance measures and business processes. The Bureau does not measure the performance of its building repair and remodeling activities and therefore cannot determine if it performs these activities efficiently. Nor does the Bureau measure customer satisfaction effectively. Consequently, the Bureau cannot gauge the quality of services that it provides to client departments. For example, although the Bureau of Building Repair's performance measure is based on customer satisfaction, the Bureau of Building Repair has not received full-year feedback from its customers on their perception of the Bureau's performance for at least two years. The Budget Analyst requested a copy of the customer survey results for FY 2004-2005 and FY 2005-2006 and was informed that "Surveys for the requested

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periods were not completed. Survey revisions were recently finished, and the survey for 05/06 was sent out in July.”

In response to a survey conducted by the Budget Analyst, the Bureau of Building Repair’s customers considered customer service satisfactory overall. However, the customers said that the Bureau provides insufficient information about work order requests, work performed against the work order, and billing.

The Bureau of Building Repair’s business processes are weak, preventing timely and sufficient information to its customers. The Bureau does not have a standardized format for receiving customers’ work order requests, and at least one department has developed its own work request form.

The Bureau has inadequate management reporting systems, leaving the Bureau with insufficient information for its internal management operations and for its customers. The Bureau is unable to generate basic work order and workload information, such as the total number of work orders completed and the labor hours for work orders completed.

The Bureau has insufficient maintenance planning and scheduling. Consequently, productivity of the journeymen workforce is significantly less than it would be were adequate planning and scheduling processes employed, resulting in unnecessary down time or travel time.

The Bureau of Building Repair does not consistently obtain building permits, in violation of the City’s Building Code. The Director of Public Works should ensure that the Bureau obtains necessary permits, and work with the Department of Building Inspection to implement a permit processing priority system. For example, the Bureau performed 12 projects at the Department’s maintenance facility located at 2323 Cesar Chavez Street without permits. These projects included (a) installing sheet rock and in-built furniture, repairing sidewalks and paving outdoor surfaces, and digging gate post holes and trenches without obtaining building permits; (b) rerouting electrical conduits, installing outlets and circuits, relocating wall switches, providing power supply to a new fan in the radio room, and installing electric push button operators without electrical permits; and (c) installing irrigation lines and water supply and waste lines without plumbing permits.

The Department expended \$336,000 appropriated by the Board of Supervisors for the Bureau’s facilities maintenance activities on the San Francisco Housing Authority’s Sunnydale Basketball Court Project without Board of Supervisors approval and the Controller’s authorization for this Housing Authority project. Although the Department was reimbursed by the Housing Authority and the Mayor’s Office of Community Development, the Director of Public Works needs to obtain proper authorization and appropriation approval for reallocation of project funds.

## **Section 12. Bureau of Building Repair Annual and Continuing Project Management**

There are significant control weaknesses related to the Bureau of Building Repair's management of annual and continuing projects. These weaknesses include committing to and incurring expenditures in excess of budgeted amounts, unwarranted carry-forward of annual projects, and a lack of protocol for project definition. These weaknesses obscure Bureau of Building Repair activities and make project tracking and monitoring difficult, which in turn prevents effective planning and resource allocation. The time spent on projects and project spending cannot be readily isolated and evaluated and problems cannot be readily identified and corrected.

For example, the Department of Public Works tracks specific project budgets and expenditures through job orders. The Bureau of Building Repair creates "tags" for the job order, which is an authorization to perform work against the job order. The Bureau of Building Repair may create tags for any given job order and obtain additional departmental authorization in excess of the amount budgeted for the job order. Thus, the Bureau of Building Repair can and has committed to and incurred expenditures without obtaining budgetary authority and funding. The Bureau's Work Order Tracking System produces a report of job orders that either have been "over-allocated" (i.e. tags have been developed for more work than the budget allows), or have been over-expended. According to this Work Order Tracking System report, queried on April 12, 2006, the Bureau had 66 job orders, in which the funding allocated to the individual tags exceeded the job order budget. Cumulatively, these "over-allocated" tags exceeded the job order budgets by \$2.4 million.

Also, the Bureau of Building Repair reports that funds for 88 projects, with a total unexpended and unencumbered budgetary balance of \$1,783,101, were carried forward from FY 2004-2005 to FY 2005-2006. 58 of these projects were designated by the Bureau of Building Repair as annual appropriations with a total unencumbered budgetary balance of \$1,164,709. Projects with budgetary balances carried forward include the following:

- \$130,517 for custodial and other Bureau of Building Repair services at the Water Department's 425 Market Street offices (Project IBRG10, Job Order 0853R). Some of the tags in the Work Order Tracking System dated back to FY 2003-2004 and it is not clear how much was expended in each of the fiscal years and on what activities. Only six tags were active with a balance remaining on those tags of approximately \$6,100 on April 17, 2006. \$121,255 of the \$130,517 was carried forward to FY 2006-2007 and, as of October 23, 2006, this job order had a total remaining balance of \$93,134.
- \$39,529 for maintenance and repair for the Department of Telecommunications and Information Services (Project IBRG84, Job Order 0959R). According to the Work Order Tracking System, only two tags were active with a balance remaining for those tags of approximately \$6,900 for stationary engineers on April 12, 2006. All of the \$39,529 was

carried forward to FY 2006-2007 and, as of October 23, 2006, this job order had a total remaining balance of \$18,658.

- \$137,272 of \$2,398,612 appropriated for several Bureau of Building Repair activities including custodial services, Occupational Safety and Health Administration requirements, and non-recurring and emergency maintenance and repair projects for the Police Department in FY 2004-2005 (Project IBRH34, Job Order 1083R). The FY 2004-2005 job order continued to be regularly charged until September 28, 2005. Since that date, three charges occurred between December 28, 2005 and February 28, 2006 which do not appear to be associated with a tag and for which the Bureau of Building Repair could not provide an explanation. A new tag of \$3,153 was established March 6, 2006 for painting and, as of April 12, 2006, has been over-expended by \$52. Interestingly, this job order carried forward \$152,413 into FY 2006-2007, more than the \$137,272 carried forward in FY 2005-2006. The increase over the FY 2005-2006 carry-forward may have been due to a release of encumbered funds or an increase in budgeted funds during the year. As of October 23, 2006, the job order had an unexpended balance of \$5,990. In FY 2005-2006, the annual job order established for the same purpose (Project IBRI18, Job Order 1418R) was budgeted at \$2,365,244 and, as of October 23, 2006, was over-expended by \$126,960.
- \$90,545 of \$110,000 for the Police Department maintenance and repair projects (Project IBRH71, Job Order 1321R). According to the Police Department, \$110,000 is budgeted annually for facilities maintenance. Similar to the previous job order also with the Police Department, a larger amount of \$98,301 was carried forward to FY 2006-2007. As of October 23, 2006, the balance remaining of the FY 2004-2005 funding was \$37,570.
- \$19,000 in six separate job orders for Tax Collector maintenance and repair projects (Projects IBR75G and IBR95-99G, Job Orders 3475R and 3495-99R). These job orders have not posted any expenditure since being established in FY 2003-2004. These balances were carried forward into FY 2006-2007 as well.

The lack of control over annual and continuing projects is compounded by an automated tracking system, the Work Order Tracking System, which does not provide the Bureau of Building Repair with a definitive understanding of job order status at the detail level or of its activities in general. In part, this is due to the Work Order Tracking System using estimates of financial data and information rather than real-time financial transactions.

The Department reports that several initiatives are under way to address Bureau of Building Repair job order management and control issues, including the consideration of a computerized maintenance management system. These initiatives should be formalized with project timelines and should include a business process review such that appropriate controls over job order creation, management and closeout are established.

### **Section 13. Materials Management Controls and Procedures**

The Department of Public Works has recently remodeled and expanded its materials storeroom at the 2323 Cesar Chavez Street maintenance yard, which stores the materials and supplies used by the Bureaus of Street and Sewer Repair, Urban Forestry, and Street Environmental Services.

The Bureau of Building Repair expended approximately \$3.0 million on work order materials during fiscal year 2005-2006. However, materials ordered for use by the Bureau of Building Repair are not processed through the storeroom. In general, the Bureau of Building Repair trade shops do not order materials for inventory; each materials order is in support of an approved work order.

The trade shops of the Bureau of Building Repair do, however, maintain materials within the confines of the shop or a shop annex. These inventories consist of materials left over from completed jobs, from materials ordered but not used because of cancellation of the work order, or from materials removed from equipment and fixtures no longer in service. The Bureau has no formal inventory of these materials, creating the risk of theft, loss or misuse of the materials. The Department of Public Works needs to develop formal materials policies and procedures to ensure standardized and efficient materials management and adequate controls to prevent theft, loss or misuse.

In general, City departments lack adequate inventory and material storeroom internal controls. Since 2003 the Budget Analyst has audited the storerooms of the Port, the Public Utilities Commission, the Recreation and Park Department, and the Department of Public Works, and found that many of the departments lacked standard storeroom practices and in some instances had significant control deficiencies. Inadequate storeroom internal controls has been a long-standing Citywide problem, previously identified by the Budget Analyst in a 1991 management audit report on the *Purchasing and Storekeeping Functions as Administered by the Purchasing Department*. The Department of Public Works should work with the City Services Auditor to establish a system of controls that can be extended to other City departments.

The Department of Public Works does not ensure that only authorized staff approve department purchases. The City's Office of Contract Administration has procedures to ensure that only authorized staff approve purchases. The Office of Contract Administration provided the Budget Analyst with its list of Department of Public Works staff persons authorized to engage in departmental purchasing. The list contained five names, including one of a recently retired employee. Also, our review of delegated departmental purchasing documents showed three Department of Public Works staff members who regularly approve delegated departmental procurements were not named on the authorized listing obtained from the Office of Contract Administration. Thus, a set of controls developed by the Office of Contract Administration to provide reasonable assurance that procedures developed to implement the sensitive authority of procuring commodities and services of up to \$10,000 on each such procurement, were not being adhered to by the Department of Public Works.

## **Section 14. Automotive and Mobile Equipment Management**

Under the Administrative Code, the Department of Public Works can allow up to 17 City-owned vehicles equipped with emergency equipment to be used for commuting to and from work. Currently, the Department allows 16 such City-owned vehicles to be used for commuting to and from work. However, although the Administrative Code requires that the Department of Public Works maintain detailed vehicle use records for these 16 vehicles, the Department only began doing so in response to the Budget Analyst's inquiry during the course of the management audit.

Also, the Administrative Code provides for garaging City-owned vehicles at an employee's place of residence during non-working hours, with the approval by resolution of the Board of Supervisors, where the head of the department having jurisdiction over such vehicles finds that the public interest will be best served by permitting the employee to take such vehicles home, rather than require the City to garage the vehicle. However, the Department of Public Works has not received Board of Supervisors approval for 20 Department employees who currently garage a City-owned vehicle at their residence during non-working hours.

The Department has not ensured that its general-purpose vehicles are routinely serviced. Of the 206 general-purpose vehicles maintained by Central Shops for the Department of Public Works, 98 or approximately 47.6 percent, were overdue for the six-month preventive maintenance lubrication and service. Some general-purpose vehicles last completed a preventive maintenance service in the first half of 2004, more than two years ago.

The Department does not maintain sufficient documentation or oversight of the Employer Pull Notice Program, implemented by the California Department of Motor Vehicles to notify employers as to their suspended licenses or other issues precluding employees from driving vehicles during their work time. Our review of 67 employees required to be enrolled in the Employer Pull Notice Program revealed that Driver Record Information records for 10 employees required to be enrolled in the program were not available for examination. Further, the Driver Record Information forms revealed expired medical examinations for two employees.

Finally, the General Services Agency's Central Shops does not consistently comply with the California Code of Regulation's standards for maintenance inspection and record keeping.

## **Section 15. Health, Safety, and Environmental Issues**

The Department of Public Works has significant environmental issues at the maintenance yard at 2323 Cesar Chavez Street. A health and safety inspection, conducted at the request of the Budget Analyst, noted several environmental deficiencies, allowing pollutants to spill into the City's sewer system and causing strain on the City's treatment of waste water.

For example, the street sweepers dump debris such as trash, gravel, and sediments into standard catch basins, offering minimum pretreatment of the liquid waste stream for smaller particles and trash. The Department has no procedures to prevent an acute discharge of collected hazardous

materials or reduce the chronic influx of pollutants from the street sweepers to the sewer and waste water treatment system.

The Department of Public Works has a high rate of Workers' Compensation claims. Both the incidence and the severity of the Department's work place illnesses and injuries, resulting in Workers' Compensation claims, exceed the California Occupational Safety and Health Administration (Cal-OSHA) rate recorded for California public and private employers.

According to the California Occupational Safety and Health Administration, the average incidence of workplace injury and illness for repair and maintenance organizations in 2004 was 4.1 incidents per 100 employees. The Department of Public Works' rate of 18 incidents per 100 employee exceeds the 4.1 incidents by 13.9 incidents, or 339 percent.

The Department's number of work place illnesses and injuries has not increased significantly between 2002 and 2005 but the severity, including time lost from work, has increased by a large amount. The Department's Operations Division's severity of work place illness and injury claims is very high. In 2005, the Operations Division reported 994.5 lost work days per 100 employees compared to the Public Utilities Commission's Hetch Hetchy Enterprise, which reported 233.2 lost work days per 100 employees. If the Operations Division's work place illness and injury severity rate were comparable to the Hetch Hetchy Enterprise, the Operations Division would gain work days and associated productivity equivalent to approximately 23.4 full time employees, or \$2.0 million in annual salary and fringe benefit costs.

The Department's six person Environmental Health and Safety Office effectively provides Department-wide guidance and technical assistance to the Director of Public Works, the Deputy Directors, and to the Bureau Managers in implementing a comprehensive health and safety program. Management commitment to the Health and Safety Program and an emphasis on safety planning for work to significantly improve the Health and Safety Program.

## **Section 16. Interdepartmental Work Order Funds**

Since the interdepartmental work order fund budgets included in the Annual Appropriation Ordinance provide the Department of Public Works with authority to fund and hire positions to provide services to client departments, these budgets should accurately reflect expected revenues and expenditures. This is particularly important since 38.6 percent of the Department's budget, or \$54.4 million, which includes direct salary and fringe benefit costs as well as overhead costs allocated to the interdepartmental work order funds and as shown in Table 2 in the Introduction to this report, out of the \$141.1 million appropriated in FY 2006-2007, is budgeted in interdepartmental work order fund budgets.

However, the Department of Public Works interdepartmental work order fund budgets do not balance. As noted in the management audit report and in the Budget Analyst's response to the Department's written disagreement with the management audit report recommendation, as discussed below:

- (a) The interdepartmental work order fund budgets do not reflect actual expenditures. The bureaus' interdepartmental work order fund budgets include salary and overhead expenditures but do not include non-salary expenditures.
- (b) These interdepartmental work order fund budgets do not show the actual revenues. Rather, these budgets show expenditure recoveries that offset budgeted salary and overhead expenditures so that the budget balances to zero. These expenditure recoveries are a placeholder rather than actual monies appropriated in other City budgets, grants, and projects.
- (c) The interdepartmental work order fund budgets overstate required funding for positions by budgeting all expenditures as salary expenditures and by budgeting positions for higher than actual expenditure recoveries. For example, the Bureau of Street and Sewer Repair interdepartmental work order fund salary and benefit budget was \$10.6 million in FY 2005-2006 while actual costs for the positions providing work order services was only \$7.0 million in that year.

Although client departments provide the Department of Public Works expenditure authority through individual work orders, the Department's current processes do not provide sufficient information for client departments to effectively monitor work order project expenditures.

Because interdepartmental fund budgets are not transparent or readily available to either the client department managers, the Board of Supervisors, other policy makers or the public, client departments cannot effectively justify or communicate annual interdepartmental work order fund activities, measure actual expenditures against projected expenditures, or track changes in expenditures from year to year. To provide meaningful appropriation and budgetary control, the Department of Public Works should develop interdepartmental work order budgets that accurately reflect estimated salary and non-salary budgetary requirements for the coming year and the client departments' cost of services.

## **Section 17. Allocation of Overhead Costs**

The Department of Public Works overhead costs represent administrative and support costs within the Department, as well as Citywide indirect cost charges. In FY 2006-2007, the Department budget includes \$57.8 million in overhead expenditures, which are funded by direct charges to the Department's General Fund, Gas Tax and Road Fund, and interdepartmental work order fund budget.

The Department of Public Works needs to contain overhead costs to limit the impacts on projects and services. Further, because the Department was incorporated into the General Service Agency in FY 2004-2005 and must now absorb a portion of indirect costs incurred by that Agency, the Director of Public Works needs to work with the City Administrator to consolidate functions and reduce costs where possible, especially human resource and information technology functions.

The Department of Public Works will need to address barriers to establishing more efficient services and greater consolidation within the General Services Agency, such as incompatible payroll systems among the different departments that make up the General Services Agency, and inflexible job classifications and job descriptions that prevent streamlining of processes and more efficient allocation of staff resources.

The Department of Public Works' five-year plan to replace obsolete information technology or implement new systems does not include an assessment of the bureaus' current systems needs or a staffing plan for central and bureau information technology staff. Each of the three capital bureaus – the Bureaus of Architecture, Engineering, and Construction Management – has their own information technology staff. However, although these bureaus are jointly responsible for capital projects, these information technology staff have no shared planning process or channels of communication. Further, according to interviews, staff time is not fully utilized for bureau functions. Better integration of information technology functions performed by the three bureaus would lead to a more efficient use of resources, including staff reductions and estimated associated salary and benefit savings of \$233,000 annually.

### **The Department of Public Works' Written Response**

The Director of Public Works' written response is attached to this management audit report beginning on page 182. The Director of Public Works' written response agrees with 104, or approximately 86.7 percent, of our 120 recommendations, and partially agrees with 8 recommendations, or approximately 6.7 percent. The Director of Public Works' written response disagrees with 3 of our 120 recommendations, or approximately 2.5 percent. The Department did not respond to five recommendations, or 4.2 percent, of which one was directed to the City Administrator (Recommendation 13.1), two were directed to the City Services Auditor (Recommendations 13.2 and 13.2), and two were directed to the Manager of the Department of Administrative Services Central Shops.

#### The Department's Disagreement with Recommendations 16.4 and 16.5

According to the Director of Public Works written response, the Department of Public Works disagrees with Recommendation 16.4, which recommends that the Department develop an annual interdepartmental work order fund budget for the operating bureaus that includes the salary and non-salary budget details in the individual work orders.

According to the Director's written response to Recommendation 16.4, "the Department manages work order budgets by the specific work order, not by all work orders combined. A significant number of our work orders are for projects that we cannot anticipate which job classes will be performing the work, or the level non-labor resources that will be needed at the beginning of the year. For example, the facilities maintenance work order from general hospital may include plumbing work one year, (which is almost all labor) and a roof patching contract in another year (which is almost all non-labor as it would be provided through a contract)."

According to the Director of Public Works written response, the Department of Public Works disagrees with Recommendation 16.5, which recommends that the Department develop procedures that allow the operating bureau superintendents to track interdepartmental work order fund budgets at a summary level.

According to the Director's written response to Recommendation 16.5, "as stated above, bureau superintendents are responsible for managing each individual work order budget. In addition, they must manage the work load of the bureau, which involves managing position counts and not budgets. There is nothing for them to manage at a summary budget level in their ID budgets."

However, the Department of Public Works interdepartmental work order fund budgets do not balance. As noted on page 164 of the management audit report:

- (a) The interdepartmental work order fund budgets do not reflect actual expenditures. The bureaus' interdepartmental work order fund budgets include salary and overhead expenditures but do not include non-salary expenditures.
- (b) These interdepartmental work order fund budgets do not show the actual revenues. Rather, these budgets show expenditure recoveries that offset budgeted salary and overhead expenditures so that the budget balances to zero. These expenditure recoveries are a placeholder rather than actual monies appropriated in other City budgets, grants, and projects.
- (c) The interdepartmental work order fund budgets overstate required funding for positions by budgeting all expenditures as salary expenditures and by budgeting positions for higher than actual expenditure recoveries. For example, the Bureau of Street and Sewer Repair interdepartmental work order fund salary and benefit budget was \$10.6 million in FY 2005-2006 while actual costs for the positions providing work order services was only \$7.0 million in that year.

Also, as noted on page 165 of the management audit report, the operating bureaus do not consistently manage specific work order budgets. For example, the Bureau of Building Repair does not sufficiently control budgets and expenditures for individual work orders. The Bureau (a) does not define projects, (b) commits to and incurs expenditures in excess of budgeted amounts, and (c) carries forward annual project expenditures without proper authorization.

Although the Director states in the written response that the Department cannot anticipate which job classes will be performing the work, the Department currently has both permanent, filled positions and temporary salaries allocated to the interdepartmental work order funds. Therefore, the Department is already committed to paying the salaries of specific job classes under the existing practice. Also, the Department would continue to have the same flexibility to hire temporary positions to meet the requirements of specific work order services as it currently has under its existing practice if the Department developed an annual interdepartmental work order

fund budget for the operating bureaus that includes the salary and non-salary budget details in the individual work orders, which we have recommended in Recommendation 16.4.

#### The Department's Disagreement with Recommendation 17.4

According to the Director of Public Works written response, the Department disagrees with Recommendation 17.4, which recommends that the Director of Public Works should submit proposed reductions or reallocation of human resources staffing within the General Services Agency as part of the human resource function evaluation to the Board of Supervisors during the FY 2007-2008 budget review.

According to the Department's written response, "GSA HR is attempting to improve service quality, improve service timeliness, and streamline processes while absorbing additional responsibilities from DHR, serving additional departments and implementing new programs. GSA HR staffing ratios are comparable to other City HR departments."

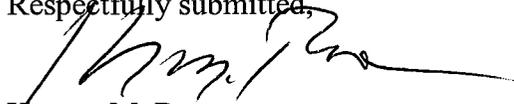
As noted on pages 175 and 176 of the management audit report, the benefits of consolidating City departments under the General Services Agency in FY 2004-2005, which includes the Departments of Administrative Services, Telecommunication and Information Services, and Public Works, include integrating and streamlining administrative and support functions within the new General Services Agency. Because the Department must now absorb a portion of indirect costs incurred by that Agency, the Director of Public Works needs to work with the City Administrator to consolidate functions and reduce costs where possible, including human resource functions.

In conjunction with the Budget Analyst's recommendation to reduce the Department's human resource staffing levels, either through elimination of positions within the Department, or reallocation of positions from the Department to the General Services Agency, the Budget Analyst recommended and the Department of Public Works agreed that (a) human resource job classifications and job descriptions should be revised to allow increased cross-training and flexibility in staffing (Recommendation 17.1) and (b) the Department should work with the General Services Agency to identify ways to consolidate payroll processes within the Agency (Recommendation 17.2). Successful implementation of Recommendations 17.1 and 17.2 would allow the General Services Agency, as well as the Department of Public Works, to employ existing human resources staff more efficiently and allow reallocation of staff resources within the General Services Agency. The Budget Analyst will review the Department's implementation of Recommendations 17.1, 17.2, and 17.3 during the FY 2007-2008 budget review.

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and Members of the Board of Supervisors  
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We would like to thank the Director of Public Works, his staff, and various representatives from other City departments for their cooperation and assistance throughout this management audit.

Respectfully submitted,



Harvey M. Rose  
Budget Analyst

cc: Supervisor Alioto-Pier  
Supervisor Ammiano  
Supervisor Daly  
Supervisor Dufty  
Supervisor Elsbernd  
Supervisor Jew  
Supervisor Maxwell  
Supervisor McGoldrick  
Supervisor Mirkarimi  
Supervisor Sandoval  
Clerk of the Board  
Controller  
Nani Coloretti  
Cheryl Adams  
Director of Public Works

## Recommendation Priority Ranking

Based on the management audit findings, the Budget Analyst has made 120 recommendations detailed in this Attachment to the transmittal letter. The Budget Analyst has ranked these recommendations based on priority for implementation. The definitions of priority are as follows:

- Priority 1: Priority 1 recommendations should be completed within six months of the release of the management audit report. These recommendations meet one the following criteria: (a) have budget impact, (b) address significant issues within the organization, or (c) can be implemented easily. The Budget Analyst will review the status of these recommendations during the Board of Supervisors FY 2007-2008 budget review process.
- Priority 2: Priority 2 recommendations should (a) be completed, (b) have achieved significant progress, or (c) have a schedule for completion within one year of the release of the management audit report. Although implementation of these recommendations has already begun or should begin upon the release of the management audit report, significant implementation or measurement of the results will take up to 12 months. The Budget Analyst will review the status of these recommendations during a one-year management audit update in approximately January 2008, as directed by the Government Audit and Oversight Committee.
- Priority 3: Priority 3 recommendations require long term process changes. While these recommendations address serious issues identified in this report, Priority 3 recommendations are either long-term goals or are dependent upon the implementation of Priority 1 and 2 recommendations. The Department should be prepared to report the initial steps taken to implement priority 3 recommendations during a one-year management audit update in approximately January 2008, as directed by the Government Audit and Oversight Committee. The Budget Analyst will review the status of these recommendations during the Board of Supervisors FY 2008-2009 budget review process.

**Recommendation**

**Priority**

**Section 1: Street Resurfacing and Pothole Repair Projects**

The Bureau of Engineering Manager should:

- 1.1 Assess and revise as appropriate the Bureau of Engineering’s street design project quality controls to ensure that street project designs meet the project needs and site requirements. 1
- 1.2 Revise or enhance the Bureau of Engineering’s existing street project design and drafting procedures to ensure that project plans and specifications correspond to actual site conditions. 2
- 1.3 Identify major causes of street project delays and develop procedures to reduce common causes, including quality control and project scheduling procedures. 2

The Bureau of Sewer and Street Repair Manager should:

- 1.4 Develop systems to better capture and report patching and pothole activities and the cost-effectiveness of performing the work. 2
- 1.5 Evaluate the labor hours, labor costs, and productivity of street resurfacing projects to ensure that these projects are delivered cost-effectively. 1
- 1.6 Present cost data and analysis of pothole, patching, and street resurfacing costs to the Board of Supervisors as part of the FY 2007-2008 budget review. 1
- 1.7 Work with the Human Resources and the Health and Safety Division to identify causes of paid and unpaid sick and disability leave and actions that the Bureau can take to reduce the incidence of unpaid leave and increase the number of productive hours. 2
- 1.8 Continue to report hours worked and not worked as part of the Department of Public Works’ SF Stat measures. 1

**Recommendation**

**Priority**

**Section 2: Cleaning and Maintaining the City’s Streets and Public Right-of-Ways**

The Director of Public Works should:

- 2.1 Work with the Mayor and with Homeless Connect to set up a Homeless Connect team to address some of the public right-of-way areas with the most severe homeless encampments, and to coordinate City departments’ resources and services to these areas. 2

The Deputy Director for Operations should:

- 2.2 Investigate the potential cost-savings and efficiency gains of using satellite staff reporting and equipment storage locations. 3
- 2.3 Develop a streamlined and uniform method for other City departments to report resolution of their 28-Clean service requests so the requests can be closed out in a timely fashion, in conjunction with the Computer Services Division. 2
- 2.4 Develop and implement a policy and methodology for the Bureau of Street Environmental Services to prioritize among competing immediate service requests and ongoing maintenance needs 2
- 2.5 Direct the Bureau of Street Environmental Services Manager to develop formal productivity standards for street and graffiti maintenance personnel, and direct supervisors to allocate staff according to these standards. 2
- 2.6 Evaluate the potential of using non-managerial staff or an outside contract to perform the Proposition C inspections, instead of more costly managerial staff. 2
- 2.7 Use the data from the Proposition C inspections to reallocate resources where prudent, such as to alter the frequency of certain street cleaning schedules. 2
- 2.8 Report the Bureau of Street Environmental Services compliance with Proposition C maintenance schedules. 2
- 2.9 Standardize the format and information content of the weekly reports submitted by Bureau of Street Environmental Services supervisors. 2
- 2.10 Work with the Mayor’s Office, Police Department, and Director of Public Works to aggressively pursue other litter enforcement staffing models. 3

<b>Recommendation</b>	<b>Priority</b>
2.11 Investigate and implement procedural changes to litter enforcement, such as streamlining the procedures involved in processing citations.	2
2.12 Direct the Bureau of Street Environmental Services Manager to set-up work order agreements and billing procedures to accurately reflect any graffiti abatement work it does for other agencies and departments.	1
2.13 Ensure the allocation of Bureau of Street Environmental Services resources to the measurement and evaluation of the new corridor approach, and utilize this information to inform future changes in the program structure.	1
2.14 Work with the Human Resources and the Health and Safety Division to identify causes of paid and unpaid sick and disability leave and actions that the Bureau can take to reduce the incidence of unpaid leave and increase the number of productive hours.	2
The Director of Finance and Administration should:	
2.15 Develop procedures to ensure timely collection of litter citation fines.	2

**Section 3: Urban Forestry**

The Director of Public Works should:

3.1 Submit a tree planting permit application fee schedule to the Board of Supervisors for approval that sets a fee schedule charging full permit processing costs to property owners that are required to plant new street trees in accordance with Section 143 of the Planning Code..	1
3.2 Work with the Mayor’s Office and Board of Supervisors to align proposed planting of new trees with ongoing funding for maintenance of street trees.	1

The Deputy Director for Operations should:

3.3 Develop performance measures specific to the mission, goals, and objectives of the Bureau of Urban Forestry.	1
3.4 Develop a work plan and schedule to evaluate, identify, and implement improvements to the Bureau of Urban Forestry’s databases, including assessing the feasibility and potential costs of integrating the forestry databases with 28-Clean, in conjunction with the Director of Finance and Administration.	2

**Recommendation**

**Priority**

The Bureau of Urban Forestry Manager should:

- 3.5 Develop an annual work plan and schedule to inventory non-Department maintained street trees, including setting inventory priorities based on geographical location and responsibility for trees. 3
- 3.6 Develop a volunteer program or partnership with nonprofit organizations to assist in the inventory of non-Department maintained street trees. 3
- 3.7 Report the actual pruning and tree maintenance schedule on the City’s web site. 2
- 3.8 Develop median and other landscape maintenance standards and schedules and publish these standards and schedules on the City’s web site. 2
- 3.9 Develop methods for tracking all of the routine and non-routine work done on landscape properties in order to best allocate resources in the future. 2
- 3.10 Evaluate procedures to include street tree inspections in routine activities, including streamlining reporting and documentation procedures and training staff in street tree regulations and procedures. 2
- 3.11 Develop procedures to revisit sites where removal permits have been denied, including (a) utilizing Bureau of Urban Forestry tree, landscape, and watering crews or Bureau of Street Environmental Services crews to conduct preliminary checks while performing other work in the vicinity, and (b) streamlining procedures and documentation 2.
- 3.12 Develop a methodology for prioritizing routine tree maintenance and service requests. 2
- 3.13 Assess staffing alternatives, including dedicating one of its landscape crews to only routine maintenance, and allow other staff to respond to service requests. 2
- 3.14 Work with the Human Resources and the Health and Safety Division to identify causes of paid and unpaid sick and disability leave and actions that the Bureau can take to reduce the incidence of unpaid leave and increase the number of productive hours. 2

**Recommendation**

**Priority**

The Director of Finance and Administration should:

- 3.15 Review and track fee revenues against expenditures each year to ensure that the Bureau of Urban Forestry is recovering service costs overall and recommend fee increases, in addition to the Consumer Price Index increases, to the Board of Supervisors as necessary. 1
- 3.16 Develop procedures to ensure timely collection of fines. 1

**Section 4: Permit and Inspection Revenues and Performance**

The Director of Finance and Administration should:

- 4.1 Evaluate the Bureau of Street Use and Mapping’s administrative costs to process the street improvement fee for property owners issued a notice to repair sidewalks and streets fronting their properties and submit a fee proposal to the Board of Supervisors for approval during the FY 2007-2008 budget review. 1
- 4.2 Identify obsolete fee provisions in the Public Works Code and submit revised or updated language to the Board of Supervisors for approval during FY 2007-2008, including ensuring that fees under outdated Code provisions are calculated to fully recover costs. 2
- 4.3 Post the same fee schedule on the Department’s web site as the fee schedule used by the Bureau of Street Use and Mapping to calculate permit fees. 1
- 4.4 Establish procedures to calculate street improvement permit inspection fees based on the Bureau of Street Use and Mapping’s actual costs to conduct additional inspections under the street improvement permit, in accordance with Public Works Code Section 2.1.3. 3
- 4.5 Review and track fee revenues against expenditures each year to ensure that the Department of Public Works is recovering service costs overall and recommend fee increases, in addition to the Consumer Price Index increases, to the Board of Supervisors as necessary.
  - (a) Evaluate General Fund fees to ensure cost recovery 1
  - (b) Evaluate Special Fund fees to ensure cost recovery 3

**Recommendation**

**Priority**

The Bureau of Street Use and Mapping Manager should:

- |      |  |   |
|------|--|---|
| 4.6  | Evaluate actual inspection time allotted to permitted projects and ensure that Bureau staff are accurately recording their project hours.  | 3 |
| 4.7  | Review the permit fee list and written guide and include all fee and permit requirements and applications not currently included.  | 1 |
| 4.8  | Provide a report on the outcome of each district focus inspection to the Board of Supervisors City Operations and Neighborhood Services Committee, including notifying the appropriate Board of Supervisors' member of the district focus inspection conducted in his or her district and the report on the outcomes.  | 1 |
| 4.9  | Provide an update to the Budget Analyst, as part of the Budget Analyst's review of the FY 2007-2008 Department budget, regarding (a) the number of inspections by permit type per district, and (b) how this data has affected inspector assignments by permit type and geographic area.   | 1 |
| 4.10 | Provide an update to the Budget Analyst, as part of the Budget Analyst's review of the FY 2007-2008 Department budget, on the integration of the Task Management, permit and Inspect-o-matic systems, including the status and goals of the project and how the integration will allow the Bureau of Streets and Management to more efficiently allocate inspectors' time by permit type and geographic area.                | 1 |
| 4.11 | Provide an update to the Budget Analyst, as part of the Budget Analyst's review of the FY 2007-2008 Department budget, on the Bureau's activities to increase inspectors' accountability for inspecting or reporting all permit violations within their geographic area of responsibility, including (a) result of employees' performance evaluations, and (b) actions taken by the Bureau and the results of these actions. |   |
|      | (a) Update on Bureau's activities to increase inspectors' accountability   | 1 |
|      | (b) Report on results of employees' performance evaluations and actions taken  | 2 |

**Recommendation**

**Priority**

**Section 5: The Impact of Claims in the Public Right of Way**

The Deputy Director for Operations should:

- 5.1 Complete an annual evaluation of all sidewalks for which the Department of Public Works is responsible and record these findings in their computer tracking system. 3
- 5.2 Assess common causes of tree-related claims, such as specific types of trees, locations, and sidewalk structures, to determine which factors contribute to claims. 2
- 5.3 Include the claims assessment data in setting sidewalk repair priorities. 2
- 5.4 Track and analyze sidewalk repair funding, sidewalk repairs, and sidewalk-related claims costs to determine if targeted sidewalk repairs contribute to reduced claims costs. 2
- 5.5 Present this information to the Board of Supervisors each year during the annual budget review. 3

**Section 6: Capital Project Design Costs**

The Deputy Director for Engineering should:

- 6.1 Establish a common performance goal for the Bureau of Engineering and Bureau of Architecture that measures the impact of design errors and omissions on construction costs and report the outcomes annually. 1
- 6.2 Develop a plan and timeline to evaluate, implement, or further develop and revise the findings and recommendations of the Department of Public Works' capital project quality assurance task force. 2
- 6.3 Identify commonly occurring problems in design projects provided by consultants and develop protocols to address these problems. 2
- 6.4 Coordinate with the Mayor's Office of Disability and the Department of Building Inspection, among other agencies, to ensure that policies, procedures, and regulations are both well-understood and consistently applied. 2

<b>Recommendation</b>	<b>Priority</b>
6.5 Assess the cost of physical site visits during the planning and design of construction projects compared to the potential costs of construction contract change orders due to design errors and omissions and unforeseen site conditions, and implement site visit procedures based upon the assessment.	2
6.6 Assess the cost of site testing for different commonly-occurring site conditions and tests compared to the potential costs of construction contract change orders due to unforeseen site conditions, and implement site testing procedures based upon the assessment.	2
6.7 Assess the costs of additional construction document reviews for projects at different phases of the design process compared to the potential costs of construction contract change orders and delays and implement procedures based upon the assessment.	2

**Section 7: Construction Contract Bids and Awards**

The Deputy Director for Engineering should:

7.1 Determine the best measure of cost estimation performance and standardize measuring and reporting of cost estimates and contract award amounts for the Bureaus of Architecture and Engineering.	1
7.2 Continue to evaluate the components of construction cost estimates and the construction cost estimate process to identify areas for improvement or increased efficiency.	2
7.3 Develop a plan and formal process to review, consider, and implement appropriate task force recommendations once the City Attorney’s Office releases the construction contracting task force report.	
(a) Develop a plan and formal process to review	2
(b) Consideration and implementation of recommendations	3
7.4 Work with the City Attorney’s Office to develop risk management protocols, allowing the Department to promptly identify and address potential problems with contractors, and make decisions on the best course of action.	2

<b>Recommendation</b>	<b>Priority</b>
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**Section 8: Construction Management Costs and Construction Project Timelines**

The Bureau of Construction Management Manager should:

- |   |   |
|---|---|
| 8.1 Implement procedures to (a) ensure accurate and complete entry of change order information into the Bureau of Construction Management’s change order tracking system and (b) tracking and monitoring of change order information.   | 2 |
| 8.2 Re-evaluate time extension approval and documentation procedures, including change order policies, procedures, and practices, to ensure that the written procedures provide sufficient project control over project timelines and that actual practices comply with procedures. | 2 |

**Section 9: Capital Project Accounting and Closeout**

The Director of Public Works should:

- |   |   |
|---|---|
| 9.1 Establish a task force with representatives from the Department of Public Works, the Controller's Office and client departments to develop and implement a plan to address capital project accounting process issues as well as current reconciliation and closeout of inactive projects. | 1 |
| 9.2 Report back to the Board of Supervisors during the FY 2007-2008 budget hearing on the status of the implementation of the task force findings and plan.   | 1 |

**Section 10: Engineering and Architecture Staff Resources**

The Deputy Director for Engineering should:

- |   |   |
|---|---|
| 10.1 Standardize work load planning and reporting to allow executive managers to better assess overall funding and staffing needs.  | 3 |
| 10.2 Evaluate short-term and long-term engineer and architect staffing to ensure that high staff costs compared to project funding do not lead to increased overhead rates. | 2 |

The City Administrator should:

- |  |   |
|--|---|
| 10.3 Assist City departments, including the Department of Public Works, in planning capital project staff resources as part of the capital planning process. | 2 |
|--|---|

**Recommendation**

**Priority**

**Section 11: The Bureau of Building Repair’s Performance and Customer Service**

The Director of Public Works should:

- 11.1 Establish budgetary and financial controls to ensure that the Controller authorizes re-allocation of facilities maintenance and other designated appropriations to other uses in accordance with the Administrative Provisions of the Annual Appropriation Ordinance. 2
- 11.2 Direct the Director of Finance and Administration, in conjunction with the Bureau of Building Repair Manager, to evaluate and re-engineer the Bureau of Building Repair’s business processes. 2

The Bureau of Building Repair Manager should:

- 11.3 Revise the existing Bureau of Building Repair mission statement to reflect clearly the Bureau’s reason for existence and the contribution that the Bureau can make to the City’s quality of life. 1
- 11.4 Develop performance measures, standards, and objectives that will serve to provide direction, accountability, and control for the Bureau of Building Repair’s operations. 2
- 11.5 Oversee the process of re-engineering the processes and systems that the Bureau of Building Repair employs to receive, approve, monitor, control, and report on its work requests. 2
- 11.6 Establish a timeline for the development of an Operational Policies and Procedures Manual and report on the status of the manual’s development to the Deputy Director, Operations, prior to May 31, 2007. 1
- 11.7 Develop and consistently administer a customer survey that captures measurable information on all of the Bureau of Building Repair’s key results areas of service. 2
- 11.8 Work to improve communications within the Bureau of Building Repair in order to improve morale and thus the performance of the Bureau. 2
- 11.9 Develop and implement a process for addressing the suggestions and concerns of the Bureau’s supervisors, on a continuing basis. 2
- 11.10 In accordance with the City’s construction codes, ensure that the Bureau of Building Repair obtains permits and inspections, as required. 1

<b>Recommendation</b>	<b>Priority</b>
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11.11 In cooperation with the Department of Building Inspection, ensure that the Bureau of Building Repair obtains priority assignment for plan review and issuance of its permit applications, as provided for in the Department of Building Inspection’s Administrative Bulletin No. AB-004, <i>Priority Permit Processing Guidelines</i> .	2
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**12: Bureau of Building Repair Annual and Continuing Project Management**

The Deputy Director of Finance and Administration, in conjunction with the Manager of the Bureau of Building Repair, should:

- |   |   |
|---|---|
| 12.1 Establish a timeline and completion date for each of its Bureau of Building Repair initiatives.  | 1 |
| 12.2 Include as one of its initiatives a business process review of project and job order management.   | 1 |
| 12.3 Establish appropriate controls over job order creation, management and closeout and document such controls in written policies and procedures. | 1 |

The Deputy Director of Operations, in conjunction with the Deputy Director of Finance and Administration, should:

12.4 Establish a formal computerized maintenance management system project structure with timelines, deliverables, and a project team that includes representatives from accounting, administrative, information technology, and client departments.	2
--	---

**Section 13: Materials Management Controls and Procedures**

The City Administrator should:

13.1 Direct the Office of Contract Administration to develop a City-wide set of guidelines and procedures and a training program on storeroom operation and management as recommended in Section 2.2 of the 1991 audit report of <i>Purchasing and Storekeeping Functions as Administered by the Purchasing Department</i> .	2
--	---

The City Services Auditor should:

13.2 As part of reviews or audits that it performs of City materials storerooms, recommend guidelines and procedures for City internal controls in this area. Guidelines and procedures recommended for the Department of Public Works may also be extended to other City agencies.	2
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<b>Recommendation</b>	<b>Priority</b>
13.3 Develop an audit schedule for periodic reviews of City materials storeroom subject to the City Services Auditor's risk analysis and scheduling process.	2
The Director of Public Works should:	
13.4 Work with the City Services Auditor to develop guidelines and procedures for City storeroom internal control, which may then be extended to other City agencies.	2
13.5 Work with the City Services Auditor to develop an audit schedule for periodic reviews of the Department of Public Works storerooms.	2
The Deputy Director, Operations, should:	
13.6 Continue to expand the inventory of items under the storeroom's responsibility commensurate with economical and efficient operations.	2
13.7 Ensure that storeroom staff receives the training and understands the guidelines and procedures that we recommend that the Office of Contract Compliance develop.	2
The Deputy Director, Finance and Administration, should:	
13.8 Comply with the requirements of Section 21.03(a) of the <i>Rules and Regulations Pertaining to the San Francisco Administrative Code, Chapter 21</i> , promulgated by the Purchaser, concerning delegated departmental procurements.	1

**Section 14: Automotive and Mobile Equipment Management**

The Director of Public Works should:	
14.1 Emphasize the importance of complying with preventive maintenance inspection schedules.	2
14.2 In accordance with Section 4.11 (b) (4) of the Administrative Code, ensure that the Department of Public Works maintains detailed records on all City vehicles used to commute to and from home.	1
14.3 In accordance with Section 4.11 (b) (6) of the Administrative Code, obtain the approval of the Board of Supervisors, by resolution, prior to authorizing employees to garage City vehicles at their residences.	1
14.4 In accordance with the State driver license EPN (Employer Pull Notice) Program, ensure that all required employees are enrolled in the Program and	

**Recommendation** **Priority**

that the required individual Driver Record Information is available and current 1

The Manager, Central Shops, should:

14.5 Ensure that all vehicles released for service by Central Shops meet the safety requirements of the California Vehicle Code. 2

14.6 Ensure that required maintenance inspections are accomplished within the 90 days, as mandated by Section 34505.5 of the California Vehicle Code. 2

**Section 15: Health, Safety, and Environmental Issues**

The Director of Public Works should:

15.1 Fully support the Department of Public Works' Health and Safety Program including developing and disseminating a Department of Public Works' Safety Policy Statement. 1

The Operations Division Manager should:

15.2 Continue to improve the housekeeping and physical condition of the Operations Division Yard and the Asphalt Plant and implement specific corrections to address deficiencies noted by the Public Utilities Commission and Airport health and safety staff. 2

15.3 Evaluate the costs and obtain funding to install a multi-chambered oil-grit separator to treat the effluent from the catch basins, or remove the catch basin entirely and install a drainage grate that is plumbed directly to the separator. 1

15.4 In conjunction with the Environment, Health and Safety Manager, analyze the causes of the increased severity of workplace injury and illness in the operating bureaus and develop and implement a plan to significantly reduce the incidence of workplace illness or injuries in the Operations Division. 2

**Recommendation**

**Priority**

**Section 16: Interdepartmental Work Order Funds**

The Director of Finance and Administration should:

- 16.1 Work with the Director of Operations and the superintendents of the four operating bureaus to ensure that the operating bureaus' procedures for managing work orders and recoveries are consistent and comply with the Department's policies and procedures.
  - (a) Bureau of Building Repair 1
  - (b) Bureaus of Street and Sewer Repair, Urban Forestry, and Street Environmental Services 2
- 16.2 Develop a mechanism to facilitate client departments' access to project expenditure data, including developing routine reports that allow client departments to track project expenditures. 2
- 16.3 Implement a process to work with client departments to develop quarterly reports that allow client departments and bureau superintendents to track work order expenditures. 2
- 16.4 In conjunction with the Director of Operations, develop an annual interdepartmental work order fund budget for the operating bureaus that includes the salary and non-salary budget details in the individual work orders and the associated overhead expenditures. 3
- 16.5 Develop procedures that allow bureau superintendents to track interdepartmental work order fund budgets at a summary level. 3
- 16.6 Develop and provide an annual summary report as part of the Board of Supervisors' annual budget review for each bureau's interdepartmental work order fund, showing actual salary and non-salary expenditures by fund. 1
- 16.7 Transfer the revenues and expenditures associated with cement work in the annual budget from the Bureau of Building Repair to the Bureau of Urban Forestry. 1
- 16.8 Reconcile the Special Engineering, Excavation and Subdivision Funds annually. 1

The Manager of the Bureau of Street Use and Mapping:

- 16.9 Provide annual summary reports as part of the Board of Supervisors' annual budget review, showing actual salary and non-salary expenditures by fund. 1

**Recommendation**

**Priority**

**Section 17: Allocation of Overhead Costs**

The City Administrator should:

- 17.1 Work with the City’s Department of Human Resources to assess and revise the existing human resources position classifications and job descriptions within the General Services Agency to allow increased cross-training and flexibility in staffing. 1

The Director of Public Works should:

- 17.2 Work with the City Administrator to identify ways to consolidate the Department’s payroll processing functions within the larger General Services Agency, including developing a work plan, time frame, and cost analysis. As part of the work plan, the Department needs to work with the Controller’s Office on the Controller’s future acquisition of a human resources and payroll system package. 3

- 17.3 Work with the City Administrator to evaluate the Department’s human resource processes, performance, and productivity; implement a work plan to streamline processes and improve performance and productivity; and recommend cost savings, including staff reductions or reallocation within the General Service Agency. 1

- 17.4 Submit proposed reductions or reallocation of human resource staffing within the General Services Agency as part of the human resource function evaluation to the Board of Supervisors during the FY 2007-2008 budget review. 1

- 17.5 Direct the Bureaus of Engineering, Architecture, and Construction Management to evaluate the integration of their information technology activities, including consolidating information technology positions. Present an information technology staffing plan during the FY 2007-2008 budget review that defines the Department’s information systems and support requirements, as well as information technology staff skills and time needed to support the information systems, This plan should also generally identify areas of redundancy and opportunities for improved efficiency and productivity, and recommend staff reductions. 1

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## **Introduction**

On May 3, 2005, the Board of Supervisors adopted a motion directing the Budget Analyst to perform a management audit of the Department of Public Works (Motion No. M05-67).

### **Purpose and Scope**

The purpose of this management audit is to (i) evaluate the economy, efficiency and effectiveness of the Department of Public Works' programs, activities, and functions and the Department of Public Works' compliance with applicable State and Federal laws, local ordinances, and City policies and procedures; and (ii) assess the appropriateness of established goals and objectives, strategies, and plans to accomplish such goals and objectives, the degree to which such goals and objectives are being accomplished, and the appropriateness of controls established to provide reasonable assurance that such goals and objectives will be accomplished.

### **Audit Methodology**

The management audit was conducted in accordance with *Governmental Auditing Standards, 2003 Revision*, issued by the Comptroller General of the United States, U.S. Government Accountability Office. The management audit staff presented a draft report to the Director of Public Works on November 7, 2006. The management audit staff held an exit conference with the Director of Public Works and key members of the Department of Public Works' management staff on November 21, 2006, to discuss the draft report. After careful consideration of the additional information provided after submission of the draft report and at the exit conference, the management audit staff prepared a final report. The Department of Public Works has provided a written response to the Budget Analyst's management audit report, which is appended to this report.

## **Overview of the Department of Public Works**

### **Organizational Structure**

The Department of Public Works has primary responsibility for maintaining the City and County of San Francisco's streets, including keeping streets clean and maintaining streets, sidewalks, street structures and landscapes in good repair. The Department of Public Works is also responsible for maintenance of the City's General Fund buildings and capital improvements to the City's General Fund facilities and infrastructure. The Department of Public Works' organization and budget reflect these responsibilities.

The Department of Public Works consists of eight bureaus in two divisions and general administration. The Department of Public Works' Engineering Division is made up of four bureaus:

- The Bureaus of Architecture, Engineering, and Construction Management are responsible for many of the City's capital projects.
- The Bureau of Street Use and Mapping is responsible for most of the Department's permitting and inspection functions and for the City and County's maps. The County Surveyor is part of the Bureau of Street Use and Mapping.

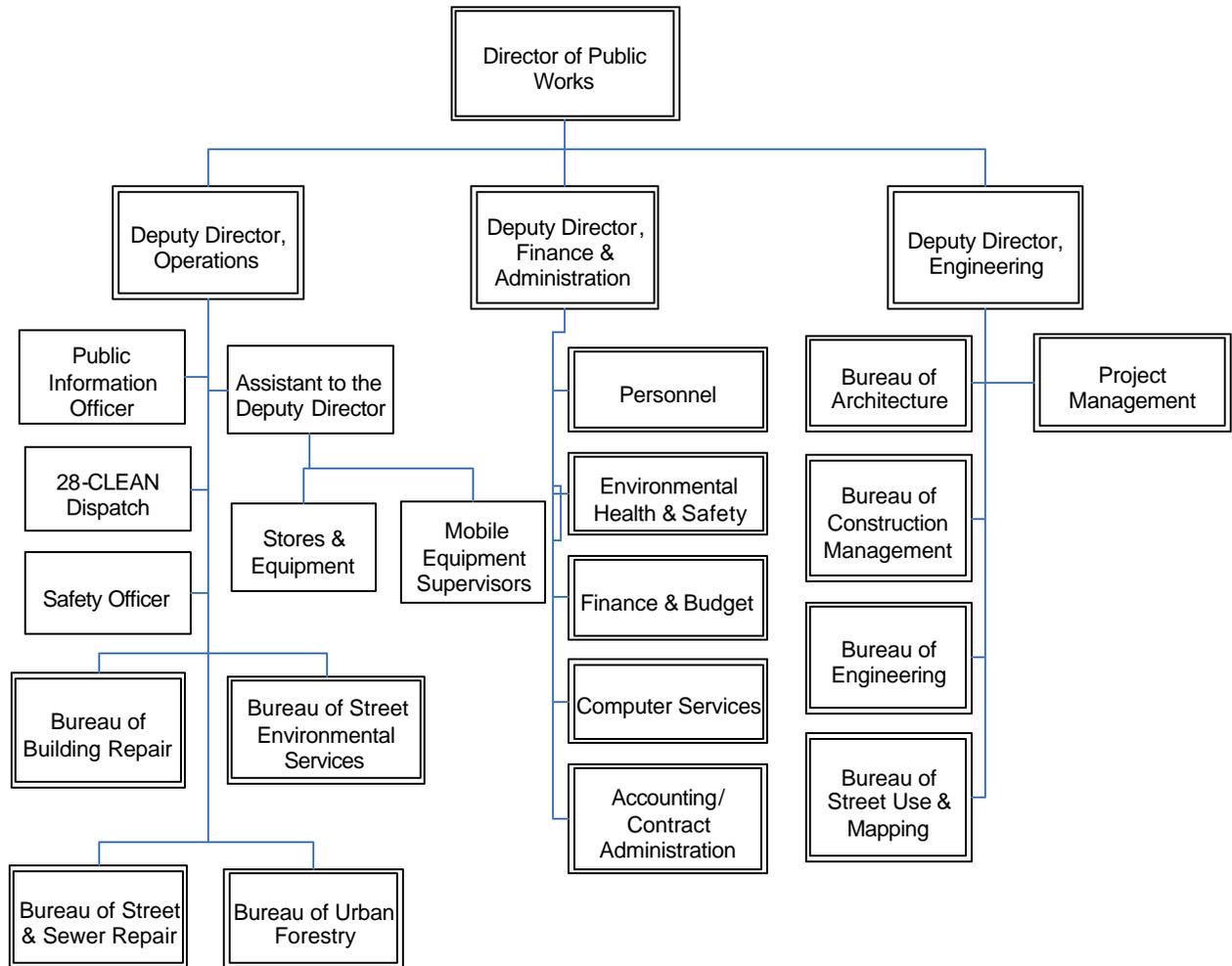
The Department of Public Works' Operating Division is made up of four bureaus:

- The Bureau of Building Repair is responsible for maintenance and repair of many City buildings and infrastructure.
- The Bureau of Street and Sewer Repair maintains and repairs City streets and, on behalf of the Public Utilities Commission, City sewers.
- The Bureau of Street Environmental Services cleans City streets and removes graffiti.
- The Bureau of Urban Forestry plants and maintains the City's street trees.

The Department's general administration functions reside within the Office of Financial Management and Administration. In FY 2005-2006, the Department of Public Works became part of the newly formed General Services Agency. The consolidation of the Department within the larger agency had minimal budget impact. The Department's general administration functions were largely unchanged, except for the transfer of the human resources manager from the Department to the General Services Agency. The other human resources positions remained within the Department. In FY 2006-2007, the Department began the transfer of some call center functions and positions from the Department's 28-CLEAN call center to the General Service Agency's 311 call center.

# Exhibit 1

## Department of Public Works' Organization



## Funding

### The Department's Sources of Funds

The Department of Public Works' annual operating budget has several funding sources, as shown in Table 1. In FY 2006-2007, the direct General Fund subsidy was \$31.2 million, which included \$20.6 million for services funded by the General Fund, plus \$10.6 million to augment services funded by the Gas Tax or Road Fund.

**Table 1**

### **The Department of Public Works' Sources of Funds in the FY 2006-2007 Budget**

	<b>General Fund</b>	<b>Gas Tax and Road Fund</b>	<b>Various Funds</b>	<b>Total Funds</b>
Permit and Fee Revenues	\$4,710,200			\$4,710,200
Expenditure Recoveries	62,220,228	33,000	286,000	62,539,228
State Vehicle Fuel Tax and Other State Monies		24,554,237		24,554,237
Other Various Sources	7,287,446	955,000	550,000	8,792,446
Federal Grants			7,800,000	7,800,000
Prior Year Reserve	1,495,512			1,495,512
General Fund Subsidy	20,600,323	10,601,948		31,202,271
<b>Total Sources of Funds</b>	<b>\$96,313,709</b>	<b>\$36,144,185</b>	<b>\$8,636,000</b>	<b>\$141,093,894</b>

Source: FY 2006-2007 Annual Appropriation Ordinance

- General Fund sources include fee and permit revenues and a direct transfer from the General Fund to pay for services, such as street inspections, graffiti removal, and cleaning of public plazas.
- State vehicle fuel tax monies, allocated in the budget as Gas Tax or Road Fund, pay for street maintenance and repair.
- Other City departments and public agencies, including the San Francisco County Transportation Authority, pay for service through work orders or transfers.
- The Department receives various funds from State and Federal grants and other sources, which pay for capital projects.

### The Department's Uses of Funds

The Department of Public Works' annual operating expenditures are divided among three main funding sources: General Fund, Gas Tax or Road Fund, and interdepartmental work orders and recoveries. The five bureaus that make up the annual operating budget are the four bureaus of the Operating Division – the Bureaus of Street and Sewer Repair, Street Environmental Services, Building Repair, and Urban Forestry – and the Bureau of Street Use and Mapping.

The Department of Public Works' annual capital budget appropriation is funded by the General Fund and various other funds. The three capital bureaus of the Engineering Division are the Bureaus of Architecture, Engineering, and Construction Management.

**Table 2**

### **The Department of Public Works' Uses of Funds in the FY 2006-2007 Budget**

	<b>General Fund</b>	<b>Gas Tax and Road Fund</b>	<b>Inter-departmental Word Order Fund</b>	<b>Overhead</b>	<b>Federal Funds</b>	<b>Total</b>
<b>Operating Budget</b>						
General Administration	\$0	\$0	\$0	\$14,422,925	\$0	\$14,422,925
Building Repair and Maintenance	6,301,084	0	26,398,344	5,689,361	0	38,388,789
Street Environmental Services	16,649,887	19,874,478	2,016,536	6,136,406	0	44,677,307
Street Use and Mapping	4,510,926	0	7,965,695	2,084,839	0	14,561,460
Street and Sewer Repair	3,454,063	4,408,430	10,719,939	3,549,855	0	22,132,287
Urban Forestry	0	<u>6,644,523</u>	<u>5,868,943</u>	<u>1,802,196</u>	0	<u>14,315,662</u>
Subtotal, Operating Budget	30,915,960	30,927,431	52,969,457	33,685,582	0	148,498,430
<b>Capital Planning and Projects</b>						
General Administration	0	0	0	8,017,969	0	8,017,969
Capital Projects	10,958,903	5,216,754	0	0	8,086,000	24,261,657
Architecture, Engineering, and Construction Management Projects	0	0	<u>1,469,389</u>	<u>16,682,356</u>	0	<u>18,151,745</u>
Subtotal, Capital	10,958,903	5,216,754	1,469,389	24,700,325	8,086,000	50,431,371
Departmental Transfer Adjustment	0	0	0	(57,835,907)	0	(57,835,907)
<b>Total Uses of Funds</b>	<b>\$41,874,863</b>	<b>\$36,144,185</b>	<b>\$54,438,846</b>	<b>\$550,000</b>	<b>\$8,086,000</b>	<b>\$141,093,894</b>

Source: FY 2006-2007 Annual Appropriation Ordinance

## **Funding Street Projects**

The City and County of San Francisco pays for street maintenance, construction, repair and replacement projects with a combination of State, Federal and local monies. State monies come from the vehicle fuel excise tax. Local monies come from the ½ cent sales tax revenues, administered by the San Francisco County Transportation Authority, and from the General Fund.

- State law allocates the vehicle fuel excise tax - or gas tax - to construction or resurfacing, maintenance and operation of public streets and highways, public mass transit projects, and payment of principal and interest of voter-approved bonds issued for these purposes.
- The San Francisco County Transportation Authority provides funds to the Department of Public Works to pay for sidewalk, curb ramp, tree planting, and street resurfacing projects.
- The General Fund augments State and San Francisco County Transportation Authority funds to pay for street maintenance, operations, and construction or resurfacing projects, as well as sidewalk, curb ramp, and tree planting projects.

## **The Department of Public Works' Spending for Streets**

The City's total FY 2004-2005<sup>1</sup> State, Federal, San Francisco County Transportation Authority and General Fund funding for street and public right of way maintenance and operations, and construction projects was \$121.6 million. While the Department of Public Works received \$96.1 million of these monies, the Municipal Transportation Authority also received a portion.

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<sup>1</sup> As of the writing of this report, the State Controller's Office had not compiled the final funding and expenditure figures for FY 2005-2006.

Table 3

## The Department of Public Work's Total Annual Funding for Streets

FY 2000-2001 through FY 2004-2005

	FY 2000-2001	FY 2001-2002	FY 2002-2003	FY 2003-2004	FY 2004-2005	Average Annual Growth Rate
<b>Bureau and Street Operations</b>						
<u>General Fund</u>						
Street Use and Mapping	\$3,224,873	\$3,651,974	\$4,349,170	\$4,115,851	\$3,809,342	4%
Street Environmental Services	13,707,532	17,002,164	16,304,706	17,170,730	19,437,798	9%
Other General Fund	683,614	459,899	335,003	494,473	344,824	(16%)
Subtotal General Fund	17,616,019	21,114,037	20,988,879	21,781,054	23,591,964	8%
<u>State Funds</u>						
Sewer and Street Repair	5,810,106	6,405,412	6,563,948	5,903,118	4,441,007	(6%)
Urban Forestry	0	0	4,623,511	4,964,356	4,716,815	n/a
Street Environmental Services	14,959,855	15,263,513	11,429,777	11,573,954	11,830,517	(6%)
Subtotal State Vehicle Fuel Tax	20,769,961	21,668,925	22,617,236	22,441,428	20,988,339	0%
Total Operations	38,385,980	42,782,962	43,606,115	44,222,482	44,580,303	4%
<b>Capital Projects</b>						
<u>Sales Tax and Local Funds</u>						
Curb Ramp, Pedestrian and Bicycle, Tree Planting, and Street Improvement Projects	24,061,551	16,490,147	17,737,584	11,231,299	19,800,242	(5%)
<u>Federal, State, and Other Funds</u>						
Curb Ramp, Pedestrian and Bicycle, Tree Planting, and Street Improvement Projects <sup>2</sup>	8,125,100	21,248,560	5,891,980	23,812,572	31,682,441	41%
Total Capital Projects	32,186,651	37,738,707	23,629,564	35,043,871	51,482,683	12.5%
<b>Total Funding</b>	<b>\$70,572,631</b>	<b>\$80,521,669</b>	<b>\$67,235,679</b>	<b>\$79,266,353</b>	<b>\$96,062,985</b>	<b>8%</b>

Source: San Francisco Controller's Office

## Future Funding for Street Projects

The City's ten-year capital plan identifies a significant backlog in street resurfacing, sidewalk repair, curb ramp, and street structure projects of approximately \$700 million. The capital plan proposes funding for City street resurfacing, sidewalk repair, curb ramp, and street structure projects of approximately \$378 million over ten years. The capital plan does not address the backlog in street and related projects nor fund all projects to the

<sup>2</sup> In FY 2003-2004 and FY 2004-2005, the City received one-time funding for street projects from the sale of land adjacent to the Octavia Boulevard project.

level required to maintain the City's streets, sidewalks and other right of way structures in current condition.

The ten-year capital plan calls for \$30 million to \$40 million in annual State, Federal, and local monies to pay for street and related projects. Of this amount, the General Fund will have to contribute from \$16 million to \$22 million annually to meet the goals of the capital plan.

In 2002 the Pedestrian Safety and Street Resurfacing Working Group made four recommendations to address the backlog in street projects and funding shortfall. Of these four recommendations:

- The City submitted a General Obligation Bond to the voters to pay for street resurfacing and related projects in November 2005 that failed to win approval of two-thirds of the voters.
- The Department of Public Works submitted many proposed fee increases, including increased excavation fees, to the Board of Supervisors for approval between 2003 and 2005.
- The Treasurer Tax Collector has begun an initiative to enforce and collect existing parking fees and taxes.
- The Board of Supervisors appropriated \$15 million in additional General Fund monies in the spring of FY 2005-2006 to fund street resurfacing and related projects.

## **Chinatown Alleyways**

The Board of Supervisors approved \$2.9 million of State Gas Tax and Road Fund monies in 1994 to pay for street improvements to Chinatown Alleyways, of which \$2.3 million was reserved. The Chinatown Alleyways street improvement process had been initiated by the non-profit Chinatown Community Development Center, including development of a master plan between 1995 and 1998 that identified the alleys to be improved.

The Department of Public Works managed the planning, design, and construction of the Chinatown Alleyways projects. Construction of the Alleyways projects was divided into five phases. The Budget and Finance Committee has approved release of reserved funds for the Chinatown Alleyways projects as follows:

- \$622,661 to construct the phase one Cordelia, Ross, and Commercial Alleys street improvements in 1999.
- \$529,339 to construct the phase three street improvements to the Waverly Place Alley began in 2005.

- \$215,000 for the planning and design of phase four Jack Kerouac Alley street improvements and phase five Beckett, Wentworth, Stark, and Bedford Alleys street improvements in 2005.
- \$334,172 to construct the phase four Jack Kerouac Alley street improvements in 2006.

Phase two to construct street improvements to John and Spofford Alleys in 2004 was funded from the Department's capital improvement funds rather than the original \$2.9 million Gas Tax and Road Fund appropriation.

\$598,828 of the original \$2.9 million appropriation remains on reserve. The Department intends to use these remaining reserved funds to pay for construction of Beckett, Wentworth, Stark, and Bedford Alleys street improvements.

According to the Chinatown Alleyways project manager, the Department of Public Works underestimated the complexity of the Chinatown Alleyways projects in the initial planning and design phases, resulting in delays and cost overruns. The project manager states that several factors – including extensive community participation in the planning process, delays in Pacific Gas and Electricity undergrounding of utilities, and street congestion in Chinatown, contributed to project delays. Cost overruns were caused by underestimation of the planning, design and project management costs for the project. Because the Department of Public Works underestimated the impact of these factors and the Chinatown Alleyways' project costs and schedules, the Department has had to scale back the total number of alleys included in the project. The original plan identified 31 Chinatown alleys of which ten were considered high need. As noted above, the initial \$2.9 million appropriation is expected to pay for street improvements to nine alleys in phases one, three, four and five.

The original Chinatown Alleyways master plan called for special improvements to the first group of high needs alleys, including streetscapes, street furniture, decorative concrete and other improvements. According to the Department of Public Works, future street improvements to the Chinatown alleys will be part of the Department's overall planning and prioritizing of street resurfacing projects because the remaining alleys do not require extensive improvements.

## **The Neighborhood Beautification Fund**

The Neighborhood Beautification Fund, which was established to provide funding for the promotion of neighborhood beautification projects in San Francisco, including reducing graffiti, is included in the Department of Public Works budget but managed by the City Administrator. City businesses may designate up to one percent of their existing annual Payroll Tax liability for deposit into the Fund. Annual funding is approximately \$550,000, which is awarded in the form of grants to local businesses, non-profits, and community groups for neighborhood beautification projects.

In August 2003 the Controller's Office conducted a three-year analysis of the Neighborhood Beautification Fund revenues and expenditures, and found that the actual revenues were significantly less than the budgeted revenues and the expenditures exceeded the available revenues. In response to this, the Controller's Office advised the Neighborhood Beautification staff to reduce the programs' grant awards to be commensurate with the available revenues. Staff from the Mayor's Office, the Neighborhood Beautification Program, the Treasurer and Tax Collector's Office and the Controller's Office evaluated and addressed the Fund imbalance. Budget responsibility for the Fund was transferred to the Department of Public Works from the Mayor's Office in FY 2004-2005.

According to the City Administrator's Office, under current procedures grants are only awarded once the Controller certifies available revenues. Additionally, the City Administrator's Office retains a reserve of approximately \$20,000 each cycle (there are two cycles per year) or a total of \$40,000 which is carried forward to the next year.

The City Administrator implemented a scoring system in February 2006, assigning points based on community benefit, participation, project feasibility, and matching funds. According to the City Administrator's Office, this scoring system is intended to make the grant process more transparent and increase the perceived fairness. Information on the point system is provided in the grant guidelines to allow grant applicants to develop their application around the point system criteria.

The City Administrator has selected a seven member advisory committee consisting of neighborhood and business representatives. According to the City Administrator's Office, the advisory committee members score applicants and approve the grant proposals. Additionally, the Advisory Committee members who score applicants now document the applicant scores on a "Score Sheet" which is kept on file with the City Administrator. This enables the City Administrator to provide grant applicants who were denied grants with feedback on the reasons for the denial.

## **Department of Public Works' Accomplishments**

The management audit team invited the Department of Public Works to submit written statements on what the Department of Public Works identifies as accomplishments in recent years.

The Department of Public Works' Operations Division has implemented several programs to promote cleanliness in the public right of way and to increase the number of street trees.

- The Department established its 28-CLEAN customer service line in 2001. 28-CLEAN provides the public with an easy to remember telephone number to report trash accumulation, illegal dumping and graffiti. The results: increased and faster customer service. In a typical month, 28-CLEAN processes nearly 8,000 calls from the public. 28-CLEAN also receives a number of non-Department-related calls for service and the department regularly forwards these service requests to appropriate agencies. The department is working closely with the new 311 Customer Service Center to transition 28-CLEAN calls to 311.
- The Department established the Community Clean Team in 2001, which has been a highly successful neighborhood beautification volunteer program. Since the program began, the department has recruited more than 20,000 volunteers and has picked up nearly 200 tons of debris. In addition, volunteers and city crews sweep and clean more sidewalks, curbs and alleyways; and manually clean nearly hundreds of tree basins. In 2004 and 2005, 370 tons of debris were collected at the events, with 50 percent being diverted from the landfill and recycled or composted.
- The Department has hosted three Clean and Green City Summits, the last one on February 15, 2006. The Summits team up a coalition of city residents, community leaders, and merchants with city government leaders and frontline staff with the goal of engaging the community and raising the level of service provided by frontline staff. Over 300 representatives from more than 200 public, private and non-profit organizations attended this year's event. Recommendations developed by participants have been shared with all relevant city departments to start creating change and raising standards.
- The Department began a 7501 Environmental Service Worker Apprenticeship Training Program to provide opportunities for people with minimal work skills to join the Department's workforce and acquire the skills needed to become general laborers and gardeners in an apprenticeship-training program. The program supports the community by providing full time jobs and skills training with long-term career opportunities, building a local skilled workforce for future construction projects in San Francisco and the state, and continuing to grow a stronger Department workforce to provide services to San Francisco.

- The Department created the Bureau of Urban Forestry in 2002 to specifically address the city's needs for coordinated maintenance of street trees and landscaped medians. The Department shifted the city's management of medians and trees from a reactive mode to a coordinated, programmatic maintenance and improvement program. This represents a historical shift in the maintenance of green spaces and trees for San Francisco. Through the Department's coordination, tracking and management, San Francisco exceeded Mayor Newsom's goal of planting 5,000 street trees annually in both 2004 and 2005. The Department has increased its number of watering trucks to maintain the new trees and is planting larger 24-gallon trees, which require less startup maintenance, compared to the smaller 15-gallon trees. By March 2007, the Department will have planted more than 15,000 additional trees since 2004 when the Mayor pledged additional street trees.

One of the Department of Public Works' primary responsibilities is to provide project management, engineering, architectural, and construction management services on some of the City's largest capital projects.

- The Department is providing project management, construction management, and overseeing the design of the Laguna Honda Hospital replacement project. Three new buildings and the renovation of an existing building are scheduled to be completed by 2007, and another new building will be finished by 2009.
- The Department designed and constructed the new Octavia Boulevard as part of the overall Central Freeway Replacement Project. Completed and opened in 2005, Octavia Boulevard is a six-lane roadway flanked by trees, flowers, other landscaping elements, decorative streetlights, benches and public artwork. The Octavia Boulevard project has revitalized a once crime-ridden part of Hayes Valley and has joined together the neighborhood. The Department's Octavia Boulevard Project has been the recipient of several awards, including Freeway Project of the Year by the California Transportation Foundation and the 2006 Excellence in Transportation Award by the California Department of Transportation. The project also received SF Beautiful's 2006 Beautification Award, Rebuilding our Civic Spaces and Neighborhood Places and the U.S. Department of Transportation's 2006 Excellence in Highway Design.
- The Department provided project and construction management on San Francisco's new Juvenile Hall, which was completed in July 2007. The 90,000 square foot building replaces an outdated facility that was constructed in 1950. The new building provides 110 sleeping rooms, with a capacity of up to 150 beds; and program space with educational, recreational, health care, religious, food service, and visitation areas.
- The Department's Harding Park Municipal Golf Course has received the Award of 2006 Distinguished Projects of the Year from American Public Works Association, Northern California Chapter. An extensive improvement process was undertaken to restore the famed 163-acre course layout to world-Class standards. The project was completed on time and was upheld to the standards of the Professional Golf

# 1. Street Resurfacing and Pothole Repair Projects

- The Board of Supervisors appropriated \$500,000 in additional General Fund monies in FY 2005-2006 to patch streets and repair potholes, increasing funding from \$1 million annually to \$1.5 million annually. The Board of Supervisors also appropriated \$15 million in new General Fund monies in the spring of FY 2005-2006 to pay for street resurfacing projects.
- Despite these new resources, the Department of Public Works cannot show that it is providing street repair projects cost-effectively. The Department does not routinely track average project labor costs and productivity to ensure that projects are completed efficiently.
- Based on cost and productivity data provided by the Department, project labor costs for street resurfacing and patching projects vary widely from year to year and do not reflect increases in salaries, benefits, and overhead. For example, the Bureau of Street and Sewer Repair's labor cost per square foot to patch streets decreased by 25.6 percent in FY 2004-2005, from \$1.76 per square foot in FY 2003-2004 to \$1.31 per square foot in FY 2004-2005, and increased by 45.8 percent in FY 2005-2006, from \$1.31 in FY 2004-2005 to \$1.91 in FY 2005-2006. The 45.8 percent increase in labor costs in FY 2005-2006 far exceeds projected increases due to salary, benefits and overhead. The Bureau of Street and Sewer Repair needs to evaluate the labor hours, labor costs, and productivity of street resurfacing and patching projects, including the accuracy of cost and productivity data, to ensure that projects are delivered cost-effectively.
- The Bureau of Street and Sewer Repair has a high rate of nonproductive hours. More than 12 percent of the Bureau's scheduled hours are nonproductive paid and unpaid sick and disability leave. The Bureau lost the equivalent of 12.5 full time positions in FY 2005-2006 due to extended, unpaid sick and disability leave. This productivity loss equals more than \$1.1 million annually in salaries and benefits.
- The Department incurs unexpected costs and delays from street improvement projects that incur design problems. For example, the Cesar Chavez Street Improvement Project incurred \$579,000 in contract change order costs, or 25.2 percent of the total construction contract amount of \$2.3 million, to pay for the redesign of a street bridge and compensate the contractor for overhead due to project delays. These costs could have been reduced or avoided if the Department had ensured adequate quality control over the project's design.

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The Department of Public Works needs to closely manage street resurfacing, patching and pothole repair projects to ensure efficient spending of limited project monies. The Bureau of Engineering program manager manages street resurfacing project funding and implementation. The Department contracts for street resurfacing projects with costs exceeding \$100,000, while the Bureau of Street and Sewer Repair performs projects with costs less than \$100,000. The Bureau of Street and Sewer Repair also performs routine street maintenance projects such as patching and pothole repair.

## **The Department of Public Works' Management of Street Resurfacing Capital Projects**

The Department of Public Works coordinates implementation of major street resurfacing projects with utilities and other underground work to minimize excavation of public streets. The Department maintains a five-year plan of utility and street projects, based on the utilities' schedules for underground work and the condition of streets needing repair or reconstruction. Once a street has been resurfaced or reconstructed, the City implements a five-year moratorium on street excavation.

The Department of Public Works combines street resurfacing projects with water, sewer, transit, or traffic projects managed by the Public Utilities Commission and the Municipal Transportation Authority. Street resurfacing is the final stage of the multi-agency projects.

The Department of Public Works' street resurfacing capital projects encounter the same project problems as the Department's other capital projects, discussed in Sections 6 and 8 of this report.

## **Anticipating Design Problems in Street Projects**

The Department of Public Works has standard street project design and drafting procedures. Although street project site conditions are generally visible, and designing and implementing street projects is relatively straight-forward, the Department's procedures allow for contingencies. For example, the project designer can increase certain specifications for street projects requiring base repair by up to 20 percent to pay for the costs to repair damage to the street base that was not visible during the design process. Also, in accordance with the Department's procedures, street project construction contracts contain a 10 percent contingency to allow for changes in the construction contract and project. Although many street projects are completed on time and within budget, several street projects are notable for design errors or unanticipated site conditions.

The Octavia Boulevard Improvement Project, with original construction costs of \$10.5 million, incurred \$1.1 million in construction contract change orders or 10.5 percent of the total construction cost, due largely to design omissions and unforeseen site conditions. Examples of design omissions or unforeseen site conditions, some of which could reasonably been anticipated, include:

- The City had to demolish old California Department of Transportation highway footings that had not been identified in the design.
- The designer had not provided access to a parking lot adjacent to the street project.
- The contractor had to relocate a storm water catch basin that had not been located correctly in the design.
- The Department of Public Works had to survey existing Municipal Transportation Authority track on Market Street that had not been surveyed to determine alignment and grade.

The Cesar Chavez Street Improvement Project, with original construction costs of \$2.3 million, incurred \$579,000 in contract change orders or 25.2 percent of the total construction cost, due to design problems and unforeseen site conditions. The largest change order totaled \$605,000 (offset by other reductions in costs) to pay for the redesign of a street bridge and to compensate the contractor for overhead and other costs associated with the time delay.

The Kearny Street improvement project encountered problems when the design for the street's base repair differed from the actual conditions. The sidewalk height and location of the utility box differed from the design plans. In this case, the lengthy planning and design process contributed to the change order, since the street conditions changed during the time that the designer was planning the project.

The Department of Public Works needs to assess and revise as appropriate its street design project quality controls to ensure that street project designs meet the project needs and site requirements.

The Bureau of Engineering needs to revise or enhance its existing street project design and drafting procedures to ensure that the design and planning process is timely, including site visits late in the design process, to ensure that project plans and specifications correspond to actual site conditions.

## **Managing Street Project Timelines**

Because delays in completing street construction projects can disrupt traffic and activities along the corridor, the Department of Public Works needs to ensure that street projects are completed on time. The Department's street construction projects complete almost three months after the original completion date based on the median number of days that construction projects are extended.

**Table 1.1**

**Number of Days that the Actual Street Construction Project  
Completion Date Exceeds the Original Construction Contract  
Completion Date for  
12 Construction Contracts Completed in 2004 and 2005**

<b>Project Title</b>	<b>Original Completion Date</b>	<b>Actual Completion Date</b>	<b>Number of Days That Project Exceeded Original Completion Date</b>
Cesar Chavez Street Improvement Project	March 11, 2002	April 30, 2004	781
Geary Boulevard Pavement Renovation.	May 28, 2003	November 24, 2004	546
O'Farrell Street and Geary Boulevard Renovation	November 29, 2004	July 27, 2005	151
Octavia Boulevard Improvements Project	April 25, 2005	September 9, 2005	137
As Needed Paving Contract, Various Street Locations	February 3, 2004	May 20, 2004	107
Oak Street Pavement Renovation Phase I	June 21, 2004	September 15, 2004	86
Sutter Street Pavement Renovation	July 12, 2005	September 30, 2005	80
Chinatown Alleyway Improvements Phase 2	December 29, 2004	March 15, 2005	76
As Needed Paving Contract, Various Locations #6	October 17, 2004	December 10, 2004	54
Shotwell Street and Treat Avenue Pavement Renovation	February 19, 2004	March 12, 2004	22
Oak Street Pavement Renovation Phase II	February 28, 2005	March 9, 2005	9
As Needed Paving Contract, Various Locations #8	October 27, 2004	November 5, 2004	9
Average Number of Days			172
Median Number of Days			83

Source: Bureau of Construction Management

Construction completion can be delayed for a number of reasons, such as inclement weather, additions to the project scope especially in as-needed contracts, or unforeseen site conditions. If the street project is combined with water line, sewer, or other underground work, projects can be delayed to relocate or work around unanticipated utilities. Although the affected utility company pays the costs of relocating utilities and contractor delays, the City incurs costs for its own staff affected by the delays.

Contract delays due to street design or condition issues included:

- An extension of the Cesar Chavez Street Improvement Project by more than one year to allow for design changes to address unforeseen site conditions or design omissions. Other project delays contributed to total delays of nearly two years.
- More than one and one-half year in delays to complete the Geary Boulevard Pavement Renovation Project, which was a joint project with the Public Utilities Commission and the Municipal Transportation Agency. Although project delays resulted from client requests or other issues with the other City departments, delays also resulted from changes initiated by the Department of Public Works, including redesigning curb ramp approaches.
- More than six months delay in the Octavia Boulevard Improvement Project to address several unforeseen site condition or design omissions, including locating and demolishing California Department of Transportation footings, removing trees, curb modifications, relocating irrigation lines, and other activities.
- Delays caused by the redesign and installation of curb ramps, reconstruction of street curbs, and additional slurry sealing of streets in other projects.

The Department of Public Works needs to identify major causes of street project delays and develop procedures to reduce common causes. Quality control procedures to reduce delays caused by design problems or site conditions that could have been anticipated will help to reduce some time delays. The Department should also look at project scheduling to reduce the impact of rain and wet weather and holiday moratoriums on street construction projects.

## **The Bureau of Street and Sewer Repair's Management of Street Projects**

The Bureau of Street and Sewer Repair is responsible for annual maintenance and repair of the City's streets, including repairing potholes and patching streets, sealing street surfaces, and maintaining street structures. Total FY 2006-2007 funding to the Bureau of Street and Sewer Repair for street resurfacing, patching, sealing and pothole repair projects was approximately \$10.6 million.

- The Bureau of Street and Sewer Repair receives approximately \$4.2 million annually in State vehicle fuel excise tax (allocated in the Department's Road Fund) to pay for slurry sealing and patch paving of the streets, pothole repairs, and other street repairs.
- The Bureau of Street and Sewer Repair also performs street resurfacing projects that are managed by the Bureau of Engineering and funded by the San Francisco County Transportation Authority from the ½ cent sales tax. The San Francisco County Transportation Authority allocates approximately \$3 million per year to the Department of Public Works for annual street resurfacing.
- In the spring of FY 2005-2006, the Board of Supervisors appropriated \$15 million in General Fund monies for street resurfacing and renovation projects which carried

forward into FY 2006-2007. The Department of Public Works allocated \$3.4 million of these funds to the Bureau of Street and Sewer Repair.

**The Bureau of Street and Sewer Repair’s Labor Costs to Resurface and Patch Streets and Repair Potholes**

The Bureau of Street and Sewer Repair does not routinely track the average labor costs of street resurfacing, patching and pothole repair projects. In FY 2005-2006, the Board of Supervisors appropriated an additional \$500,000 in General Fund monies for patching and pothole repair projects, from \$1.0 million per year to \$1.5 million per year. However, the Bureau can not consistently show that these projects are delivered cost-effectively.

The Bureau’s average labor costs to resurface and patch streets, based on cost and productivity data provided by the Bureau, have been inconsistent over the past three years. Although the average labor costs would be expected to increase at the same rate as salary, benefit, and overhead increases, average labor costs for street patching and resurfacing projects based on the Bureau’s data decreased between FY 2003-2004 and FY 2004-2005 and then increased significantly in FY 2005-2006.

**Labor Costs to Patch and Resurface Streets**

The Bureau of Street and Sewer Repair’s average labor costs to patch streets decreased by 25.6 percent between FY 2003-2004 and FY 2004-2005 and increased by 45.8 percent between FY 2004-2005 and FY 2005-2006, as shown in Table 1.2.

**Table 1.2**

**The Bureau of Street and Sewer Repair’s Labor Costs to Patch Streets  
FY 2003-2004 through FY 2005-2006**

	<b>FY 2003-2004</b>	<b>FY 2004-2005</b>	<b>FY 2005-2006</b>	<b>Percent Increase/ (Decrease) FY 2003-2004 to FY 2004-2005</b>	<b>Percent Increase/ (Decrease) FY 2004-2005 to FY 2005-2006</b>
Labor Costs to Patch Streets	\$566,915	\$495,387	\$794,440	(12.6%)	60.4%
Number of Square Feet Patched	321,457	379,059	414,901	17.9%	9.5%
Average Labor Cost per Square Foot	\$1.76	\$1.31	\$1.91	(25.6%)	45.8%

Source: Department of Public Works and SF Stat

Average labor costs to resurface streets decreased by 33.8 percent between FY 2003-2004 and FY 2004-2005 and increased by 18.1 percent between FY 2004-2005 and FY 2005-2006.

**Table 1.3**

**The Bureau of Street and Sewer Repair’s Costs to Resurface Streets**

**FY 2003-2004 through FY 2005-2006**

	<b>FY 2003-2004</b>	<b>FY 2004-2005</b>	<b>FY 2005-2006</b>	<b>Percent Increase/ (Decrease) FY 2003-2004 to FY 2004-2005</b>	<b>Percent Increase/ (Decrease) FY 2004-2005 to FY 2005-2006</b>
Labor Costs	\$1,952,544	\$1,763,734	\$1,981,253	(9.7%)	12.3%
Non Labor Costs	<u>1,558,667</u>	<u>996,497</u>	<u>1,129,395</u>	(36.1%)	13.3%
Total	\$3,511,211	\$2,760,231	\$3,110,648	(21.4%)	12.7%
Square Feet	891,000	1,218,000	1,158,726	36.7%	-4.9%
Labor Charge per Square Foot	\$2.19	\$1.45	\$1.71	(33.8%)	18.1%
Total Labor and Non Labor Charge per Square Foot	\$3.94	\$2.27	\$2.68	(42.4%)	18.5%

Source: Bureau of Engineering

While labor cost increases should reflect increases in salary, fringe benefit costs, and overhead rates, the Bureau’s labor costs do not correspond with these cost increases. The large increase in average labor costs for street patching projects in FY 2005-2006 exceeds expected increases in salary, benefit, and overhead costs. The Bureau of Street and Sewer Repair needs to evaluate the labor hours, labor costs, and productivity of street resurfacing and patching projects, including the accuracy of cost and productivity data, to ensure that these projects are delivered cost-effectively.

**The Costs of Repairing Potholes**

The Bureau’s Response Time to Pothole Complaints

The Bureau of Street and Sewer Repair reports the response time to pothole complaints to SF Stat, the City’s performance measurement system. The SF Stat data shows that the Bureau of Street and Sewer Repair’s response to pothole complaints improved slightly between FY 2004-2005 and FY 2005-2006. As a result of receiving additional funds to repair potholes, the Department of Public Works hired one additional crew to repair potholes in FY 2005-2006. The addition of one crew allowed the Bureau to increase its response to pothole complaints. In FY 2005-2006, the Bureau reported responding to 30 percent of pothole complaints within 24 hours compared to 27 percent in FY 2004-2005. The Bureau repaired 1,493 potholes in response to complaints in FY 2005-2006 compared to 1,371 potholes in FY 2004-2005, a 9 percent increase.

The Bureau of Street and Sewer Repair’s Costs to Repair Potholes

In addition to reducing the response time to pothole complaints, the Bureau of Street and Sewer Repair repaired more potholes in FY 2005-2006 compared to FY 2004-2005 due to the additional funds allocated to pothole repair. The Bureau’s average labor costs to repair potholes have increased by approximately 14.8 percent per year, which is consistent with expected increases in salary, benefit, and overhead costs.

**Table 1.4**

**The Bureau of Street and Sewer Repair’s Labor Costs to Repair Potholes  
FY 2003-2004 through FY 2005-2006**

	<b>FY 2003-2004</b>	<b>FY 2004-2005</b>	<b>FY 2005-2006</b>	<b>Average Annual Growth Rate</b>
Labor Costs to Repair Potholes	\$553,728	\$451,998	\$746,539	16.1%
Number of Potholes Repaired	17,458	11,753	17,858	1.1%
Average Labor Cost per Pothole Repair	\$31.72	\$38.46	\$41.80	14.8%

Source: Department of Public Works and SF Stat

**The Asphalt Plant’s Costs**

Currently, much of the Department of Public Works asphalt for street projects is manufactured by the Department’s asphalt plant, managed by the Bureau of Street and Sewer Repair. The asphalt plant is funded by the General Fund, although the sale of asphalt, either to outside contractors working on City projects or charged to City projects funded by the local sales tax, State gas tax, or other funds, was intended to recover costs. However, the asphalt plant has operated at a loss for the last several years because the plant’s operating costs exceed the price of asphalt. In FY 2002-2003 the Board of Supervisors approved an ordinance (File 03-0416) appropriating \$2.2 million to construct asphalt storage silos. At that time, the Department projected that the plant would produce approximately 85,000 tons of asphalt by FY 2005-2006, reducing the per ton production costs. In fact, in FY 2005-2006 the asphalt plant has produced 35,772 tons of asphalt, which is 49,228 less tons, representing a percentage deficit of 57.9 percent. In FY 2005-2006, the Department’s cost to manufacture asphalt was \$78 per ton, compared to the market price of \$65 per ton, representing a \$13 per ton loss.

During the FY 2006-2007 budget review, the Budget Analyst recommended and the Board of Supervisors approved reserving six months of the asphalt plant operating budget, pending a report to the Board of Supervisors by the Director of Public Works, no later than October 1, 2006, on the options for obtaining asphalt for City projects,

including (a) continuing to operate the asphalt plant to fully recover costs, (b) contracting out the operations of the asphalt plant, and (c) purchasing asphalt from private suppliers.

The Department of Public Works has submitted a report to the Board of Supervisors, finding that insufficient street resurfacing funding and corresponding demand for asphalt has contributed to the asphalt plant’s revenue shortfall. The Department’s report identified five options and the benefits and risks of each option. The Budget Analyst will prepare a written evaluation of the Department’s findings to present to the Board of Supervisors during the Finance and Budget Committee’s hearing to release the reserved funds in January 2007.

## **The Bureau of Street and Sewer Repair’s Staff Productivity**

The Bureau of Street and Sewer Repair loses more than 9 percent of productive work time due to unpaid sick leave, paid and unpaid disability leave, and other types of unpaid leave. More than 12 percent of productive work time is lost due to paid and unpaid sick leave, disability leave, and other unpaid time off. Bureau employees only work 76.8 percent of all hours scheduled.

**Table 1.5**

### **Bureau of Street and Sewer Repair Hours Worked and Not Worked January 2005 through June 2006**

<b>Bureau of Street and Sewer Repair Hours Worked and Not Worked</b>		<b>Percent of Total Hours Worked and Not Worked</b>
<b>January 2005 through June 2006</b>	<b>Total Hours</b>	
Hours Worked	219,381	76.8%
Hours Not Worked	<u>66,283</u>	<u>23.2%</u>
Total Hours Worked and Not Worked	285,664	100.0%
<u>Summary of Hours Not Worked</u>		
Holidays, Vacations, and Compensatory Time Off	31,187	10.9%
Paid Sick and Disability Leave	9,179	3.2%
Unpaid Sick, Disability, and Other Leave	<u>25,917</u>	<u>9.1%</u>
Subtotal Sick, Disability and Other Leave	35,096	12.3%
Total Hours Not Worked	66,283	23.2%

Source: SF Stat

This large percentage of non-productive time impairs the Bureau of Street and Sewer Repair’s ability to perform its functions and increases costs relative to productive output. The Bureau needs to work with the Human Resources and the Health and Safety Division to identify causes of paid and unpaid sick and disability leave and actions that the Bureau can take to reduce the incidence of unpaid leave and increase the number of productive hours.

## **Conclusion**

The City has a large back log in street projects and needs to manage its street projects cost-efficiently to ensure that limited funds are well used. To address this backlog, the Board of Supervisors appropriated an additional \$500,000 in General Fund monies to patch streets and repair potholes in the FY 2005-2006 budget, and \$15 million in General Fund monies in the spring of FY 2005-2006 to resurface streets. These additional monies have allowed the Department to increase its street resurfacing, patching and pothole repair projects. However, the Department of Public Works has not ensured that street projects are completed timely and cost-effectively.

The Department of Public Works' street renovation and improvement projects have experienced delays and cost overruns due to design errors and omissions or site conditions that could have reasonably been anticipated. The Bureau of Street and Sewer Repair does not track and manage street project costs to ensure that projects are performed cost-effectively. Consequently, the costs of projects vary widely from year to year and project costs cannot be anticipated based upon increases in salaries, benefits and overhead costs.

The Bureau of Street and Sewer Repair also loses productive time to paid and unpaid sick and disability leave. The Bureau lost the equivalent of 12.5 full time positions in FY 2005-2006 due to extended, unpaid sick and disability leave. This productivity loss equals more than \$1.1 million annually in salaries and benefits.

## **Recommendations**

The Bureau of Engineering Manager should:

- 1.1 Assess and revise as appropriate the Bureau of Engineering's street design project quality controls to ensure that street project designs meet the project needs and site requirements.
- 1.2 Revise or enhance the Bureau of Engineering's existing street project design and drafting procedures, to ensure that project plans and specifications correspond to actual site conditions.
- 1.3 Identify major causes of street project delays and develop procedures to reduce common causes, including quality control and project scheduling procedures.

The Bureau of Sewer and Street Repair Manager should:

- 1.4 Develop systems to better capture and report patching and pothole activities and the cost-effectiveness of performing the work.
- 1.5 Evaluate the labor hours, labor costs, and productivity of street resurfacing projects to ensure that these projects are delivered cost-effectively.

- 1.6 Present cost data and analysis of pothole, patching, and street resurfacing costs to the Board of Supervisors as part of the FY 2007-2008 budget review.
- 1.7 Work with the Human Resources and the Health and Safety Division to identify causes of paid and unpaid sick and disability leave and actions that the Bureau can take to reduce the incidence of unpaid leave and increase the number of productive hours.
- 1.8 Continue to report hours worked and not worked as part of the Department of Public Works' SF Stat measures.

## **Costs and Benefits**

The Department of Public Works would achieve approximately \$180,000 in efficiency gains by increasing productive time and reducing the hours lost to paid and unpaid sick and disability leave. If the hours attributed to paid and unpaid sick and disability leave were reduced by 10 percent, the Bureau of Street and Sewer Repair would have productivity increases equal to two positions, with estimated salary and fringe benefit costs of \$180,000.

## 2. Cleaning and Maintaining the City's Streets and Public Right of Ways

- Measures of the cleanliness of the public right of way show that the Department of Public Works is not currently providing optimal service. Less than half of San Francisco residents rate neighborhood street cleanliness as “good” or “very good” (49 percent). Although the Department’s goal is to resolve service requests within 48 hours, a large percentage remain unresolved. In FY 2005-2006, 19 percent of street cleaning requests and 68 percent of graffiti requests were not resolved within 48 hours. Further, of the total 13,773 28-Clean service requests referred to other departments and agencies from July 2004 through June 2006, 60.6 percent were not resolved within 48 hours.
- The Bureau of Street Environmental Services lacks staff productivity standards, adequate service request prioritization methods or other criteria to determine optimal allocation of resources, resulting in inefficient staffing plans and the aggravation of deferred maintenance issues.
- Despite having over a year’s worth of data, the Bureau has not significantly shifted resources based upon the information learned from Proposition C evaluations. The Bureau has not used the data from the Proposition C evaluations to alter street cleaning schedules, despite evidence that such a reallocation would be productive.
- The Bureau does not adequately collect fines for litter citations. From June 16, 2003 through August 29, 2006, the Bureau levied 12,680 fines and citations. Of the \$1,290,800 due, including delinquent penalties and interest, the Department has only collected \$524,209 of the fines, and waived \$167,930.
- In 2004, all City departments were directed by the Mayor to abate graffiti from city-owned property within 24 hours, but the implementation of this directive has been minimal. The Bureau needs to better coordinate graffiti abatement and billing procedures with other city agencies and departments.
- The Bureau experiences significant lost work time due to work related injury and illness, personal or family leave, and sick leave, contributing to reduced productivity and understaffing. The Bureau is only exceeded by the Bureau of Urban Forestry in its level of unproductive use of scheduled work hours.

## **The Condition of the Public Right of Ways**

The Bureau of Street Environmental Services is charged with cleaning and maintaining the public right of ways in the City. The Bureau's major activities include mechanical street sweeping, daytime litter patrols, swing shift and graveyard operations that clean busy commercial corridors, graffiti abatement, and public litter outreach programs. For most of its operations, the Bureau of Street Environmental Services divides the City into six zones.

Measures of public perception of the cleanliness of the public right of ways show that the Bureau of Street Environmental Services is not currently providing optimal service. According to the Controller's Office Annual City Survey in 2005, less than half of resident respondents rate neighborhood street cleanliness as "good" or "very good" (49 percent), which is a slight decline from the proportion finding neighborhood street cleanliness favorable in 2004 (52 percent). This measure is only one of public perception, and does not accurately gauge the condition of the public right of ways. It does show that the Department of Public Works needs to work with City officials to better satisfy the expectations of San Francisco residents.

### **28-Clean Service Requests**

Other measures of the Bureau of Street Environmental Services performance include data generated from 28-Clean, the Department's service request management system. 28-Clean currently receives approximately 8,000 calls per month. The Department can track the generation and completion of different types of service requests generated from the public and internally. The Department analyzes and presents the 28-Clean data to SFStat, the Mayor's performance management process, several times a year.

The Department's goal is to resolve all service requests within 48 hours of receipt. Although the Department's performance improved between FY 2004-2005 and FY 2005-2006, the Department continues to have unresolved service requests after 48 hours.

**Table 2.1**

**28-Clean Service Requests Unresolved Within 48 Hours,  
FY 2004-2005 and FY 2005-2006**

Service Request Type	Average Number of Service Requests per Month Unresolved Within 48 Hours	
	FY 2004-2005	FY 2005-2006
Street Cleaning	28%	19%
Graffiti	80%	68%
Enforcement	50%	32%
Other Street / Environmental	21%	20%

Source: Department of Public Works, SFStat Data, May 2006

In addition to completing service requests that fall under its own jurisdiction, the Department refers service requests that come in through 28-Clean to other departments and agencies. Often, the loop is not closed in a timely manner on the status of these extra-Department requests. Of the total 13,773 28-Clean referrals to other departments and agencies from July 2004 through June 2006, 60.6 percent were not resolved within 48 hours. The following Table 2.2 details service requests referred to other agencies in June of 2006.

**Table 2.2**

**28 Clean Service Requests Referred to Other Departments and Agencies, June 2006**

<b>Service Request Type</b>	<b>Number of Service Requests</b>	<b>Number of Unresolved Within 48 Hours</b>	<b>Percent Unresolved Within 48 Hours</b>
Sunset Scavengers	150	60	40%
PUC/Sewer	79	77	97%
DPT Sign Shop	55	51	93%
Health Department- Toxics	33	29	88%
SFPD	13	3	23%
Viacom- Bus Shelters	1	0	0%
BLHP- Street Lighting	10	7	70%
PUC	2	0	0%
Animal Control	11	6	55%
DPT Signal	24	21	88%
Water Department, PUC	7	3	43%
DPT 37A Tow Away	5	4	80%
Port	3	2	67%
Comcast	2	0	0%
PG & E	4	0	0%
DPT- Meter Repair	1	1	100%
CalTrans	2	1	50%
SBC	3	3	100%
SF Housing Authority	1	1	100%
SFFD	1	0	0%
Real Estate	1	1	100%
DPT Traffic Engineering	1	1	100%
Golden Gate Disposal	1	1	100%
Community Boards	1	0	0%
Health Department- Unsanitary	14	14	100%
MUNI	1	1	100%
Rec & Park	14	4	29%
Other	64	35	55%
<b>Totals</b>	<b>504</b>	<b>326</b>	<b>65%</b>

Source: Department of Public Works, SFStat Data, June 2006

As shown in Table 2.2, some departments, such as the Public Utilities Commission, Department of Parking and Traffic, and Department of Public Health are either not resolving the service requests referred to them within 48 hours, or are doing so but then not notifying the Department in a timely manner that the request has been resolved. The Department should work with these other Departments to determine a better and uniform method for reporting resolution of 28-Clean referred service requests.

## **The Planning and Allocation of Resources**

The Department lacks productivity standards, service request prioritization methods or other criteria to determine optimal allocation of resources in the Bureau of Street Environmental Services. Consequently, the Department does not consistently assign staff to meet priority service needs.

## **The Prioritization of Service Needs**

One of the primary challenges of the Bureau is the utilization of its resources to regularly clean and maintain streets while having the flexibility to respond to service requests of an unforeseen or immediate nature. Many service requests are called in by the public and by Department staff through the 28-Clean tracking system. Others can be found in the text of the weekly reports made by supervisors to the Superintendent. These weekly reports detail some of the special requests asked of the Bureau's resources, such as those made by members of the Board of Supervisors or by the Director of Public Works, to prepare for visiting dignitaries, special city events, or other occasions. For example, in August of 2006, the Bureau sent a crew to clean in preparation for the Mayor's SF Connect unveiling, another crew to prepare for a weekend event in a Supervisor's district at the request of a member of the Board of Supervisors, and a graffiti crew to remove graffiti near the scene of a recent murder at the request of a member of the Board of Supervisors.

Although all of these requests may be valid, it is unclear how the prioritization decisions are made, including how these requests beyond routine maintenance are balanced alongside the importance of routine maintenance. The Bureau does not have a formal way to prioritize among these competing immediate service requests and ongoing maintenance needs, other than the discretion of the Bureau of Street Environmental Services Superintendent and supervisors. Inevitably, ongoing maintenance needs will suffer if the Bureau does not identify and manage less important service requests, a placing the requests in the appropriate queue. The Bureau should develop a methodology for prioritizing these service needs.

## **Staff Productivity and Allocation**

All supervisors in the Bureau of Street Environmental Services report staff productivity to be a challenge. Although some degree of loss of productivity might be expected in the Bureau, the Bureau has had no formal productivity standards for street and graffiti maintenance personnel, and therefore has had no systematic method to determine how many staff positions are necessary to fulfill its duties. The Bureau needs to develop

maintenance practices and productivity standards for these functions to ensure that the Bureau has an overall understanding of its staffing needs. Examples of appropriate productivity standards for laborers might include blocks swept per shift, pounds of debris collected per shift, or service calls responded to per shift. Examples of productivity standards for graffiti laborers might include number of graffiti incidences removed or square feet of surface repainted.

### **Proposition C and Street Maintenance**

The Bureau did not previously have street maintenance standards or a method to evaluate the Bureau's performance against such standards. However, under Proposition C, passed by the voters in November of 2003, the Bureau is now required to establish standards for street maintenance, publish maintenance schedules, and regularly evaluate Bureau performance based on the standards and schedules.

In FY 2004-2005, the Controller's Office worked with the Bureau to establish the mandated maintenance standards. The chosen standards include standards for streets, graffiti, and trash receptacles. During this time the Controller's Office and the Bureau worked jointly to develop a street maintenance standards manual and evaluation tools. As further discussed in Section 3 of the report, the standards do not include Department-maintained landscaped areas or street trees. The Bureau evaluates one street cleaning route in each of the 11 supervisory districts once a month. A segment of the routes is evaluated as a sample of the whole route, and evaluations must be performed before and after scheduled mechanical street sweeping takes place. In addition to these monthly Proposition C evaluations performed by the Department, the Controller's Office conducts two evaluations annually, serving in an auditing capacity.

A passing evaluation for the street cleaning category is a maximum of up to 15 pieces of litter counted per 100 curb feet examined. A passing evaluation for the graffiti category is a finding that 100 percent of the street surface, public and private structures and sidewalks are free of graffiti. A passing evaluation for trash receptacle category is that (a) the receptacle must be clean and not overflowing, (b) the area around the receptacle must be free of no more than five pieces of litter, (c) the structure must have a uniform coat of paint, (d) the structure must be free of large cracks or damage that affects its use, and (e) the door must be closed.

#### Proposition C Evaluation Methodology

As discussed above, the Department has agreed to survey and evaluate eleven routes per month to determine compliance with the Proposition C published standards and schedules. The Department has completed over a year of evaluations, beginning in July of 2005.

Currently, evaluations are performed by senior level staff, and are often done in the middle of the night. According to staff, managers spend approximately 100 hours per month performing Proposition C evaluations. At an approximate hourly salary and benefits cost of \$50.45 for a 7281 Street Environmental Services Supervisor, the

Department is currently spending \$60,535 this fiscal year by using its managers to perform evaluations. This annual cost of \$60,535 does not include lost productivity by using managers to perform the work over other Bureau service needs. Because senior level staff time is better spent performing other managerial duties, the Bureau should evaluate the potential of using non-managerial staff or an outside contract to perform the Proposition C inspections, instead of more costly managerial staff.

#### The Bureau's Use of Data from Proposition C Evaluations

Despite having over a year's worth of data now, the Bureau has not significantly shifted resources based upon the information learned from Proposition C evaluations. For example, the Bureau has not used the data from the Proposition C evaluations to reallocate resources, such as to alter some of the street cleaning schedules, despite evidence that such a reallocation would be productive.

In the Controller's Office City Services Auditor Annual Report on Parks and Streets Maintenance, issued July 7, 2006, the Controller found that in general the mechanical sweepers are working according to schedules and are effective. The report found, however that the Bureau should analyze its mechanical sweeping schedules database together with inspection results and determine if changes should be made to increase or decrease the frequency of sweeps. The Department's FY 2006-2007 budget included funds for an independent comprehensive study of the sweeping routes, frequencies, and schedules. As of October 18, 2006, the Request for Proposal had been released but the submission deadline for responses had not passed.

However, the existing data show that some routes consistently failed the litter standard after sweeping - such as in the Western Addition, Glen Park, Chinatown and Mission - potentially indicating that these routes could be altered so that they are swept by mechanical sweepers more frequently. The data also show that some routes are consistently clean prior to sweeping, indicating the fact that these routes could be altered so that they are swept by mechanical sweepers less frequently. For example, from July through October of 2005, the routes evaluated in the Richmond, Lakeview, and Marina neighborhoods received passing evaluations for street sweeping prior to the mechanical sweeping taking place. Also, evaluations done along different routes from December of 2005 through February of 2006 show Lakeside and Park Merced received passing evaluations for street sweeping prior to the mechanical sweeping taking place. The Bureau should identify the street cleaning routes that are consistently clean and consistently dirty, and evaluate the cost feasibility of reducing or increasing the mechanical street cleaning frequency, or shifting resources.

In 2006, the Department of Public Works transferred funding to the City Services Auditor to input all mechanical sweeping routes into a database which was intended to allow for improved management and analysis of this function. However, as noted, the Bureau has not shifted resources based upon the information learned from Proposition C evaluations. The Controller's Office is also currently in the process of revising and expanding the street cleanliness measures beyond the three currently mandated by Proposition C. The Controller has indicated that it intends to add additional standards to be measured,

increasing the sample size of areas surveyed and reducing inspection time. The Bureau should work closely with the Controller's Office to ensure the new standards are implemented quickly.

#### Proposition C Street Maintenance Schedules

In addition to mandating the development of and evaluation against maintenance standards, Proposition C also mandated that the Department develop, publish, and report compliance with maintenance schedules. Proposition C states:

*Each such department shall monitor compliance with these schedules, and shall publish regularly data showing the extent to which the department has met its published schedules.*

The Controller's Office helped the Department to update its schedules for mechanical street sweeping routes and develop schedules for public areas such as plazas, bridges, tunnels, and tree maintenance. These schedules are posted on the Department and Controller's Office websites. However, as required by Proposition C, the Department does not report compliance with these schedules. The Department should begin reporting compliance with Proposition C maintenance schedules.

### **Improving Planning and Productivity**

The Bureau should address several planning and productivity issues that interfere with street maintenance, including (a) standardizing the format of weekly reports by Bureau supervisors to the superintendent, (b) investigating the possibility of using satellite locations for litter patrols, (c) mitigating the impact of homeless encampments on workload, and (d) reorganizing zone supervision.

#### Standardizing the Weekly Zone Report Formats

Currently, the supervisors in the Bureau of Street Environmental submit to the Superintendent a weekly summary report of the activities that took place in his/her area of management, as well as other important issues such as personnel issues, leave, and community activities. Each supervisor utilizes a different format, some with narratives describing crew work, some with a list of activities by day of the week. These reports are dense and difficult to use to get a clear picture of what the Bureau's activities were during the week. They should be standardized to include the information most useful for the Superintendent to manage the Bureau, and not just reflect the way that individual supervisors prefer to report activities undertaken in their areas. Standardized reports would also be useful for the Superintendent in making comparisons across zones and aggregating different types of data for a better Bureau-wide snapshot of activity.

### Investigating the Possibility of Using Satellite Locations

Currently, most staff in the Bureau of Street Environmental Services report to the main Department yard, located at 2323 Cesar Chavez in southeast San Francisco. After the crews assemble at the main yard in the mornings, they disperse to locations throughout the City. Several supervisors indicated that the Bureau could have some staff, such as general laborers, report directly to the zones in which they work, thus saving the transit time and associated costs. Also, if the Department procured locations where it could store vehicles in other parts of the city, the Department could realize additional savings in gas, particularly for crews working in the northwest side of the city. The Department should investigate the potential cost-savings and efficiency gains of satellite reporting and equipment locations.

### Mitigating the Impact of Homeless Encampments

Many Bureau managers and staff have expressed concern about the loss in productivity and safety concerns resulting from homeless encampments. Cleaning up and removing homeless encampments is time consuming and can be hazardous for staff. In the past two years, there were at least three incidents in which homeless persons assaulted Bureau workers, and in one case the assault resulted in the victim requiring treatment at General Hospital.

The Department's primary working relationship addressing the homeless problem has been with the Police Department. The Bureau participates regularly scheduled runs with the Police Department to move and clean up around homeless people. However, the impact of homeless encampments is a City, rather than a Department-specific and Police-specific, problem. The Director should work with the Mayor and with Homeless Connect to set up a Homeless Connect team to address some of the public right of way areas with the most severe homeless encampments, and to coordinate City departments' resources and services to these areas.

### Reorganizing Management Supervision of Zone Activities

Currently, the Bureau of Street Environmental Services is organized into three areas of oversight, with each of these areas managed by an Assistant Superintendent, who then reports to the Superintendent. One Assistant Superintendent manages the Zone Program, which is made up litter patrols in the Bureau's six spatial zones, with a 7781 Supervisor II position overseeing each. A different Assistant Superintendent of "Support Services" oversees the mechanical street cleaning, radio room, night shift, and swing shift operations. Another Assistant Superintendent of "Operations" oversees graffiti, along with other Bureau administrative functions.

Currently, the way the Bureau is organized, no single individual oversees and coordinates the activities of all personnel working in each of the six zones. Therefore, there is no single individual who is ultimately responsible for the cleanliness of the zones. The

Bureau should evaluate reorganizing its structure so that all litter patrol staff working within a zone report to the same Supervisor II, including daytime, swing and graveyard shifts.

## **Litter Citations and Violations**

The Department does not do an adequate job of collecting fines for litter citations it issues. From June 16, 2003 through August 29, 2006 (the 38.5 month period for which data are available), the Department levied 12,680 fines and citations, or approximately 329 fines and citations per month. Of the \$1,290,800 amount due from the fines assessed, including delinquent penalties and interest, the Department has only collected \$524,209 of the fines, and waived \$167,930. This leaves \$598,661 in uncollected fines. The Department should aggressively pursue the collection of these fines.

In addition to not adequately collecting the fines due from the citations and violations issued, the Department's litter enforcement efforts have declined. In FY 2003-2004, the Bureau's Environmental Control Officer positions were greatly reduced and then eliminated in FY 2005-2006, and the task of issuing citations was given primarily to 7215 Supervisor I staff, of which there are 46 funded positions in FY 2006-2007. However, under this situation, the Department is not prioritizing the issuance of citations and violations. In 2004 the Bureau staff issued 3,089 citations, and in 2005, they only issued 280, a decrease of 90.9 percent.

Litter enforcement through citations and violations has the dual benefit of educating the public and while generating revenues for the Department to offset General Fund expenditures. The Department states that it was working with the Mayor's Office and the City Attorney to identify a class of uniformed personnel in the Police Department to provide litter enforcement service, however this effort was not successful and halted. The Department should continue to aggressively pursue other litter enforcement staffing models, such as allocating dedicated staffing. The Bureau should also consider other procedural changes to litter enforcement, such as streamlining the procedures involved in processing citations in order to decrease the currently lengthy amount of staff time it takes to administer citations.

## **Graffiti Abatement**

In 2001, a Civil Grand Jury estimated that the City spends approximately \$22 million annually on graffiti abatement. In nine Proposition C inspections over eight months in FY 2005-2006, no route in the city was completely free of graffiti. Routes inspected in the Bayview, Marina, Pacific Heights, Noe Valley and Park Merced showed low graffiti incidences, whereas routes in the Excelsior, Haight, Chinatown, Mission and Western Addition consistently showed the highest incidences.

The Department is responsible for the removal of graffiti on its own properties, which includes street surfaces and trash receptacles. When graffiti is on public structures and buildings that do not belong to the Department, such as mail boxes, street signs, etc., the

Department notifies the public agencies of the graffiti and of their responsibility to abate. Abatement procedures will differ depending on the various public agencies. In 2004, all City departments were directed by the Mayor to abate graffiti from city-owned property within 24 hours, but the implementation of this directive has been minimal.

Staff indicate that the Bureau's graffiti crews abate graffiti on public properties not under its jurisdiction when they are working in the same area. However the Bureau was not previously billing other City departments for this service. In August of 2006, the Bureau began billing the Public Utilities Commission and the Municipal Transportation Agency for graffiti abatement. This was to be facilitated by new FY 2006-2007 work order agreements with the Municipal Transportation Agency and the Public Utilities Commission, in amounts of \$250,000 and \$225,000 respectively. However, the Bureau reports that so far only the Municipal Transportation Agency has given the Bureau funds (\$225,000) for graffiti removal. Unfortunately, the Bureau has been slow to implement this billing procedure, reflecting a broader theme of the Department's tendency to not fully quantify and recoup its costs from other City departments for services performed.

Further, the Bureau should pursue similar abatement agreements with other agencies and departments. Although the Bureau is now billing the Municipal Transportation Agency, other agencies and jurisdictions have significant graffiti abatement service requests generated through 28-Clean. In FY 2005-2006, the Bureau routed 391 service requests to the San Francisco Fire Department, only 4 percent of which were reported resolved within 48 hours, and 63 service requests to the Recreation and Park Department, only 36 percent of which were reported resolved within 48 hours. The Bureau should set up work order agreements and billing procedures to accurately reflect any graffiti abatement work it does for these other agencies, as well as pursue the previously anticipated \$250,000 work order with the Public Utilities Commission. The Bureau should also pursue agreements with private entities that it refers service requests to, such as PG&E and SBC, to perform graffiti abatement and recoup these costs.

## **28-Clean and the Transition to 311**

The City is currently in the planning process of setting up a 311 Call Center, which when fully operational will connect citizens to a central call center that will function as the customer service representative for all City departments. According to proposed plans for the initiation of 311, the Department's 28-Clean customer service line, which receives approximately 8,000 calls per month, will be the first City line to transition to the 311 system. The Department's FY 2006-2007 budget proposed that three dispatchers and one supervisor currently working on 28-Clean will transition to 311. The impact of this transition to the Department is still unknown. Should the number of calls to 28-Clean not drop in the very early phases of 311, a scenario which is likely, the Department's 28-Clean call center will have to fill the same number of calls with fewer dedicated permanent staff.

The Department stated in July that the “soft start” for the transition to 311 would take place in September, but as of October 18, the 311 Call Center had not yet been activated and the Department’s dispatchers had not yet transitioned to 311.

### **The FY 2006-2007 Corridor Approach**

In June of 2006, the Department proposed an outline of the SFClean Patrol Program, a list of actions and initiatives to improve the cleanliness of City streets. A major component of this new program is a “Corridor Approach” to intensively clean and maintain 100 blocks of city streets with the highest need and highest visibility.

The FY 2006-2007 budget for the Bureau of Street Environmental Services included funds for an additional 22 positions to implement this corridor program, positions which will manually sweep the 100 blocks during peak hours (Thursday through Monday, 12pm to 9pm). These 22 sweepers will provide oversight over their designated areas, and will act as block monitors, develop relationships with merchants, and report in requests for a variety of service areas, including structure repair, graffiti abatement, and service needs for other agencies.

As of the writing of this report, the corridor program was too early in its implementation for analysis to be possible. However, this new approach has received significant attention and resources, and is considered to be very promising. The Department should ensure that it allocates ample resources to the measurement and evaluation of the efficacy of this new approach, and utilizes this information to inform future changes in the program structure.

### **Staff Productivity and Attendance**

Although the Bureau has programs or procedures to manage performance and attendance, the Bureau needs to improve its management of employee performance. The Bureau should manage sick leave and attendance to improve job performance and productivity.

The Bureau experiences significant lost work time due to work related injury and illness, personal or family eave, and sick leave, contributing to reduced productivity and understaffing. Of the 51,547 hours that the Bureau’s 340 employees were scheduled to work in the month from May 19 through June 16, 2006, only 38,063 hours, or 73.8 percent, were actually worked. 7.39 percent of the scheduled hours were taken as sick leave (paid and unpaid) and 4.22 percent were taken as disability leave (paid and unpaid). The Bureau of Street Environmental Services is only exceeded by the Bureau of Urban Forestry in its level of unproductive use of scheduled work hours.

Further, in field visits with crews, it was observed that productivity was frequently lost due to absent staff. Crews in zones with missing personnel required supervisor oversight, trucks and equipment from other areas, which had to be re-routed or re-organized from their scheduled crews, resulting in productivity losses. Supervisors frequently noted that high rates of absenteeism impacted crew productivity.

The Bureau should work with the Department's human resources staff to review and evaluate existing protocols to monitor employees who are absent from work on extended sick or other types of leave. These efforts should include the identification of improvements in procedures to return employees to work through temporary transitional work assignments or American with Disabilities Act accommodations.

## **Conclusion**

Measures of the cleanliness of the public right of ways show that the Bureau is not currently providing optimal service. The average monthly percentage of service requests unresolved within 48 hours has increased. The Bureau lacks productivity standards, adequate service request prioritization methods or other criteria to determine optimal allocation of resources, resulting in inefficient staffing plans and the aggravation of deferred maintenance issues. Despite having over a year's worth of data now, the Bureau has not significantly shifted resources based upon the information learned from Proposition C evaluations. The Bureau does not do an adequate job of collecting fines for litter citations it issues and needs to better coordinate graffiti abatement and billing procedures with other city agencies and departments. Finally, the Bureau experiences significant lost work time due to absenteeism, contributing to reduced productivity and understaffing.

## **Recommendations**

The Director of Public Works should

- 2.1 Work with the Mayor and with Homeless Connect to set up a Homeless Connect team to address some of the public right of way areas with the most severe homeless encampments, and to coordinate City departments' resources and services to these areas.

The Deputy Director for Operations should:

- 2.2 Investigate the potential cost-savings and efficiency gains of using satellite staff reporting and equipment storage locations.
- 2.3 Develop a streamlined and uniform method for other City departments to report resolution of their 28-Clean service requests so the requests can be closed out in a timely fashion, in conjunction with the Computer Services Division .
- 2.4 Develop and implement a policy and methodology for the Bureau of Street Environmental Services to prioritize among competing immediate service requests and ongoing maintenance needs.
- 2.5 Direct the Bureau of Street Environmental Services Manager to develop formal productivity standards for street and graffiti maintenance personnel, and direct supervisors to allocate staff according to these standards.

- 2.6 Evaluate the potential of using non-managerial staff or an outside to perform the Proposition C inspections, instead of more costly managerial staff.
- 2.7 Use the data from the Proposition C inspections to reallocate resources where prudent, such as to alter the frequency of certain street cleaning schedules.
- 2.8 Report the Bureau of Street Environmental Services compliance with Proposition C maintenance schedules.
- 2.9 Standardize the format and information content of the weekly reports submitted by Bureau of Street Environmental Services supervisors.
- 2.10 Work with the Mayor's Office, Police Department, and Director of Public Works to aggressively pursue other litter enforcement staffing models.
- 2.11 Investigate and implement procedural changes to litter enforcement, such as streamlining the procedures involved in processing citations.
- 2.12 Direct the Bureau of Street Environmental Services Manager to set-up work order agreements and billing procedures to accurately reflect any graffiti abatement work it does for other agencies and departments.
- 2.13 Ensure the allocation of resources to the measurement and evaluation of the new corridor approach, and utilize this information to inform future changes in the program structure.
- 2.14 Work with the Human Resources and the Health and Safety Division to identify causes of paid and unpaid sick and disability leave and actions that the Bureau can take to reduce the incidence of unpaid leave and increase the number of productive hours.

The Director of Finance and Administration should:

- 2.15 Develop procedures to ensure timely collection of litter citation fines.

## **Costs and Benefits**

By altering street cleaning routes, using satellite locations, and decreasing absenteeism, the Department could realize cost savings not quantified. Additionally, the Department would realize \$598,661 in fine revenues through collection of existing citation fines. The Department could realize additional but not quantified fine revenues through increased enforcement activity.

### 3. Urban Forestry

- **The Department of Public Works’ Bureau of Urban Forestry manages City-owned street trees. Of an estimated 106,000 street trees in the public right of way, the Bureau of Urban Forestry manages approximately 30,000. The remaining trees are maintained by private property owners.**
- **The Department of Public Works’ tracking, reporting and monitoring of street trees and maintenance is inadequate to manage tree planting and maintenance efficiently. The Department is unable to provide consistent and complete data on the number of street trees and schedule of maintenance.**
- **Accurate street tree information, including tree location, condition, and maintenance history is especially important as the City moves forward with its goal is to plant an additional 5,000 trees each year. The Department of Public Works will need accurate information to efficiently allocate staff resources to planting and maintaining trees.**
- **The Department of Public Works could do much more to increase tree and landscape maintenance productivity. The Department needs to establish performance goals and measures and enhance the productivity of its existing staff. For example, the Department needs to develop procedures to prioritize and coordinate routine maintenance with service requests. The Department also needs to better manage staff performance, attendance, and productivity.**
- **The Department’s ability to plant and maintain new street trees will impact the presence of street trees throughout the City. Currently, street trees are not distributed equitably among neighborhoods. Property owners incur costs to maintain street trees, resulting in inequality in the status of the urban forest based on variation in economic development across the City’s neighborhoods.**
- **The Department does not adequately monitor street trees that are removed illegally or enforce citations and fines for doing so. The Department has not collected approximately \$60,000 in fines. Nor does the Department follow up on tree removal permits that have been denied to ensure that the tree was not removed illegally.**

San Francisco’s urban forest has been the focus of increased attention in recent years due to a heightened Citywide focus on greening initiatives. There are a number of City departments, programs, committees, and councils working on issues related to the urban

forest. However the Department's Bureau of Urban Forestry is the lead entity in the care of trees in the public right of way.

The term "urban forest" actually encompasses more than those trees the Bureau of Urban Forestry has jurisdiction over, including trees in parks and on private property. According to one recent estimate, the City has approximately 106,000 street trees in the public right of way, approximately 30,000 of which are trees maintained by the Department. The remaining 76,000 or so street trees are maintained by private property owners. The forestry unit within the Bureau maintains and prunes these approximately 1/3 of the City's street trees, processes all permits for street tree planting and removal, and performs inspection for tree maintenance and sidewalk repair needs.

In addition, the Bureau has a landscape unit that is in charge of maintaining over 200 acres of landscaped medians, other right of way locations, and civic plazas, as well as provides services to other agencies through interdepartmental work orders. The Bureau also has a sidewalk division which repairs sidewalks lifted by tree roots of Department-maintained street trees, as well as provides services to other agencies through interdepartmental work orders.

### **State of the Urban Forest**

There have been a number of efforts in the past several years to assess the state of the urban forest and make recommendations for its upkeep and expansion, including an Urban Forest Plan published by the Urban Forestry Council in February of 2006. This plan, although addressing a scope larger than that of the Department's street tree work, found significant maintenance and planting deficiencies in the urban forest. It concluded that there are over 127,000 empty planting sites in the City, and only sixty percent of existing street trees can be considered in "good" condition.

The report also found that street trees are not distributed equitably among neighborhoods. Aggravating this is the cost burden for property owners to maintain street trees, resulting in more inequality in the status of the urban forest based on variation in economic development across the City's neighborhoods.

#### Citywide Street Tree Inventory

Section 805 Article 16 of the Public Works Code (the Urban Forestry Ordinance) states that "the Department shall use its best efforts to maintain an inventory of all trees or corridors of trees under its jurisdiction." All trees in the public right of way, and therefore all street trees in the City (both department-maintained and privately-maintained) fall under the jurisdiction of the Department.

However, the Department does not keep such an inventory of all street trees. It has a database of the approximately 30,000 trees it maintains. It also maintains records of all privately-maintained street trees for which the City has issued a planting permit since the 1920s, totaling approximately 49,000 permits. Of course, many of the trees for which

these permits were issued in the past have been long-since deceased or replaced. The City does not keep detailed information on these trees, other than general data, such as the species.

Because there are an estimated 106,000 street trees in the City and the Department's database includes only the maintenance records of the 30,000 street trees under its care, full records are kept for only 28.3 percent of all street trees. Without a full street tree inventory, the Department is missing out on valuable opportunities to improve the quality and size of the urban forest Citywide. For example, without such information, the Department cannot identify the number and locations of non-Department maintained empty basins and other potential sidewalk sites where trees could be planted. Such information could be useful in an education campaign to property owners encouraging them to plant trees where currently none exist. Some estimates put the number of empty planting sites at over 127,500, meaning the potential to double the size of the street tree population.

The Department states that such an inventory of non-Department maintained trees and basins would be cost-prohibitive. However, the Department could utilize volunteers and partnerships with nonprofit organizations, to begin building such an inventory. The city of Washington, D.C. uses college students to perform such an effort. The city of New York inventories its tree population every five years. The Department states that it is in discussions with partners to potentially undertake such an inventory effort with the use of an online mapping tool. This effort should be continued, and in coordination with other City agencies like the Department of the Environment, the Urban Forestry Council, volunteers, and community groups.

## **Measuring Performance**

### Controller's Performance Measures

The Department does not have any measures related to the Bureau of Urban Forestry included the Controller's performance measures, which are reported annually by every City department. The Bureau should be included in such reporting. Some potential performance measures would be the number of trees planted per year, the mortality rate of new trees, the average length of time between tree prunings and landscape maintenance, the number of different types of permits issued, and the number of illegal tree removal citations issued.

### Forestry Division

Further, Proposition C, which was approved by the voters in 2003, establishing Charter Section F.102, mandated the publishing of and reporting against maintenance schedules for streets, sidewalks, parks and park facilities. Although Proposition C does not require the Department to publish maintenance schedules for tree maintenance, the Department does publish a pruning schedule on its website.

However, this published pruning schedule is the Bureau of Urban Forestry's goal for pruning street trees and does not reflect the actual maintenance schedule. The average number of years between prunings for a department-maintained tree is seven years, compared to a goal of three years. The Department prunes some trees with far higher frequency, however. These include California, Folsom and Pine Streets, which receive pruning maintenance at least once every two years. In addition, the Department does not report its performance in pruning individual trees, as would be required by Proposition C for other types of park and street maintenance schedules. The Department can estimate the average number of years between prunings by calculating the number of trees it maintains per year, but it does not have an overall picture of the actual pruning schedule of its street trees.

As previously mentioned, the Bureau of Urban Forestry keeps a database of all trees it maintains. The database, although recently redesigned, has several inadequacies that limit the ability of the Department to efficiently perform its work. The database cannot generate important reports that would help it develop a work plan and allocate resources efficiently, such as a report listing the number of trees which haven't been pruned in a given number of years. Given that the Bureau of Urban Forestry prunes its street trees approximately every seven years on average, with some street trees pruned as seldom as every 15 years, tracking and monitoring street trees that have the greatest potential need for pruning would allow the Bureau to prioritize staff time and resources.

Using its existing database, the Department also cannot track the survival rate of newly planted trees, thereby missing potentially valuable information about patterns in tree mortality and need to reallocate resources or re-think planting strategies and young tree-maintenance. The database also is not currently able to "talk" with the Department's 28-Clean service request system. The Department should work with its information technology staff to improve its databases, and the integration of the forestry databases with 28-Clean.

#### Landscape Division

Similarly, the landscape division within the Bureau of Urban Forestry has significant deferred maintenance issues on the medians and other public lands it maintains. Unlike the Recreation and Park Department, the Bureau of Urban Forestry's landscape division does not have a similar Proposition C mandate to publish a schedule of median and other landscape work to be performed at a given site, or the standards to which these sites should be held. The Department should develop such schedules and standards, even though not required by Proposition C.

However, even if such schedules currently existed, the Bureau would not be able to determine if it is complying with the schedule. The Department does not keep records of its routine maintenance on its landscape properties. The only record of work done is through closed-out service requests generated by 28-Clean, which often take precedence over routine maintenance needs. The Bureau of Urban Forestry should develop methods

for tracking all of the routine and non-routine work done on landscape properties in order to best allocate resources in the future.

## **Permits and Fees**

### In-Lieu Fee

The Department charges an “in-lieu” fee, deposited into the Adopt-A-Tree Fund, for destroying or removing a tree in the public right of way or for not planting a tree where otherwise required by Planning Code Section 143(d). The Urban Forestry Ordinance states that the in-lieu fee is to be equal to the replacement value of the tree removed, destroyed, or excused. Prior to FY 2006-2007, the in-lieu fee was last set in 1996 at \$560. The Department revised the in-lieu fee in FY 2006-2007, raising it to a minimum of \$1,489. The Department is to review adjusting the fee annually in accordance with the procedures set forth in Public Works Code Section 2.1.2.

Although the Department revised its in-lieu for FY 2006-2007 to recover costs, the Department had not revised the in-lieu fee for the previous ten years, resulting in the fee revenues falling far short of the replacement value of the trees destroyed, removed or excused. The Department needs to ensure that it is assessing and updating all of its fees, including the in-lieu fee and new sidewalk landscape application permit fees, in every fiscal year going forward.

### Tree Planting Permit Fee

Under the Public Works Code, a property owner does not pay a fee for planting a tree on the sidewalk fronting the property. The following Table 3.1 shows the number of permits applications submitted by developers and private individuals for the last three fiscal years.

**Table 3.1****Tree Planting Permit Applications, FY 2003-2004 to FY 2005-2006**

<b>Fiscal Year</b>	<b>Permit Applicant Type</b>	<b>Number of Planting Permit Applications</b>
FY 03-04	Developers	188
	Individual	110
FY 04-05	Developers	159
	Individual	145
FY 05-06	Developers	141
	Individual	138

Source: Bureau of Urban Forestry Permit Log

As shown in Table 3.1, over half of all planting permit applications made during the past three fiscal years were filed on behalf of housing developers. The Department should adopt a tree planting permit application fee schedule in which those more capable of paying, such as developers, are charged the full administrative costs of processing planting permit applications, and others continue to pay a subsidized rate. One method of achieving this would be to apply a tree planting permit fee when property owners are required to plant new street trees in accordance with Section 143 of the Planning Code, which applies to both individuals and developers when building permits are issued for new construction or significant site modifications, thereby signaling the ability to pay for a permit.

#### Enforcement of Citations for Removal or Damage

The Department is not proactive in issuing citations to property owners for damaging or removing street trees, as is required by the Urban Forestry Ordinance. Such oversight results in an unchecked decline in the size of the urban forest, as well as a missed opportunity for Department revenues for the planting and maintenance of new street trees.

In FY 2005-2006, the Department sent 103 fine letters for illegal tree removal or pruning. The Department states that approximately 65 percent of cases that are eventually followed up upon result from citizen complaints. The investigating of street tree violations and the issuing of citations are low on the priority list for the Bureau of Urban Forestry, in part because the Department-maintained trees are on a significant deferred

maintenance cycle. This is aggravated by the fact that the Department must respond to significant seasonal increases in work load due to weather conditions.

In order to perform more inspections without significantly increasing the burden on existing staff and resources, the Department should investigate better ways of including tree inspections in routine activities. Some potential methods to do this may include developing a simplified reporting and documentation system that allows maintenance workers and others in the entire Department to report street tree problems when they see them, without significantly adding to their work load. The Department should also train its staff to understand regulations related to street trees and train them to look at the City's streets and public rights-of-way holistically, not just their individual work assignments.

#### Collection of Fines Levied

In addition to the low number of citations issued, the Department does not adequately follow through and collect the fines it imposes. When an illegal removal or pruning is brought to the attention of the Department and the Department deems that a citation is in order, the Department creates an entry in its citation log and then tracks the progress of the citation issuance, appeals, and payment. This log shows that there were eleven violations in the past year for which citation letters were drafted but not sent, totaling potential lost revenues of \$4,480.

Further, as of August 2006, the Budget Analyst has calculated that the Department collected only \$13,740 in fines out of \$109,364 for 103 citation letters sent during FY 2005-2006. \$36,120 of the remaining uncollected \$95,624 represents fines that have been waived or are pending through administrative review. Therefore, \$59,504 in fines is unaccounted for, representing the amount not collected, waived, or pending administrative review. This lost revenue, if coupled with increased efforts to cite street tree violations, could result in significant additional revenues in the Adopt-A-Tree Fund, and therefore eventually more new trees planted. Further, these calculations of lost revenues are based upon a log with many incomplete records, pointing to a further need for the Department to improve its tracking and record-keeping of citations issued.

The actual benefits of issuing citations for illegal street tree removal and damage go beyond the citation revenues realized, although the benefits are not straightforward to calculate in dollar amounts. Department staff state that one of the primary ways they currently educate the public about street tree regulations is through the citation and hearing process. Many property owners are simply unaware of their legal obligations in relation to street trees, and if the Department were more proactive in issuing citations, then greater educational benefits would accrue as well, and the city's street tree population as a whole would potentially have more knowledgeable advocates and guardians among residents.

### Denied Tree Removal Permits

The Department does not do a good job of finding and following through on the illegal removal of trees. The Department does not routinely revisit sites where permits for removal have been denied to verify that the tree is in fact still there. Anecdotal evidence indicates that trees for which removal permits have been denied are sometimes removed anyway.

According to the Bureau of Urban Forestry, current staffing levels do not allow such follow-up visits in all cases. However, the Department should make it a policy to revisit sites where removal permits have been denied after several months following the issuance of the permit denial letter. Departmental tree crews, landscape crews, watering crews, or even Bureau of Street Environmental Services crews could be utilized to perform such a brief check when in the vicinity of the denied permit location. The Department should create streamlined procedures for its various crews already working throughout the city to follow up on denied removal permits. These crews could perform these simple checks for the presence or absence of a tree that do not require the expertise of arborist inspectors.

### **Current City Tree Planting Efforts**

The Department plays a central role in the City's recent "Clean and Green Initiative," part of which includes a promise to plant an additional 5,000 trees every year for the next five years. This 5,000 goal includes trees that are not trees in the public rights-of-way, however the Department has the most visible and significant planting role of all city departments. In FY 2006-2007, the Department received four new positions to establish trees that were newly-planted in FY 2005-2006. Additionally, the Department has engaged a contractor to plant and establish 2,400 new trees in FY 2006-2007.

The Department of Public Works needs to work with the Mayor's Office in planning tree planting and maintenance in future years. Currently, the Department, is only pruning its trees on an average cycle of seven years. The Department will need to coordinate maintenance resources with the planting of new trees. The Department should ensure that these growing maintenance costs are acknowledged and adequately addressed in its long-term budget planning for the Bureau of Urban Forestry.

### **Productivity and the Allocation of Resources**

#### Prioritizing the Allocation of Resources

One of the primary challenges of the Department of Public Works is the utilization of its resources to regularly maintain the urban forest and the landscape areas under its jurisdiction while having the flexibility to respond to service requests of an unforeseen or immediate nature. Many service requests are called in by the public and by Department staff through the 28-Clean tracking system. Others are made by Department management and supervisors. Although all of these requests may be valid, it is unclear how the

decision is made which to attend to first, and how these requests are balanced alongside the importance of routine maintenance.

The Department of Public Works does not have a formal way to prioritize among these competing immediate service requests and ongoing maintenance needs, other than the discretion of the Bureau of Urban Forestry Superintendent and supervisors. Inevitably, ongoing maintenance needs will suffer if the Department of Public Works does not identify and manage unnecessary service requests, placing the requests in the appropriate queue. The Department should develop a methodology for prioritizing these service needs.

#### Staff Productivity Standards

The Department does not utilize productivity standards for its landscape and tree crews, and cannot therefore evaluate the performance of its staff against such standards, develop annual work plans and deploy resources most efficiently. In 2002, such a staffing analysis was done for the landscape division in order to determine appropriate full-time equivalent position levels based on the amount of time needed to maintain properties, but this staffing analysis has not been updated since.

As previously mentioned, the Department does not keep records of routine maintenance performed on its landscape properties. The only record of work done on the landscaped public right of way is through closed-out service requests generated by 28-Clean, and these often take precedence over routine maintenance needs. Without such information, an analysis of the most efficient deployment of staffing resources is challenging.

To address the dual purpose of determining the actual staffing needs for routine maintenance, and the backlog of landscape maintenance, the Department should assess staffing alternatives, including dedicating one of its landscape crews to only routine maintenance, and allow other staff to respond to service requests. Such a re-organization would also allow the maintenance crew to keep records of maintenance performed, which as described above, is not currently done.

#### Staff Productivity and Absenteeism

Interviews with supervisors indicate that employee productivity is and quality of work are issues of concern to the Bureau. Further, in field visits with crews, it was observed that productivity was frequently lost due to absent staff. Crews in zones with missing personnel required supervisor oversight, trucks and equipment from other areas, which had to be re-routed or re-organized from their scheduled crews, resulting in productivity losses. Supervisors frequently noted that high rates of absenteeism impacted crew productivity.

Attendance data support these observations in the field. Of all bureaus in the Department, the Bureau of Urban Forestry has one of the highest rates of scheduled hours not worked. In the 12 pay periods between December 18, 2004 through December 16,

2005, Bureau of Urban Forestry staff worked 148,965 of their scheduled 192,195 hours, or 77.5 percent. 14,335 hours, or 7.4 percent of scheduled hours, were taken in sick leave (paid and unpaid). 9,270 hours, or 4.8 percent of scheduled hours, were taken in disability leave (paid and unpaid). The Bureau should work with the Department's human resources staff to review and evaluate existing protocols to monitor employees who are absent from work on extended sick or other types of leave. These efforts should include the identification of improvements in procedures to return employees to work through temporary transitional work assignments or American with Disabilities Act accommodations.

## **Conclusion**

The Bureau of Urban Forestry is unable to keep pace with the maintenance and pruning of the City's street trees. The City's goal is to plant an additional 5,000 trees each year but the Bureau of Urban Forestry lacks resources to maintain current trees at an optimal level. The Department of Public Works' tracking, reporting and monitoring of street trees and maintenance is inadequate to manage tree planting and maintenance efficiently. The Department is unable to provide consistent and complete data on the number of street trees and schedule of maintenance. The Department needs to develop its tracking and reporting systems to more efficiently manage existing and new trees.

At the same time, the Department of Public Works should evaluate its current staffing resources and productivity. Because the planting of new trees requires new maintenance resources, the Department needs to employ its current resources more effectively. The Department should evaluate assignments, training, and staff performance to ensure that existing staff can provide tree maintenance at optimal levels.

## **Recommendations**

The Director of Public Works should:

- 3.1 Submit a tree planting permit application fee schedule to the Board of Supervisors for approval that sets a fee schedule charging full permit processing costs to property owners that are required to plant new street trees in accordance with Section 143 of the Planning Code.
- 3.2 Work with the Mayor's Office and Board of Supervisors to align proposed planting of new trees with ongoing funding for maintenance of street trees.

The Deputy Director for Operations should:

- 3.3 Develop performance measures specific to the mission, goals, and objectives of the Bureau of Urban Forestry.
- 3.4 Develop a work plan and schedule to evaluate, identify, and implement improvements to the Bureau of Urban Forestry's databases, including assessing

the feasibility and potential costs of integrating the forestry databases with 28-Clean, in conjunction with the Director of Finance and Administration.

The Bureau of Urban Forestry Manager should:

- 3.5 Develop an annual work plan and schedule to inventory non-Department maintained street trees, including setting inventory priorities based on geographical location and responsibility for trees.
- 3.6 Develop a volunteer program or partnership with nonprofit organizations to assist in the inventory of non-Department maintained street trees.
- 3.7 Report the actual pruning and tree maintenance schedule on the City's web site.
- 3.8 Develop median and other landscape maintenance standards and schedules and publish these standards and schedules on the City's web site.
- 3.9 Develop methods for tracking all of the routine and non-routine work done on landscape properties in order to best allocate resources in the future.
- 3.10 Evaluate procedures to include street tree inspections in routine activities, including streamlining reporting and documentation procedures and training staff in street tree regulations and procedures.
- 3.11 Develop procedures to revisit sites where removal permits have been denied, including (a) utilizing Bureau of Urban Forestry tree, landscape, and watering crews or Bureau of Street Environmental Services crews to conduct preliminary checks while performing other work in the vicinity, and (b) streamlining procedures and documentation.
- 3.12 Develop a methodology for prioritizing routine tree maintenance and service requests.
- 3.13 Assess staffing alternatives, including dedicating one of its landscape crews to only routine maintenance, and allow other staff to respond to service requests.
- 3.14 Work with the Human Resources and the Health and Safety Division to identify causes of paid and unpaid sick and disability leave and actions that the Bureau can take to reduce the incidence of unpaid leave and increase the number of productive hours.

The Director of Finance and Administration should:

- 3.15 Review and track fee revenues against expenditures each year to ensure that the Bureau of Urban Forestry is recovering service costs overall and recommend fee increases, in addition to the Consumer Price Index increases, to the Board of Supervisors as necessary.

3.16 Develop procedures to ensure timely collection of fines.

## **Costs and Benefits**

By charging develops and businesses street tree planting permit fees, comparable to the existing minor sidewalk encroachment permit fees, the Department of Public Works would realize approximately \$120,000 in additional fee revenues. Additionally, the Department would realized \$60,000 in fine revenues through collection of existing citation fines. The Department could realize additional but not quantified fine revenues through increased enforcement activity.

## **4. Permit and Inspection Revenues and Performance**

- **The Department of Public Works has submitted most of its fees to the Board of Supervisors over the past four years for approval of new fees or fee increases. Public Works Code Article 2.1, approved by the Board of Supervisors in 2003, authorized new fees, fee increases, and annual fee adjustments for all Department fees.**
- **Although the Department of Public Works adjusts its fees annually by the Consumer Price Index, the Department's salary costs are increasing faster than the rate of inflation, causing the Department's fees to fall behind the growing costs to provide services. These revenue shortfalls are significant. If the Department's FY 2006-2007 General Fund fees were increased to fully recover costs, the Department would receive an additional \$1.4 million in fee revenues.**
- **The Department does not consistently apply its fees. For example, the Department assesses a street improvement fee for property owners who have received a notice to repair the sidewalk fronting their property based on outdated Public Works Code language. Also, the Department assesses a street improvement inspection fee calculated as a percentage of street construction costs that is inconsistent with Public Works Code language.**
- **The Bureau of Street Use and Mapping's district inspectors conduct inspections of public streets to identify safety hazards. Most of these inspections are initiated by calls from citizens who have observed a safety hazard. According to the Bureau's policy, district inspectors should conduct routine inspections to identify safety hazards and Code infractions as well as respond to citizen complaints. The current approach results in more frequent inspections and citations in neighborhoods with a high volume of calls, rather than high level of risk, leading to unequal enforcement of the Public Works Code.**

### **The Department of Public Works' General Fund and Special Revenue Fund Fees**

The Department of Public Works charges fees for certain services provided by the Department and for encroachments to the public right of way or work in the public right of way. Fees charged by the Department to provide essential City services can recover but not exceed the costs of providing services, in accordance with State law. However, fees paid by private individuals, firms, or organizations for non-essential services, such as

occupying street space during a construction project, are not limited to recovering the costs of services, allowing the Department to charge an assessment for these services equal to a market rate value.

The Department of Public Works has multiple fees, generating revenues that are deposited to the General Fund or special revenue funds. Some fee revenues are divided between the General Fund to pay permit processing costs and market rate assessments, and a Special Engineering Fund to pay permit inspection costs. Subdivision mapping and excavation permit fee revenues are deposited into the Subdivision Fund and excavation permit fee revenues are deposited into the Excavation Fund.

Over the past four years, the Board of Supervisors has approved new or increased Department of Public Works fees, including excavation permit fees and street occupancy fees in 2002, 15 General Fund fees in 2003, and subdivision fees in 2005.

In FY 2003-2004, the Board of Supervisors approved Public Works Code Article 2.1, establishing a new fee schedule for many of the Department of Public Works' General Fund fees and authorizing the Department to increase the fees annually based on the Consumer Price Index, subject to certification by the Controller that the fee increases do not exceed the Department's costs to provide the service. The Board of Supervisors has the authority to modify or increase market rate assessments at any time. The Public Works Code also authorizes the Department to charge additional fees for individual permits if the costs of permit processing and inspection exceed the fee amount.

**Table 4.1**  
**The Department of Public Works' Fees**

<b>Fee</b>	<b>General Fund</b>	<b>Special Revenue Fund</b>	<b>Cost Recovery or Market Rate</b>	<b>Authorization</b>
Minor Sidewalk Encroachment	General Fund	Engineering Fund	Recovery	Public Works Code
Underground Vault	General Fund		Recovery and Market	Public Works Code
Street Improvement	General Fund	Engineering Fund	Recovery	Public Works Code
Special Sidewalk	General Fund	Engineering Fund	Recovery	Public Works Code
Pipe Barrier	General Fund	Engineering Fund	Recovery	Public Works Code
Major Encroachment	General Fund	Engineering Fund	Recovery	Public Works Code
Over-wide Driveway	General Fund	Engineering Fund	Recovery	Public Works Code
Security Bollards	General Fund	Engineering Fund	Recovery	Public Works Code
Tank Abandonment	General Fund		Recovery	Public Works Code
Debris Box	General Fund		Recovery	Public Works Code
Street and Sidewalk Plaques	General Fund	Engineering Fund	Recovery	Public Works Code
Flower Markets	General Fund		Recovery	Public Works Code
Sidewalk Displays	General Fund		Recovery	Public Works Code
Sidewalk Tables and Chairs	General Fund		Recovery	Public Works Code
Banners	General Fund	Engineering Fund	Recovery	Public Works Code
Storage Containers	General Fund	Engineering Fund	Recovery and Market	Public Works Code
Street Space and Temporary Occupancy	General Fund	Engineering Fund	Recovery and Market	Public Works Code
Sidewalk Landscape	General Fund			
Street Tree Permits	General Fund		Recovery	Public Works Code
Excavation Permit Fee		Excavation Fund	Recovery	Public Works Code
Subdivision and Mapping Fee		Subdivision Fund	Recovery	Subdivision Code

Source: Subdivision and Public Works Codes

The Bureau of Urban Forestry manages sidewalk landscape and street tree permits, fees and inspections, as discussed in Section 3 of this report. The Bureau of Street Use and Mapping manages the other Department of Public Works’ fees, and is responsible for issuing permits and conducting inspections to ensure that that permit holders comply with the Public Works Code and permit regulations.

### The Department of Public Works Fee Revenues

Prior to adoption of Public Works Code Article 2.1 in FY 2003-2004, allowing the Department of Public Works to increase fees and assessments annually by the Consumer Price Index without further Board of Supervisors approval, the Department only reviewed fees periodically, resulting in fee revenues falling below the Department’s costs for providing services. Over the past three years, the Department has increased the amount charged for most of the Department’s fees, resulting in increased annual fee revenues.

**Table 4.2**

### Increase in the Department of Public Works Fee Revenues

#### FY 2003-2004 through FY 2005-2006

	FY 2003-2004	FY 2004-2005	FY 2005-2006	Percent Increase/ (Decrease) from FY 2003-2004 to FY 2005-2006
General Fund Fees	\$3,699,062	\$4,375,958	\$5,590,812	51.1%
Subdivision Fees	1,645,509	1,467,116	2,541,052	54.4%
Special Engineering Fund Fees	1,387,500	1,489,280	1,237,043	(10.8%)
Excavation Fund Fees	<u>1,988,113</u>	<u>1,684,843</u>	<u>2,000,107</u>	0.6%
	\$8,720,184	\$9,017,197	\$11,369,014	30.4%

Source: Department of Public Works Office of Financial Management and Administration

### The Bureau of Street Use and Mapping’s Application of Fees

#### Revising Outdated Code Provisions

The Public Works Code contains several outdated fee provisions that have been superseded by Article 2.1. For example, Section 708 sets an inspection fee of \$10 for the first 100 square feet and \$5 for each additional 100 square feet for permits to construct, repair or replace sidewalks, gutters, driveways, and related structures, but the Department charges inspection fees of \$155, such as for special sidewalk permits, based on the actual costs of inspection.

The Department of Public Works also has not recalculated all fees authorized under the Public Works Code to ensure that these fees recover costs. For example, Section 716, established in 1987, requires a \$60 permit fee to install a driveway. The Department has increased the fee over the past three years by the Consumer Price Index to equal \$61.94. The Department needs to evaluate this fee and other outdated fees to ensure that the fee amount fully recovers costs.

### **Assessing Street Improvement Fees for Notices to Property Owners to Repair Streets and New Construction**

The Department of Public Works continues to charge street improvement fees under outdated Public Works Code provisions as well as under Article 2.1. When the Department submitted street improvement fees to the Board of Supervisors for approval in 2003 as part of the approval process for 15 General Fund fees, the Department estimated permit processing and inspection costs of \$880.85 per street improvement permit. The actual street improvement fee in FY 2005-2006 was \$850.58.

The Public Works Code requires street improvement permits for improving streets, filling in street excavations, constructing curb cuts and sidewalks, and other work associated with streets and sidewalks. Property owners are responsible to repair sidewalks that front their property. Property owners may initiate the street improvement permit process, especially in conjunction with property construction permitted by the Department of Building Inspection, or the Department may issue a notice to a property owner to repair sidewalks.

#### Notices to Property Owners to Repair Streets

The Department of Public Works assesses property owners who receive a notice to repair the sidewalk fronting their property a street improvement fee of \$320 rather than \$850. Although the Department's web site lists a street improvement fee of \$850, the Bureau of Street Use and Mapping maintains a second fee schedule that lists a \$320 street improvement fee for permits responding to a notice to repair sidewalks, consisting of \$165 for administrative costs plus \$155 for inspection.

The Department of Public Works bases the \$165 administrative fee on Public Works Code Section 416, adopted in 1987, rather than on a current cost-recovery analysis. Section 416 requires a permit processing fee of \$160 for property owners to repair sidewalks or streets fronting their property. The Department should evaluate its administrative costs to process the street improvement fee for property owners issued a notice to repair and submit a fee proposal to the Board of Supervisors for approval during FY 2007-2008. At the same time, the Department should identify obsolete fee provisions in the Public Works Code and submit revised or updated language to the Board of Supervisors for approval to minimize conflicts in applying Public Works Code provisions to permit fee schedules. The Department should also post the same fee schedule on its web site as the fee schedule that it uses to calculate permit fees.

### Assessing Street Improvement Fees for New Construction

The Bureau of Street Use and Mapping assesses new construction projects the standard \$850.58 street improvement fee. If the street improvement project is large or requires additional inspections, the Bureau assesses additional inspection fees, equal to 7.5 percent of the estimated cost of the construction project. The Bureau collects the Street Improvement fee at the time of the permit application and collects additional inspection fees based on expected additional costs prior to issuing the permit. The Bureau staff prepare a cost estimate of the proposed work under the permit and apply 7.5 percent of the cost estimate as the basis for additional inspection fees.

The Bureau of Street Use and Mapping should review its procedure to assess additional fees to ensure compliance with the Public Works Code. Code Section 2.1.3 specifies that additional fees should be sufficient to recover actual costs and charged on a time and materials basis. The Department should charge additional street improvement fees based on the Department's actual costs to conduct inspections.

### **Department of Public Works Fees Recovering Less than the Costs of Services**

Although the Department of Public Works' fees are adjusted annually by the Consumer Price Index, these adjustments have not kept pace with the costs of providing services. Prior to approval of Public Works Code Article 2.1 in 2003, the Department of Public Works had not increased certain fees for several years, resulting in fee recoveries falling far below the service costs. Article 2.1 was intended to provide annual fee increases equal to the Consumer Price Index to account for increases in the costs of providing services.

Not all Department of Public Works' fees were full cost recovery when initially set, and although these fees have increased annually by the Consumer Price Index, they have continued to fall short of the fee amount necessary to recover costs. Also, because the Department's salary costs have increased at a higher annual rate than the Consumer Price Index, fees that were initially set to fully recover costs now fall short.

The Department of Public Works needs to review and track fee revenues against expenditures each year to ensure that the Department is recovering service costs overall. Although the provisions of Article 2.1 mitigate the Department's previous delays in adjusting fees, the Department still risks revenue shortfalls if fees adjusted by the Consumer Price Index do not keep pace with increasing costs.

### **The Department of Public Works' Tracking of Service Costs**

#### **The Bureau of Street Use and Mapping's Tracking of Labor Hours**

The Bureau of Street Use and Mapping does not have an effective method to track the hours allotted to permit processing and inspections. Permit processing staff do not routinely track their hours and therefore, the Bureau cannot document the average labor hours or costs required to perform different types of permit processing.

The Bureau of Street Use and Mapping implemented a Task Management System in July 2005 and implemented a policy, requiring supervisors to include tracking of labor hours in performance evaluations. The Bureau needs to ensure consistent implementation of its policies and use of the Task Management System by inspectors, and should extend the Task Management System to include permit processing. According to interviews, the Bureau's inspectors do not consistently track their hours by permit type or project. Utility inspectors who inspect street excavation work track their labor hours by utility contracts and not by permit type. Street inspectors report that they do not track their hours because they do not have time.

The Bureau of Street Use and Mapping does not accurately capture the number of inspection hours required for each permit type. The Bureau of Street Use and Mapping's projected hours to perform inspections for different types of permits, the actual inspection hours that inspectors report anecdotally that they spend on permit inspections, and the actual hours for specific permit inspections captured in the Bureau's time records do not correspond.

For example, the Bureau projects that street improvement permits require four hours' of an inspectors' time. Street inspectors report anecdotally that street improvement projects require six to eight inspections, exceeding the four hour projection. However, actual time records show an average of one hour of street inspector's time allotted to each permit, suggesting that the time record system does not accurately capture permit inspection hours.

The Department of Public Works has set excavation permit fees based on inspecting medium excavation projects one to two times per week on average and large excavation projects three times per week on average. The excavation inspectors, however, report that they inspect both medium and large jobs at least once per day, if not more. Consequently, the Department may not have set the excavation permit fee to fully recover costs because the cost calculations use a different estimated frequency of inspections.

Because fee revenues fund much of the Bureau of Street Use and Mapping's activities, the Bureau needs to ensure that fees accurately reflect the Bureau's activities. The Bureau required that its supervisors review their staff's time records as part of the FY 2005-2006 performance review. However, according to interviews with some inspectors, the supervisors did not consistently review time records. The Bureau should evaluate actual inspection time allotted to permitted projects and ensure that Bureau staff are accurately recording their project hours.

## The Bureau of Street Use and Mapping's Management of the Permitting Process

### Plan Checkers' Understanding of Policies and Procedures

The Bureau of Street Use and Mapping's permit staff lack sufficient training and oversight in permit processing policies and procedures. In a review of excavation, temporary occupancy, and street improvement permits, the Budget Analyst found that the Bureau's permit staff did not fully understand the Bureau's procedures for all types of permits. For example, the Public Works Code specifies that the Bureau should charge permit holders \$51.61 per block face per day for a permit extension and a \$50.00 processing fee for a date change. Of the eight permit staff interviewed, only three permit staff knew that permit extensions should be charged \$51.61 per block per day, and none of the eight individuals interviewed knew the correct charge for a date change.

**Table 4.3**

### Temporary Occupancy Permit Extension and Date Change Fees

	Permit Extension	Date Change
Public Works Code Provision	\$51.61/block face/day.	On 7 days notice, may change permit except duration and amount of space. \$50.00 processing fee.
Response by Plan Checker		
1	\$51.61/block face/day.	First change free. The second change is 51.61 per day.
2	\$61.61/block face/day + \$1.02 surcharge.	Processing fee if date is changed multiple times.
3	\$51.61/block face/day.	No fee.
4	\$51.61/block face/day.	No fee.
5	\$51.61 per day.	\$51.61 per day.
6	\$51.61 per day.	No fee.
7	\$51.61 per day.	\$51.61 per day.
8	If the additional time needed is greater than 14 days and special permission is granted, \$51.61 per day.	No fee.

The plan checkers were also not certain of the excavation permit extension and date change fees.

**Table 4.4**  
**Excavation Permit Extension and Date Change Fees**

	<b>Permit Extension</b>	<b>Date Change</b>
Public Works Code Provision	Make request 5 days prior to expiration date. Administrative Fee: \$66/block  Inspection Fee:     \$16/ day small job \$55/ day medium job \$81/ day large job	Make request 5 days prior to start date.
Response by Plan Checker		
1	Standard Administrative and Inspection Fees.	Charge Administrative Fee, but not Inspection Fee.
2	Call 24 hours before the end of the permit or it is a new permit. Administrative Fee charged.	No fee.
3	Administrative Fee (\$68.13)	Charge Administrative Fee based on processing time, 1 hr minimum.
4	Charge per day.	No Charge.
5	Charge per day.	No Charge.

Plan checkers are also uncertain about permitting procedures unrelated to fees. For example, plan checkers use different criteria when determining whether or not to check the “call for” boxes on temporary occupancy permits. Temporary occupancy permits have three call for boxes: (1) inspection, (2) post tow-away register for posting, and (3) special traffic permit may be required. Based on interviews with plan checkers and as shown in Table 4.5 below, some plan checkers always check the inspection box, while other plan checkers never check the box. The criteria that plan checkers use to determine when to check the post tow-away register for posting box and the special traffic permit box vary even more widely. Only two plan checkers used the same criteria, “check if blocking traffic lane,” to determine when to check the special traffic permit box.

**Table 4.5**  
**Criteria for When to Check Call For Box**

<b>Plan Checker</b>	<b>Inspection</b>	<b>Post Tow-Away Register for Posting</b>	<b>Special Traffic Permit</b>
1	Check if there is something tricky to inspect.	Always check.	Check if blocking traffic lane.
2	Never check.	Always check.	Check if DPT needs to close street.
3	Check if permit doesn't show start date	Never check...	Check if blocking traffic lane.
4	Check if applicant wants DPT to tow.	Check if first box is checked.	Check if the applicant has a special traffic permit
5	Check if there is something tricky to inspect.	Check if blocking traffic lane.	Check if applicant needs to find out if they need a special traffic permit.
6	Always check.	Always check.	Check if applicant using both sides of the street.

### **Supervisory Review of Plan Checkers' Performance**

The Bureau of Street Use and Mapping's supervisors state they do not regularly review plan checkers' work. Although the senior plan checker and the associate engineer maintain an open door policy, regularly ask plan checkers if they have any questions, and review the complex permits, the senior plan checker and the associate engineer do not regularly review less complex permits for quality control. According to the Bureau manager, the Bureau supervisors periodically review permits and staff receive training to refresh staff knowledge. Additionally, the Bureau supervisors evaluate permit staff on the number of permits issued as well as the relative complexity of the permit.

Nonetheless, the above-described inconsistent and frequently inaccurate application of fee requirements and the lack of standardized criteria for checking the call for boxes show the need for continued staff training and reinforcement in applying the Bureau's policies and procedures, and for evaluating and enhancing the Bureau's quality controls.

Additionally, the Bureau of Street Use and Mapping's permit fee list and written guide for issuing permits do not include all fee requirements. The Bureau needs to review its permit fee list and written guide and include all fee and permit requirements and applications not currently included.

## **Work Procedures and Work Load Management**

### **District Inspections**

The Bureau of Street Use and Mapping's district inspectors conduct inspections of public streets to identify safety hazards, including notifying property owners of the need to eliminate identified safety hazards and re-inspecting hazards to ensure they have been removed or repaired to the standard described by the Public Works Code. Most of these inspections are initiated by calls from citizens who have observed a safety hazard. According to the Bureau's policy, district inspectors should conduct routine inspections to identify safety hazards and Code infractions as well as respond to citizen complaints. The current approach results in more frequent inspections and citations in neighborhoods with a high volume of calls, rather than high level of risk, leading to unequal enforcement of the Public Works Code.

In the past, district inspectors have conducted block-by-block inspections, inspecting each block of a given street from beginning to end. However, district inspectors report that they have not conducted any block-by-block inspections in at least seven months because they are overwhelmed by the number of citizen complaints. The Bureau of Street Use and Mapping management acknowledges the problem and intends to start a new type of inspection known as a "focus inspection." According to one Bureau manager, focus inspections will be conducted at least three times per year and will cover 30 to 40 square blocks in areas with high pedestrian volume or in areas requested by the Mayor and/or the Board of Supervisors. To ensure that the Bureau is implementing the focus inspections and informing the Board of Supervisors about the effectiveness of inspections in their district, the Bureau should report back to the Board of Supervisors City Operations and Neighborhood Services Committee following each focus inspection. If the focus inspection occurs in the District of a Supervisor who does not sit on the City Operations and Neighborhood Services Committee, the Bureau should notify the Supervisor about the meeting.

### **Street Inspector Organization**

The Bureau of Street Use and Mapping street inspectors are divided into three groups: (1) district inspectors, (2) special projects inspectors, and (3) construction-related street inspectors. District inspections are funded by the General Fund, and are organized by zip code; each district inspector responds to the complaints in his or her zip codes. Special projects inspectors are also funded by the General Fund, and perform both permit and complaint driven inspections to ensure compliance with regulations related to utilizing the public right of way for the storage of garbage containers, posting of signs, and banners.

Construction-related street inspectors are funded by permit and fee revenues, and inspect permitted work to ensure the work conforms to the permit and the Public Works Code. These inspectors are subdivided by permit type into three subgroups: utility inspectors, street improvement inspectors, and commercial inspectors. Utility inspectors inspect

permits related to roadway excavations for installation or repair of utilities. Street improvement inspectors inspect permits related to building construction. Commercial inspectors inspect permits related to commerce such as tables and chairs or display merchandise permits. Construction-related street inspectors are further subdivided by zip code. All Bureau inspectors share the same classification (6230 Street Inspector), must pass the same entrance examination, and are cross-trained in all permit types.

Organizing street inspectors by permit type is inefficient for the reasons outlined below.

- First, multiple inspectors are assigned to each zip code. Zip code 94118 in the Richmond is a residential area, but also contains the commercial corridor along Geary Boulevard. As a result, 94118 is staffed by a utility inspector, a commercial inspector, and a street inspector, each of whom drives from the Bureau's offices in the Civic Center to the Inner Richmond district each day, a drive which takes about 30 minutes, depending on the time of day.
- In addition, some street inspectors cover a very large geographic area. One street inspector covers 94114, 94116, 94117, 94122, 94127, and 94132, which includes the Twin Peaks, the Sunset, Lake Merced, and West Portal neighborhoods. The size of this area requires that the street inspector spend a significant amount of time driving from inspection site to inspection site.
- Finally, because street inspectors are only responsible for certain permit types, they do not act on problems unrelated to their area of responsibility. During ride-alongs with street inspectors, the Budget Analyst observed a number of street inspectors point out a problem unrelated to their area of responsibility but neglect to take action. Even if the street inspector had referred the problem to the appropriate Bureau inspector, the response would be inefficient. It would take additional time to refer the problem to the responsible inspector, and for the responsible inspector to schedule a visit and travel to the zip code. According to the Bureau management, street inspectors should respond to any violation they see, not just violations relevant to their permit area. However, street inspectors report they are too busy to respond to violations not relevant to their permit area.

The Bureau of Street Use and Mapping should more accurately track the number of inspection hours per permit and the number of inspections by permit type per district, and use this information to more efficiently allocate inspector resources to reduce travel time and to match inspector assignments to fluctuations in seasonal workload. In addition, the Bureau should identify ways to increase inspectors' accountability for enforcing all permit violations within their area of responsibility, thereby ensuring more consistent permit and Public Works Code enforcement.

## **Conclusion**

The Department of Public Works needs to ensure that its permit fees, which are intended to recover the costs of services, are sufficient to fully recover these costs.

Inaccurate application of fees, such as the street improvement fee assessed to property owners who have been issued a notice to repair sidewalks or streets fronting their property, can also result in insufficient revenues to cover costs. Also, the Department needs to ensure that fee adjustments based on the Consumer Price Index are sufficient to cover the increased costs of providing services. Because the Department's salary costs are increasing at a greater rate than the Consumer Price Index, the Department needs to review and adjust fees regularly.

The Bureau of Street Use and Mapping needs to improve the tracking of costs of providing services, especially the labor hours needed to process permits and conduct inspections. The Bureau also needs to ensure that permit staff are trained in consistent application of permit procedures, ensuring that all procedures are included in the written guide and that fee lists are complete.

Finally, the Bureau of Street Use and Mapping needs to ensure inspector allocations to permit types and geographic areas are efficient, taking into account travel time and fluctuations in work load and revenue streams and to increase accountability among inspectors for all permit work, inspections, and code enforcement within their area.

## **Recommendations**

The Director of Finance and Administration should:

- 4.1 Evaluate the Bureau of Street Use and Mapping's administrative costs to process the street improvement fee for property owners issued a notice to repair sidewalks and streets fronting their properties and submit a fee proposal to the Board of Supervisors for approval during the FY 2007-2008 budget review.
- 4.2 Identify obsolete fee provisions in the Public Works Code and submit revised or updated language to the Board of Supervisors for approval during FY 2007-2008, including ensuring that fees under outdated Code provisions are calculated to fully recover costs.
- 4.3 Post the same fee schedule on the Department's web site as the fee schedule used by the Bureau of Street Use and Mapping to calculate permit fees.
- 4.4 Establish procedures to calculate street improvement permit inspection fees based on the Bureau of Street Use and Mapping's actual costs to conduct additional inspections under the street improvement permit, in accordance with Public Works Code Section 2.1.3.
- 4.5 Review and track fee revenues against expenditures each year to ensure that the Department of Public Works is recovering service costs overall and recommend fee increases, in addition to the Consumer Price Index increases, to the Board of Supervisors as necessary.

The Bureau of Street Use and Mapping Manager should:

- 4.6 Evaluate actual inspection time allotted to permitted projects and ensure that Bureau staff are accurately recording their project hours.
- 4.7 Review the permit fee list and written guide and include all fee and permit requirements and applications not currently included.
- 4.8 Provide a report on the outcome of each district focus inspection to the Board of Supervisors City Operations and Neighborhood Services Committee, including notifying the appropriate Board of Supervisors' member of the district focus inspection conducted in his or her district and the report on the outcomes.
- 4.9 Provide an update to the Budget Analyst, as part of the Budget Analyst's review of the FY 2007-2008 Department budget, regarding (1) the number of inspections by permit type per district, and (2) how this data has affected inspector assignments by permit type and geographic area.
- 4.10 Provide an update to the Budget Analyst, as part of the Budget Analyst's review of the FY 2007-2008 Department budget, on the integration of the Task Management, permit and Inspect-o-matic systems, including the status and goals of the project and how the integration will allow the Bureau of Streets and Management to more efficiently allocate inspectors' time by permit type and geographic area.
- 4.11 Provide an update to the Budget Analyst, as part of the Budget Analyst's review of the FY 2007-2008 Department budget, on the Bureau's activities to increase inspectors' accountability for inspecting or reporting all permit violations within their geographic area of responsibility, including (a) result of employees' performance evaluations, (b) actions taken by the Bureau and the results of these actions.

## **Costs and Benefits**

The Department of Public Works would have realized an estimated \$1.4 million in additional fee revenues in FY 2006-2007 by increasing all General Fund fees to fully recover costs.

## 5. The Impact of Claims in the Public Right of Way

- The Department of Public Works paid \$2.85 million in claims settlement costs in FY 2005-2006 from claims related to tree problems, sidewalk falls, vehicle accidents and other Department activities. The Department's number of claims settlements has increased by 50 percent over the past ten years and claims settlement costs have increased by 79 percent.
- The Department of Public Works incurs high costs for claims settlements for tree-related incidents. \$1.7 million in claims settlement costs in FY 2005-2006 resulted from tree problems, or 59.6 percent of the Department's total claims settlement amount of \$2.85 million. Sidewalks lifted and damaged by tree roots are the primary reason for the increase in tree problem settlements.
- According to the Department, the Bureau of Urban Forestry assesses sidewalk damage due to tree problems and prioritizes sidewalk repairs based on this assessment. However, the cost of tree-related claims has increased significantly over the past 10 years. The number of tree-related claims settlements increased from 56 in FY 1996-1997 to 251 in FY 2005-2006. The claims settlement amount increased from \$158,006 in FY 1996-1997 to \$1,661,936 in FY 2005-2006.
- The Department should more thoroughly assess causes of tree-related claims to efficiently plan sidewalk repairs and reduce the incidence and costs of claims settlements resulting from tree problems.

The Department of Public Works, through the services of the Office of the City Attorney Bureau of Claims and Investigations, investigates and seeks to settle all claims brought against the City and County resulting from accidents on the City's right of way. Over the past ten years, from fiscal year 1996-1997 through fiscal year 2005-2006, the Department of Public Works settled a total of 5,274 claims with total costs of \$22.2 million.

Since FY 1996-1997, the number of claims settlements has increased by 50 percent and the cost to settle has increased 79 percent. The Department of Public Works settles an increasing number of claims due to tree and sidewalk accidents. The number of claims attributed to tree problems have increased by approximately 350 percent and the costs of these claims has increased by approximately 950 percent.

**Table 5.1**

**Comparison of the Annual Number and Costs of Settlements for Claims Resulting from the Department of Public Works' Responsibility for the Public Right of Way**

**FY 1996-1997 and FY 2005-2006**

Cause	Number of Settlements		Cost of Settlements	
	FY 2005-2006	FY 1996-1997	FY 2005-2006	FY 1996-1997
Tree Problems	251	56	\$1,661,936	\$158,006
Sidewalk Falls	35	48	293,570	217,563
City Vehicle Accidents	76	81	313,067	378,616
Roadway Falls	27	38	107,046	247,916
Vehicles Damaged by Road	141	70	139,913	218,689
Damage caused by operations <sup>1</sup>	51	57	247,480	69,753
Flooding Damages	6	21	29,087	295,445
Miscellaneous Damages <sup>2</sup>	7	1	52,726	140
Tires Damaged by Curbs	27	43	3,686	3,264
City Contracts <sup>3</sup>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total:	621	415	\$2,848,511	\$1,589,392
10-year increase in the number of Settlements	50%			
10-year increase in the cost of Settlements	79%			

Source: City Attorney Claims Unit

Sidewalks lifted and damaged by tree roots are the primary reason for the increase in tree problem settlements.<sup>4</sup> Although property owners are responsible for the maintenance of their sidewalk, the exception is when a City tree causes damage. Additionally, the City is

<sup>1</sup> Damages caused by operations are anything that happens in the course of working in the streets from simple human error or freak accidents.

<sup>2</sup> Miscellaneous settlements are those which do not fall neatly into the other nine categories.

<sup>3</sup> City Contracts are contractors in dispute about the terms and conditions of the contract.

<sup>4</sup> Other tree problems include (a) trees and limbs damaging property or cars during a storm and (b) trees that damage cars or person because they have not been pruned to the 14" clearance level.

responsible for sidewalks of school districts and some buildings of State and Federal buildings.

According to the Bureau of Urban Forestry, as of October 20, 2006, the Bureau had identified 6,252 City sidewalks needing repairs and an additional 8,195 for which the City is responsible. Total estimated costs of the backlog are \$11.4 million.

**Table 5.2**

**Backlog of Sidewalk Repairs as of October 20, 2006**

	<b>Number of Sidewalk Locations</b>	<b>Square Feet per Sidewalk Location</b>	<b>Cost per Square Feet</b>	<b>Total Estimated Cost to Repair the Sidewalks</b>
<u>Tracked by the Bureau of Urban Forestry</u>				
City sidewalks	6,252	72	\$11.00	\$4,951,584
<u>Not Tracked by the Bureau of Urban Forestry</u>				
School districts	3,352	72	11.00	2,654,784
State and Federal	676	72	11.00	535,392
Other - not identified	<u>4,167</u>	72	11.00	<u>3,300,264</u>
	8,195			6,490,440
<b>Total Estimated Backlog Sidewalk Repairs:</b>	14,447	72	11.00	\$11,442,024

Source: Bureau of Urban Forestry

To better understand the scope of the sidewalk repair backlog for which the Department of Public Works is responsible, the Bureau of Urban Forestry should complete an annual evaluation of all sidewalks for which the City is responsible and record these findings in their computer tracking system.

Currently, the Department of Public Works does not have a formal procedure to assess and manage risks associated with its infrastructure in order to minimize claims and litigation. Because the Department incurs such high claims costs from sidewalk claims due to tree problems, the Department should assess common causes, such as specific types of trees, locations, and sidewalk structures to determine which factors contribute to claims. The Department should then use this information to plan and set priorities for repairs.

The Department of Public Works receives approximately \$500,000 annually from the San Francisco County Transportation Authority and an additional \$100,000 annually from grants to reconstruct and repair sidewalks. The City's ten-year capital plan anticipates approximately \$1 million annually in sidewalk to replace defective sidewalks and keep current with annual sidewalk deterioration. The Department of Public Works should track

and analyze sidewalk repair funding, sidewalk repairs, and sidewalk-related claims costs to determine if targeted sidewalk repairs contribute to reduced claims costs. This information should be presented to the Board of Supervisors each year during the annual budget review, allowing the Board of Supervisors to assess the impact of sidewalk funding and resulting savings in claims costs.

## **Conclusion**

The City incurs significant costs from claims associated with sidewalk damage due to tree roots cracking, displacing or in other ways causing damage or disruption to sidewalks. At the same time, the City has a backlog in sidewalk maintenance. The Department of Public Works does not have a full inventory of all sidewalks needing repair nor a procedure to assess which sidewalks contribute to accidents and claims costs. The Department needs to evaluate the costs of sidewalk repairs against the potential reduction in claims to determine if prioritizing sidewalk repairs contributes to a reduction in claims.

## **Recommendations**

The Deputy Director for Operations should:

- 5.1 Complete an annual evaluation of all sidewalks for which the Department of Public Works is responsible and record these findings in their computer tracking system.
- 5.2 Assess common causes of tree-related claims, such as specific types of trees, locations, and sidewalk structures, to determine which factors contribute to claims.
- 5.3 Include the claims assessment data in setting sidewalk repair priorities.
- 5.4 Track and analyze sidewalk repair funding, sidewalk repairs, and sidewalk-related claims costs to determine if targeted sidewalk repairs contribute to reduced claims costs.
- 5.5 Present this information to the Board of Supervisors each year during the annual budget review.

## **Costs and Benefits**

Currently, the Department of Public Works incurs \$1.6 million annually in claims costs due to tree-related incidents. If sidewalk repair priorities based on an assessment of frequently-occurring claims reduced claim amounts by 10 percent, the City would achieve \$160,000 annually in savings.

## 6. Capital Project Design Costs

- The Department of Public Works incurs increased construction costs for project design errors and omissions. Design errors and omissions, a preventable occurrence, accounted for \$2.1 million in increased construction contract costs for 49 construction contracts completed in 2004 and 2005, or approximately 2.9 percent of total construction costs of \$72.5 million.
- Despite the impact of design errors and omissions on construction costs, the Department does not measure the impact. Although the Bureau of Engineering previously had a performance goal to limit construction contract cost increases due to design errors and omissions to 3 percent, the Bureau does not currently measure such increases. The Budget Analyst found that more than 22 percent of contracts exceeded this goal. Eleven of the 49 construction contracts, or 22.4 percent, had cost increases of 3 percent or more due to design errors and omissions.
- The Department's Bureaus of Architecture and Engineering have project design quality assurance and control programs, but the Bureau of Engineering has not fully implemented their program. Further, the Department formed a task force to assess capital project quality assurance procedures but has not moved forward in evaluating or implementing the task force recommendations for the Department as a whole.
- Several common occurrences have contributed to the increased construction costs resulting from design errors and omissions. Projects designed by consultants can incur high costs. For example, the recently completed Juvenile Hall construction project, designed by a consultant, is expected to incur \$9.3 million in additional costs due to design problems, equal to 18 percent of the \$51.7 million construction contract. Although the Department intends to pursue a claim for professional liability against the architectural and engineering design contractor, in many contracts the City and not the consultant pays the increased costs
- The Department also needs to better coordinate with the Department of Building Inspection to ensure sign-off of construction projects and prevent delays.
- The Department needs to look at the costs of increasing site visits by the project designer and site testing during the design phase compared to the costs of contract change orders due to unforeseen site conditions to ensure that project designs are cost-effective.

## **Management of Capital Projects**

The Department of Public Works manages most of the City's General Fund capital projects. The Charter authorizes the City's enterprise departments – the Port, the Airport, the Public Utilities Commission, and the Municipal Transportation Agency – and the Recreation and Park Department to manage their own capital projects. The Department of Public Works manages the capital projects of the remaining departments, including street and other projects under the jurisdiction of the Department of Public Works, and provides engineering, architectural, and construction management services to the enterprise as well as the General Fund departments.

The Department of Public Works' engineers and architects serve as project managers for capital projects. The project designer serves as project manager for single discipline projects, such as electrical or structural engineering projects. The Department has also formed a project management group, which assigns engineers and architects as project managers for a limited tenure.

## **Management of the Capital Project Design Process**

The planning and design of projects is the key stage in determining the scope and costs of the capital project. The project designer drafts the construction specification documents that form the basis of the construction bid. The Department prepares construction cost estimates in-house or hires consultants specializing in construction contract estimation, depending on the type of project.

Client departments participate in planning most capital projects. The Department of Public Works' role is to support the planning process and execute the project plan. The Department's engineering and architecture staff design most of the Department's projects, although the Department will hire design consultants to design complex or specialized projects, such as health care or corrections facilities. The project design is the basis of the construction documents and construction cost estimates.

According to interviews with the Department of Public Works' engineers and architects, the capital project design is intended to meet Americans with Disabilities Act and building code requirements and industry standards. The designer needs to balance the client's project plans, code requirements and other standards, and cost restraints. The goal is to achieve a project design that balances design requirements and reduces the need for change orders during the construction phase of the project.

The Bureaus of Engineering and Architecture are responsible for the Department of Public Work's capital project design. Although project design can be complex and varies significantly by the type of project, design efficiency can be measured in part by the cost of the design compared to total construction costs, and the number of construction contract change orders attributed to design errors and omissions.

## Capital Project Design Costs

Generally, the Bureaus of Architecture and Engineering senior architects and engineers are responsible for meeting with clients, developing the scope of work, and assigning design work to staff within their sections. The Bureau of Architecture has a pool of consultants to assign design work in addition to the Department of Public Works' architecture staff. The Department also contracts with outside consultants to design complex or specialized projects.

The Department of Public Works encounters specific issues when managing design costs as a portion of overall project costs. As a public agency, the Department lacks the budget constraints of a private firm that must absorb excess labor costs. The Department must pay for all labor hours charged to a project. Conversely, the Department cannot offer pay incentives or retain funds for delivering the project at lower than budgeted costs. The Department also encounters higher design costs due to the higher regulatory and design standards for many public projects. The Department must balance the need to cost-efficiently design projects while ensuring design thoroughness to avoid later construction change order costs for design errors and omissions.

The Department of Public Works' engineers and architectures expect design costs to make up approximately 7 percent to 15 percent of a project's costs, as a general rule. Design costs constitute a larger percentage of small projects. Specific types of projects, such as curb ramp construction, have a higher percentage of design costs due to the special issues encountered in designing the curb ramp, such as the location of utilities and street lights, basements, and other structures.

### Benchmarking Design Costs

Seven California agencies, including the San Francisco Department of Public Works, have been participating in an ongoing capital improvement program benchmarking study. The *California Multi-Agency CIP Benchmarking Study – Update 2005*<sup>1</sup> found that, for projects completed between January 1, 1999, and January 1, 2005, the project delivery costs<sup>2</sup> as a percentage of total construction costs increased over time. The *Study* considered that the increased project delivery costs resulted from improved data collection, which identified project delivery costs more accurately, greater community involvement and coordination, and more stringent regulatory requirements.

When compared to the *Study's* benchmarks, the Department of Public Works project planning and design costs as a percentage of total construction costs are not high.<sup>3</sup>

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<sup>1</sup> The *California Multi-Agency CIP Benchmarking Study – Update 2005*, published in September 2005, is a joint project of the cities of San Francisco, Sacramento, Oakland, San Jose, Long Beach, Los Angeles, and San Diego.

<sup>2</sup> Project delivery costs include all project planning, design, and construction award and management costs.

<sup>3</sup> The Budget Analyst obtained project delivery costs on 34 capital projects managed by the Department of Public Works and completed in 2005. Table 9.1 summarizes this capital project data and compares the results to the *California Multi-Agency CIP Benchmarking Study* benchmarks.

**Table 6.1**

**The Department of Public Works' Capital Project Planning and Design  
Costs as a Percentage of Total Construction Costs for Capital Projects  
Completed in 2005**

Average Costs for Department of Public Works Projects Completed in 2005	Department of Public Works			California Multi-Agency CIP Benchmarking Study - Update 2005
	Average Planning and Design Costs	Average Total Construction Costs	Planning and Design as Percent of Total Construction Costs	
<u>Sewer Projects</u>				
Sewer Projects Less than \$500,000	\$83,143	\$451,788	18%	27% to 33%
Sewer Projects \$500,000 to \$3,000,000	\$106,870	\$800,817	13%	11% to 17%
<u>Street Projects</u>				
Street Reconstruction Projects Less than \$500,000	\$85,567	\$448,865	19%	21% to 24%
Street Reconstruction Projects \$500,000 to \$3,000,000	\$187,770	\$1,610,717	12%	17% to 21%
Street Reconstruction Projects Greater than \$3,000,000	\$1,741,435	\$17,015,391	10%	16% to 17%
<u>Recreation and Park Clubhouses and Centers</u>				
Community Building Project \$500,000 to \$3,000,000	\$233,443	\$2,694,817	9%	21% to 23%
Community Building Project Greater than \$3,000,000	\$1,028,241	\$6,037,928	17%	19% to 21%
<u>Recreation and Park Playgrounds</u>				
Playground Project Less than \$500,000	\$95,912	\$390,172	25%	18% to 25%
Playground Project \$500,000 to \$3,000,000	\$202,625	\$1,493,573	14%	12% to 18%

Source: The Department of Public Works Bureau of Architecture and Bureau of Engineering

### **Managing Design Quality**

Capital projects can incur delays and increased costs if the project planning and design is inadequate. The Bureaus of Architecture and Engineering have formal quality assurance and control policies and procedures to reduce the risk of inadequate design but have implemented these procedures unevenly. The Bureaus of Architecture and Engineering's written policies and procedures cover the design process, including defining the roles and responsibilities of the design team, establishing standards for different types of project designs, and outlining requirements for quality assurance checks of project designs.

The Bureau of Architecture has a formal quality assurance program. The quality assurance program consists of five elements:

- Design reviews at various stages of the design process to ensure that the project's costs and timelines and that the facility's appearance and ability to perform for its intended use meet the client's goals and expectations;
- Post-occupancy evaluations at the end of each project;
- Client surveys and assessments;
- Training; and
- Project information and resource banks.

The Bureau of Architecture has designated one senior architect position to oversee the quality assurance program. The Bureau of Architecture provided a list of 46 design projects that were reviewed between November 2004 and August 2006. Most of these projects were reviewed when the design documents were 95 percent complete, although some projects were reviewed at an earlier phase. According to the documentation, the reviewer returned the project documents to the designer if corrections were necessary.

The Bureau of Engineering's quality assurance program has been less fully-implemented than the Bureau of Architecture. The Bureau of Engineering has one assistant engineer assigned to the quality assurance program but has not funded the senior engineer position to oversee the program. The Bureau has detailed policies and procedures but has not implemented one component – annual audits of randomly selected projects to ensure compliance with quality assurance procedures. According to the Bureau manager, quality design and bidding documents are a top priority for the Bureau in FY 2006-2007.

## **The Impact of Project Design on Construction Contract Change Orders**

The quality of the project design can have significant impact on the construction project's costs and time lines. If the design project contains errors, omits design details, or fails to identify significant site conditions, the construction contract can be adjusted through a construction contract change order to pay the contractor for the change in project scope or specifications, increasing project costs or extending project timeliness. Overall, construction contract costs increase by about 2.9 percent from the initial contract costs due to design errors and omissions and by an additional 2.2 percent due to unforeseen site conditions.

**Table 6.2**

**Total Construction Contract Change Orders as a Percent of Original  
Construction Contract Amounts for 49 Construction Projects  
Completed in 2004 and 2005**

		<b>Contract Change Order as a Percent of Original Construction Contract Amount</b>
Total Original Construction Contract Amount for 50 Construction Projects Completed in 2004 and 2005	\$72,495,229	
<u>Construction Contract Change Orders</u>		
Design Errors and Omissions	2,086,610	2.9%
Unforeseen Site Conditions	1,601,913	2.2%
Client Request	2,052,485	2.8%
Other Adjustments	<u>(657,510)</u>	(0.9%)
Total Change Orders	\$5,083,498	7.0%

Source: Bureau of Construction Management

The Department of Public Works classifies construction contract change orders as design errors, design omissions, unforeseen site conditions, and client requests. Because the Department does not have a formal definition for each change order type, the Department's staff classify change orders based on their experience and best judgement.

The Department of Public Works classifies change orders caused by design error separately from change orders caused by design omissions. Design error or omission refers to mistakes (errors) or oversights (omissions) by the project's designers, requiring plan and specification corrections. The project designer should have reasonably known and dealt with the design issue during the design of the project.

Change orders due to unforeseen site conditions are necessitated by discovery of actual job site conditions that differ from those shown in the contract plans or described in the specifications. By definition, the project designer could not reasonably have known of the site condition during the project design.

A third type of change order results from client requests, such as additions or deletions to the original project scope and design.

The *California Multi-Agency CIP Benchmarking Study – Update 2005* found that projects tend to have change orders equal to 10 percent of the construction contract cost.

The size of the construction project had little impact on construction contract change order percentages. According to the *Study*, project managers tend to approve construction contract change orders up to the amount of the contract's contingency, which is usually set at 10 percent of the total construction contract amount. Because contract cost increases greater than 10 percent require additional approval, project managers and construction contractors work within the allotted amounts.

According to interviews with Department of Public Works staff, the distinction between change orders designated as due to design errors and omissions or to unforeseen site conditions is not exact. A change order may be classified as due to unforeseen site conditions although the project designer could have reasonably known the condition of the site.

### **Measuring Design Performance**

Previously, the Bureau of Engineering had a performance goal to limit construction contract change orders due to design errors and omissions to no more than 3 percent. Currently, neither the Bureau of Engineering nor the Bureau of Architecture measure the impact of design errors and omissions on construction costs.

The Department has a large number of construction contracts with change orders due to design errors and omissions exceeding 3 percent. Of 49 construction contracts completed in 2004 and 2005, 11 contracts or 22.4 percent, had change orders due to design errors and omissions that exceeded 3 percent of total construction costs. The Department needs to measure and report the impact of design errors and omissions on construction costs annually. These goals and measures should be uniform for the Bureau of Engineering and the Bureau of Architecture.

### **Addressing Recurring Project Design Problems**

A detailed review of the 49 construction projects completed in 2004 and 2005 and other projects reveals some recurring project issues.

#### Quality of Consultant Design

The Department of Public Works' quality assurance program focuses on project designs created by the Bureau of Engineering and Bureau of Architecture staff. The Department does not have an agreed upon protocol to review design services provided by outside consultants. Although the City has legal recourse if a consultant's project design is seriously flawed, the City does not have formal procedures to ensure that consultant design services will result in efficient project delivery. The City generally pays the costs of construction contract change orders due to design errors and omissions rather than the design consultant.

- The \$2.6 million Helen Wills Park construction project incurred \$164,700 in construction contract change orders and more than 230 days in project delays. The project, which was designed by a consultant, required frequent modifications to meet

American with Disabilities Act requirements and to accommodate the design to the actual site conditions.

- The Juvenile Hall project, which has not been fully completed, is expected to incur additional costs of \$9.3 million, increasing the total project costs by 18 percent, from \$51.7 million to \$61.0 million. Project delays and increased costs resulted in large part from design problems and construction document errors and omissions. The Department of Public Works intends to pursue a claim for professional liability against the architectural and engineering design contractor.

The Department of Public Works needs to identify commonly occurring problems in design projects provided by consultants and develop protocols to address these problems. For example, because consultants are less familiar with City requirements and standards for public facilities, the Department needs to ensure that consultants are fully informed and that design projects meet American with Disabilities Act and other requirements.

Also, the Department of Public Works implemented a task force to assess capital project quality assurance procedures. The task force addressed consultant design quality controls as well as coordinated quality assurance procedures between the Bureaus of Architecture and Engineering. The Department needs to move forward in establishing effective quality controls, both for consultant and in-house design projects.

#### Coordinating with the Department of Building Inspection to Meet Requirements

Construction projects are delayed or incur unexpected costs because the project did not meet Department of Building Inspection requirements.

Both the Community Health Network third floor tenant improvement project and the Maxine Hall Health Center renovation project incurred change orders and increased project costs from unanticipated regulatory requirements. Completion of the Community Health Network project was delayed because the Department of Building Inspection inspector did not approve installation of electrical conduits in modular office walls, requiring rewiring of the location, exceeding the original construction document scope. The Maxine Hall Health Center project incurred construction contract change orders to comply with Department of Building Inspection site inspection requirements to install temperature control modifications. According to the project manager, the Department of Building Inspection had not required these modifications in the project drawings.

The Department of Public Works needs to coordinate with the Department of Building Inspection, among other agencies, to ensure that policies, procedures, and regulations are both well-understood and consistently applied. According to interviews with Department of Public Works staff, building inspectors have significant discretion in approving completed projects and validating compliance with City regulations.

### Gathering Project Site Information

Several of the projects reviewed incurred additional costs because the construction project encountered unexpected or unidentified problems. In some instances, problematic site conditions are impossible to discern or anticipate in the project design, or the cost of identifying the problematic site condition exceeds the expected cost of correcting it during the construction project.

The Palace of Fine Arts rotunda roof repair project included a contingency to pay for expected deterioration in the existing roof but the actual deterioration exceeded the contingency. According to the project manager, the Department would have had to hire a second contractor to investigate the rotunda roof prior to completing the design documents to fully identify the extent of roof deterioration

However, construction projects encounter problems, resulting in change orders and increased costs, for issues or incidents that could have reasonably been anticipated. For example, both the Geary Boulevard pavement renovation project and the Post and Stockton Streets emergency repair projects incurred construction contract change orders to pay for San Francisco off-duty police officers to direct traffic during construction in traffic-congested zones. In both cases, the costs of directing traffic could have reasonably been known during the planning and design of the project.

### *Site Visits*

The Department of Public Works' project design procedures include visiting the project site during the planning of the project and ensuring compatibility of the project with site conditions. The extent to which project designers visit and interact with the project site depends not only on the design type but the individual designer. According to interviews, project designers vary in the extent to which they visit and become familiar with specific project sites.

The Bureaus of Engineering and Architecture need to review change orders resulting from design omissions and unforeseen site conditions to assess the extent to which physical site visits would improve the design document or reduce the need for change orders. For example, the Octavia Boulevard Street Improvement project incurred a \$26,500 change order because the project designer had not known about the adjacent International School's parking lot gates that opened onto the project site.

### *Site Testing during Project Planning and Design*

The Department of Public Works could reduce the frequency of construction contract change orders resulting from unforeseen site conditions by better testing of the site. Because increased testing results in increased planning and design costs, the Department needs to assess the costs and benefits of site testing and evaluation to determine if better site information can result in more efficient construction project results.

Both the Maxine Hall Health Center renovation and Helen Wills Park project encountered asbestos in the existing structures during the construction project, and the renovation of Fire Station No. 33 incurred multiple change orders to mitigate dry rot in the existing structure.

Because the Department of Public Works approves construction contract change orders, based on a negotiated price with the contractor or on time and materials, the resulting contract change order can represent higher costs than if the work were included in the initial low bid. Consequently, testing for and including specific site conditions in the original bid documents could result in cost savings and timely project completion.

## **Construction Document Review**

The Department of Public Works' task force to assess capital project quality assurance procedures considered revising the existing guidelines for the Bureau of Construction Management to review project plans and specifications to assure that project plans are compatible with the project site. The Department's current policies and procedures provides for construction management staff to participate in the document review process for large projects at the 50 percent, 75 percent, and 95 percent design stages. According to the policy, the Bureau of Construction Management staff participate in quality assurance evaluation, staging area, site preparation, construction execution, sequencing, and scheduling. For other projects, the Bureau of Construction Manager staff review the project plans and specifications prior to submission to bid. The task force considered revised procedures that would elaborate on these functions.

Because the City as a public agency is prohibited from consulting with construction contractors on site conditions prior to the bid process, the Department needs to rely on its own resources to determine if a design project on paper can successfully be implemented at the construction site. As in the case with site testing, the Department of Public Works needs to assess the costs and benefits of increased review compared to the potential costs of construction contract change orders and delays.

## **Conclusion**

The Department of Public Works has incurred significant construction contract costs resulting from contract changes due to design errors and omissions that differ from the design. Both the Bureaus of Architecture and Engineering have quality assurance and control programs, although the Bureau of Engineering's quality assurance program has been less fully implemented. Lack of quality controls over projects designed by consultants, inadequate communication with regulatory bodies regarding project design and implementation, and inadequate site information through testing and visits all contribute to contract cost increases.

## **Recommendations**

The Deputy Director for Engineering should:

- 6.1 Establish a common performance goal for the Bureau of Engineering and Bureau of Architecture that measures the impact of design errors and omissions on construction costs and report the outcomes annually.
- 6.2 Develop a plan and timeline to evaluate, implement, or further develop and revise the findings and recommendations of the Department of Public Works' capital project quality assurance task force.
- 6.3 Identify commonly occurring problems in design projects provided by consultants and develop protocols to address these problems.
- 6.4 Coordinate with the Mayor's Office of Disability and the Department of Building Inspection, among other agencies, to ensure that policies, procedures, and regulations are both well-understood and consistently applied.
- 6.5 Assess the cost of physical site visits during the planning and design of construction projects compared to the potential costs of construction contract change orders due to design errors and omissions and unforeseen site conditions, and implement site visit procedures based upon the assessment.
- 6.6 Assess the cost of site testing for different commonly-occurring site conditions and tests compared to the potential costs of construction contract change orders due to unforeseen site conditions, and implement site testing procedures based upon the assessment.
- 6.7 Assess the costs of additional construction document reviews for projects at different phases of the design process compared to the potential costs of construction contract change orders and delays and implement procedures based upon the assessment.

## **Costs and Benefits**

The Department of Public Works could reduce construction contract change order costs by strengthening its design quality controls. Based on the 49 construction projects completed in 2004 and 2005, a 10 percent reduction in construction change order costs would make available \$200,000 in funds that could be re-allocated to other projects.

## 7. Construction Contract Bids and Awards

- Accurate construction cost estimates are important to ensure that a capital project can be achieved with available funds. The Department of Public Works has had to re-bid or re-define projects when the construction bid amounts have significantly exceeded the construction cost estimates and available funds.
- Although the Bureau of Engineering's FY 2005-2006 performance target was that 75 percent of all construction contract awards were to be less than 105 percent of the construction contract estimate, only 55 percent of construction contract awards met this target.
- Although the Bureau of Architecture's FY 2005-2006 performance target was that 75 percent of all construction contract awards were to be less than 110 percent of the construction contract estimate, only 58 percent were met this target.
- City departments overall have reported that construction contract bids are high compared to construction contract estimates and that these high bids are due to a low number of contractors bidding on City construction projects. Although the number of construction contractors that bid on each project has declined and the contract bids and awards have increased citywide, the Department also needs to assess its cost estimating procedures.
- The City Attorney's Office has taken the lead in forming a task force to address these issues, including improving the bid environment. The task force has looked at a variety of issues, and recommendations will most likely address departments' procedures as well as interdepartmental practices and City policies. The Department of Public Works should develop a plan and formal process to review, consider, and implement appropriate task force recommendations once the City Attorney's Office releases the report.
- Several Department of Public Works construction projects have resulted in large cost overruns, significant delays and litigation. Department staff identified some of these potential problems during the contract bid, award, and negotiation process. However, the Department lacks procedures to identify and divert potential construction problems early in the process. The Department should work with the City Attorney's Office to develop risk management protocols, allowing the Department to promptly identify and address potential problems with contractors, and make decisions on the best course of action.

## The Department of Public Works' Construction Cost Estimates and Bids

The Department of Public Works project engineers and architects develop construction cost estimates when preparing construction project plans, specifications, and documents. The Department's Bureau of Architecture and Bureau of Engineering design staff prepare cost estimates on many of the Department's construction projects, although the Department will use consultants to prepare cost proposals for complex projects. According to interviews, the Department's staff lack sufficient construction cost estimating experience but consultants often underestimate or fail to understand the costs of the City's contracting practices.

The Bureau of Engineering's cost estimation policy aims for actual construction bids to be equal to or less than 105 percent of the project's estimated construction cost. The Bureau measures construction contract awards that are 105 percent or less than construction cost estimates, and reports the information as part of the Department's performance measures. Over the past three fiscal years, the percent of the Bureau of Engineering's contract awards that exceeded 105 percent of construction cost estimates increased from 6 percent of contracts in FY 2003-2004 to 45 percent of contracts in FY 2005-2006.

**Table 7.1**

### The Bureau of Engineering's Construction Contract Award Amounts as a Percentage of the Construction Cost Estimates

**FY 2003-2004 through FY 2005-2006**

Contract Bids	FY 2003-2004		FY 2004-2005		FY 2005-2006	
	Number	Percent	Number	Percent	Number	Percent
Less than 105% of Estimate	33	94%	23	68%	16	55%
Greater than 105% of Estimate	<u>2</u>	<u>6%</u>	<u>11</u>	<u>32%</u>	<u>13</u>	<u>45%</u>
Total	35	100%	34	100%	29	100%

Source: Bureau of Engineering

The Bureau of Architecture measures and reports construction contract awards that do not exceed the construction cost estimate by more than 10 percent. In FY 2005-2006, the percent of the Bureau of Architecture's contract awards that exceeded 110 percent of construction cost estimates was 42 percent, compared to 25 percent in FY 2003-2004.

**Table 7.2****The Bureau of Architecture's Construction Contract Award Amounts  
as a Percentage of the Construction Cost Estimates****FY 2003-2004 through FY 2005-2006**

<u>Contract Bids</u>	<b>FY 2003-2004</b>		<b>FY 2004-2005</b>		<b>FY 2005-2006</b>	
	Number	Percent	Number	Percent	Number	Percent
Less than 110% of Estimate	9	75%	1	33%	7	58%
Greater than 110% of Estimate	<u>3</u>	<u>25%</u>	<u>2</u>	<u>67%</u>	<u>5</u>	<u>42%</u>
Total	12	100%	3	100%	12	100%

Source: Bureau of Architecture

The Bureau of Engineering's FY 2005-2006 performance target was 75 percent of all construction contract awards were to be less than 105 percent of the construction contract estimate. However, only 55 percent of construction contract awards were less than 105 percent.

The Bureau of Architecture's FY 2005-2006 performance target was 75 percent of all construction contract awards were to be less than 110 percent of the construction contract estimate. However, only 58 percent were less than 110 percent.

**Standardizing Measures**

The process of planning, designing and estimating the costs of construction projects is comparable for the Bureau of Engineering and the Bureau of Architecture. The Bureaus should determine the best measure of cost estimation performance and standardize measuring and reporting of cost estimates and contract award amounts, to ensure that the measures are a meaningful tool for the Department of Public Works and others with an interest in the Department's performance.

**Evaluating Cost Estimation Performance**

The types of projects that received high bids compared to the construction cost estimates covered the spectrum of construction projects, including street, sewer, park, and building projects. The Department of Public Works staff, along with other City departments that manage capital projects, considers the high bid amounts compared to cost estimates to result from the low number of bids rather than problems with the design and cost estimating process.

### Evaluating the Cost Estimating Process

Although the low number of construction bids may contribute to the Department of Public Works' underestimation of construction costs, the Department also needs to assess its cost estimating procedures. Construction cost estimating takes place at different stages of the planning and design process. The initial conceptual estimate is used to determine the feasibility of the project and the preliminary estimate is used to request project funding or compare alternatives. The engineer's estimate is used to prepare the construction bid documents.

The construction bid estimates consist of direct construction costs for labor, materials, supplies, and equipment, and indirect costs for the contractor's and subcontractors' overhead and profit, insurance, and other administrative or support costs. According to the Bureau of Engineering's cost estimating policies and procedures, several variables make up cost estimates, including market and economic trends, availability of skilled labor and supply sources, and other factors. Cost estimation accuracy depends on experience, consultation with contractors and other designers, current knowledge of cost data, and sound knowledge of the project requirements.

Accurate cost estimates are important to ensure that a capital project can be achieved with available funds. The Department of Public Works has had to re-bid or re-define projects when the construction bid amounts have significantly exceeded the construction cost estimates and available funds.

According to the Bureau of Engineering, project designers are continuing to make adjustments to reflect the market situation. As noted in Section 6 of this report, the Department of Public Works has previously established a task force to assess capital project quality assurance procedures, including producing construction contract documents. The Department of Public Works needs to continue to evaluate the components of construction cost estimates and the construction cost estimate process to identify areas for improvement or increased efficiency.

### **The City Attorney's Task Force**

Citywide, the number of construction contractors that bid on each project has declined and the contract bids and awards have increased. The City Attorney's Office has taken the lead in forming a task force, bringing together capital project staff from the Airport, Port, Public Utilities Commission, Municipal Transportation Agency, and the Department of Public Works to address the issues. One of the task force's goals has been to improve the bidding environment. The City Engineer, who oversees the Department of Public Works Bureaus of Engineering, Architecture, and Construction Management has participated in the task force, along with other Department of Public Works staff.

According to the City Attorney's Office, the task force findings and recommendations will probably be released in the fall of 2006. The task force has looked at a variety of issues that impact construction bidding and contracting and recommendations will most

likely address departments' procedures as well as interdepartmental practices and City policies. The Department of Public Works should develop a plan and formal process to review, consider, and implement appropriate task force recommendations once the City Attorney's Office releases the report.

## **Managing Risks in Awarding Contracts**

The Administrative Code requires the Department of Public Works to select the responsible construction contractor submitting the lowest responsive bid. According to interviews, this low-bid requirement can result in the selection of inexperienced contractors or poor performing contractors.

Some Department of Public Works staff expressed concern that contractors underbid projects and then drive up the costs through change orders. A review of construction projects completed in 2004 and 2005 does not show a strong correlation between contract awards that were less than the construction cost estimate and change orders. Of the ten projects that were completed in 2004 and 2005, in which the bid was less than the construction cost estimate, only two resulted in final construction contract costs that exceeded the original construction cost estimate. The contract for Davies Symphony Hall system upgrades resulted in final contract costs that were 9 percent higher than initial cost estimates and the contract for Helen Wills Park resulted in final contract costs that were one percent higher than initial cost estimates.

## **Managing Problematic Contract Awards**

The Department of Public Works can experience and identify problems with the construction contractor early in the contract award process. The Department awarded the construction contract for the Fourth Street Bridge seismic retrofit and rehabilitation project to the lowest of five qualified bidders, Mitchell Engineering/ Obayashi Corporation, Joint Venture, in January 2003 with an expected construction start date in April 2003. The Joint Venture submitted a bid of \$16.98 million, which was less than the construction estimate of \$22.7 million. The Department awarded the contract to the Joint Venture despite concerns at the beginning of the project that the contractor lacked sufficient experience in bridge building, experience in completing complex projects, and the ability to appropriate staff the project.

According to Department of Public Works' documents, the contractor delayed in submitting the necessary insurance certificates, contractors' licenses, and business licenses. Although the contractor had failed to submit these insurance documents within the contractually required timeframe, the Department chose not to cancel the contract.

The expected construction start date was April 1, 2003, but the contractor was late in procuring materials, submitting shop drawings, and having sufficient staff in place to perform the job. At the same time, the contractor expressed concern about the impact of delays that the contractor considered to be caused by the Department of Public Works. Department's documents show that the Department was prepared to release the contractor from the contract, return the bid bond, and re-issue the bid.

The Fourth Street Bridge project has continued to have significant problems, delays and cost overruns. The original project scope anticipated an 18-month project but the project was not substantially complete until May 2006. The City and contractor are currently in Dispute Review Board hearings. The contractor is seeking a total claim of \$22 million. Previously, the contractor filed nine claims against the City for a total of \$7 million. The Department is seeking liquidated damages of \$8.6 million.

Several Department of Public Works projects have resulted in large cost overruns, significant delays and litigation. Although project delays and cost overruns can result from numerous causes, the Department needs to identify potential problems and develop strategies to avert problems early in the project. The Department should work with the City Attorney's Office to develop risk management protocols, allowing the Department to promptly identify and address potential problems with contractors, and make decisions on the best course of action.

## **Conclusion**

Accurate construction cost estimates are important to ensure that a capital project can be achieved with available funds. The Department of Public Works has had to re-bid or re-define projects when the construction bid amounts have significantly exceeded the construction cost estimates and available funds. The Department needs to continue to evaluate the components of construction cost estimates and the construction cost estimate process to identify areas for improvement or increased efficiency.

Further, the Department of Public Works has incurred significant construction project and litigation costs due to problems with construction contractors. Although the Administrative Code requires that the Department select the lowest qualified bidder for construction contracts, the Department does have options to identify and address potential problems with contractors early in the process. The Department needs to work with the City Attorney's Office to develop risk management protocols to reduce the incidence and costs of construction project delays, cost overruns, and litigation.

## **Recommendations**

The Deputy Director for Engineering should:

- 7.1 Determine the best measure of cost estimation performance and standardize measuring and reporting of cost estimates and contract award amounts for the Bureaus of Architecture and Engineering.
- 7.2 Continue to evaluate the components of construction cost estimates and the construction cost estimate process to identify areas for improvement or increased efficiency.

- 7.3 Develop a plan and formal process to review, consider, and implement appropriate task force recommendations once the City Attorney's Office releases the construction contracting task force report.
- 7.4 Work with the City Attorney's Office to develop risk management protocols, allowing the Department to promptly identify and address potential problems with contractors, and make decisions on the best course of action.

## **Costs and Benefits**

By implementing these recommendations, the Department of Public Works could better ensure that a capital project can be achieved with available funds and reduce the need to re-bid or re-define projects when the construction bid amounts have significantly exceeded the construction cost estimates and available funds.

The City faces significant legal and other costs when major construction problems occur. For example, the City could incur legal and construction costs for the Fourth Street Bridge project of several million dollars. Developing better risk management procedures would help to avoid such costs.

## 8. Construction Management Costs and Construction Project Timelines

- **Most of the Bureau of Construction Management's construction projects do not complete on the originally scheduled date. On average, construction projects extend for approximately 135 days, or four and one-half months, past the original construction completion date. When projects are not completed on time, not only does the project incur additional construction and construction management costs, but the City and the public are denied timely access to the facility.**
- **In a review of 27 construction contracts completed in 2004 and 2005, only 22 percent, or six contracts, completed by the original contract completion date. 78 percent, or 21 construction contracts, extended beyond the original contract completion date, ranging from two months to more than two years.**
- **The Bureau of Construction Management extends contract timelines due to weather delays, changes in work scope, and delays requested by the client or attributed to an outside factor. The Bureau generally documents time extensions through contract change orders**
- **The Bureau of Construction Management's procedures to document construction contract time extensions varies significantly among projects. The Bureau often documents and approves time extensions after the completion of the contract, some times as much as 16 months after the completion of the contract. By not formally approving and documenting contract time extensions during the course of the construction project, the Bureau reduces its control over time extensions and cannot ensure that the construction project does not incur unnecessary delays.**

The Department of Public Works' Bureau of Construction Management staff are responsible for managing construction projects and working with the construction contractor. Construction managers are minimally involved in the early planning and design stages of the capital project. Construction management staff review the construction documents prior to the bid announcement, but do not become actively involved in the project until the contractor is selected. Once the Department issues the notice to proceed to the contractor and the construction contract begins, the construction manager manages the construction project from the job site. For large construction projects, the construction manager will remain at the job site throughout the construction period. More than one construction management staff person may be assigned to the construction site for large or complex jobs.

## Construction Management Costs

Construction management costs are part of the capital project's delivery (or soft) costs. The Bureau of Construction Management provides estimated construction management costs to the project manager for each project and the project manager develops the construction management allocation for the capital project.

Generally, the Bureau of Construction Management's project costs for construction management services are within the norms identified by the *California Multi-Agency CIP Benchmarking Study Annual Report – Update 2005*<sup>1</sup>.

**Table 8.1**

### The Department of Public Works' Construction Management Costs as a Percentage of Total Construction Costs for Capital Projects Completed in 2005<sup>2</sup>

Average Costs for Department of Public Works Projects Completed in 2005	Average Construction Management Costs	Average Total Construction Costs	Construction Management Costs as a Percent of Total Construction Costs	California Multi-Agency CIP Benchmarking Study - Update 2005
<u>Sewer Projects</u>				
Sewer Projects Less than \$500,000	\$41,885	\$289,836	14%	16% to 19%
Sewer Projects \$500,000 to \$3,000,000	\$121,157	\$800,817	15%	14% to 16%
<u>Street Projects</u>				
Street Reconstruction Projects Less than \$500,000	\$80,830	\$448,865	18%	18% to 27%
Street Reconstruction Projects \$500,000 to \$3,000,000	\$232,238	\$1,610,717	14%	6% to 18%
Street Reconstruction Projects Greater than \$3,000,000	\$1,084,062	\$17,015,391	6.4%	5% to 6%
<u>Recreation and Park Clubhouses and Centers</u>				
Community Building Project \$500,000 to \$3,000,000	\$368,695	\$2,694,817	14%	11% to 17%
Community Building Project Greater than \$3,000,000	\$907,349	\$6,037,928	15%	6% to 11%
<u>Recreation and Park Playgrounds</u>				
Playground Project \$500,000 to \$3,000,000	\$117,300	\$1,493,573	10%	10% to 17%

Source: Department of Public Works Bureaus of Architecture and Engineering

<sup>1</sup> The *California Multi-Agency CIP Benchmarking Study – Update 2005*, published in September 2005, is a joint project of the cities of San Francisco, Sacramento, Oakland, San Jose, Long Beach, Los Angeles, and San Diego.

<sup>2</sup> The Budget Analyst obtained project delivery costs on 34 capital projects managed by the Department of Public Works and completed in 2005. Table 9.1 summarizes this capital project data and compares the results to the *California Multi-Agency CIP Benchmarking Study* benchmarks.

Construction management costs for one Recreation and Park Department project, the \$6 million Harding Park club house project, equaled 15 percent of total construction costs, compared to a benchmark range of 6 percent to 11 percent. According to the Manager of the Bureau of Construction Management, numerous project problems, including the deadline to complete the clubhouse prior to the PGA tournament, contributed to the higher than usual construction management costs.

## **Construction Contract Time Extensions**

Most of the Bureau of Construction Management's construction projects do not complete on the originally scheduled date.<sup>3</sup> On average, construction projects extend for approximately 135 days, or four and one-half months, past the original construction completion date. In a review of 27 construction contracts completed in 2004 and 2005:

- Six construction contracts, or 22 percent, completed by the original contract completion date. Two of these contracts were delayed due to inclement weather but otherwise the construction contract completed on time.
- Twenty-one construction contracts, or 78 percent, extended beyond the original contract completion date, ranging from two months to more than two years.

## **Change Order Agreements to Extend Contract Timelines**

The Bureau of Construction Management extends contract timelines due to weather delays, changes in work scope, and delays requested by the client or attributed to an outside factor. The Bureau generally documents time extensions through contract change orders.

The Bureau of Construction Management's contract change order procedure specifies that the resident construction manager or engineer initiates construction change orders and routes the change order documentation through the appropriate engineering and management staff. Both the contractor and the Department of Public Works managers sign the change order, formally agreeing to additional work, costs, and time extensions.

In practice, the Bureau of Construction Management often approves time extensions after the fact. According to the Bureau of Construction Management Manager, the contractor proceeds with additional work requested by the Department of Public Works or the client prior to change order approval to prevent unnecessary delays in the project. The Bureau of Construction Management Manager states that Bureau staff document and assess time extensions in daily reports and progress meetings, and formalize time extensions in change orders once the full extent is known.

A review of the 21 contracts with extended timelines shows that:

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<sup>3</sup> Of the 55 construction projects that were completed in 2004 and 2005, five projects had no data entered into the change order tracking system and no back up documents. Of the remaining 50 projects which were entered into the change order tracking system, the Budget Analyst obtained hard copy files for 27 projects which included detailed change order documentation.

- In only nine contracts did the Department formally approve contract time extensions through a change order signed by the Department managers and the contractor during the course of the construction project. However, in one of these nine contracts (project 0481J) the Department did not formally approve a change order for 101 days out of 225 days of extended time until six months after the completion of the project.
- In six contracts the Department did not document approval for all the days included in the time extension. The remaining days, or “overrun”, were included in the final time summary in the contract close out documents. For example, project 2019N timelines were extended by 546 days. The Department documented 293 days in time extensions in eight change orders approved and signed during the course of the project. However, according to the Bureau of Construction Management, the 253 day overrun, which included 81 days for a holiday moratorium and 172 days for delays attributed to PG&E and design changes, will be recommended in the time summary in the final close out documents.
- In six contracts, the Department documented approval for all time extensions after the completion of the project. The Department documented these time extensions in change orders or in the time summary in the final close out documents from one month to 16 months after the completion of the project.

The Attachment to Section 8 provides a summary of the 27 construction contracts.

### **Approval of Project Time Extensions through the Change Order Process**

According to the Bureau of Construction Management, timeline extensions are negotiated between the Bureau and the contractor. The Bureau authorizes the contractor to perform the work before negotiations are completed to avoid unnecessary project delays.

However, the Bureau of Construction Management’s practices vary widely among projects. Although the Bureau negotiates and documents time extensions through change orders during the course of the project, the Bureau often only documents time extensions after the project is completed.

For example, Project 0722A was extended by 258 days, from the original completion date of October 6, 2004 to the final completion date of May 22, 2005. According to the project’s construction manager, the Department negotiated time extensions with the contractor up front. According to contract documents, the project time extensions were approved and documented through change orders throughout the project, beginning with change order number seven prior to the original completion date and completing with change order number 15 shortly after the final completion date.

On the other hand, Project 2029N documented time extensions only after the completion of the project. The project was extended by 137 days from the original completion date of April 25, 2005 to the final completion date of September 9, 2005. According to the project’s construction manager, the project extensions received informal approval during

the course of the project. However, the Department did not document formal approval of the 137 day time extension until October 2005 after the completion of the project.

The Bureau needs to develop more uniform procedures to ensure that construction managers are monitoring, negotiating and documenting contract time extensions in a timely manner to prevent unnecessary project delays. The Department's change order procedure requires approval by senior managers and signoff by both Department managers and the contractor. Therefore, change order documentation to extend project timelines during the course of the project provides a formal agreement for the project extension and a project control over timelines.

## **Tracking of Change Orders in the Information System**

The Bureau of Construction Management's change order tracking system is intended to track the impact of construction contract change orders on project schedules and costs. Resident construction managers and engineers enter the information into the system from source documents. However, the resident construction managers and engineers differ widely in the level of detail and precision included in the information system entries. In a review of 55 projects completed in 2004 and 2005, the resident construction manager or engineer had made no entries for five of the projects, which had cumulative contract budgets of \$7.4 million. Many of the other projects had inaccurate or insufficient information. Consequently, although the Bureau managers can track specific projects, they cannot track the overall impact of change orders on construction projects.

## **Conclusion**

The Bureau of Construction Management's lacks sufficient control over construction project time extensions. The Bureau's practices to document construction contract time extensions vary significantly among projects, and the Bureau often documents and approves time extensions after the completion of the contract, some times as much as 16 months after the completion of the contract. The Bureau needs to document contract time extensions through the change order process during the construction project to ensure formal agreement between the Department and the contractor and provide control over project time extensions.

## **Recommendations**

The Bureau of Construction Management Manager should:

- 8.1 Implement procedures to (a) ensure accurate and complete entry of change order information into the Bureau of Construction Management's change order tracking system and (b) tracking and monitoring of change order information.
- 8.2 Re-evaluate time extension approval and documentation procedures, including change order policies, procedures, and practices, to ensure that the written

procedures provide sufficient project control over project timelines and that actual practices comply with procedures.

## **Costs and Benefits**

Implementation of these recommendations are intended to strengthen the Department of Public Works' controls over construction contract time extensions. Contract time extensions can result in increased Department costs for staff time to monitor the contract. By increasing control over contract time extensions, the Department should be able to reduce unnecessary staff costs, thus shifting staff resources to other uses.

### Time Extension Documentation in 27 Construction Contracts Completed in 2004 and 2005

Project	Original Completion Date	Final Completion Date	Approved Time Extension (Days)	Actual Time Extension (Days)	Overrun (Days)	Comments
Construction Contracts Completed on Time, Including Extensions due to Inclement Weather						
0873J	02/28/05	03/09/05	9	9	0	The Department approved time extensions for unworkable days due to inclement weather.
0333J	02/19/04	03/12/04	22	22	0	The Department approved time extensions for unworkable days due to inclement weather.
0769J	04/10/04	04/02/04	0	(8)	0	This contract completed prior to the original completion date.
0902J	09/24/05	09/09/05	0	(15)	0	This contract completed prior to the original completion date.
0982J	1/03/05	01/03/05	0	0	0	This was an emergency contract for an eight-day project.
1721N	07/30/04	07/30/04	0	0	0	This project completed on time.
Construction Contracts with Time Extensions Documented through Approved Change Orders during Project						
0742J	12/12/03	07/13/05	579	579	0	This project had significant delays at the beginning due to extra time required to obtain materials, redesign of poles and signs, utility conflicts, and holiday moratoriums.
0322J	02/03/04	05/20/04	107	107	0	The Department increased the scope of this street paving project at the end of the contract due to additional funds becoming available.
0480J	07/01/04	05/04/05	308	307	(1)	This project had significant delays at the beginning because of utility delays.

<b>Project</b>	<b>Original Completion Date</b>	<b>Final Completion Date</b>	<b>Approved Time Extension (Days)</b>	<b>Actual Time Extension (Days)</b>	<b>Overrun (Days)</b>	<b>Comments</b>
0481J	07/01/04	02/11/05	225	225	0	The Bureau formally approved 114 days of the time extension in change orders during the project. However, the final change order to extend the contract by 101 days was not approved until six months after the final completion date.
6193A	10/25/04	02/25/05	153	123	(30)	The Bureau approved 81 days of the time extensions in change orders during the project, and the final 72 days in a change order one week after the final completion date.
0761J	01/31/05	06/09/05	129	129	0	The Bureau approved the 129 day time extension in a change order prior to the final completion date.
0486J	06/01/04	09/17/04	108	108	0	The Bureau approved 93 days of the time extension in a change order during the project and the remaining 15 days due to inclement weather in the close-out documents.
0488J	09/12/03	04/23/04	224	224	0	The project was delayed initially due to bird nesting in the project areas by 31 days. The Bureau approved the remaining 193 days in change orders during the project, with the final change order approval for 25 of the 193 days one month after the end of the project.
1655N	03/9/02	04/30/04	781	781	0	This project had major design changes and delays. The Bureau approved the initial 317 day extension in a change order two months after the original completion date and approved the second 461 day extension after the project had been temporarily shut down and prior to the notice to proceed for the second phase of the project.

<b>Project</b>	<b>Original Completion Date</b>	<b>Final Completion Date</b>	<b>Approved Time Extension (Days)</b>	<b>Actual Time Extension (Days)</b>	<b>Overrun (Days)</b>	<b>Comments</b>
Construction Contracts with Time Extensions Documented through Approved Change Orders during Project and in the Close Out Documents						
0235J	08/10/03	01/09/04	103	152	49	The Bureau approved 83 days of the time extension in change orders prior to the final completion date and 20 days of the time extension in a change order two months after the final completion date. According to the Bureau, the final 49 days will be documented in the construction close-out documents without compensation to the contractor, based on an agreement between the City and the contractor.
0722J	10/06/04	06/21/05	228	258	30	The Bureau approved 228 days of the time extensions in change orders during the course of the project. The final 30 day overrun was due to late discovery of construction problems after the project was substantially complete and open for public use.
2019N	05/28/03	11/24/04	293	546	253	The Department documented 293 days in time extensions in eight change orders approved and signed during the course of the project. However, according to the Bureau of Construction Management, the final 253 days (81 days for holiday moratorium and 172 days for PG&E delays and design changes) not accounted for in change orders will be recommended in the time summary in the final close out documents.
6117A	05/23/03	10/31/05	710	892	182	The Department documented 606 days of the approved 710-day time extension in a change order approved at the end of the project. According to the Bureau of Construction Management, the project was delayed by 182 days because the Bureau of Street Use and Mapping did not sign off on the sidewalk construction, citing compliance with American with Disabilities Act requirements. The City released the contractor from further responsibility. According to the Bureau of Street Use and Management, the final 182 day time extension will be recommended in the time summary in the final close out documents.

<b>Project</b>	<b>Original Completion Date</b>	<b>Final Completion Date</b>	<b>Approved Time Extension (Days)</b>	<b>Actual Time Extension (Days)</b>	<b>Overrun (Days)</b>	<b>Comments</b>
6130A	7/12/2003	3/31/2005	157	628	471	The Department documented 157 days of the time extensions in change orders approved during the project. According to the Bureau of Construction Management, the project was delayed by 471 days due to changes in the curb ramp design specifications, design changes to accommodate the specifications, and lack of available funding. The City eventually released the contractor from further responsibility.
6179A	03/18/05	10/05/05	110	201	91	According to the Bureau of Construction Management, the Department incurred 91 days in time extensions that were not approved through change orders during the course of the project due to delays in obtaining Department of Building Inspection permits and obtaining the necessary equipment to perform the work.
<b>Construction Contracts with All Time Extensions Approved at the End of the Project</b>						
0494J	08/27/04	02/25/05	182	182	0	The Department documented time extensions totaling 182 days (12 days for inclement weather and 170 days for additional work and client delays) in a change order that was approved one year after the completion of the project.
0390J	10/17/04	01/17/05	92	92	0	The Department documented time extensions totaling 92 days (17 days for inclement weather and 75 days for design changes) in a change order that was approved 16 months after the completion of the project.
0022J	11/29/04	07/27/05	151	240	89	The Department documented time extensions of 151 days in a change order that was approved four months after the completion of the project. According to the Bureau of Construction Management, the contract has not been closed out due to an outstanding claim by the contractor. The 89 day overrun is dependent on the outcome of the claim.
0064J	12/28/04	03/15/05	77	77	0	The Department documented time extensions of 77 days due to the holiday moratorium and additional work in the final contract summary in the close out documents.

<b>Project</b>	<b>Original Completion Date</b>	<b>Final Completion Date</b>	<b>Approved Time Extension (Days)</b>	<b>Actual Time Extension (Days)</b>	<b>Overrun (Days)</b>	<b>Comments</b>
2029N	04/25/05	09/09/05	137	137	0	The Department documented the 137 day time extension in a change order one month after the completion of the project.
5475A	08/10/04	12/23/04	0	135	135	The Department documented the 135 day time extension in the final contract summary. According to contract documents, the contractor may be assessed liquidated damages for the 135 day overrun, pending the outcome of negotiations between the Office of Labor Standards Enforcement and the contractor.

## 9. Capital Project Accounting and Closeout

- **The Department of Public Works accounting for and reporting of capital projects does not facilitate effective project management. The Budget Analyst's review found weaknesses in internal controls surrounding the management of capital projects. These issues include: a) projects not being closed timely once complete or indefinitely delayed, resulting in labor charges after projects appear to be complete and significant unspent project balances, b) unclear project parameters, c) inconsistent treatment of labor spent on projects with no established funding source or insufficient funding, d) negative project balances, and e) inaccurate and incomplete project information in the Department's Project Management Database.**
- **These issues are due in large part, but not entirely, to the way capital projects are structured in FAMIS in which management of a project and budgetary control can be shared by two or more responsible departments. These issues also stem from a lack of established and documented protocol for opening and closing projects, working on projects with no established funding source, maintaining budgetary control, and maintaining current data and information in the Project Management Database.**
- **The annual reconciliation of inactive funds is not sufficient to mitigate these issues and a significant backlog of unreconciled projects at the Department of Public Works persists. The Director of Public Works, in consultation with the Controller, needs to address process issues and increase internal controls and standardization to the greatest extent possible. This is especially critical at this time given the City's renewed focus on the capital program and the development of the 10-Year Capital Plan.**

Many capital projects are managed solely by the Department of Public Works and its bureaus. However, many other capital projects are managed by the Department of Public Works for, and in coordination with, other City departments. Because of this relationship and how projects are structured in the City's Financial Accounting and Management Information System (FAMIS), one capital project may be bifurcated into two or more segments, each controlled separately by the individual departments.

Because expenditure controls are at the project level, this project management approach can create a situation where one department may overspend its allocation and another department may under-spend its allocation. For example, in the SEP Building 785 Thickening Facilities Improvement capital project detailed below, the Department of

Public Works project balance is \$230,109, but the client department is over-budget by \$137,149, resulting in a total Citywide unexpended balance for the project of \$92,961.

The focus of this review was on Department of Public Works accounting and reporting processes and, thus, project activities in other City departments were not reviewed. In order to verify that the accounting for and reporting of capital projects facilitates effective project management, the Budget Analyst reviewed Department of Public Works processes for tracking and monitoring these projects.

As part of the Budget Analyst's assessment, 24 of 920 capital projects that had been or were actively being managed by the Department of Public Works as of February 13, 2006 were judgmentally selected and reviewed to obtain an understanding of the accounting practices related to a variety of projects<sup>1</sup>. This review found several examples of accounting and reporting weaknesses that indicate a lack of internal controls surrounding the management of capital projects. Such examples are listed below:

- Changing Department of Public Works project management assignments and inconsistent oversight by client departments compromises authority and accountability over project finances;
- Projects are not being closed timely once they are complete or have indefinite delays;
- Labor charges have been posted to projects after the project appears to be complete or indefinitely delayed;
- Projects can have significant balances of unspent appropriations long after the project appears to be complete or indefinitely delayed;
- Projects may be purposely charged for the cost of activities unrelated to the stated rationale for the original appropriation authority;
- Projects are not consistently well defined or have clear parameters;
- There does not appear to be a documented protocol for working on projects with no identified and/or established funding source; and,
- There are significant negative project balances.

Samples of the projects where these weaknesses were found are described below.

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<sup>1</sup> The sample was selected from a report generated by the Department of Public Works of capital projects open in FAMIS as of February 13, 2006.

**San Francisco Fire Department Boat Headquarters (CFCFD2, Job Order 5478A)**

	Budget	Actual Expenditures	Encumbrance	Balance
As of 2/13/06	\$1,724,238	\$442,894	\$26,643	\$1,254,701

According to the Department of Public Works' Project Management Database of the Financial and Personnel System, the San Francisco Fire Department Boat Headquarters project was established for "seismic strengthening of existing building and pier, provision of handicapped toilet and women's facilities and upgrading of plumbing, mechanical and electrical systems." According to the Project Management Database, the project start date was May 5, 1997 and the project close date was October 24, 2001. According to the Fire Department, this project was placed on hold while the Fire Department worked with the Port of San Francisco to identify an alternative site because the original project plan proved to be very costly for the limited amount of work allowed on the historic building. Further, the Fire Department reports that during the development of the project plans, Emergency Medical Services was transferred to the Fire Department and accommodations for the additional staff were not included in the original project plans. Therefore, according to the Department of Public Works project manager, although the design work was completed, the project was cancelled because the Fire Department opted to locate at an alternative sight provided by the Port of San Francisco. However, an appropriate alternative proved to be untenable and the Fire Department reports that the original project plan will be re-established and revised.

A review of accounting transactions through February 2006 indicates the last significant labor and non-labor activity occurred in FY 1999-2000 and ended in May 2000, over six year ago. Since that time, an additional 24 hours were charged to the project at a cost of \$2,671. Of this amount, nine hours at a cost of \$1,239 was charged after the project close date. Further, according to the project manager, the \$26,643 in outstanding encumbrances are for specialty engineering consultants used during the initial planning phase. Yet, these encumbrances remain open. Finally, on April 19, 2005, the project budget was reduced by \$487,610 to provide supplemental appropriations for the San Bruno Jail and Juvenile Hall projects. It is the understanding of the Fire Department that these funds will be returned to the project.

As noted above, this project was placed on hold for approximately six years while the Fire Department sought to identify project alternatives. During that time, additional charges occurred, encumbrances that were no longer necessary remained open, project scope dramatically changed - and then changed again - and a portion of the budgeted funds were re-allocated. Yet, the project was not closed out as part of a larger comprehensive management of these bond funds or of Fire Department capital projects, in general. The Fire Department reports that when the capital program was at its peak, these funds and projects were managed by a position that was eliminated from the Department's budget in 2002.

**San Francisco Fire Department Station #12 (CFCFD2, Job Order 5465A)**

	Budget	Actual Expenditures	Encumbrance	Balance
As of 2/13/06	\$981,000	\$870,431	\$0	\$110,569

According to the Project Management Database, the San Francisco Fire Department Station #12 project was established for general improvements to the fire station, including separate facilities for female firefighters, re-roofing, and mechanical and electrical system upgrades. According to the Project Management Database, the project start date was December 2, 1997 and the project close date was March 17, 2000, with the last labor charges posting in FY 2000-2001. According to the Department of Public Works project manager and the Fire Department, this project is now completed and can be closed. While the Department of Public Works available balance shows \$110,569, the Fire Department incurred an additional expenditure on this project totaling \$40,213 in FY 2002-2003, which is not included and accordingly offsets the Department of Public Works reported balance, resulting in an adjusted project remaining balance of \$70,357.

**San Francisco Fire Department Pump Station 1 Renovation (CATES1, Job Order 5228A)**

	Budget	Actual Expenditures	Encumbrance	Balance
As of 2/13/06	\$11,256,060	\$11,023,529	\$0	\$232,531

According to the Project Management Database, the San Francisco Fire Department Pump Station 1 Renovation project was established for construction of three office floors and a basement within an existing facility. While there are no project start and project close dates reported in the Project Management Database, the last labor charges were posted in FY 2001-2002 and the last significant non-labor charges occurred in FY 1998-1999. According to the Department of Public Works project manager, this project was completed and the remaining balance should have been returned to the Fire Department's master project funded from the 1989 Earthquake Safety Bond. Since being made aware of the available balance as a result of this management audit, the project manager reports that the project has now been closed.

**War Memorial Opera House Seismic Upgrade (CATES2, Job Order 2342U)**

	Budget	Actual Expenditures	Encumbrance	Balance
As of 2/13/06	\$49,243,118	\$48,340,958	\$0	\$902,160

The Project Management Database notes that this project was established for the seismic upgrade of the Opera House, including disabled access upgrades, facility preservation, hazardous materials mitigation, and earthquake damage repair. According to the Project Management Database, the project start date was February 1, 1993 and the project close

date was September 5, 1997. Because project activity occurred before the establishment of the Project Management Database, there is insufficient information to obtain a clear understanding of the transaction history of this project. Further, in FY 2001-2002 the Project Management Database included \$48,420 in labor charges and it is unclear, given the project close date of September 5, 1997, whether these charges were appropriately charged to the project. The Director of the War Memorial reports that an email inquiry was made at the time of the charges for an explanation, but the Department of Public Works did not respond.

The Project Management Database listed an individual that never worked on the main seismic project as the project manager. When contacted during this management audit, this individual was unable to comment on project status other than to indicate that the project may have been kept open to fund other projects. There had been two other Department of Public Works project managers for this project, but both are no longer with the Department of Public Works. According to the Director of the War Memorial, the funding spent after the project close date and the remaining project balance were earmarked for capital improvements to the facility that could not be incorporated into the initial project due to the restricted project schedule. The Director attributed the ten-year delay for expending the final funds to a number of factors, including other repair and maintenance priorities that resulted from the initial construction project and the disintegration of the Department of Public Works project management team. However, the final component of this project, a fire sprinkler protection upgrade, has recently been initiated and is expected to utilize all remaining funding in this project.

***Hill Slides/Rockfalls FY 03-04 (CENTRN, Job Order 0910J)***

	Budget	Actual Expenditures	Encumbrance	Balance
As of 2/13/06	\$40,963	\$8,353	\$0	\$32,610

The Project Management Database notes that this project was established to cover expenditures of staff responding to landslides or rockfall incidents and other related tasks. While the Project Management Database reports the project start date as May 3, 2004 and project close date as June 30, 2005 and despite the project title indicating the funds are for FY 2003-2004, it appears this project has accumulated funds from several other projects that have been closed. Additionally, there is a more recent project established for similar activities in FY 2005-2006 with an original appropriation of \$100,000, expenditures through February 13, 2006 of \$37,807, and a balance remaining of \$62,193. The Bureau of Engineering which oversees this project reports that while funds are appropriated in a particular fiscal year, there is no requirement that the funds be spent only during that year. Further, the Bureau reports that hillslide and rockfall projects can and do span fiscal years and that funds are carried forward for this purpose.

According to the project manager, there is annual funding for responding to emergency landslides, but the funds are also used at management's discretion and for construction activities. The project manager reported that the FY 2003-2004 project could not be

closed because the funding was needed for current staff expenditures and to pay for staff time preparing plans for how to respond to future emergencies. When asked how staff know which project to charge, the project manager reported that staff try to bill older projects first. Further, the project manager stated during interviews that older projects may also be used to provide "bridge" funding until new appropriation authority is obtained for new projects. Indeed, a review of documentation indicates that the Hill Slides/Rockfalls FY 03-04 capital project with a reported close date of June 30, 2005 had recent expenditures through December of 2005.

Several weaknesses become apparent when examining this project:

- The project may not meet the definition of a capital project if expenditures are for on-going maintenance and repair activities;
- There does not appear to be defining criteria for what is charged to the project with respect to timing or to activities. Thus, the contrivance of a project has no actual meaning;
- It is not appropriate to charge unrelated time to a project while waiting for a new project to be established because there does not appear to be department protocol or controls ensuring that such expenditures will be reversed at a later time, even if new funding has not been obtained; and,
- If these funds are to be used for emergency purposes, then the funds for FY 2005-2006 and prior years should be closed, presuming that additional funding was provided in FY 2006-2007.

***SEWPCP Cogen/Digester Gas Study (CENRNR, Job Order 0709J)***

	Budget	Actual Expenditures	Encumbrance	Balance
As of 2/13/06	\$59,500	\$73,621	\$0	(\$14,121)

The Project Management Database does not have a description of this project. However, the San Francisco Public Utilities Commission reports that this project was for a study of digester gas production and how the digester gas production can be best handled for cogeneration and other reuses. According to the Project Management Database, the project start date was April 15, 2002 and the project close date was December 31, 2004. The individual listed in the system as the project manager reported that his role was only for contract administration. He referred Budget Analyst staff to an individual in another division of the Department of Public Works, who reported his role was limited as well and referred Budget Analyst staff to a third individual, who in turn reported that he had absolutely nothing to do with the project.

As shown above in the table, the project is over-budget by \$14,121, but there is no one individual responsible for making the necessary budget adjustments and closing out the

project. Further, the Public Utilities Commission's component of the project is also over-budget by \$21,219 and the Wastewater Enterprise has an unexpended budget balance of \$8,000. Thus, the total project is over-budget by \$27,339. According to the Public Utilities Commission, the Department of Public Works is responsible for notifying the Public Utilities Commission that it requires additional funds.

***SEP Building 785 Thickening Facilities Improvement (CENRNR, Job Order 0199J)***

	Budget	Actual Expenditures	Encumbrance	Balance
As of 2/13/06	\$277,500	\$47,391	\$0	\$230,109

While the Project Management Database reports a project start date of August 20, 2001 and a project close date of August 20, 2003, the project manager reports that this was a small component of a much larger project started in the mid 1990's by the Public Utilities Commission's Water Pollution Control Bureau. According to the project manager, the role of the Department of Public Works was only to provide support to award a contract. The project manager reported that he needs to be notified by the Public Utilities Commission to close the project.

***Office of City Architect (CENBLD, Job Order 0055J)***

	Budget	Actual Expenditures	Encumbrance	Balance
As of 2/13/06	\$265,004	\$245,003	\$0	\$20,001*

\* The \$20,001 balance of appropriations is offset by unrealized revenues of \$20,001 and, therefore, there is no funding to support the appropriation balance.

The Project Management Database notes that this project was established to manage all expenses related to the office of the City Architect. No project start date or project close date was entered in the Project Management Database. The project manager is no longer with the Department of Public Works and is now the department head of the Recreation and Park Department. According to the current Bureau of Architecture manager, this project was handled by the Mayor's Office and the Department did not have any involvement. The last expenditures occurred October 6, 2003.

***Compressed Natural Gas (CENTRN, Job Order 0702J)***

	Budget	Actual Expenditures	Encumbrance	Balance
As of 2/13/06	\$348,145	\$348,145	\$0	\$0

According to the project manager, the Department of Public Works assisted the Department of the Environment in awarding a construction contract for the building of a natural gas filing station. All funding available to the Department of Public Works has now been expended and, accordingly, the Department is attempting to spend as little time

as possible on this project. Thus, the project manager reports that labor charges spent on this project are now being charged to overhead, which as of April of 2006 totaled approximately \$4,861. However, the project manager also reported that this is not a typical practice and that he is not aware of any other projects being charged to overhead.

***Laguna Honda Hospital Pharmacy Office Remodel (CHLBLD, Job Order 6139A)***

	Budget	Actual Expenditures	Encumbrance	Balance
As of 2/13/06	\$161,796	\$53,472	\$616	\$107,708

According to the Project Management Database, the Laguna Honda Hospital Pharmacy Office Remodel project was established to provide architectural and engineering services for remodeling storage rooms and offices. According to the Project Management Database, the project start date was April 23, 2001 and the project close date was June 30, 2006. The project manager listed in the Project Management Database has not managed capital project for the Department since December 2002. She reports that the last action before she left was to submit the project for permits, but she did not know the outcome. According to the acting Director for Plant Service at Laguna Honda Hospital, there was staff turnover at both the Department of Public Works and Laguna Honda Hospital, which is the likely cause of the project delay. While the permit was granted, it has now expired. Since made aware of this situation during the management audit, the project has now been re-instated with the intention of keeping the project scope the same.

**Capital Project Reporting and Reconciliation**

As described above, one or more departments may have responsibility over any given project. This decentralized responsibility over project management has lead to a lack of control over project budgets and closeouts. While the Controller's Office does an annual review of capital projects by forwarding project listings and project balances to departments to facilitate the closure of projects in FAMIS, departments either defer to each other as the responsible party or they simply do not report the need to close a project in order to retain the funding within the department for some future use. Such future use may or may not be identified, such as in the San Francisco Fire Department Boat Headquarters example above, or may not be capital-related, such as for repair and maintenance or an occasional charge to the project since funding is available, such as in the Hill Slides/Rockfalls FY 03-04 example above.

The Controller's report of the Department of Public Work's inactive capital projects as of April 27, 2005 identified 1,053 capital project segments with a net project balance of (\$164,718,127) that had no activity for at least two fiscal years.<sup>2 3</sup> In other words,

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<sup>2</sup> As stipulated in the Administrative Provisions of the Annual Appropriation Ordinance (Section 12.10), the Controller is authorized and directed to close projects that have not had expenditure activity for the past two fiscal years.

financing uses exceeded financing sources available to the Department of Public Works by \$164,718,127. As noted above, this negative balance was likely offset by positive balances in the same projects which were allocated to other departments. Of these 1,053 capital project segments, the Department of Public Works reported that, as part of the FY 2004-2005 year-end close process, 1,017 capital project segments should be closed with a balance of (\$157,997,657) and only 34 project segments, with a balance of (\$6,423,244) should remain open.

The Department of Public Works reports that the capital projects identified for closure included balances that accumulated over many years because of a lack of reconciliation. According to the Director of Accounting and Contract Administration, the Department is working with the Controller's Office at this time to close out grants and, subsequently, the related capital projects will be closed. For more current projects, the Director reports that capital projects are reviewed annually due to GASB 34 financial reporting requirements. Further, the Director has advised that the Department is reinstating routine reports that will be automatically transmitted to project managers and client departments when project expenditures hit 80 percent of total budgeted funds.

## **Conclusion**

The Department of Public Works has not established strong internal controls over accounting and reporting for the management of capital projects. Internal control weaknesses identified as part of this review are due in large part, but not entirely, to the way capital projects are structured in FAMIS, in which management of a project and budgetary control can be shared by two or more responsible departments. These weaknesses also stem from a lack of established and documented protocol for opening and closing projects, working on projects with no identified and established funding source, lack of appropriate budgetary control, and lapses in maintaining current data and information in the Department's Project Management Database.

The annual reconciliation of inactive funds is not sufficient to mitigate these issues and a significant backlog of unreconciled projects persists. The Director of Public Works, in consultation with the Controller, needs to address process issues and increase internal controls and standardization to the greatest extent possible. This is especially critical at this time given the City's renewed focus on the capital program and the development of the 10-Year Capital Plan.

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<sup>3</sup> The Controller's report separates projects and project detail by fund. Therefore, one project may be comprised of several segments in different funds. For purposes of this analysis, each segment is considered a separate project account because while the control of expenditures is at the total project level, expenditure control is also maintained at the fund level.

## **Recommendations**

The Director of Public Works should:

- 9.1 Establish a task force with representatives from the Department of Public Works, the Controller's Office and client departments to develop and implement a plan to address capital project accounting process issues as well as current reconciliation and closeout of inactive projects.
- 9.2 Report back to the Board of Supervisors during the FY 2007-2008 budget hearing on the status of the implementation of the task force findings and plan.

## **Costs and Benefits**

The costs associated with these recommendations would be the staff time required to develop and implement a plan to address capital project accounting process issues and the reconciliation and closeout of inactive projects. These costs, especially as related to the inactive project reconciliation, may be considerable, but should be a priority and absorbed by existing resources. However, the benefits include the reallocation of capital funds once existing inactive capital projects are reconciled.

## 10. Engineering and Architecture Staff Resources

- **The Department of Public Works is not able to plan long-term for its capital project staffing needs. Although some of the Department's capital project funding is stable or predictable, project funding and work provided by other City departments fluctuates. Consequently, the Department could potentially have insufficient project funding to pay for the Department's existing engineering and architecture staff, resulting in overstaffing.**
- **For example, the Municipal Transportation Agency is performing more electrical engineering work in-house to provide sufficient work to its own engineering staff as the Agency's funding for large projects declines, and therefore providing less electrical work to the Department of Public Works. As the Municipal Transportation Agency assumes more of its own electrical engineering work, the Department of Public Works could be overstaffed with electrical engineers. Also, beginning in October 2006 the Recreation and Park Department will hire project managers for Recreation and Park Department projects, potentially creating overstaffing in the Department of Public Works as its project managers, who previously managed Recreation and Park Department projects, return to their former classifications.**
- **Currently, the Department of Public Works can only project sufficient funding to pay for current staff for two months for electrical engineers to 12 months or more for engineers designing and managing street projects. A Citywide task force report in 2005 found that the City needs effective strategic planning for capital resources to prevent shifts in work load, overstaffing, and layoffs.**
- **Although the City's capital program is decentralized, the City's Administrator is coordinating the Citywide capital planning process pursuant to 2005 Administrative Code provisions. The City Administrator should assist the City departments, including the Department of Public Works, in planning capital project staff resources as part of the capital planning process.**

The Department of Public Works' Bureaus of Engineering and Architecture pay for staff time from project funding. Except for the Hall of Justice, streets and public right of way projects, and other various projects that are under the Department jurisdiction, the Bureaus of Engineering and Architecture receive project funding from other City departments and the San Francisco Unified School District.

The Bureaus of Engineering and Architecture budgets include Department overhead, bureau overhead, and project costs. Department and bureau overhead costs are allocated

to projects through the indirect cost rate, as discussed in Section 17 of this report. The Bureaus' senior managers charge their time to overhead, but all other bureau staff are expected to charge all their time to projects. The Bureaus' overhead makes up approximately 25 percent of the Bureaus' annual budgets.

## **Capital Projects and Staffing**

The Bureau of Engineering and the Bureau of Architecture solicit and receive projects similar to a private engineering and architecture firm without the staffing flexibility of a private firm. Although under the Administrative Code the Department of Public Works manages all City General Fund department capital projects, the City departments that have their own capital project contracting authority<sup>1</sup> can manage their own projects or contract with the Department of Public Works to manage their projects. The Department's share of City capital projects has declined over time as the Public Utilities Commission, Municipal Transportation Agency, Recreation and Park Department, and other City departments with contracting authority have assumed management of their own projects.

Over the next year, both the Recreation and Park Department and the Municipal Transportation Agency will take on more responsibility for their own capital projects. As the Municipal Transportation Agency completes its large capital projects, such as the Third Street Light Rail project, the Agency is taking back smaller electrical projects, such as traffic signals, that have been performed by the Department of Public Works staff. The loss of the Municipal Transportation Agency electrical work creates project, work load, and staffing problems for the Bureau of Engineering's electrical engineering section.

In FY 2006-2007, the Recreation and Park Department is assuming project management of its recreation center and park projects that have previously been managed by the Department of Public Works project managers. The Department of Public Works and the Recreation and Park Department completed a Memorandum of Understanding in September 2006 on the impact of the Recreation and Park Department's project management plan. Under the Memorandum of Understanding, the Recreation and Park Department will manage all the Department's capital projects by may allocate project planning, design, and construction management work to the Department of Public Works. As noted by the Budget Analyst during the FY 2006-2007 budget review, the Department of Public Works Bureau of Engineering and Bureau of Architecture will have surplus positions if the Department's project managers who currently manage Recreation and Park Department projects do not move into Recreation and Park Department project manager positions.

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<sup>1</sup> The City departments with contracting authority include the Airport, Port, Municipal Transportation Agency, Public Utilities Commission, and Recreation and Park Department.

## The Bureaus of Engineering and Architecture Staffing Procedures

Both the Bureaus of Engineering and Architecture are concerned about uncertainties in project funding and the impact on staffing. The Bureaus' full time positions in the annual budget have decreased over the past five fiscal years but project funding has also varied or declined.

**Table 10.1**

### The Bureaus of Engineering and Architecture Budgeted Full Time Equivalent Positions

**FY 2002-2003 to FY 2006-2007**

	<b>FY 2002-2003</b>	<b>FY 2003-2004</b>	<b>FY 2004-2005</b>	<b>FY 2005-2006</b>	<b>FY 2006-2007</b>	<b>Percent Increase/ (Decrease) in Budgeted Positions FY 2002-2003 to FY 2006-2007</b>
<b>Bureau of Engineering</b>						
Positions Allocated to Overhead	35.01	33.76	31.18	30.65	31.56	(9.9%)
Positions Allocated to Projects	<u>172.69</u>	<u>171.01</u>	<u>164.84</u>	<u>161.87</u>	<u>158.88</u>	(8.0%)
	207.70	204.77	196.02	192.52	190.44	(8.3%)
<b>Bureau of Architecture</b>						
Positions Allocated to Overhead	18.64	17.73	18.18	18.06	17.01	(8.7%)
Positions Allocated to Projects	<u>80.84</u>	<u>79.88</u>	<u>80.26</u>	<u>79.70</u>	<u>81.15</u>	0.4%
	99.48	97.61	98.44	97.76	98.16	(1.3%)

Source: Annual Salary Ordinance

During this period, the Public Utilities Commission and Municipal Transportation Agency have taken on more of their own capital project work; funding for large street projects, such as the mid-Embarcadero and Octavia Boulevard projects has declined; and Library projects, funded by general obligation bonds, are concluding. The number of filled positions in the Bureaus of Engineering and Architecture is less than the number of budgeted positions. In FY 2005-2006, approximately 70 of the Bureau of Architecture's 98 full time equivalent positions were filled and approximately 132 of the Bureau of Engineering's 190 full time equivalent positions were filled.

The Bureaus of Engineering and Architecture have permanent positions to perform their routine and expected work. Additionally, each Bureau maintains a pool of as-needed

contractors to provide services during peak work load and hires consultants with expertise in specialized work, such as designing bridges, hospitals, and jails. The Department of Public Works can use as-needed contractors for smaller projects with up to \$200,000 in fees but undergoes a formal bidding process to select architects and engineers for large projects.

#### The Bureau of Engineering's Work Load and Staffing Plans

Section managers within the Bureaus of Engineering and Architecture monitor project funding and develop work load projections for their section. The Bureau of Engineering has six sections, defined by engineering discipline, which provide engineering planning and design services.

##### *Landscape Architecture*

The landscape architecture section serves two major clients, the Recreation and Park Department and the Public Utilities Commission. The Recreation and Park Department bond-funded program has stopped and started in the past few years, due to changes in administration and program priorities. The Public Utilities Commission work has been more stable. The section has accommodated changes in staffing needs by rotating staff to other work, including construction management.

##### *Streets and Highways*

The streets and highways section has two major components: street renovation and curb ramp improvements. These projects, which are funded mostly, by the ½ cent sales tax, administered by the San Francisco County Transportation Authority, are sponsored by the Department of Public Works, which has responsibility for the public right of way. Some street or curb ramp projects are funded by other City departments. In FY 2006-2007, the General Fund provided \$15 million in funding for street projects.

##### *Structural Engineering*

The structural engineering section provides services to other City departments, as well as providing some General Fund services for structural inspections and responses to landslides. The structural engineering projects tend to be small, discrete projects, and funding for these projects varies during the course of the year. According to the section manager, funding can be insufficient to pay staff costs for more than 10 to 12 days in advance, requiring the section manager to actively seek more work or transfer staff temporarily to other assignments.

##### *Mechanical Engineering*

The mechanical engineering section provides planning and design services for other City departments and capital projects, including building systems, industrial facilities, and underground utilities. The mechanical engineering section has stable funding for building services, which is an ongoing need for City departments, and provides services to the Public Utilities Commission for its capital program. If existing mechanical

engineering design projects are insufficient to pay for staff, the section manager actively seeks work from client departments.

*Electrical Engineering*

The Bureau of Engineering considers the electrical engineering section to be problematic. Two major areas of work, underground utilities and traffic signal projects, are nearly completed or losing funding. Although the electrical engineering section has been successful in obtaining funding from the Public Utilities Commission for wastewater electrical design projects, the Public Utilities Commission also uses its own electrical engineers to design projects. The Bureau of Engineering is actively seeking additional work for this section, but will also rotate staff to other projects or functions, if necessary.

*Hydraulic Engineering*

The hydraulic engineering section provides planning and design services to the Public Utilities Commission’s Wastewater Enterprise, including planning and hydraulic studies, sewer repair and replacement projects, and wastewater treatment facilities capital projects. The section receives regular annual funding from the Public Utilities Commission to pay for the services.

As shown in Table 10.2, except for the hydraulic engineering and streets and highways sections, the Bureau of Engineering can only project available funding and staffing for two to four months. Consequently, the Bureau has to actively seek work from other City agencies or rotate staff to other duties, often construction management, to avoid inappropriate charges to overhead or lay-off of staff.

**Table 10.2**

**Number of Months for Which Project Funding is Available to Fund Existing Bureau of Engineering Staff, as of July 31, 2006**

	<b>Estimated Number of Months</b>
Landscape Architecture	4.0
Streets and Highways	12.0
Structural Engineering	3.3
Mechanical Engineering	3.2
Electrical Engineering	2.1
Hydraulic Engineering	12.0

Source: Bureau of Engineering

### The Bureau of Architecture's Work Load and Staffing Plans

The Bureau of Architecture proposed laying off permanent staff in FY 2004-2005, resulting in the early retirement of eight employees. Prior to the reduction in staff, the Bureau incurred cost overruns in its overhead budget due to insufficient project funding to cover staff costs. In FY 2004-2005, the Bureau of Architecture overspent its overhead budget allocation for salaries and fringe benefits by \$343,000, which the Department of Public Works offset by reducing the Bureau's overhead budget non-salary expenditures.

According to the Bureau of Architecture, the FY 2004-2005 staff reduction was the first for the Bureau. The Bureau of Architecture receives all its project funding for services performed for other City departments. Unlike the Bureau of Engineering, which sponsors street and other projects under the Department of Public Works jurisdiction and has regular funding from the Public Utilities Commission for hydraulic engineering services, the Bureau of Architecture lacks routine or predictable funding sources. The Bureau must rely on the City's General Fund departments bond-funded projects, established relationships with City clients, and marketing to receive project funding for design services.

The Bureau of Architecture divides project responsibilities by City department, including Fire Department, Library, Performing Arts, Public Health, Recreation and Park, and San Francisco Unified School District projects. The senior architects are responsible for monitoring work load and planing staff needs for each of their sections. The assistant bureau managers plan overall Bureau of Architecture staffing. Section managers state that planning work load over long periods is difficult because project funding is not known. Even if City departments have funding to implement capital projects, the departments do not necessarily allocate project planning and design work to the Bureau of Architecture. The Bureau of Architecture, by necessity, has to build client relationships to ensure adequate project funding to support staff costs. The Bureau of Architecture has developed relationships with some City departments that has provided stable funding. For example, the Department of Public Health funds two architect positions on a part-time basis to help plan for the Department's facility needs. The Bureau of Architecture has been able to obtain other City department design projects by working with the respective department to show that the Bureau of Architecture can deliver quality design projects in a timely manner.

#### *Planning Bureau of Architecture's Work Load and Staffing Needs*

According to the Bureau of Architecture, the Bureau acts much like a private firm in developing client relations and planning staffing needs. However, the Bureau's existence is "hand to mouth", according to one Bureau manager. The Bureau's salary costs are relatively fixed, due to Civil Service restrictions, although funding is not. While the Bureau of Architecture can increase its flexibility by using as-needed consultants to meet peak work load needs, the Bureau has limited marketing opportunities since it can only provide services to City departments and the San Francisco Unified School District.

The Bureau of Architecture anticipates its staffing needs by developing a work plan that inputs project funding, timelines and staff allocation. According to the Bureau, the Bureau can only anticipate project funding going forward for up to six months. Funding estimates after that point are less certain. Each of the senior managers develops work load and staffing projections for their sections. The assistant bureau manager develops work load and staffing projections for the Bureau as a whole.

As of July 2006, the Bureau of Architecture shows 93 percent of its staff allocated to projects, declining to 81 percent as of December 2006. During the FY 2006-2007 budget review, the Bureau of Architecture documented expected work load increases as the City developed a capital plan and prepared to fund capital projects going forward. However, the Bureau may incur surplus staff if the Department of Public Works project managers, who are currently assigned to Recreation and Park Department projects, return to their former architect positions when the Recreation and Park Department assumes management of its own projects.

## **Engineer and Architect Staffing and the City's Capital Plan**

The Department of Public Works cannot adequately plan its need for engineers and architects if information on available capital projects and funding is insufficient and coordination with other City departments is inadequate. Internally, the Department of Public Works lacks a consistent staffing tool to measure staffing needs. The Bureaus of Engineering and Architecture approach funding and staffing projections differently, using different information and planning tools to determine staffing needs. The Department of Public Works should standardize work load planning and reporting to allow executive managers to better assess overall funding and staffing needs.

The Department of Public Works also needs to evaluate short-term and long-term engineer and architect staffing to ensure that high staff costs compared to project funding does not lead to increased overhead rates. Currently, the Bureau of Engineering rotates staff to other functions, such as construction management, if engineering design work is unavailable. However, the Department faces longer term staffing surpluses, especially for electrical engineers, that need to be resolved. The Department of Public Works could have more architect staff than anticipated if the Department's project managers, currently managing Recreation and Park projects, return to their former positions.

The Department of Public Works' indirect cost rates for the Bureaus of Engineering and Architecture have increased from 154 percent in FY 2003-2004 to 174 percent in FY 2005-2006, as discussed in Section 2 of this report. While this is not high compared to other City departments with capital programs<sup>2</sup>, it exceeds the rates reported by five other California agencies in the seven agency *California Multi-Agency CIP Benchmarking*

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<sup>2</sup> The April 2005 *Engineering Services Task Force Consolidated Committee Findings and Recommendations* reported FY 2004-2005 indirect cost rates of 219.8 percent for the Public Utilities Commission, 224.84 percent for the Airport, 176.27 percent for the Municipal Transportation Agency, 157.28 percent for the Port, and 198.04 percent for the Recreation and Park Department.

*Study, Annual Report Update 2005.* The Department of Public Works needs to ensure that indirect cost rates do not increase due to staffing pressures.

## **The City's Capital Plan**

Bureau of Engineering and Bureau of Architecture staff were hopeful that the City's current capital planning process, authorized by the Board of Supervisors and included in the Administrative Code in August 2005, will allow the Department of Public Works to better plan for capital projects.

A citywide task force was convened in January 2005 to look at engineering and architecture services provided by the Port, Airport, Municipal Transportation Agency, Public Utilities Commission, Recreation and Park Department, and the Department of Public Works. The task force was to evaluate areas of improved efficiency, including centralization of capital project and engineering and architect functions.

The task force did not find much redundancy in actual engineering and associated positions among the six departments. The *Engineering Services Task Force Consolidated Committee Findings and Recommendation* report found that, if each department with capital project contracting authority performs effective and efficient strategic capital planning, fluctuations in permanent division staff could be minimized.

According to the report, if departments do not perform strategic planning effectively, the resulting staff work loads become unstable. At the same time, staff work loads require detailed planning and coordination to successfully complete capital programs. The task force recommended that the Mayor and the Board of Supervisors establish a body legislatively that would be empowered to make decisions spanning multiple departments and processes. This body would address, among other topics, current personnel processes to implement standards for organization upsizing and downsizing when initiating or completing major capital programs.

The City Administrator, who oversees the Department of Public Works as part of the General Services Agency, chairs the City's Capital Planning Committee. The City Administrator is responsible for developing the capital expenditure plan, and the Capital Planning Committee sets priorities and assessment criteria, reviews the capital expenditure plan prior to submission to the Mayor and Board of Supervisors, and reviews the budget and any proposed use of long term debt.

Currently, the City's process for planning capital projects and resource needs is decentralized. Consequently, as project funding fluctuates, City departments can have insufficient, surplus, or misallocated staff. For example, as the Municipal Transportation Agency project funding declines, the Agency is performing more electrical engineering work in-house, resulting in potential overstaffing of electrical engineers in the Department of Public Works. The City Administrator, as part of the capital planning process, should assist City departments, including the Department of Public Works, in planning capital project staff resources. The City's ten year capital plan provides a basis for identifying what the type and scope of projects to be funded in the short-term and

long-term. The City Administrator, in conjunction with the Department of Public Works and other City departments that manage capital projects, assess the need for engineering and architect general and specialized skills and resources overall and how these resources should be allocated.

## **Conclusion**

Because the City's system of capital planning and project implementation is decentralized, the Department of Public Works can not anticipate project funding or project work over the long term. Currently, the Department seeks capital project work from other City departments in addition to performing its own work. In effect, the Department acts like a private engineering and architecture firm, soliciting clients and projects, although the Department is constrained by the City system, with a limited pool of clients to solicit work and limited flexibility in managing staffing and performance. The City Administrator, as part of the Citywide capital planning process, should work with the Department of Public Works and other City departments in planning capital staff resources.

## **Recommendations**

The Deputy Director for Engineering should:

- 10.1 Standardize work load planning and reporting to allow executive managers to better assess overall funding and staffing needs.
- 10.2 Evaluate short-term and long-term engineer and architect staffing to ensure that high staff costs compared to project funding do not lead to increased overhead rates.

The City Administrator should:

- 10.3 Assist City departments, including the Department of Public Works, in planning capital project staff resources as part of the capital planning process.

## **Costs and Benefits**

By implementing these recommendations, the Department would be able to project staffing needs more accurately and match position requirements with available funding.

## 11. The Bureau of Building Repair's Performance and Customer Service

- The Bureau of Building Repair has inadequate performance measures and business processes. The Bureau does not measure the performance of its building repair and remodeling activities and therefore cannot determine if it performs these activities efficiently. Nor does the Bureau measure customer satisfaction effectively. Consequently, the Bureau cannot gauge the quality of services that it provides to client departments.
- In response to a Budget Analyst survey, the Bureau of Building Repair's customers considered customer service satisfactory overall. However, the customers said that the Bureau provides insufficient information about work order requests, work performed against the work order, and billing.
- The Bureau of Building Repair's business processes are weak, preventing timely and sufficient information to its customers. The Bureau does not have a standardized format for receiving customers' work order requests, and at least one department has developed its own work request form.
- The Bureau has inadequate management reporting systems, leaving the Bureau with insufficient information for its internal management operations and for its customers. The Bureau is unable to generate basic work order and workload information, such as the total number of work orders completed and the labor hours for work orders completed.
- The Bureau has insufficient maintenance planning and scheduling. Consequently, productivity of the journeymen workforce is significantly less than it would be were adequate planning and scheduling processes employed, resulting in unnecessary down time or travel time.
- The Bureau of Building Repair does not consistently obtain building permits, in violation of the City's Building Code. The Director of Public Works should ensure that the Bureau obtains necessary permits, and work with the Department of Building Inspection to implement a permit processing priority system.
- The Department spent \$336,000 appropriated by the Board of Supervisors for the Bureau's facilities maintenance activities on the San Francisco Housing Authority's Sunnydale Basketball Court Project without Board of Supervisors' approval and the Controller's authorization. Although the Department was reimbursed by the Housing Authority and Mayor's Office of Community Development, the Director of Public Works needs to obtain proper authorization for reallocation of funds.

The Bureau of Building Repair provides two types of services to City departments:

- Repair, remodeling, and construction services for City departments on a work order basis; and
- Building operations, maintenance, and custodial services for Department of Public Works-owned buildings and certain buildings of other City departments.

The Bureau of Building Repair also receives General Fund facilities maintenance funds, in the amount of \$425,000 for FY 2006-2007, to provide crafts for maintenance and repair of the 2323 Cesar Chavez Street Maintenance Yard and associated locations.

Appropriated funding for the Bureau of Building Repair increased by \$2,293,488, from \$29,980,940 in FY 2005-2006 to \$32,274,428 in FY 2006-2007, as shown below.

**Table 11.1**  
**Bureau of Building Repair Expenditure Appropriations**  
**FY 2005-2006 and FY 2006-2007**

Appropriation	FY 2005-2006 Amount	FY 2006-2007 Amount	Increase/(Decrease) from FY 2005-2006 to FY 2006-2007
Salaries	\$17,753,615	\$18,858,677	\$1,105,062
Mandatory Fringe Benefits	5,096,246	5,472,884	376,638
Department Overhead	3,744,003	4,213,582	469,579
Non-Personal Services	381,364	643,521	262,157
Materials and Supplies	448,352	440,852	(7,500)
Fixed Charges	11,597	0	(11,597)
Capital Outlay	219,753	236,268	16,515
Services of Other Departments	2,392,347	2,322,435	(69,912)
Carry Forward	<u>(66,337)</u>	<u>86,209</u>	<u>152,546</u>
Total Appropriations	\$29,980,940	\$32,274,428	\$2,293,488

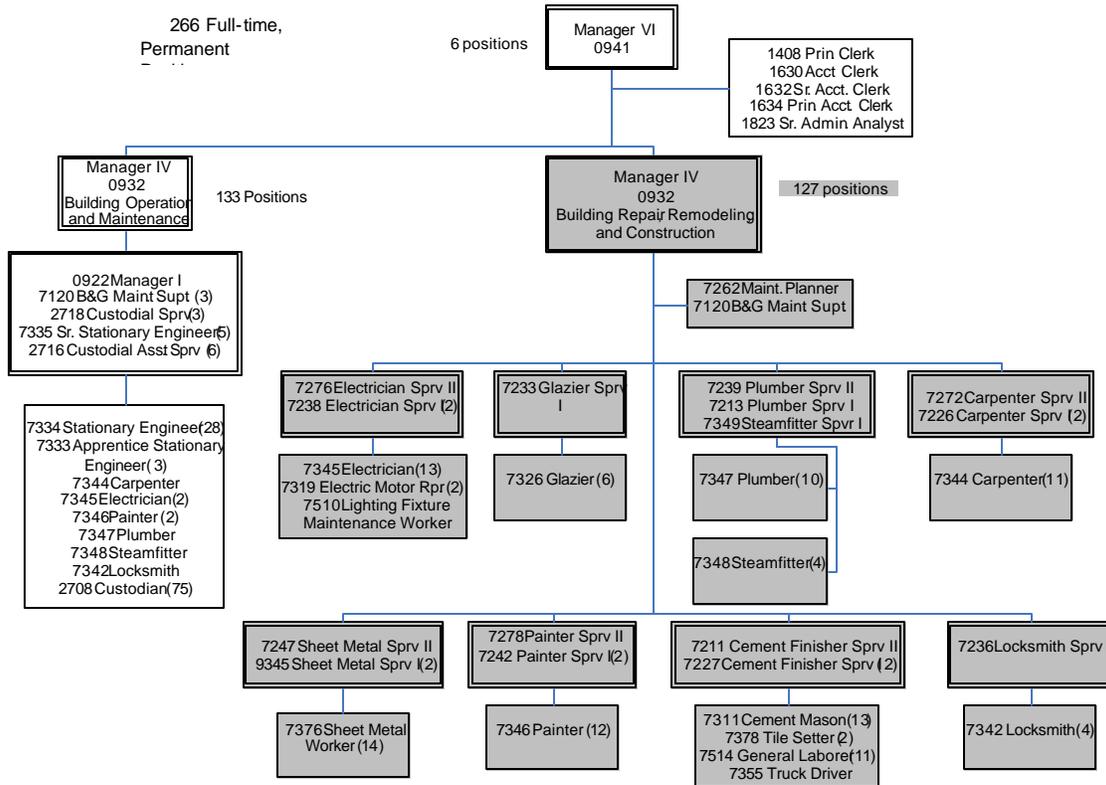
Source: Department of Public Works Office of Financial Management and Administration

Although the FY 2006-07 Annual Salary Ordinance authorizes the Bureau of Building Repair 276.62 full time equivalent positions, the Bureau has only 265.33 funded positions

in FY 2006-07 because of 11.29 full time equivalent positions in attrition savings. As of August 31, 2006, 217 of the 266 authorized permanent positions were filled.

### Exhibit 11.1

## Bureau of Building Repair Organizational Chart



Though not reflected in the FY 2006-2007 Annual Salary Ordinance, the Cement Mason Shop with its 30 authorized positions was recently transferred from the Bureau of Building Repair to the Bureau of Urban Forestry because the preponderance of the work currently performed is in support of tree planting and other work performed by the Bureau of Urban Forestry.

## **Mission, Performance Measures, Standards, and Objectives**

An organization's mission statement defines its purpose. Performance measures are selected input, output, outcome, or efficiency (input – output ratios) measures that provide an indication of how well an organization is performing. Standards are authoritative, recognized examples of correctness, perfection, quantity, or some definite degree of quality. An objective is a benefit to be achieved. A primary task of a manager is to convert the organization's mission statement into operational specifics. Managers make mission statements operational by developing performance measures, standards, and objectives.

### **The Bureau of Building Repair's Mission Statement**

The stated mission of the Bureau of Building Repair is as follows:

The mission of the Bureau of Building Repair is to provide quality, cost effective services that include custodial, operations, maintenance, repairs, and alterations for the preservation of City-owned properties under the jurisdiction of the Department of Public Works, as well as other Municipal departments, through the Interdepartmental Work Order Program.

Ideally, a mission statement describes the “nature and scope of the work to be performed – in effect describes the organization's or unit's reason for existence.” To be effective, the mission statement should be simple, clear, and reflect three attributes: opportunities; competence; and commitment.<sup>1</sup>

The mission statement quoted above should be modified to better emphasize the cost and quality expectations of the services provided to its clients, as follows:

The mission of the Bureau of Building Repair is to provide custodial, maintenance, repair, and related services that meet or exceed the cost and quality expectations of our clients, while complying with all regulations.

### **Performance Measures and Objectives**

#### The Building Repair, Remodeling, and Construction Division's Performance Measures

A generally accepted management principle requires that management establish standards of performance, periodically measure that performance, and take corrective action when necessary. The Bureau's Building Repair, Remodeling, and Construction Division lacks measures of its service and performance.

Because of the variability in building repair projects and the work of the trade shops, standard measures of work product are difficult. However, the Building Repair, Remodeling, and Construction Division could construct performance measures, such as

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<sup>1</sup> Peter F. Drucker, *Managing the Nonprofit Organization*, (New York: HarperCollins Publishers, 1990),.

(1) the percentage of jobs completed on or before the scheduled completion date, (2) ratio of estimated labor usage to actual labor expenditure, and (3) ratio of “wrench time”<sup>2</sup> to charged time.

#### The Bureau of Building Repair's Measurement of Customer Satisfaction

An objective is a benefit to be achieved. The objective statement should relate directly to the manager's mission and to higher-level missions and objectives. Further, it should be understandable by those who will be contributing to its attainment and it should be attainable, but represent a significant challenge.

The Bureau of Building Repair did not achieve its FY 2005-2006 objectives. The important objective of increasing the Bureau of Building Repair's responsiveness to its customers and to develop a plan that describes how that will happen, which requires reviewing the Bureau's business practices, was not achieved.

As contained in the FY 2005-2006 Efficiency Plan of the Department of Public Works, the goal and measure for the Bureau of Building Repair are as follows:

Goal: Provide high quality and cost-efficient repair, maintenance and cleaning of City buildings

Measure: Percentage of customers “satisfied” or “very satisfied” with service

Although the Bureau of Building Repair's performance measure is based on customer satisfaction, the Bureau of Building Repair has not received full-year feedback from its customers on their perception of the Bureau's performance for at least two years. The Budget Analyst requested a copy of the customer survey results for FY 2004-2005 and FY 2005-2006 and was informed that “Surveys for the requested periods were not completed. Survey revisions were recently finished, and the survey for 05/06 was sent out in July.”

Further, the Bureau of Building Repair's customer survey contains eight questions that are too general and do not indicate what corrective action would be appropriate if a problem is indicated. For example, four of the eight questions are:

- (1) Do you find our staff to be courteous and professional?
- (2) Was staff friendly and helpful working with you?
- (3) Were you treated as a valued customer? and
- (4) Did we provide a service to assist you toward accomplishing your goal?

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<sup>2</sup> “Wrench time” defined as the amount or percentage of time that a craftsperson is actually on the job using his or her tools, is a vitally important maintenance factor.

As noted below, the Budget Analyst developed and distributed a customer survey with questions that more specifically identified components of the Bureau's services to its customers, providing more precise information that the Bureau can use to plan service. The Bureau of Building Repair needs to revise its existing customer survey to reflect the Bureau's activities more precisely and distribute and tabulate the survey annually as part of its stated goals and performance measures.

## **The Budget Analyst's Survey of the Bureau of Building Repair's Customers**

In order to obtain an indication of the level of satisfaction Bureau of Building Repair's clients are receiving, the Budget Analyst developed a customer questionnaire, which we disseminated to twelve of the Bureau of Building Repair's largest customers. We received eleven responses. The 35 questions comprising the questionnaire were grouped under the following categories:

- Requests for Service Estimates
- Response Times to Repairs
- Bills – Invoicing
- Work Performance
- Responsiveness of Bureau of Building Repair Staff
- Overall Rating

**Table 11.2**

### **Summary of the Budget Analyst's Customer Satisfaction Survey Results**

	Outstanding	Excellent	Satisfactory	Marginal	Unsatisfactory
Number of Responses	1	5	4	1	0

Source: Budget Analyst Survey Results

### **The Bureau of Building Repair's Customer Satisfaction**

As shown in Table 11.2, ten of the eleven customer satisfaction survey respondents rated the Bureau of Building Repair's service as at least satisfactory.

Pertinent remarks accompanying some of the overall ratings are as follows:

- "They almost always do what they say they will do."
- "In dire need of improvement."

- “Very good craftsmanship. Sometimes high cost. Sometimes not timely. Basic confidence in Bureau of Building Repair crafts and their planners.”
- “Issues with BBR's performance and customer services, including cost estimates, on-time performance, work rules, schedules, and responsiveness.”

Additional comments solicited on the questionnaire for the purpose of providing the Bureau of Building Repair with helpful feedback are as follows:

- “There is no question that BBR labor is expensive, but on the whole, I feel that they are the best alternative to having more crafts on our own payroll – whether permanent or temporary.”
- “BBR has improved over the years. They seem to emphasize quality and service more.”
- “BBR should get better funding so that they could reduce the overhead they charge. Why is the overhead so much more than it was 10 years ago? Department of Public Works management should make a bigger commitment to supporting the bureau and establish adequate annual capital funding to maintain the public buildings that they are responsible for. BBR could improve the way they schedule work. Schedules and priorities should be established and there should be accountability for jobs that are not started in a reasonable time frame.”
- “Our experience has been that we seldom get the service requested on time or on budget. Estimates need to be timely; work needs to start when promised. BBR needs to stop the practice of pulling staff off one job mid-stream to work on another – they do this constantly and without informing the first department of what they are doing, why they are doing, it, and how long a delay it will cause. BBR should back out of projects and let departments go to outside vendors when they can not meet the time constraints of a project.”
- “Billing system is complicated and confusing for both departments.”
- “It is difficult to reconcile the billing transactions against workorder encumbrances in FAMIS with the actual tags issued through DPW's internal billing system. There needs to be a way for the Client to see tags related to FAMIS billings.”
- “Need more regular meetings with bigger customers.”

The Bureau of Building Repair needs to work with its customers to identify major service deficiencies and develop a plan to address the service areas of greatest concern. The overall ranking of *satisfactory* by one respondent was accompanied by comments that were more appropriate of a *marginal* rating, yet the respondent reiterated the satisfactory rating. The overall ratings reflect the conditions indicated in the individual questionnaire categories – the lack of consistent outstanding and excellent provision of services.

Relevant remarks on responses to other questionnaire categories follow:

### Requests for Service

This category, which contains four questions, is informational in nature rather than evaluative. As discussed in Section 12 of this report, the Bureau of Building Repair does not have a Computer Maintenance Management System (CMMS) whereby the steps in processing a work order – generating the request, acknowledging receipt, requesting and providing additional information, approval, and status updates - are performed electronically. The Bureau of Building Repair's clients transmit this information by telephone, facsimile, electronic mail, and for departments having a Bureau of Building Repair resident stationary engineer, in person, in a variety of formats.

Every department for whom the Bureau of Building Repair performs work is assigned a minimum of one "job order" by Department of Public Works Accounting Division in order to collect costs in the City's Finance and Accounting Management Information System (FAMIS). The Bureau of Building Repair issues a "tag," which is an authorization to perform work. In response to the question "Do you receive job/tag numbers for maintenance requests?" we received a variety of responses, ranging from "always," to "seldom," to "yes, but not until billing phase." The lack of consistently providing information to departments is an indicator of the need for better customer relations.

### Response Times to Repair Requests

Based on the answers received, the Bureau of Building Repair is much more responsive to some departments than to others. One department stated that the average response time was less than four hours; however, three departments reported average response time of between one and two days, and three departments reported response times of greater than two days.

### Estimates

Although there is an element of inconsistency indicated in the responses, overall most departments view the Bureau of Building Repair's estimating services as being adequately performed. Most responses stated that the estimates are performed within one week. One response cited within one month, and one stated that a number of months are required to obtain an estimate.

### Billing – Invoicing

The ratings and comments in this category primarily concern the timeliness and completeness of billing information provided. Some departments report that they seldom or never are notified when work commences on a job. A lesser number stated that they are seldom informed when a job is completed. Most departments reported that they do not receive invoicing. All departments responded that some form of invoicing is desirable.

### Work Performance

The individual shops generally received high marks for their workmanship. The carpenter shop received the highest number of *outstanding* ratings, four, and the paint shop received the second highest number of such ratings, three. Since not all departments use all of the individual shops, some shops received a greater number of ratings than others. On the basis of the highest proportion of *outstanding* and *excellent* ratings received as a percentage of the total number of ratings, the paint shop was highest at 85.7 percent.

Concerning how often a supervisor inspects work on a job, most departments reported *always* or *frequently*. The same was reported concerning how often a prompt solution is implemented when issues arise about work being performed. As to whether the Bureau of Building Repair performs corrective work at its own expense, most departments were not sure.

The Bureau of Building Repair needs to identify specific weaknesses in providing customer services through routine customer surveys, as noted above, and develop a plan of action to improve the quality and consistency of service. The Bureau of Building Repair especially needs to assess its procedures for providing customers work order and billing information and responding to service requests in a timely and consistent manner.

## **Bureau of Building Repair Business Processes**

The Bureau of Building Repair does not have a computerized maintenance management system for receiving and approving work requests, setting work priorities, assigning work to shops, planning and scheduling work, monitoring progress, closing work orders, and developing management reports. The Bureau of Building Repair does have a computerized system called the Work Order Tracking System that is used for authorizing work and collecting costs. The various other systems used by the Bureau of Building Repair to facilitate the processes enumerated above are primarily paper-driven. Given the importance of the work that the Bureau of Building Repair performs, the situation is entirely unsatisfactory.

### **Receiving and Approving Work Requests**

The Bureau of Building Repair does not have a standard format for receiving departments' work requests. Departments submit work requests in a variety of methods: electronic mail, facsimile, telephone, and in person. At least one department has developed its own work request form.

Because work order requests require essential elements of information, the Bureau of Building Repair needs to develop a standard format. Of seven maintenance and repair organizations that the Budget Analyst has audited in the past 38 months, the Bureau of Building Repair is the only department that cannot receive work orders through a computerized system.

Attachment I to this section is a two-page example of how a Bureau of Building Repair planner accepted a work request for roll up door covers from the Water Pollution Control Division of the Public Utilities Commission. Attachment II shows the "tag" that is generated by the Work Order Tracking System that authorizes work to be performed and material to be ordered. In the case of this example, the "tag" was generated on the same day as receipt of the work request. However, tags are sometimes generated subsequent to the date of work request receipt, and if the "source document" (Attachment I) is not placed in the file, which appears to be the case frequently, then the actual date of the request is not captured.

Attachment III is an example of a work request generated by a shop supervisor. The work request in this case is a "Shop Tag Request Form" that is submitted to the appropriate planner as a request to generate a tag so that work may be performed.

### **Work Order Planning and Scheduling**

The Bureau's Building Repair, Remodeling, and Construction Division does not have sufficient maintenance planning and scheduling. Consequently, productivity of the journeymen workforce is significantly less than it would be were adequate planning and scheduling processes employed, resulting in unnecessary down time or travel time.

Planning and scheduling work orders assigns the proper amount of work to crews and enables control for managing productivity.<sup>3</sup> Work order planning entails specifying the job scope, craft and skill level, a time estimate, as well as specifying anticipated parts and tools needed for the job. Work order *planners* should be highly skilled and conscientious journeymen, and the *planner* or *planning unit* should report to the bureau manager rather than a trade supervisor who is directly responsible for overseeing the maintenance and repair work that journeymen perform. The output of the *planner* or *planning unit* is a set of work orders that cumulatively require the hours available for journeymen to perform maintenance and repair work. Normally, planners perform a week's worth of planning for each selected trade.

In contrast to the centralized planning system described, the Bureau of Building Repair's planning and scheduling is performed by the shop supervisors. Thus, the control and standardization of centralized planning is forfeited. The Bureau of Building Repair has three assigned planners whose primary task is customer relations, including responding to the emergency, repair, maintenance, and estimating needs of customers. The Bureau of Building Repair planners are only peripherally involved in planning work – that is, specifying the job scope, craft and skill level, a time estimate, as well as specifying anticipated parts and tools needed for the job – that is the essence of what a "planning" shop should perform. Since the Building Repair, Remodeling, and Construction Superintendent does not have a means of knowing how much work is planned, he does not have a basis for measuring planned work against work that is accomplished.

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<sup>3</sup> Richard D. (Doc) Palmer, Maintenance Planning and Scheduling Handbook (Boston: McGraw Hill, 1999), pp 1.7-1.12.

The Bureau of Building Repair needs to look at its overall business practices, including maintenance planning and scheduling. Other City departments, such as the Public Utilities Commission's Water Pollution Control Division have effective maintenance planning procedures. The Bureau of Building Repair should assess its current maintenance planning functions and staffing to identify opportunities to perform these functions more efficiently, and evaluate the cost-effectiveness of substituting vacant Supervisor I positions for maintenance planning positions.

## **Management Reporting**

Another important function of maintenance and repair operations is management reporting. The computerized maintenance management systems that we have observed offer a wide variety of management reporting capabilities. The Bureau of Building Repair should require reports for managing its internal operations and also for providing visibility to their clients on work orders and projects.

Management reporting is one of the weakest aspects of the Bureau of Building Repair's current method of operating. The following list of Budget Analyst inquiries and Bureau of Building Repair responses illustrates the shortcomings of the Bureau's management reporting capabilities:

- Please provide the following workload information for each shop assigned to the Bureau of Building Repair for FY 2004-2005 and 2005-2006:
  - a. Total number of work orders completed.

Response: The total number of work orders completed in 05/06 can not be accurately calculated at this time due to carry forward reviews still ongoing. It is my understanding that these quantities can be requested through OFFMA (Office of Financial Management and Administration) after all carry forward activities are complete. [Answer provided on September 25, 2006. There was no response to the number of work orders completed in FY 2004-2005.]

- b. Total Estimated Hours for work orders completed.

Response: The Work Order Tracking System (WOTS) does not track total estimated hours.

- c. Total hours allocated to each category of maintenance. (For example, preventive maintenance, emergency maintenance, etc.)

Response: WOTS does not track categories of maintenance.

- d. Number and value of change orders.

Response: WOTS does not track totals of change orders.

The existing Work Order Tracking System is outdated and does not allow for accurate, comprehensive reports to track labor and non-labor expenditures; does not produce accurate project or maintenance activity reports; and fails to provide scheduling or accurate charge reports to clients. As discussed in Section 12 of this report, the Bureau of Building Repair and the Office of Financial Management and Administration are trying to address the Bureau's job order management and control issues.

The Bureau of Building Repair should review how it manages its work, identifying and addressing needed process improvements. Specifically, the Bureau needs to assess its work order request processes and management reporting capabilities and develop procedures to improve these processes.

## **Operational Policies and Procedures Manual**

The Bureau of Building Repair does not have an operational policies and procedures manual. In a January of 1995 directive to the Department's Deputy Directors, Bureau Managers, and Office of Financial Management and Administration Division Managers, the Director of Public Works established a policy for preparing, updating, distributing, and maintaining Department of Public Work's policies and procedures. The directive established the methods and standards for developing and maintaining both administrative and operational policies and procedures. The directive specifies that administrative policies and procedures, which have department-wide applicability, are the responsibility of the Director, the Manager of Environmental Health and Safety, and the four Office of Financial Management and Administration Division Managers, and would cover topics such as Department of Public Works correspondence, Safety Program, personnel requisitions, annual budget instructions, and the records retention plan.

The policies and procedures directive assigns responsibility for developing operational policies and procedures to bureau managers and provides examples of typical topics, three of which are shown below:

8.01 Design Phase Flow Chart

8.02 Utility Coordination

8.03 Design Review Process

Policies and procedures serve multiple functions, including the following:

- A self-regulating control standard for performing work,
- An efficiency and effectiveness tool incorporating best practices or lessons learned, and
- A training and indoctrination tool for newly assigned personnel.

The Bureau of Building Repair needs to develop its operational policies and procedures manual to ensure not only that the Bureau's procedures are carried out uniformly and efficiently, but also to provide information and continuity as senior employees retire and are replaced by new employees who lack the institutional knowledge of the retiring employees.

## **Concerns of Shop Supervisors**

The Budget Analyst interviewed all of the shop Supervisor II position incumbents, permanent and acting, and certain Supervisor I position incumbents, in order to determine their concerns, assessments of current operations, and ideas for improvements. The interviews took place in the trade shops, travel to and from job sites, and at job sites. Pertinent comments on those interviews are as follows:

- The vast majority of the supervisors whom we interviewed think that the Bureau of Building Repair is doing a good job.
- In response to an inquiry as to the mission of the Bureau of Building Repair, most recited something akin to “to keep assigned City buildings and facilities in a safe and sound condition.” (The Budget Analyst has recommended a mission statement that is short enough to be memorized and includes quality, cost, and compliance commitments.)
- The most frequent responses to “what are the performance measures of your shop?” were job completion within budget and on time, customer ratings, and “finding enough work to keep all of my people employed.”
- Most rated morale as being marginal to satisfactory on a scale that also included outstanding, excellent, and unsatisfactory ratings. The reason most frequently provided concerning the relatively low morale ratings, including unsatisfactory ratings, was operational changes such as the global positioning system for vehicles and a new key control system also for vehicles that some perceive as fostering a negative cultural change, typified by such statements as “they don't trust us.”
- Concerning one or two policy changes or interventions that would have the greatest positive impact, we received the following responses:
  - On large jobs, have an on-site person, with appropriate decision-making authority, who is controlling the job.
  - A budgeted as opposed to work-ordered position in each shop to take care of vital general repair work, such as maintaining tools, equipment, and vehicles. This response was voiced by numerous supervisors.
  - A budgeted as opposed to work-ordered position in each shop to take care of vital general repair work, such as maintaining tools, equipment, and vehicles. This response was voiced by numerous supervisors.

- The need for additional planners and project managers was a frequent response.
- Clerical support on a part-time basis in each shop.
- Additional funds for job-specific and equipment-specific training. (\$11,420 was authorized for training in the Bureau of Building Repair in both the FY 2005-2006 and FY 2006-2007 Board of Supervisors approved budgets, which amounts to \$42.93 per authorized full-time, permanent position, which is less than 30 minutes of journeyman time at the fully-loaded rate.).

The policy change or intervention recommendations of the supervisors should be considered during the Bureau of Building Repair's review of how it manages its work.

## **Obtaining Permits and Performing Work**

Section 106.2 of the San Francisco Building Code, *Work Exempt from Permit*, and relevant sections of the San Francisco Plumbing Code and Electrical Code specify those construction activities that may be undertaken without first obtaining a permit. Concerning the San Francisco Building Code, exempted activities pertain to nonstructural work such as fences not over six feet high and painting, papering, and similar finish work. Work performed on structures owned and occupied by the Federal or State Government is also exempt from San Francisco Code requirements.

In general, City departments with building trade capabilities, such as the Department of Public Works, are required to comply with all provisions of the City's construction codes, including those mandating permits and inspections. In order to determine whether the Bureau of Building Repair is obtaining permits for required work as set forth in the Building, Electrical, and Plumbing Codes, the Budget Analyst obtained a listing of the projects that the Bureau completed under its Facilities Maintenance Job Order and also a listing of the larger projects that the Bureau of Building Repair completed during FY 2005-2006, for testing.

Table 11.3 below lists the projects that were completed under the Facilities Maintenance Job Order. According to the Department of Building Inspection, these projects would require a building, electrical or plumbing permit. As shown in Table 11.3, none of the appropriate permits were obtained by the Bureau of Building Repair, and thus none of the required building, electrical, or plumbing inspections by the Department of Building Inspection were performed.

**Table 11.3**

**Bureau of Building Repair Compliance with Code Requirements**

<b>Tag Number</b>	<b>Project Name or Location of Work</b>	<b>Work Performed</b>	<b>Required Permit Obtained?</b>
35635	2323 Cesar Chavez	Sheetrock wall under stairs; install counter top and cabinet	Building – No
36934	2323 Cesar Chavez	Disconnect and reinstall modular furniture; enclose opening with metal studs; sheetrock	Building – No
35770	2323 Cesar Chavez	Dig for new gate posts; trench for rerouting conduits and irrigation lines; repair sidewalk, pave over section of planter area	Building and Electrical – No
35667	2323 Cesar Chavez	Provide power and control power to new supply fan in radio room	Electrical – No
35735	2323 Cesar Chavez	Outlets for pedestal tools in Engineer Shop; relocate and add outlets in kitchen area and main engineer office	Electrical – No
35775	2323 Cesar Chavez	Reroute conduits	Electrical – No
36188	2323 Cesar Chavez	Install 220 circuit for new air conditioning unit in LAN room	Electrical – No
36943	2323 Cesar Chavez	Relocate wall switches and feeds to partitions in Purchasers Office	Electrical – No
36950	2323 Cesar Chavez	Install push button operators at the southwest and southeast gates to facilitate opening from the inside	Electrical – No
37171	2323 Cesar Chavez	Install 220 volt circuits for two heat pumps for Engineer's Office	Electrical – No
35669	2323 Cesar Chavez	Install new hot/cold water and waste lines; install sink on counter top in Engineer's Shop	Plumbing – No
35774	2323 Cesar Chavez	Install irrigation lines for new main gate	Plumbing – No
36625	St. Mary's Shelter	Construct showers for victims of Hurricane Katrina: locate water supply, connect sewer for emergency showers at St. Mary's Shelter	Building and Plumbing – No

Source: Bureau of Building Repair

The Assistant Superintendent, Building Repair, Remodeling, and Construction, has stated that in past practice a permit has not been required for the type work shown in Table 11.3. However, the construction codes are unequivocal in the requirement: unless exempted, a permit and inspections are required. Without a change to the construction codes, Bureau of Building Repair should obtain the required permits and undergo the required inspections.

In the instances that obtaining a building, electrical, or plumbing permit would delay required emergency work, the Bureau of Building Repair can obtain permits and required inspections where appropriate after the performed work is completed, according to a Department of Building Inspection manager.

The Director of Public Works should ensure that the Bureau of Building Repair obtains necessary permits as any professional contractor is so required to obtain, for the health and safety of the public and for the City workers who use the buildings and facilities. The Department of Public Works should work with the Department of Building Inspection to implement a permit processing priority system so as not to unduly hamper the work of the Bureau of Building Repair.

## **Sunnydale Basketball Court Project Funding**

The Department of Public Works has spent funds that were appropriated for the Department's facilities maintenance projects on projects for other agencies, without Board of Supervisors' approval or the Controller's authorization. The Board of Supervisors appropriated \$600,000 in the FY 2004-2005 for maintenance and repair of the 2323 Cesar Chavez Street Maintenance Yard and other buildings and facilities for which the Department of Public Works is directly responsible.

The Bureau of Building Repair spent \$336,685 of the \$600,000 appropriation on a San Francisco Housing Authority project called the Sunnydale Basketball Court Project, and approximately \$133,182 in charges to other job orders, for a total of \$469,867 in FY 2004-2005. The five additional job order numbers and the specified client and uses are as follows:

1. 4430R Bureau of Building Repair; General Repair (\$29,046)
2. 1033R Department of Public Works ; Sunnydale Corridor (\$75,011)
3. 7501F Bureau of Urban Forestry; Gas Tax (\$803)
4. 1332R Housing Authority; Provide for services of Sheet Metal Shop and Cement Shop to core holes and install fence posts and panels around playground walls (\$21,408)
5. 1339R Street Environmental Services (SES); SES Maintenance in Yard (\$6,914)

The Department received \$119,403 from the San Francisco Housing Authority and \$237,768 from the Mayor's Office of Community Development to reimburse for the costs of the Sunnydale Basketball Court Project. Remaining funding was provided by the Bureau of Architecture's capital and facility planning appropriation and other Department sources. According to the Controller's Office, the Department should have obtained the Controller's approval at a minimum prior to expending the facilities management appropriation on other uses.

## Conclusions

The Bureau of Building Repair needs to strengthen its management of performance and tighten its management controls. The Bureau does not consistently establish standards of performance, periodically measure that performance, and take corrective action as necessary. The Bureau's Building Repair, Remodeling, and Construction Division lacks performance measures. The Bureau of Building Repair has not completed a full-year customer satisfaction survey for two years, although the measure of its performance goal – “provide high quality and cost-efficient repair, maintenance, and cleaning of City buildings” – is the percentage of customers “satisfied” or “very satisfied” with service.

A survey of the Bureau of Building Repair's customers, conducted by the Budget Analyst, showed overall satisfaction with the Bureau's service but identified specific areas of weakness, including insufficient work order and billing information provided to customers, and inconsistent response times to repair requests. The Bureau of Building Repair needs to routinely conduct its own surveys, including developing survey questions that reflect the Bureau's activities and components of customer service, in order to identify components of customer service that need improvement and develop specific procedures to improve these components.

The Bureau of Building Repair also needs to look at its business processes, one of its stated objectives, to assess process inefficiencies. For example, the Bureau of Building Repair has no standard format for receiving service requests from other City departments. The Bureau also needs to develop better procedures for management reporting and evaluating and acting on information provided in management reports.

## Recommendations

The Director of Public Works should:

- 11.1 Establish budgetary and financial controls to ensure that the Controller authorizes re-allocation of facilities maintenance and other designated appropriations to other uses in accordance with the Administrative Provisions of the Annual Appropriation Ordinance.
- 11.2 Direct the Director of Finance and Administration, in conjunction with the Bureau of Building Repair Manager, to evaluate and re-engineer the Bureau of Building Repair's business processes.

The Bureau of Building Repair Manager should:

- 11.3 Revise the existing Bureau of Building Repair mission statement to reflect clearly the Bureau's reason for existence and the contribution that the Bureau can make to the City's quality of life.

- 11.4 Develop performance measures, standards, and objectives that will serve to provide direction, accountability, and control for the Bureau of Building Repair's operations
- 11.5 Oversee the process of re-engineering the processes and systems that the Bureau of Building Repair employs to receive, approve, monitor, control, and report on its work requests.
- 11.6 Establish a timeline for the development of an Operational Policies and Procedures Manual and report on the status of the manual's development to the Deputy Director, Operations, prior to May 31, 2007.
- 11.7 Develop and consistently administer a customer survey that captures measurable information on all of the Bureau of Building Repair's key results areas of service.
- 11.8 Work to improve communications within the Bureau of Building Repair in order to improve morale and thus the performance of the Bureau.
- 11.9 Develop and implement a process for addressing the suggestions and concerns of the Bureau's supervisors, on a continuing basis.
- 11.10 In accordance with the City's construction codes, ensure that the Bureau of Building Repair obtains permits and inspections, as required.
- 11.11 In cooperation with the Department of Building Inspection, ensure that the Bureau of Building Repair obtains priority assignment for plan review and issuance of its permit applications, as provided for in the Department of Building Inspection's Administrative Bulletin No. AB-004, *Priority Permit Processing Guidelines*.

## Costs and Benefits

The Bureau of Building Repair could incur potentially significant costs in re-engineering its work processes and obtaining a computerized maintenance management system to support those processes. The Department needs to incorporate an evaluation of the Bureau's business processes as part of its current initiative to address the Bureau's job order management and control issues, discussed in Section 12 of this report.

The Bureau of Building Repair can minimize its costs to re-engineer its business processes by applying lessons learned from other City departments. The Bureau can develop an operational policies and procedures manual in-house, within existing resources. The costs of obtaining required permits would be borne by interdepartmental work orders and possibly by a small increase to the facilities maintenance budget. The benefits of the proposed recommendations would include improved repair, remodeling, and construction services to City departments, a better trained and more cohesive workforce, compliance with City building, electrical, and plumbing codes, which are designed to protect the health and welfare of the citizens of San Francisco and its workforce, and adherence to the appropriation intent of the Board of Supervisors.

35604



- 7/11 ANIMAL CARE - TAGS NEEDED KAT BROWN  
- PLUMBER - BACKFLOWS

MSG. - GRAZIER - TABLETOP GLASS  
- CEM. SHOP - ELEVATOR TILE  
- ELECTR. - INSTALL PLUG

P. ITO - DTIS - HOLD UP ON # BUR CHARGING TO 1432R

- EP MILLS - CEILING & TILE }  
A & C

- ANIMAL CARE - NO JOB#?

7/12

- 30 VAN NESS - RICHARDS ... 307-1679

3RD FL. MEN'S & WOMEN'S CAN

- FREED UP 7:35

- I VAN - NEED PLUMB BAYVIEW  
TOILET CLOGGED

- BAYVIEW - W. SIDE ENTRY DOOR - HANDLE  
LOOSE

- WPC -  
- 324K + 250 - PER SKEE  
- ROLL UP DOOR COVERS

REF: TAG # 35604

35604



REF: TAB  
#35604

7/12 - WPC - MAZU.

① 5000692 ROLL UP DOORS - AUTHORIZED PM?  
TELESCOPIC

② GARTINUS -

10,000. - NEED NOW (WILL RESALV  
30 ~~MONTHS~~ <sup>ALSO</sup> ~~MONTHS~~ UNDERBLASTING)

- SALV. YARDOR IS NOT IN COMPLIANCE

- NINI LEIGH - WPC - CENVAUR 5129R  
OLD & OR NEW ✓ TO ABATE 300K  
JOHNNY WONG

- J PADRISSE COUNTY JAIL #8 ESTIMATE FOR  
E LYONS

- M SMYTH

- B GOODMAN AUDIT REPAIRS - NEED TAG.  
(ROAD STRUCTURES)  
14540R

GL - 84

P - 37

NEED TO REMOVE L.L. RUBBING

SURVEY LETTER TO CONTRACTOR  
LINE ITEM - VEHICLE  
ROLL-OVER  
ANOTHER LINE ITEM

TAG# 35604 TAG STATUS F (A=Active, F=Finished) TAG LOCATION 139

TAG ACTIVITY BRS DATE STARTED DATE DUE EVENT  
STREET PHELPS STREET ADDRESS 750 DISTRICT 010  
SHOP T SHEETMETAL SHOP SUPERVISOR EMPL#  
CRAFT T SHEET METAL WORKER RATE 90.16  
JOB# 6129R TITLE PUC/WPC 05/06 BALANCE 31,185.84  
CLIENT PUC/WPC

	ALLOWED	SPENT	BALANCE
LABOR HOURS	32.00	4.00	28.00
LABOR COST	2,885.12	359.18	2,525.94
NON LABOR COST	250.00	.00	250.00
TOTAL	3,135.12	359.18	2,775.94

WORK DESCRIPTION B000 SEP COVERS FOR ROLLUP DOORS PER M GRUSHAYEV 7/12/05  
\*PC

Print? \_ (Y/N)

ENTER=Next Selection F3=Cancel F5=Change F10=Comments

36295

8/25/05 *ms*

Department of Public Works  
Bureau of Building Repair

36295

Tag #

Shop Tag Request Form

Approved By

Job Order #	Requesting Organization	Shop	Loc. Code	Date
	SFWD Fremont	RCM	665	8-24-05
Job Title	Craft		FCM Facility	
R <sub>1</sub> R SDWK	CM			
Street	Street #	FCM Defic. #		
S Drummer & Ishi				
Description of Work		Labor Hours		
Remove <sup>1 Pipe</sup> 50 LF x 4' of SDWK			96	
Dig 9" below FG Install min 3" of crushed rock Set Forms Pour 6" Deep Deep		Labor Cost		
Score SDWK Every 8' 1 1/2 Incher. Setup Up temp		Non Labor Cost	1000.00	
Rebar in walk way and 2 handicap ramps at each		Total		
SHOP HEAD MUST SIGN HERE		ESTIMATOR MUST SIGN HERE		

CREATED BY: RCM/MSH

## 12. Bureau of Building Repair Annual and Continuing Project Management

- **There are significant control weaknesses related to the Bureau of Building Repair's management of annual and continuing projects. These weaknesses include committing to and incurring expenditures in excess of budgeted amounts, unwarranted carry-forward of annual projects, and a lack of protocol for project definition. These weaknesses obscure Bureau of Building Repair activities and make project tracking and monitoring difficult, which in turn prevents effective planning and resource allocation. The time spent on projects and project spending cannot be readily isolated and evaluated and problems cannot be readily identified and corrected.**
- **The lack of control over annual and continuing projects is compounded by an automated tracking system, the Work Order Tracking System, which does not provide the Bureau of Building Repair with a definitive understanding of job order status at the detail level or of its activities in general. In part, this is due to the Work Order Tracking System using estimates of financial data and information rather than real-time financial transactions.**
- **The Department reports that several initiatives are under way to address Bureau of Building Repair job order management and control issues, including the consideration of a computerized maintenance management system. These initiatives should be formalized with project timelines and should include a business process review such that appropriate controls over job order creation, management and closeout are established.**

The Bureau of Building Repair manages its activities with job orders. Large job orders are typically created for maintenance and repair activities on a client-department basis. These job orders will contain activities that range from custodial services to elevator maintenance to remodeling and repair projects. Additionally, job orders are established on a project by project basis. Departmental job orders for routine maintenance and repair receive annual appropriations, which typically expire at the end of the fiscal year because the operational need and funding recurs on an annual basis. Project-oriented job orders receive continuing appropriations that do not expire until the project has been completed. At a more detailed level, job orders are comprised of "tags" which are work authorizations that include personnel and non-personnel cost estimates developed at the craft shop level.

Job orders correlate to projects in the City's FAMIS accounting system and budgetary control is maintained at the project level. Thus, the detailed budget contained within a job order should be linked to the project budgets specifically and the Bureau of Building Repair budget overall. The Office of Financial Management and Administration reports

that, as of November 19, 2006, total appropriations for Bureau of Building Repair job orders were \$22.1 million.

Despite the project/job order budget, not all appropriations within a job order will have a tag and be authorized for expenditure by client departments at the start of the fiscal year. For unscheduled maintenance and repair activities, tags are not developed until the need arises. In fact, Bureau of Building Repair management reports that many clients wait until late in the fiscal year to authorize work because of budget uncertainties.

## **Automated Tracking System**

The Work Order Tracking System was developed in-house over 20 years ago to assist the Bureau of Building Repair in tracking and monitoring its job orders. The Work Order Tracking System reports that as of February 14, 2006, the Bureau of Building Repair had 199 active job orders with an unexpended balance of \$9.1 million. The system utilizes estimates of authorized work to provide real-time information to Bureau of Building Repair managers and allows for monitoring estimated expenditures against budget. A policies and procedures manual for management and staff has not been developed for use of this system or for establishing, tracking and monitoring, and closing job orders in general.

System weaknesses are significant and include imprecise financial data. Labor rates, labor hours, and non-personnel transactions are manually input by a Bureau of Building Repair account clerk. Labor rates, estimated at the beginning of the year at the top step and inclusive of an estimated overhead rate, may be revised during the year. Further, non-personnel transactions are input from purchase orders which may ultimately vary from actual expenditures incurred. In fact, the Work Order Tracking System's project status report sent to departments upon request states: "These estimated amounts are used as a BBR (Bureau of Building Repair) cost management tool only, and are not to be compared to the quarterly billing statements issued by OFFMA (Office of Financial Management and Administration)." These issues are significant enough that the Department of Public Work's Office of Financial Management and Administration does not support the system. Nonetheless, the Bureau of Building Repair uses the Work Order Tracking System to track and monitor its job orders because it is the only system that can provide real-time information with respect to the Bureau of Building Repair's daily activities. However, the system does not provide the Bureau of Building Repair with a definitive understanding of job order status at the detail level or of its activities in general which is amplified by the findings discussed below.

## **Identified Budgetary Control Issues**

Significant issues with respect to budgetary control over job orders have been identified by gaining an understanding of Bureau of Building Repair processes and systems and by reviewing open job orders. These issues include:

- Committing to and incurring expenditures in excess of budgeted amounts

- Unwarranted carry-forward of annual projects
- Lack of protocol for project definition

### Exceeding Budgets

The Bureau of Building Repair may create tags for any given job order and obtain additional departmental authorization in excess of budgeted amounts. Work is planned and scheduled according to active tags, which is the level at which individual units and crafts are assigned work. Thus, the Bureau of Building Repair can and has committed to and incurred expenditures without obtaining budgetary authority and funding.

The Work Order Tracking System produces a report of job orders that either have been "over-allocated" (i.e. tags have been developed for more work than the budget allows), or have been over-expended. This report, queried on April 12, 2006, identified 66 job orders that had tags in excess of budgeted amounts by \$2.4 million. Bureau of Building Repair staff reported that tags may be developed which exceed budget, especially late in the fiscal year, when it becomes clear that not all existing tags, such as those for custodial services, will be spent. The Budget Analyst noted six instances where the budget was over-committed and four instances where the projects were over-expended by amounts in excess of \$100,000. However, many over-allocated job orders also had expenditures that exceeded budgeted amounts.

In total, 45 job orders exceeded budgeted amounts by a total of \$1.6 million and six of these job orders had no budget at all, but \$315,041 in expenditures. Because job orders are funded through work orders, exceeding budgeted amounts also means that the Bureau of Building Repair has not appropriately obtained funding authorization from the client for the over-expenditure. According to Bureau of Building Repair staff, Bureau of Building Repair attempts to reconcile any overspending during the year. However, \$1.6 million at any given time is substantial.

### Carry-Forward of Annual Projects

The Bureau of Building Repair reports that 88 projects with a total unexpended and unencumbered budgetary balance of \$1,783,101 were carried forward from FY 2004-2005 to FY 2005-2006. Fifty-eight of these projects were designated by the Bureau of Building Repair as annual appropriations with a total unencumbered budgetary balance of \$1,164,709. Of these 58 projects carried forward, 10 projects had a negative balance carried forward totaling \$283,609. Projects with budgetary balances carried forward include the following:

- \$130,517 for custodial and other Bureau of Building Repair services at the Water Department's 425 Market Street offices (Project IBRG10, Job Order 0853R). Some of the tags in the Work Order Tracking System dated back to FY 2003-2004 and it is not clear how much was expended in each of the fiscal years and on what activities. Only six tags were active with a balance remaining on those tags of approximately \$6,100 on April 17, 2006. \$121,255 of the \$130,517 was

carried forward to FY 2006-2007 and, as of October 23, 2006, this job order had a total remaining balance of \$93,134.

- \$39,529 for maintenance and repair for the Department of Telecommunications and Information Services (Project IBRG84, Job Order 0959R). According to the Work Order Tracking System, only two tags were active with a balance remaining for those tags of approximately \$6,900 for stationary engineers on April 12, 2006. All of the \$39,529 was carried forward to FY 2006-2007 and, as of October 23, 2006, this job order had a total remaining balance of \$18,658.
- \$137,272 of \$2,398,612 appropriated for several Bureau of Building Repair activities including custodial services, Occupational Safety and Health Administration requirements, and non-recurring and emergency maintenance and repair projects for the Police Department in FY 2004-2005 (Project IBRH34, Job Order 1083R). The FY 2004-2005 job order continued to be regularly charged until September 28, 2005. Since that date, three charges occurred between December 28, 2005 and February 28, 2006 which do not appear to be associated with a tag and for which the Bureau of Building Repair could not provide an explanation. A new tag of \$3,153 was established March 6, 2006 for painting and, as of April 12, 2006, has been over-expended by \$52. Interestingly, this job order carried forward \$152,413 into FY 2006-2007, more than the \$137,272 carried forward in FY 2005-2006. The increase over the FY 2005-2006 carry-forward may have been due to a release of encumbered funds or an increase in budgeted funds during the year. As of October 23, 2006, the job order had an unexpended balance of \$5,990. In FY 2005-2006, the annual job order established for the same purpose (Project IBRI18, Job Order 1418R) was budgeted at \$2,365,244 and, as of October 23, 2006, was over-expended by \$126,960.
- \$90,545 of \$110,000 for the Police Department maintenance and repair projects (Project IBRH71, Job Order 1321R). According to the Police Department, \$110,000 is budgeted annually for facilities maintenance. Similar to the previous job order also with the Police Department, a larger amount of \$98,301 was carried forward to FY 2006-2007. As of October 23, 2006, the balance remaining of the FY 2004-2005 funding was \$37,570.
- \$19,000 in six separate job orders for Tax Collector maintenance and repair projects (Projects IBR75G and IBR95-99G, Job Orders 3475R and 3495-99R). These job orders have not posted any expenditure since being established in FY 2003-2004. These balances were carried forward into FY 2006-2007 as well.

The projects were designated as routine, annual appropriations and, yet, some carry-forwards were appropriated several years ago and never utilized. Both the Bureau of Building Repair and the Office of Financial Management and Administration report that these carry-forwards were reviewed and agreed upon by both the Bureau of Building Repair and client departments. Further, staff report that there is no protocol for use of carry-forwards. In theory, appropriations should have established tags or work commitments to be carried forward, but that does not appear to be current practice.

Rather, available funds are accessed as the need arises. In fact, as of April 9, 2006, the remaining balance in projects carried forward according to a FAMIS report of active projects was \$1,685,350. Less than \$100,000 had been spent approximately nine months into the fiscal year. Most of these projects were established for on-going operational needs and, therefore, receive new funding every fiscal year. Thus, unexpended appropriations should not be carried forward or allowed to continue indefinitely or until a new use has been established.

### **Project Definition**

As noted above, the Bureau of Building Repair uses job orders to manage its activities and job orders correlate to projects in FAMIS. These methods of classification, therefore, should separate disparate activities. Indeed, annual projects in FAMIS were to have an initial character of "I" in its coding structure, whereas continuing projects were to start with "J". Although some exceptions were noted, as a general rule, the Bureau of Building Repair has adhered to this protocol.

However, disparate activities, including those that should be budgeted annually and those that should be continuing projects, are combined within a single job order. In fact, a large client department job order likely contains almost all activities that the Bureau of Building Repair conducts: custodial services, stationary engineers and routine maintenance, contract elevator maintenance, remodeling and discretionary projects, and emergency repair projects. Because a significant portion of these activities are labor-intensive, and each craft or unit is managed separately, the groups compete for resources and can easily exceed budgeted amounts without management controls in place.

By way of example for all of these issues, the annual Police Department job order for FY 2004-2005 is detailed in the Table below.

Table 12.1  
Police Department Annual Job Order Detail  
FY 2004-2005 as of April 12, 2006

Shop	Tags	Allocated	Spent	Balance
Carpentry	43	\$123,678	\$75,229	48,449
Admin Office	27	63,984	27,917	36,067
Cement Shop	32	57,892	18,177	39,715
Custodian	3	1,422,373	1,259,513	162,860
Electric Shop	109	142,645	149,632	(6,987)
Engineers	10	413,406	405,133	8,273
Glass Shop	15	16,031	15,425	606
Lock Shop	115	44,653	38,961	5,692
Paint Shop	30	131,795	136,781	(4,986)
Plumbing Shop	92	74,011	78,508	(4,497)
Steamfitter Shop	17	27,728	22,469	5,259
Sheetmetal Shop	35	71,721	59,644	12,076
Total	528	\$2,589,917	\$2,287,390	\$302,527

Source: Bureau of Building Repair

The prior year Police Department job order was reviewed in detail on the Work Order Tracking System. As noted in the table, the job order had a total of 528 tags as of April 12, 2006. Most of these tags were for annual or recurring activities, such labor associated with custodial work and stationary engineers, or for routine maintenance or minor repairs, such as activities associated with the lock shop or plumbing shop. However, larger continuing project work is also being charged to the project, including a significant project totaling approximately \$72,000 for the Police Department's pistol range as well as various remodeling activities. Further, as noted above, the Bureau of Building Repair was unable to explain some unspecified charges in FY 2005-2006 that were not associated with any particular tag. Additionally, while this is a job order associated with FY 2004-2005, there were a few tags established in FY 2005-2006 and the Work Order Tracking System reports that open and active projects as of April 12, 2006 had a remaining unexpended balance of \$113,781. At the same time, a new FY 2005-2006 job order was established for annual projects with a budget of \$2.3 million.

Finally, as can be seen in the table above, three shops have exceeded their cumulative budgeted amounts. Indeed, as of April 12, 2006, while this job order had a total budget of \$2,396,612, \$2,287,390 had been expended and open and active job orders had a remaining unexpended balance of \$113,781. Thus, at the end of the year, if no additional tags were created and all active projects were on budget, the total job order would have been over expended by \$4,559. Significant under-expenditure in several areas, specifically custodial services and structural engineers, allowed the Bureau of Building

Repair to allocate funding to other areas and over-allocate the job order in total. As can be seen in the Table, while the budget for this job order was \$2,396,612, \$2,589,917 has been allocated to specific activities. While this job order carried forward \$152,413 into FY 2006-2007 and had a balance of \$5,960 as of October 23, 2006, the annual Police Department job order established for FY 2005-2006 (IBRI18, Job Order 1418R) exceeded its budget as of October 23, 2006 by \$126,960.

These issues obscure Bureau of Building Repair activities and make project tracking and monitoring difficult, which in turn prevents effective planning and resource allocation. The time spent on projects and project spending cannot be readily isolated and evaluated and problems cannot be readily identified and corrected.

## **Computerized Maintenance Management System**

Bureau of Building Repair management has reported a need for a computerized maintenance management system to improve management of Bureau of Building Repair activities and because of the deficiencies found in the current Work Order Tracking System. According to Bureau of Building Repair management, an informal group was established in 2005 with representatives from four Department of Public Works bureaus, including the bureaus of Building Repair, Urban Forestry, Street Environmental Services, and Street and Sewer Repair, to identify common business process problems. From that working group, the Bureau of Building Repair conducted additional research with computerized maintenance management system vendors and other City departments to develop an understanding of the cost and resource needs for the request for proposal process, system installation, and on-going system maintenance. While the Bureau of Building Repair requested funding in the FY 2006-2007 budget, the computerized maintenance management system project has not gone forward due to other departmental priorities and budgetary constraints. The project is, however, in the Department's Computer Services Division Five Year Plan and the Office of Financial Management and Administration reports that the Department is looking to implement a computerized maintenance management system or other system solution in FY 2007-2008.

In the interim, the Office of Financial Management and Administration reports that several initiatives are under way to address Bureau of Building Repair job order management and control issues. These initiatives include a systems review of the Work Order Tracking System to identify any system enhancements that can be made to link the system to the Department's Financial and Personnel System and the City's FAMIS accounting system. Additionally, the Office of Financial Management and Administration is in the process of developing routine reports that will be automatically transmitted to project managers, including those at the Bureau of Building Repair, and client departments when project expenditures hit 80 percent of total budgeted funds. Other initiatives include increased training for Department staff in general and the Bureau of Building Repair in particular, a business process review of purchasing and procurement, and a possible increase in accounting staff assigned to the Bureau of Building Repair.

## Conclusion

There are significant control weaknesses related to the Bureau of Building Repair's management of annual and continuing projects. While the Department has identified several initiatives to address these weaknesses, there is no time frame for implementation. Further, the Department has not included as one of its initiatives a review of job order management and control that would establish clear policies and procedures for appropriately establishing, tracking and monitoring, and closing job orders. In general, with the exception using estimates rather than real-time financial information, the Work Order Tracking System is configured to provide basic data and information necessary for project management and control. The weaknesses identified in this report are due in large part to weak manual processes and these have not been comprehensively addressed. These manual processes include areas such as the establishment of projects according to clear project definitions and appropriate closeout and year-end procedures, management authorization and review at periodic intervals and for select activities, and adequate reporting for both management and clients.

With respect to a computerized maintenance management system, the Department of Public Works must consider business processes department-wide, not just in the Bureau of Building Repair, and, as part of the new General Services Department, Department of Public Works should consider business processes and systems City-wide. Further, all vested interests such as accounting, administrative, information technology, and client departments must be included in the process from the beginning. Accordingly, a formal project structure should be established for a business process review and system needs assessment for the selection of a computerized maintenance management system or other system solution.

## Recommendations

The Deputy Director of Finance and Administration, in conjunction with the Manager of the Bureau of Building Repair, should:

- 12.1 Establish a timeline and completion date for each of its Bureau of Building Repair initiatives.
- 12.2 Include as one of its initiatives a business process review of project and job order management.
- 12.3 Establish appropriate controls over job order creation, management and closeout and document such controls in written policies and procedures.

The Deputy Director of Operations, in conjunction with the Deputy Director of Finance and Administration, should:

- 12.4 Establish a formal computerized maintenance management system project structure with timelines, deliverables, and a project team that includes

representatives from accounting, administrative, information technology, and client departments.

## **Costs and Benefits**

These recommendations include the review and refinement of business processes to increase controls over project management and, as such, existing resources should absorb any related costs. The Budget Analyst does not necessarily recommend the implementation of a computerized maintenance management system at least prior to conducting a business process review and, therefore, the costs of such a system are not included in this report. The benefits of these recommendations include increased controls over the \$26.8 million that has been established in the Bureau of Building Repair's work order budget in FY 2006-2007 and the appropriate close out of over \$1 million in annual projects that is carried forward from year to year.

## 13. Materials Management Controls and Procedures

- The Department of Public Works has recently remodeled and expanded the materials storeroom at the 2323 Cesar Chavez Street maintenance yard. The operating bureaus have increased the inventory that they maintain in the storeroom. Storeroom issuances from the storeroom to the Bureau of Building Repair in fiscal years 2004-2005 and 2005-2006 were only \$11,266 and \$11,586, respectively, although the Bureau of Building Repair expends in excess of \$3 million annually on materials and supplies. The Bureau receives all other materials to be used for projects directly at the requesting Bureau trade shop. However, the Bureau maintains materials left over from or not used for projects within the confines of the trade shops. The Bureau has no formal inventory of these materials, creating the risk of theft, loss or misuse of the materials.
- In general, City departments lack adequate inventory and material storeroom internal controls. Since 2003 the Budget Analyst has audited the storerooms of the Port, the Public Utilities Commission, the Recreation and Park Department, and the Department of Public Works, and found that many of the departments lacked standard storeroom practices and in some instances had significant control deficiencies. Inadequate storeroom internal controls has been a long-standing Citywide problem, previously identified by the Budget Analyst in a 1991 report. The Department of Public Works should work with the City Services Auditor to establish a system of controls that can be extended to other City departments.
- The Department of Public Works should also develop formal materials policies and procedures to ensure standardized and efficient materials management.
- The Department of Public Works does not ensure that only authorized staff approve department purchases. The City's Office of Contract Administration has procedures to ensure that only authorized staff approve purchases. However, three Department of Public Works' staff regularly approve purchase orders without formal authorization. Thus, a set of controls developed by the Office of Contract Administration to provide reasonable assurance that procedures developed to implement the sensitive authority of procuring commodities and services of up to \$10,000 on each such procurement were not being adhered to by the Department of Public Works.

## **Inadequate Control of Storeroom Operations Citywide**

Since August of 2003, the Budget Analyst has audited the storerooms of the following City Departments:

- The Port of San Francisco
- The Public Utilities Commission storerooms
  - Water Pollution Control Division
  - Hetch Hetchy Water and Power Division
  - City Distribution Division
  - Water Supply and Treatment Division
- Recreation and Park
- Department of Public Works

The audits of the seven storerooms have revealed a lack of standardization in storeroom practices and in some instances significant control deficiencies. Whereas the Public Utilities Commission's Water Pollution Control Division's storeroom operates with effective controls, the following statements from the Port of San Francisco and Recreation and Park Department storeroom audits highlight significantly deficient conditions:

### **The Port of San Francisco**

The storeroom is unkempt, with a crust of dirt on most of the items stored. At the outset of this management audit, the storeroom was in essence a highly disorganized warehouse, with items of inventory commingled with all manner of non-inventoried items, such as relics taken from the Ferry Building. Lately, there have been improvements made to the organization of the storeroom

Many of the shelves in the storeroom do not have bin locations. Thus, as is the procedure in auditing storerooms for the accuracy of inventory, one cannot obtain an inventory bin location, proceed to that location, and determine whether the actual number of inventoried items matches what is recorded in the inventory records....

### **The Recreation and Park Department**

The Structural Maintenance Division does not maintain an inventory of the many thousands of dollars in material and supplies stored in the trade shops, in shed bays, or in the open, central yard....

With the exception of work orders for reimbursable work and capital projects, the Structural Maintenance Division does not record material usage on its work orders....

As previously stated, the Recreation and Park Department operates a storeroom that is located in the Structural Maintenance Division's yard. According to the Classification 1936 Senior Storekeeper who has operated the storeroom for the last 19 years, the Recreation and Park Department has not conducted an annual physical inventory in at least the last five years. According to the Senior Storekeeper, management eliminated the physical inventory in order to avoid the cost of performing the inventory.

The Budget Analyst released a management audit report on the *Purchasing and Storekeeping Functions as Administered by the Purchasing Department* in March of 1991. At the time of the audit, the Purchasing Department's Stores and Equipment Division operated 20 storerooms for ten departments, including nine storerooms of the Municipal Railway, which was then a part of the Public Utilities Commission. The Port of San Francisco storeroom was under the Port of San Francisco. Subsequent to the audit, control of the all departmental storerooms under the Purchasing Department was transferred to the respective departments.

The general finding statement and recommendations of Section 2.1, *Administrative Control*, which pertain to the administrative control of the departmental storerooms and the need for guidelines and procedures, are as follows:

#### Section 2.1: Administrative Control

The Purchasing Department manages the various decentralized departmental storerooms as if these storerooms are central and Charter mandated. However, administrative control of the various departmental storerooms is divided between the Purchasing Department and the operating departments, which has resulted in poor management of the storerooms. The storerooms are departmental in nature, and would be managed better if full administrative control were given to the operating departments, and if the Internal Audits Division of the Controller's Office made periodic reviews of the efficiency and effectiveness of operating departments' administration of the storerooms.

#### Recommendations

We recommend that the **Purchasing Department**, in conjunction with the operating departments:

- Classify all storerooms not under the direct supervisor of the Director of Purchasing and Services as operating departmental storerooms as opposed to central storerooms.
- Continue to develop a City-wide set of guidelines and procedures and a training program, as outlined in their operational plan, on storeroom operation and management as recommended in Section 2.2 of this report.

We recommend that the **Internal Audit Division** of the Controller's Office:

- Develop a City-wide set of guidelines and procedures for City storeroom internal control.

- Develop an audit program for periodic reviews of the performance of the department storerooms.
- Request three new Financial Auditor positions to implement and maintain the audit program.

According to the Office of Contract Administration, the current management has no knowledge of the Citywide set of guidelines and procedures on storeroom operation and management ever being developed. The City Administrator, who oversees the General Service Agency, including the Office of Contract Administration and the Department of Public Works, should direct the Office of Contract Administration to develop Citywide guidelines and procedures on storeroom operation and management.

According to the Manager, Internal Audits Division of the Controller's Office, the recommendations have not been implemented. The Department of Public Works should work with the Controller's Office to develop materials management internal control guidelines and audit schedule, as part of the Department's work order for City Services Auditor services.

## **Storage of Materials and Supplies and Tools at the Operations Division**

The Department of Public Works maintains a storeroom/toolroom in the Cesar Chavez Street Maintenance Yard of the Operations Division for the purpose of servicing the four Bureaus of the Operations Division. During the entire period of this management audit, the storeroom operation has been undergoing significant physical remodeling and expansion of storeroom responsibilities.

As a percentage of total material usage within the Department of Public Works, the operations of the storeroom expanded from issuances of \$288,943 in fiscal year 2004-2005 to issuances of \$697,453 in fiscal year 2005-2006, an increase of 141.4 percent. Further, the storeroom inventory reports show a significant increase in the number of line items stocked and total inventory value between fiscal year 2004-2005 and fiscal year 2005-2006: 490 inventoried items with a total value of \$250,252 in fiscal year 2004-2005 to 819 items with a total value of \$668,890 in fiscal year 2005-2006. The storeroom has assumed storage responsibilities for many of the items used by the Bureaus of Street and Sewer Repair, Street Environmental Services, and Urban Forestry. However, the storeroom responsibility for items used by the Bureau of Building Repair is still small compared to the potential efficient storage by the storeroom.

The Bureau of Building Repair expended approximately \$3 million on work order material during fiscal year 2005-2006. However, material ordered for use by the Bureau of Building Repair is not processed through the storeroom. Storeroom issuances from the storeroom to the Bureau of Building Repair in fiscal years 2004-2005 and 2005-2006 were only \$11,266 and \$11,586, respectively. Following approval of Bureau of Building Repair purchase requests by the Department of Public Works Accounting Office that is located on-site at the Maintenance Yard, material ordered by Bureau of Building Repair personnel is either delivered to the requesting shop or picked up from the vendor by the user. In general, the Bureau of Building Repair trade

shops do not order material for inventory; each material order is in support of an approved work order.

The trade shops of the Bureau of Building Repair do, however, maintain material within the confines of the shop or a shop annex. These inventories consist of material left over from completed jobs, from material ordered but not used because of cancellation of the work order, or from material cannibalized from equipment and fixtures no longer in service. There is no formal inventory of these stores of material.

According to the Deputy Director for Operations, the ultimate objective of Operations Division storeroom operation is to store all common items used by the Bureaus and all Bureau-specific items for which there is a recurring demand and which can be economically and efficiently stored by the storeroom. The Budget Analyst agrees that there is much room for efficient and effective expansion of storeroom inventory and control of material. The objective should be adequate control of material without adversely affecting the effectiveness of the Bureau of Building Repair trade shops and other bureaus of the Operations Division.

### **Lack of a Materials Management Policies and Procedures Manual**

The Operations Division of the Department of Public Works does not have a Materials Management Policies and Procedures Manual to standardize its processes for obtaining goods and services. Good practice requires that the Operations Division develop a Materials Management Policies and Procedures Manual to simplify and supplement the various Administrative Code and Office of Contract Compliance provisions that regulate the procurement of goods and services in City government. As an administrative control, a Materials Management Policies and Procedures Manual provides standardization and accountability. The absence of a Materials Management Policies and Procedures Manual, which in addition to this current audit report, the Budget Analyst has reported on in recent audits of the Port of San Francisco, three divisions of the Public Utilities Commission, and the Recreation and Park Department stems from a lack of appreciation by management of the power of policies and procedures as administrative controls. The Budget Analyst strongly recommends that the Deputy Director of Operations develop a Materials Management Policies and Procedures Manual.

Examples of topics covered in materials management policies and procedures manuals that apply to storerooms are shown below in Table 13.1.

**Table 13.1**

**Materials Management Policies and Procedures Policies and Procedures  
Manual Example Contents**

• Policy and Functions of Materials Management	• Authorization to Withdraw Materials from the Storeroom
• New Stock Requests	• Receiving Material
• Storeroom Issues and Credits	• Bin Locations
• Storeroom Scheduled Deliveries	• Low Value Items (Free Stock)
• Back Orders	• Non-Discrimination in Contracts
• Departmental Blanket Purchase Order Procedures	• Cost of Ordering and Cost of Carrying
• Departmental Purchase Requisitions	• Inactive Inventory
• Purchase Requisitions	• Physical Inventory
• Active Inventory	• Management Reporting

### **The “Lower Yard”**

The “Lower Yard” area of the Operations Division Maintenance Yard is used as a vehicle park; as a store of plant material, soils, and equipment of the Bureau of Forestry; as a store of homeless belongings, and as a store various materials, primarily those of the Bureau of Street and Sewer Repair. At the initiation of this audit, the Lower was unsightly and disorganized. At the time of the April 6 2006, inspection the appearance of the Lower Yard had improved somewhat. However, the Health and Safety Inspector recommended that the Department “Improve housekeeping and store supplies, equipment, and abandoned items in an orderly manner. Discard items that are unusable.”

At the time of a final walkthrough of the Lower Yard on October 10, 2006, most if not all of the deficiencies cited in the Health, Safety, and Environmental inspection of April 6, 2006, had been corrected and the orderliness and general appearance was excellent.

The Budget Analyst recommends that the Deputy Director of Operations and the Manager Environmental Health and Safety continue to emphasize the importance of orderliness and good housekeeping to successful operations and a healthy and safe environment.

### **Procuring Goods and Services**

Chapter 21 of the San Francisco Administrative Code governs the acquisition of commodities and services. Section 21.03(a) of the Administrative Code provides approval authority for the acquisition of commodities and services, as follows:

- (a) **Approval of Purchases.** The Purchaser shall purchase all Commodities or Services required by City departments and offices of the City, except as otherwise provided in the Charter and Municipal Code of San Francisco. The Purchaser shall, by regulation, designate and authorize appropriate department personnel to exercise the Purchaser's approval authority for contracts approved as provided in this section.

Accordingly, the Purchaser has the authority to delegate signature authority to departments up to the specified dollar amount, currently \$10,000, stated in regulation 21.5(a) of the *Rules and Regulations Pertaining to the San Francisco Administrative Code, Chapter 21*, promulgated by the Purchaser.

In addition to the foregoing "Delegated Departmental Purchasing" authority under which departments are able to procure individual goods and services through Departmental Purchase Orders, the Purchaser may also delegate Departmental Blanket Purchase Order authority. Unlike a City Blanket Purchase Order (also known as a "Term Contract") under which all City agencies may procure commodities and services at a price negotiated by the Purchaser,<sup>1</sup> Departmental Blanket Purchase Orders are established individually between a department and a vendor.<sup>2</sup> Currently, Departmental Blanket Purchase Orders for open market purchases in excess of \$50,000 require the approval of the Office of Contract Administration. Individual orders against the Departmental Blanket Purchase Orders, called "releases," are currently limited to \$1,000 per vendor, per day.

A third method of departmental procurement, the Direct Voucher method, is used for small purchases, normally \$200 or less.

## **Departmental Purchase Orders**

The Purchaser has promulgated specific rules for departments to follow in order to continue to use Delegated Departmental Purchasing authority, as follows:

1. Departments must submit a roster of employees in the department who are authorized to purchase goods and services using delegated purchasing authority.
2. The roster must list employee name, Civil Service classification, address and telephone number. The Office of Contract Administration may restrict the delegated authority to certain Civil Service classifications as appropriate, upon a review of the information submitted.
3. All designated employees are required to attend a Purchasing training class. The roster must indicate the date training was completed.

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<sup>1</sup> Examples of commodities suitable for a City Blanket Purchase Order are uniforms and cleaning supplies.

<sup>2</sup> An example of a commodity suitable for a Departmental Blanket Purchase Order is aggregate used by the Asphalt Plant of the Department of Public Works.

4. All employees who exercise delegated Purchasing signature authority must adhere to the Principles and Standards of Ethical Purchasing Conduct promulgated by the Office of Contract Administration and must sign a statement attesting thereto.
5. All designated employees shall file Form 700, Statement of Economic Interests annually as required by the Article III, Chapter 1, of the San Francisco Campaign and Governmental Conduct Code.

The Office of Contract Administration provided the Budget Analyst with its list of Department of Public Works staff persons authorized to engage in departmental purchasing. The list contained five names, including one of a recently retired employee. However, our review of delegated departmental purchasing documents showed three Department of Public Works staffmembers who regularly approve delegated departmental procurements were not named on the authorized listing obtained from the Office of Contract Administration. Thus, a set of controls developed by the Office of Contract Administration to provide reasonable assurance that procedures developed to implement the sensitive authority of procuring commodities and services of up to \$10,000 on each such procurement, were not being adhered to by the Department of Public Works. The Budget Analyst immediately informed the Department of Public Works management of the deficient condition.

### **Departmental Blanket Purchase Orders**

The Budget Analyst reviewed a sample of Departmental Blanket Purchase Order Releases and Direct Voucher payments processed by the Operations Division in order to determine whether the procurements under these methods were being processed in compliance with acquisition regulations. As previously stated, Departmental Blanket Purchase Orders are established between a department and a vendor. Currently, the maximum dollar amount authorized for Departmental Blanket Purchase Order releases is \$1,000 per vendor, per day.

Our review of Departmental Blanket Purchase Orders and Direct Voucher payments disclosed no instances of improper use.

### **Non-Discrimination in Contracts**

The Human Rights Commission, in its administration of Chapter 12B of the Administrative Code, *Nondiscrimination in Contracts*, requires that contractors entering into contracts with the City for accumulative sums in excess of \$5,000 per fiscal year complete a Nondiscrimination in Contracts and Benefits form. The Chapter 12B compliance information on the vendor is entered into the City's Financial Accounting and Management Information System (FAMIS) where it is available to City departments.

The Budget Analyst selected a sample of contractors who had been awarded contracts with the Department of Public Works during fiscal year 2005-2006 for the purpose of determining whether the contractors were compliant with the provisions of Chapter 12B. With the exception of three who were exempt because of the \$5,000 applicability provision, all of the contractors were on file as being compliant with the provisions of Chapter 12B.

## Conclusion

The Department of Public Works lacks sufficient procedures and controls to ensure the security of its inventory, integrity of the purchasing process, and efficient operation of the storeroom. In a 1991 management audit, the Budget Analyst recommended implementation of Citywide guidelines and protocols to operate and maintain storerooms and to provide internal controls. Fifteen years later, these guidelines have not been developed Citywide. The Department of Public Works should develop internal control guidelines and procedures, including an audit schedule, through its work order with the City Services Auditor. The City Administrator, who oversees the Office of Contract Administration as well as the Department of Public Works, should develop Citywide guidelines and protocols to operate and maintain storerooms. The Department of Public Works could further strengthen its storeroom operations by writing formal policies and procedures to standardize the storeroom's procedures.

The Department of Public Works also lacks sufficient controls over the purchasing procedure, including allowing unauthorized employees to regularly approve departmental purchases and maintaining a retired employee on the list of employees authorized to approve departmental purchases.

## Recommendations

The City Administrator should:

- 13.1 Direct the Office of Contract Administration to develop a City-wide set of guidelines and procedures and a training program on storeroom operation and management as recommended in Section 2.2 of the 1991 audit report of *Purchasing and Storekeeping Functions as Administered by the Purchasing Department*.

The City Services Auditor should:

- 13.2 As part of reviews or audits that it performs of City materials storerooms, recommend guidelines and procedures for City internal controls in this area. Guidelines and procedures recommended for the Department of Public Works may also be extended to other City agencies.
- 13.3 Develop an audit schedule for periodic reviews of City materials storeroom subject to the City Services Auditor's risk analysis and scheduling process.

The Director of Public Works should:

- 13.4 Work with the City Services Auditor to develop guidelines and procedures for City storeroom internal control, which may then be extended to other City agencies.
- 13.5 Work with the City Services Auditor to develop an audit schedule for periodic reviews of the Department of Public Works storerooms.

The Deputy Director, Operations, should:

- 13.6 Continue to expand the inventory of items under the storeroom's responsibility commensurate with economical and efficient operations.
- 13.7 Ensure that storeroom staff receives the training and understands the guidelines and procedures that we recommend that the Office of Contract Compliance develop.

The Deputy Director, Finance and Administration, should:

- 13.8 Comply with the requirements of Section 21.03(a) of the *Rules and Regulations Pertaining to the San Francisco Administrative Code, Chapter 21*, promulgated by the Purchaser, concerning delegated departmental procurements.

## **Costs and Benefits**

Implementing the other recommendations, which would expand and improve the operations of the Operations Division storeroom, can be accomplished within the authorized resources of the Department of Public Works. The benefits of implementing the recommendations 15.1 through 15.3 would be to improve the economy, efficiency, and effectiveness of material management operations citywide, and could be significant. Implementation of recommendations 15.4 and 15.5 would improve the effectiveness of the Operations Division by improving storeroom operations, Implementation of recommendation 15.6 would bring the Department of Public Works into compliance with the requirements of Section 21.03(a) of the *Rules and Regulations Pertaining to the San Francisco Administrative Code, Chapter 21*, promulgated by the Purchaser, concerning delegated departmental procurements.

## 14. Automotive and Mobile Equipment Management

- The Department of Public Works needs to more closely manage its automotive and mobile equipment program. For example, the Department of Public Works has not complied with certain Administrative Code provisions on the use of City-owned vehicles.
- The Administrative Code requires detailed vehicle use records for vehicles that are equipped with emergency equipment and garaged at an employee's residence during non-working hours. The Department only began maintaining detailed records in response to the Budget Analyst's inquiry.
- Also, the Department of Public Works has not received Board of Supervisors' approval to allow employees to garage a City vehicle at their residence during non-working hours in accordance with the Administrative Code.
- The Department has not ensured that its general-purpose vehicles are routinely serviced. 98 of the 206 general-purpose vehicles maintained by Central Shops for the Department of Public Works, or approximately 47.6 percent, were overdue for the six-month preventive maintenance lubrication and service. Some general-purpose vehicles last completed a preventive maintenance service in the first half of 2004, in some instances more than two years ago.
- The Department does not maintain sufficient documentation or oversight of the Employer Pull Notice Program, implemented by the California Department of Motor Vehicles to notify employers on suspended licenses or other issues for employees driving vehicles for work. Our review of 67 employees required to be enrolled in the Employer Pull Notice Program revealed that Driver Record Information records for 10 employees required to be enrolled in the program were not available for examination. Further, the Driver Record Information forms revealed expired medical examinations for two employees.
- Finally, the General Services Agency's Central Shops does not consistently comply with the California Code of Regulation's standards for maintenance inspection and record keeping.

The Department of Public Works is currently assigned a total of 945 vehicles and pieces of mobile equipment. Of the 945 vehicles and pieces of mobile equipment, 211 are general-purpose vehicles, defined as non-emergency-response automobiles, and light-

duty trucks and vans, and the remaining 734 are special-purpose vehicles or pieces of mobile equipment such as electric carts, forklifts, dump trucks, front loaders, packers, graders, sweepers, and trailers. Included in the Department of Public Works general-purpose fleet are 70 sedans and one sports utility vehicle, a 1991 Chevrolet Blazer, which the Department reports is used for messenger services.

The Department's 945 vehicles and pieces of mobile equipment are allocated to the Department's General Office and Bureaus, as follows:

**Table 14.1**  
**Department of Public Works Vehicle and Mobile Equipment Allocations**

General Office and Bureaus	Number of Vehicles
General Office	13
Street Environmental Services	336
Building Repair	191
Street Repair	125
Sewer Repair	49
Urban Forestry	100
Engineering	18
Architecture	10
Construction Management	69
Street Use and Mapping	<u>34</u>
<b>Total</b>	<b>945</b>

Source: Central Shops database.

Fleet administration services for the 801 vehicles and pieces of mobile equipment assigned to the Operations Division of the Department of Public Works, which includes the Bureaus of Street Environmental Services, Building Repair, Street and Sewer Repair, and Urban Forestry, are performed by two classification 7210, Mobile Equipment Supervisors. Those services include writing specifications for new and replacement vehicles, preparing new vehicles for service and preparing vehicles for turn in, boom truck certification, management of the fuel key/chip system, and other tasks.

According to the Manager, Central Shops, 182, or approximately 35.8 percent, of the Department of Public Works' 508 on road, non-general-purpose, operational fleet<sup>1</sup> are 10 years or older.

## **The City's Fleet Management Program**

Section 4.10-1 of the Administrative Code provides for a Fleet Management Program to be administered by the Director of Administrative Services. All general-purpose vehicles owned, leased, or rented by the City are eligible for participation in the Program.

Salient features of the Fleet Management Program are as follows:

- The legislation mandates that *all* general-purpose vehicles “are hereby transferred to the jurisdiction of the Director of Administrative Services.”
- The Director of Administrative Services has primary authority over general-purpose vehicles but may assign such vehicles for use by City officers and departments.
- The Director of Administrative Services shall adopt rules and regulations implementing the Fleet Management Program, “including rules covering: terms, conditions, and fees for assignment of vehicles by the Department of Administrative services to individual City officers and departments, vehicle maintenance programs; and vehicle replacement plans.”<sup>2</sup>
- Fees charged, “shall be used to pay for acquisition and replacement of vehicles, maintenance and repair, and other costs of administering the program.”
- “The Director of Administrative Services may make appropriate provision for vehicles previously acquired using special, dedicated or otherwise restricted funds.”
- The Director of Administrative Services is empowered to “establish, maintain and operate an automobile pool, the location of which shall be subject to the approval of the Board of Supervisors by resolution . . . . Vehicles now or hereafter allocated to any department . . . shall be transferred to the jurisdiction thereof . . . the Purchaser of Supplies for assignment to and use in the automobile pool, whenever such transfer shall be authorized and directed by resolution of the Board of Supervisors.”

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<sup>1</sup> The “operational fleet” is that subset of the Department’s automotive and mobile equipment fleet that is self-propelled, excluding general-purpose vehicles.

<sup>2</sup> The Director of Administrative Services has established a Lease – Charge Back Program, whereby departments participating in the Fleet Management Program lease their general purpose vehicles from the Director of Administrative Services and are charged periodic lease payments to cover the maintenance of the vehicle, an administrative fee of \$10 per vehicle, and a cost element to cover the eventual replacement of the vehicle.

Based on information recorded in the Central Shops fleet database, all general-purpose vehicles assigned to the Department of Public Works are enrolled in the Fleet Management Program.

## Use of City-Owned Vehicles

The Department of Public Works has not complied with certain Administrative Code provisions on the use of City-owned vehicles. Section 4.11 of the Administrative Code, *Use of City-Owned Vehicles*, specifies that vehicles owned, leased, or rented by the City shall be used only in the discharge and transaction of municipal business. Section 4.11 also specifies the conditions necessary for City vehicles to be used for transportation to and from an employee's place of residence, as follows:

- The Department of Public Works allows 16 vehicles equipped with emergency equipment to be used for commuting to and from work. Section 4.11 (b) (4) of the Administrative Code provides that a maximum of 17 Department of Public Works vehicles that are equipped with emergency equipment may be garaged at an employee's place of residence during nonworking hours, with the prior written approval of the Director of Public Works. Although Section 4.11 (b) (4) requires the Department of Public Works to maintain detailed vehicle use records for these 16 vehicles, the Department only began doing so in response to the Budget Analyst's inquiry. In response to the Budget Analyst's request to review the records of vehicle use, the Department had to create such records from overtime reports and other files. The Director of Public Works has stated that employees authorized to garage a vehicle at his or her residence have been instructed to complete and submit vehicle usage reports on a monthly basis.
- The Department of Public Works has not received Board of Supervisors' approval to allow employees to garage a City vehicle at their residence during non-working hours. Section 4.11 (b) (6) of the Administrative Code provides for garaging vehicles at an employee's place of residence during nonworking hours, with the approval by resolution of the Board of Supervisors, where the head of the department having jurisdiction over such vehicle finds that the public interest will be best served by permitting the employee to take such vehicle home, rather than require the City to garage the vehicle.

Under the provisions of Section 4.11 (b) (6), 20 employees of the Department of Public Works are currently garaging a vehicle at his or her residence in San Francisco. However, although Section 4.11 (b) (6) requires approval by resolution of the Board of Supervisors, the Department reports that such approval has not been obtained.

## **Non-compliance with Scheduled Preventive Maintenance Inspections**

Preventive maintenance is maintenance performed on equipment at specified time or operating intervals, such as monthly or every 1000 hours of operation. The purpose of preventive maintenance is to maintain equipment in continuous operating condition by performing maintenance tasks that prevent breakdowns and failures.

As of March 29, 2006, 98 of the 206 general-purpose vehicles then maintained by Central Shops for the Department of Public Works, or approximately 47.6 percent, were overdue for the six-month preventive maintenance lubrication and service. Some general-purpose vehicles last completed a preventive maintenance service in the first half of 2004, in some instances more than two years ago. The condition cited denotes the need for management emphasis on vehicle maintenance. Central Shops reports that expected savings due to effective preventive maintenance programs average between 12 and 18 percent annually.

## **Non-compliance with California Safety and Inspection Requirements**

### **The Employer Pull Notice Program**

The Department of Public Works does not maintain sufficient documentation or oversight of the Employer Pull Notice Program. The California Highway Patrol is responsible for regulating the safe operation of certain types of vehicles. Accordingly, the California Highway Patrol has instituted safety programs covering vehicle maintenance requirements and a State driver license Employer Pull Notice Program for all drivers who are required to possess a Class A or Class B driver license. Each of the bureaus within the Operations Division operates vehicles that require driver enrollment in the Employer Pull Notice Program.

An employer enrolled in the Employer Pull Notice Program is assigned a requester code. The requester code is added to an employee's driver license record. When an employee's driver license is updated to record an action/activity, a check is made electronically to determine if a pull notice is on file. If the action/activity is one that the California Highway Patrol reports under the Employer Pull Notice Program, a driver record is generated and mailed to the employer. The California Highway Patrol periodically checks sites required to be in the safety programs in order to determine compliance with the requirements.

The Budget Analyst evaluated the Department of Public Works' Employer Pull Notice Program in order to determine whether required employees are enrolled and whether the required individual Driver Record Information is available and current. Our review of 67 employees required to be enrolled in the Employer Pull Notice Program revealed that Driver Record Information records for 10 employees required to be enrolled in the program were not available for examination. Further, the Driver Record Information

forms revealed expired medical examinations for two employees. The seriousness of these deficiencies can be derived from the following quotation from the California Highway Patrol's "Motor Carrier Safety Compliance Handbook."

All motor carriers should be aware that failure to enroll all drivers in the DMV Pull Notice Program is cause for an unsatisfactory terminal rating and a mandatory negative recommendation from the California Highway Patrol to the Public Utilities Commission, even if no other violations are found during the terminal inspection. Failure to obtain and keep any new driver's current public driving record prior to allowing that driver to drive a regulated vehicle is also cause for an unsatisfactory terminal rating.

### **State Preventive Maintenance Requirements**

The General Services Agency's Central Shops does not consistently comply with the California Code of Regulation's standards for maintenance inspection and record keeping. As previously stated, the California Highway Patrol is responsible for regulating the safe operation of certain types of vehicles, including motortrucks of three or more axles that are more than 10,000 pounds gross vehicle weight rating, truck tractors, buses, full-trailers and semi-trailers, and vans with seating for 10 or more passengers in addition to the driver. Such vehicles are subject to regulations in Chapter 6.5, 13 California Code of Regulations. One of the general requirements that applies to all vehicles subject to Chapter 6.5, 13 California Code of Regulations, is that such vehicles are to be maintained in proper operating condition, in a systematic manner.

The California Highway Patrol has published a handbook titled "Motor Carrier Safety Compliance Handbook," (the "Handbook") for the purpose of facilitating compliance with the requirements of the California Code of Regulations. The Handbook defines preventive maintenance, sets forth objectives of preventive maintenance for the organization and for public safety, describes an effective preventive maintenance program, and establishes requirements and standards for inspections and record keeping. Required records include Driver's Vehicle Inspection Reports, Preventive Maintenance Inspection Reports, Lubrication Records, and Repair Records.

Our reviews of Central Shops' compliance with the maintenance inspection and record keeping requirements of the California Highway Patrol revealed significant deficiencies, as noted below:

- a. Some maintenance inspections had not been accomplished within the last 90 days, as required by Section 34505.5 of the California Vehicle Code.
- b. The record of the most recent maintenance inspection, as determined from the maintenance inspection database, was not available in the maintenance files, in several instances.

- c. One vehicle was being dispatched that should have been taken out-of-service due to uncorrected inspection deficiencies.

The foregoing three deficiency types are considered to be serious by the California Highway Patrol: deficiencies a. and c. could result in a failure of the evaluation. In response to these findings the Manager, Central Shops, states that Central Shops has reviewed past practices and procedures regarding the Biennial Inspection of Terminals Program and has made the following changes:

- Truck Shop supervisors in Central Shops are to diligently monitor the monthly generated Biennial Inspection of Terminals Program inspection schedule to assure that vehicles are inspected within the 90-day, California Vehicle Code requirement.
- Completed inspections shall be reviewed daily to insure that any safety-related mechanical failures are corrected before vehicles are released to service.
- Reviewed inspection reports are now filed daily in vehicle history jackets.

## **Conclusion**

Because 98 of 206 general-purpose vehicles were overdue for scheduled preventive maintenance inspections, the Department of Public Works was diminishing the benefits of such inspections, which are safe vehicles, economic repairs before major maintenance is required, and preserving the useful life of the vehicle. Central Shops reports that expected savings due to effective preventive maintenance programs average between 12 and 18 percent annually. Also, the Department of Public Works was not in compliance with the provisions of the administrative code requiring Board of Supervisors approval for garaging vehicles at the residences of employees and maintaining records of use for vehicles that are equipped with emergency equipment and are garaged at an employee's place of residence during nonworking hours. Further, the Department of Public Works was not in compliance with the State's Employee Pull Notice Program. Finally, deficiencies were noted in Central Shops' maintenance of vehicles operated by the Department of Public Works that are required to be maintained in accordance with the California Vehicle Code.

## **Recommendations**

The Director of Public Works should:

- 14.1 Emphasize the importance of complying with preventive maintenance inspection schedules.
- 14.2 In accordance with Section 4.11 (b) (4) of the Administrative Code, ensure that the Department of Public Works maintains detailed records on all City vehicles used to commute to and from home.

- 14.3 In accordance with Section 4.11 (b) (6) of the Administrative Code, obtain the approval of the Board of Supervisors, by resolution, prior to authorizing employees to garage City vehicles at their residences.
- 14.4 In accordance with the State driver license EPN (Employer Pull Notice) Program, ensure that all required employees are enrolled in the Program and that the required individual Driver Record Information is available and current

The Manager, Central Shops, should:

- 14.5 Ensure that all vehicles released for service by Central Shops meet the safety requirements of the California Vehicle Code.
- 14.6 Ensure that required maintenance inspections are accomplished within the 90 days, as mandated by Section 34505.5 of the California Vehicle Code.

## **Costs and Benefits**

The Budget Analyst's recommendations can be accomplished with existing staff in-house. The benefits of the recommendations would include better vehicle maintenance, compliance with use of City-owned vehicle regulations, compliance with the State's Employee Pull Notice Program, and compliance with State preventive maintenance requirements.

## 15. Health, Safety, and Environmental Issues

- The Department of Public Works has significant environmental issues at the maintenance yard at 2323 Cesar Chavez Street. A health and safety inspection, conducted at the request of the Budget Analyst, noted several environmental deficiencies, allowing pollutants to spill into the City's sewer system and causing strain on the City's treatment of waste water.
- For example, the street sweepers dump debris such as trash, gravel, and sediments into standard catch basins, offering minimum pretreatment of the liquid waste stream for smaller particles and trash. The Department has no procedures to prevent an acute discharge of collected hazardous materials or reduce the chronic influx of pollutants from the street sweepers to the sewer and waste water treatment system.
- The Department of Public Works has a high rate of Workers' Compensation claims. Both the incidence and the severity of the Department's work place illnesses and injuries, resulting in Workers' Compensation Claims, exceeds the California Occupational Safety and Health Administration rate recorded for all California public and private employers. The Department's number of work place illnesses and injuries has not increased significantly between 2002 and 2005 but the severity, including time lost from work, has increased by a large amount.
- The Department's Operations Division's severity of work place illness and injury claims is very high. In 2005, the Operations Division reported 994.5 lost work days per 100 employees compared to the Public Utilities Commission's Hetch Hetchy Enterprise, which reported 233.2 lost work days per 100 employees. If the Operations Division's work place illness and injury severity rate were comparable to the Hetch Hetchy Enterprise, the Operations Division would gain work days and associated productivity equivalent to approximately 23.4 full time employees, or \$2.0 million in salary and fringe benefit costs.
- The Department's six person Environmental Health and Safety Office effectively provides Department-wide guidance and technical assistance to the Director of Public Works, the Deputy Directors, and to the Bureau Managers in implementing a comprehensive health and safety program. Management commitment to the Health and Safety Program and an emphasis on safety planning for work are required to significantly improve the Health and Safety Program.

The general responsibilities of employers for worker occupational health and safety are specified in Title 8, Industrial Relations, of the California Code of Regulations. Section 1509 of Title 8,

Injury and Illness Prevention Program, requires that every employer shall take the following actions concerning health and safety:

- Establish, implement, and maintain an effective Injury and Illness Prevention Program.
- Adopt a written Code of Safe Practices which relates to the employer's operations.
- Post the Code of Safe Practices at a conspicuous location at each job site office or provide a copy to each supervisory employee who shall have it readily available.
- Conduct periodic meetings of supervisory employees held under the direction of management for the discussion of safety problems and accidents that have occurred.
- Supervisory employees shall conduct "toolbox" or "tailgate" safety meetings, or equivalent, with their crews at least every 10 working days to emphasize safety.

The specific requirements of the Injury and Illness Prevention Program, which constitutes the core of health and safety programs, are enumerated in Section 3203 of Title 8, Injury and Illness Prevention Program, and include the following:

1. A system for ensuring that employees comply with safe and healthy work practices.
2. Procedures for identifying and evaluating work place hazards including scheduled periodic inspections to identify unsafe conditions and work practices.
3. A procedure to investigate occupational injury or occupational illness.
4. Methods and/or procedures for correcting unsafe or unhealthy conditions, work practices, and work procedures in a timely manner based on the severity of the hazard.
5. Training and instruction.

## **The Department of Public Works' Administration of the Health and Safety Program**

Workplace health and safety is a basic management responsibility, and for the Department of Public Works, a significant responsibility. The work performed by the Bureau of the Department's Operations Division - Building Repair, Street and Sewer Repair, Urban Forestry, and Street Environmental Services - often involves significant hazards to health and safety. Managing the work environment so as to minimize injuries and illnesses should be a key result area for the Department's management.

The Department's six staffperson Environmental Health and Safety Office is responsible for providing Department-wide guidance and technical assistance to the Director of Public Works, the Deputy Directors, and to the Bureau Chiefs to assist in implementing a comprehensive health and safety program. The responsibilities of the Environmental Health and Safety Office, as stated the Department's Safety Policy Manual, are to

- audit Bureau compliance with the Injury and Illness Prevention Program,

- develop and maintain Department-wide policies, standards, and procedures,
- report quarterly and annually to management and staff on occupational injuries and illnesses, and identify trends and problem areas,
- provide technical assistance to the Department on compliance with environmental, hazardous materials, and health and safety regulations,
- provide Department-wide health and safety training programs, and assist in developing Bureau-specific and job-specific health and safety training and codes of safe practices,
- conduct health and safety inspections and make recommendations for corrective actions,
- assist Bureaus with investigations of serious injuries and illnesses,
- act as a liaison between the Department and regulatory agencies.

The Department of Public Works' Environmental Health and Safety Office has implemented an effective system of controls for administering the Department's Health and Safety Program. The Environmental Health and Safety Office's mission statement, performance measures, and objectives reflect the Office's functions and responsibilities and serve to focus effort and measure achievement. The Office's administrative publications, including the Safety Policy Manual, the Code of Safe Practices (Department-wide version), the Employee Health and Safety Handbook, the Supervisor Safety Handbook, and the quarterly Wellness & Safety Newsletter up-to-date and of professional quality.

The Department of Public Works has not issued a Public Works Safety Policy Statement since the 1980s. The Director of Public Works should issue an updated Safety Policy Statement, indicating his dedication to the Health and Safety Program. This action, if followed by initiatives supporting the Program, should aid the work of the Environmental Health and Safety Office and the managers who have been implementing improved practices during the course of this audit.

## **Health and Safety Program Outcomes**

In order to evaluate the effectiveness of major segments the Department of Public Works' Health and Safety Program, the Budget Analyst (1) oversaw an evaluation of the health, safety, and environmental status of the Department's Maintenance Yard and Asphalt Plant, and (2) conducted a comparative analysis of the Department's injury and illness incidence rates.

## **Health, Safety, and Environmental Inspections**

At the request of the Budget Analyst, staff of the Safety and Health Department of the San Francisco International Airport and the Public Utilities Commission's Health and Safety and Environmental Regulation Office conducted a health, safety, and environmental inspection of the Department of Public Works' Maintenance Yard, located at 2323 Cesar Chavez Street, and the Asphalt Plant located at 1801 Quint Street, on April 4, 2006. The inspection included a walk-through of the trade shops, the fueling station, street sweeping operations, vehicle and equipment storage areas, the Bureau of Urban Forestry areas, and the hazardous materials storage area.

We have provided summaries of the inspection, below. We have also provided complete inspection reports with photographs, including detailed “Observations” and “Required Actions,” to the Department of Public Works.

### Health and Safety Issues

The inspectors made the following observations concerning common safety issues:

- Housekeeping was very good in many of the shops. Electrical panels were labeled, accessible, and free of debris. Automatic External Defibrillators were visible and training records were posted. The organization of the Material Safety Data Sheets was outstanding, with all shops maintaining binders that were neatly organized.
- There were several instances of improper storage of flammable chemicals, unlabeled chemical containers, incompatible chemicals stored together, lack of signage, and hazardous wastes stored on wooden pallets.
- Equipment and shovels were stored haphazardly in the chain link closet.
- Shelving in the shop areas and annex locations is inadequate.
- Housekeeping/material storage was poor in the Carport 3 Storage Area, the Tool Room, the Sheet Metal Annex, the Glass Shop, and Electrical Shop, and the Homeless Belongings Area in the Lower Yard.

In addition to the items noted in the detailed inspection report, there were other capital improvement, building, and facility safety hazards noted by the inspection team, as follows:

- The main service electrical system is antiquated and at capacity.
- Street lighting (Department of Parking and Traffic responsibility) on the Cesar Chavez street side is inadequate.
- There was no security guard at the Kansas Street entrance gate.
- Fixed ladders are required on each building and carport.
- The furnace system is antiquated in some shop areas.
- The Carpenter Shop needs a more efficient dust collection system.

The inspectors also noted the following deficiencies in the Hazardous Materials Storage Area, Carport 4 of the Maintenance Yard, which is maintained by the Department of Public Health:

- Housekeeping/material storage was poor throughout the area.
- Drums containing hazardous waste were not stored on appropriate spill pallets.
- The emergency eyewash station is not being maintained in a sanitary condition.

The inspectors noted exposed thermal system insulation on pipe at the Asphalt Plant. The pipe wrapping should be repaired.

The Health and Safety inspection revealed that although housekeeping was very good in many of the trade shops, housekeeping and material storage was poor in the Sheet Metal Annex, the Glass Shop, and the Homeless Belongings area in the Lower Yard. Also, the inspection noted several instances of improper storage of flammable chemicals, unlabeled chemical containers, incompatible chemicals stored together, lack of signage, and hazardous wastes stored on wooden pallets instead of spill pallets. Further, shelving in the shop areas and annex locations is inadequate and some shops have wooden ladders that do not have any safety feet.

### Environmental Inspection Results

The sections that follow pertain to areas that exhibit the highest potential sources of storm water pollution: The areas inspected are required to comply with the Sewer Use Ordinance (San Francisco Municipal Code [Public Works Code] Part II, Chapter 10, Article 4.1), which regulates runoff to the sewer system.

#### *Street Sweeper Unloading/Washing Pads*

The Street Sweeper Unloading/Washing Pad operation constitutes the most serious concern for the safety of the sewer conveyance system. Currently, the street sweepers are unloaded on one of two asphalt pads that are each graded toward a central drain, and surrounded by an asphalt berm on three sides (See Exhibit 1, below). The sweepers back up over the pad and tilt the collection bins to dump collected materials. While the sweeper's bins are in the dump position, access panels on the sides and front are opened and the operators hose out the inside of the collection bin. The liquid component, potentially high in pollutants, flows directly to the drains in the center of the pad (See Exhibit 2, below). Larger debris such as trash, gravel, and a large portion of the sediments are routinely removed by front-end loaders and hand shovels after the sweepers pull out of the pads or at the end of a shift. The drains that service these areas are standard catch basins and offer minimum pretreatment of the liquid waste stream, except for larger sediment particles and trash removal. The effluent from this washing process is eventually treated at the treatment plant; however, there are no measures in place to prevent an acute discharge of a collected hazardous material, or to reduce the chronic influx of pollutants generated from this activity. The Public Utilities Commission's Wastewater Enterprise staff, who are responsible for the City's wastewater collection system, currently clean the trapped coarse sediments and other debris from the catch basins on a weekly basis. At the time of the inspection, the basins were filled up to the drain pipe with sediment, not allowing for any further material capture. Studies conducted by the Alameda County Urban Runoff Clean Water Program showed that once the sump of a catch basin exceeds one-third the height from the bottom to the water line, the basin loses its treatment capacity. The inspector recommended the following actions to correct the problem:

1. Install a multi-chambered oil-grit separator to treat the effluent from the catch basins, or remove catch basin entirely and install a drainage grate that is plumbed directly to the separator. There are numerous variations of this technology, each good at sediment and oil separation. The variations occur around specific pollutants. Several examples have been provided in Attachment B of the detailed report but newer modules that allow for use of various inserts to increase treatment capabilities should be an important consideration as pollutant limits to and from the publicly-owned wastewater treatment facilities will likely

become increasingly stringent in the future. Depending on size, these units will still require frequent maintenance, but treatment capabilities far exceed the current catch basin configuration.

2. Please submit plans to the Public Utilities Commission's Bureau of Environmental Regulation and Management for review prior to final decision.
3. Provide written maintenance plan including frequency.

### **Exhibit 15.1**

#### **Street Sweeper Unloading / Debris Dumping Area**



#### **Exhibit 1: Sweeper Wash Pad**

Debris is dumped onto this pad, sweeper holding chambers are sprayed out, and trash and large sediment particles are scooped and placed in debris box. Liquid pollutants and suspended solids flow to the drain. Photo taken from adjacent pad.

## Exhibit 15.2

### Street Sweeper Unloading / Washing Pad Debris Pile



**Exhibit. 2** Sweeper Wash Pad.

Debris pile covering drain after street sweeper has been emptied.

#### *Housekeeping and Material Storage*

Housekeeping was generally good throughout the yard with negligible accumulation of haphazard storage of parts, equipment, supplies, and other materials, or accumulation of items with little or no remaining utility. Most shops had uncovered garbage containers with trash in them. During rain, as observed on the inspection day, the garbage cans partially fill with water, and the water will end up on the ground either through holes in the cans, or from spills while emptying the cans. The water from the garbage cans will contain trace amounts of any pollutants inside the cans. To correct this problem, the Director of Operations should ensure that all garbage containers have a lid in place or are stored under a roof or indoors.

The materials storage area located outside of carport 2 in the Northeast corner of the yard had many containers of soaps and cleaners whose containers had weathered to the point of questionable integrity. This inspector was able to simply break off pieces of the lids by hand due to their brittleness. The Director of Operations should ensure inventory management that employs a “first in-first out procedure for materials.

#### *Hazardous Material Storage*

The Operations Division staff store hazardous materials, located in the Northwest corner of the facility, in a proper manner. The inspectors noted only one deficiency: the placement of the spill protection berm along the front of the storage area was outside the drip line of the roof, allowing rainwater to collect inside the bermed area. The collected rainwater allows for the mobilization of chemicals and/or dry-sweep materials that have accumulated on the ground. The Director of Operations should instruct the appropriate staff to relocate the berm inside the drip line.

### *Vehicle Fueling and Service*

The gasoline and diesel fueling area complied with most storm water Best Management Practices. The inspectors noted one deficiency: the lack of a complete spill kit. Containers of absorbent “kitty litter” were present, but no brooms or dustpans to complete the spill cleanup procedure were present. As a result, an accumulation of spent absorbent was present on the fueling pad, which will eventually get tracked to the surrounding area (Fig. 7). Upon a return visit, the proper tools were placed in the spill kit, but accumulated absorbent was still present on the fueling pad. The Director of Operations should post signage to remind personnel of proper cleanup procedures, and ensure annual tailgate training for city employees who operate vehicles.

The vehicle service area located adjacent to the fueling area exhibited nearly complete use of Best Management Practices at the time of the inspection. Waste oil is handled in a closed loop system that requires no manual fluid transfer except from the vehicle oil pan to the collection pan in the mechanic’s pit. Spill kits were present and well marked, and spill prevention devices were properly employed. The only deficiency noted was the procedure for disposing of spent mop water from clean up of the shop. Currently water gets disposed in a nearby storm drain outside the shop. There is an oil/water separator drain located inside the shop that needs to be used for all mop water containing traces of oil. The Director of Operations should ensure that the oil/water separator is used only for dumping oily mop water. Additionally, a mop needs to be designated for cleaning up oil spills and residues and rinsed in a bucket only containing water. A second mop designated for finishing with a soap solution is needed designated as well.

### *Cement Shop*

One wastewater collection system issue was cited in the cement shop. An indoor floor drain located approximately one yard from the hazardous material storage closet inside the shop where chemicals including corrosives are stored is not used on a regular basis for any purpose. The Cement Shop Superintendent should ensure that the drain is plugged with a removable stopper to prevent any accidental spills from entering the sewer system. The stopper should remain in place except at the rare times when drainage for that area may be needed (e.g. washing the floor).

### *Graffiti Paint Sinks*

The graffiti crew washes paint equipment in sinks located along an east-facing wall between the upper and lower yards. The sinks drain through two particle traps designed to separate paint particles from the wastewater generated during cleaning. The traps had not been serviced as evidenced by rust and accumulated paint over maintenance points on the traps and confirmed through interviews with the graffiti crew supervisors. These traps require regular servicing to properly function and removed material should be disposed of as hazardous waste if the content of the material is not completely known.

### *Bureau of Urban Forestry Area*

The Bureau of Urban Forestry stores plant material, soils, and equipment in the southwestern corner of the lower yard. At the time of the inspection, sediment-laden runoff was entering a storm drain that services the area. The sediment was generated from uncovered piles of soil in

storage bins. These piles need to be covered during the rainy season. In addition to preventing the mobilization of soil particles by keeping the piles covered, an additional level of drain protection should be implemented at the drains themselves by placing gravel bags around the drains. In addition to the storm drain, vegetation was growing inside the separator chamber of the grated trench that flows to an oil/grit separator on an equipment washing pad, indicating lack of servicing for an extended period. The Bureau of Urban Forestry manager needs to ensure that staff cover the stores of plant material, soils, and equipment during the rainy season and service the separator chamber routinely. Further, all vehicle washing (except street cleaners as described in an earlier section) should be performed on this pad. The oil/grit separator will need regular servicing above the level to which it is currently receiving.

### *Asphalt Plant*

The Department of Public Works asphalt plant located on Jerrold and Quint streets employed good implementation of Best Management Practices overall. Improved preventative maintenance of the drainage system and improved spill protection are the only recommendations. For the drainage system, there are seven storm drains that serve the facility. These should be inspected on a weekly basis throughout the rainy season, and cleaned if necessary. A thorough inspection and cleaning should be scheduled starting in September to prepare for the rainy season. Also, spill kits in hazardous material storage areas need to be clearly marked. There is significant diesel storage and usage at the facility; therefore, temporary drain blockers should be located and marked adjacent to each storm drain. An example of a portable and rapidly deployable drain protection unit is included in attachment B.

## **The Department of Public Works' Incidence of Workplace Injury and Illness**

The recordable incidence rate and the recordable severity rate are measures of injury experience calculated such that interested parties can make meaningful trend analyses or cross-comparisons of injury experience within a given industry, trade, or project type. A recordable injury is an injury that requires other than first aid. The formula for calculating the recordable incidence rate yields the number of recordable incidents per 100 employees working 40 hours per week for 50 weeks per year. The formula for calculating the recordable severity rate yields the number of lost workdays per 100 employees working 40 hours per week for 50 weeks per year.

Table 15.1 below displays the recordable incidence rate and recordable severity rate for the Department of Public Works and other City agencies for the periods indicated. Table 15.1 shows that there were 18.0 recordable incidents per 100 employees in calendar year (CY) 2005, which is slightly below the five-year mean of 18.1 recordable incidents per 100 employees. Another way of viewing the statistic is that approximately 18 percent of the Department of Public Works' employees had a recordable injury in calendar year 2005.<sup>1</sup>

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<sup>1</sup> Stated as a percentage of employees, the figure is an approximation because a given employee can have more than one recordable injury during the year.

Table 15.1 also shows that the Department of Public Works experienced 594.7 lost workdays per 100 employees in calendar year 2005, the highest recordable severity rate within the last five years of a statistic that has increased in each of those years.

**Table 15.1**

**Department of Public Works' Recordable Incidence and Severity Rates  
Compared to Other City Departments**

Calendar Year	Recordable Incidence Rates				Recordable Severity Rates			
	Public Works	Recreation and Park <sup>2</sup>	Hetch Hetchy Enterprise	Water Pollution Control	Public Works	Recreation and Park <sup>3</sup>	Hetch Hetchy Enterprise	Water Pollution Control
2001	18.3	23.0	12.5	18.8	364.4	206.0	237.0	428.3
2002	17.7	30.0	5.4	16.1	430.6	398.7	45.1	672.6
2003	18.7	26.7	16.0	17.6	511.8	202.3	153.7	449.0
2004	17.7	23.8	6.5	15.4	576.1	808.0	143.1	572.5
2005	<u>18.0</u>	<u>34.7</u>	<u>13.2</u>	<u>14.8</u>	<u>594.7</u>	<u>429.3</u>	<u>233.2</u>	<u>596.2</u>
<b>CY 2001 thru CY-2005 Average</b>	<b>18.1</b>	<b>27.6</b>	<b>9.4</b>	<b>16.5</b>	<b>495.5</b>	<b>408.9</b>	<b>162.4</b>	<b>543.7</b>

Source: Published Department of Public Works and Public Utilities Commission Health and Safety statistics.

The California Occupational Safety and Health Administration (Cal-OSHA) web site includes tables showing recordable incidence rates for 2004, the most recent year that data has been published, for both governmental and private organizations of all types. The recordable incidence rate for all industries including State and local government is 8.9, and the recordable incidence rate for private industry is 4.9. For repair and maintenance organizations, the recordable incidence rate is 4.1, which is approximately 77.2 percent less than the Department of Public Works' recordable incidence rate of 18.0. Further, the statistics shown for the Department of Public Works as a whole include the rates for Engineering and Finance and Administration, organizations with relatively low recordable rates.

The data in Table 15.1 shows that the Hetch Hetchy Enterprise of the Public Utilities Commission has by far the best health and safety record of the organizations shown. The Department of Public Works and the Water Pollution Control Division of the Public Utilities Commission have comparable health and safety records: the Department of Public Works has a

<sup>2</sup> Fiscal year rather than calendar year beginning in FY 2000-2001.

<sup>3</sup> Fiscal year rather than calendar year beginning in FY 2000-2001.

higher rate of recordable incidents, but they are moderately less severe over the five-year period shown. The Recreation and Park Department, for the period shown, has by far the highest incidence of recordable injuries and the second highest severity rates.

According to health and safety specialists, the significant variables determining health and safety rate experiences include the following: (1) management commitment, (2) safety planning for work, (3) employee fitness, and (4) and type of work performed. The significant variables are not completely independent: management commitment can certainly affect safety planning for work and employee fitness, as well as other health and safety factors.

Tables 15.2 and 15.3 show the recordable incidence rates and the recordable severity rates, respectively, for the Bureaus of the Operations Division and for the Operations Division as an entity for the calendar years shown.

**Table 15.2**  
**Operations Division Recordable Incidence Rates**

<b>Calendar Year</b>	<b>Bureau of Building Repair</b>	<b>Bureau of Urban Forestry</b>	<b>Street Environmental Services</b>	<b>Street and Sewer Repair</b>	<b>Operations Division Total</b>
2001	21.8	N/A	31.4	25.7	26.9
2002	20.5	52.8	32.2	23.7	27.9
2003	17.2	75.3	29.6	36.2	30.5
2004	25.8	57.1	25.2	19.5	28.3
2005	<u>21.3</u>	<u>49.2</u>	<u>30.2</u>	<u>22.7</u>	<u>28.6</u>
<b>CY 2001 thru CY-2005 Average</b>	<b>21.3</b>	<b>58.6</b>	<b>29.7</b>	<b>25.6</b>	<b>28.4</b>

Source: Published Department of Public Works Health and Safety Statistics

**Table 15.3**  
**Operations Division Recordable Severity Rates**

Calendar Year	Bureau of Building Repair	Bureau of Urban Forestry	Street Environmental Services	Street and Sewer Repair	Operations Division Total
2001	398.9	N/A	786.0	464.8	593.0
2002	533.6	1299.6	715.6	889.8	701.3
2003	627.0	1942.7	898.7	575.1	867.2
2004	735.6	478.8	1204.8	825.5	916.6
2005	<u>885.8</u>	<u>1406.8</u>	<u>1124.3</u>	<u>420.7</u>	<u>994.5</u>
<b>CY 2001 thru CY-2005 Average</b>	<b>636.2</b>	<b>1,282.0</b>	<b>945.9</b>	<b>635.2</b>	<b>814.5</b>

Source: Published Department of Public Works Health and Safety Statistics

The recordable incidence rate of the Operations Division as an entity has been fairly stable for the past five years, ranging from 26.9 to 30.5. However, the recordable severity rate has been increasing significantly over that time period – from 593.0 to calendar year 2001 to 994.5 in calendar year 2005.

As an indication of the significance of health and safety rates on productivity, had the Operations Division experienced the Hetch Hetchy recordable severity rate of 233.2 in calendar year 2005 instead of its reported recordable severity rate of 994.5, the prevention of lost work due to injuries would be approximately 23.4 full time equivalent positions, based on an assigned Operations Division strength of approximately 800 employees. The cost of 23.4 full time equivalent positions, based on the average salary and mandatory fringe benefits costs for an Operations Division employee, is \$2,062,559. Additional savings in medical and related costs could also be realized.

The Operations Division rates are only an indicator of the health and safety experience of the organization over a given time period. The Department of Public Works needs to analyze the rates of workplace injury or illness within each of the Bureaus and the activities contributing the most to the high incidence Bureaus in order to implement effective interventions. Based on the information shown in Table 15.2 and Table 15.3, the Department of Public Works should investigate the causes of the apparent high injury and severity rates among members of the Operations Division, with particular emphasis on the Bureau of Urban Forestry, and develop action plans to significantly reduce the incidence and severity of injury in the Division.

## Conclusion

The Department of Public Works needs to implement specific environmental improvements in the 2323 Cesar Chavez Street maintenance yard. Inspections of the yard showed that, while the yard was generally clean and free of significant hazards, numerous incidents of poor maintenance, servicing, or management contribute to safety problems. The Director of Operations needs to ensure that the maintenance yard is well maintained and free of hazards and implement specific corrections identified by Public Utilities Commission and Airport health and safety staff.

The Department of Public Works' lost work days due to work place injury or illness over the past several years has increased significantly. From calendar year 2001 through calendar year 2005, the number of the Department's Operation Division's workplace injuries per 100 employees, requiring more than first aid treatment, was largely unchanged. However, the severity of the Operation Division's workplace injuries and illnesses, measured by the number of lost work days per 100 employees, increased significantly, especially in the Bureaus of Building Repair, Urban Forestry, and Street Environmental Services.

## Recommendations

The Director of Public Works should:

- 15.1 Fully support the Department of Public Works' Health and Safety Program including developing and disseminating a Department of Public Works' Safety Policy Statement.

The Operations Division Manager should:

- 15.2 Continue to improve the housekeeping and physical condition of the Operations Division Yard and the Asphalt Plant and implement specific corrections to address deficiencies noted by the Public Utilities Commission and Airport health and safety staff.
- 15.3 Evaluate the costs and obtain funding to install a multi-chambered oil-grit separator to treat the effluent from the catch basins, or remove the catch basin entirely and install a drainage grate that is plumbed directly to the separator.
- 15.4 In conjunction with the Environment, Health and Safety Manager, analyze the causes of the increased severity of workplace injury and illness in the operating bureaus and develop and implement a plan to significantly reduce the incidence of workplace illness or injuries in the Operations Division.

## Costs and Benefits

With the exception of implementing an environmentally-acceptable method of disposing of effluent on the street sweeper unloading/washing pad, which according to the Department of Public Works will cost approximately \$15,000 to \$20,000, the Budget Analyst's recommendations can be accomplished with existing staff, in-house. The benefits of the

recommendations would include a healthier, safer, and environmentally compliant workplace, and the potential prevention of lost work due to injuries of approximately 23.4 full time equivalent positions. The cost of 23.4 full time equivalent positions, based on the average salary and mandatory fringe benefits costs for an Operations Division employee, is \$2,062,559. Additional savings in medical and related costs could also be realized.

## 16. Interdepartmental Work Order Funds

- Since the interdepartmental work order fund budgets included in the Annual Appropriation Ordinance provide the Department of Public Works with authority to fund and hire positions to provide services to client departments, these budgets should accurately reflect expected revenues and expenditures. This is particularly important since 35.7 percent of the Department's operating budget, or \$52.97 million out of the \$148.5 million appropriated in FY 2006-2007, are budgeted in interdepartmental work order fund budgets.
- However, the budgets for these interdepartmental work order funds do not accurately represent the Department's actual income or cost for assigned activities. Most significantly, the position costs included in the Annual Appropriation Ordinance substantially exceed the Department's actual costs. For example, the Bureau of Street and Sewer Repair interdepartmental work order fund budget was \$10.6 million in FY 2005-2006 while actual costs for the positions providing work order services was only \$7.0 million in that year.
- Although client departments provide the Department of Public Works expenditure authority through individual work orders, the Department's current processes do not provide sufficient information for client departments to effectively monitor work order project expenditures.
- Because interdepartmental fund budgets are not transparent or readily available to client department managers, the Board of Supervisors, other policy makers or the public, client departments cannot effectively justify or communicate annual interdepartmental work order fund activities, measure actual expenditures against projected expenditures, or track changes in expenditures from year to year. To be a meaningful document, the Department of Public Works should develop interdepartmental work order budgets that accurately reflect estimated salary and non-salary budgetary requirements for the coming year and the client departments' cost of services.

### Operating Bureaus Interdepartmental Work Order Funds

The interdepartmental work order fund budgets for the Department of Public Works' four operating bureaus are made up of work order services for other City departments, grants, projects, and other sources of funds. The operating bureaus interdepartmental work order fund budgets make up 35.7 percent of the Department of Public Works' annual operating budget, or \$52.97 million of the \$148.5 million operating budget in FY 2006-2007, as shown in Table 2 in the Introduction to this report.

The interdepartmental work order fund budgets do not reflect actual expenditures. The bureaus' interdepartmental work order fund budgets include salary and overhead expenditures but do not include non-salary expenditures.

These interdepartmental work order fund budgets do not show the actual revenues. Rather, these budgets show expenditure recoveries that offset budgeted salary and overhead expenditures so that the budget balances to zero. These expenditure recoveries are a placeholder rather than actual monies appropriated in other City budgets, grants, and projects.

The interdepartmental work order fund budgets overstate required funding for positions by budgeting all expenditures as salary expenditures and by budgeting positions for higher than actual expenditure recoveries.

## **Individual Work Order Expenditures and Recoveries**

According to the Department of Public Works' Director of Finance and Administration, the purpose of the interdepartmental work order fund budgets is to provide position authority and is not intended to provide spending authority for salary and non-salary expenditures. According to this Director, client departments provide the Department of Public Works expenditure authority through individual work orders.

The Department of Public Works manages interdepartmental work order expenditures and recoveries at the individual project or work order level. According to the Director of Finance and Administration, the operating bureaus manage projects and individual work orders to ensure that salary and non-salary expenditures do not exceed actual recoveries.

While this practice may ensure that expenditures will not exceed available resources, budget accountability is lost because actual expenditures and expenditure recoveries bear no relationship to projections made and funded by the Board of Supervisors in the budget. The Department of Public Works disagrees with this assessment, and does not consider budgeting and tracking work order salary and non-salary expenditures within each bureau's interdepartmental work order fund to be efficient or informative, due to the large number of individual work orders.

## **Interdepartmental Work Order Fund Budgets at the Bureau Level**

An operating budget is a financial control tool, a management tool, and a document that facilitates communication about anticipated revenues and expenditures to policy makers and the public. The Department of Public Works has developed the operating bureaus interdepartmental work order fund budgets to provide authority for positions allocated to interdepartmental work orders. Because the interdepartmental work order fund budgets do not correspond to the Department's expected salary and non-salary expenditures or to expected recoveries, these budgets fail to meet the necessary functions of an operating budget.

## **The Budget as a Financial Control**

The Department does not ensure that all interdepartmental work orders are effectively managed and that the work order or project budget provides effective financial control. The Department's current procedures for budgeting and tracking interdepartmental work orders could serve as a financial control at the project level if properly implemented since the Department of Public Works' policies and procedures assign responsibility to the bureau and project managers for monitoring expenditures against work order budgets.

### The Operating Bureau's Management of Work Order Budgets

The operating bureaus do not consistently manage work order budgets. As noted in Section 12 of this report, the Bureau of Building Repair does not sufficiently control work order budgets and expenditures. The Bureau does not define projects, commits to and incurs expenditures in excess of budgeted amounts, and carries forward annual project expenditures without proper authorization.

### The Client Department's Access to Information

According to the Department, the client department is also responsible for monitoring work order expenditures by the bureau that performs the work. However, client department access to information varies by project and bureau.

- The Bureau of Street and Sewer Repair provides a report to the Public Utilities Commission once per year detailing expenditures for the \$5 million annual work order. While the Public Utilities Commission has electronic access to the Department of Public Works' project expenditure data to view when jobs are completed, it cannot view the number of hours allocated to the job or receive ongoing information about changes to the job order. The Public Utilities Commission can access information in the City's general ledger system, FAMIS, but the general ledger system is not intended as a project management tool, and non-salary expenditures posted in the system lag.
- The Bureau of Building Repair lacks adequate systems to report work order expenditures to client departments. Consequently, the Bureau's manager, assistant superintendents and client departments have insufficient information to monitor expenditure details, as discussed in Sections 12 of this report. The Bureau of Building Repair does not track or report work order expenditures in a way that allows the client department and the Bureau manager to evaluate the efficiency of work order expenditures. Currently, the Bureau does not produce standard reports that allow managers to monitor project expenditures. Specific project budgets that are funded by a work order with a client department are "over-allocated", indicating that the project's expenditure budget exceeds the project's funding allocation. The Bureau has not yet implemented a process to notify client departments of projects that are over-allocated.

Bureau of Building Repair customers reported in a customer satisfaction survey, conducted by the Budget Analyst and discussed in Section 11 of this report, that billing information is complicated and confusing. According to survey responses, it is difficult to reconcile billing transactions against work order encumbrances in the City's general ledger system, FAMIS, with the actual task order issued through the Department of Public Works' internal billing system. The Department of Public Works has not provided a way for the client department to view the actual task order that may be related to the FAMIS billings.

#### Managing Work Orders as a Financial Control

To be an effective financial control, the Department needs to ensure that the bureaus' procedures for managing work orders and recoveries are consistent and comply with the Department's policies and procedures. The Department also needs to facilitate client department access to project expenditure data, including developing routine reports that allow client departments to track project expenditures. The Department of Public Works should work with the client departments to develop quarterly reports that allow client departments and bureau superintendents to track work order expenditures.

### **The Budget as a Management Tool and Communication Device**

The Department of Public Work's current interdepartmental work order fund budget procedures are ineffective as a management tool or mechanism for communication. Because the annual budget does not reflect anticipated expenditures or recoveries, the budget provides no information to decision makers or the public.

#### Using the Budget as a Management Tool

The bureaus' interdepartmental work order fund budgets are not a management tool. The difference between budgeted and actual expenditure recoveries and budgeted and actual positions is too large to allow managers to use the budget to plan annual work load and spending or to monitor spending against the budget.

- The FY 2005-2006 Bureau of Building Repair interdepartmental work order fund budget was \$24.5 million. The Controller included \$16.8 million in actual recoveries from other City departments, including recoveries from other Department of Public Works bureaus, a difference of \$7.7 million. According to the Department of Public Works, the Bureau of Building Repair receives additional work orders throughout the year from other City departments, the San Francisco Unified School District, the San Francisco Housing Authority, and other agencies, in addition to the \$16.8 million. However, the Department of Public Works has not identified the amount of such additional funding.

In addition, the \$24.5 million interdepartmental work order fund budget was for salary and overhead expenditures only, although non-labor expenditures made up approximately 20 percent to 30 percent of the Bureau of Building Repair's work

order services. Therefore, approximately \$7 million should have been included as non-labor expenditures in the Bureau of Building Repair's \$24.5 million budget.

- The Bureau of Street and Sewer Repair's FY 2005-2006 interdepartmental work order fund budget was \$10.6 million for salary and overhead expenditures. The Bureau's actual work orders, including San Francisco County Transportation Authority funding, were \$8.6 million, of which approximately \$7.0 million were for salary and overhead expenditures and \$1.6 million were for non-salary expenditures.

#### Aligning Interdepartmental Work Order Fund Budgets with Expenditures

According to the Department of Public Works, the Department developed the current interdepartmental work order fund budget structure to allow flexibility in staffing by including more positions in the budget than are actually funded by work orders. The interdepartmental work order funds include not only position authority for permanent positions but also monies to pay for temporary salaries to meet peaks in workload.

According to the Department of Public Works, because bureau managers are required to manage their annual expenditures based on actual work order recoveries rather than the interdepartmental work order fund budget, the bureaus do not overspend in their interdepartmental work order fund budgets.

However, the Department does not track interdepartmental work order expenditures by bureau. Rather, bureau managers are intended to track expenditures by project or work order. For the Bureau of Building Repair, which has the largest interdepartmental work order fund budget, the current work order tracking system does not allow for accurate monitoring. Further, none of the four operating bureaus have the ability to generate summary reports that allow bureau managers to monitor interdepartmental work order fund spending as a whole.

The Department states that, because of the varying nature of projects funded by work orders, estimating the number of work orders and the salary and non-salary expenditures in the annual budget is not practical.

However, each of the work orders between the Department of Public Works and the client department includes a detailed budget, outlining all expected salary and non-salary expenditures during the fiscal year. Each of the operating bureaus should develop an annual interdepartmental work order fund budget that includes the salary and non-salary budget details in the individual work orders and the associated overhead expenditures.

#### *Monitoring Interdepartmental Work Order Fund Budgets*

The Department should also develop procedures that allow bureau managers to track interdepartmental work order fund budgets as a whole. Under the Department's current practice, the Department reports overhead, General Fund, and Road and Gas Tax fund expenditures but does not report expenditures in the interdepartmental work order funds. The bureau managers need to monitor interdepartmental work order fund expenditures to

better track salary expenditures and identify staffing needs to ensure appropriate staffing levels.

### **Transferring Responsibility for the Cement Shop in the Budget**

The Department needs to transfer the revenues and expenditures associated with cement work in the annual budget. Previously, responsibility for cement work was divided between two bureaus, the Bureau of Building Repair and the Bureau of Urban Forestry. In FY 2006-2007, the Bureau of Urban Forestry assumed responsibility for all cement work, including all positions, equipment, and other costs associated with cement work. However, the Department did not transfer the positions or associated expenditures from the Bureau of Building Repair to the Bureau of Urban Forestry in the budget. The Department cannot accurately allocate overhead costs to cement work if the associated positions are not correctly placed in each bureau's budget.

### **The Bureau of Street Use and Mapping's Fee Revenues and Expenditures**

The Bureau of Street Use and Mapping uses the interdepartmental work order fund budget to provide position authority for permit processing staff, street inspectors, and other staff funded by associated permit and fee revenues.

These permit and fee revenues are included in three Department of Public Works special funds.

- The Excavation Fund is authorized by the Public Works Code and receives deposits from excavation permit revenues.
- The Subdivision Fund is authorized by the Subdivision Code and receives map processing, plan checking, and other related fees.
- The Special Engineering Fund is authorized by the Public Works Code and receives deposits to pay for the inspection component of general purpose fees and permits.

The Subdivision, Engineering, and Excavation Funds are self-appropriating, with monies to be used exclusively to defray the costs of the Department of Public Works' activities associated with the permits and fees. The fund balance is automatically carried forward each year.

**Table 16.1****The Bureau of Street Use and Mapping's Interdepartmental Work Order Fund budget and Actual Expenditures by Fund****FY 2003-2004 through FY 2005-2006**

	<b>FY 2003-2004</b>	<b>FY 2004-2005</b>	<b>FY 2005-2006</b>
Interdepartmental Work Order Budget	\$6,298,096	\$6,762,053	\$6,831,376
<b>Actual Expenditures by Funding Source</b>			
Work Orders	270,647	270,647	231,647
Subdivision Fund	1,645,509	1,467,116	2,541,052
Engineering Fund	1,387,500	1,489,280	1,237,043
Excavation Fund	1,988,113	1,684,843	2,000,107
<b>Total Expenditures</b>	<b>\$5,291,769</b>	<b>\$4,911,886</b>	<b>\$6,009,849</b>

Source: Department of Public Works

The Bureau of Street Use and Mapping does not manage the special funds by annual budget amounts. Rather, the Bureau manages these funds based on the amount of time required to process permit applications. The Bureau of Street Use and Mapping sets up an expenditure budget in the City's general ledger system, FAMIS, for projects charged to each of the special funds. According to the Bureau of Street Use and Mapping manager, the Bureau only fills positions based on estimated revenues and expected workload. As shown in Table 16.1, the annual interdepartmental work order budget exceeds annual interdepartmental work order expenditures each year.

Each of these three funds has accumulated a fund balance in which budgeted revenues have exceeded budgeted expenditures over the life of the fund.

**Table 16.2****Bureau of Street Use and Mapping Special Funds Fund Balance**

	<b>Engineering Fund</b>	<b>Excavation Fund</b>	<b>Subdivision Fund</b>
Budgeted Revenues	\$13,965,283	\$18,767,818	\$29,803,553
Budgeted Expenditures	<u>13,153,784</u>	<u>16,570,632</u>	<u>28,434,038</u>
Fund Balance	\$811,499	\$2,197,186	\$1,369,515

Source: Office of Financial Administration and Management

The self-appropriating funds allow the Bureau the flexibility to spend funds as needed to process permits and conduct inspections. However, the Bureau needs to bring the annual budget closer in-line with expected expenditures. The Bureau of Street Use and Mapping needs to provide annual reports as part of the Board of Supervisors' annual budget review, showing actual salary and non-salary expenditures by fund.

Also, the Department of Public Works needs to annually reconcile these special funds to ensure that actual revenues correspond to actual expenditures. The Department needs to ensure that special fund fees are sufficient to cover the Department's costs of services but at the same time do not build up surplus funds and large fund balances.

## **Conclusion**

The Department of Public Works' interdepartmental work order fund budgets are ineffective as financial controls, management tools, or a means of communication about the budget. Thirty-four percent of the Department of Public Works' budgeted operating expenditures, or \$52.97 million of the \$148.5 million operating budget, are in the Department's bureaus' interdepartmental work order funds. These funds are not budgets, as such, but a means to provide the Department authority to fund and hire positions to provide services to client departments. The interdepartmental work order fund budgets include permanent and temporary salary expenditures that exceed the operating bureaus' required salary expenditures by a large amount, and no non-salary expenditures. These salary expenditures are offset in the budget by expected payments from client departments requesting services, although the amounts included in the interdepartmental work order fund budgets are a placeholder and do not represent the actual client departments' work orders.

The Department of Public Works considers that financial controls are at the individual work order or project level. However, the Department of Public Works' current processes provide insufficient information to the client departments to allow them to effectively monitor their work order budgets.

Expenditures for work order services make up a large percentage of the Department of Public Works' budget. These budgeted expenditures are not transparent or readily communicated to Department managers, the Board of Supervisors and other policy makers, and the public at large. Managers cannot show their annual interdepartmental work order fund staffing and work plan in the budget, measure their actual expenditures against their projected expenditures included in the budget, or track changes in expenditures from year to year. To be a meaningful document, the Department of Public Works should develop interdepartmental work order budgets for the operating bureaus that reflect estimated salary and non-salary requirements for the coming year and the client departments' payments for these services.

## Recommendations

The Director of Finance and Administration should:

- 16.1 Work with the Director of Operations and the superintendents of the four operating bureaus to ensure that the operating bureaus' procedures for managing work orders and recoveries are consistent and comply with the Department's policies and procedures.
- 16.2 Develop a mechanism to facilitate client departments' access to project expenditure data, including developing routine reports that allow client departments to track project expenditures.
- 16.3 Implement a process to work with client departments to develop quarterly reports that allow client departments and bureau superintendents to track work order expenditures.
- 16.4 In conjunction with the Director of Operations, develop an annual interdepartmental work order fund budget for the operating bureaus that includes the salary and non-salary budget details in the individual work orders and the associated overhead expenditures.
- 16.5 Develop procedures that allow bureau superintendents to track interdepartmental work order fund budgets at a summary level.
- 16.6 Develop and provide an annual summary report as part of the Board of Supervisors' annual budget review for each bureau's interdepartmental work order fund, showing actual salary and non-salary expenditures by fund.
- 16.7 Transfer the revenues and expenditures associated with cement work in the annual budget from the Bureau of Building Repair to the Bureau of Urban Forestry.
- 16.8 Reconcile the Special Engineering, Excavation and Subdivision Funds annually.

The Manager of the Bureau of Street Use and Mapping should:

- 16.9 Provide annual summary reports as part of the Board of Supervisors' annual budget review, showing actual salary and non-salary expenditures by fund.

## Costs and Benefits

The Department of Public Works should be able to implement these recommendations as part of their ongoing management and administrative functions. Although the implementation of these recommendations does not lead directly to cost savings, increased budget transparency and controls allow managers and policy makers to better understand and contain inefficient or unnecessary costs.

## 17. Allocation of Overhead Costs

- **The Department of Public Works overhead costs represent administrative and support costs within the Department, as well as Citywide indirect cost charges. In FY 2006-2007, the Department budget includes \$57.8 million in overhead expenditures, which are funded by direct charges to the Department's General Fund, Gas Tax and Road Fund, and interdepartmental work order fund budgets.**
- **The Department of Public Works needs to contain overhead costs to limit the impacts on projects and services. Further, because the Department was incorporated into the General Service Agency in FY 2004-2005 and must now absorb a portion of indirect costs incurred by that agency, the Director of Public Works needs to work with the City Administrator to consolidate functions and reduce costs where possible, especially human resource and information technology functions.**
- **The Department of Public Works will need to address barriers to establishing more efficient services and greater consolidation within the General Services Agency, such as incompatible payroll systems among the different departments that make up the General Services Agency, and inflexible job classifications and job descriptions that prevent streamlining of processes and more efficient allocation of staff resources.**
- **The Department of Public Works' five-year plan to replace obsolete information technology or implement new systems does not include an assessment of the bureaus' current systems needs or a staffing plan for central and bureau information technology staff. Each of the three capital bureaus – the Bureaus of Architecture, Engineering, and Construction Management – have their own information technology staff. However, although these bureaus are jointly responsible for capital projects, these information technology staff have no shared planning process or channels of communication. Further, the ten information technology staff assigned to these three bureaus are not fully utilized. Better integration of information technology functions performed by the three bureaus would lead to a more efficient use of resources, including staff reductions and estimated salary savings of \$233,000 annually.**

Many of the Department of Public Works' activities are project based. To ensure that the Department's overhead costs are allocated equitably among the Department's activities or projects, and to comply with Federal grant requirements, the Department has developed an indirect cost plan in accordance with Federal requirements. This cost plan is updated annually.

The indirect cost plan allocates Citywide overhead costs, the Department of Public Work's general administrative costs and the eight bureaus' administrative costs to the respective bureaus, based on the number of employees in each bureau. The Department uses the indirect cost plan to:

- Allocate general administrative costs and bureau administrative costs to each bureau in the annual budget; and
- Establish indirect cost rates, which are added to the hourly cost of labor charged to projects so that full direct and indirect costs are recovered.

## **The Department of Public Works' Overhead Costs**

The Department of Public Works overhead costs represent administrative and support costs within the Department, as well as Citywide indirect cost charges. In FY 2006-2007, the Department budget includes \$57.8 million in overhead expenditures, which are funded by direct charges to the Department's General Fund, Gas Tax and Road Fund, and interdepartmental work order fund budgets.

### **Departmental Tracking and Applying of Overhead Costs**

The Department of Public Works allocates the Department's general administrative costs to each of the eight bureaus as part of the annual budget. Within each bureau, these administrative costs are further allocated across funds, including the General Fund, Gas Tax or Road Fund, and interdepartmental work order funds. In some instances, the citywide overhead is applied to specific funds or projects, depending on funding source or restrictions on the application of this type of overhead.

By allocating administrative costs to each of the bureaus and adjusting the annual indirect cost plan, the Department of Public Works sets the indirect cost rates for each of the Department's bureaus. The indirect cost rate is a percentage rate applied to the hourly cost of labor that accounts for administrative overhead and non-productive labor time. Therefore, when the Department performs services for other City departments or agencies, or when the Department's employees charge their hours to projects, the indirect cost rate is applied to an employee's hourly wage rate to capture total productive and non-productive labor costs and administrative overhead costs.

Prior to FY 2004-2005, the Department of Public Works' finance staff increased the indirect cost rates during the course of the year when the Department's expenditures exceeded recoveries for work performed. These mid-year rate adjustments increased the Department's costs for providing services to other City departments, and thus impacted the budgets set for the services or projects.

In FY 2004-2005, the Department of Public Works' finance staff began calculating indirect cost rates on projected rather than budgeted expenditures for salaries. The Department's finance staff review the bureaus' expenditures and recoveries during the course of the year and reconciled actual recoveries to expenditures at year-end. According to the finance staff, the Department's goal is to maintain expenditures within recoveries, avoiding the need for mid-year rate adjustments. However, the Department adjusted the Bureaus of Architecture, Engineering and Construction Management rates

mid-year in FY 2004-2005 and the Bureau of Building Repair's rates mid-year in FY 2005-2006.

### The Department's Increases in Indirect Cost Rates

Over the past three fiscal years, the Department of Public Works has increased indirect cost rates for each of the bureaus by 12 to 50 percentage points, resulting in rate increases ranging from 10 percent to 50 percent, as shown in Table 17.1.

**Table 17.1**

**The Department of Public Works' Indirect Cost Rates for the  
Department's Bureaus  
FY 2003-2004 through FY 2005-2006**

<b>Bureau</b>	<b>FY 2003- 2004</b>	<b>FY 2004- 2005</b>	<b>FY 2005- 2006</b>	<b>Percentage Point Change</b>	<b>Percent Change</b>
Combined Architecture, Engineering, and Construction Management	155.00%	168.00%	174.00%	19 points	12%
Building Repair	116.57%	131.25%	136.69%	20 points	17%
Street Environmental Services	110.15%	124.94%	129.50%	19 points	18%
Street and Sewer Repair	135.45%	175.63%	183.13%	48 points	35%
Street Use and Mapping	100.09%	126.13%	150.47%	50 points	50%
Urban Forestry	113.99%	132.28%	125.86%	12 points	10%

Source: Department of Public Works Indirect Cost Plan

#### Increases in the Bureau's Indirect Cost Rates

The indirect cost rates have increased for each of the bureaus due, in part, to mandatory fringe benefits, paid time off, retiree health benefits and general administrative overhead cost allocations. The Bureaus of Street Use and Mapping, Street and Environmental Services, and Architecture, Engineering, and Construction Management had increases in indirect cost rates that resulted from unique circumstances within each of those bureaus. These are described below.

#### *The Bureau of Street Use and Mapping*

The 50 percent increase in the Bureau of Street Use and Mapping indirect cost rate between FY 2003-2004 and FY 2005-2006 resulted from increases in non productive

labor hours, as well as increases in mandatory fringe benefits, paid time off, and the Department's general administrative overhead allocation.

In FY 2003-2004, the Bureau of Street Use and Mapping included 94.79 full time positions in the budget, of which five were allocated to overhead. In FY 2005-2006, the Bureau of Street Use and Mapping included 90.41 full time positions in the budget, but the number of positions allocated to overhead increased to seven. The Bureau of Street Use and Mapping added new information technology positions, including adjusting the position classifications upward, resulting in increased administrative overhead costs.

#### *The Bureau of Street and Sewer Repair*

The Bureau of Sewer and Street Repair had significant indirect cost rate increases, resulting from insufficient direct labor charges to recover overhead costs and increases in non-labor costs allocated through the indirect cost plan, including road and sewer repair equipment. According to Bureau staff, such equipment costs cannot be easily charged to individual projects and is therefore allocated through overhead.

#### *The Bureaus of Architecture, Engineering, and Construction Management*

The Department of Public Works combines the indirect costs for the three capital bureaus – the Bureaus of Architecture, Engineering, and Construction Management – into one indirect cost rate. The bureaus' FY 2004-2005 indirect cost rate of 168 percent exceeded indirect cost rates charged by five other California cities participating in the California Multi-Agency CIP Benchmarking Study.<sup>1</sup> According to the Study, the city of Sacramento charged an indirect cost rate of 194.44 percent in FY 2004-2005, but the other five cities charged a rate less than the San Francisco Department of Public Works. In general, the Department's general administrative and bureau overhead rates are higher than those that are reported by other cities.

## **The Department of Public Works' Need to Contain Administrative Overhead Costs**

### **Containing General Administration Overhead Costs**

General administration overhead costs include finance and accounting, human resources, environmental health and safety, information technology, and the general costs of the Director's office. In FY 2004-2005, the City established the General Services Agency under the auspices of the City Administrator, consolidating the Departments of Administrative Services, Telecommunication and Information Services, and Public Works into one agency. In order to fully realize the benefits of consolidation, the Department of Public Works needs to work with the City Administrator to integrate and streamline administrative and support functions within the new General Services Agency. Opportunities to do so are discussed below.

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<sup>1</sup> Cities participating in the California Multi-Agency CIP Benchmarking Study are Long Beach, Los Angeles, Oakland, Sacramento, San Diego, San Francisco, and San Jose.

## **Consolidating Human Resources Functions**

In FY 2005-2006, the Department of Public Works human resources manager position was transferred to the General Services Agency to become the Agency's Director of Human Resources. However, the departments making up the General Services Agency continue to have different human resources staffing levels and systems. Consequently, consolidating functions to create a more streamlined and efficient human resource program requires analyzing and standardizing human resource practices and developing uniform systems.

### Consolidating Payroll Functions

Within the General Services Agency, the Departments of Administrative Services and Public Works use different payroll systems, preventing easy consolidation of payroll processing between the two departments. Because City departments are largely decentralized, departments have developed systems to address their individual needs but, in the process, have created barriers to streamlining functions. The Department needs to work with the City Administrator to identify ways to consolidate the Department's payroll processing functions within the larger General Services Agency, including developing a work plan, time frame, and cost analysis for its accomplishment. As part of the work plan, the Department needs to work with the Controller's Office on requirements for the new human resources and payroll system package being planned by the City.

### Increasing Flexibility in Personnel and Payroll Processing Functions

Consolidation of human resource functions is also hampered by the City's position classification system, preventing employees from performing activities deemed to be outside their classification job description. Thus, personnel and payroll staff cannot be easily cross-trained to perform each other's duties, limiting flexibility in assignments. Because the City departments' work needs change as new systems and processes are introduced, job classifications need to be revised with broader job description to allow the Department to respond to changing needs. The City Administrator should work with the City's Department of Human Resources to assess and revise existing position classifications and job descriptions to permit increased cross-training and assignment flexibility in staffing.

## **Containing Department and Bureaus Information Technology Costs**

The Department of Public Works' information technology services are provided by the Department's Office of Financial Management and Administration Computer Systems Division and by information technology staff assigned to the four Capital Division bureaus – the Bureaus of Architecture, Engineering, Construction Management, and Street Use and Mapping. The Department has assigned information technology staff to these four Capital Division bureaus to provide more timely service to the bureaus for specialized information system requests and needs. In FY 2006-2007, the Department of Public Works' has 30 information technology positions, which has decreased over the

past five years from 34 positions in FY 2002-2003. In FY 2006-2007 position costs have been budgeted at \$3.4 million. Descriptions of the functions performed by these staff are described below.

- The Computer Systems Division manages the Department of Public Works' mainframe, with responsibility for maintaining the wide area network (WAN) infrastructure and mainframe applications and databases, and providing desktop and network support to the Office of Financial Management and Administration and the Operations Bureaus, which include the Bureaus of Building Repair, Sewer and Street Repair, Urban Forestry, and Street Environmental Services. The Computer Systems Division costs for 15 positions are allocated to overhead. In addition, the Bureau of Street Environmental Services has one information technology position allocated to the Gas Tax Fund.
- The bureaus of Engineering, Architecture, and Construction Management information technology staff maintain the bureaus' servers and specialized applications. The bureaus of Engineering and Construction Management each have four information technology positions, and the Bureau of Architecture has two information technology positions, for a total of ten positions.
- The Bureau of Street Use and Mapping information technology staff manage the Citywide Geographic Information System, including maintaining and updating the City's base map. The Bureau of Street Use and Mapping maintains data on land parcels, City blocks, and special features, such as street curbs. The Bureau of Street Use and Mapping information technology staff are also responsible for maintaining internal servers and managing the user-based intranet. The Bureau of Street Use and Mapping allocates costs for three information technology positions to overhead and for a fourth position to the General Fund.

#### Staffing Changes and the Department's Information Technology Needs

The Department of Public Works is facing future vacancies in key management positions as senior information technology staff begin to retire. Many of the Department's more senior staff are trained in COBOL, an obsolete language in which the Department's core applications are written. Because many of the Department's core applications are 15 years old, and the written language COBOL has become obsolete, newer staff are not trained in the old language, creating a skills deficit as senior staff retire. Currently, the Department's Computer Services Division acting manager is assuming the functions of the Division's manager, who is on extended leave; and, the local area network/wide area network manager, who has retired.

The Department of Public Works must address several systems improvement initiatives at the same time that it is losing senior staff with specialized skills. Therefore, the Department needs to assess its long term information technology plan. Further, its existing mainframe system and applications, while serviceable, are outdated and will need to be upgraded or replaced over the next several years.

### *Information Systems Planning*

The Department of Public Works has no strategic plan for its information systems. The Department has prepared a five-year plan for replacement of the Financial and Personnel System (the Department's business process system) and the maintenance management system. As part of this effort, the Department engaged a consultant in 2005 to evaluate the costs of replacing the Financial and Personnel System, and submitted an \$8.2 million capital projects funding request to the Capital Planning Committee for FY 2006-2007 to replace the Financial and Personnel System and implement a maintenance management system. That request was not approved.

The Department of Public Works' five-year plan does not include an assessment of the bureaus' current systems and needs or a staffing plan for central and bureau information technology staff.

### *Capital Bureaus' Information Technology Planning and Coordination*

Currently, the Department of Public Works has no formal planning process between the Computer Services Division and the Department's bureaus, or among the three capital bureaus. Each of the three capital bureaus – the Bureaus of Architecture, Engineering, and Construction Management – has information technology staff and functions separate from the other two bureaus. The three capital bureaus' information technology staff have no regular meetings or channels of communication. Nor do the capital bureaus have information technology plans for the specific bureaus or the bureaus jointly.

Because the three capital bureaus are jointly responsible for planning, design and management of capital and construction projects, the bureaus need to work more closely together in planning information technology needs. The Department of Public Works is implementing Primavera, a project management system, that will be shared by the three bureaus. The Bureaus of Engineering and Construction Management are more closely involved with implementation of Primavera than the Bureau of Architecture. In planning present and future needs, the three bureaus need to assess their shared processes and identify opportunities to integrate and streamline staffing.

In the short term, the bureaus should evaluate existing information technology staffing. Currently, the three bureaus have ten positions, including system administrators, engineers, and technicians. According to interviews, staff time is not fully utilized for bureau functions.

### *Assessing Short Term and Longer Term Staffing Needs*

The Department of Public Works needs to evaluate information technology staffing across the Department to identify opportunities to streamline functions and reduce staff.

The Department of Public Works needs to assess its short term and longer term information systems staffing needs. For example, the Department needs to evaluate the best use of in-house information technology staff as project managers. As computer systems migrate to networked-based or other computer architecture, the Department needs to develop information technology staff to serve as project managers and hire vendors to write computer code and implement systems.

The Department of Public Works also needs to evaluate its current information technology staffing levels to allocate staff resources more efficiently and reassess central and bureau staffing levels. As part of this assessment the Department needs to evaluate the Bureaus of Architecture, Engineering and Construction Management current and future information technology functions, planning processes, and coordination. The Department should present an information technology staffing plan during the FY 2007-2008 budget review that details the Department's information systems and support requirements, and information technology staff skills and time needed to support the information systems; and identifies areas of redundancy and opportunities for improved efficiency and productivity. As part of this staffing plan, the Department should recommend re-allocation of staff or staff reductions to streamline services and reduce overhead costs.

## **Conclusion**

The Department of Public Works' overhead costs make up one-third of the Department's annual budget. The Department of Public Works needs to contain its growing overhead costs to limit the impact that such costs have on projects and services.

Including the Department of Public Works into the larger General Services Agency provides the opportunity to consolidate, streamline, and re-engineer administrative functions, especially human resource and information technology functions. The Department needs to evaluate its human resource processes and staffing levels, which are nearly double industry standards, to ensure efficient and cost-effective services.

The Department of Public Works also needs to develop an information technology staffing plan to ensure that it hires and retains information technology staff to meet its current and future systems needs. At the same time, the Department needs to ensure that central and bureau information technology staff are fully utilized and that information technology functions and staff are integrated and performing efficiently.

## **Recommendations**

The City Administrator should:

- 17.1 Work with the City's Department of Human Resources to assess and revise the existing human resources position classifications and job descriptions within the General Services Agency to allow increased cross-training and flexibility in staffing.

The Director of Public Works should:

- 17.2 Work with the City Administrator to identify ways to consolidate the Department's payroll processing functions within the larger General Services Agency, including developing a work plan, time frame, and cost analysis. As part of the work plan, the Department needs to work with the Controller's Office on the Controller's future acquisition of a human resources and payroll system package.
- 17.3 Work with the City Administrator to evaluate the Department's human resource processes, performance, and productivity; implement a work plan to streamline processes and improve performance and productivity; and recommend cost savings, including staff reductions or reallocation within the General Service Agency.
- 17.4 Submit proposed reductions or reallocation of human resource staffing within the General Services Agency as part of the human resource function evaluation to the Board of Supervisors during the FY 2007-2008 budget review.
- 17.5 Direct the Bureaus of Engineering, Architecture, and Construction Management to evaluate the integration of their information technology activities, including consolidating information technology positions. Present an information technology staffing plan during the FY 2007-2008 budget review that defines the Department's information systems and support requirements, as well as information technology staff skills and time needed to support the information systems. This plan should also generally identify areas of redundancy and opportunities for improved efficiency and productivity, and recommend staff reductions.

## **Costs and Benefits**

The Department of Public Works needs to evaluate administrative processes, identify opportunities for increased efficiency and productivity, and recommend administrative position reductions in the FY 2007-2008 budget. The Department of Public Works could achieve at least \$233,000 in ongoing annual salary and fringe benefit savings by integrating the capital bureaus' information technology functions and staffing, allowing it to reduce capital bureau information technology staff by at least two positions.

If the Department of Public Works successfully reduces human resource positions by 10 percent, through greater consolidation of human resource functions with the General Service Agency, the Department of Public Works could achieve approximately \$192,000 in ongoing annual salary and fringe benefit savings. This modest position reduction would still place San Francisco's staffing levels well above industry standards.

The Budget Analyst recommended and the Board of Supervisors approved \$260,000 in administrative overhead expenditures reductions in the Department of Public Works' FY 2006-2007 budget. Based on the management audit findings, the Department of Public

Works could achieve additional administrative reductions through streamlining processes, consolidating functions with the General Services Agency and reducing redundant information technology and human resources staff.

Altogether, the Budget Analyst's proposed and adopted reductions equal \$685,000.

## **Department of Public Works' Response**



Gavin Newsom, Mayor  
Fred V. Abadi, Ph.D., Director



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December 1, 2006

Harvey Rose  
Budget Analyst  
San Francisco Board of Supervisors  
1390 Market Street, Ste. 1390  
San Francisco, CA 94102

Dear Mr. Rose,

This is the Department of Public Works' (DPW) official response to your management audit that was conducted between January-November 2006.

I came to DPW after your audit had begun. Your report's recommendations will prove useful to me as I continue to reengineer parts of the Department. My managers are also looking forward to implementing most of the recommendations recommended in the audit. There are a very small number of recommendations with which we do not concur. We look forward to discussing the entire audit with the Board of Supervisors in early 2007.

Attached are our specific responses to each audit recommendation. We thank you for the opportunity to include these with your audit report.

Sincerely,

A handwritten signature in black ink that reads "Fred V. Abadi".

Fred V. Abadi, Ph.D.  
Director of Public Works

**DPW Response**  
**2006 Management Audit by**  
**Board of Supervisors Budget Analyst**

**Section 1: Street Resurfacing and Pothole Repair Projects**

The Bureau of Engineering Manager should:

- 1.1 Assess and revise as appropriate the Bureau of Engineering's street design project quality controls to ensure that street project designs meet the project needs and site requirements. 1

**DPW Response:** Agree. BOE will be implementing new quality control procedures developed over the last year and a half by the end of Calendar Year 2006.

- 1.2 Revise or enhance the Bureau of Engineering's existing street project design and drafting procedures, to ensure that project plans and specifications correspond to actual site conditions. 2

**DPW Response:** Agree. BOE will review and revise their Design and Drafting Procedures to ensure that the design and planning process is timely, including site visits late in the design process. Even with site visits during design, certain site conditions cannot be fully know until pavement is removed during construction.

- 1.3 Identify major causes of street project delays and develop procedures to reduce common causes, including quality control and project scheduling procedures. 2

**DPW Response:** Agree. One major delay in delivering the street projects on time relates to conflicted schedules and priorities to complete underground utility work such as PG&E, sewer, water, MUNI and DPT. Streets cannot be repaved if utility work is not completed on time. DPW is forced to delay work until the utility work is completed on time ahead of paving. DPW is working on developing a new reporting system and a checklist to improve coordination and minimize paving delays. The aim of this new procedure is to ask other City departments and utility companies to commit to maintain their schedules and priorities to allow DPW to move forward with paving work on time.

The Bureau of Sewer and Street Repair Manager should:

- 1.4 Develop systems to better capture and report patching and pothole activities and the cost-effectiveness of performing the work. 2

**DPW Response:** Agree. We are making modifications to our existing system that will improve reporting. Further improvements will come when

<b>Recommendation</b>	<b>Priority</b>
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our management information systems at the yard are upgraded. We will request funds for this for this upgrade in the FY 2007-08 budget.

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|--|---|
| 1.5 Evaluate the labor hours, labor costs, and productivity of street resurfacing projects to ensure that these projects are delivered cost-effectively. | 1 |
|--|---|

**DPW Response:** Agree.

- |  |   |
|--|---|
| 1.6 Present cost data and analysis of pothole, patching, and street resurfacing costs to the Board of Supervisors as part of the FY 2007-2008 budget review. | 1 |
|--|---|

**DPW Response:** Agree. We will present data on number of potholes repaired, square feet patched, blocks repaved and the cost of each function.

- |  |   |
|--|---|
| 1.7 Work with the Human Resources and the Health and Safety Division to identify causes of paid and unpaid sick and disability leave and actions that the Bureau can take to reduce the incidence of unpaid leave and increase the number of productive hours. | 2 |
|--|---|

**DPW Response:** Agree. We plan to work with Human Resources and Health and Safety Division to analyze causes of paid/unpaid sick and disability leaves and determine actions, if necessary, to improve performance. We currently employ an aggressive workers comp management process. Our Paid Leave percent is below average and unpaid leave slightly above average.

- |   |   |
|---|---|
| 1.8 Continue to report hours worked and not worked as part of the Department of Public Works' SF Stat measures. | 1 |
|---|---|

**DPW Response:** Agree.

**Section 2: Cleaning and Maintaining the City's Streets and Public Right-of-Ways**

The Director of Public Works should:

- |  |   |
|--|---|
| 2.1 Work with the Mayor and with Homeless Connect to set up a Homeless Connect team to address some of the public right-of-way areas with the most severe homeless encampments, and to coordinate City departments' resources and services to these areas. | 2 |
|--|---|

**DPW Response:** Partially Agree. DPW is currently working with the Mayor's Homeless Connect on homeless issues. However, the main concern of homeless in the right-of-way areas is people move and return within minutes to the same area. Social services issues should be addressed by the program agencies with such resources.

<b>Recommendation</b>	<b>Priority</b>
The Deputy Director for Operations should:	
2.2 Investigate the potential cost-savings and efficiency gains of using satellite staff reporting and equipment storage locations.	3
<b>DPW Response:</b> Agree. This is an ongoing project, which will require additional funding for lease and/or purchase of space for satellite locations. We have not been successful so far but are continuing the search.	
2.3 Develop a streamlined and uniform method for other City departments to report resolution of their 28-Clean service requests so the requests can be closed out in a timely fashion in conjunction with the Computer Services Division.	2
<b>DPW Response:</b> Agree. The implementation of 311 in March 2007 will streamline the reporting of service requests.	
2.4 Develop and implement a policy and methodology for the Bureau of Street Environmental Services to prioritize among competing immediate service requests and ongoing maintenance needs.	2
<b>DPW Response:</b> Agree.	
2.5 Direct the Bureau of Street Environmental Services Manager to develop formal productivity standards for street and graffiti maintenance personnel, and direct supervisors to allocate staff according to these standards.	2
<b>DPW Response:</b> Agree.	
2.6 Evaluate the potential of using non-managerial staff or an outside contract to perform the Proposition C inspections, instead of more costly managerial staff.	2
<b>DPW Response:</b> Agree. The Department is seeking outside contract assistance for data collection.	
2.7 Use the data from the Proposition C inspections to reallocate resources where prudent, such as to alter the frequency of certain street cleaning schedules.	2
<b>DPW Response:</b> Agree. DPW has entered into a consulting contract to evaluate its street cleaning program, including an evaluation of its routes, schedules and geographic coverage. The consultant will be provided with the Prop. C data.	

<b>Recommendation</b>	<b>Priority</b>
2.8 Report the Bureau of Street Environmental Services compliance with Proposition C maintenance schedules.	2
<b>DPW Response:</b> Agree.	
2.9 Standardize the format and information content of the weekly reports submitted by Bureau of Street Environmental Services supervisors.	2
<b>DPW Response:</b> Agree.	
2.10 Work with the Mayor’s Office, Police Department, and Director of Public Works to aggressively pursue other litter enforcement staffing models.	3
<b>DPW Response:</b> Agree. We are currently awaiting an arbitration decision on this matter.	
2.11 Investigate and implement procedural changes to litter enforcement, such as streamlining the procedures involved in processing citations.	2
<b>DPW Response:</b> Agree. Currently we are using the Administration Hearing process because we were unable to collect on more than 90% of the citations issued. The process is time consuming, but we will investigate whether it could be implemented more efficiently, while still achieving the high level of rulings that are favorable to the City.	
2.12 Direct the Bureau of Street Environmental Services Manager to set-up work order agreements and billing procedures to accurately reflect any graffiti abatement work it does for other agencies and departments.	1
<b>DPW Response:</b> Agree. BSES has agreements with the PUC and MTA for some of their property this fiscal year and a tracking system and billing system is in place.	
2.13 Ensure the allocation of Bureau of Street Environmental Services resources to the measurement and evaluation of the new corridor approach, and utilize this information to inform future changes in the program structure.	1
<b>DPW Response:</b> Agree. We have collected information on baseline conditions and will continue to collect data to evaluate the program.	
2.14 Work with the Human Resources and the Health and Safety Division to identify causes of paid and unpaid sick and disability leave and actions that the Bureau can take to reduce the incidence of unpaid leave and increase the number of productive hours.	2

**Recommendation**

**Priority**

**DPW Response:** Agree. We plan to work with Human Resources to analyze cause of work absences. We have implemented a stricter sick leave policy in SES. We will continue to use temporary transitional work assignments and ADA when appropriate.

The Director of Finance and Administration should:

- 2.15 Develop procedures to ensure timely collection of litter citation fines. 2

**DPW Response:** Agree. We will continue to work with the Bureau of Delinquent Revenue to ensure timely collection and/or disposition of litter citation fines.

**Section 3: Urban Forestry**

The Director of Public Works should:

- 3.1 Submit a tree planting permit application fee schedule to the Board of Supervisors for approval that sets a fee schedule that charges full permit processing costs to property owners that are required to plant new street trees in accordance with Section 143 of the Planning Code. 1

**DPW Response:** Agree.

- 3.2 Work with the Mayor's Office and Board of Supervisors to align proposed planting of new trees with ongoing funding for maintenance of street trees. 1

**DPW Response:** Agree. Ongoing funding needs to be considered are not limited to watering for new trees, but also includes maintenance of established trees, which requires special equipment and qualified staff to care for often large, mature trees. We will request additional maintenance funding in the FY 2007-08 budget, and have included establishment and maintenance costs in our ten-year capital plan submission.

The Deputy Director for Operations should:

- 3.3 Develop performance measures specific to the mission, goals, and objectives of the Bureau of Urban Forestry. 1

**DPW Response:** Agree.

- 3.4 Develop a work plan and schedule to evaluate, identify, and implement improvements to the Bureau of Urban Forestry's databases, including assessing the feasibility and potential costs of integrating the forestry

<b>Recommendation</b>	<b>Priority</b>
<p>databases with 28-Clean, in conjunction with the Director of Finance and Administration.</p>	2
<p><b>DPW Response:</b> Agree. As with other Information System improvement recommendations, resources will be required to evaluate, make recommendations and implement changes to the Department’s databases. We will request funds for this for this upgrade in the FY 2007-08 budget.</p>	
<p>The Bureau of Urban Forestry Manager should:</p>	
<p>3.5 Develop an annual work plan and schedule to inventory non-Department maintained street trees, including setting inventory priorities based on geographical location and responsibility for trees.</p>	3
<p><b>DPW Response:</b> Partially Agree. Urban Forestry inspectors currently inspect 100% of DPW-maintained street trees within a range of 1 to 5 years, depending on workload and assistance from staff assigned to modified work duty. Inventorying non DPW-maintained trees would require significant resources.</p>	
<p>3.6 Develop a volunteer program or partnership with nonprofit organizations to assist in the inventory of non-Department maintained street trees.</p>	3
<p><b>DPW Response:</b> Partially Agree. Volunteers are not needed for inspection of DPW-maintained trees as they are regularly inspected by staff. Volunteers can help to inventory trees not maintained by DPW, but significant resources would be required to provide training, supervision, quality control, and database upgrades.</p>	
<p>3.7 Report the actual pruning and tree maintenance schedule on the City’s web site.</p>	2
<p><b>DPW Response:</b> Agree. Routes pruned can be reported. Various tree species have different pruning schedules, many of them requiring pruning only once every 2-3 years. We can post precise schedules on the web site as they are set.</p>	
<p>3.8 Develop median and other landscape maintenance standards and schedules and publish these standards and schedules on the City’s web site.</p>	2
<p><b>DPW Response:</b> Agree. Scheduled landscape maintenance can be reported,. Mowing and certain other scheduled maintenance work can be affected by weather, so schedules are somewhat dynamic.</p>	
<p>3.9 Develop methods for tracking all of the routine and non-routine work done on landscape properties in order to best allocate resources in the future.</p>	2

**Recommendation**

**Priority**

**DPW Response:** Agree. Tracking completed landscape work in order to evaluate allocation of resources would require an investment to upgrade the Department's databases. We will request funds for this for this upgrade in the FY 2007-08 budget.

- 3.10 Evaluate procedures to include street tree inspections in routine activities, including streamlining reporting and documentation procedures and training staff in street tree regulations and procedures. 2

**DPW Response:** Agree. While some inspections can be conducted during routine activities, additional staff are required to investigate code violations, submit fines and follow through administrative review process.

- 3.11 Develop procedures to revisit sites where removal permits have been denied, including (a) utilizing Bureau of Urban Forestry tree, landscape, and watering crews or Bureau of Street Environmental Services crews to conduct preliminary checks while performing other work in the vicinity, and (b) streamlining procedures and documentation. 2

**DPW Response:** Partially Agree. While some inspections of locations where removals have been denied can be conducted during routine activities, it can also negatively impact productivity of a staff person's primary work assignment, whether mowing turf or cleaning streets.

- 3.12 Develop a methodology for prioritizing routine tree maintenance and service requests. 2

**DPW Response:** Agree. The Department already makes daily adjustments to work schedules based on public safety issues, high profile projects, and routine work schedules.

- 3.13 Assess staffing alternatives, including dedicating one of its landscape crews to only routine maintenance, and allow other staff to respond to service requests. 2

**DPW Response:** Agree.

- 3.14 Work with the Human Resources and the Health and Safety Division to identify causes of paid and unpaid sick and disability leave and actions that the Bureau can take to reduce the incidence of unpaid leave and increase the number of productive hours. 2

**DPW Response:** Agree. We plan to work with Human Resources to analyze cause of work absences. Initial analysis indicates signs of an aging workforce - repetitive motion and back sprain injuries make up a large number of injuries. We are developing training to attempt to mitigate some of these

**Recommendation**

**Priority**

injury types. We will continue to use temporary transitional work assignments and ADA when appropriate to bring back employees to work in different assignments.

The Director of Finance and Administration should:

- 3.15 Review and track fee revenues against expenditures each year to ensure that the Bureau of Urban Forestry is recovering service costs overall and recommend fee increases, in addition to the Consumer Price Index increases, to the Board of Supervisors as necessary. 1

**DPW Response:** Agree. This will be done as part of Department’s FY 2007-08 Budget. Where fees are not cost recovering, for instance when a permitted activity enhances a public good, we will include this information in our report to the Board of Supervisors.

- 3.16 Develop procedures to ensure timely collection of fines. 1

**DPW Response:** Agree. We will develop procedures for the timely collection and/or disposition of fines.

**Section 4: Permit and Inspection Revenues and Performance**

The Director of Finance and Administration should:

- 4.1 Evaluate the Bureau of Street Use and Mapping’s administrative costs to process the street improvement fee for property owners issued a notice to repair sidewalks and streets fronting their properties and submit a fee proposal to the Board of Supervisors for approval during the FY 2007-2008 budget review. 1

**DPW Response:** Agree. DPW will prepare legislation to allow the Board of Supervisors to review this policy and adopt it as their own. The Bureau of Street Use and Mapping’s intent is to provide incentives for property owners to repair their sidewalks. We believe that charging the full fee for sidewalk repair permits would lead to more property owners not making necessary repairs to the sidewalks, lengthening the time for repair, and increasing costs to BSM to get property owners to comply with the Code and make sidewalks safe.

- 4.2 Identify obsolete fee provisions in the Public Works Code and submit revised or updated language to the Board of Supervisors for approval during the FY 2007-2008, including ensuring that fees under outdated Code provisions are calculated to fully recover costs. 2

**Recommendation**

**Priority**

**DPW Response:** Agree. There may be fee sections within the Public Works Code which do not provide for full cost recovery. Fees will be reviewed in the context of the current Code. If the Code does not provide for such adjustments or additions, proposals to revise the Public Works Code will be presented to the Board.

- 4.3 Post the same fee schedule on the Department’s web site as the fee schedule used by the Bureau of Street Use and Mapping to calculate permit fees. 1

**DPW Response:** Agree. DPW will revise the website to provide current fee schedule.

- 4.4 Establish procedures to calculate street improvement permit inspection fees based on the Bureau of Street Use and Mapping’s actual costs to conduct additional inspections under the street improvement permit, in accordance with Public Works Code Section 2.1.3. 3

**DPW Response:** Partially agree. In FY 2005-06 the Bureau began evaluating and upgrading its computer-based systems to integrate all of its databases to fully coordinate, track and manage all Bureau responsibilities. This process is likely to take 12 more months to complete evaluation, programming, testing and integration with DBI’s databases before implementation.

- 4.5 Review and track fee revenues against expenditures each year to ensure that the Department of Public Works is recovering service costs overall and recommend fee increases, in addition to the Consumer Price Index increases, to the Board of Supervisors as necessary.

- (a) Evaluate General Fund fees to ensure cost recovery 1  
(b) Evaluate Special Fund fees to ensure cost recovery 3

**DPW Response:** Agree. The Department has recently conducted extensive reviews of nearly all fees charged by BSM, and taken these fees to the Board of Supervisors for revision. DPW intends to evaluate its Excavation fees in early 2007, and will evaluate General Fund fees in time for the FY 2007-08 budget submission.

The Bureau of Street Use and Mapping Manager should:

- 4.6 Evaluate actual inspection time allotted to permitted projects and ensure that Bureau staff are accurately recording their project hours. 3

**DPW Response:** Partially agree. As stated in our response to Recommendation 4.4, the Bureau has undertaken an extensive system

**Recommendation**

**Priority**

integration process to tie the permitting system with the inspection system. Our current systems are cumbersome and do not facilitate tracking inspection time against specific permits. The Bureau will continue its progress on the system integration and provide the tools necessary for the inspection staff to track time spent against permitted work. We will look to the Controller's Office and other permitting/inspection agencies for examples of integrated tracking systems that we could modify for our needs.

- 4.7 Review the permit fee list and written guide and include all fee and permit requirements and applications not currently included. 1

**DPW Response:** Agree. The Bureau will evaluate and modify guidelines for permit applications, and fee schedule as necessary.

- 4.8 Provide a report on the outcome of each district focus inspection to the Board of Supervisors City Operations and Neighborhood Services Committee, including notifying the appropriate Board of Supervisors' member of the district focus inspection conducted in his or her district and the report on the outcomes. 1

**DPW Response:** Agree.

- 4.9 Provide an update to the Budget Analyst, as part of the Budget Analyst's review of the FY 2007-2008 Department budget, regarding (a) the number of inspections by permit type per district, and (b) how this data has affected inspector assignments by permit type and geographic area. 1

**DPW Response:** Agree.

- 4.10 Provide an update to the Budget Analyst, as part of the Budget Analyst's review of the FY 2007-2008 Department budget, on the integration of the Task Management, permit and Inspect-o-matic systems, including the status and goals of the project and how the integration will allow the Bureau of Streets and Management to more efficiently allocate inspectors' time by permit type and geographic area. 1

**DPW Response:** Agree. The beta version of the software integration is expected to take at least 12 months to complete but we will provide a status report as requested.

- 4.11 Provide an update to the Budget Analyst, as part of the Budget Analyst's review of the FY 2007-2008 Department budget, on the Bureau's activities to increase inspectors' accountability for inspecting or reporting all permit violations within their geographic area of responsibility, including (a) result of

<b>Recommendation</b>	<b>Priority</b>
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employees' performance evaluations, and (b) actions taken by the Bureau and the results of these actions. 1

**DPW Response:** Agree. We will report in aggregate on how this issue was addressed in performance evaluations of inspectors. In addition, we will identify actions taken and associated results regarding inspectors' accountability.

**Section 5: The Impact of Claims in the Public Right of Way**

The Deputy Director for Operations should:

5.1 Complete an annual evaluation of all sidewalks for which the Department of Public Works is responsible and record these findings in their computer tracking system. 3

**DPW Response:** Agree. It is estimated that the City is responsible for 3.6 million square feet of sidewalk area. We are initiating a new program to support this effort, and will be seeking funds to repair sidewalks. Because of the volume of damaged sidewalks in the City, and the corresponding inspection hours and construction costs associated with it, this will be a multi-year program.

5.2 Assess common causes of tree-related claims, such as specific types of trees, locations, and sidewalk structures, to determine which factors contribute to claims. 2

**DPW Response:** Agree. Some analysis of tree species relationship to actual claims and sidewalk structures may require additional resources to upgrade databases.

5.3 Include the claims assessment data in setting sidewalk repair priorities. 2

**DPW Response:** Agree. Already claims are our highest priority repairs. The assessment of claims data may instead be useful in selecting tree species and tree basin locations and configurations.

5.4 Track and analyze sidewalk repair funding, sidewalk repairs, and sidewalk-related claims costs to determine if targeted sidewalk repairs contribute to reduced claims costs. 2

**DPW Response:** Agree. The department will be initiating a broader public and private sidewalk repair program this fiscal year and will track the programs impact on both complaints and claims

<b>Recommendation</b>	<b>Priority</b>
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5.5 Present this information to the Board of Supervisors each year during the annual budget review.	3
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**DPW Response:** Agree.

**Section 6: Capital Project Design Costs**

The Deputy Director for Engineering should:

6.1 Establish a common performance goal for the Bureau of Engineering and Bureau of Architecture that measures the impact of design errors and omissions on construction costs and report the outcomes annually.	1
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**DPW Response:** Agree. The Department does identify and track changes due to errors and omissions and would benefit from a structured annual review of the origins and impact of these changes. We have incorporated a performance measure of errors and omissions into our Local 21 incentive pay program, and we will evaluate its suitability as a departmental performance measure.

6.2 Develop a plan and timeline to evaluate, implement, or further develop and revise the findings and recommendations of the Department of Public Works' capital project quality assurance task force.	2
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**DPW Response:** Agree. These recommendations will be included in the Department's next steps in improving our Quality Assurance and Quality Control (QA/QC) procedures.

6.3 Identify commonly occurring problems in design projects provided by consultants and develop protocols to address these problems.	2
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**DPW Response:** Agree.

6.4 Coordinate with the Mayor's Office of Disability and the Department of Building Inspection, among other agencies, to ensure that policies, procedures, and regulations are both well-understood and consistently applied.	2
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**DPW Response:** Agree. DPW and MOD work together closely and in FY 2005-06 established procedures for joint review of differences in interpretation of regulations. The Department is currently planning expanded training for design, construction and permitting staff on ADA policies and regulations.

<b>Recommendation</b>	<b>Priority</b>
<p>6.5 Assess the cost of physical site visits during the planning and design of construction projects compared to the potential costs of construction contract change orders due to design errors and omissions and unforeseen site conditions, and implement site visit procedures based upon the assessment.</p> <p><b>DPW Response:</b> Agree. The Department will review existing site review procedures for adequacy and completeness and will work to ensure that designers are following those procedures.</p>	2
<p>6.6 Assess the cost of site testing for different commonly-occurring site conditions and tests compared to the potential costs of construction contract change orders due to unforeseen site conditions, and implement site testing procedures based upon the assessment.</p> <p><b>DPW Response:</b> Agree. In FY 2004-05, the Department hired its first geotechnical engineer and hired a second in FY 2005-06. Having this capability in-house greatly enhances the Department's ability to conduct cost-effective review of geotechnical conditions which could result in significant additional costs if not thoroughly evaluated. The Department will modify design procedures to include geotechnical review on all appropriate projects.</p>	2
<p>6.7 Assess the costs of additional construction document reviews for projects at different phases of the design process compared to the potential costs of construction contract change orders and delays and implement procedures based upon the assessment.</p> <p><b>DPW Response:</b> Agree. This will be incorporated into our continuing review and enhancement of our Quality Assurance and Quality Control (QA/QC) procedures. See also 6.1</p>	2

**Section 7: Construction Contract Bids and Awards**

The Deputy Director for Engineering should:

<p>7.1 Determine the best measure of cost estimation performance and standardize measuring and reporting of cost estimates and contract award amounts for the Bureaus of Architecture and Engineering.</p> <p><b>DPW Response:</b> Agree. The Director of Public Works has identified improving our cost estimating practices, procedures and skills as a Department priority. Evaluation of reporting practices, measures and criteria for will be included in our complete review of cost estimation practices.</p>	1
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<b>Recommendation</b>	<b>Priority</b>
7.2 Continue to evaluate the components of construction cost estimates and the construction cost estimate process to identify areas for improvement or increased efficiency.	2
<b>DPW Response:</b> Agree. See 7.1	
7.3 Develop a plan and formal process to review, consider, and implement appropriate task force recommendations once the City Attorney’s Office releases the construction contracting task force report.	
(a) Develop a plan and formal process to review	2
(b) Consideration and implementation of recommendations	3
<b>DPW Response:</b> Agree. We are actively reviewing the recommendations in the report to identify recommendations that the Department can pursue independently and goals that will require inter-departmental coordination.	
7.4 Work with the City Attorney’s Office to develop risk management protocols, allowing the Department to promptly identify and address potential problems with contractors, and make decisions on the best course of action.	2
<b>DPW Response:</b> Agree. We will attempt to include the other construction contracting departments in these discussions.	

**Section 8. Construction Management Costs and Construction Project Timelines**

The Bureau of Construction Management Manager should:

8.1 Implement procedures to (a) ensure accurate and complete entry of change order information into the Bureau of Construction Management’s change order tracking system and (b) tracking and monitoring of change order information.	2
<b>DPW Response:</b> Agree. A procedure is being drafted to ensure accurate data entry.	
8.2 Re-evaluate time extension approval and documentation procedures, including change order policies, procedures, and practices, to ensure that the written procedures provide sufficient project control over project timelines and that actual practices comply with procedures.	2
<b>DPW Response:</b> We have established a task force to review change order procedures and practices.	

**Section 9: Capital Project Accounting and Closeout**

<b>Recommendation</b>	<b>Priority</b>
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The Director of Public Works should:

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| 9.1 Establish a task force with representatives from the Department of Public Works, the Controller's Office and client departments to develop and implement a plan to address capital project accounting process issues as well as current reconciliation and closeout of inactive projects. | 1 |
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**DPW Response:** Agree. During the later half of fiscal year 2005/2006 DPW met quarterly with the Controller's Office to review project balances and project closeout priorities. A number of inactive projects/inactive grants have been analyzed, reviewed by the Controller and entries are being processed. DPW will continue to meet with the Controller's office and client departments to develop a citywide capital project accounting policies and procedures.

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| 9.2 Report back to the Board of Supervisors during the FY 2007-2008 budget hearing on the status of the implementation of the task force findings and plan. | 1 |
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**DPW Response:** Agree. We will report back on the results of 9.1.

**Section 10: Engineering and Architecture Staff Resources**

The Deputy Director for Engineering should:

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| 10.1 Standardize work load planning and reporting to allow executive managers to better assess overall funding and staffing needs. | 3 |
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**DPW Response:** Agree.

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| 10.2 Evaluate short-term and long-term engineer and architect staffing to ensure that high staff costs compared to project funding do not lead to increased overhead rates. | 2 |
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**DPW Response:** Agree. The evaluation of staffing levels and the amounts and types of future design and construction work are an on-going effort to ensure that we have an adequate workload to support staff. Also, our annual review of overhead rates includes comparing our rates with outside consultants and other capital project departments.

The City Administrator should:

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| 10.3 Assist City departments, including the Department of Public Works, in planning capital project staff resources as part of the capital planning process. | 2 |
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**Recommendation**

**Priority**

**DPW Response:** Agree. A solid foundation was established with the publication of the 10-Year Capital Plan in FY 2005-06. The City Administrator, with the assistance of staff from the Department of Public Works, will continue to work with all City agencies to refine and improve the City's capital plan.

**Section 11: The Bureau of Building Repair's Performance and Customer Service**

The Director of Public Works should:

- 11.1 Establish budgetary and financial controls to ensure that the Controller authorizes re-allocation of facilities maintenance and other designated appropriations to other uses in accordance with the Administrative Provisions of the Annual Appropriation Ordinance. 2

**DPW Response:** Agree. DPW will establish controls that will allow the Controller to approve the reallocation of facilities maintenance appropriations in accordance with the Administrative Provisions of the Annual Appropriation Ordinance.

- 11.2 Direct the Director of Finance and Administration, in conjunction with the Bureau of Building Repair Manager, to evaluate and re-engineer the Bureau of Building Repair's business processes. 2

**DPW Response:** Agree. DPW is in the process of re-engineering BBR business processes, bringing in new Bureau leadership, developing and upgrading information systems, and establishing performance measurements to improve management reporting, client services, work order request monitoring and control, and internal communications. Funding for system upgrades will be requested in the FY 2007/08 budget.

The Bureau of Building Repair Manager should:

- 11.3 Revise the existing Bureau of Building Repair mission statement to reflect clearly the Bureau's reason for existence and the contribution that the Bureau can make to the City's quality of life. 1

**DPW Response:** Agree.

- 11.4 Develop performance measures, standards, and objectives that will serve to provide direction, accountability, and control for the Bureau of Building Repair's operations. 2

**DPW Response:** Agree. See response to Recommendation 11.2.

<b>Recommendation</b>	<b>Priority</b>
11.5    Oversee the process of re-engineering the processes and systems that the Bureau of Building Repair employs to receive, approve, monitor, control, and report on its work requests.	2
<b>DPW Response:</b> Agree. See response to Recommendation 11.2.	
11.6    Establish a timeline for the development of an Operational Policies and Procedures Manual and report on the status of the manual's development to the Deputy Director, Operations, prior to May 31, 2007.	1
<b>DPW Response:</b> Agree. See response to Recommendation 11.2.	
11.7    Develop and consistently administer a customer survey that captures measurable information on all of the Bureau of Building Repair's key results areas of service.	2
<b>DPW Response:</b> Agree.	
11.8    Work to improve communications within the Bureau of Building Repair in order to improve morale and thus the performance of the Bureau.	2
<b>DPW Response:</b> Agree. See response to Recommendation 11.2.	
11.9    Develop and implement a process for addressing the suggestions and concerns of the Bureau's supervisors, on a continuing basis.	2
<b>DPW Response:</b> Agree.	
11.10    In accordance with the City's construction codes, ensure that the Bureau of Building Repair obtains permits and inspections, as required.	1
<b>DPW Response:</b> Agree. We will review and determine what work requires permits and comply with these requirements. We will determine if additional costs will be required, and seek these additional funds in the FY 2007-08 budget.	
11.11    In cooperation with the Department of Building Inspection, ensure that the Bureau of Building Repair obtains priority assignment for plan review and issuance of its permit applications, as provided for in the Department of Building Inspection's Administrative Bulletin No. AB-004, <i>Priority Permit Processing Guidelines</i> .	2
<b>DPW Response:</b> Agree. We will work with DBI to implement this recommendation and will ask that a point person on the DBI side be identified to help facilitate the process.	

**Recommendation** **Priority**

**12: Bureau of Building Repair Annual and Continuing Project Management**

The Deputy Director of Finance and Administration, in conjunction with the Manager of the Bureau of Building Repair, should:

- 12.1 Establish a timeline and completion date for each of its Bureau of Building Repair initiatives. 1

**DPW Response:** Agree. Expected completion 6/30/07.

- 12.2 Include as one of its initiatives a business process review of project and job order management. 1

**DPW Response:** Agree. Expected completion 6/30/07.

- 12.3 Establish appropriate controls over job order creation, management and closeout and document such controls in written policies and procedures. 1

**DPW Response:** Partially Agree. The creation, management and closeout of job orders are the responsibility of the Deputy Direction of Operations and Bureau Management. OFFMA provides reports and follows up but the initiation of the process lies at the Bureau level because the Bureaus are more aware of the client needs and schedule.

The Deputy Director of Operations, in conjunction with the Deputy Director of Finance and Administration, should:

- 12.4 Establish a formal computerized maintenance management system project structure with timelines, deliverables, and a project team that includes representatives from accounting, administrative, information technology, and client departments. 2

**DPW Response:** Agree. A proposal will be made with the Budget for FY 2007-08.

**Section 13: Materials Management Controls and Procedures**

The City Administrator should:

- 13.1 Direct the Office of Contract Administration to develop a City-wide set of guidelines and procedures and a training program on storeroom operation and management as recommended in Section 2.2 of the 1991 audit report of *Purchasing and Storekeeping Functions as Administered by the Purchasing Department*. 2

<b>Recommendation</b>	<b>Priority</b>
The City Services Auditor should:	
13.2 As part of reviews or audits that it performs of City materials storerooms, recommend guidelines and procedures for City internal controls in this area. Guidelines and procedures recommended for the Department of Public Works may also be extended to other City agencies.	
13.3 Develop an audit schedule for periodic reviews of City materials storeroom subject to the City Services Auditor's risk analysis and scheduling process.	
The Director of Public Works should:	
13.4 Work with the City Services Auditor to develop guidelines and procedures for City storeroom internal control, which may then be extended to other City agencies.	2
<b>DPW Response:</b> Agree. We will request a contact person in the Controller's Office to work with us on implementing this recommendation.	
13.5 Work with the City Services Auditor to develop an audit schedule for periodic reviews of the Department of Public Works storerooms.	2
<b>DPW Response:</b> Agree.	
The Deputy Director, Operations, should:	
13.6 Continue to expand the inventory of items under the storeroom's responsibility commensurate with economical and efficient operations.	2
<b>DPW Response:</b> Agree.	
13.7 Ensure that storeroom staff receives the training and understands the guidelines and procedures that we recommend that the Office of Contract Compliance develop.	2
<b>DPW Response:</b> Agree.	
The Deputy Director, Finance and Administration, should:	
13.8 Comply with the requirements of Section 21.03(a) of the <i>Rules and Regulations Pertaining to the San Francisco Administrative Code, Chapter 21</i> , promulgated by the Purchaser, concerning delegated departmental procurements.	1

**Recommendation**

**Priority**

**DPW Response:** Agree. We are now addressing and resolving this compliance requirement.

**Section 14: Automotive and Mobile Equipment Management**

The Director of Public Works should:

- 14.1 Emphasize the importance of complying with preventive maintenance inspection schedules. 2

**DPW Response:** Agree.

- 14.2 In accordance with Section 4.11 (b) (4) of the Administrative Code, ensure that the Department of Public Works maintains detailed records on all City vehicles used to commute to and from home. 1

**DPW Response:** Agree.

- 14.3 In accordance with Section 4.11 (b) (6) of the Administrative Code, obtain the approval of the Board of Supervisors, by resolution, prior to authorizing employees to garage City vehicles at their residences. 1

**DPW Response:** Agree.

- 14.4 In accordance with the State driver license EPN (Employer Pull Notice) Program, ensure that all required employees are enrolled in the Program and that the required individual Driver Record Information is available and current. 1

**DPW Response:** Agree.

The Manager, Central Shops, should:

- 14.5 Ensure that all vehicles released for service by Central Shops meet the safety requirements of the California Vehicle Code. 2

- 14.6 Ensure that required maintenance inspections are accomplished within the 90 days, as mandated by Section 34505.5 of the California Vehicle Code. 2

**Section 15: Health, Safety, and Environmental Issues**

The Director of Public Works should:

<b>Recommendation</b>	<b>Priority</b>
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| 15.1 Fully support the Department of Public Works' Health and Safety Program including developing and disseminating a Department of Public Works' Safety Policy Statement. | 1 |
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**DPW Response:** Agree.

The Operations Division Manager should:

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| 15.2 Continue to improve the housekeeping and physical condition of the Operations Division Yard and the Asphalt Plant and implement specific corrections to address deficiencies noted by the Public Utilities Commission and Airport health and safety staff. | 2 |
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**DPW Response:** Agree.

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| 15.3 Evaluate the costs and obtain funding to install a multi-chambered oil-grit separator to treat the effluent from the catch basins, or remove the catch basin entirely and install a drainage grate that is plumbed directly to the separator. | 1 |
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**DPW Response:** Agree.

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| 15.4 In conjunction with the Environment, Health and Safety Manager, analyze the causes of the increased severity of workplace injury and illness in the operating bureaus and develop and implement a plan to significantly reduce the incidence of workplace illness or injuries in the Operations Division. | 2 |
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**DPW Response:** Agree. The Deputy Director of Operations is working with Health and Safety to analyze causes of increased severity of workplace injuries and illnesses. We are currently implementing a pilot in the BUF cement shop as part of a larger plan to reduce incidents of workplace injuries and illnesses in Operations. The Cement shop pilot includes body mechanics training, improving jackhammer equipment, training safe use of tool, and pre-job stretching training.

**Section 16: Interdepartmental Work Order Funds**

The Director of Finance and Administration should:

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| 16.1 Work with the Director of Operations and the superintendents of the four operating bureaus to ensure that the operating bureaus' procedures for managing work orders and recoveries are consistent and comply with the Department's policies and procedures. |   |
| (a) Bureau of Building Repair   | 1 |

<b>Recommendation</b>	<b>Priority</b>
(b) Bureaus of Street and Sewer Repair, Urban Forestry, and Street Environmental Services	2
<b>DPW Response:</b> Agree. OFFMA staff meet with bureaus on a bi-weekly basis to review financial status, including revenues, expenditures and recoveries to budget. We are developing reports that Operations management can use for monitoring expenditures and recoveries to budgets.	
16.2 Develop a mechanism to facilitate client departments' access to project expenditure data, including developing routine reports that allow client departments to track project expenditures.	2
<b>DPW Response:</b> Agree. Because BBR has a significant number of Interdepartmental Work Orders compared to the other DPW bureaus, DPW has begun developing BBR reports to provide clients with this information. These BBR reports will be completed by June 30, 2007. Full implementation of client reports DPW-wide will be completed by June 30, 2008 assuming we obtain the required system upgrades and staff resources.	
16.3 Implement a process to work with client departments to develop quarterly reports that allow client departments and bureau superintendents to track work order expenditures.	2
<b>DPW Response:</b> Agree. See response to 16.2.	
16.4 In conjunction with the Director of Operations, develop an annual interdepartmental work order fund budget for the operating bureaus that includes the salary and non-salary budget details in the individual work orders and the associated overhead expenditures.	3
<b>DPW Response:</b> Disagree. The Department manages work order budgets by the specific work order, not by all work orders combined. A significant number of our work orders are for projects that we cannot anticipate which job classes will be performing the work, or the level non-labor resources that will be needed at the beginning of the year. For example, the facilities maintenance work order from general hospital may include plumbing work one year, (which is almost all labor) and a roof patching contract in another year (which is almost all non-labor as it would be provided through a contract).	
16.5 Develop procedures that allow bureau superintendents to track interdepartmental work order fund budgets at a summary level.	3
<b>DPW Response:</b> Disagree. As stated above, bureau superintendents are responsible for managing each individual work order budget. In addition,	

<b>Recommendation</b>	<b>Priority</b>
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they must manage the work load of the bureau, which involves managing position counts and not budgets. There is nothing for them to manage at a summary budget level in their ID budgets.

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| 16.6 Develop and provide an annual summary report as part of the Board of Supervisors' annual budget review for each bureau's interdepartmental work order fund, showing actual salary and non-salary expenditures by fund. | 1 |
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**DPW Response:** Agree. We can provide a summary of actual spending on Work Order funding in the ID budgets through month 10 at the time the budget is submitted to the Board in June. However, we do have the resources to provide reports on spending on all ID budget fund sources (including grants, bonds and various special funds).

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| 16.7 Transfer the revenues and expenditures associated with cement work in the annual budget from the Bureau of Building Repair to the Bureau of Urban Forestry. | 1 |
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**DPW Response:** Agree. This budget transfer will be made in the FY 2007-08 budget.

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| 16.8 Reconcile the Special Engineering, Excavation and Subdivision Funds annually. | 1 |
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**DPW Response:** Agree. We have reconciled this as part of our FY06 goals and we continue to monitor.

The Manager of the Bureau of Street Use and Mapping:

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| 16.9 Provide annual summary reports as part of the Board of Supervisors' annual budget review, showing actual salary and non-salary expenditures by fund. | 1 |
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**DPW Response:** Agree. We can provide a summary of actual spending on the three major funds in the ID budget through month 10 at the time the budget is submitted to the Board in June.

**Section 17: Allocation of Overhead Costs**

The City Administrator should:

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| 17.1 Work with the City's Department of Human Resources to assess and revise the existing human resources position classifications and job descriptions within the General Services Agency to allow increased cross-training and flexibility in staffing. | 1 |
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**Recommendation**

**Priority**

**DPW Response:** Agree. GSA HR will provide opportunities for cross-training and broader more flexible job descriptions as it adds new departments to it's organization, absorbs additional responsibilities and implements new programs.

The Director of Public Works should:

- 17.2 Work with the City Administrator to identify ways to consolidate the Department's payroll processing functions within the larger General Services Agency, including developing a work plan, time frame, and cost analysis. As part of the work plan, the Department needs to work with the Controller's Office on the Controller's future acquisition of a human resources and payroll system package. 3

**DPW Response:** Agree. We are working with the Controller and the Department of Human Resources on their project to acquire and implement a new human resource and payroll system that DPW can benefit from.

- 17.3 Work with the City Administrator to evaluate the Department's human resource processes, performance, and productivity; implement a work plan to streamline processes and improve performance and productivity; and recommend cost savings, including staff reductions or reallocation within the General Service Agency. 1

**DPW Response:** Agree. Process improvement initiatives will be implemented to streamline processes, improve performance and customer service.

- 17.4 Submit proposed reductions or reallocation of human resource staffing within the General Services Agency as part of the human resource function evaluation to the Board of Supervisors during the FY 2007-2008 budget review. 1

**DPW Response:** Disagree. GSA HR is attempting to improve service quality, improve service timeliness, and streamline processes while absorbing additional responsibilities from DHR, serving additional departments and implementing new programs. GSA HR staffing ratios are comparable to other City HR departments.

- 17.5 Direct the Bureaus of Engineering, Architecture, and Construction Management to evaluate the integration of their information technology activities, including consolidating information technology positions. Present an information technology staffing plan during the FY 2007-2008 budget review that defines the Department's information systems and support requirements, as well as information technology staff skills and time needed

**Recommendation**

**Priority**

to support the information systems, This plan should also generally identify areas of redundancy and opportunities for improved efficiency and productivity, and recommend staff reductions.

1

**DPW Response:** Partially agree. The Capital Engineering Bureaus have a number of shared information management needs and objectives, particularly in the management and reporting of project information. Improving the coordination and integration of the efforts of the IT efforts of the three capital bureaus will improve their overall effectiveness. Due to the multiple office sites, systems, management tools, and hardware maintenance needs, we do not believe that position consolidation is warranted.