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AUDITOR-CONTROLLER

I N T E R N A L A U D I T

**FIRST AND FINAL  
CLOSE-OUT FOLLOW-UP  
INFORMATION TECHNOLOGY  
AUDIT:**

**COUNTY PROCUREMENT  
OFFICE/OC EXPEDITER  
SYSTEM**

**As of September 7, 2016**



**Audit Number 1455-F1 (Reference 1541)  
Report Date: November 10, 2016**



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**Eric H. Woolery, CPA**  
**Orange County Auditor-Controller**

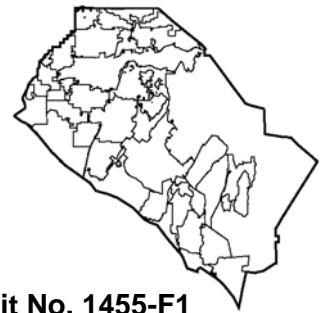
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**ERIC H. WOOLERY, CPA**  
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**Transmittal Letter**

**Audit No. 1455-F1**  
**(Reference 1541)**

**November 10, 2016**

**TO:** Rob Richardson, County Procurement Officer  
County Executive Office/County Procurement Office

**SUBJECT:** First and Final Close-Out Follow-Up Information Technology Audit:  
County Procurement Office/OC Expediter System, Original Audit No. 1455

We have completed our First Follow-Up Information Technology Audit of the County Procurement Office/OC Expediter Project as of September 7, 2016. Our final report is attached for your review.

I submit an **Audit Status Report** quarterly to the Audit Oversight Committee (AOC) and a monthly report to the Board of Supervisors (BOS) where I detail any critical 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 assessment will be included in a future status report to the AOC and BOS.

A handwritten signature in blue ink, appearing to read "Toni Smart".

Toni Smart, CPA, Director  
Auditor-Controller Internal Audit Division

**Attachments**

Other recipients of this report:  
Members, Board of Supervisors  
Members, Audit Oversight Committee  
Eric H. Woolery, Auditor-Controller  
Frank Kim, County Executive Officer  
Michelle Aguirre, Chief Financial Officer  
Charles Eckstrom, Interim Chief Information Officer  
Quazi Hashmi, Program Manager, CEO/OCIT  
Foreperson, Grand Jury  
Robin Stieler, Clerk of the Board of Supervisors  
Macias Gini & O'Connell LLP, County External Auditor



# Table of Contents

---

*First and Final Close-Out Follow-Up Information Technology Audit:  
County Procurement Office/OC Expediter System  
Audit No. 1455-F1 (Reference 1541)*

As of September 7, 2016

<b>Transmittal Letter</b>	<b>i</b>
<b>Internal Auditor's Report</b>	
<b>SCOPE</b>	<b>1</b>
<b>BACKGROUND</b>	<b>1</b>
<b>RESULTS</b>	<b>1</b>

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# Internal Auditor's Report

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**Audit No. 1455-F1  
(Reference 1541)**

**November 10, 2016**

**TO:** Rob Richardson, County Procurement Officer  
County Executive Office/County Procurement Office

**FROM:** Toni Smart, CPA, Director  
Auditor-Controller Internal Audit Division

**SUBJECT:** First and Final Close-Out Follow-Up Information Technology Audit:  
County Procurement Office/OC Expediter System, Original Audit No. 1455

## **SCOPE**

We have completed a First and Final Close-Out Follow-Up Audit of the OC Expediter System. Our audit was limited to reviewing actions taken as of September 7, 2016, to implement **thirteen (13) recommendations** from our original audit dated October 16, 2015.

## **BACKGROUND**

The County Procurement Office (CPO) is implementing OC Expediter, a routing based requisition software tool and invoice tracking system that provides information so departments can monitor remaining contract balances to avoid contract overruns. OC Expediter is utilized for requisitions of all purchases including petty cash, Cal-Card, and non-DPA contracts such as human services and public works. Our initial audit identified 13 findings as follows:

- **Two (2) Critical Control Observations** regarding (1) lack of adequate accountability for final approval and budget approval of requisitions and (2) final approval of a requisition is not required by the system.
- **Four (4) Significant Control Observations** regarding (1) lack of formal process for establishing users' access, including Department Head delegation of "Final Approval" authority, (2) CPO needs to provide corporate policy for OC Expediter usage, (3) audit trails for capturing changes to requisitions, and (4) need for a system threshold or limit when final costs exceed authorized amounts.
- **Seven (7) Control Observations** regarding the need to document procedures for the newly created data file upload reconciliation, data accuracy, restricting sensitive data, controlling IT staff access to the production environment, system governance, system documentation, and monitoring system performance during implementation.

## **RESULTS**

Our First Follow-Up Audit found that the CPO **implemented all thirteen (13) recommendations** from the original audit. As such, **this report represents the final close-out of the original audit.**

Based on our First Follow-Up Audit, the following is the implementation status of the 13 original recommendations:



# Internal Auditor's Report

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## **Finding No. 1 - Lack of Adequate Accountability for Final Approval and Budget Approval (Critical Control Observation)**

**Recommendation No. 1:** We recommend that the CPO create unique user roles for the final approval and budget approval permissions.

Current Status: **Implemented.** Our First Follow-Up Audit found that CPO created unique user security permissions/roles for "Final Approval" and "Budget Approver" which may be assigned to personnel with a direct business need upon appropriate management authorization. Because of the actions taken by CPO, we consider this recommendation implemented.

## **Finding No. 2 - Final Approval of the Requisition is Not Required by the System (Critical Control Observation)**

**Recommendation No. 2:** We recommend that the CPO implement a system rule in OC Expediter requiring the final approval to be the last step in the requisition workflow (prior to buyer assignment) or as a required step right before budget approval with the requisition data locked except for account coding entered by the budget approver.

Current Status: **Implemented.** Our First Follow-Up Audit found that "Final Approval" status is required for each requisition prior to processing; and in addition, locks the requisition data to prevent modifications by the user except for account coding that is entered by the Budget Approver. Because of the actions taken by CPO, we consider this recommendation implemented.

## **Finding No. 3 - Lack of Formal Process for Establishing Users' Access, Including Department Head Delegation of "Final Approval" Authority (Significant Control Observation)**

**Recommendation No. 3:** We recommend that the CPO establish written policies and procedures for granting user access to OC Expediter. This includes requirements for the formal delegation by Department Heads (or designee) of the approval authority ("Final Approver") for requisitions.

Once the above process is established, CPO should also go back and ensure the existing OC Expediter users (OCPW, OCCR, and OCW&R) have appropriate documentation in place for their user access roles granted.

Current Status: **Implemented.** Our First Follow-Up Audit found that CPO established a formal procedure of requesting and authorizing all OC Expediter application security roles to users with a direct business need including specific requirements for the formal delegation by Department Heads (or designee) of the approval authority ("Final Approver") for requisitions. Additionally, we tested a sample of new and existing application users for appropriate documentation for access roles granted and noted no exceptions. Because of the actions taken by CPO, we consider this recommendation implemented.



# Internal Auditor's Report

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## Finding No. 4 - CPO Needs to Provide Corporate Policy for OC Expediter Usage (Significant Control Observation)

**Recommendation No. 4:** We recommend that the CPO develop countywide policies regarding the use of OC Expediter including which requisitions should be processed in the system, key user roles and responsibilities, required training, and procurement knowledge expectations of the users, with an emphasis on the "final approver" of requisitions.

Current Status: **Implemented.** Our First Follow-Up Audit found that policy and procedures were appropriately established and documented for the utilization of OC Expediter (e.g., requisition fundamentals, types of valid requisitions, etc.), key user security roles assignment and responsibilities, required training, and emphasis on the "final approver" of requisitions. Because of the actions taken by CPO, we consider this recommendation implemented.

## Finding No. 5 - Audit Trails Do Not Capture Requisition Data Changes During the Review and Approval Process (Significant Control Observation)

**Recommendation No. 5:** We recommend that the CPO consider modifying the OC Expediter system to capture requisition data changes affecting Estimated Cost including user, date, time, and the data values before and after the change. However, this control will become less important should the system be modified to include a designated individual with "Final Approval" status and the requisition is locked (except for buyer data) once the final approval is made.

Current Status: **Implemented.** Our First Follow-Up Audit found that the system was appropriately configured to designate individuals with "Final Approver" role as well as lock critical areas of the requisition upon final approval to prevent unauthorized changes to the requisition. With the implementation of the "Final Approval" status feature, as well as locking the requisition upon final approval, we consider the initial recommendation of capturing requisition data changes affecting estimated cost including user, date, time, and the data values before and after the change less important. Because of the actions taken by CPO, we consider this recommendation implemented.

## Finding No. 6 - Data File Reconciliation Process (Control Observation)

**Recommendation No. 6:** We recommend that the CPO assign responsibility for the data file reconciliation and document the associated procedures in a system administration guide or user guide.

Current Status: **Implemented.** Our First Follow-Up Audit found that the data file reconciliation process has been appropriately established, documented, and responsibilities for the process is assigned to CEO/OCIT. We found that the data file reconciliation process is an automated reconciliation process designed to detect file data output variances. Further, we found that there have been no variances identified since the implementation of the reconciliation process. Because of the actions taken by CPO, we consider this recommendation implemented.



# Internal Auditor's Report

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## Finding No. 7 - System Limit or Threshold Needed When Final Cost of Procurement is Greater Than the Authorized Requisition Amount (Significant Control Observation)

**Recommendation No. 7:** We recommend that the CPO modify OC Expediter to prevent a final cost from being entered that is greater than a management pre-determined threshold. If the increase is above the pre-determined threshold, the requisition should be rerouted for final approval and budget approval.

Current Status: **Implemented.** Our First Follow-up Audit found that the system was configured to generate an error message if a final cost amount is entered into the system that was greater than the original requisition amount. CPO has opted for there to be no pre-determined threshold amount, thus any errors resulting from the aforementioned action will be locked for further review and return to the initiator. Because of the actions taken by CPO, we consider this recommendation implemented.

## Finding No. 8 - Temporary Inaccurate Balances Could Result from Invoices with Multiple DO's (Control Observation)

**Recommendation No. 8:** We recommend that the CPO modify OC Expediter system to accept multiple contract numbers e.g. delivery order for a single invoice.

Current Status: **Implemented.** Our First Follow-Up Audit found that the system was appropriately configured to accept multiple contracts per invoice. Because of the actions taken by CPO, we consider this recommendation implemented.

## Finding No. 9 - Lack of System Configuration or Written Policy for Restricting Sensitive Data (Control Observation)

**Recommendation No. 9:** We recommend that the CPO either modify the OC Expediter system to restrict access to sensitive data or develop a written policy that prohibits users from entering sensitive data in OC Expediter; provides definitions and examples of sensitive data; and provides a manual process outside of OC Expediter for any requisitions containing sensitive information.

Current Status: **Implemented.** Our First Follow-Up Audit found that policy and procedures were appropriately documented that prohibit users from entering sensitive data in OC Expediter as well as providing definitions and examples of sensitive data. Furthermore, for departments using OC Expediter, all requisitions must be processed through the system, i.e., there is no manual process outside of OC Expediter. Because of the actions taken by CPO, we consider this recommendation implemented.





# Internal Auditor's Report

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## Finding No. 10 - IT Staff Have Ability to Perform Operational Functions in the Production Environment (Control Observation)

**Recommendation No. 10:** We recommend that the CPO work with CEO/OCIT to institute an emergency access procedure for the OC Expediter system and remove IT staff access to the production environment once the system is deployed countywide.

**Current Status: Implemented.** Our First Follow-Up Audit found that IT privileged users were appropriately restricted to the least number of users to the production application. Additionally, we found that an emergency IT privileged access procedure was established and documented to govern the process of provisioning IT privileged access on a temporary "as needed" troubleshooting basis and only upon supervisor approval. This access is then subsequently removed upon resolution of the issue. Because of the actions taken by CPO, we consider this recommendation implemented.

## Finding No. 11 - No Formal System Governance Framework Exists (Control Observation)

**Recommendation No. 11:** We recommend that the CPO prepare a formal governance framework for the OC Expediter system.

**Current Status: Implemented.** Our First Follow-Up Audit found that a formal governance framework for the OC Expediter was appropriately established and documented. Because of the actions taken by CPO, we consider this recommendation implemented.

## Finding No. 12 - Additional System Documentation Needs to be Developed (Control Observation)

**Recommendation No. 12:** We recommend that the CPO work with CEO/OCIT to ensure that a system administrator manual or development documentation is prepared for the OC Expediter system.

**Current Status: Implemented.** Our First Follow-Up Audit found that an OC Expediter Systems Development Life Cycle (SDLC)/Change Management document was appropriately prepared, and approved by management. Additionally, we found that an OC Expediter system database data dictionary that outlines a description of all database tables, as well as a detailed user application security roles/permissions definitions, were appropriately prepared and documented. Because of the actions taken by CPO, we consider this recommendation implemented.

## Finding No. 13 - Need to Consider System Performance of Countywide Implementation (Control Observation)

**Recommendation No. 13:** We recommend that the CPO ensure system performance is monitored and evaluated upon system implementation at each of the individual departments.



# Internal Auditor's Report

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Current Status: **Implemented.** Our First Follow-Up Audit found that the OC Expediter system performance is appropriately monitored by a virtualization performance management console which automatically allocates system resources as needed and server hardware management console in order to consistently sustain optimal system performance upon deployment of the system countywide. In addition, IT staff are appropriately notified via e-mail in the event of system performance issues as any issues are immediately resolved. Because of the actions taken by CPO, we consider this recommendation implemented.