

Limited Review of the City of Orlando Events Center Construction Project

**Report by the
Office of County Comptroller**

**Martha O. Haynie, CPA
County Comptroller**

County Audit Division

J. Carl Smith, CPA
Director

Christopher J. Dawkins, CPA
Deputy Director

Lisa A. Fuller, CIA, Audit Supervisor
In-Charge Auditor

**Report No. 416
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TABLE OF CONTENTS

Transmittal Letter	1
Executive Summary	2
Action Plan	6
Introduction	9
Background.....	10
Scope and Objectives	12
Overall Evaluation.....	13
Recommendations for Improvement	14
1. Publicly Funded Construction Projects Should Utilize Best Practices for Government Procurement	15
2. Project Management Should Ensure the Construction Manager's Application and Certification for Payment is Adequately Supported.....	19
3. Project Management Should Ensure Construction Manager's Subcontractors Are Paid in a Timely Manner for Work Performed	20
4. Reports for Contractual Required Goals Should be Prepared Using Verifiable Source Documents and Should Accurately Disclose All Relevant Data.....	22
5. The County Should Take Appropriate Steps to Limit the Use of County Contributed Funds for Furniture, Fixtures, and Equipment.....	25
6. Consideration Should Be Given to Expanding the County's Role in Future Interlocal Agreements	26
Appendix A - Methodology	29
Appendix B – Events Center Development, LLC. Responses to Issues Noted	34
Appendix C – Consultant's Report on Value Engineering	39

October 24, 2011

Teresa Jacobs, County Mayor
And
Board of County Commissioners

We have conducted a limited review of the City of Orlando Events Center Construction Project. The period reviewed was August 1, 2007 through March 31, 2010 with emphasis on transactions occurring in the later part of the review period.

We conducted this audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Responses to our Recommendations for Improvement were received from the Office of Accountability and are incorporated after each of the recommendations. In addition, the Developer's Representative provided a response to each of the issues noted within the Recommendation for Improvements Section for the items that related to the Events Center construction (Recommendations for Improvement No. 1-5) and their response is included as Appendix B.

We appreciate the cooperation of the personnel from the City of Orlando, Shingle Creek Advisors, and the County during the course of the review.

Martha O. Haynie, CPA
County Comptroller

c: Ajit Lalchandani, County Administrator
Eric Gassman, Chief Accountability Officer
Jay Berlinsky, Principal Owner, Shingle Creek Advisors
Jim Fritz, Chief Financial Officer, Orlando Magic

EXECUTIVE SUMMARY

Executive Summary

We conducted a limited review of the Orlando Events Center Construction Project. The scope of the review was limited to verifying compliance with certain provisions of the Interlocal Agreement as well as ensuring public funds were used for reasonable and allowable expenditures. The objectives of this review are detailed in the Scope and Objectives Section of this report. The period reviewed was August 1, 2007 through March 31, 2010 with emphasis on transactions occurring in the later part of the review period.

Based on the results of our testing, public funds used on the Events Center were for reasonable and allowable expenditures. The procurement of goods and services was materially in accordance with the Interlocal Agreement (Section 8.2) and applicable Florida Statutes; however, we noted instances in which best practices for government procurement were not followed. Further, in our opinion:

- The Interlocal Agreement adequately protected the County from additional financial obligations related to the construction and operation of the Events Center;
- Language in subsequent agreements and contracts contained the appropriate flow down language and requirements specified in the Interlocal Agreement; and,
- Project Management established adequate controls to track progress of meeting certain conditions outlined in the Interlocal Agreement; however improvements are needed in the reporting of Minority/Women Business Enterprise (M/WBE) goals.

Based on the results of testing performed by our Consultants, the value engineering team, process and the program's overall effectiveness was adequate. However, certain aspects of the value engineering process were not well documented.

The following opportunities for improvement are noted below:

The Request for Qualifications issued by the Developer for the two professional services contracts reviewed did not contain the specific weighted evaluation criteria in the notice to the proposers. In addition, the Request for Proposals issued by the Developer for one of the three construction services contracts reviewed did not contain the specific weighted evaluation criteria in the notice to the proposers.

For all five solicitations reviewed, there was no documentation available to support the evaluation performed by the Procurement Committee. There were no scoring sheets, meeting minutes, or other documentation to show the basis of the committee's decision to rank the selected firms as the number one firms.

Although noted by the Developer's Representative and corrected prior to the audit, the Truth in Negotiation and Consideration for Award clauses were added to the two professional services agreements reviewed several months after the firms were selected and agreements were executed.

For all three construction services reviewed, there was no public opening or public notification of the responses received for the Requests for Proposals issued by the Developer.

Seventeen of the 27 subcontractor Applications for Payment reviewed did not contain evidence of approval (signed) by the subcontractor. We also noted 24 of the 27 subcontractor Applications for Payment reviewed did not contain evidence of approval by the Construction Manager.

We found that project management had established a process for obtaining and logging lien waivers from the various parties (contractors, subcontractors, and suppliers) paid with project funds. Lien waivers are commonly used on construction projects to ensure parties to the construction project are paid for work performed and materials/equipment delivered as well as to protect the owner of the property from claims. However, the process did not include ensuring all lien waivers were received from subcontractors included on the Construction Manager's previous Application for Payment prior to paying the Construction Manager additional funds for work performed by the same subcontractors. Our testing found the Construction Manager was not providing payments to the subcontractors in a timely basis for 37 percent of the payments tested. Six of the late payments exceeded 100 days with the most being 337 days.

The Minority and Women Business Enterprise (M/WBE) report the Developer included in their monthly progress report to the City as of March 31, 2010, contained several errors in the computation of the M/WBE percentages and included some data that was not supported by documentation from third-parties. During the course of the review, the Developer took proactive steps to correct some of the issues identified on subsequent reports provided to the City.

The Interlocal Agreement does not exclude the use of County contributed funds for the purchase of furniture, fixtures, and equipment (FF&E) installed in areas not accessible to the general public or used for hosting events. Subsequent to the execution of the Interlocal Agreement, the City negotiated the Project Construction Agreement (PCA) with the project developer. The PCA contains several items that were not included in the definition of the Events Center as described in the Interlocal Agreement. FF&E items added to the PCA include the fit out, furnishing and equipping of all City administrative space and offices in accordance with the Quality Events Center Standard; and occupancy ready build-out of both the City and County's suites, complete with furniture, fixtures, and equipment. We noted various areas of the Center that are neither

accessible to the general public nor used for operating and hosting events that were paid with public funds. These areas include the administrative offices for the City and its major tenant (the Orlando Magic), as well as office space and other customary spaces for such tenant's basketball operations. Public funds should not be used to provide FF&E for tenant occupied space. It should be noted that the major tenant has reimbursed the project for furnishing and equipping their administrative office space. While it appears to be an acceptable use of public monies to provide furnishings and equipment for the City employees, it should have been included within the definitive elements outlined in the Interlocal Agreement.

The Interlocal Agreement did not contain any requirements for County personnel to participate in establishing major processes such as developing procurement procedures, assisting with the value engineering process, or reviewing project budgets, and major agreements/contracts prior to issuance. Also, we did not note any County involvement in these processes. A more expanded role in the project could have provided additional assurance that public funds were used as intended and in a cost effective manner. In addition, it could have provided additional assurance that initiatives specified in the Interlocal Agreement were acted upon and achieved.

Orange County Administration concurred with all of our Recommendations for Improvement. Responses to each of the Recommendations for Improvement are included herein. In addition, the Developer's Representative provided responses to each of the issues noted, and their response is included as Appendix B.

ACTION PLAN

**LIMITED REVIEW OF THE CITY OF ORLANDO
EVENTS CENTER CONSTRUCTION PROJECT
ACTION PLAN**

NO.	RECOMMENDATIONS	MANAGEMENT RESPONSE			IMPLEMENTATION STATUS	
		CONCUR	PARTIALLY CONCUR	DO NOT CONCUR	UNDERWAY	PLANNED
1.	We recommend subsequent Interlocal Agreements be clarified to note which local ordinance must be followed in the event of a conflict. In addition, the County should request procurement procedures for future projects include the following:	✓				✓
A)	Weighted evaluation criteria in the notice to the proposers;	✓				✓
B)	Documentation that the evaluation performed by the Procurement Committee was based upon weighted objective criteria;	✓				✓
C)	Truth in Negotiation and Consideration for Award clauses are added to the agreements before the agreements are executed; and,	✓				✓
D)	Public opening or public notification of the responses received for the Requests for Proposals.	✓				✓
2.	We recommend the County requests Project Management for future projects ensures all subcontractor Applications for Payment supporting the Construction Manager's Application and Certification for Payment contain evidence of approval by both the subcontractor and the Construction Manager.	✓				✓

**LIMITED REVIEW OF THE CITY OF ORLANDO
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ACTION PLAN**

NO.	RECOMMENDATIONS	MANAGEMENT RESPONSE			IMPLEMENTATION STATUS	
		CONCUR	PARTIALLY CONCUR	DO NOT CONCUR	UNDERWAY	PLANNED
3.	We recommend the County requests Project Management for future projects ensures all lien waivers are received from subcontractors included on the Construction Manager's previous Application for Payment prior to paying the Construction Manager additional funds for more work performed by the same subcontractors. When valid reasons exist for withholding payments to subcontractors, Project Management should work with the parties to resolve the discrepancies as soon as practical to avoid potential claims on the project.	✓				✓
4.	We recommend the County requests Project Management for future projects ensures reports containing details relative to the achievement of contractual required goals are prepared using verifiable source documents. In addition, such reports should accurately disclose all relevant data and amounts reported should reconcile to the overall project budget.	✓				✓
5.	We recommend the County takes the necessary steps to ensure the Interlocal Agreement prohibits the use of County contributed funds for furnishing and equipping Community Venue areas not accessible to the general public or used for hosting events.	✓				✓
6.	We recommend Interlocal Agreements for construction projects utilizing County funding consider expanding the County's role and providing additional guidance or oversight on certain aspects of the project.	✓				✓

INTRODUCTION

INTRODUCTION



Limited Review of the City of
Orlando Events Center
Construction Project

Background

In August 2007 the Orange County Board of County Commissioners (County) entered into the Orlando/Orange County Interlocal Agreement (Interlocal Agreement) with the City of Orlando (City) and the City of Orlando Community Redevelopment Agency (Agency) to finance and facilitate the construction of the Community Venues. The Community Venues consist of constructing a new community events center (Events Center), constructing a new performing arts center, and renovating the existing Florida Citrus Bowl Stadium.

Regarding the construction of the Events Center, the Interlocal Agreement outlines a finance plan of \$480 million that includes Tourist Development Tax Bonds (\$270 million from Orange County), State Sales Tax Revenue Bonds (\$30 million), affiliates of the Orlando Magic Ltd contributions (\$50 million), and City contributions of land and monies from non-general fund sources (\$130 million). The use of funds consists of the following:

Gross Construction Costs:	\$380 million
Property Contribution, Acquisition, & Site Prep:	\$ 40 million
Parking, Roads, & Site Improvements:	\$ 60 million

As part of the Interlocal Agreement the County agreed to contribute a portion of the Sixth Cent Tourist Development Tax (Sixth Cent TDT) to finance up to \$270 million in project costs for the Event Center. According to Section 8.1.3 of the Interlocal Agreement, "...no general fund revenues or other funds of the County are obligated or shall be used to secure debt relating to the Community Venues or to provide for the operating or maintenance costs of the Community Venues." In addition, Section 8.1.4 states "...the County shall not be liable for any construction cost overruns or operating subsidies of any type whatsoever in connection with the construction or operation of the Community Venues."

The levying and use of the County's Tourist Development Tax is governed by Florida Statute 125.0104. Section 125.0104(5)(a) restricts the use of the tourist development tax. In general, the County's Tourist Development Taxes may be used to acquire, construct, extend, enlarge, remodel,

INTRODUCTION



Limited Review of the City of
Orlando Events Center
Construction Project

repair, improve, maintain, operate, or promote various matters related to publicly owned and operated convention centers, sports stadiums, sports arenas, coliseums, or auditoriums. The Tourist Development Tax may also be used to: promote and advertise tourism in the State of Florida and nationally and internationally; to fund convention bureaus, tourist bureaus, tourist information centers, and news bureaus; or to finance beach park facilities or beach improvement, maintenance, renourishment, restoration, and erosion control.

To facilitate the design, development, construction, and operation of the Events Center, the City entered into the New Orlando Events Center Agreement (NOECA) and the Orlando Events Center Project Construction Agreement (PCA) with affiliates of the Orlando Magic, LTD (the Magic), to include Events Center Development, LLC, designated as the project Developer. Although the overall project budget was set at \$480 million, the NOECA and the PCA jointly established the construction portion of the budget at \$380 million. All construction cost overruns, other than amounts spent on excluded costs as defined in the NOECA and the PCA, are the responsibility of the project developer and/or the Magic.

As part of the \$480 million project budget, the \$380 million construction budget includes the following major components:

Construction Services (GMP) -	\$ 284 million
Architectural Services -	\$ 24 million
Building FF&E -	\$ 19 million
Program Management Costs -	\$ 13 million
Insurance/Risk Management -	\$ 13 million
Contingency -	\$ 15 million

The Interlocal Agreement (Section 8.2) stipulates the following:

- 1) Any architectural and engineering services funded by County contributions shall be procured through an

INTRODUCTION



Limited Review of the City of
Orlando Events Center
Construction Project

open, competitive procurement process. The procurement process shall comply with Section 287.055, Florida Statutes;

- 2) The services of construction manager and all third party providers funded by County contributions shall be procured through an open competitive process. The procurement method shall comply with Section 255.20, Florida Statutes; and,
- 3) Construction must comply with the minority business enterprise and women-owned business enterprise requirements of Chapter 57 of the City Code.

As part of the NOEC and the PCA, the City required the Developer to utilize an Owner Direct Purchasing Program to achieve sales tax savings for the construction costs associated with the Events Center. According to the Developer approximately \$80 million of goods and materials were purchased through this program with a sales tax savings of approximately \$4.5 million.

Scope and Objectives

The scope of the review was limited to verifying compliance with certain provisions of the Interlocal Agreement as well as ensuring public funds were used for reasonable and allowable expenditures. The period reviewed was August 1, 2007 through March 31, 2010 with emphasis on transactions occurring in the later part of the review period.

The primary objectives of this review were to determine the following:

- 1) Reasonableness and allowability of expenditures from public funds;
- 2) Compliance with procurement provisions of the Interlocal Agreement (Section 8.2), applicable Florida Statutes, and best practices for government procurement;



INTRODUCTION

- 3) Adequacy of agreement and contract language as well as compliance with certain conditions of the Interlocal Agreement; and,
- 4) Adequacy of the Value Engineering team, process and the program's overall effectiveness.

To achieve our objectives, we performed tests that are described in our Methodology Section, Appendix A.

Overall Evaluation

Based on the results of our testing, public funds used on the Events Center were for reasonable and allowable expenditures. The procurement of goods and services was materially in accordance with the Interlocal Agreement (Section 8.2) and applicable Florida Statutes; however, we noted instances in which best practices for government procurement were not followed.

In our opinion:

- The Interlocal Agreement adequately protected the County from additional financial obligations related to the construction and operation of the Events Center;
- Language in subsequent agreements and contracts contained the appropriate flow down language and requirements specified in the Interlocal Agreement; and,
- Project Management established adequate controls to track progress of meeting certain conditions outlined in the Interlocal Agreement; however improvements are needed in the reporting of M/WBE goals.

Based on the results of testing performed by our Consultants, the value engineering team, process and the program's overall effectiveness was adequate. However, certain aspects of the value engineering process were not well documented.

Opportunities for improvement are described herein.

RECOMMENDATIONS FOR IMPROVEMENT

1. Publicly Funded Construction Projects Should Utilize Best Practices for Government Procurement

Section 8.2 of the Interlocal Agreement requires architectural, engineering, and construction services funded by the County's contribution be procured through an open, competitive procurement process utilizing a request for proposals or a request for qualifications solicitation. In addition, procurement methods must comply with applicable Florida Statutes. In general, we found the methods used by the Developer to procure architectural, engineering and construction services comply with Florida Statutes and local procurement ordinances. However, we had the following concerns relating to the Developer's evaluation and selection of consultants and contractors:

- 1) The Request for Qualifications issued by the Developer for the two professional services contracts reviewed did not contain the specific weighted evaluation criteria in the notice to the proposers. In addition, the Request for Proposals issued by the Developer for one of the three construction services contracts reviewed did not contain the specific weighted evaluation criteria in the notice to the proposers.

Florida Statute 287.055 relative to the acquisition of professional services (also known as the Consultants' Competitive Negotiation Act) does not specifically require the use of weighted criteria. However, weighted criteria and scoring is used in government procurement to help ensure an unbiased selection of the most responsive, qualified proposer. For construction services, Florida Statute 255.20 requires such contracts to be awarded in accordance with applicable local ordinances. Although the Interlocal agreement did not specifically clarify which "local ordinance" should be followed in the event of a conflict, both County and City Ordinances (Sections 17-311 (2) and 7.17 E., respectively) require the

RECOMMENDATIONS FOR IMPROVEMENT



Limited Review of the City of
Orlando Events Center
Construction Project

request for proposal document to state the relative importance of price and other criteria.

- 2) For all five solicitations reviewed, there was no documentation available to support the evaluation performed by the Procurement Committee. There were no scoring sheets, meeting minutes or other documentation to show the basis of the committee's decision to rank the selected firms as the number one firms.

As previously noted, Florida Statute 287.055 relative to the acquisition of professional services does not specifically require the use of weighted criteria. However, scoring sheets and/or selection committee meeting minutes are used in government procurement to provide documented evidence that an unbiased decision was made based on previously disclosed evaluation criteria. Also, as previously noted, Florida Statute 255.20 requires contracts for construction services be awarded in accordance with applicable local ordinances. Both County and City Ordinances (sections 17-311 (3) and 7.17 G respectively) state that the contract file shall contain the basis on which the award is made.

- 3) For both professional services reviewed, the Truth in Negotiation and Consideration for Award clauses were added to the agreements several months after the firms were selected and agreements were executed. This issue was noted by the Developer's Representative and corrected prior to the audit taking place.

Florida Statute 287.055(5)(a) states, "The agency shall require the firm receiving the award to execute a truth-in-negotiation certificate stating that wage rates and other factual unit costs supporting compensation are accurate, complete and current at the time of contracting." Further, this statement should be signed at the beginning of the contract negotiations. In

RECOMMENDATIONS FOR IMPROVEMENT



Limited Review of the City of
Orlando Events Center
Construction Project

addition, “each contract entered into by the agency for professional services must contain a prohibition against contingent fees....”

- 4) For all three construction services reviewed, there was no public opening or public notification of the responses received for the Requests for Proposals issued by the Developer. Without a public opening or other public notification of proposals received, there is no assurance that all proposals received were considered.

As previously noted, Florida Statute 255.20 requires contracts for construction services be awarded in accordance with applicable local ordinances. County Ordinance (section 17-311 (1)c) states, “Proposals shall be opened at the time and place specified in the Request for Proposals or Request for Information. The name of each proposer shall be announced and recorded at the time of opening.” The City’s Ordinance does not specifically require public bid openings. As previously noted the Interlocal Agreement did not address which policy to follow in the event of a conflict.

Considering the amount of public funds contributed to the Events Center construction project, best practices for government procurement should have been utilized. Public sector purchasing requires transparency and accountability for the use of public funds. Transparency in the context of public procurement refers to the ability of all interested parties to know and understand the actual methods and processes by which contracts are awarded. When formal proposals are requested, the request for proposals should clearly state the criteria for evaluating the responses as well as the relative weight assigned to each criteria. Weighted criteria are used to help ensure an unbiased selection of the best qualified responsive proposer. In addition, all procurement decisions should be supported by a properly documented audit trail detailing the procurement process and the reasons for selecting the successful firms. Such

RECOMMENDATIONS FOR IMPROVEMENT



Limited Review of the City of
Orlando Events Center
Construction Project

documentation includes meeting minutes and scoring sheets that reflect the sequences and rationales behind the award decision.

We Recommend subsequent Interlocal Agreements be clarified to note which local ordinance must be followed in the event of a conflict. In addition, the County should request procurement procedures for future projects include the following:

- A) Weighted evaluation criteria in the notice to the proposers;
- B) Documentation that the evaluation performed by the Procurement Committee was based upon weighted objective criteria;
- C) Truth in Negotiation and Consideration for Award clauses are added to the agreements before the agreements are executed; and,
- D) Public opening or public notification of the responses received for the Requests for Proposals.

Orange County Management's Response:

We concur. In subsequent Interlocal Agreements involving significant County funding, we will specifically state which local ordinances must be followed in the event of a conflict. In regard to the Events Center, the intent was that this project would be subject to the City's procurement ordinance. The agreement was based on the City constructing, owning and operating the facility and the County providing contract revenue payments under certain terms and conditions. So, under this arrangement, it is reasonable that the City's procurement ordinance would be applicable.

In addition, we concur that the County will consider including additional requirements in future Interlocal Agreements with the City that involve significant County funding to ensure that

procurement procedures include the items noted in A, B, and D of your recommendation above. We also concur that the Truth in Negotiation and Consideration for Award clause should have been included in all agreements prior to execution.

2. Project Management Should Ensure the Construction Manager's Application and Certification for Payment is Adequately Supported

We reviewed a sample of Applications and Certifications for Payment submitted by the Construction Manager. We found the Construction Manager's Applications and Certifications for Payment were supported by Applications for Payment from the various subcontractors performing work on the project. However, we noted 17 of the 27 subcontractor Applications for Payment reviewed did not contain evidence of approval (signed) by the subcontractor. We also noted 24 of the 27 subcontractor Applications for Payment reviewed did not contain evidence of approval (signed) by the Construction Manager.

By signing the Application for Payment the subcontractor is assuring the Construction Manager, and ultimately the Owner, that: (1) they have inspected the work represented by this Application, (2) such work has been completed to the extent indicated in this Application, and the quality of workmanship and materials conforms with the Contract Documents, (3) this Application for Payment accurately states the amount of work completed and payment due, (4) all amounts have been paid by the subcontractor for work for which previous Applications for Payment were issued and payments received from the Construction Manager, and (5) the subcontractor knows of no reason why payment should not be made.

The Construction Manager's signature on the subcontractor's Application for Payment would indicate that the Construction Manager has reviewed the subcontractor's

RECOMMENDATIONS FOR IMPROVEMENT



Limited Review of the City of
Orlando Events Center
Construction Project

work and concurs that the subcontractor has met all their obligations in relation to this Application for Payment.

Requiring the Construction Manager to submit subcontractor Applications for Payment that have been approved by both the subcontractor and the Construction Manager provides the Project with additional assurance that the work billed for was performed, is complete, and conforms to contract documents. It is also a good method for having subcontractors attest that they have paid their suppliers and subcontractors.

We Recommend the County requests Project Management for future projects ensures all subcontractor Applications for Payment supporting the Construction Manager's Application and Certification for Payment contain evidence of approval by both the subcontractor and the Construction Manager.

Orange County Management's Response:

We concur. The County will consider including additional requirements in future Interlocal Agreements with the City that involve significant County funding to ensure that all subcontractor Applications for Payment supporting the Construction Manager's Application and Certification for Payment contain evidence of approval by both the subcontractor and the Construction Manager.

3. Project Management Should Ensure Construction Manager's Subcontractors Are Paid in a Timely Manner for Work Performed

We reviewed documentation related to the payments made by the Construction Manager for work performed by the subcontractors. As a result of our review we found 32 of the 87 subcontractor payments (37%) reviewed were remitted to the subcontractors more than 30 days after the Construction Manager had received the funds from the project. Six of the 32 late payments exceeded 100 days with the most being 337 days.

Lien waivers are commonly used on construction projects to ensure parties to the construction project are paid for work performed and materials/equipment delivered as well as to protect the owner of the property from claims. A lien waiver is a document from a contractor, subcontractor, materials provider, equipment lessor or other party to the construction project stating they have received payment and waive any future lien rights to the property. During the construction phase, conditional lien waivers are obtained as progress payments are invoiced and paid. A conditional waiver on progress payments generally specifies that if the party has been paid to date the waiver is an effective proof against any lien claim on the property.

The Project Construction Agreement between the City and the Developer [Section 7.7 (b (iii))] states, “With respect to the Draw Packages relating to the Construction Contract and Principal Contractors, the Draw Package shall include:....(B) to the extent applicable, conditional partial waivers of lien from each payee covering all Work performed by such payee since the last payment application of such payee.” Similar language is also included in the Construction Management Agreement [Section 8.4.3.1]. We found that project management had established a process for obtaining and logging lien waivers from the various parties (contractors, subcontractors and suppliers) paid with project funds. However, the process did not include ensuring all lien waivers were received from subcontractors included on the Construction Manager’s previous Application for Payment prior to paying the Construction Manager additional funds for work performed by the same subcontractors.

We recognize that there are valid reasons for the Construction Manager to withhold payment to a subcontractor. However, project management should be aware of these situations and should work with the parties to rectify the discrepancies as soon as practical to avoid potential claims on the project.

We Recommend the County requests Project Management for future projects ensures all lien waivers are received from

RECOMMENDATIONS FOR IMPROVEMENT



Limited Review of the City of
Orlando Events Center
Construction Project

subcontractors included on the Construction Manager's previous Application for Payment prior to paying the Construction Manager additional funds for more work performed by the same subcontractors. When valid reasons exist for withholding payments to subcontractors, Project Management should work with the parties to resolve the discrepancies as soon as practical to avoid potential claims on the project.

Orange County Management's Response:

We concur. The County will consider including additional requirements in future Interlocal Agreements with the City that involve significant County funding to ensure lien waivers are received from subcontractors included on the Construction Manager previous Application for Payment prior to paying additional funds for more work performed by the same subcontractors. It is our understanding that Events Center Development LLC (ECDLLC) modified their process during the project, which they believe adequately addressed this issue.

4. Reports for Contractual Required Goals Should be Prepared Using Verifiable Source Documents and Should Accurately Disclose All Relevant Data

The Interlocal Agreement, Section 8.2, stipulates that the construction of the Community Venues is to comply with the M/WBE requirements of Chapter 57 of the City Code. Chapter 57 of the City Code establishes a goal of 18 percent of the City's annual monetary value of contracts and subcontracts for supplies, services and construction to be awarded to minority business enterprises meeting contract specifications (section 57.16) and a similar goal of 6 percent to be awarded to women-owned business enterprises (section 57.23).

Based on our review of the M/WBE report the Developer included in their monthly progress report to the City as of

RECOMMENDATIONS FOR IMPROVEMENT



Limited Review of the City of
Orlando Events Center
Construction Project

March 31, 2010, we noted the following relative to data reported:

- A) The report listed items that were excluded from M/WBE participation to reconcile the M/WBE report to the overall project budget (project management, insurance, certain materials, utilities, etc). However, amounts noted for materials that were excluded were also included in the contract amounts. This resulted in these amounts being double counted and therefore the report totals did not truly reconcile to the project budget. Project dollars should be properly allocated to ensure the progress toward achieving goals is accurately stated.
- B) The report did not disclose all of the consulting contracts awarded by the Developer. We found 16 contracts totaling approximately \$2.6 million were not included on the M/WBE report as of March 31, 2010. All contracts awarded need to be considered to determine the correct percentage of contract dollars allocated to M/WBE firms.
- C) For 21 of the 37 second tier M/WBE subcontracts reviewed we found that portions of the amounts reported as allocated to the second tier subcontractors were based on data self-reported by the Construction Manager's first tier subcontractors. In general we found that the original subcontract amount was supported by a contract document or purchase order; however revised contract amounts were not supported with copies of executed change orders between the first and second tier subcontractors.

There is an incentive for the first tier subcontractors to overstate the contract amounts they awarded to M/WBE firms. The Subcontract Agreement between the Construction Manager and the first tier subcontractors permits the Construction Manager to assess liquidated damages at a rate of \$5,000 for

RECOMMENDATIONS FOR IMPROVEMENT



Limited Review of the City of
Orlando Events Center
Construction Project

each percentage point for which the subcontractor is below its M/WBE goals (Attachment IV, Section 12). Efforts should be made to ensure amounts reported as allocated to M/WBE firms are based on verifiable source documents.

- D) One of the 37 second tier M/WBE subcontracts reviewed was not certified as such by the City or County. Amounts awarded to this subcontractor (\$6,000) should not be included in the amounts allocated and paid to M/WBE firms.

Reports detailing the progress toward achieving contractually stipulated goals should accurately report all relevant data. Also, the data reported should be based on verifiable source documents.

It should be noted that upon bringing these matters to the attention of the Developer proactive steps were taken to correct some of the issues identified on subsequent reports provided to the City.

We Recommend the County requests Project Management for future projects ensures reports containing details relative to the achievement of contractual required goals are prepared using verifiable source documents. In addition, such reports should accurately disclose all relevant data and amounts reported should reconcile to the overall project budget.

Orange County Management's Response:

We concur. It is our understanding that ECDLLC acknowledged an unintentional formula error on the spreadsheet for the month audited and that they will perform a final reconciliation of all M/WBE participation when final source documentation is available.

5. The County Should Take Appropriate Steps to Limit the Use of County Contributed Funds for Furniture, Fixtures, and Equipment

The Interlocal Agreement does not exclude the use of County contributed funds for the purchase of furniture, fixtures, and equipment (FF&E) installed in areas not accessible to the general public or used for hosting events. Section 2.1 of the Interlocal Agreement specifically includes FF&E within the definition of costs and does not specifically exclude any FF&E from being paid with public funds.

Subsequent to the execution of the Interlocal Agreement, the City negotiated the Project Construction Agreement (PCA) with the Developer. The PCA contains several items that were not included in the definition of the Events Center as described in the Interlocal Agreement. FF&E items added to the PCA include the fit-out, furnishing and equipping of all City administrative space and offices in accordance with the Quality Events Center Standard; and occupancy ready build-out of both the City and County's suites, complete with furniture, fixtures, and equipment.

As a result of reviewing various documentation related to the construction of the Events Center, we noted various areas of the Center that are not accessible to the general public or used for operating and hosting events. These areas include the administrative offices for the City and its major tenant (the Orlando Magic), as well as office space and other customary spaces for such tenant's basketball operations. Public funds should not be used to provide FF&E for tenant occupied space. While it appears to be an acceptable use of public monies to provide furnishings and equipment for the City employees, it should have been included within the definitive elements outlined in the Interlocal Agreement.

The PCA was not provided to the County for review and comment prior to execution. Both the Interlocal and PCA include administrative office space for the home NBA tenant. Neither agreement contains provisions for furnishing and equipping the tenant spaces.

The FF&E contract and associated owner direct purchases (approximately \$18 million) were paid entirely from bond proceeds backed by County contributed funds. It should be noted that the major tenant has reimbursed the project for furnishing and equipping their administrative office space.

We Recommend the County takes the necessary steps to ensure the Interlocal Agreement prohibits the use of County contributed funds for furnishing and equipping Community Venue areas not accessible to the general public or used for hosting events.

Orange County Management's Response:

We concur. The County agrees that County funds should not be used to pay for FF&E for tenant occupied space and that future agreements should more specifically address the issue dealing with areas of the building that are not accessible by the general public.

We understand that the major tenant has reimbursed the project for-furnishing and equipping their administrative office space. Further, the County agrees that it appears acceptable to use public monies to provide furnishings and equipment for City employees.

6. Consideration Should Be Given to Expanding the County's Role in Future Interlocal Agreements

As part of the Interlocal Agreement with the City of Orlando, the County agreed to contribute a portion of the Sixth Cent Tourist Development Tax (Sixth Cent TDT) to finance up to \$270 million in project costs for the Events Center. During the early planning for the Community Venues, the County made the decision to not directly construct, oversee, or operate any of the Community Venue Projects. This was done to mitigate risks associated with the County being perceived as the owner and/or operator of the Community Venues. Therefore, in crafting the Interlocal Agreement, County personnel focused considerable effort to assuring the

RECOMMENDATIONS FOR IMPROVEMENT



Limited Review of the City of
Orlando Events Center
Construction Project

County was adequately protected from any potential cost overruns or additional financial obligations related to the construction and operation of the Events Center. As such, the Interlocal Agreement did not contain any requirements for County personnel to participate in establishing major processes such as developing procurement procedures, assisting with the value engineering process, or reviewing project budgets and major agreements/contracts prior to issuance. Also, through interviews with the Developer's Representative and review of documentation we did not note any County involvement in the processes noted.

Based on our review of the Events Center construction project, the Developer's Representative did an effective job of managing the overall project and the County's goals of controlling risk and capping the County's financial obligations were achieved. However, a more expanded role in the project could have provided additional assurance that public funds were used as intended and in a cost effective manner. In addition, it could have provided additional assurance that initiatives specified in the Interlocal Agreement, such as open, competitive procurement; green building standards; and M/WBE requirements; are acted upon and achieved.

We Recommend Interlocal Agreements for construction projects utilizing County funding consider expanding the County's role and providing additional guidance or oversight on certain aspects of the project.

Orange County Management's Response:

We concur. In all future agreements, the County will continue to evaluate and consider whether or not we should assume an expanded role in managing the project. In regard to the Interlocal Agreement to construct the Community Venues, this agreement was developed over a very long period of time and involved extensive negotiations between the County, Comptroller's Office, City, Magic, DPAC, and Citrus Bowl. The process leading up to the approval of the Interlocal Agreement in July 2007 included numerous public meetings, news coverage, Board

RECOMMENDATIONS FOR IMPROVEMENT



Limited Review of the City of
Orlando Events Center
Construction Project

presentations, and public discussions. Throughout this entire process, it was well known, disclosed, and discussed that the City would construct (either directly or through agreements with the other key parties), own and operate the facilities and the County would provide financial assistance through Contract Revenue payments under the terms and conditions of the Interlocal Agreement. It is also worth noting, the Magic agreed to assume the risk of project cost overruns. As such, it seemed reasonable to allow the City and the Magic some flexibility in constructing the project within the parameters of the Interlocal Agreement without inserting a third entity, the County, in the oversight of the project. We agree that the Interlocal Agreement met the County's goals of controlling risk and capping the County's financial obligations while allowing for the effective project management of the Events Center by the Developer's Representative.

APPENDIX A - METHODOLOGY

To achieve our objectives, we performed the following:

To determine whether public sector funds were used for reasonable and allowable expenditures, we performed the following tests for the selected draw packages (amounts paid to the Construction Manager were reviewed separately as described further below):

- 1) Reviewed amounts paid for adequate support;
- 2) Confirmed amounts paid with Public Sector Funds qualified for reimbursement from such funds as per Interlocal Agreement;
- 3) Verified no invoices dated prior to the date the Interlocal Agreement was approved by the Board of County Commissioners were paid with Public Sector Funds;
- 4) Examined payments for contractual services that were not open and competitively procured to verify no Public Sector Funds were used to pay for such services;
- 5) Determined what was purchased and verified whether it was an appropriate use of Public Sector Funds;
- 6) Reviewed for duplicate payments between what was reimbursed to the Orlando Magic and what was paid directly to other payees;
- 7) For amounts reimbursed to Magic, tested for proof of payment by the Orlando Magic;
- 8) Where applicable, examined amounts invoiced for compliance with contract rates; and,
- 9) Confirmed no County provided funds used to pay for the following:
 - A) Any cost or expense of any nature in connection with the acquisition of right-of-way or other land for the Community Venues (Interlocal 7.1.5);
 - B) Any cost or expense of any nature relating to environmental investigation or monitoring of site conditions, any clean-up, containment, remediation, removal, restoration or other similar environmental work (Interlocal 7.1.6); and,
 - C) County, City, Agency or any other governmental operating or personnel expenses (Interlocal 7.1.7).

To assess amounts paid to the Construction Manager, we reviewed the Applications and Certificates of Payment (pay applications) that were included in the draw packages reviewed above. The following is a summary of the testing performed:

- 1) Tested for evidence that the pay applications were certified by the Construction Manager, Architect and Developer;
- 2) Tested for evidence of review and approval by the Construction Manager and subcontractors for the various subcontractor pay applications that support the Construction Manager's pay applications;
- 3) Examined general condition amounts billed for adequate support;
- 4) Evaluated whether amounts billed qualified for reimbursement;
- 5) Compared the amounts the Construction Manager invoiced the project to the amounts the Construction Manager paid the subcontractors and for general condition items;
- 6) Evaluated whether subcontractors were paid within 30 days of the Construction Manager receiving funds from Project; and,
- 7) Confirmed whether retainage for the Construction Manager and various subcontractors was withheld at appropriate rates.

We also confirmed that the disbursement amounts reported by the Developer reconciled with the disbursement amounts reported by the City. We traced the disbursement amounts to the applicable bank statements as well as the City's accounting journal. We reviewed the bank statements and accounting journal to ensure the City did not use project funds on expenses in addition to those included in the monthly draw packages.

To determine whether goods and services were procured in accordance with the Interlocal Agreement (Section 8.2), applicable Florida Statutes, and best practices for government procurement, we reviewed the procurement process the Developer used to award Agreements/Contracts. Specifically, we tested for the following:

- 1) Whether the procurement method met the requirements of Section 287.055, Florida Statutes (for professional services);
- 2) Whether the procurement method met the requirements of Section 255.20, Florida Statutes (for construction services); and,
- 3) Whether best practices for government procurement were utilized for all services procured.

We also reviewed the procurement processes the Architect and Construction Manager used to award subcontracts. We evaluated whether the process fulfilled the terms and conditions specified in the respective Agreements as well as the process described in various public information meetings. We tested and evaluated whether best practices for government procurement were utilized. Specifically, we performed the following:

- 1) Verified the scopes of service and bid packages were publically announced;
- 2) Reviewed for evidence demonstrating proposers and bidders were evaluated on the same criteria as specified in the applicable Request for Proposal or Request for Bid;
- 3) Evaluated whether contracts were awarded to responsive proposers or lowest responsive bidders and, if not, that valid explanation exists for the selection; and,
- 4) For construction subcontracts, verified all bidders were included on a bid tabulation form provided to Developer and that the bid amounts agreed with bid documents.

To review the adequacy of agreement and contract language as well as compliance with certain conditions of the Interlocal Agreement we obtained the Interlocal Agreement, Project Construction Agreement (PCA), and a sample of contracts/agreements executed by the Developer. We reviewed the agreements for adequacy of language as well as for terms and clauses required by the Interlocal and/or PCA. Specifically, we reviewed the following:

- 1) Interlocal Agreement to ensure it adequately protected the County from additional financial obligations related to the construction and operation of the Events Center;
- 2) PCA to verify the City was protected from cost overruns related to the construction of the Events Center and that the PCA contains certain terms and clauses agreed upon in the Interlocal (audit clause, record & report retention, Blueprint, Green Building, bidding and award process);
- 3) Developer executed agreements to ensure they contained certain terms and clauses specified in the PCA (audit clause, record and report retention, Blueprint, Green Building, direct purchases, third party beneficiary, indemnification); and,
- 4) Certain standard clauses such as liquated damages, termination clauses, mitigation of disputes, invoicing procedures, change order pricing, and retainage.

To determine whether the Minority M/WBE requirements specified in the Interlocal Agreement (Section 9.16) were being accurately reported, we reviewed the M/WBE report the Developer prepared and included in their monthly progress report as of March 31, 2010. Specifically, we performed the following:

- 1) Checked that all project funds were included and properly allocated;
- 2) Verified the original and revised amounts for all prime contracts awarded by the Developer and all first tier subcontracts awarded by the Construction Manager were accurately reported;
- 3) For a sample of the first tier subcontracts awarded by the Construction Manager, tested whether second tier subcontract amounts awarded to M/WBE firms were accurately reported; and,
- 4) For a sample of the first tier subcontracts awarded by the Construction Manager, tested whether first and second tier subcontractors reported as M/WBE firms were certified as such.

We did not verify the amounts reported as having been paid to any of M/WBE subcontractors. Our testing also did not include a review of the workforce utilization report.

We retained a Consultant to give assurances on the adequacy of the Events Center's value engineering team, the value engineering process and the program's overall effectiveness. The Consultant was tasked with performing the following:

- 1) Evaluating the value engineering program in terms of team composition and overall program effectiveness;
- 2) Reviewing provisions for value engineering in the respective contracts (A&E, CM, Trades) for adequacy;
- 3) Identifying and evaluating value engineering recommendations proposed during the value engineering process (both accepted and rejected) for merit;
- 4) Determining reasons for rejected recommendations that appear valid;
- 5) Quantifying potential cost savings from implemented recommendations;
- 6) Quantifying potential savings lost due to rejection of apparently valid recommendations; and,
- 7) Reviewing plans and specifications for value engineering ideas that may have been missed or not considered and quantify potential cost savings.

The Consultant's report detailing their methodology and conclusions is attached as Appendix C.

**APPENDIX B – Events Center
Development, LLC. (ECDLLC) Response to
Issues Noted**

1. Publicly Funded Construction Projects Should Utilize Best Practices for Government Procurement

- 1) We agree that Florida Statute 287.055, which is applicable to the professional services contracts awarded, does not require the use of weighted criteria during the selection process. ECDLLC reviewed each firm's overall experience, qualifications, pricing and team members, taken as a whole, in the selection process.

With respect to construction services contracts, we also agree that Florida Statute 255.20 requires that such contracts be awarded in accordance with applicable local ordinances. All Contractors (as defined in the PCA) paid with public funds were selected in accordance with Section 6.3 of the Project Construction Agreement ("PCA"), which required (i) selection pursuant to an open competitive procurement process pursuant to Section 255.20, and (ii) the City's participation both in the design of the selection criteria as well as on the review committee ultimately responsible for selecting the Contractors. Section 6.3 contains numerous requirements for contracts with such Contractors designed to protect the public interest in terms of both the types of contracts that must be used as well as the obligations and requirements of the Contractors. In addition, the public interest in the selection of Contractors was further protected by the considerations and factors described in the ECDLLC Response at the end of Section 1 below.

- 2) We agree that there was no written documentation retained with respect to the evaluation. These firms were selected by a committee comprised of ECDLLC and City representatives. While documentation was not retained in the file, the firms were selected based on the submittal requirements listed in the RFQs which were posted and advertised.
- 3) We agree that all of the contracts ECDLLC procured under Florida Statute 287.055 were required to contain the above-referenced language. During a routine internal review of contracts, ECDLLC determined that the language was missing from the contracts referenced above, and ECDLLC immediately took steps to remedy the situation.
- 4) We agree that there was no public opening or public notification of bids received for these RFPs. Nevertheless, with respect to local ordinances, the three reviewed construction services contracts were awarded in accordance with Section 6.3 of the PCA.

Although best practices relating to weighted criteria and retention of evaluation documentation were not strictly followed, the interests of the public in the use of public funds were preserved and protected by the statutory competitive procurement of the Prime Contractor and the Design Architect, and of all other

direct contracts between ECDLLC and Contractors (third party providers) paid by public funds, particularly given that:

(i) the Prime Contractor contract is a guaranteed maximum price contract intended to protect the public from cost overruns and the liabilities of numerous sub-contracts managed by the Prime Contractor; (ii) the City's (and, therefore, the public's) obligation for construction costs is further protected and limited by the Budget Cap (see Section 7.2 of the PCA) approved in the Interlocal Agreement, with the Magic having cost overrun responsibility beyond the Budget Cap (per the Interlocal Agreement and Section 7.3 of the PCA); and (iii) the City's participation both in the design of the selection criteria as well as on the review committee ultimately responsible for selecting the Contractors.

2. Project Management Should Ensure the Construction Manager's Application and Certification for Payment is Adequately Supported

We agree that this process is an ideal best practice, but it is not practical in 30-day pay cycles with three and four tiers of subcontractors processing pay requests. In an effort to facilitate timely payment to contractors and tier subcontractors, ECDLLC accepted subcontractor pay requests which may have been unsigned, and received them later in the monthly pay cycle. ECDLLC relied on Construction Manager (CM) and Architect to certify percentage completion. In addition, no subcontractor was closed out until final lien waivers were received and the CM or Architect certified that the work was complete.

3. Project Management Should Ensure Construction Manager's Subcontractors Are Paid in a Timely Manner for Work Performed

We agree with this comment, and modified the process during the Project. ECDLLC originally made payment to CM in one check each month for the entire pay request. ECDLLC made payment to CM for some subcontractor pay applications without partial lien waivers for previous pay applications in a good faith effort to allow all subs and lower tier subs to receive timely payment, under the assurance that the CM release of payment was eminent. When it became apparent that CM release of prior payments to subcontractors was delayed, ECDLLC modified its policy from cutting one check for the entire CM pay request to cutting multiple checks with one for each subcontractor amount. Individual checks for each subcontractor amount were then released to CM as they provided proof of payment for all earlier subcontractor pay applications. ECDLLC believes this adequately resolved the issue.

4. Reports for Contractual Required Goals Should be Prepared Using Verifiable Source Documents and Should Accurately Disclose All Relevant Data

- A) We agree that an unintentional formula error occurred on the spreadsheet for the month reviewed, which resulted in inaccurately lowering the M/WBE participation rate reported. This error will be corrected in the final M/WBE report for the Project.
- B) We agree and the contracts were included in all subsequent reports.
- C) We agree that the interim reports were created using data available at the time, some of which was self-reported by subcontractors. In some instances, ECDLLC received the self-reported data from trade contractors before receiving executed change orders and contracts from the CM. ECDLLC issued all interim reporting to the best of its knowledge until such time as all final payments are made to all tier subcontractors. The final reporting of M/WBE participation will use verifiable source data. When all payments have been made and final source documents are available, a final reconciliation of all M/WBE participation will be prepared. It is noteworthy that the Project is currently projected to achieve over 31% M/WBE participation, which far exceeds the Blueprint goal of 24% M/WBE.
- D) We agree with this comment. This above-referenced subcontractor was added to the M/WBE spreadsheet when the contract award was made. Subsequently it was determined that the subcontractor was not certified by the City or County. As previously discussed, a final M/WBE participation report will be issued which will not include this subcontractor.

5. The County Should Take Appropriate Steps to Limit the Use of County Contributed Funds for Furniture, Fixtures, and Equipment

We agree with this comment. "Cost" or "Costs" as defined in the Interlocal Agreement – which Costs are eligible for payment by public funds – specifically includes "costs of furniture, fixtures and equipment." The definition of "Cost" or "Costs" also specifically excludes certain kinds of costs from costs that may be paid by public funds, and FF&E in the areas of the Events Center not accessible to the general public are not listed as excluded costs. So, as a general proposition, the Interlocal Agreement contemplated and approved FF&E costs as "Costs" which could be paid by public funds.

As an additional matter, preliminary budgets establishing the Project Budget Cap, which were provided to and reviewed by the City prior to the execution of the Interlocal Agreement, included FF&E costs in the budget soft costs. As part of the consideration and adoption of the NOEC Agreement as an exhibit to the

Interlocal Agreement, the County was aware that the Project budget included FF&E costs payable from public funds.

As noted above, the Interlocal Agreement did not provide specific guidance on which public funds should be applied to which type of expenditure. However, Section 7.7(d)(ii) of the PCA stipulates that the City holds the authority under the "City Funding Determination" for all disbursements under the Project Budget.

Nonetheless, we agree that FF&E for other Orlando Magic administrative staff space outside of Basketball Operations should be paid for by the Orlando Magic. Accordingly, the Orlando Magic identified these costs during the procurement process and made payments to fully reimburse the Project for these FF&E costs. These items were procured during the construction process and initially paid through Project draws because they were procured in bulk from suppliers.

APPENDIX C – Consultant's Report on Value Engineering

30 September, 2010



ORANGE COUNTY COMPTROLLER

ORLANDO EVENT CENTER

ORLANDO, FLORIDA

VALUE ENGINEERING AUDIT

Prepared for:

*ORANGE COUNTY COMPTROLLER
109 E. Church Street, Suite 220
Orlando, Florida 32802*

Prepared by:

*CMI
5507 Alhambra Drive
Orlando, FL 32808
Tel: (407) 293-4168
Fax: (407) 293-0944
E-Mail: cmi@cminc.biz*

CMI No. J-766



Orange County Comptroller
Orlando, Florida
Orlando Event Center – Value Engineering Audit

30 September, 2010
Page 1

TABLE OF CONTENTS

- INTRODUCTION
 - SCOPE OF THIS REPORT
 - DESCRIPTION OF THE EVENTS CENTER
 - INFORMATION USED TO PREPARE THIS REPORT
 - METHODOLOGY
- VALUE ENGINEERING REVIEW ELEMENTS
 - TASK 1: TEAM COMPOSITION AND OVERALL EFFECTIVENESS
 - TASK 2: CONTRACT PROVISIONS FOR VALUE ENGINEERING
 - TASK 3: EVALUATION OF VALUE ENGINEERING RECOMMENDATIONS CONSIDERED
 - TASK 4: REASONS FOR REJECTED RECOMMENDATIONS
 - TASK 5: POTENTIAL COST SAVINGS FROM IMPLEMENTED RECOMMENDATIONS
 - TASK 6: POTENTIAL SAVINGS LOST DUE TO REJECTION OF VALID RECOMMENDATIONS
 - TASK 7: VALUE ENGINEERING IDEAS THAT MAY HAVE NOT BEEN CONSIDERED
- CONCLUSIONS
- RECOMMENDATIONS



CMI No. J-766

Orange County Comptroller
Orlando, Florida
Orlando Event Center – Value Engineering Audit

30 September, 2010
Page 2

INTRODUCTION

Scope of this Report

Cost Management Inc (CMI) has been retained by the office of Orange County Comptroller (Comptroller) to perform a Limited Review of the Orlando Events Center Construction Project (Events Center), with the specific purpose to review Value Engineering performed on the Events Center. CMI's scope included the following, as referenced in our proposal CMI No. P-1233(R2), dated 3/26/10:

- 1) Evaluate the value engineering program in terms of team composition and overall program effectiveness.
- 2) Review provisions for value engineering in the respective contracts (A&E, CM, Trades) for adequacy.
- 3) Identify and evaluate value engineering recommendations proposed during the value engineering process (both accepted and rejected) for merit.
- 4) Determine reasons for rejected recommendations that appear valid.
- 5) Quantify potential cost savings from implemented recommendations.
- 6) Quantify potential savings lost due to rejection of apparently valid recommendations.
- 7) Review plans and specifications for value engineering ideas that may have been missed or not considered and quantify potential cost savings.

The objective of this study was to give assurances / opinions on the adequacy of the value engineering team, the value engineering process, and the program's effectiveness.

Description of the Event Center

The Orlando Events Center is a 750,000 SF multi-purpose sports and entertainment complex located in downtown Orlando, Florida, with an approximate seating capacity of 18,500. The primary function of the facility will be to support basketball and hockey sporting events; the facility will also support other events, such as music concerts and similar venues. As such, the facility and supporting infrastructure must accommodate a variety of configurations and event setups. The facility includes Public Spaces (event seating and suites;



CMI No. J-766

Orange County Comptroller
Orlando, Florida
Orlando Event Center – Value Engineering Audit

30 September, 2010
Page 3

concourses and circulation; restroom facilities, first aid and other service areas); Food Service and Retail Merchandising (concessions, retail kiosks and stores, restaurants/lounges, and related food service support); Event Support Areas (dressing /green rooms, press and production support, team facilities, building operations); Support Elements (mechanical/electrical, ice making plant, loading docks/staging areas, security/command center); and Administrative Offices.

Information Used to Prepare this Study

CMI was provided or had access to the following information in order to perform this study:

- 1) Copies of contracts between the project team members and Events Center Development, LLC
- 2) Design Development (DD) level drawings (set issued to the NBA)
- 3) Value Engineering Log #1 through #6
- 4) Interviews with Developer's Representative and Program Manager representatives

Methodology

The goal of a Value Engineering (VE) Program is to identify and evaluate alternative systems, equipment and materials to those presented by the design team, for the purpose of achieving a lower price without diminishing the intended quality or design concept. A common approach to Value Engineering is to assemble a team (VE team) comprised of representatives from the responsible parties on the project, including at a minimum the Owner, Architect, and Contractor. Other team members that have a responsibility for delivering the completed project are also typically represented on the VE team, so that their perspectives are considered when deciding on which VE alternatives to accept. The typical process involves the following steps:

- 1) Develop a list of potential alternatives
- 2) Evaluate the alternatives for function and cost
- 3) Determine the feasibility of implementing proposed changes
- 4) Document the VE process



CMI No. J-766

Orange County Comptroller
Orlando, Florida
Orlando Event Center – Value Engineering Audit

30 September, 2010
Page 4

Our methodology for reviewing the VE program for the Events Center Complex anticipated a detailed review of project files to assess the VE items proposed for consideration, along with the respective action to either incorporate a proposed change into the project or to reject it for insufficient merit. However, we discovered that there was little documentation of the VE Program available for review. As a result, we modified our methodology for this review.

The Events Center Complex is a large project with a complex organizational structure. The key team members tasked with a responsibility for Value Engineering were the Developer's Representative, the Program Manager, the Construction Manager, and the Architect. Upon the issuance of CMI's notice to proceed with the VE audit, a number of attempts were made by the Developer Representative to arrange a Kick-Off meeting with the key representatives of the VE team. Due to scheduling conflicts, the Kick-Off meeting was delayed for several weeks. In order to get the VE review underway, it was agreed to conduct the meeting with only representatives from the Developer's Representative, the Program Manager, County Audit and CMI present. An overview of the project and the VE process was presented by the Program Manager. During our briefing at the Kick-Off meeting, we were informed that VE logs, maintained by the Construction Manager, represented the only documentation of the VE program. There are no project files with backup for the various VE items considered, and there are no records, in the form of meeting minutes or VE reports, that account for the actions/inactions taken. This limited much of our data gathering to interviews, rather than review of project files.

VALUE ENGINEERING REVIEW ELEMENTS

Task 1 – Evaluate the Value Engineering Program in terms of Team Composition and Overall Effectiveness

To determine the VE team members and individual roles and responsibilities, and to get an overall assessment of the VE Program for the Events Center facility, we conducted a review of the contract requirements for each key team member, along with a review of the primary source records – the VE Logs. Additionally, we conducted interviews with the Developer Representative and Program Manager. These interviews provided the



CMI No. J-766

Orange County Comptroller
Orlando, Florida
Orlando Event Center – Value Engineering Audit

30 September, 2010
Page 5

primary input for our analysis and conclusions. We noted that the VE team consisted of the following members, with their respective primary responsibilities:

- 1) Developer: responsible for acceptance or rejection of VE items presented as “commercially and reasonably necessary to cause the Budget Cap from being exceeded”.
- 2) Developer Representative: responsible to “assist, as requested by Developer, with value engineering/cost saving suggestions”; they facilitated the VE program between the Developer and other VE team members.
- 3) Program Manager: responsible to “assist with Value Engineering /Cost saving suggestions”; they provided an independent opinion of VE items, in terms of impact on the Quality and Cost objectives of the program, based on their experience with similar projects.
- 4) Construction Manager: responsible to “assist Architect in providing a life cycle...cost reduction and Value Engineering analysis on major construction components...conduct workshop...and prepare a formal report...following these workshops”; the Construction Manager’s schematic design (SD) estimate provided a baseline from which the VE team worked to achieve the project Budget Cap.
- 5) Architect: responsible to “participate in the Value Engineering Program...to provide alternate solutions, systems, materials or techniques...to ascertain that the recommended design achieves a desirable and practical programmatic and economic solution within the limitations of the Project Budget”; they were also responsible for incorporating accepted VE items into the Contract Documents.

We found that the overall VE Program was not well documented. However, through reviews of the VE Logs and interviews with the Program Manager, we found that the VE Program identified and quantified a significant number of VE Items. There were a total of 279 items documented in the VE Logs for consideration. Of the total 279 VE Items:

- 1) 5 items were accepted without consideration of their potential cost savings. However, it is reasonable to assume that subcontractor pricing was less because of these VE items being accepted.
- 2) 25 items were rejected without consideration of their potential cost savings.



CMI No. J-766

Orange County Comptroller
Orlando, Florida
Orlando Event Center – Value Engineering Audit

30 September, 2010
Page 6

- 3) 7 items were identified as duplicates with other VE items on the logs.
- 4) 242 items were evaluated for cost impacts to the Event Center Project, and the total potential cost savings of the VE Program was shown to be \$90.6 million, with the following breakdown:

Status	# Items	Estimated Savings (millions)
a. Accepted	110	\$51.6
b. Partially Accepted	15	\$11.9
c. Partially Not Accepted	(same 15 items)	\$5.5
d. Not Accepted	<u>117</u>	<u>\$21.6</u>
	242	\$90.6

Although the VE process was not well documented, we found the VE Program to have been effective for the following reasons:

- 1) VE items were considered for all of the major building components, as further discussed under Task 2.
- 2) The Project Budget Cap was achieved at the time the GMP was established.
- 3) The VE program was documented by the VE Logs #1, dated 1/8/08 through #6, dated 8/26/08.
- 4) 279 VE items were considered – 242 were priced for a total projected savings of \$90.6 million.
- 5) 130 VE items were accepted or partially accepted for a net projected savings of \$63.4 million. These 130 VE items were placed into the following categories (allowance reductions were divided into two categories-Reduce Allowance (d) for allowances reduced as a result of further development which allowed for scope definition and pricing and Reduce Allowance (r) for allowances reduced with the understanding that the risk of budget overruns for those line items was increased by reducing the allowance within the GMP):

Category	# Items	Estimated Savings (millions)
a. Design Change/Added Feature/Reduce Allowance (d)	92	\$44.1
b. Contingency Reduction/Reduce Allowance (r)	13	14.4



CMI No. J-766

Orange County Comptroller
Orlando, Florida
Orlando Event Center – Value Engineering Audit

30 September, 2010
Page 7

c. Eliminate Feature / Program Change	18	3.3
d. Funding Change	7	1.6

Based upon our review of the limited documents, and to a greater degree from input provided by the Developer Representative and Program Manager through various interviews, we found that the VE team was comprised of the appropriate members; and, along with the roles/responsibilities defined for each team member, the VE team composition was adequate for the size and complexity of the Events Center project. Further, we found that the VE Program was effective in reducing cost without diminishing the intended quality or design concept.

Task 2 – Review Contracts for Adequacy of Value Engineering Provisions

CMI reviewed contract agreements between the respective parties and Events Center Development, LLC to identify the contractual responsibility for the Value Engineering Process within each contract. The following excerpts define the intent of the VE Program:

- 1) Developer Representative – responsible for assisting, as requested by Developer, with value engineering / cost saving suggestions.
- 2) Program Manager – responsible for assisting with Value Engineering / Cost saving suggestions.
- 3) Construction Manager – responsible for assisting the Architect in providing a life cycle analysis and for providing a cost reduction and Value Engineering analysis on major construction components, such as, but not restricted to (1) structural system, (2) exterior envelope, (3) mechanical system, (4) lighting, and (5) power service. The Construction Manager's responsibility also included conducting a series of Value Engineering analysis workshops during the Schematic Design, Design Development and GMP Development phases of the Project to develop cost saving ideas for the Work. A formal report analyzing the Value Engineering was to be prepared by Construction Manager following these workshops and distributed to the Project Development Team.
- 4) Architect – responsible for participating in the Value Engineering Program developed by the CM, with input from Program Manager by providing alternate solutions, systems, materials or techniques to achieve Project requirements, allowing the Developer to ascertain that the recommended alternate



CMI No. J-766

Orange County Comptroller
Orlando, Florida
Orlando Event Center – Value Engineering Audit

30 September, 2010
Page 8

designs achieved a desirable and practical programmatic and economic solution within the limitations of the Project Budget.

Due to the limited project records, the extent of participation in the VE Program by the various team members was not well documented. However, from a review of the limited records and to a greater degree from input provided by the Developer Representative and Program Manager through various interviews it appeared that each of the parties participated, to some degree, in the Value Engineering Program. We noted the following:

- 1) The Developer Representative and Program Manager were involved in identifying, reviewing, and coordinating actions taken on the VE Items with the Developer. This participation was consistent with the Developer Representative's and Program Manager's contractual responsibilities.
- 2) The Construction Manager (CM) developed pricing for evaluation of VE Items and maintained documentation of the VE Items and actions taken through the use of a Value Engineering Log. Reports analyzing the Value Engineering Program were not prepared by the CM. However, a Value Engineering Log was maintained which documented VE items identified and studied, along with respective actions taken. While a more formal documentation of the VE Program was anticipated, this participation seems to have met the intent of the contractual responsibilities for pricing and documentation of VE Items.

Another contractual requirement of the VE Program developed by the CM was to analyze major facility components, such as structural systems (represented by CSI Divisions 03, 04, 05), exterior envelope (represented by CSI Divisions 07, 08), mechanical systems (represented by CSI Division 15), and lighting & power systems (represented by CSI Division 16). We found that VE Items had been considered for each of these major components of the facility, along with other facility components (see Summary by CSI Division below):

<u>Summary by Division</u>		
<u>CSI Division</u>	<u>Estimated Savings / Add</u>	<u>% of Total</u>
General	\$ (9,766,820)	10.8%
02	\$ (6,879,666)	7.6%



CMI No. J-766

Orange County Comptroller
Orlando, Florida
Orlando Event Center – Value Engineering Audit

30 September, 2010
Page 9

03	\$	(5,916,434)	6.5%
04	\$	(680,900)	0.8%
05	\$	(9,377,100)	10.4%
06	\$	(1,958,000)	2.2%
07	\$	(6,723,499)	7.4%
08	\$	(1,170,849)	1.3%
09	\$	(12,673,375)	14.0%
10	\$	(2,775,193)	3.1%
11	\$	(5,383,000)	5.9%
12	\$	(1,719,100)	1.9%
13	\$	(502,500)	0.6%
14	\$	(2,049,600)	2.3%
15	\$	(7,153,131)	7.9%
16	\$	(2,830,588)	3.1%
17	\$	(5,350,000)	5.9%
20	\$	(7,644,868)	8.4%

Approximately 40% of the value of structural components was in early concrete subcontract bid packages, and there were limited opportunities for alternative design solutions with the foundation and concrete superstructure systems. Much of the exterior envelope components were also included in early subcontract bid packages. There were limited opportunities for VE alternatives for Mechanical, Electrical, and Power systems due to Program requirement for obtaining green building certification. Despite these limitations, we found that each major category, required to be included in the VE Program by contract, had been identified for Value Engineering analysis and the value of the VE Items considered for each category was representative of their respective relative values in the GMP.

Structural Systems	16.9% of VE Program	26.4% of GMP
Exterior Envelope	8.7% of VE Program	7.7% of GMP
Mechanical Systems	7.9% of VE Program	10.3% of GMP
Lighting and Power Service	3.1% of VE Program	7.9% of GMP

Based on the understanding that there were some limitations on the VE Program, the Construction Manager's participation in the VE Program was consistent with the contractual responsibilities.



CMI No. J-766

Orange County Comptroller
Orlando, Florida
Orlando Event Center – Value Engineering Audit

30 September, 2010
Page 10

- 3) The Architect's involvement in the VE Program was not documented, so the extent of their involvement was unclear. However, based on interviews with the Program Manager, the Architect:
 - a. Prepared alternative design solutions for the CM to evaluate pricing
 - b. Incorporated accepted or partially accepted VE Items into the construction documentsThis participation was consistent with the contractual responsibilities.

Task 3 – Evaluation of VE Recommendations Considered for Merit

There were a total of 279 items documented in the VE Log for consideration, with 242 of the items evaluated for potential savings. The total estimated potential savings was \$90.6 million, with the following breakdown:

Category	# Items	Estimated Savings (millions)
1) Accepted	115	\$51.6
2) Partially Accepted	15	\$11.9
3) Partially Not Accepted	(same 15 items)	\$5.5
4) Not Accepted	<u>149</u>	<u>\$21.6</u>
	279	\$90.6

Due to the lack of documentation, project records with specific scope and pricing for VE items were not available for review. Alternatively, we selected a limited sampling of items from the VE Log and reviewed them to determine merit. Our review consisted of an examination of project plans and specifications, and an assessment of the value in the VE Log for the selected items. The following are the sample items selected and a brief narrative of our findings:

- 1) *VE Log, Audit Line #3 – Reduce Tower Height “Drop Tower Hospitality from Level 7 to Level 6 – Reduce Tower height by 20’ – Reduce Tower gross area by 1800 GSF.* This Item was noted on the VE Log as Accepted, at a value of (\$869,500). From our observation of the drawings, we found them to be adequate for the phase of the submission with references to details properly annotated. Based on construction prices in the year 2008, we found the savings for the VE Item to be fair and reasonable.



CMI No. J-766

Orange County Comptroller
Orlando, Florida
Orlando Event Center – Value Engineering Audit

30 September, 2010
Page 11

- 2) *VE Log, Audit Line #234 – Item 16410.000 Revise emergency power configuration – Utilize one (1) single larger emergency generator and rework feeders, panel, and MCC locations. This will eliminate the emergency paralleling switchgear power requirements. This will increase the overall quantity of automatic transfer switches. This will also result in a total revision of the Emergency Generator System.* This Item was noted on the VE Log as Accepted, at a value of (\$200,000). Based on our review we find the cost savings to be fair and reasonable. In addition to the initial cost savings, over the life of the equipment, the owner should see reduced maintenance labor costs, reduced fuel costs required to exercise one generator, instead of two, and a potential savings in replacement parts and service calls.
- 3) *VE Log, Audit Line #236 – Item 16510.000 Delete (4) Desiccant Cooling Units DAHU 7a, B, C, D -I, Electrical components associated with them (See VE Estimate Item #15870.511 for more information).* This Item was noted on the VE Log as Rejected, at a value of (\$33,800). The estimated deletion of the electrical portion of this work is a fair price for this work.
- 4) *VE Log, Audit Line #237 – Item 16200.000 Delete (4) 2000 amp 277/480 v., 3 phase 4 wire Vertical Buss Duct Systems completely and replace with (4) 2000 amp 277/480v., 3 phase 4 wire Distribution Boards and associated panel feeders fed from the Buss Duct System.* This Item was noted on the VE Log as Accepted, without a projected cost savings. It is common practice to VE buss ducts from a design and replaces them with either panels, feed through panels, or junction boxes, and it is considered reasonable to have accepted this item.
- 5) *VE Log, Audit Line #240 – Item 16806.110 Delete underground conduits between closets, run all horizontal trucks overhead in hoops.* This Item was noted on the VE Log as Rejected, at a value of (\$127,000). According to our review, this appears to be a substantial credit with no change in function, durability, or overall life expectancy of the cables, and would have been a good item to accept. There is also some added flexibility to the system based on access to trunk lines/feeders.



CMI No. J-766

Orange County Comptroller
Orlando, Florida
Orlando Event Center – Value Engineering Audit

30 September, 2010
Page 12

There would be opportunities to replace or repair cables without removing all the cables from any one conduit.

- 6) *VE Log, Audit Line #241 – Item 16340.520 Delete (1) show power 2500 amp switchboard and feeder.*

This Item was noted on the VE Log as Accepted, at a value of (\$150,000). Based on the feeder lengths and current material prices, we find that the estimated savings to be fair and reasonable.

- 7) *VE Log, Audit Line #244 – Item 16439.989 Target Lighting reduction HOK and SSR issue.* This Item was noted on the VE Log as Accepted, at a value of (\$1,000,000). We reviewed the lighting fixture schedule, as well as the number and type of light fixtures shown on the drawings. We understand that the \$1,000,000 cost savings target was based on opening the specification to competition. Had the initial pricing been based on open competition, a \$1 million reduction would have been very aggressive and concessions to aesthetics would have likely been required.

Based on our test sampling, our review of the VE logs, and our interviews with the Program Manager, we concluded that a sufficient number of VE Items were considered for each of the major components of the facility, as contractually required. Further, we concluded that a sufficient number of VE Items were evaluated for other components of the facility. For the VE Items that had pricing developed, we concluded, based on our sampling and interviews, that the pricing represented a fair and reasonable potential cost savings estimate.

Task 4 – Determine Reasons for Rejected Recommendations that Appear Valid

Of the total 279 VE items considered, 164 were Rejected (either unaccepted or partially accepted). Unaccepted items and the unaccepted portion of the partially accepted items represented an estimated potential savings of \$27.2 million or 30.0% of the total estimated savings. The following are the three primary reasons given for not accepting a VE Item partially or in total:

- 1) The design was too far along to realistically implement the proposed change.
- 2) Accepting the VE Item would result in a reduced quality, below the expected standards.
- 3) The VE Item would result in a change to the overall program.



CMI No. J-766

Orange County Comptroller
Orlando, Florida
Orlando Event Center – Value Engineering Audit

30 September, 2010
Page 13

Based on our review of the VE Logs and interviews with the Program Manager, we concluded that the majority of the Rejected Items that Appeared Valid fell into these categories. We consider these to have been fair and reasonable justifications for rejecting VE Items that appeared valid.

Task 5 – Quantify Potential Cost Savings from Implemented Recommendations

Of the total 279 VE items considered, 130 items were Implemented (either accepted or partially accepted). The total value of accepted items and the accepted portion of partially accepted VE Item was \$63.4 million or 70.0% of the \$90.6 million potential savings. The following categories describe the type of items accepted or partially accepted:

Category	# Items	Estimated Savings (millions)	Accepted or Partially Accepted (millions)	
1) Design Changes	67	\$34.6	\$32.2	35.5%
2) Added/Deleted Features and Program Changes	29	(\$ 0.5)	(\$ 0.8)	(0.89%)
3) Reduced Contingency/Allowances/Funding Changes	<u>34</u>	<u>\$34.8</u>	<u>\$32.0</u>	<u>35.3%</u>
	130	\$68.9	\$63.4	70.0%

Based on our test sampling and interviews with the Program Manager, we concluded that the estimated savings for VE items accepted or partially accepted represents a fair and reasonable potential cost savings estimate.

Task 6 – Quantify Potential Savings Lost Due to Rejection of Valid Recommendations

In the discussion above for Tasks 3 and 4, we noted that there were a total of 279 items documented in the VE Log for consideration, at an estimated value of \$90.6 million. Of the total, 164 items were Rejected (either partially accepted or not accepted completely). The total value of VE Items not incorporated into the GMP was \$27.2 million or 30.0%. Further, we noted that 25 of these items were rejected without consideration of their potential cost savings. Based on our review of the VE logs and interviews with the Program Manager, we concluded that the following rejected items would have been valid recommendations for consideration:

- 1) *VE Log, Audit Line #49 – Change CMU wall above concession counters to gyp board.* This Item was noted on the VE Log as Rejected, with no value of estimated savings. This VE Item was rejected



CMI No. J-766

Orange County Comptroller
Orlando, Florida
Orlando Event Center – Value Engineering Audit

30 September, 2010
Page 14

because it was deemed that the design was too far along to implement the change. Accepting this item would have resulted in numerous dimensional revisions and coordination with other trades.

- 2) *VE Log, Audit Line #214 – Delete all overflow piping; use scuppers in lieu of the overflow storm piping; HOK will have to agree to this and locate in the roofing specification.* This Item was noted on the VE Log as Rejected, at a value of (\$870,926). The estimated deletion of this work is considered fair and reasonable for the plumbing portion of this work. However, this VE Item was rejected because it was deemed that the design was too far along to implement the change. If implemented, additional costs to other trades, including possible rework, would have reduced the estimated savings. There might also have been schedule impacts that could have further offset the cost savings for this item.
- 3) *VE Log, Audit Lines #199 and #236 – Delete (4) Desiccant Cooling Units DAHU 7a, B, C, D-1 (NHL standards).* These Items were noted on the VE Log as Rejected, at a value of (\$1,054,600). The estimated deletion of this work is a fair and reasonable price. This scope was programmed to meet NHL standards for ice-hockey. Accepting these items would have been consistent with other accepted VE Items related to deferring full compliance with NHL standards. However, these items were noted on the VE Log as rejected due to a potential need of this function for Ice Shows.
- 4) *VE Log, Audit Line #240 – Item 16806.110 Delete underground conduits between closets, run all horizontal trucks overhead in hoops.* This Item was noted on the VE Log as Rejected, at a value of (\$127,000). According to our review, this appears to be a substantial credit with no change in function, durability, or overall life expectancy of the cables, and would have been a good item to accept. There is also some added flexibility to the system based on access to trunk lines/feeders. There would be opportunities to replace or repair cables without removing all the cables from any one conduit.

These items represent a potential of between \$1.5 and \$1.8 million of potential cost reductions that were lost. Other VE items that were not accepted were considered rejected for valid reasons.



CMI No. J-766

Orange County Comptroller
Orlando, Florida
Orlando Event Center – Value Engineering Audit

30 September, 2010
Page 15

Task 7 – Review Plans and Specifications for VE Ideas that May Have Been Missed or Not Considered and Quantify Potential Savings

Over a 7-month period 279 VE Items, valued at over \$90 million dollars were identified, evaluated and acted upon – either accepted, partially accepted, or rejected. Some evaluations were quickly reached and accepted or rejected based on the nature of the VE Item. Others were priced thoroughly, evaluated for impact on the program, accepted or partially accepted, and implemented into the project. With a project of the magnitude and complexity of the Orlando Events Center, the number of potential VE Items is almost unlimited. The list of items will vary with VE team personnel and the amount of time to develop and evaluate a list of items. We reviewed the drawings to identify other potential VE Items not considered in the VE Program. We noted the following items, as examples:

- 1) *Replace circular NBA Home Locker Room & Surrounding Hallway with a Rectangular Room and Hallway.* This results in a reduction of fourteen thousand dollars (\$14,000) in the GMP. Additional factors that could be considered would be the special furnishings required for a circular room. If the circular furnishings are not being considered the shape of the room could result in considerable non functioning space.
- 2) *Reduce Wall Height at Practice Court:* The exterior wall enclosing the practice court is shown as 38'-6". Based on a wall height of 30'-0" the estimated saving is seventy two thousand dollars (\$72,000).
- 3) *Replace the Metal Panel Screen Wall with a CMU and Stucco Wall:* The metal panel screen wall enclosing the mechanical yard could be replaced with a CMU wall on concrete wall footing and finished with stucco and paint. This substitution could result in savings estimated at eighteen thousand dollars (\$18,000).



CMI No. J-766

Orange County Comptroller
Orlando, Florida
Orlando Event Center – Value Engineering Audit

30 September, 2010
Page 16

CONCLUSIONS

Based on our review of the Value Engineering Program for the Orlando Events Center, we have reached the following conclusions:

- 1) The Value Engineering team was comprised of the appropriate members and was adequate for the size and complexity of the Events Center project.
- 2) The VE Team conducted a thorough and comprehensive VE Program that identified over \$90 million of potential savings, with over \$60 million of those ideas being implemented into the project, achieving the program financial goals, without sacrificing the project quality and scheduled completion goals.
- 3) The Contract language in each of the agreements for the key prime contractors was sufficient for developing and implementing a Value Engineering Program.
- 4) We found that the overall program was not well documented. The only project records of VE Items and the respective actions taken is the Value Engineering Log developed and maintained by the Construction Manager.
- 5) A sufficient number of VE Items were considered for each of the major components of the facility, as contractually required in the CM agreement. Further, we concluded that a sufficient number of VE Items were evaluated for the other components of the facility.
- 6) Based on our sampling and interviews, we concluded that the potential cost savings shown in the VE log represented fair and reasonable pricing for the respective VE Items.
- 7) Based on our review of the VE Logs and interviews with the Program Manager, we concluded that the majority of the Rejected Items that Appeared Valid were rejected based on reasonable justifications.
- 8) The total value of Implemented (accepted items and the accepted portion of partially accepted items) was \$63.4 million or 70.0% of the potential savings. We concluded that the VE Program was a comprehensive assessment of potential cost savings ideas.
- 9) The total value of VE Items not incorporated into the GMP was \$27.2 million or 30.0%. Further, we noted that 25 items were rejected without consideration of their potential cost savings. Based on our sampling



CMI No. J-766

Orange County Comptroller
Orlando, Florida
Orlando Event Center – Value Engineering Audit

30 September, 2010
Page 17

and interviews, we concluded that the majority of the VE items not incorporated into the project were rejected based on valid justifications. However, we noted that some of the rejected VE items would have been valid candidates for consideration, with a potential of between \$1.5 and \$1.8 million of additional cost reductions.

- 10) With a project of the magnitude and complexity of the Orlando Events Center, the number of potential VE Items is almost unlimited. Based on a review of the drawings and interviews with the Program Manager, we concluded that there could have been other items considered with the VE Program, and we identified some examples. However, the VE team conducted a thorough and comprehensive study of potential cost savings ideas.

RECOMMENDATIONS

No further action for the Orlando Events Center Value Engineering Team is recommended. However, as a lesson learned from this audit of the Value Engineering Program, we recommend for future projects, that a more structured process be followed, with the detailed documentation called for in the contract language.



CMI No. J-766

REPRESENTATIVE PROJECTS

Accommodation

Hyatt Hotel Renovation; Shades of Green Hotel
600 Biscayne Bay, Modello

Assembly

City of Orlando Events Center
Most Precious Blood Catholic Church
St. Isaac Jogues Catholic Church
Orange County Convention Center – Phases I – V
Palm Beach Convention Center

Aviation

Orlando International Airport
Tampa International Airport
Miami International Airport
Southwest Florida International Airport
Fort Lauderdale-Hollywood International Airport
Palm Beach County Airport
Jacksonville International Airport
Newark Liberty International Airport, NJ
Asheville Regional Airport, NC
Indianapolis International Airport, IN
San Diego International Airport, CA
San Francisco International Airport, CA
Louisville International Airport, KY

Disaster / Emergency

GOAA Hurricane Charley Clean Up
GOAA Hurricane Rehabilitation & Restoration
Seminole State College Hurricane Repairs
Krome Processing Center Hurricane Damages
Orange County Hazard Mitigation Grant Program

Educational (K-12)

Orange County Public School
Miami-Dade County Public Schools
Seminole County Public School
St. Lucie County Public Schools
Volusia County Schools

Educational (Colleges & Universities)

Broward College
Rollins College
IRCC / FAU Joint Use Facility
Seminole Community College
Valencia Community College
Florida Agricultural & Mechanical University
Florida International University
University of Central Florida
University of Florida
University of Miami
University of South Florida

Entertainment

Carver Theater
City of Orlando Events Center
Daytona Intl. Speedway - Expanded Visitors Center
Disney's Magic Kingdom Parade Storage Building
Dr. P. Phillips Performing Arts Center
Universal Studios Expansion
Walt Disney World

Facilities Improvement

Animal Services Building – Orange County
Amory SRT HVAC & Space Renovation – Orange County
IOC HVAC Upgrade – Orange County
Admin Center Power & Emergency Power Upgrade – Orange County
Fire Alarm System Upgrade – Orange County Courthouse
Facilities Assessment – Orange County Convention Center
Roof Replacement – Orange County Convention Center
West Bldg. Fire Alarm Upgrade – Orange County Convention Center
Building 830 Facility Improvement – Orlando Int'l Airport
OOC HVAC & Generator Upgrade – City of Orlando

Healthcare

Boca Raton Community Hospital
Central Florida Blood Bank
Health Central Hospital Cancer Center
Hillsborough County Medical Examiners Facility
North Broward Hospital District Master Plan
VA Hospital Miami Renovation of ER, Urology & Mental Health
University of Miami, JMH Campus Clinical Research Building

Infrastructure

Dames Point Marine Terminal
Oakland Park – Phases 1A & 1B
SFWMD Lakeside Ranch Stormwater Treatment Areas

Judicial

Alachua County Courthouse
Charlotte Federal Courthouse, NC
Duval County Courthouse
Ft. Pierce Federal Courthouse
Jacksonville Federal Courthouse
Lake County Judicial Center
Okaloosa County Courthouse
Orange County Courthouse; Orange County Juvenile Justice Center
Orange County Intake, Release, Medical/Mental Health & Housing
Seminole County Courthouse

LEED & Sustainability

Alachua County Court Support Services
Newark Liberty International Airport - Terminal A, NJ
University of Florida – Graduate Studies Building (Hough Hall)

Parking Garages

Seminole Community College; VA Hospital, Gainesville
Lake County Judicial Center; University of Miami

Parks and Recreation

City of Kissimmee - Lakefront Park
City of Orlando - Eagle Nest Park
Orange County - Dr. Phillips Community Park
Orange County Parks - Little Econ Greenway Ph 2
City of S. Miami - Murray Park Multipurpose Center
St. Lucie County - Skateboard Park
Streetscape – Events Center

Public Safety

Public Safety Building - City of Stuart
Call Center - Orange County
Sheriff Central Complex - Orange County
Fire Stations - Orange County
EOC Buildings - Sarasota & Lake County
Center for Public Safety & Forensic Science – UCF
Public Safety Building - Valencia Community College

Special Services (Auditing, Claims, etc.)

Metropolis Phases 1 & 2; 900 Biscayne Bay
Quantum on The Bay; The Radius; Pero Farms; Artecity
Lake County Judicial Complex (GMP Analysis)
Palm Beach County- Solid Waste Transfer Facility
University of Central Florida - Engineering Building III

Transportation

Oak Street Widening – City of Kissimmee
Florida High Speed Rail
Florida Turnpike Enterprise – Toll Plazas
Fourth Runway Program – Orlando International Airport

US Armed Forces, etc.

Camp Blanding Ammunition Supply Point, FL
Fort Sill Commissary, OK
New Orleans NAS-JRB-DECA and Navy Exchange, LA
Randall Hall Michie Stadium Athletic Complex, NY
West Point Rugby Training & Sports Complex, NY

Contact: ganesh.jiawon@cminc.biz Tel: 407-293-4168
Website: www.cminc.biz

