



INTERNAL AUDIT DEPARTMENT
COUNTY OF ORANGE

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**AUDIT
OF
JOHN WAYNE AIRPORT

PUBLIC WORKS
CONTRACT ADMINISTRATION**

**For the Period
July 1, 2004 through September 30, 2005**

AUDIT NUMBER: 2567

REPORT DATE: JUNE 29, 2006

Audit Director:	Peter Hughes, Ph.D., CPA
Deputy Director:	Eli Littner, CPA, CIA
Audit Manager:	Michael Goodwin, CPA, CIA
Senior Auditor:	Winnie Keung, CPA

**Audit of John Wayne Airport
Public Works Contract Administration**

**For the Period
July 1, 2004 through September 30, 2005**

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ELI LITTNER
CPA, CIA, CFE, CFS, CISA
DEPUTY DIRECTOR

MICHAEL J. GOODWIN
CPA, CIA
AUDIT MANAGER

ALAN MARCUM
MBA, CPA, CIA, CFE
AUDIT MANAGER

AUTUMN MCKINNEY
CPA, CIA, CGFM
AUDIT MANAGER

Office of the Director
DR. PETER HUGHES
Ph.D., MBA, CPA, CIA, CFE, CITP

MAILING ADDRESS:
400 CIVIC CENTER DRIVE WEST
BUILDING 12, ROOM 232
SANTA ANA, CALIFORNIA 92701

TELEPHONE: (714) 834-5475

FAX: (714) 834-2880

EMAIL: peter.hughes@ocgov.com

WEBSITE: www.ocgov.com/audit/

Transmittal Letter

Audit No. 2567

June 29, 2006

TO: Alan L. Murphy, Director
John Wayne Airport

FROM: Peter Hughes, Ph.D., CPA, Director
Internal Audit Department

SUBJECT: Audit of John Wayne Airport Public Works Contract Administration

We have completed our audit of John Wayne Airport public works contract administration for the period July 1, 2004 through September 30, 2005. The final report is attached along with your responses to our recommendations.

Please note, beginning in January 2005, we implemented a more structured and rigorous Follow-Up Audit process in response to recommendations and suggestions made by the Audit Oversight Committee (AOC) and the Board of Supervisors (BOS). As a matter of policy, our first Follow-Up Audit will now begin no later than six months upon the official release of the report. The AOC and BOS expect that audit recommendations will typically be implemented within six months and often sooner for significant and higher risk issues. Our second Follow-Up Audit will now begin at 12 months from the release of the original report, by which time all audit recommendations are expected to be addressed and implemented.

At the request of the AOC, we are to bring to their attention any audit recommendations we find still not implemented or mitigated after the second Follow-Up Audit. The AOC requests that such open issues appear on the agenda at their next scheduled meeting for discussion.

We have attached a Follow-Up Audit Report Form. Your department should complete this template as our audit recommendations are implemented. When we perform our Follow-Up Audit approximately six months from the date of this report, we will need to obtain the completed document to facilitate our review.

As the Director of Internal Audit, I now submit a monthly audit status report to the BOS where I detail any material and significant audit findings released in reports during the prior month and the implementation status of audit recommendations as disclosed by our Follow-Up Audits. Accordingly, the results of this audit will be included in a future status report to the BOS.

As always, the Internal Audit Department is available to partner with you so that JWA can successfully implement or mitigate difficult audit recommendations. Please feel free to call me should you wish to discuss any aspect of our audit report or recommendations.

Additionally, we will be forwarding a Customer Survey of Audit Services for completion. Your office will receive the survey shortly after the distribution of this report.

Attachments

Other recipients of this report:

- Members, Board of Supervisors
- Members, Audit Oversight Committee
- Thomas G. Mauk, County Executive Officer
- Loan Leblow, Assistant Airport Director
- Richard Oviedo, Senior Deputy County Counsel
- Larry Serafini, Deputy Airport Director, JWA/Facilities
- Glenn Owens, Manager, Airport Development
- Scott Suzuki, Quality Assurance & Compliance Manager
- Foreperson, Grand Jury
- Darlene J. Bloom, Clerk of the Board of Supervisors



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SANTA ANA, CALIFORNIA 92701

TELEPHONE: (714) 834-5475

FAX: (714) 834-2880

EMAIL: peter.hughes@ocgov.com

WEBSITE: www.ocgov.com/audit/

INTERNAL AUDITOR'S REPORT

Audit No. 2567

June 29, 2006

TO: Alan L. Murphy, Director
John Wayne Airport

SUBJECT: Audit of John Wayne Airport Public Works Contract Administration

We have completed our audit of John Wayne Airport (JWA) public works contract administration for the period from July 1, 2004 through September 30, 2005. We performed this audit at the request of JWA for the purpose of evaluating procedures, processes and internal controls related to the management of JWA public works contracts. Our audit was conducted in accordance with professional standards established by the Institute of Internal Auditors.

Management of JWA is responsible for establishing and maintaining a system of internal controls over public works contract administration. The objectives of an internal control system are to provide management with reasonable, but not absolute assurance that assets are safeguarded against loss from unauthorized use or disposition, and that transactions are executed in accordance with management's direction and authorization. County Accounting Procedure (CAP) No. S-2 – Internal Control Systems prescribes the policies and standards to be followed by departments/agencies in establishing and maintaining internal control systems. Our audit enhances and complements, but does not substitute for JWA's continuing emphasis on control activities, self-assessment of control risks, and correction or mitigation of control risks identified.

Because of inherent limitations in any system of internal controls, errors or irregularities may nevertheless occur and not be detected. Also, projection of any evaluation of the system to future periods is subject to the risk that procedures may become inadequate because of changes in conditions or the degree of compliance with the procedures may deteriorate. Accordingly, our audit made for the purpose described above would not necessarily disclose all weaknesses in JWA's operating procedures, accounting practices and compliance with County policy.

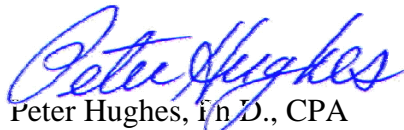
Based on our audit, **no material weaknesses or significant issues were identified.** Our audit of JWA's contract administration using the Business Process Maturity Model resulted in a determination that the process for public contracts over \$75,000 is between Stage 3 – *Stabilized* and Stage 4 – *Actively Managed*. We assessed JWA's contract administration for Delivery Order contracts at slightly under Stage 3 – *Stabilized*. By implementing our recommendations noted in this report, JWA can achieve a higher level of process maturity in its public works contract administration processes. See *Attachment B* for a description of the Process Maturity Model.

We identified **26 Control Findings** with corresponding recommendations to enhance controls and processes as discussed in the *Detailed Assessment of Processes and Components* section of this report. The Control Findings are in the areas of updating policies and procedures; establishing criteria for evaluating contractor bids; reconciling project financial reports; performing field inspections and supervisory reviews of inspection reports; documenting deviations to project plans and specifications; reviewing change orders; ensuring accuracy of contractor pay requests, and finalizing procedures for Delivery Order contract administration.

While our report indicates the specific areas where our observations are directly applicable, **JWA should implement the recommendations in other contract administration processes they find applicable.** An expectation of the Board of Supervisors is that departments and agencies will view this report as a “lessons learned” opportunity to guide them in proactively self-assessing other similar operations or processes.

We appreciate the courtesy and cooperation extended to us during the audit by the personnel of JWA. If we can be of further assistance, please contact me or Eli Littner, Deputy Director at (714) 834-5899 or Michael Goodwin, Audit Manager, at (714) 834-6066.

Respectfully Submitted,



Peter Hughes, Ph.D., CPA
Director, Internal Audit

Attachments

Distribution Pursuant to Audit Oversight Committee Procedure No. 1:

- Members, Board of Supervisors
- Members, Audit Oversight Committee
- Thomas G. Mauk, County Executive Officer
- Loan Leblow, Assistant Airport Director
- Richard Oviedo, Senior Deputy County Counsel
- Larry Serafini, Deputy Airport Director/Facilities
- Glenn Owens, Manager, Airport Development
- Scott Suzuki, Quality Assurance & Compliance Manager
- Foreperson, Grand Jury
- Darlene J. Bloom, Clerk of the Board of Supervisors

EXECUTIVE SUMMARY

INTRODUCTION AND BACKGROUND

Internal Audit Department performed this audit at the request of John Wayne Airport (JWA) to conduct a review of procedures, processes and internal controls related to the management of public works contracts. To accomplish our audit, we utilized a *Business Process Maturity Model* to evaluate controls and processes over public works contracts. (See Attachment B for a description of the Process Maturity Model.)

The mission of JWA is to plan, direct, and provide high quality aviation services and facilities for Orange County in a safe, secure, and efficient manner. JWA is owned and operated by the County of Orange and is a self-supporting enterprise fund. JWA derives revenues primarily from nonaeronautical and aeronautical users, represented by landing fees, terminal space rental, parking, concessions, and tiedown fees. The revenues are utilized to operate JWA, provide for repayment of revenue bonds, fund facility capital improvement or maintenance projects, and support aviation planning. JWA's major expenses include operating costs, capital projects and debt services. JWA is comprised of five Divisions: Public Affairs, Operations, Facilities, Finance & Administration, and Business Development. Our audit of public works contract administration involved the Facilities Division (JWA/Facilities).

There are five operating units within JWA/Facilities: Facilities Maintenance, Engineering, Airport Development, Planning & CADD and Information Systems. These units provide core business functions that include planning and project management of capital development programs, engineering studies and JWA facility requirements. Airport Development is responsible for all public works contracts, including construction, maintenance and repair work.

We selected two types of public works contracts to include in our audit: **Public Works Contracts Over \$75,000** and **Delivery Order Contracts**. Each are described below, with more detailed descriptions included in our report section entitled *Detailed Assessment of Processes and Components*.

Public Works Contracts Over \$75,000

The County Purchasing Manual requires formal bidding for public works contract over \$75,000. The scope of these contracts is specifically defined in the project's plans and specifications. These contracts do not have specific expiration dates; they expire when work is completed and a *Notice of Completion of Work* is issued. As of July 27, 2005, there were **ten active public works contracts over \$75,000** with contracts ranging individually from **\$558,000 to \$5,997,500**.

Delivery Order Contracts

A Delivery Order contract is an annual public works contract. The contract contains a number of possible tasks (also known as line items), which are generally for repair and maintenance work. For purposes of bidding, the possible tasks and estimated quantities of materials are listed in the bid packet for general contractors to bid on the **unit price** for each line item. The contract is awarded to the "lowest responsible bidder" of the total bid price. The contract amount is not fixed, but there is a **minimum of fifty thousand dollars (\$50,000) and a maximum of one million dollars (\$1,000,000)**. Once the Delivery Order contract is awarded, JWA/Facilities determines the scope of work for each task and issues a *Job Order*, which is an agreement on unit quantities and authorizes the contractor to proceed. Therefore, there may be a number of job orders during the contract term. During our audit period, there was a Delivery Order contract in effect, but no job orders had been issued for the contract.



SCOPE AND OBJECTIVE

Our audit was limited to evaluating controls and processes for administering public works contracts over \$75,000 and Delivery Order contracts for the period July 1, 2004 through September 30, 2005. Our specific objective was to evaluate the contract administration processes that JWA/Facilities adopted for public works contracts over \$75,000 and delivery order contracts, using a Business Process Maturity Model to determine the adequacy and effectiveness of controls and processes.

We accomplished our audit through inquiry, auditor observation and examination of relevant documentation to assess controls and processes of administering public works contracts. In evaluating the process, we identified **eight process components** to aid in our understanding of the strengths and weaknesses of the contract administration for both processes, and these are described on the following pages of this report.

Our audit did not include an evaluation of controls and process of public works contracts under \$75,000 and other types of contracts administered at JWA.

CONCLUSION

Our audit of JWA's contract administration using the Business Process Maturity Model resulted in a determination that the process for public works contracts over \$75,000 is currently between Stage 3 – *Stabilized* and Stage 4 – *Actively Managed*. This assessment demonstrates processes with objective standards and criteria that are becoming well-defined, documented and communicated. We further determined that JWA's contract administration for Delivery Order contracts is currently slightly under Stage 3 – *Stabilized*. This assessment demonstrates a process that is still developing and has written policies and procedures in draft form that were not fully defined, documented and communicated to users. By implementing our recommendations noted in this report, JWA management can achieve a higher level of process maturity in its public works contract administration processes.



Business Process Maturity Model: Assessment of Public Works Contracts Processes

In evaluating JWA's public works contract processes, we identified the following eight process components to aid in our understanding of the strengths and weaknesses of the processes reviewed.

Public Works Contracts Over \$75,000:

Bidding Process

We reviewed how JWA evaluates and selects qualified contractors up to the awarding of a contract, how well the steps are defined in policies and procedures, and how effectively the processes are communicated to staff.

Project Administration/Monitoring

We reviewed how JWA administers and monitors public works contracts, the adequacy of documentation used in administering/monitoring contracts, the processes for inspecting and verifying work performed, and the process for project completion.

Change Orders

We reviewed how JWA analyzes and approves job modifications and the adequacy of documentation showing the review and approval process for change orders.

Pay Requests

We reviewed JWA's process for reviewing and approving contractor pay requests, including how JWA ensures contractors are billing for actual work accomplished, and how well the steps and responsibilities of reviewing and approving a pay request are defined in policies and procedures.

Delivery Order Contracts:

Plans and Specifications Development

We inquired about procedures for developing plans and specifications of contracts, how well the roles and responsibilities of the staff and management are defined in this areas, and how effectively the processes are communicated to staff.

Bidding Process

We inquired how JWA evaluates contractor proposals, selects qualified contractors, awards the contract, defines steps in policies and procedures, and communicates the processes to staff.

Job Administration/Monitoring

We inquired how JWA authorizes a job order, monitors job status, analyzes job modification and accepts the job at completion; how staff performs inspections and verifications of work performed by contractors; and the how documentation is maintained during construction projects.

Pay Requests

We inquired of JWA's process for reviewing and approving contractor pay requests, including how JWA ensures contractors are billing for actual work accomplished, and how well the steps and responsibilities for reviewing and approving a pay request are defined in policies and procedures.



Summary of Observations of the Process Components

Below is a summary of observations we noted in our audit of JWA public works contract processes, categorized by the process components identified on page 5. A detailed assessment of our observations is provided in the following pages of this report.

Public Works Contracts Over \$75,000

<i>Process Component</i>	<i>Description</i>	<i>Report Detail</i>
Bidding Process	<ul style="list-style-type: none"> • Update/revise written procedures to reflect current practices and laws. • Establish criteria for “pre-qualification” process to include situations when used; requirements for documentation; and verification of contractor information. • Establish guidelines for Project Managers in the evaluation and analysis of unit price contract bids, and review of Bid Recap Sheets. 	Page No. 8
Project Administration/Monitoring	<ul style="list-style-type: none"> • Work jointly with JWA/Information Technology to address discrepancies in project financial reports. • Assign responsibility for reconciling project financial reports. • Establish a procedure to ensure all submittals are received and summarized for purposes of monitoring for compliance. • Review/update written procedures and forms for Field Inspectors. • Ensure Field Inspectors document any issues of non-compliance on <i>Daily Inspection Reports</i>. • Project Managers should review field inspection and material testing reports and document their review. • Document in project files instances when plans and specifications are substituted by other material quality and/or testing methods. 	Page No. 10
Change Orders	<ul style="list-style-type: none"> • Ensure Change Orders are reviewed for accuracy, and all requests exceeding \$5,000 are reviewed by Change Order Review Board. • Establish a policy that defines situations where work can proceed <u>before</u> there is formal written approval of a change order request. • Standardize the Change Order Log used for public works projects. 	Page No. 15
Pay Requests	<ul style="list-style-type: none"> • Define responsibilities for reviewing accuracy of pay requests. • Evaluate procedure for <i>Progress Payments</i> re: meeting with contractor to determine work completed. 	Page No. 17

Delivery Order Contracts

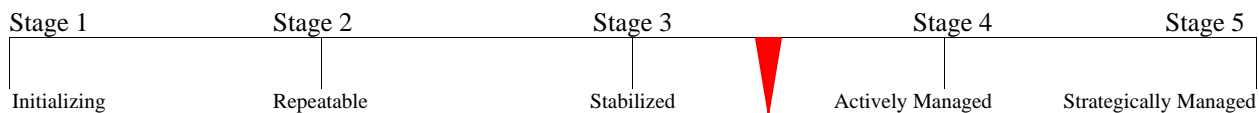
<i>Process Component</i>	<i>Description</i>	<i>Report Detail</i>
Plans and Specifications Development	<ul style="list-style-type: none"> • Establish written procedures for Delivery Order contracts. 	Page No. 19
Bidding Process	<ul style="list-style-type: none"> • Establish a process for evaluation of line item bid proposals. 	Page No. 19
Job Administration/Monitoring	<ul style="list-style-type: none"> • Revise <i>Job Order</i> form for inclusion of requested work, job location and priority, and engineering requirements. • Ensure Project Managers perform documented reviews of field inspection reports. • Define procedures for Field Inspectors on performing and documenting inspections in <i>Daily Inspection Reports</i>. • Establish a policy that defines situations where work can proceed <u>before</u> there is formal written approval of a change order request. 	Page No. 20
Pay Requests	<ul style="list-style-type: none"> • Establish written policy on release of retention payments. • Define responsibilities to ensure mathematical accuracy of pay requests and compliance with plans and specifications. 	Page No. 23



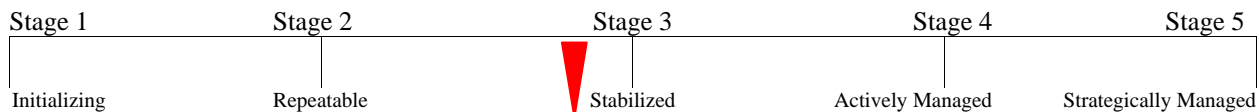
Assessment of JWA’s Public Works Contract Processes Using a Business Process Maturity Model
In our assessments of County business processes, we recommend a “**Stage 3 – Stabilized**” maturity level as a minimum level for processes we believe are critical and have large, widespread impact on the operations of the County.

Our audit of JWA’s contract administration using the Business Process Maturity Model resulted in a determination that the process for public works contracts over \$75,000 is currently between Stage 3 – *Stabilized* and Stage 4 – *Actively Managed*. This assessment demonstrates processes with objective standards and criteria that are becoming well-defined, documented and communicated. We further determined that JWA’s contract administration for Delivery Order contracts is currently slightly under Stage 3 – *Stabilized*. This assessment demonstrates a process that is still developing and has written policies and procedures in draft form that were not fully defined, documented and communicated to users. By implementing our recommendations noted in this report, JWA management can achieve a higher level of process maturity in its public works contract administration processes.

Public Works Contracts Over \$75,000
PROCESS MATURITY



Delivery Order Contracts
PROCESS MATURITY



DETAILED ASSESSMENT OF PROCESSES AND COMPONENTS

Public Works Contracts Over \$75,000

Public works contracts can be further categorized into the following two contracting methods:

A. Lump Sum Contract

A lump sum project is complex and contains a number of unique components to complete. Contractors submit one lump sum bid amount in the proposal. The bid is evaluated based solely on the total price and is awarded to the “lowest responsive bidder.” Once the contract is awarded, the contractor is required to submit a *Schedule of Values*, which details the total contract price for each principal category of the project, and provides a basis for determining progress payments and monitoring project status. Construction of a new building is an example of a lump sum contract.

B. Unit Price Contract

A unit price project contains several components that can not be readily quantified (underground excavation in questionable soil conditions) and are repetitive in nature. Contractors are required to bid a “unit price” of each principal component, or line item, stated in the project specifications. These line items are used as a basis for determining progress payments and monitoring project status. Unit price contract bids are evaluated based on the unit price of each component and the total price of the project. Asphalt pavement is an example of a unit price contract item.

We selected two public works contracts to help in our assessment of processes and controls: **Refurbishment of Terminal Restrooms** project (a lump sum contract for **\$780,520**) and **Flush Mount Fire Hydrants** project (a unit price contract for **\$1,070,000**). In our process evaluation, we defined four major process components: Bidding Process, Project Administration/Monitoring, Change Orders, and Pay Requests. Each is described below along with our observations where we discuss our recommendations for enhancing controls and processes.

1. Bidding Process

We reviewed how JWA evaluates and selects qualified contractors up to the awarding of a contract, how well the steps are defined in policies and procedures, and how effectively the processes are communicated to staff.

As stated in the County of Orange Contract Policy Manual (CPM), departments/agencies have the primary role in contract preparation, bid solicitation and evaluation, and contract administration. Per the CPM, formal bidding procedures are required for public works contract over \$75,000. The lowest responsible bidder is recommended to the Board of Supervisors for awarding of the contract.

JWA uses formal bidding procedures for public works contracts over \$75,000. The Board of Supervisors approves the plans and specifications and directs JWA to advertise the project to solicit bids. The Clerk of the Board of Supervisors accepts sealed bids from contractors. JWA Project Managers evaluate lump sum contract bids by comparing the total prices, evaluating unit price contract bids based on the “unit price” of each line-item and the total price. The Project Manager verifies the qualifications and references of the apparent lowest bidder to ensure the contractor is properly licensed and insured against claims. As required by California Public Contract Code Section 22038, the contract is awarded to the lowest responsive bidder. JWA may reject all bids if they exceed engineer’s estimates and budget, if there are not enough bidders, or if a bid is suspected of being submitted unfairly.



To ensure contracts are awarded to the lowest, responsive and qualified contractor, in 2004, JWA started using a “pre-qualification” process to select qualified contractors on certain projects. During this process, contractors are invited to submit a pre-qualification packet and to complete a list of questions that are used in the evaluation process. Only pre-qualified contractors are allowed to obtain bid documents and submit proposals on the project. Due to uniqueness of each project, JWA evaluates whether or not to use the pre-qualification process on a case by case basis.

Observations

We found there were written policies and procedures for JWA’s bidding process, including pre-qualification, that were available for use by JWA/Facilities staff. Below we note areas where the procedure manuals should be enhanced for the bidding process:

- JWA written procedure entitled *Bidding* included a reference to California Public Contract Code Section 22032(c) citing that bidding procedures be used for contracts over \$75,000. The Code has been subsequently revised and increased the threshold to \$125,000. To date, the County Contracting Manual has not been revised to reflect this increase.
- Due to uniqueness of each project, JWA/Facilities does not have written criteria to determine whether a project should use the pre-qualification process to select a qualified contractor. Each project is evaluated on a case by case basis, and there was no documentation maintained to indicate why the pre-qualification process was used or not used.
- During the pre-qualification process, information provided by contractors (e.g. contractor’s license, insurance requirements) was not verified. Instead, JWA verified contractor information only for the apparent lowest responsive bidder. These verifications were often obtained verbally and were not consistently documented in the contract files. There were no supervisory reviews to ensure the contractor’s qualifications and references were verified.
- Project Managers evaluated the proposed unit price contract line items for reasonableness and to ensure they were mathematically correct. They subjectively reviewed any apparent high or low bids on line items because of a risk that contractors could strategically bid high or low on certain line items in order to obtain the contract. We noted there was no written documentation maintained to evidence the Project Manager’s analysis and review of engineer’s estimates and variance among the bids for unit price contracts, or of the Bid Recap Sheet that is submitted to the Board of Supervisors for awarding a contract.

Recommendations

Based on our observations, we recommend the following:

1. JWA make necessary revisions to their current procedures manual, such as references to corresponding Government Codes, and establish a process to ensure the procedural manual is periodically reviewed and updated to reflect current regulations and procedures.
2. JWA establish criteria for the contractor pre-qualification process and maintain documentation in project files to indicate whether or not the process was used.
3. JWA ensure that verification of contractor information is documented in writing. Supervisory review of the verifications should be performed to ensure there is adequate and consistent documentation. JWA should consider validating contractor information during the pre-qualification process, which would provide them with a pool of prequalified contractors.



4. JWA establish guidelines to assist Project Managers with evaluating unit price contract bids, to analyze all major line item variances, to document the outcomes and conclusions, and to review the Bid Recap Sheet for accuracy prior to submission to the Board of Supervisors.

JWA Management Responses:

1. Concur. The Airport Development Section's policies and procedures manual has been reviewed and is up to date. A procedure has been established wherein the manual will be reviewed and updated periodically to reflect current regulations and procedures. Updates are submitted from the Senior Civil Engineer or Manager of Airport Development and approved by the Deputy Airport Director of Facilities.
2. Concur. Criteria to determine whether a project should use the pre-qualification process have been established. Pre-qualification is required for all Public Works Contracts \$1,000,000 and over or with special experience requirements. All future project files will contain appropriate documentation.
3. Concur. Current policy requires verification of information provided by all contractors who have submitted pre-qualification documents when the contract is \$1,000,000 and over or has special experience requirements. Contractors passing this stage of the process create a "pool" from which JWA can select the responsible low bidder. When pre-qualification is not required, contractor information is verified for only the apparent lowest responsible bidder.

The Project Manager initially verifies information provided by contractors for the pre-qualification process. A procedure has been implemented wherein the Manager of Airport Development will provide supervisory review of the pre-qualification process to ensure contractor information verification is documented when required.

4. Concur. Procedures for evaluating unit price contract bids have been updated. Project Managers will check proposals submitted by bidding contractors to ensure they are in proper form including completion of required fields, confirmation that amounts agree with those in writing, and analysis of any major line item variances. Any discrepancies such as omissions or alterations will be noted and the Project Manager's review and conclusion will be documented on the Bidder Evaluation form.

A Bid Recap Sheet will be prepared by the Project Manager to accompany the Award of Contract Agenda Staff Report (ASR). Accuracy of the Bid Recap Sheet will be verified by the Manager of Airport Development prior to submission to the Board of Supervisors for selection and award.

II. Project Administration/Monitoring

We reviewed how JWA administers and monitors public works contracts, the adequacy of documentation used in administering/monitoring contracts, the processes for inspecting and verifying work performed, and the process for project completion. We assessed project administration/monitoring in the following areas: Construction Costs, Submittals, Field Inspections and Materials Testing, and Project Completion.



Construction Costs

JWA uses a customized Microsoft Access program to monitor the construction costs of all capital projects. This program generates financial reports to keep track of all construction payments, change orders and project status. A *Schedule Implementation and Capital Projects Status Report* (also known as Document A) is a monthly summary report used for monitoring the entire project including design and construction phases. The *Project Cost Distribution Detail* is a financial summary that shows year-to-date amounts of each phase. The *Construction Payment Report* is a detailed financial report that shows payment history and all change order records for a project. JWA/Accounting ensures all pay requests do not exceed the contracted amount and that all change orders are officially approved when processing the payments.

Observations

We found that JWA has a process to administer and track project cost information for its public works contracts. The financial reports provide sufficient detailed information by contract/project to enable JWA to monitor project costs. We noted where JWA needs to enhance its monitoring of construction costs as detailed below:

- Financial information shown on *Document A* and the *Project Cost Distribution Detail* differed from amounts shown on the *Construction Payment Report*. Because information contained in these three reports is from the same database, information should be the same. However, we noted there were discrepancies between the reports, which were cited to be the result of an application error. The errors pertain to the calculation of the net payment, which is the construction gross amount minus a 5% retention payment.
- Reconciliations of the project financial reports (e.g. *Construction Payment Report*) were not performed to identify discrepancies and errors. We noted that the actual Net Payment amounts and Change Order amounts for the **Flush Mount Fire Hydrant** project were accurate; however, they were **overstated by \$9,921 and \$10,443**, respectively, on the Construction Payment Report.

Recommendations

Based on our observations, we recommend the following:

5. JWA/Facilities and Information Technology Divisions work jointly to address the discrepancies in amounts between the project financial reports.
6. JWA assign responsibility to reconcile project financial reports on a regular basis. Any reconciling items should be documented in writing along with their resolution.

JWA Management Responses:

5. Concur. This recommendation is the result of a formula error in the Access database that was used to track project status. This system will be replaced by the Skire Company's Unifier, a new dedicated SQL (Structured Query Language) based project management system specifically designed for facilities related project management. Unifier is being installed by the SAIP (Settlement Amendment Implementation Plan) consultant Faithful & Gould. All workflows and configuration settings are being programmed at this time. Initial functionality of the system will be available approximately by the end of June 2006 with additional features to be released in the future. Unifier will completely replace the old Access system by approximately October 2006. In the interim, discrepancies between the project financial reports have been resolved and the formula error has been corrected.



6. Concur. The responsibility to reconcile project financial reports on a regular basis has been assigned to the recently created Project Management Control Analyst position. Reconciliations will be performed quarterly and reconciling items will be handled in accordance with Internal Audit's recommendation.

JWA is actively recruiting for the Project Management Control Analyst position and plans to have it staffed by the end of July 2006. In the interim, the Manager of Airport Development will be temporarily responsible for reconciling project financial reports.

Submittals

Submittals are documents that are required from the contractors prior to starting a project. Submittals are approved by JWA prior to beginning work and are used in monitoring construction progress and quality control. A Project Manager is responsible to ensure the submittals are received from the contractor. One type of submittal is a *Schedule of Values*, which breaks down project costs in categories for monitoring and determining progress payments. Another submittal, *Statement of Materials*, is a certification from the contractor that the quality and mix design of the materials conform to plans and specifications. After approval by JWA, Field Inspectors will compare the corresponding submittals against the delivery tickets when the materials are delivered to ensure the material used is meeting the engineering requirements.

Observations

We observed documentation noting that submittals were received prior to starting projects. However, submittals are not always agreed to project plans and specifications. Information in submittals should agree with requirements in the project plans and specifications.

We found one instance where a Project Manager received a slurry mix design submittal from the contractor for the **Flush Mount Fire Hydrant** project; however, it was not in accordance with the required specifications. The submittal was obtained from the contractor and placed in the project file, but it was not agreed to the specifications. Based on further inquiry, we noted that the material content of this submittal was beyond the acceptable standard of a slurry mix. Therefore, it created a non-compliance issue when the incorrect standard material was delivered to the construction site. (The issue is noted below under Field Inspections and Materials Testing). Supervisory reviews were not performed to ensure all required submittals were agreed to project plans and specifications.

We also noted some projects had a summary page, which is a recap of plans and specifications for all materials and test methods; however, a summary page was not consistently provided for all sections of the specifications. Because public work projects involve a number of tasks requiring different quality of materials and mix designs at different stages, it is possible a Project Manager may not be aware of some of the engineering requirements without the summary page. A summary page will increase efficiency as it allows for easier identification of specifications and for matching them to each submittal.

Recommendation

7. JWA establish a process to ensure all submittals are received, agreed to project plans and specifications, and summarized for purposes of monitoring compliance. This could be accomplished through performing documented supervisory reviews.



JWA Management Response:

7. Concur. Training was conducted at a monthly project management meeting wherein procedures for handling submittals were reviewed. The Project Manager is responsible for ensuring all submittals are agreed to project plans and specifications and the Manager of Airport Development is responsible for providing supervisory oversight to ensure this is performed.

The upcoming Unifier system will require and document correct workflow. The system's submittal process will help ensure all project related submittals are agreed to project plans and specifications.

Field Inspections and Materials Testing

JWA Field Inspectors, who report to Project Managers, are assigned to perform daily general field inspections throughout the project and monitor construction progress to ensure contractors are conforming to plans and specifications. Also, Field Inspectors are responsible for ensuring the quality of material delivered to the construction site by agreeing the Delivery Ticket to the approved submittal. Field Inspectors are required to submit *Daily Inspection Reports*, which document site conditions, project progress, problems encountered and corrective actions needed, to the Project Manager for review. In addition, Project Managers perform regular on-site visits to monitor construction progress.

In addition to general inspections, JWA contracts with various Materials Testing and Inspections Firms to perform material testing and special inspections to ensure the material used and workmanship conform with engineering requirements. These firms conduct tests and inspections at the construction site and document the results and/or corrective actions on a special test report.

Observations

We noted that JWA has written policies and procedures for field inspections for monitoring projects. Our review of the procedures and selected contracts noted the following:

- The *Daily Inspection Report* in the procedures manual is not the version currently in use.
- Field Inspectors use the *Daily Inspection Report* to document site conditions, but do not consistently sign it to establish accountability of work performed.
- Project Managers did not always review *Daily Inspection Reports* to ensure completeness, accuracy and consistency, and to be informed timely of any problems or concerns. We were told that Field Inspectors verbally inform Project Managers of project status on a daily basis.
- Our review of *Daily Inspection Reports* for the **Flush Mount Fire Hydrant** project found the reports did not address the discrepancy between a delivery ticket and the approved slurry mix design submittal. The material content for this submittal was beyond the acceptable standards of a slurry mix when it was delivered, and was not mentioned in the *Daily Inspection Report*. Because *Daily Inspection Reports* are official reports to document project status and communicate the status between the field and JWA, any issues similar to this should be identified in the reports along with documentation of its resolution.



- Our review of *Special Test Reports*, which are prepared by the contracted Materials Testing and Inspections Firms, did not note any evidence that the Project Manager reviewed the reports to ensure the test results are meeting the requirements. We were informed that reviews were conducted but documentation was not maintained.
- We noted one instance where the result of a field density test met project requirements; however, the method used to perform the test was different from the methods recommended in project specifications. We found no evidence that the alternate method was approved by JWA, although we were informed that the alternate method is appropriate for this material testing. Because the objective of conducting a materials test is to ensure conformance with plans and specifications, proper documentation should be maintained showing approval when a different test method is used.

Recommendations

Based on our observations, we recommend the following:

8. JWA ensure the procedures for Field Inspections are periodically reviewed and updated to include current procedures and sample report forms, such as the *Daily Inspection Report*.
9. JWA remind Field Inspectors to document in the *Daily Inspection Reports* any issues of non-compliance along with the resolution of the issues, and to sign and date all reports.
10. JWA ensure Project Managers review *Daily Inspection Reports* and *Special Test Reports* and document their review by signing and dating the reports.
11. JWA document in project files any instances where the quality or testing methods of materials differ from requirements in plans and specifications. Documentation should include authorization of the alternate option, explanation of the issue, and the outcome.

JWA Management Responses:

8. Concur. The procedures for Field Inspections (developed by the Airport Engineering group) are reviewed as part of the quality assurance plan for each project. All project specific and special inspections are identified and programmed for in this plan. The inspectors also verify the adequacy of the existing procedures and report forms (e.g., current Daily Inspection Report and Construction Field Report), execute any needed general changes, and adopt any needed project specific requirements into the reporting system for that project.
9. Concur. Training was conducted at a monthly project management meeting wherein procedures for Field Inspectors were reviewed, including documenting issues of non-compliance and their respective resolution.

The upcoming Unifier system will automatically stamp the Daily Inspection Report with the Field Inspector's identity and the date completed.

10. Concur. The Daily Inspection Report and Special Test Report procedures have been modified to include a requirement for the Project Manager to review, comment on when appropriate, and sign/date each report. All reports which include notices of non-compliance are reviewed by the Manager of Airport Development. These documents will flow through, be stored in, and tracked in Document Locator, a SQL database designed for this purpose.



11. Concur. Training was conducted at a monthly project management meeting wherein procedures for handling variances of quality or testing methods were reviewed. The Project Manager is responsible for ensuring documentation is maintained for instances where the quality or testing methods of materials differ from requirements in plans and specifications and the Manager of Airport Development is responsible for providing supervisory oversight to ensure this is performed.

Project Completion

At the completion of a project, JWA performs job walks to determine if construction work is complete and conforms to project plans and specifications. During the job walk, the Project Manager or Field Inspector prepares a list of observed deficiencies for the contractor to correct, known as a *Punch List*. The deficiencies will be followed-up until they are corrected; then the project is considered completed. JWA will then issue a *Notice of Completion of Work* to officially accept the project. At this time, any retention funds are released to the contractor.

Observations

In the contracts we reviewed, we noted one instance (**Flush Mount Fire Hydrant project**) where a *Notice of Completion of Work* was issued indicating project completion. We were told that a job walk was performed; however, there was no documentation showing it was completed. We also noted that one of the tasks included in the original scope totaling **\$5,000** was not performed. Although we verified that no payment was made for this task, we did not note any Change Order or other file documentation showing the change in project scope.

Recommendations

Based on our observations, we recommend the following:

12. JWA ensure documentation is maintained showing that job walks are performed.
13. JWA ensure documentation is maintained in project files showing all changes in project scope along with the approval by JWA management.

JWA Management Responses:

12. Concur. The Project Management Control Analyst will ensure job walk documentation is maintained for every project prior to the issuance of a Notice of Completion. JWA is actively recruiting for this position and plans to have it staffed by the end of July 2006. In the interim, the Manager of Airport Development will be responsible for ensuring job walk documentation is properly maintained.
13. Concur. Training was conducted at a monthly project management meeting wherein procedures for documentation requirements for handling changes in project scope were reviewed. The Project Manager is responsible for ensuring documentation is maintained showing all changes in project scope and the Manager of Airport Development is responsible for providing supervisory oversight to ensure this is performed.

III. Change Orders

We reviewed how JWA analyzes and approves job modifications and the adequacy of documentation showing the review and approval process for change orders.



Change orders are supplemental agreements to original contracts usually resulting from changes in the scope of work or from unforeseen events. Change orders can be monetary for additional construction costs, or non-monetary to allow extra time for project completion. Change orders also result from a *Field Order*, which is a tool for used by the contractor and JWA to clarify issues such as unforeseeable site conditions or engineering errors and omissions. A *Change Order Log* is used to keep track of the change orders.

Project Managers prepare a *Memorandum of Negotiation* (also known as *Change Order Packet*) that includes detailed descriptions of any changes and an independent cost estimate. This document is used to assist JWA/Facilities management determine that the additional work is appropriate and the negotiated cost is reasonable. If the change order is less than \$5,000, JWA/Facility management approves the change order. Change orders over \$5,000 require review and approval from the Change Order Review Board, which consists of the Deputy Airport Director/Facilities, Manager of Airport Development, Airport Engineer and the Project Manager. Formal approval is required prior to starting the work.

Observations

We noted the change order process is addressed in written policy and procedures, and the steps and responsibilities to analyze and approve change orders were adequately defined. Based on our review of the procedures and selected contracts, we noted the following:

- A change order totaling **\$21,530** for the **Flush Mount Fire Hydrant** project was approved by JWA management but it was not approved by the Change Order Review Board as required by the written procedures.
- A change order totaling **\$12,171** for the **Refurbish Terminal Restrooms** project contained a mathematical error resulting in an overstatement of **\$198**. The error was subsequently corrected by JWA/Accounting; however, such errors and discrepancies should be identified and corrected earlier in the review process.
- *Change Order Logs* are in different formats than shown in written procedures.
- JWA procedures state that *Change Order Logs* should have documentation indicating whether or not the change is a result of an architect/engineer error or omission. The purpose of this procedure is to assist JWA in evaluating the work of the architect/engineering firm providing the design services. We noted there was no such documentation in the change order logs for **Flush Mount Fire Hydrant** and **Refurbish Terminal Restrooms**.
- Written procedures require that formal approval is obtained prior to starting work; however, we were informed that due to time constraints, change orders can be formally approved after the work has started, or even after project completion. With the approval of the Manager of Airport Development, a Project Manager has the authority to verbally approve a change order. We did not see this practice reflected in JWA written procedures. Also, we did not note any evidence that the Manager of Airport Development approved the change orders for the **Flush Mount Fire Hydrant** and **Refurbish Terminal Restrooms** projects.

Recommendations

Based on our observations, we recommend the following:

14. JWA ensure all change order requests are reviewed for accuracy and all requests exceeding \$5,000 are reviewed and approved by the Change Order Review Board.



15. JWA remind Project Managers to use standardized *Change Order Logs* for all public works projects. This form should indicate whether or not the change order is a result of an architect engineer error or omission as required in written procedures.
16. JWA establish policy to address the circumstances that the contractor is authorized to perform work prior to written management approval. This policy should also define the levels of authority needed to approve change orders in these instances.

JWA Management Responses:

14. Concur. Current procedures require that all change orders be reviewed by the Manager of Airport Development for accuracy, appropriateness, and legality. The Deputy Airport Director of Facilities will ensure that reviewed change orders are approved at the appropriate level. These reviews will be documented on appropriate forms. All change orders over \$5,000 are reviewed by the Change Order Review Board staffed by the Manager of Airport Development; Supervisor, Airport Engineering; and the Assistant Deputy Airport Director, Facilities.
15. Concur. Training was conducted at a monthly project management meeting wherein procedures for Project Managers were reviewed including usage of the Change Order Logs. There is now one version of the Change Order Log and it has been integrated into the Unifier system. The log also includes a provision to indicate if the change order was a result of an architect engineer error or omission.
16. Concur. In general, contractors can be authorized to perform work prior to completion of a formal change order only under exigent circumstances and only after receiving the Project Manager's approval. Examples of exigent circumstances include, but are not limited to, a change required in (1) an emergency situation to ensure the preservation of life, health, or property or (2) unforeseen circumstances that develop where the costs of waiting for formal approval exceed the costs of acting immediately. Going forward, this approval will be documented on a Field Order that will be signed by the Project Manager. Complete change order documentation will subsequently be completed in accordance with change order procedures.

IV. Pay Requests

We reviewed JWA's process of reviewing and approving contractor pay requests, including how JWA ensures contractors are billing for actual work accomplished, how well the steps and responsibilities of reviewing and approving a pay request are defined in policies and procedures.

Pay requests are claims/invoices that contractors submit for work completed during a billing period, usually monthly. The *Contractors Progress Payment Request* (Pay Request) form requires the contractor to show a breakdown of work performed for each principal category or line item agreed to in the *Schedule of Values* (for Lump Sum Contract) or contract (for Unit Price Contract). A Project Manager reviews the claim and supporting documents, and/or inquires with the Field Inspector to ensure the contractor is billing for actual work performed or material received. Any discrepancies, including disagreements on the percentage of completion, require the contractor to correct the Pay Request and re-submit the request. JWA/Facilities management reviews and approves Pay Requests. JWA/Accounting reviews claims for accuracy and processes the payments.



Observations

Pay request processes have been established in JWA written policy and procedures. The steps and responsibilities of reviewing and approving pay requests are generally defined in the procedures. Based on our review of the procedures and selected contracts, we noted the following:

- For the **Refurbish Terminal Restrooms** project, we noted a payment on a claim for **\$44,629** that contained a line item amount of **\$1,095** where the claim showed 0% work completed. This was cited as an oversight by JWA. Because payments should not be made for 0% completed work, it is important to detect such errors in the review and approval process.
- Responsibility for ensuring mathematical accuracy of financial information included in payment requests is not clearly defined between JWA/Accounting and Facilities. We noted **four** instances where the “Amount Earned to Date” on the payment requests were inaccurately calculated based on actual percentage of work completed.
- The written procedures for *Progress Payments* state that during the last week of the month, the contractor’s representative and Project Manager will meet to determine the percentage of work projected to be finished for the month. We did not note any evidence that these meetings were conducted, and were told this process may not be practical to follow. In one instance, we noted the percentage of work completed was evaluated after JWA received the pay request, and resulted in having the contractor to re-submit the payment request.

Recommendations

Based on our observations, we recommend the following:

17. JWA define responsibilities for reviewing the accuracy of payment requests, and ensure those individuals do a detailed review of all elements and amounts on the requests.
18. JWA should evaluate its procedure for *Progress Payments* and revise the procedure, if needed to reflect current practices and management’s expectations regarding meetings with contractors for discussions of percentage of work completion.

JWA Management Responses:

17. Concur. This was an isolated incident as further research revealed work was actually completed for the line item identified in the audit, thus entitling the contractor to this payment; however, detail figures were not correctly carried forward from supporting documentation to the payment request (which showed 0% completed). Procedures have been updated and now identify the Project Manager as responsible for ensuring the accuracy of payment requests. Each payment request will be reviewed by the recently created Project Management Control Analyst position for mathematical accuracy and engineering will provide an independent review of quantities listed. The Manager of Airport Development will provide supervisory review to ensure these reviews have been conducted.
18. Concur. Facilities management reviewed the procedures for Progress Payments and is satisfied that it adequately reflects current practices.



Delivery Order Contracts

A Delivery Order contract contains several line item projects/tasks. Examples of such tasks include projects for pavement repairs, utilities and grounds improvement, and maintenance. As of October 2005, no job on the existing Delivery Order contract has been issued and authorized. Therefore, no expenses had been incurred on this contract.

In April 2005, JWA revised its written procedures for administering Delivery Order contracts, but the procedures are in **draft form** pending finalization and management approval. Because no jobs had started under the existing contract, our review was based solely on the draft written procedures and inquiry with JWA personnel. We defined four major process components: Plans and Specifications Development, Bidding, Evaluating and Awarding of Contracts, Job Administration/Monitoring and Pay Requests. Each is described below along with our observations where we discuss our recommendations for enhancing controls and processes.

I. Plans and Specifications Development

We inquired of the process for developing plans and specifications for contracts, how well the roles and responsibilities of the staff and management are defined in these areas, and how effectively the processes are communicated to staff.

Plans and specifications are engineering drawings, technical specifications, tests and set criteria for the contractor and subcontractors to follow during construction. The development of plans and specifications is significant as it identifies the basic scope and needs of the project. The development of a Delivery Order contract also includes identifying the possible tasks/line items, and the estimated quantities needed to enable contractors to submit competitive bid proposals. Because the value of a Delivery Order contract can go up to \$1,000,000, plans and specifications are submitted to the Board of Supervisors for approval.

Observations

We were informed written procedures for the development of plans and specifications for Delivery Order contracts have not yet been established. JWA is exploring methods to review and determine the possible tasks and estimated quantities to be included in the bid documents for each contract period. We were informed that JWA is reviewing its current practices and will incorporate them into detailed written procedures.

Recommendation

19. Upon completing their review, JWA should establish written procedures for developing plans and specifications for Delivery Order contracts. Procedures should define responsibilities for developing, reviewing and approving plans and specifications.

JWA Management Response:

19. Concur. JWA has suspended the letting of any additional Delivery Order contracts pending the rewriting of its Delivery Order contract procedures. Procedural revisions will address defining responsibilities for developing, reviewing and approving plans and specifications for Delivery Order contracts. The planned completion date for these procedures is November 2006.



II. Bidding, Evaluating and Awarding of Contracts

We inquired how JWA evaluates contractor bid proposals, selects a qualified contractor, awards a contract, how well the steps are defined in policies and procedures, and how effectively the processes are communicated to staff.

The total value of a Delivery Order contract ranges from fifty thousand dollars (\$50,000) to one million dollars (\$1,000,000). *California Public Contract Code Section 22032(c)* requires formal bidding procedures for contracts over \$125,000. When submitting a bid, contractors propose a unit price for each task/line item on the contract, and the total bid amount is calculated based on the proposed unit prices and the estimated quantities of each task. JWA may reject all bids if they suspect a bid is submitted unfairly.

Observations

We were informed that JWA does not have a procedure for evaluating contractor proposals for Delivery Order contracts. According to JWA management, the written procedures for bidding and awarding of construction contracts applies to all public works contracts, including Delivery Order contracts. The criterion for awarding a Delivery Order contract is that it be made to the **lowest responsive bidder**. Because the actual scope of work and quantities remain unknown until a Job Order is issued, JWA/Facilities does not evaluate the proposal based on each line item or unit price. Instead, it reviews bid proposals for completeness (e.g., adequate bid bond, contractor license, overall accuracy of the bid, and the total bid amount).

Contractors bid annually on Delivery Order contracts. Because these contracts contain the same possible tasks and estimated units/quantities of materials, there is a chance the same contractor may continuously win the contract; especially if the contractor has been previously awarded the contract. The *Construction Audit Guide*, published by the Institute of Internal Auditors, suggests that if contractors have worked before in an organization, careful bid analysis must be performed.

Recommendation

20. JWA establish procedures for evaluating contractor bid proposals for Delivery Order contracts, including an analysis of bid proposals submitted by contractors who have been previously awarded similar contracts by JWA.

JWA Management Response:

20. Concur. Delivery Order contract procedures are currently being rewritten. Procedural revisions will address evaluating contractor bid proposals for Delivery Order contracts, including handling of bid proposals submitted by contractors who have been previously awarded similar contracts by JWA. The planned completion date for these procedures is November 2006.

III. Job Administration/Monitoring

We inquired how JWA authorizes a job order, monitors job status, analyzes job modifications and accepts the job at completion; how JWA staff performs inspections and verifications of work performed by contractors, and the adequacy of documentation maintained during construction. We assessed the procedures for job administration/monitoring in the areas of: Project Initiation, Field Inspections, Change Orders, and Project Completion.



Project Initiation

After the contract is awarded and a task is initiated, a scope of work for a particular task is developed in a *Job Order*. It is initiated when JWA/Airport Engineering Division receives a maintenance request from within or from other airport divisions, and issues a request to a Project Manager. The Project Manager prepares a standard *Job Order* form officially requesting the job. Facilities Management reviews the *Job Order* for appropriateness. If the cost of the job order is greater than five thousand dollars (\$5,000), approval from the Change Order Review Board is required.

Observations

JWA has established policies and procedures for requesting and approving job orders. Our review of job orders noted that certain information is not documented on the job orders, such as who requested the work, the location and the severity of the work, who verified the request, and any special engineering requirements needed. Because of the importance of developing the job order, this information should be included on each request to establish accountability, to prioritize and verify work requested and to list out all necessary submittals to meet engineer's requirements. In addition, because maintenance requests come from various JWA divisions, there should be a review and verification that the scope of the requested job order is covered by the Delivery Order contract; if not, a new contract may be required.

Recommendation

21. JWA revise its current Job Order form to include additional information on the task, such as verification of the task being part of the Delivery Order contract, who requested the work, the location and severity of the work request, and who verified the information including quantities and any special engineering requirements or submittals.

JWA Management Response:

21. Concur. We have implemented procedures for the remaining Delivery Order contract that require additional information for all Job Orders in accordance with Internal Audit's recommendation.

Field Inspections

The assigned Project Manager is responsible for administering and monitoring the project. A Field Inspector, who reports directly to a Project Manager, performs daily field inspections to monitor construction progress to ensure contractors are conforming to plans and specifications throughout the project. A *Daily Inspection Report* is a tool that Field Inspectors use to document site conditions, project progress and any problems encountered.

Observations

JWA has established policies and procedures to monitor on-going job projects. We noted where the procedures can be enhanced to ensure contractors are conforming to plans and specifications:

- Supervisory review of the *Daily Inspection Reports* and other supporting documents (e.g., *Special Material Testing Reports*) should be required and documented on the reports. Typically, the Project Manager should perform and document this review.
- The written procedures describing the duties of Field Inspectors are not clearly defined (e.g., responsibility to report non-compliance issues). Clearly defined duties and responsibilities will help ensure that inspections are performed consistently and are adequately documented in the *Daily Inspection Reports*.



Recommendations

Based on our observations, we recommend the following:

22. JWA ensure Project Managers perform a documented review of *Daily Inspection Reports*.
23. JWA define the duties of Field Inspectors in its written procedures to ensure inspections are consistently performed and documented in the *Daily Inspection Reports*.

JWA Management Responses:

22. Concur. The Daily Inspection Report procedures have been modified to include a requirement for the Project Manager to review, comment on when appropriate, and sign each report. All reports which include notices of non-compliance are reviewed by the Manager of Airport Development.
23. Concur. These duties and responsibilities are in written procedures. Additionally, training was conducted at a monthly project management meeting wherein procedures for Field Inspectors were reviewed, including ensuring inspections are consistently performed and documented in the *Daily Inspection Reports*.

Change Orders

A change order is a supplemental agreement of an original job order/contract. Either JWA or the contractor may propose a change order due to unforeseeable conditions during construction. The unit price of the change will be negotiated if the actual quantities performed are substantially higher than estimated in the contract agreement. If a change order requires additional work, which is not covered by the original contract line item, the Project Manager prepares a *Memorandum of Negotiation* (also known as Change Order Packet), which includes the description and reasons of the change, and an independent cost estimate to assist JWA/Facilities management in determining that the additional work is appropriate and the negotiated cost is reasonable. If the cost of a change order exceeds \$5,000, it requires Change Order Review Board review and approval.

Observations

We noted the change order process is addressed in written policies and procedures. The procedures adequately define the steps and responsibilities to analyze and approve change orders. The procedures require formal approval prior to beginning a project; however, we were informed that due to time constraints, change orders can be formally approved after the work has begun or even after it is completed. With the approval of the Manager of Airport Development, a Project Manager has the authority to verbally approve a change order. This practice is not addressed in the written procedures.

Recommendation

24. JWA update written procedures for change orders to address circumstances when contractors are authorized to perform work prior to JWA management written approval of the change order. The procedures should define the levels of authority required to approve change orders in these instances.

JWA Management Response:

24. Concur. In general, contractors can be authorized to perform work prior to completion of a formal change order only under exigent circumstances and only after receiving the Project Manager's approval. Examples of exigent circumstances include, but are not limited to, a



change required in (1) an emergency situation to ensure the preservation of life, health, or property or (2) unforeseen circumstances that develop where the costs of waiting for formal approval exceed the costs of acting immediately. Going forward, this approval will be documented on a Field Order that will be signed by the Project Manager. Complete change order documentation will subsequently be completed in accordance with change order procedures.

Project Completion

At the completion of work, JWA performs a job walk to determine if construction work conforms to plans and specifications for each job order. During the job walk, a Project Manager or Field Inspector prepares a punch list of observed deficiencies for the contractor to correct. Once the deficiencies are corrected, and with concurrence of JWA/Facilities and the user (JWA/Maintenance Unit) that the project is satisfactorily completed, a final *Engineer's Report* is prepared to record a final accounting of the quantity of the job, and to close the job order. JWA prepares and issues a *Notice of Completion*, which is a legal notice of project acceptance, at the end of the contract period to officially accept all jobs under the same contract.

Observations

During our review and inquiry, we noted monitoring the completion of construction work is adequately addressed in the JWA written policy and procedures. **We have no recommendations for this area.**

IV. Pay Requests

We inquired into JWA's process for reviewing and approving contractor pay requests, including how JWA ensures contractors are billing for actual work accomplished.

Pay requests are claims that contractors submit for work completed during the month. Contractors submit pay requests based on work accomplished and the corresponding unit price stated in the proposal. Project Managers are responsible for ensuring pay requests are adequately supported and quantities of the work have been verified prior to submitting it for management approval. JWA/Facilities is considering a requirement for JWA/Airport Engineering Division to independently verify the completed construction work and quantities claimed for the period billed. JWA/Accounting processes the approved requests.

Observations

JWA has established policies and procedures for processing pay requests for Delivery Order contracts. Our review of the procedures and selected contracts noted the following:

- Procedures to release retention funds are not adequately addressed. Since there may be multiple job orders during the contract term and only one *Notice of Completion* issued at the end of the contract term, procedures should be established to determine if retention payments should be released for each completed job or at the end of the contract term, and any conclusions regarding retention decisions, be clearly communicated to the contractor.
- Procedures to ensure the accuracy of the pay requests should be enhanced as there are different unit prices and billable units for each project included in Delivery Order contracts. Payment processing roles should be clearly defined as to who has the responsibility for agreeing the pay request to the billing rates stated in the contract.



Recommendations

Based on our observations, we recommend the following:

25. JWA establish a written policy on the release of retention payments for jobs performed under Delivery Order contracts. The procedure should indicate when retention funds are to be released and be clearly communicated to the contractor.
26. JWA define responsibilities to ensure pay requests are mathematically accurate and the unit price claimed agrees with the contract proposal or job order amendments.

JWA Management Responses:

25. Concur. Delivery Order contract procedures are currently being rewritten. Procedural revisions will include when retention funds are to be released. The planned completion date for these procedures is November 2006.
26. Concur. Procedures have been updated and now identify the Project Manager as responsible for ensuring the accuracy of payment requests. Each payment request will be reviewed by the recently created Project Management Control Analyst position for mathematical accuracy and engineering will provide an independent review of quantities listed. The Manager of Airport Development will provide supervisory review to ensure these reviews have been conducted.



ATTACHMENT A: Report Item Classifications

For purposes of reporting our audit observations and recommendations, we will classify audit report items into three distinct categories:

- **Material Weaknesses:**

Audit findings or a combination of Significant Issues that can result in financial liability and exposure to a department/agency and to the County as a whole. Management is expected to address “Material Weaknesses” brought to their attention immediately.

- **Significant Issues:**

Audit findings or a combination of Control Findings that represent a significant deficiency in the design or operation of processes or internal controls. Significant Issues do not present a material exposure throughout the County. They generally will require prompt corrective actions.

- **Control Findings:**

Audit findings that require management’s corrective action to implement or enhance processes and internal controls. Control Findings are expected to be addressed within our follow-up process of six months, but no later than twelve months.



ATTACHMENT B: Process Maturity Model

We utilized a Process Maturity Model (PMM) to evaluate where the current process is in its maturity life cycle in order to establish priorities for process enhancements required to attain higher levels of business process maturity. The Process Maturity Model is based on the Capability Maturity Model (CMM) developed by the Carnegie Mellon University's Software Engineering Institute.

Like CMM and its focus on technology development, the Process Maturity Model (PMM) defines stages of business process development. These business processes typically progress through five distinct stages of maturity over the course of their life cycle. Some business processes may even regress from higher levels of maturity and slide downward due to management inattention, lack of awareness, or inadequate resources. Our PMM measures the five stages of business process maturity. The first stage describes a process in its infancy and the fifth and final stage describes a process that is fully matured, robust, responsive, flexible, adaptable, and collaborative. The Process Maturity Model identifies and defines the following five stages of process maturity.

Stage 1: Initializing

A Stage 1 process has little, if any, defined or documented standards, criteria or guidelines. Standards that are established are typically vague and general in nature and allow considerable latitude in interpretation. Performance measures are not used nor is the process tracked, monitored or actively managed. Consequently the outcomes tend to be viewed by users as ad hoc, sporadic and subjective in nature with user frustration usually running high.

Stage 2: Repeatable

A Stage 2 process has standards and criteria that are partially defined, documented and communicated. Standards have some degree of specificity and enables users to predict somewhat the outcomes. Routines exist more than defined processes. The absence of clear objective criteria still contributes to some users' confusion, frustration, and dissatisfaction.

Stage 3: Stabilized

A Stage 3 process has objective standards and criteria that are becoming well defined, documented and communicated. Management is aware of performance measures and uses them to encourage consistent, predictable, and equitable outcomes. Users are adhering to guidance and their perceptions of the process tend to be favorable.

Stage 4: Actively Managed

A Stage 4 process has well defined criteria and standards that are clearly documented, adhered to and communicated. The process has well defined and comprehensive performance measures to monitor and ensure consistent and predictable results. User satisfaction is generally high.

Stage 5: Strategically Managed

A Stage 5 process has all the components of a Stage 4 process. The key difference is the built-in capacity to improve the services and results on an on-going basis. Process performance is regularly and routinely analyzed to identify bottlenecks and defects and to determine their root causes. The regular use of user surveys is designed into the process to ensure the results support the entities strategic plans. Changes in process are well thought out and discussed with users prior to implementation. Steering or advisory committees provide on-going oversight that balance competing and even conflicting objectives. Processes are transparent, well defined, supported, and where appropriate formal and objective "appeal" processes exist and provide balanced and timely resolution of conflicts.





County of Orange

MEMO

June 28, 2006

TO: Dr. Peter Hughes, Director
Internal Audit Department

FROM: Alan L. Murphy, Airport Director
John Wayne Airport

SUBJECT: Response to the Internal Audit Department's Report on Audit of John Wayne
Airport Public Works Contract Administration, No. 2567

I am pleased to provide John Wayne Airport's response to the Public Works Contract Administration audit recently completed by the Internal Audit Department. Our response has been reviewed and approved by the County Executive Office on June 28, 2006.

While no material weaknesses or significant issues were noted, we are actively taking steps to implement the Internal Audit Department's recommendations.

On behalf of the Airport, I would like to express our appreciation for the continued thoroughness and professionalism demonstrated by the Internal Audit Department in conducting this audit.

cc: Loan Leblow, Assistant Airport Director
Larry Serafini, Deputy Airport Director of Facilities
Scott Suzuki, Quality Assurance & Compliance Manager

RECEIVED
INTERNAL AUDIT DEPARTMENT
2006 JUN 29 AM 11:00



JOHN WAYNE AIRPORT
Response to the Internal Audit Department's Report on
Audit of John Wayne Airport Public Works Contract Administration, No. 2567

Recommendation No. 1:

JWA make necessary revisions to their current procedures manual, such as references to corresponding Government Codes, and establish a process to ensure the procedural manual is periodically reviewed and updated to reflect current regulations and procedures.

JWA Management Response:

Concur. The Airport Development Section's policies and procedures manual has been reviewed and is up to date. A procedure has been established wherein the manual will be reviewed and updated periodically to reflect current regulations and procedures. Updates are submitted from the Senior Civil Engineer or Manager of Airport Development and approved by the Deputy Airport Director of Facilities.

Recommendation No. 2:

JWA establish criteria for the contractor pre-qualification process and maintain documentation in project files to indicate whether or not the process was used.

JWA Management Response:

Concur. Criteria to determine whether a project should use the pre-qualification process have been established. Pre-qualification is required for all Public Works Contracts \$1,000,000 and over or with special experience requirements.

All future project files will contain appropriate documentation.

Recommendation No. 3:

JWA ensure that verification of contractor information is documented in writing. Supervisory reviews of the verifications should be performed to ensure there is adequate and consistent documentation. JWA should consider validating contractor information during the pre-qualification process, which would provide them with a pool of pre-qualified contractors.

JWA Management Response:

Concur. Current policy requires verification of information provided by all contractors who have submitted pre-qualification documents when the contract is \$1,000,000 and over or has special experience requirements. Contractors passing this stage of the process create a "pool" from which JWA can select the responsible low bidder. When pre-qualification is not required, contractor information is verified for only the apparent lowest responsible bidder.



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The Project Manager initially verifies information provided by contractors for the pre-qualification process. A procedure has been implemented wherein the Manager of Airport Development will provide supervisory review of the pre-qualification process to ensure contractor information verification is documented when required.

Recommendation No. 4:

JWA establish guidelines to assist Project Managers with evaluating unit price contract bids, to analyze all major line item variances, to document the outcomes and conclusions, and to review the Bid Recap Sheet for accuracy prior to submission to the Board of Supervisors.

JWA Management Response:

Concur. Procedures for evaluating unit price contract bids have been updated. Project Managers will check proposals submitted by bidding contractors to ensure they are in proper form including completion of required fields, confirmation that amounts agree with those in writing, and analysis of any major line item variances. Any discrepancies such as omissions or alterations will be noted and the Project Manager's review and conclusion will be documented on the Bidder Evaluation form.

A Bid Recap Sheet will be prepared by the Project Manager to accompany the Award of Contract Agenda Staff Report (ASR). Accuracy of the Bid Recap Sheet will be verified by the Manager of Airport Development prior to submission to the Board of Supervisors for selection and award.

Recommendation No. 5:

JWA/Facilities and Information Technology Divisions work jointly to address the discrepancies in amounts between the project financial reports.

JWA Management Response:

Concur. This recommendation is the result of a formula error in the Access database that was used to track project status. This system will be replaced by the Skire Company's Unifier, a new dedicated SQL (Structured Query Language) based project management system specifically designed for facilities related project management. Unifier is being installed by the SAIP (Settlement Amendment Implementation Plan) consultant Faithful & Gould. All workflows and configuration settings are being programmed at this time. Initial functionality of the system will be available approximately by the end of June 2006 with additional features to be released in the future. Unifier will completely replace the old Access system by approximately October 2006. In the interim, discrepancies between the project financial reports have been resolved and the formula error has been corrected.



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Recommendation No. 6:

JWA assign responsibility to reconcile project financial reports on a regular basis. Any reconciling items should be documented in writing along with their resolution.

JWA Management Response:

Concur. The responsibility to reconcile project financial reports on a regular basis has been assigned to the recently created Project Management Control Analyst position. Reconciliations will be performed quarterly and reconciling items will be handled in accordance with Internal Audit's recommendation.

JWA is actively recruiting for the Project Management Control Analyst position and plans to have it staffed by the end of July 2006. In the interim, the Manager of Airport Development will be temporarily responsible for reconciling project financial reports.

Recommendation No. 7:

JWA establish a process to ensure all submittals are agreed to project plans and specifications, and summarized for purposes of monitoring compliance. This could be accomplished through performing documented supervisory reviews.

JWA Management Response:

Concur. Training was conducted at a monthly project management meeting wherein procedures for handling submittals were reviewed. The Project Manager is responsible for ensuring all submittals are agreed to project plans and specifications and the Manager of Airport Development is responsible for providing supervisory oversight to ensure this is performed.

The upcoming Unifier system will require and document correct workflow. The system's submittal process will help ensure all project related submittals are agreed to project plans and specifications.

Recommendation No. 8:

JWA ensure the procedures for Field Inspections are periodically reviewed and updated to include current procedures and sample report forms, such as the *Daily Inspection Report*.

JWA Management Response:

Concur. The procedures for Field Inspections (developed by the Airport Engineering group) are reviewed as part of the quality assurance plan for each project. All project specific and special inspections are identified and programmed for in this plan. The inspectors also verify the adequacy of the existing procedures and report forms (e.g., current Daily Inspection Report and Construction Field Report), execute any needed general changes, and adopt any needed project specific requirements into the reporting system for that project.



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Recommendation No. 9:

JWA remind Field Inspectors to document in the *Daily Inspection Reports* any issues of non-compliance along with the resolution of the issues, and to sign and date all reports.

JWA Management Response:

Concur. Training was conducted at a monthly project management meeting wherein procedures for Field Inspectors were reviewed, including documenting issues of non-compliance and their respective resolution.

The upcoming Unifier system will automatically stamp the Daily Inspection Report with the Field Inspector's identity and the date completed.

Recommendation No. 10:

JWA ensure Project Managers review *Daily Inspection Reports* and *Special Test Reports* and document their review by signing and dating the reports.

JWA Management Response:

Concur. The Daily Inspection Report and Special Test Report procedures have been modified to include a requirement for the Project Manager to review, comment on when appropriate, and sign/date each report. All reports which include notices of non-compliance are reviewed by the Manager of Airport Development. These documents will flow through, be stored in, and tracked in Document Locator, a SQL database designed for this purpose.

Recommendation No. 11:

JWA document in project files any instances where the quality or testing methods of materials differ from requirements in plans and specifications. Documentation should include authorization of the alternate option, explanation of the issue, and the outcome.

JWA Management Response:

Concur. Training was conducted at a monthly project management meeting wherein procedures for handling variances of quality or testing methods were reviewed. The Project Manager is responsible for ensuring documentation is maintained for instances where the quality or testing methods of materials differ from requirements in plans and specifications and the Manager of Airport Development is responsible for providing supervisory oversight to ensure this is performed.

Recommendation No. 12:

JWA ensure documentation is maintained showing that job walks are performed.



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JWA Management Response:

Concur. The Project Management Control Analyst will ensure job walk documentation is maintained for every project prior to the issuance of a Notice of Completion.

JWA is actively recruiting for this position and plans to have it staffed by the end of July 2006. In the interim, the Manager of Airport Development will be responsible for ensuring job walk documentation is properly maintained.

Recommendation No. 13:

JWA ensure documentation is maintained in project files showing all changes in project scope along with the approval by JWA management.

JWA Management Response:

Concur. Training was conducted at a monthly project management meeting wherein procedures for documentation requirements for handling changes in project scope were reviewed. The Project Manager is responsible for ensuring documentation is maintained showing all changes in project scope and the Manager of Airport Development is responsible for providing supervisory oversight to ensure this is performed.

Recommendation No. 14:

JWA ensure all change order requests are reviewed for accuracy and all requests exceeding \$5,000 are reviewed and approved by the Change Order Review Board.

JWA Management Response:

Concur. Current procedures require that all change orders be reviewed by the Manager of Airport Development for accuracy, appropriateness, and legality. The Deputy Airport Director of Facilities will ensure that reviewed change orders are approved at the appropriate level. These reviews will be documented on appropriate forms.

All change orders over \$5,000 are reviewed by the Change Order Review Board staffed by the Manager of Airport Development; Supervisor, Airport Engineering; and the Assistant Deputy Airport Director, Facilities.

Recommendation No. 15:

JWA remind Project Managers to use standardized *Change Order Logs* for all public works projects. This form should indicate whether or not the change order is a result of an architect engineer error or omission as required in written procedures.



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JWA Management Response:

Concur. Training was conducted at a monthly project management meeting wherein procedures for Project Managers were reviewed including usage of the Change Order Logs. There is now one version of the Change Order Log and it has been integrated into the Unifier system. The log also includes a provision to indicate if the change order was a result of an architect engineer error or omission.

Recommendation No. 16:

JWA establish policy to address the circumstances that the contractor is authorized to perform work prior to written management approval. This policy should also define the levels of authority needed to approve change orders in these instances.

JWA Management Response:

Concur. In general, contractors can be authorized to perform work prior to completion of a formal change order only under exigent circumstances and only after receiving the Project Manager's approval. Examples of exigent circumstances include, but are not limited to, a change required in (1) an emergency situation to ensure the preservation of life, health, or property or (2) unforeseen circumstances that develop where the costs of waiting for formal approval exceed the costs of acting immediately. Going forward, this approval will be documented on a Field Order that will be signed by the Project Manager. Complete change order documentation will subsequently be completed in accordance with change order procedures.

Recommendation No. 17:

JWA define responsibilities for reviewing the accuracy of payment requests, and ensure those individuals do a detailed review of all elements and amounts on the requests.

JWA Management Response:

Concur. This was an isolated incident as further research revealed work was actually completed for the line item identified in the audit, thus entitling the contractor to this payment; however, detail figures were not correctly carried forward from supporting documentation to the payment request (which showed 0% completed).

Procedures have been updated and now identify the Project Manager as responsible for ensuring the accuracy of payment requests. Each payment request will be reviewed by the recently created Project Management Control Analyst position for mathematical accuracy and engineering will provide an independent review of quantities listed. The Manager of Airport Development will provide supervisory review to ensure these reviews have been conducted.



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Recommendation No. 18:

JWA should evaluate its procedure for *Progress Payments* and revise the procedure, if needed to reflect current practices and management's expectations regarding meetings with contractors for discussions of percentage of work completion.

JWA Management Response:

Concur. Facilities management reviewed the procedures for Progress Payments and is satisfied that it adequately reflects current practices.

Recommendation No. 19:

Upon completing their review, JWA should establish written procedures for developing plans and specifications for Delivery Order contracts. Procedures should define responsibilities for developing, reviewing and approving plans and specifications.

JWA Management Response:

Concur. JWA has suspended the letting of any additional Delivery Order contracts pending the rewriting of its Delivery Order contract procedures. Procedural revisions will address defining responsibilities for developing, reviewing and approving plans and specifications for Delivery Order contracts. The planned completion date for these procedures is November 2006.

Recommendation No. 20:

JWA establish procedures for evaluating contractor bid proposals for Delivery Order contracts, including an analysis of bid proposals submitted by contractors who have been previously awarded similar contracts by JWA.

JWA Management Response:

Concur. Delivery Order contract procedures are currently being rewritten. Procedural revisions will address evaluating contractor bid proposals for Delivery Order contracts, including handling of bid proposals submitted by contractors who have been previously awarded similar contracts by JWA. The planned completion date for these procedures is November 2006.

Recommendation No. 21:

JWA revise its current Job Order form to include additional information on the task, such as verification of the task being part of the Delivery Order contract, who requested the work, the location and severity of the work request, and who verified the information including quantities and any special engineering requirements or submittals.

JWA Management Response:

Concur. We have implemented procedures for the remaining Delivery Order contract that require additional information for all Job Orders in accordance with Internal Audit's recommendation.



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Recommendation No. 22:

JWA ensure Project Managers perform a documented review of *Daily Inspection Reports*.

JWA Management Response:

Concur. The Daily Inspection Report procedures have been modified to include a requirement for the Project Manager to review, comment on when appropriate, and sign each report. All reports which include notices of non-compliance are reviewed by the Manager of Airport Development.

Recommendation No. 23:

JWA define the duties of Field Inspectors in its written procedures to ensure inspections are consistently performed and documented in the *Daily Inspection Reports*.

JWA Management Response:

Concur. These duties and responsibilities are in written procedures. Additionally, training was conducted at a monthly project management meeting wherein procedures for Field Inspectors were reviewed, including ensuring inspections are consistently performed and documented in the *Daily Inspection Reports*.

Recommendation No. 24:

JWA update written procedures for change orders to address circumstances when contractors are authorized to perform work prior to JWA management written approval of the change order. The procedures should define the levels of authority required to approve change orders in these instances.

JWA Management Response:

Concur. In general, contractors can be authorized to perform work prior to completion of a formal change order only under exigent circumstances and only after receiving the Project Manager's approval. Examples of exigent circumstances include, but are not limited to, a change required in (1) an emergency situation to ensure the preservation of life, health, or property or (2) unforeseen circumstances that develop where the costs of waiting for formal approval exceed the costs of acting immediately. Going forward, this approval will be documented on a Field Order that will be signed by the Project Manager. Complete change order documentation will subsequently be completed in accordance with change order procedures.



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Recommendation No. 25:

JWA establish a written policy on the release of retention payments for jobs performed under Delivery Order contracts. The procedure should indicate when retention funds are to be released and be clearly communicated to the contractor.

JWA Management Response:

Concur. Delivery Order contract procedures are currently being rewritten. Procedural revisions will include when retention funds are to be released. The planned completion date for these procedures is November 2006.

Recommendation No. 26:

JWA define responsibilities to ensure pay requests are mathematically accurate and the unit price claimed agrees with the contract proposal or job order amendments.

JWA Management Response:

Concur. Procedures have been updated and now identify the Project Manager as responsible for ensuring the accuracy of payment requests. Each payment request will be reviewed by the recently created Project Management Control Analyst position for mathematical accuracy and engineering will provide an independent review of quantities listed. The Manager of Airport Development will provide supervisory review to ensure these reviews have been conducted.

