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MEMORANDUM

DATE: April 12, 2007

TO: Seattle City Councilmembers

FROM: Susan Cohen, City Auditor 

SUBJECT: Audit of Project Controls for the Fire Facilities And Emergency Response Levy Program

Responding to a request from City Councilmembers Jan Drago and Richard McIver, the Office of City Auditor entered into a contract with CDR Consultants to assess the project control systems being developed for use by the Seattle Department of Fleets and Facilities (FFD) to track the schedule, cost and change orders of Fire Levy projects; assess FFD's overall document management and record keeping systems; and provide recommendations regarding improvements if determined to be appropriate. The attached report from CDR Consultants makes recommendations in the areas of contract development, schedule management, budget management, reporting, and document management.

The response of the Director of FFD and some specific comments on details in the report are also attached. FFD has already implemented all of the Auditor's recommendations or expects to do so shortly. FFD's specific comments have been incorporated into the final report.

The Office of City Auditor sincerely appreciates the cooperation received from the employees of the Fleets and Facilities Department who participated in the review process.

cc: Mayor Greg Nickels, City of Seattle
Brenda Bauer, Director, City of Seattle Department of Fleets and Facilities
Ken Nakatsu, Mayor's Chief of Staff for Operations
Regina LaBelle, Mayor's Counsel, City of Seattle
Linneth Riley-Hall, Department of Executive Administration, Purchasing and Contracting Services Director
Janet Credo, Department of Finance Budget Analyst
Rick Thorson, State Auditor's Office



City of Seattle
Office of City Auditor

Project Controls Audit

Fire Facilities & Emergency Response Levy
Program

Seattle, Washington

April 6, 2007

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AUDIT OF FIRE FACILITIES AND EMERGENCY RESPONSE LEVY PROGRAM

I. INTRODUCTION

In November 2003, the citizens of Seattle voted “YES” to pass the Fire Facilities and Emergency Response Levy. The Fleets and Facilities Department (FFD) was tasked with overseeing and managing the Capital Projects for the Levy Program which has a total budget of \$229M, comprising \$153M for active projects and \$76M for inactive projects.

II. SCOPE OF AUDIT

CDR Consultants (CDR) was retained by the City of Seattle Office of City Auditor to review the project control systems that have been developed by FFD to track the schedule, budget, change orders, and to review the FFD’s document management and record keeping system.

The following Fire Levy Projects are the focus of this audit:

- Fire Station 2: Belltown
- Fire Station 17: University District
- Fire Station 28: Rainier Valley
- Fire Station 31: Northgate

Appendix A to this Report provides an overview of the scope, schedule, and budget for the above listed projects.

III. FIRE STATION (FS) PROJECTS: PROGRESS TO DATE

A. Planning/Pre-Design Phase Progress

Table III-1 below summarizes the projects’ progress reported on the City of Seattle web site as of February 2007. The website is one of the tools being used by FFD to communicate projects’ progress to the public.

Design of the above neighborhood fire stations began in July 2006 and has been underway for four months. As of the February 2007 update to the City’s website, three of the four fire stations had begun schematic design.

TABLE III-1

	Station 2 Belltown	Station 17 University District	Station 28 Rainer Valley	Station 31 Northgate
February 2007	No Change in Information Posted	Schematic Design Begins	Two meetings have been scheduled for the public to view the proposed design plans: Design Commission Scope/Concept Review Thursday, February 15, 2007 Design Commission Schematic Design Review Thursday, March 15, 2007	Schematic Design Begins
Oct 2006	Started a building condition assessment of the existing structure	Continuing pre-design work, and started programming mtgs	Work continued on the concept plans to prepare for presentation to executive staff in Nov 06.	Held final programming mtg, and haz-mat and electrical load test reports were provided to design subconsultants.
Sep2006	Began Haz-Mat analysis and early program planning	Continuing pre-design work, and started programming mtgs	Two concept plans were selected to evaluate cost and efficiency effectiveness of both.	Programming process continues, mtgs to discuss code requirements was held
Aug 2006	Project is in Pre-Design	Project is in Pre-Design	Project is in Pre-Design	Project is in Pre-Design
Jul2006	Negotiated and Contracted for services with AE firm, Arai Jackson	Negotiated and Contracted for services with AE firm, Bassetti Architects	Negotiated and Contracted for services with AE firm, Schreiber, Starling, and Lane	Negotiated and Contracted for services with AE firm, Snyder, Hartung, Kane & Strauss
Plan Start	2006	2006	2006	2006
Plan Finish	2009	2009	2009	2008

FFD’s website was again reviewed on February 15, 2007. No revisions to the planned start and finish dates have been posted on the website.

B. Costs Expended To Date

From a budget perspective, during the past five months approximately 1-2% of the planned budget has been spent during the planning/pre-design phase for FS 2, 17, and 28, and approximately 4.5% has been spent during the planning/pre-design phase on FS 31.

Fire Levy Program Project Costs To Date (CTD) (Dollars in \$1,000s)											
Project	Budget	June 30, 2006		July 31, 2006		Aug. 3, 2006		Sep. 30, 2006		Oct. 31, 2006	
		CTD	% CTD	CTD	% CTD	CTD	% CTD	CTD	% CTD	CTD	% CTD
Station 2	\$14,532	\$90	0.62%	\$96	0.66%	\$102	0.70%	\$124	0.85%	\$145	1.00%
Station 17	\$10,960	\$46	0.42%	\$53	0.48%	\$60	0.55%	\$115	1.05%	\$144	1.31%
Station 28	\$12,600	\$68	0.54%	\$89	0.71%	\$118	0.94%	\$172	1.37%	\$232	1.84%
Station 31	\$2,544	\$25	0.98%	\$49	1.93%	\$56	2.20%	\$79	3.11%	\$115	4.52%

IV. CONTRACT DOCUMENT DEVELOPMENT

A. AE Contracts

FS 2 – Belltown: AE Contract (Arai Jackson Ellison Murakami)

Agreement No. FS-06-11 is the Consultant Agreement between the City of Seattle and Arai Jackson Ellison Murakami. The scope of work covered in the contract is for Phase One (Pre-Design Services and Programming), and Other Professional Services (Site Survey, Geotechnical, HazMat, and Phase 1 ESA), and reimbursable expenses.

FS 17 – University District: AE Contract (Bassetti)

Agreement No. FS-06-12 is the Consultant Agreement between the City of Seattle and Bassetti Architects. **The total contract amount is \$174,382.** The scope of work covered in the contract is for Phase One (Pre-Design Services and Programming including “additional fire station programming to include all universal elements present in the Seattle Fire Station system of the four “Baseline” Fire Station types ...”), and Other Professional Services (Site Survey, Geotechnical, HazMat, and Phase 1 ESA), and reimbursable expenses. The only contract reference as to a timeframe for conduct of the programming services states, “Pre-design Programming Services **will consist of up to 6 workshops conducted over a 9 to 12 week period.**” [Emphases added]

FS 28 – Rainier Valley: AE Contract (Schreiber, Starling, and Lane)

Agreement No. FS-06-13 is the Consultant Agreement between the City of Seattle and Schreiber, Starling, and Lane. **The total contract amount is \$89,722.** The scope of work covered in the contract is for Phase One (Pre-Design Services and Programming), and Other Professional Services (Site Survey, Geotechnical, HazMat, and Phase 1 ESA), and reimbursable expenses. **The work is required to be completed within “twelve weeks from the date this Agreement is fully executed by all parties.”** [Emphases added]

FS 31 – Northgate: AE Contract (Snyder, Hartung, Kane, and Strauss)

Agreement No. FS-06-14 is the Consultant Agreement between the City of Seattle and Snyder, Hartung, Kane, and Strauss. **The total contract amount is \$45,648.** The scope of work covered in the contract is for Phase One (Pre-Design Services and Programming), Other Professional Services (Site Survey, Geotechnical, HazMat, and Phase 1 ESA), and reimbursable expenses. The work is required to be completed within “eight weeks from the time of contract execution.”

Contract Document Development Findings:

Finding: Although FFD (Dove Alberg’s email dated 10/2/06) states “FFD has a master schedule and will work with the A/E to develop specific schedule.” The AE Agreement does not require the AE to submit a design or construction schedule as a deliverable during Pre-Design Phase. FFD explained that they work with the AE to develop a schedule and that then the “agreed” schedule is incorporated into the FFD template for that fire station.

Recommendation: Revise the AE Agreements to include deliverables for design and construction schedule development.

Finding: The One Pre-Design Services and Programming were to have been completed within eight to 12 weeks following execution of the Agreements for FSs 17, 28, and 31. According to FFD’s monthly status reports, the pre-design and programming efforts are still ongoing. The completion of the scope of work for these Agreements is delayed.

FFD provided updated Project Schedules for the four fire stations being reviewed. The updated schedules have a data date of January 26, 2007. The project schedule, which, according to FFD includes AE agreed timeframes, shows that the completion dates for the

Pre-Design phase have been delayed beyond the completion periods outlined in the AE Agreements. For example, the Pre-Design Phase for FS 31 by contract was to be completed within eight weeks from the time of contract execution. The January 26, 2007 schedule shows the Pre-Design phase taking 7 ½ months to complete. So, FFD has agreed to a project schedule that conflicts with its own contract requirement.

Recommendation: A design phase completion date should be agreed to between FFD and the AE *before* an Agreement is executed. The agreed date should be included in the AE Agreement.

V. PROJECT CONTROLS

A. *Schedule Management*

The bar chart shown in *Appendix B* provides a comparison of FFD’s project schedule template and the initial (baseline) project schedules for FSs 2, 17, 28, and 31. This graphic provides a measure of FFD’s accuracy for forecasting the timeframes needed for design and construction for each project. As can be seen comparing the yellow bars which represent the schedule template information to the black bars which represent actual “agreed” timeframes, the schedule template timeframes were estimated to be much shorter than is proving to be the case (see Pre-Design Phase).

Finding: FFD underestimated the durations for the design phases for FSs 2, 17, 28, and 31. The current project schedules depict design phase durations which have been agreed to by the AEs and are much longer than were shown in the schedule templates. Future fire stations projects maybe relying on a schedule template that is too optimistic for planning purposes. To the extent appropriate for the project type and size, FFD could use the schedule information from these first four fire stations to forecast more realistic timeframes for the remaining fire station projects.

Recommendation: FFD should use the schedule information that has been developed for FSs 2, 17, 28, and 31 to better estimate the duration of activities shown in the schedule templates that will be used for other fire station projects that will be similar in size, complexity, and type.

Finding: FFD currently uses the Master Schedule (see page 10 of this Report for an example of the Master Schedule format currently being used) as a planning schedule to provide information to the Fire Levy Committee and City Council regarding the planned future

expenditures for each of the projects. The schedule provided in Committee reports does NOT depict the plan for completing design and construction of the projects.

Recommendation: Using Appendix B as an example, FFD should designate the January 26, 2007 schedule as the Baseline Schedule for each project, and provide updated schedule progress information on a monthly basis, comparing the Baseline Project Schedule to the Project Schedule Update. This would allow the Fire Levy Committee and the City Council to be aware of variances between the planned schedule and the current progress achieved.

B. Budget Management

The Fire Facilities and Emergency Response Levy Program provides for the renovation or rebuilding of 31 neighborhood fire stations over the next seven years. A revised financial plan was provided to City Council in January 6, 2006 which stated that an additional \$67 million is needed to complete these projects (\$32 million if the projects were bid in 2005, and \$35 million was included for inflation). The report states that \$14 million of the \$67 million is associated with an under-estimate of the costs of the station program during Levy planning.

FFD retained Davis Langdon, an independent cost estimator, to re-estimate the cost of the neighborhood station program. Langdon reviewed eight of the 31 fire stations, including

Projects planned to begin in 2006

Fire Station 2: Major Renovation

Fire Station 17: Major Renovation

Fire Station 28: Major Renovation and construction of storage space

Fire Station 31: Moderate Renovation

Projects planned to begin in 2007

Fire Station 6: New Construction

Fire Station 16: Moderate Renovation

Fire Station 33: Minor Renovation

Fire Station 35: New Construction

The above eight fire station cost estimates were used to refine and validate the cost estimates used for the entire Levy Program, specifically addressing the reconstruction of the fire station projects.

FFD requested Hoffman Construction Company to perform a “peer review.” Hoffman used its subsidiary company’s (Precision Construction) projects as comparisons to FFD’s fire station projects. Hoffman estimated the costs of new construction projects to range between \$230/SF and \$330/SF, agreeing with Langdon Davis’ estimate to use between \$270/SF and \$300/SF. Renovation construction was estimated as follows: \$40/SF for minor renovations, \$60/SF for moderate renovations, and \$180/SF for major renovations.

The revised financial plan has indicated that the principal factors affecting the size of the funding gap are inflation, the speed of executing the neighborhood stations program, and interest earnings in the Levy Program. Additional sources of funds to cover the “funding gap” are planned to be obtained from Real Estate Excise Tax (REET) revenues, general government tax revenues, and councilmanic debt.

Finding: FFD provided information indicating that additional funding will be available when needed to cover the shortfall between the current estimated costs to complete ALL of the planned Fire Levy Projects versus the funds that were initially estimated to be needed for the projects. The “additional funds” are deemed to be guaranteed. However, the timing of receipt of these funds if monitored against the project budgeting needs, especially for some of the latter projects, would help to ensure that the additional money will be available to the projects when needed.

Finding: Construction period contingencies of 10% for new construction and 12% for renovation have been estimated in the revised cost estimates. In addition, a Management Reserve of 5.4% has been estimated for a program wide contingency for changes in program or site requirements. FFD did not provide any information to show how it will monitor contingency spending.

Finding: The budget reporting for the Oversight Committee and City Council does not provide cost expenditure information delineating how much has been spent of the planned design budget. Reporting project expenditures against the total budget will NOT highlight budget overruns until the budget is nearly expended, even though the overruns may have occurred during the design phase.

Recommendations: Revise the “Executive Summary Report of Projects” to show the design and construction budgets rather than just the total project budget. Expenditures can then be tracked against each budget, thus allowing any budget overruns to be tracked more precisely.

FFD should track project funding appropriations to ensure that the funds will be available as planned. Approximately, \$67M will be needed to fund the shortfall in projected project funding. Although the Department of Finance will track the additional funding sources, it is recommended that FFD include information regarding the timing of when the additional funding will be committed to specific projects.

FFD has indicated that its project budget worksheets will track the use of contingency as it is expended. In the event that 75% of a project’s contingency is spent, it is recommended that this situation is highlighted by FFD in its reports to the Fire Levy Committee.

VI. PROJECT COMMUNICATIONS/REPORTING

A. Reporting

Section 9 of Ordinance 121380 required the following:

“The Director of Fleets and Facilities will provide reports on both a monthly and quarterly basis to the Fire Facility Oversight Committee and any other interested Councilmembers. The information that shall be included in the reports, along with the frequency, is listed in Attachment A.”

Attachment A - Reporting Requirements

Project Narrative (Monthly): A narrative description of how individual projects are proceeding and what has been accomplished to date as well as future activities that FFD anticipates will occur in the intervening month.

Finding: The “Fire Levy Monthly Report” is a two-page document that provides a cursory discussion/update of the entire Fire and Emergency Response Levy Program. Within the body of the Monthly Report, a short paragraph discusses the progress achieved on the Neighborhood Station Program. FSs 2, 17, 28, and 31 are discussed as a collective group of projects rather than individually. The narrative briefly addresses what has been accomplished but it does not describe future work that FFD anticipates will occur in the upcoming month.

Project Schedule (Monthly): Schedules for each project underway that show the original proposed timeline for each phase of work (e.g., preliminary design, final design, scope approval, construction, etc.) and the actual time it has taken or is estimated to take to complete each task. The schedule should clearly show where a project is in the process and whether it is on target to meet the completion date.

Finding: FFD provided “Fire Levy Program Master Schedules” for FSs 2, 17, 28, and 31 (see below) but did not provide monthly project schedules depicting the progress of the work that has taken place to date.

Project Budget & Contingencies (Monthly): The original base budget, original contract, approved changes, adjusted contract, project life-to-date costs, and remaining budget. Individual and overall project contingencies should be tracked and reported on separately and if any contingency is spent, the report should explain when and why.

Finding: The monthly project budget report provides the total estimated budget and the total costs expended to date for the four fire stations that are the subject of this audit. When FFD was requested to provide a budget breakdown for design vs. construction, it was explained that detailed budgets are not yet available. FFD stated that “Project Breakdowns are closely at 50% for design; 50% hard costs until the schematic when [it] is expected to receive a first cost estimate from the AE design team.” The monthly budget report does not provide information regarding project contingencies, thus it is unclear if contingency money has been set aside to cover possible project overruns due to change orders and/claims. To the extent that project contingency funds have been established for each project, this report is not formatted to show the expenditure of contingency funds. The report should be modified to address project contingency funding and expenditures.

Project Scope and Change Orders (Monthly): A description of preliminary and final project scope when it is developed for each project and if and when there are any Change Order Proposals associated with the scope and what the impact to cost and schedule are. FFD should have independent cost estimates completed for Change Order Proposals.

To the extent that no change orders have been approved for design services on these projects, and construction has not yet begun, FFD provided only the change order form. Design change orders need to be monitored as closely as construction change orders.

Finding: Although the above Master Schedule (used for planning purposes) for Fire Stations 2, 17, 28 and 31 does not show enough detail to indicate when the design phases are planned to start and complete, the Pre-Design phases for FSs 17, 28, and 31 have not proceeded in accordance with the “template” schedules upon which the Master Schedule was based.

Finding: The bar chart fails to show the planned schedule for each fire station project. Rather, several fire stations are grouped into one timeframe making it difficult to see individual project schedule gains or delays as each project progresses. The above report does not sufficiently meet the need for “*Council to see how the different pieces and timetables relate to each other.*” Tracking the Levy Projects individually and by quarterly increments would enable FFD to better monitor the progress of the projects.

BOOST and Apprenticeship Usage (Quarterly): For contracted work, the BOOST and apprenticeship usage for each program area (i.e., Neighborhood stations, "Command Center", Marine, etc).

No information was provided by FFD. The quarterly reports FFD prepares for the Levy Oversight Committee do not provide a discussion regarding BOOST and apprenticeship usage.

Recommendation: FFD must establish the January 26, 2007 MS-Project detailed schedules for FSs 2, 17, 28, and 31 as the baseline project schedule. Reports to the Fire Levy Committee and City Council should include comparisons of work activities that have been progressed during each reporting period versus January 26, 2007 Baseline Schedule. Such comparisons will highlight gains or losses in the planned timeframes vs. actual progress. Reporting such as this will allow for a proactive approach to the development of contingency plans and/or mitigation efforts, thus limiting the effects of events that might delay the project(s).

B. Communication

The October 2005 communication plan prepared by FFD set forth the following communication goals and objectives:

- Develop and maintain a two-way communication process for use by all stakeholders
- Keep firefighters informed through the levy program

- Ensure that stakeholder concerns are addressed by project leadership
- Honor diversity in communications with all audiences
- Maintain positive relations with the Fire Department and neighborhoods
- Measure the success of communication activities

The materials provided by FFD and a review of the materials distributed through the City of Seattle FFD web site seem to address the majority of the communication goals and objectives.

VII. DOCUMENT MANAGEMENT

FFD reviewed other City departments and two private firms (Shiels Obletz Johnsen, a construction management firm, and Schreiber, Starling, Lane Architects) to gather information on how construction project document management systems have been set up. The recommendations the FFD Capital Programs Division (CPD) review team derived from its study of these entities consisted primarily of how the physical documents would be maintained and appropriate document management personnel to use for daily filing and maintenance of the project records.

FFD provided a copy of the Central Project File Structure it plans to use for the Fire Levy projects. Change orders are planned to be filed in the contract files.

Finding: FFD did not provide any information regarding document management procedures. If FFD has a project manual or guidelines regarding these procedures, please provide such information so that it can be reviewed for this audit. Document management procedures typically outline the types of documents that are required for key files. For example, the change order files include items such as estimates, scope of work descriptions, supporting documentation, contractual justification, and a record of negotiation. FFD must ensure that its project managers have guidelines as to how to maintain the project files in a consistent manner, and that each project manager understands the nature of the documents that are to be kept in some of these key project record categories.

Recommendations: Prepare a document management procedures manual discussing the following:

- Develop procedures outlining responsible parties for maintenance of various project records.

- Describe the type of documents that should be filed in the folder categories.
- Identify the types of documents that are **REQUIRED** to be maintained in the files, and frequency that the documents should be generated

Train the PMs on established document management procedures to facilitate consistency in projects' recordkeeping.

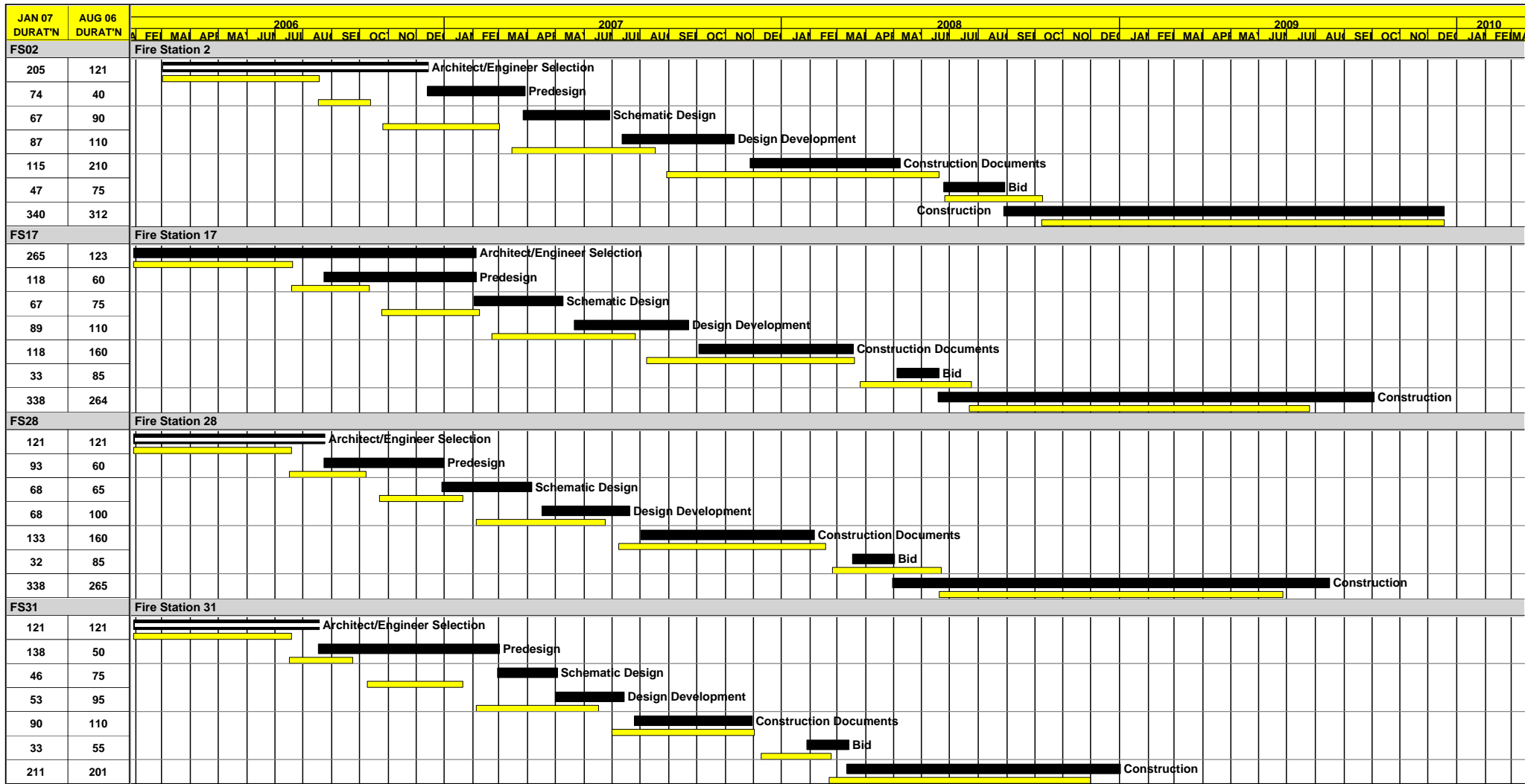
Eliminate duplicative file categories by design phase.




Having a historical record of the project filed in a manner that ensures a “needed” document will be found is the **BEST** defense in construction disputes. Failure to maintain necessary project documentation or a lack of consistency in how the files are maintained may put FFD at risk to be able to adequately defend against claims that might be asserted by the contractor.

CITY OF SEATTLE - FLEETS AND FACILITIES DEPARTMENT
Project Overviews for
Fire Stations 2, 17, 28 and 31

	Belltown - FS 2	University District - FS17	Rainier Valley - FS 28	Northgate - FS 31
Address	2334 Fourth Ave	1050 NE 50th St	5968 Rainier Ave S	1319 N Northgate Way
Originally Built	1918	1929	1951	1973
Anticipated Start Date	2006	2006	2006	2006
Planned Completion Date	2009	2009	2009	2008
Planned Construction Early Start	10/8/2008	8/8/2007	6/20/2008	2/22/2008
Anticipated Construction EF	12/17/2009	3/18/2008	6/25/2009	11/28/2008
Existing Square Footage	18,882	14,000	5,100 (plus a 3,930 sq ft basement)	11,200
Final Square Footage	34,216	20,602 (min)	18,032	13,658
Current Phase	Pre-Design	Pre-Design	Pre-Design	Pre-Design
Budget	\$14,532,000	\$9,500,000	\$12,600,000	\$2,544,000
Design Firm	Arai Jackson Ellison Murakami	Bassetti Architects	Schreiber, Starling, and Lane	Snyder, Hartung, Kane, and Strauss
Scope of Work	Seismic bracing; building systems upgrades; structural reinforcement; expansion for an additional medic unit, fragmentation cache, vehicle storage area, and a new occupational health center. The City's current Fire Alarm Center and Emergency Ops Center will be relocated to free up 7,000 sq. ft.	Seismic bracing; structural reinforcement; space expansion; space for classroom and physical training activities; an outside court for drills; new firefighter quarters; and an expansion for existing engine and ladder truck on the north side of Battalion 6. Roof, heating/electrical, building systems upgrades.	Addition of a second story to the existing single-story structure. Seismic retrofit, basement expansion, and a third apparatus bay. A new 5,400 sq ft building will be added behind the existing station for the Metro Medical Response System and Urban Search & Rescue Squads.	Seismic upgrade of the Fire Station and hose tower; an addition for a proposed hazardous response unit and medic sleeping quarters; remodel of crew area; basement, and offices.
Planned Station Features: Technical	<ul style="list-style-type: none"> * Emergency fragmentation cache * Bay space for (7) apparatus incl battalion chief bay & storage * Surplus capacity for future medic unit * Decontamination/clean room * Maintenance work area, battery charging alcove, & compressor * Storage for major disaster supplies & EMS eqpt * Hose dryer and storage alcove 	<ul style="list-style-type: none"> * Surplus capacity for future specialty unit * Bay space for (6) regular apparatus, incl battalion chief & reserve bay * Decontamination/clean room * Maintenance work area, battery charging alcove, & compressor * Storage for major disaster supplies & EMS eqpt * Hose tower * Training facility: drilling platform, classrm, storage 	<ul style="list-style-type: none"> * Capacity for the Urban Search and Rescue unit & Metropolitan Medical Response System * Bay space for (3) regular apparatus * Decontamination/clean room * Maintenance work area, battery charging alcove, and compressor * Storage for major disaster supplies and EMS equipment * Hose dryer and storage alcove 	<ul style="list-style-type: none"> * Bay space for (6) apparatus, incl north-end hazardous materials unit & the trailer-mounted generator * Surplus capacity for future medic unit * Decontamination/clean room * Maintenance work area and battery charging alcove * Storage for major disaster supplies & EMS equipment * Hose dryer and storage alcove
Planned Station Features: Administrative & Crew Areas	<ul style="list-style-type: none"> * Injury prevention and rehabilitation center * Secure public lobby * Station office, incl report desk & dispatch counter * Visitor-accessible unisex restroom * Beanery kitchen and dining room * Day room * Officers' quarters * Firefighter bunk rooms * Physical fitness room * Toilet/shower rooms * Laundry room 	<ul style="list-style-type: none"> * Secure public lobby * Station office * Visitor-accessible unisex restroom * Beanery kitchen and dining room * Day Room * Officers' quarters * Firefighter bunk rooms * Toilet/shower rooms * Laundry room 	<ul style="list-style-type: none"> * Station office * Visitor-accessible unisex restroom * Beanery kitchen and dining room * Day Room * Physical fitness room * Officers' quarters * Firefighter bunk rooms * Toilet/shower rooms * Laundry room 	<ul style="list-style-type: none"> * Station office * Bunker gear room * Beanery kitchen and dining room * Physical fitness room * Firefighter bunk rooms * Toilet/shower rooms * Laundry room

Appendix B



 JAN 2007
 AUG 2006
 Progress Bar
 © Primavera Systems, Inc.

FFD MS-Project Master Fire Station Schedules
 January 26, 2007 Schedules vs. August 11, 2006 Schedules

SUPPORTING DOCUMENTATION USED TO DEVELOP AUDIT FINDINGS

Initial Document Request

1. *Communications Plan, Fire Facilities and Emergency Response Levy Program, dated October 2005; last updated February 15, 2006 on the City of Seattle web site.*
2. *Seattle Fire Stations Operational Plan, dated May 5, 2003.*
3. *Photos of existing conditions of fire stations, last updated September 18, 2006 on the City of Seattle web site.*
4. *Project fact sheets for fire stations #2, 17, 28, and 31; last updated on the City of Seattle web site September 29, 2006.*
5. *Neighborhood Fire Station Financial Update, dated January 2006; last updated January 18, 2006 on the City of Seattle web site.*
6. *Presentation to Design Commission on Fire Stations 28 and 31, last updated March 13, 2006 on the City of Seattle web site.*
7. *MS Project (electronic file) Schedule for Fire Station 2 dated August 25, 2006.*
8. *MS Project (electronic file) Schedule for Fire Station 17 dated August 25, 2006.*
9. *MS Project (electronic file) Schedule for Fire Station 28 dated September 10, 2006.*
10. *MS Project (electronic file) Schedule for Fire Station 31 dated August 25, 2006.*
11. *Consultant Agreements for Architectural/Engineering Services for Fire Stations 17, 28, and 31.*
12. *Request for Letters of Intent and Qualifications for Neighborhood Stations Projects, undated on the City of Seattle web site.*
13. *FFD Monthly Reports to the Mayor's office, Seattle Fire Department, Levy Working Group, Levy Client Group, Levy Oversight Committee, Implementation Team for June, July, August, September, and October 2006*
14. *City of Seattle Fire Facilities and Emergency Response Program Spreadsheet for Executive Summary Report of Projects as of August 31, 2006; includes spreadsheet listing Inactive Fire Levy Projects as of May 31, 2006.*

SUPPORTING DOCUMENTATION USED TO DEVELOP AUDIT FINDINGS

15. *FFD Quarterly Reports to the Levy Oversight Committee dated April 25, July 25, and November 21, 2006*
16. *2006 Master Schedule for the Levy Program, revised June 5, 2006; last updated September 18, 2006 on the City of Seattle web site.*
17. *3rd Quarter Budget Report Through August 2005, prepared September 14, 2005; last updated October 31, 2005 on the City of Seattle web site.*
18. *Memo dated August 8, 2001 from Chris Potter to Mary Denzel with attached documents per Ms. Denzel's request and a roster of CIP planning and project controls personnel; MS Project files of FS 2, 17, 28, 31; Consultant Contract Checklist; Project Budget Worksheet for FS 31; Standard forms for Modification Proposals, RFIs, Change Orders, and Construction Pay Applications; Construction Management Process Checklist; and Consultant Contract Accounting Coding Block form.*
19. *City of Seattle Spreadsheet for Fire Station 31 Project Budget with comments showing SHKS revised budget amount of \$2,942,000, dated July 28, 2006. Standard worksheets included for project budget revisions under and over \$500,000.*
20. *City of Seattle FFD Forms, including:*
 - a. *Modification Proposal Form, undated.*
 - b. *Change Order Form for proposed changes under 25%, undated*
 - c. *Change Order Form for proposed changes over 25%, undated*
 - d. *Request For Information (RFI) Form, undated*
 - e. *Payment Application (with Retainage) Cover form, last revised October 11, 2006*
 - f. *Payment Application (without Retainage) Cover form, last revised October 11, 2006*
 - g. *Payment Routing Slip, for use when requesting approval of payments, last revised November 23, 2005*
 - h. *Contract Construction Processes checklist covering construction documents, last revised March 23, 2006*
 - i. *Change Order Cover Memo with project budget worksheet, undated*
 - j. *Consultant Contract Accounting Coding Block, revised August 2006*
 - k. *Consultant Contract Checklist for inclusion with Consultant Contract Signature Package, revised August 2006.*
21. *An article from the Seattle Post-Intelligencer newspaper titled "'Worst' Fire Station Will Stay That Way, Mayor Says", regarding Fire Station 20, written by Angela Galloway, dated October 2, 2006.*

SUPPORTING DOCUMENTATION USED TO DEVELOP AUDIT FINDINGS

22. *Mayor Greg Nickels' letter to the Neighbors of Fire Station 20 stating Fire Station 20 will remain at its current location, dated September 13, 2006.*
23. *City of Seattle FFD Contract Boilerplate:*
 - a. *Section 00100 – Instructions to Bidders, undated.*
 - b. *Section 00150 – Bidder's Checklist, revised October 27, 2003*
 - c. *Section 00300 – Bid Form, undated*
 - d. *Section 00500 – Agreement Form, revised April 20, 2005*
 - e. *Section 00600 – Sample Forms, undated*
 - f. *Section 00700 – General Conditions, undated*
 - g. *Section 00800 – Supplementary Conditions, undated*
 - h. *Section 00820 – Prevailing Wage Requirements, dated January 1, 2001*
 - i. *Section 00820 – Prevailing Wage Rate Schedule cover page, undated*
 - j. *Section 00850 – Contractor Performance Evaluation Program, undated*
 - k. *Section 01545 – Existing Underground Facilities, undated*
 - l. *Section 01575 – Waste Material Disposal, undated*
 - m. *Section 01760 – Existing Facilities in Seattle, revised July 20, 2001*
24. *Lessons Learned: A Review of How Other City Departments Handle Filing for Capital Projects, undated.*
25. *Appendix to Lessons Learned: A Review of How Other City Departments Handle Filing for Capital Projects, undated.*
26. *Fleets & Facilities Central Project File Structure, undated*

Additional Documents Provided After January 26, 2007 OCA-FFD Meeting to Review Preliminary Report

1. *FFD Master Project Schedules for Fire Stations 2, 17, 28, and 31, dated January 25, 2007 (MS-Project Format)*
2. *Consultant Agreements for Architectural/Engineering Services for Fire Station 2.*
3. *Contract Amendment No. 1 to Consultant Agreement for Architectural/Engineering Services for Fire Station 17 dated January 20, 2006 and Fire Station 31, dated December 22, 2006.*

SUPPORTING DOCUMENTATION USED TO DEVELOP AUDIT FINDINGS

4. *Contract Amendment No. 2 to Consultant Agreement for Architectural/Engineering Services for Fire Station 28, dated December 28, 2006.*
5. *Monthly Status Reports for March 2006 and June 2006 through January 2007. Executive Summaries included for March 2006 and May 2006 through December 2006.*
6. *Examples of Levy reports: Old Format for Reports: Project Summary Report for Emergency Community Disaster Supplies, dated May 31, 2006; New Report Format: May Report for the Fire Facilities and Emergency Response Levy Program Memorandum, dated June 14, 2006.*
7. *Project Budget Worksheet for Fire Levy Projects Fire Station 2 dated November 20, 2006, Fire Station 28 dated August 1, 2006, November 3, 2006, and December 29, 2006, and Fire Station 31 dated August 8, 2006 and December 27, 2006.*
8. *Council Bill Number 115439/Ordinance Numbers 121991 - "An Ordinance adopting a budget, including a Capital Improvement Program and position modifications, for the City of Seattle for fiscal year 2006," dated February 2, 2007.*
9. *Council Bill Number 115772/Ordinance Number 122298 - "An Ordinance adopting a budget, including a Capital Improvement Program and position modifications, for the City of Seattle for fiscal year 2007," dated February 2, 2007.*
10. *Council Bill Number 115497/Ordinance Number 122038 - "An Ordinance relating to neighborhood fire station; removing four budget provisos that restricted expenditures in the Fleets and Facilities Department's 2006 budget and reducing an appropriation from that department's budget and making a new appropriation to the Legislative Department to fund a consultant study," dated February 2, 2007.*
11. *City of Seattle Occupational Health Center – Project Start-up Meeting Minutes, dated November 6, 2006.*
12. *City of Seattle Occupational Health Center Meeting #2 – Initial Programming Meeting, dated November 6, 2006.*
13. *Fire Station 2 – Pre-Meeting Minutes, dated November 6, 2006.*
14. *City of Seattle Fire Station 2 Meeting #2 – Initial Programming Meeting Minutes, dated November 20, 2006.*

SUPPORTING DOCUMENTATION USED TO DEVELOP AUDIT FINDINGS

15. *Fire Station 28 Meeting Minutes – DPD Pre-Submittal Conference, dated December 28, 2006.*
16. *Fire Station 31 – Meeting Minutes for Pre-Submittal Conference w/ DPD and SDOT, dated September 29, 2006.*
17. *City of Seattle Fire Department Occupational Health Center Space Needs Assessment and Architectural Programming Questionnaire, dated November 1, 2006.*
18. *City of Seattle Occupational Health Center Predesign Space Needs Verification dated November 27, 2006.*
19. *City of Seattle Fire Station 2 Pre-Design Space Needs Verification, dated November 27, 2006.*
20. *Conceptual Project Budget – Wellness and Fitness Center, Fire Station 2, dated April 2003.*
21. *Fire Station 17 Budget Categories, dated November 8, 2006.*
22. *Furnishings and Equipment List – Wellness and Fitness Center, Fire Station 2, dated April 2003.*
23. *Electronic Mail Correspondence discussing Equipment Prices for Fire Station 31, dated January 2, 2007.*
24. *Fire Station 31 – Preliminary Estimate of Costs for Furnishings, From Joan Hitchner, dated December 26, 2006.*
25. *Fire Station 2 Project Schedule from Arai Jackson Ellison Murakami, dated November 3, 2006.*
26. *Fire Station 17 Project Schedule from Bassetti Architects with Rice Fergus Miller, dated December 19, 2006.*
27. *Letter from Snyder, Hartung, Kane, and Strauss discussing Fire Station 31 schedule durations, dated July 5, 2006.*
28. *Fire Station 2 Cost Model and Conceptual Cost Estimate, Provided by Matson Carlson Estimating for Arai Jackson Ellison Murakami, dated January 2, 2007.*
29. *Fire Station 2 Cost Model and Conceptual Cost Estimate, Provided by Matson Carlson Estimating for Arai Jackson Ellison Murakami, dated January 7, 2007.*

SUPPORTING DOCUMENTATION USED TO DEVELOP AUDIT FINDINGS

30. *Seattle Fire Department Station #17 Pre-Design Cost Estimate Compared to Levy Planning Estimates, Prepared by The Robinson Company, dated December 19, 2006.*
31. *Fire Station 17 Addition and Modernization Cost Model Estimate, dated October 30, 2006.*
32. *Fire Station 28 – Baseline, Option, and USAR/MMST Building Cost Summaries, Prepared by Olympic Associates Company for Schreiber Starling & Lane, dated November 25, 2006.*
33. *Fire Station 31 – Estimate Summaries, Prepared by Roen Associates for Snyder Hartung Kane Strauss, dated October 19, 2006 and October 23, 2006.*
34. *Fire Station 28 - City of Seattle Screening and Submittal Checklist, Land Use Permit Submittal Requirements, Index 11, dated December 27, 2006.*
35. *Fire Station 28 - Pacific Northwest Title Company Limited Liability Certificate Schedules A and B, dated August 23, 2006.*
36. *Fire Station 28 – Historic Property Inventory Form, dated November 9, 2000.*
37. *Fire Station 28 – Seismic Improvement and Basement/Foundation Plans, dated March 27, 1986.*
38. *Fire Station 31 – Renovation/Addition Pre-Design Study by Snyder Hartung Kane and Strauss (Includes Cost Estimates), dated January 16, 2007.*
39. *Fire Station 31 – Project Backlog, dated February 1, 2007.*
40. *City of Seattle Memorandum – Fire Station 31 – Scope Prioritization, dated October 10, 2006.*
41. *City of Seattle Memorandum – Fire Station 31 – Scope Prioritization Update After Pre-Design Meeting, November 30, 2006, dated December 4, 2006.*
42. *Fire Station 31 – Review Comments Resolution Form, dated November 15, 2006.*
43. *Contents of Central Project Files – Guidance as to What Constitutes a Public Document, undated.*



City of Seattle

Gregory J. Nickels, Mayor

Fleets and Facilities Department

Brenda Bauer, Director

MEMORANDUM

DATE: March 30, 2007

TO: Susan Cohen, City Auditor
Mary Denzel, Assistant City Auditor
Office of City Auditor

FROM: Brenda Bauer

RE: Project Controls Reporting Audit
Fire Facilities & Emergency Response Levy Program

We appreciate the time and effort the Office of City Auditor invested in reviewing our processes and project delivery tools. This work was particularly challenging because when the audit started, we were at the beginning stages of planning for the neighborhood station program that you reviewed. As you noted, our planning included reviewing best practices for systems and controls at multiple public agencies and private firms. We created schedule templates for the distinct types of station projects in the program that have proved to be good predictions as we have put our projects into actual design.

We also developed a defined records management system to ensure consistency and best practices across projects, and a project manual to capture standards to be incorporated in all our station projects. The Capital Programs staff worked with the Law Department and City Contracting to create and improve a consultant contract template that has become a model that will be used for facilities design contracts across the City, and they are similarly working to improve the facilities construction specifications. Our program practices are based on our deliberate planning and best practices review as we ramped-up for this major initiative, and the program is a model for the City and other agencies.

We have already implemented, or expect to implement shortly, all of the Auditor's recommendations, including:

- Reporting on our project schedules in the form the Auditor requested;
- Including schedule deliverables and milestones in all our design contracts;
- Updating our financial reporting format to separate design and construction costs; and,
- Preparing a manual of document examples to compliment our Filing Plan, and reviewing the material with capital project managers.

I ask that you consider the attached specific comments as you finalize your report on our practices and recognize our efforts to respond to your recommendations.

The Fleets & Facilities Capital Program team has already successfully executed a number of Levy projects on time and on budget. We recognize the challenges of the current climate in the construction industry and have doubled our efforts to ensure our project controls and systems are robust and *in place*. We will continue to look for improvements as we progress with the Neighborhood Station Program.

cc: Mayor's Office

#	Where	What	Comment
	p. 1, last para	Insufficiently updated	Report does not define time period of audit. This paragraph says that design "began in July 2006 and has been underway for four months...". However, Table III-1 clearly includes a longer timeframe and additional information. This is caused by the ongoing nature of the stations program - defining a time period and then reporting consistently on that time period would be appropriate.
1	p. 3, FS 17	Pre-design contract description	FS17 pre-design contract includes development of pre-design manual that standardizes programming for station elements across all fire stations. The description does not note this significant difference from the other pre-design efforts.
2	p. 5, last finding	Master Planning Schedule	Not identified to the reader or identified by that name in this report. Suggest labeling the figure on p. 10, and directing reader to it.
3	p. 7 first finding	additional funding sources	Gap funding is from Cumulative Reserve Funds and (future) bonds, per adopted CIP. This plan identified to Auditor on 1/26/07. Email transmittal from Potter to Denzel notes CRF revenues tracked for City by DOF, and that CRF appropriations are "guaranteed" to FFD. Suggest that these aren't revenues that are appropriate for tracking - rather, FFD monitoring should focus on ensuring that appropriations (and future bond sales) occur as planned. FFD's attention to the Council's provisos is evidence of this attention.
4	p. 7 second finding	monitoring contingency	Auditor has reviewed project budget worksheets, which clearly identify contingencies. FFD noted on 1/26/07 that all contracts and contract amendments, including change orders, require a project budget worksheet. Any use of contingency will be shown on the worksheets.
5	p. 7 recommendation	additional funds, contingency	Reconsider content in light of comments, above.
6	p. 9 finding 1	No budgets	Auditor has reviewed project budget worksheets, showing budgets for first 4 projects.
7	p. 9.	No change order proposals	City change orders are changes to the construction contract. Construction has not yet begun on these projects. Suggest: "As construction has not begun on these projects, FFD only provided the change order form."
8	p. 10 first finding	schedule not changed	Correction to statement. That schedule was changed to reflect delaying FS 6 by two years, and accelerating 2 other projects to offset the financial impact of doing so. Consider "The information about Fire Stations 2, 17, 28 and 31 shown on the above report...". In other words, we maintained it for its purpose as a planning tool.
9	Appendix A	Vintage of information	This table appropriately labeled as "initial planning assumptions" or updated to reflect the current status and description of each project.
10	Document List	Additional documents	Items #1 and #44 are duplicates. At the 1/26/07 meeting, we provided you with our Levy master schedule report (all projects, one page). Perhaps you intended to identify it as an additional supporting document.
11			