

2018

# RISK AND CONTROL ASSESSMENT

## SCDOT Intelligent Transportation Services On-Call Commodities and Services Contract Activity



INTERNAL AUDIT  
SERVICES

January 19, 2018

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# 1 FOREWORD

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## **AUTHORIZATION**

The South Carolina Office of the State Auditor established the Internal Audit Services division (IAS) pursuant to SC Code Section 57-1-360 as revised by Act 275 of the 2016 legislative session. IAS is an independent, objective assurance and consulting function designed to add value and improve the operations of the South Carolina Department of Transportation (SCDOT). IAS helps SCDOT to achieve its objectives by bringing a systematic, disciplined approach to evaluating the effectiveness of risk management, internal control, and governance processes and by advising on best practices.

## **STATEMENT OF INDEPENDENCE**

To ensure independence, IAS reports administratively and functionally to the State Auditor while working collaboratively with SCDOT leadership in developing an audit plan that appropriately aligns with SCDOT's mission and business objectives and reflects business risks and other priorities.

## **REPORT DISTRIBUTION**

This report is intended for the information and use of the SCDOT Commission, SCDOT leadership, the Chairman of the Senate Transportation Committee, the Chairman of the Senate Finance Committee, the Chairman of the House of Representatives Education and Public Works Committee, and the Chairman of the House of Representatives Ways and Means Committee. However, this report is a matter of public record and its distribution is not limited.

## **PERFORMED BY**

Beth Adkins, CIA, CFE  
Internal Audit Manager

## **REVIEWED BY**

Wayne Sams, CPA  
Director of Internal Audit Services

## **ACKNOWLEDGEMENT**

We wish to thank members of management and staff in the Traffic Engineering, Procurement, and Human Resources Divisions for their cooperation in assessing risks and developing actions to improve internal control and enhance operating performance.

## 2 EXECUTIVE SUMMARY

**ACTIVITY ASSESSED:** Intelligent Transportation Systems On-Call  
Commodities and Services Contract Activity

**NUMBER OF PROCESSES IN THE ACTIVITY:** 2

**NUMBER OF PROCESSES ASSESSED IN THIS ENGAGEMENT:** 2

**PROCESSES ASSESSED AND RESPONSIBLE DIVISIONS:**

1. Contract Award – Procurement Division
2. Work Order Assignment and Invoice Processing – Traffic Engineering Division

**OVERALL RISK EXPOSURE TO SCDOT:**

Minimal	Low	Med-Low	Medium	Med-High	High	Extreme
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**RISK MANAGEMENT OBSERVATIONS:**

**Process 1 – Contract Award (Procurement Division):**

1. Approximately five percent of employees with procurement roles have not completed the most current required Code of Conduct and Ethics training online module. Additionally, this training does not assess the trainee's knowledge of the material and the module allows the trainee to fast forward through the material without listening to the audio for each slide (detailed in Observation 5.1 E1 on page 21).
2. Employees who review and approve SCEIS purchase orders may not be adequately trained in procurement code requirements. Enhancements to reviewer training can make for effective reviews and reduce procurement risks (detailed in Observation 5.1 D1 on page 22).
3. We tested all 32 employees who were granted access rights to the SCEIS procurement system to determine whether access was granted only after completing required policy and procedure training. Two were granted access prior to completing the training (detailed in Observation 5.1 E2 on page 23).

## EXECUTIVE SUMMARY continued

4. We tested a sample of ten procurement ratifications and found that two lacked the requisite signature by headquarters' management indicating approval of the ratification and acceptance of the corrective action (detailed in Observation 5.1 E3 on page 24).
5. Evidence does not exist to verify that procurement staff performed a review to determine that a bidder meets the State standard for responsibility and responsiveness (detailed in Observation 5.1 D2 on page 25).
6. For one of the five solicitations tested, evidence to support RFP panel members signed required nondisclosure and integrity forms does not exist (detailed in Observation 5.1 E4 on page 26).

### Process 2 – Work Order Assignment and Invoice Processing (Traffic Engineering Division):

7. A permanent record of unexpected on-call work assigned to vendors is not developed and maintained (detailed in Observation 5.2 D1 on page 31).
8. Eight out of the ten on-call vendor invoices tested did not have adequate details or approvals on the associated timesheet to support the charges included on the invoice (detailed in Observation 5.2 E1 on page 32).
9. There are no existing documented desk procedures for creating work orders and reviewing invoices (detailed in Observation 5.2 E2 on page 33).
10. Conflicts of interest exist where inspections performed on maintenance work orders were performed by inspectors who are subcontractors of the primary contractor (detailed in Observation 5.2 E3 on page 34).

### PERFORMANCE MANAGEMENT OPPORTUNITIES:

1. A possible solution for addressing item 8 above is the use of SiteManager, a web-based daily work record application, or through purchasing or developing a similar application (detailed in Opportunity 6.1 P1 on page 36).
2. A SCEIS aging report would assist in identifying slow moving procurements assuring the procurement is finalized to meet the end users' time frame (detailed in Opportunity 6.1 P2 on page 36).



# 3 INTERNAL AUDITOR'S REPORT

January 19, 2018

Ms. Christy A. Hall, Secretary of Transportation  
and  
Members of the Commission  
South Carolina Department of Transportation  
Columbia, South Carolina

We have completed a risk and control assessment of the South Carolina Department of Transportation's (SCDOT's) Intelligent Transportation System On-Call Commodities and Services Contract activity. The objective of this assessment was to contribute to the improvement of risk management by evaluating SCDOT's exposure to risks and the controls designed by Management to manage those risks. Our review included two aspects:

- Facilitation of Management's assessment of risks and controls for providing reasonable assurance that significant risks have been identified and that controls are adequately designed to manage risk to an acceptable level, and
- Tests of internal controls over significant risks to determine whether the controls are operating effectively.

The results of both Management's assessment and our tests of controls are included in the *Risk and Control Assessment Results* section beginning on page 8. While our engagement was primarily focused on risk management, we have identified other matters that may represent opportunities for cost savings, revenue enhancement, process improvement, strengthened control environment, or more effective performance. These matters are detailed in the *Performance Management Opportunities* section on page 36.

We planned and performed the engagement with due professional care in order to obtain sufficient, appropriate evidence to provide a reasonable basis for our observations and conclusions. Our observations as a result of our testing are described in the *Risk and Control Assessment Results* section beginning on page 8 of this report.

George L. Kennedy, III, CPA  
State Auditor

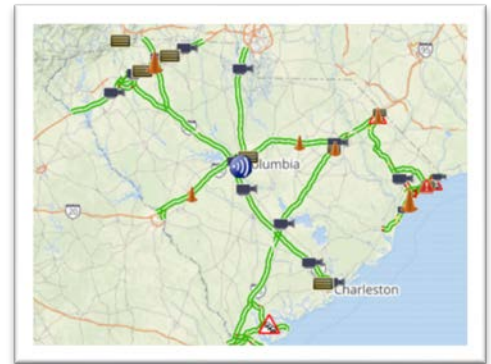
# 4 ENGAGEMENT OVERVIEW

## 4.1 BACKGROUND

In June 2016, a former SCDOT employee of the Intelligent Transportation Systems (ITS) section of the Traffic Engineering division was indicted by the South Carolina Grand Jury. The list of charges included criminal conspiracy, official misconduct, accepting extra compensation and three counts of receiving anything of value to influence a public employee. This former employee was a silent partner in three shell companies. His position in SCDOT allowed him to procure contracts and assign work to these companies.

Prior to the indictment, SCDOT had significant staff turnover in its headquarters procurement division (hereinafter referred to as “HQ Procurement”). The Agency hired a new HQ Procurement director in January 2015 and two procurement managers in April 2015. The new team, which includes individuals who worked previously with the South Carolina Materials Management Office, had already been in the process of revising procurement policies and procedures to ensure compliance with the South Carolina Consolidated Procurement Code. SCDOT leadership asked us to conduct this engagement to determine whether the policy and procedure revisions, along with recently implemented internal controls, would prevent and/or detect a similar event in the future.

ITS is responsible for the installation and maintenance of the fiber optics, highway cameras and message boards in operation throughout the state. This work is performed by various vendors through separate on-call contracts – one for installation and one for maintenance. “On-call” means the scope of work is determined as a need arises and the work is assigned to one of the vendors on a rotational basis. The maintenance contract has been in place since at least 2008. The current solicitation was awarded as an invitation for bid. The term is for a period of one year with four, one-year renewal options. After five years, a new solicitation is published. The current solicitation was awarded on November 13, 2014 with an end date of October 16, 2019. The targeted value of the solicitation is \$2,000,000. There are currently three vendors on the maintenance contract. The current installation contract was also an invitation to bid. There are two vendors on the installation contract which runs through September 21, 2018.



SCDOT Intelligent Information Systems Map  
[www.511sc.org](http://www.511sc.org)

## 4.2 OBJECTIVES

Management’s objective is to effectively mitigate risks through strengthened controls to prevent and/or detect improper or fraudulent payments in the ITS On-Call Contract activity. Our objective was to facilitate management’s assessment of risks in the processes used to procure and pay on-call vendor contracts as well as to assess the effectiveness of controls designed to manage those risks to an acceptable level.

### 4.3 SCOPE

The ITS On-Call Commodities and Services Contract activity is comprised of two processes as follows:

	<b>Process</b>	<b>Responsible Division</b>	<b>Relevance to Scope</b>	<b>Included in Scope</b>
1	Commodities and Services Procurement	HQ Procurement	High Relevance	Yes
2	Work Order Assignment and Invoice Processing	Traffic Engineering	High Relevance	Yes

We ranked each process' significance on a scale of low relevance, medium relevance, and high relevance based on the process' ability to contribute to the underlying causes of the indictment. We determined that our audit effort should be focused on only processes of medium and high relevance. Therefore, our scope included the processes marked "Yes" in the above table with their activities and transactions for the period April 1, 2016 through March 31, 2017.

The ITS on-call contract associated with the aforementioned indictment was procured through process 1 noted in the above table. This process is also used by all other SCDOT divisions for procuring goods and services (except construction and professional services contracts which are procured through separate processes). Our engagement scope will extend beyond on-call contracts to include an assessment of risks and controls associated with all types of procurements flowing through this process. This broader scope will provide feedback to Management on the effectiveness of its recent changes to procurement policies and procedures as well as identify other potential risk exposures.

### 4.4 METHODOLOGY

For the significant processes included in the engagement scope, we performed the following procedures:

1. We facilitated Management's completion of a process outline that documented the steps in the process and the individuals responsible for those steps.
2. We facilitated Management's completion of a risk and control matrix used to:
  - a. identify risks which threaten process objectives;
  - b. score the risks as to their consequence and likelihood of occurrence;
  - c. determine if controls are adequately designed to manage the risks to within the risk appetite; and
  - d. propose design improvements to controls when risks are not managed to within the risk appetite (Management of the Traffic Engineering and Procurement divisions agreed to use a conservative risk appetite score of 4).



3. We observed the discussion by key process owners and other subject matter experts performing the steps in procedure two above. We evaluated Management's assessment of control design and action plans for improving inadequate controls. We believe that Management's assessment was reasonable and comprehensive.
4. We tested key controls for risks with inherent scores of 6 and above [scale of 1 (lowest) to 25 (highest)] to determine if the controls are operating effectively. Testing included inquiry, observation, inspection of documentation, and re-performance of process steps.
5. We collaborated with Management to develop observations based on the assessments of controls which are not adequately designed and/or operating effectively.
6. We facilitated Management's development of action plans to improve control design and/or operating effectiveness with practical, cost-effective solutions.
7. We identified opportunities to improve performance management.

## 4.5 CONCLUSION

In our opinion, based on our evaluation of Management's assessment of risks and controls and on the results of our testing, internal controls need to be improved both in design and effectiveness to manage the significant risks associated with the ITS On-Call Commodities and Services Contract activity to within a prudently acceptable level. Overall risk exposure to SCDOT for this activity is assessed as medium-high. We collaborated with Management in the design of its Management Action Plans, which, if effectively implemented, are expected to reduce the overall risk exposure to an acceptable level (i.e. within the risk appetite).

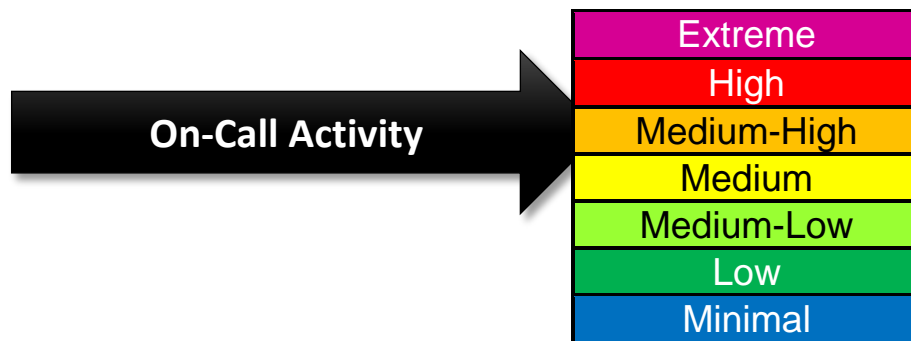
## 4.6 FOLLOW-UP ON MANAGEMENT ACTION PLANS

We will follow up with Management on the implementation of the proposed actions on an ongoing basis to ensure they are implemented effectively and timely. We will provide SCDOT leadership with periodic reports on the status of Management Action Plans and whether those actions are effectively and timely implemented to reduce risk exposure to an acceptable level.

# 5 RISK AND CONTROL ASSESSMENT RESULTS

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## Overall Risk Exposure to SCDOT for this Activity



## Risk and Control Assessments by Process

	Process	Detailed in Section	Overall Control Assessment	Process Risk Exposure
1	Commodities and Services Procurement	5.1	Controls need improvement in both design and operating effectiveness.	Medium
2	Work Order Assignment and Invoice Processing	5.2	Controls need improvement in both design and operating effectiveness.	Medium-High

# 5.1 PROCESS 1 Commodities and Services Procurement

## Process Objectives






1. To comply with the requirements of the SC Procurement Code and effectively manage the risk of improper payments.










## Process Description







Procurements at SCDOT may originate at headquarters or in the districts. While the end user places the initial request and must approve the vendor selected, HQ Procurement plays a key role in managing the procurement selection process. While district procurement staff report organizationally to each District Engineering Administrator (DEA), HQ Procurement collaborates with procurement staff in the districts in handling end user requests and provides oversight on procurements above certain dollar thresholds. Training of HQ Procurement staff is conducted to maintain consistency in handling end users requests. HQ Procurement enlists employees to serve on request-for-proposal (RFP) panels and instruct the employees on procurement law relative to RFP evaluation.














## Summary of Significant Process Risks and Controls













Internal Controls determined to be inadequate or ineffective are described in the Control Observations following the table.













	A	B	C	E	F	G	H
	SIGNIFICANT RISKS <i>and Consequences</i>	INHERENT RISK SCORE (Before Considering Controls)	RESIDUAL RISK SCORE (After Considering Design of Controls)	MANAGEMENT'S ASSESSMENT OF CONTROL DESIGN	KEY CONTROL(S) TESTED BY INTERNAL AUDITOR (Primary Controls Which Provide Greatest Risk Treatment are in Bold)	INTERNAL AUDITOR ASSESSMENT OF CONTROL EFFECTIVENESS	CURRENT RISK EXPOSURE TO SCDOT
		1 = Low 25 = High Risk Appetite = 4 or Less (See Scoring Matrix in Appendix A)					
1	<p><b>Cutting corners or ignoring laws and regulations to rush procurement</b></p> <p><i>Violation of laws and regulations; lawsuit; negative impact on agency certification; harm to reputation; protest delays process</i></p>	<b>16</b>	<b>3</b>	 Adequate	<p>1. Ethics training for all staff annually</p> <p><b>2. Review and approval workflow in SCEIS</b></p> <p>3. Procurement policies and procedures training and refresher prior to commencing procurement activities</p> <p>4. Ratification process on unauthorized procurement (requires disciplinary action and chain of command signatures)</p>	<p> Ineffective (Observation 5.1 E1 on page 21)</p> <p> Effective</p> <p> Partially Effective (Observation 5.1 E2 on page 23)</p> <p> Ineffective (Observation 5.1 E3 on page 24)</p>	Medium

	A	B	C	E	F	G	H
	SIGNIFICANT RISKS <i>and Consequences</i>	INHERENT RISK SCORE (Before Considering Controls)	RESIDUAL RISK SCORE (After Considering Design of Controls)	MANAGEMENT'S ASSESSMENT OF CONTROL DESIGN	KEY CONTROL(S) TESTED BY INTERNAL AUDITOR (Primary Controls Which Provide Greatest Risk Treatment are in Bold)	INTERNAL AUDITOR ASSESSMENT OF CONTROL EFFECTIVENESS	CURRENT RISK EXPOSURE TO SCODT
		1 = Low 25 = High Risk Appetite = 4 or Less (See Scoring Matrix in Appendix A)					
2	<b>Bidder is given unfair treatment</b>  <i>Violation of laws and regulations; lawsuit; negative impact on agency certification; harm to reputation; protest delays process</i>	9	3	 Adequate	1. Ethics training for all staff annually	 Ineffective (Observation 5.1 E1 on page 21)	Medium-Low
					3. Procurement policies and procedures training and refresher prior to commencing procurement activities	 Partially Effective (Observation 5.1 E2 on page 23)	
					<b>5. Independent centralized procurement review</b>	 Effective	
					<b>6. Procurement supervisory reviews of procurement staff decisions</b>	 Effective	
3	<b>Error in evaluating bids or proposals</b>  <i>Violation of laws and regulations; lawsuit; negative impact on agency certification; harm to reputation; protest delays process</i>	9	3	 Adequate	3. Procurement policies and procedures training and refresher prior to commencing procurement activities	 Partially Effective (Observation 5.1 E2 on page 23)	Medium-Low
					<b>6. Procurement supervisory reviews of procurement staff decisions</b>	 Effective	
					<b>7. Procurement staff control RFP process including the panel review and scoring</b>	 Effective	














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		1 = Low 25 = High Risk Appetite = 4 or Less (See Scoring Matrix in Appendix A)					
4	<p><b>Scope is written too narrow; restrictive specs</b></p> <p><i>Violation of laws and regulations; lawsuit; negative impact on agency certification; harm to reputation; protest delays process</i></p>	9	6	 Partially Adequate (Observation 5.1 D1 on page 22)	<p><b>1. Ethics training for all staff annually</b></p> <p>2. Review and approval workflow in SCEIS</p> <p>3. Procurement policies and procedures training and refresher prior to commencing procurement activities</p> <p><b>8. Justification form</b></p> <p>9. Training of HQ Procurement staff</p>	<p> Ineffective (Observation 5.1 E1 on page 21)</p> <p> Effective</p> <p> Partially Effective (Observation 5.1 E2 on page 23)</p> <p> Effective</p> <p> Effective</p>	Medium
















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	SIGNIFICANT RISKS <i>and Consequences</i>	INHERENT RISK SCORE (Before Considering Controls)	RESIDUAL RISK SCORE (After Considering Design of Controls)	MANAGEMENT'S ASSESSMENT OF CONTROL DESIGN	KEY CONTROL(S) TESTED BY INTERNAL AUDITOR (Primary Controls Which Provide Greatest Risk Treatment are in Bold)	INTERNAL AUDITOR ASSESSMENT OF CONTROL EFFECTIVENESS	CURRENT RISK EXPOSURE TO SCODT
		1 = Low 25 = High Risk Appetite = 4 or Less (See Scoring Matrix in Appendix A)					
5	<p><b>Budget estimate is inaccurate or missing</b></p> <p><i>Violation of laws and regulations; lawsuit; negative impact on agency certification; harm to reputation; protest delays process</i></p>	<b>6</b>	<b>4</b>	 Adequate	<p><b>2. Review and approval workflow in SCEIS</b></p>	 Effective	Acceptable (Low)
					<p>3. Procurement policies and procedures training and refresher prior to commencing procurement activities</p>	 Partially Effective (Observation 5.1 E2 on page 23)	
					<p><b>5. Independent centralized procurement review</b></p>	 Effective	
					<p><b>6. Procurement supervisory reviews of procurement staff decisions</b></p>	 Effective	
					<p>9. Training of HQ Procurement staff</p>	 Effective	
6	<p><b>Biased RFP Panel</b></p> <p><i>Violation of laws and regulations; lawsuit; negative impact on agency certification; harm to reputation; protest delays process</i></p>	<b>12</b>	<b>4</b>	 Adequate	<p>1. Ethics training for all staff annually</p>	 Ineffective (Observation 5.1 E1 on page 21)	Medium-Low
					<p>3. Procurement policies and procedures training and refresher prior to commencing procurement activities</p>	 Partially Effective (Observation 5.1 E2 on page 23)	
					<p><b>5. Independent centralized procurement review</b></p>	 Effective	
					<p><b>6. Procurement supervisory reviews of procurement staff decisions</b></p>	 Effective	
					<p>9. Training of HQ Procurement staff</p>	 Effective	
					<p>10. Nondisclosure and Procurement Integrity forms must be signed by RFP panel members</p>	 Partially Effective (Observation 5.1 E4 on page 26)	
















	A	B	C	E	F	G	H
	SIGNIFICANT RISKS <i>and Consequences</i>	INHERENT RISK SCORE (Before Considering Controls)	RESIDUAL RISK SCORE (After Considering Design of Controls)	MANAGEMENT'S ASSESSMENT OF CONTROL DESIGN	KEY CONTROL(S) TESTED BY INTERNAL AUDITOR (Primary Controls Which Provide Greatest Risk Treatment are in Bold)	INTERNAL AUDITOR ASSESSMENT OF CONTROL EFFECTIVENESS	CURRENT RISK EXPOSURE TO SCODT
		1 = Low 25 = High Risk Appetite = 4 or Less (See Scoring Matrix in Appendix A)					
7	<b>Errors or omissions in evaluating responsiveness and responsibility</b>  <i>Violation of laws and regulations; lawsuit; negative impact on agency certification; harm to reputation; protest delays process</i>	12	4	 Adequate	3. Procurement policies and procedures training and refresher prior to commencing procurement activities	 Partially Effective (Observation 5.1 E2 on page 23)	Medium-Low
					<b>6. Procurement supervisory reviews of procurement staff decisions</b>	 Effective	
8	<b>Error in identifying need</b>  <i>Need not met or waste of resources</i>	6	3	 Adequate	<b>2. Review and approval workflow in SCEIS</b>	 Effective	Acceptable (Low)
9	<b>Intentionally identifying a need that does not exist</b>  <i>Need not met or waste of resources</i>	6	3	 Adequate	1. Ethics training for all staff annually	 Ineffective (Observation 5.1 E1 on page 21)	Acceptable (Low)
					<b>2. Review and approval workflow in SCEIS</b>	 Effective	
10	<b>Errors or omissions in evaluating terms and conditions (federal and state)</b>  <i>Violation of laws and regulations; lawsuit; negative impact on agency certification; harm to reputation; protest delays process</i>	9	3	 Adequate	<b>2. Review and approval workflow in SCEIS</b>	 Effective	Acceptable (Low)
					<b>5. Independent centralized procurement review</b>	 Effective	
					<b>6. Procurement supervisory reviews of procurement staff decisions</b>	 Effective	

















	A	B	C	E	F	G	H
	SIGNIFICANT RISKS <i>and Consequences</i>	INHERENT RISK SCORE (Before Considering Controls)	RESIDUAL RISK SCORE (After Considering Design of Controls)	MANAGEMENT'S ASSESSMENT OF CONTROL DESIGN	KEY CONTROL(S) TESTED BY INTERNAL AUDITOR (Primary Controls Which Provide Greatest Risk Treatment are in Bold)	INTERNAL AUDITOR ASSESSMENT OF CONTROL EFFECTIVENESS	CURRENT RISK EXPOSURE TO SCODT
		1 = Low 25 = High Risk Appetite = 4 or Less (See Scoring Matrix in Appendix A)					
11	<p><b>Divulge bidder information prior to bid opening</b></p> <p><i>Violation of laws and regulations; lawsuit; negative impact on agency certification; harm to reputation; protest delays process</i></p>	<b>9</b>	<b>3</b>	 Adequate	<p>1. Ethics training for all staff annually</p>	 Ineffective (Observation 5.1 E1 on page 21)	Medium-Low
					<p>3. Procurement policies and procedures training and refresher prior to commencing procurement activities</p>	 Partially Effective (Observation 5.1 E2 on page 23)	
					<p>9. Training of HQ Procurement staff</p>	 Effective	
					<p><b>11. SCEIS access control; prevents information release prior to bid opening</b></p>	 Effective	
12	<p><b>Divulge bidder information after bid or RFP opening and prior to award</b></p> <p><i>Violation of laws and regulations; lawsuit; negative impact on agency certification; harm to reputation; protest delays process</i></p>	<b>6</b>	<b>3</b>	 Adequate	<p>1. Ethics training for all staff annually</p>	 Ineffective (Observation 5.1 E1 on page 21)	Acceptable (Low)
					<p>3. Procurement policies and procedures training and refresher prior to commencing procurement activities</p>	 Partially Effective (Observation 5.1 E2 on page 23)	
					<p><b>5. Independent centralized procurement review</b></p>	 Effective	
					<p><b>6. Procurement supervisory reviews of procurement staff decisions</b></p>	 Effective	
					<p>9. Training of HQ Procurement staff</p>	 Effective	
					<p>10. Nondisclosure and Procurement Integrity forms must be signed by RFP panel members</p>	 Partially Effective (Observation 5.1 E4 on page 26)	






















	A	B	C	E	F	G	H
	SIGNIFICANT RISKS <i>and Consequences</i>	INHERENT RISK SCORE (Before Considering Controls)	RESIDUAL RISK SCORE (After Considering Design of Controls)	MANAGEMENT'S ASSESSMENT OF CONTROL DESIGN	KEY CONTROL(S) TESTED BY INTERNAL AUDITOR (Primary Controls Which Provide Greatest Risk Treatment are in Bold)	INTERNAL AUDITOR ASSESSMENT OF CONTROL EFFECTIVENESS	CURRENT RISK EXPOSURE TO SCDOT
		1 = Low 25 = High Risk Appetite = 4 or Less (See Scoring Matrix in Appendix A)					
13	<p><b>Divulge offeror's name after RFP opening</b></p> <p><i>May impede negotiation process</i></p>	6	3	 Adequate	<p>1. Ethics training for all staff annually</p> <p>3. Procurement policies and procedures training and refresher prior to commencing procurement activities</p> <p><b>5. Independent centralized procurement review</b></p> <p>9. Training of HQ Procurement staff</p> <p>10. Nondisclosure and Procurement Integrity forms must be signed by RFP panel members</p>	<p> Ineffective (Observation 5.1 E1 on page 21)</p> <p> Partially Effective (Observation 5.1 E2 on page 23)</p> <p> Effective</p> <p> Effective</p> <p> Partially Effective (Observation 5.1 E4 on page 26)</p>	Acceptable (Low)
14	<p><b>End user influences district procurement personnel</b></p> <p><i>Violation of laws and regulations; lawsuit; negative impact on agency certification; harm to reputation; protest delays process</i></p>	16	3	 Adequate	<p>1. Ethics training for all staff annually</p> <p><b>3. Procurement policies and procedures training and refresher prior to commencing procurement activities</b></p> <p><b>4. Ratification process on unauthorized procurement (requires disciplinary action and chain of command signatures)</b></p> <p><b>5. Independent centralized procurement review</b></p> <p>9. Training of HQ Procurement staff</p> <p><b>12. Review and approval by Procurement staff workflow in SCEIS for procurements over \$10,000</b></p>	<p> Ineffective (Observation 5.1 E1 on page 21)</p> <p> Partially Effective (Observation 5.1 E2 on page 23)</p> <p> Ineffective (Observation 5.1 E3 on page 24)</p> <p> Effective</p> <p> Effective</p> <p> Effective</p>	Medium-Low

	A	B	C	E	F	G	H
	SIGNIFICANT RISKS <i>and Consequences</i>	INHERENT RISK SCORE (Before Considering Controls)	RESIDUAL RISK SCORE (After Considering Design of Controls)	MANAGEMENT'S ASSESSMENT OF CONTROL DESIGN	KEY CONTROL(S) TESTED BY INTERNAL AUDITOR (Primary Controls Which Provide Greatest Risk Treatment are in Bold)	INTERNAL AUDITOR ASSESSMENT OF CONTROL EFFECTIVENESS	CURRENT RISK EXPOSURE TO SCODT
		1 = Low 25 = High Risk Appetite = 4 or Less (See Scoring Matrix in Appendix A)					
15	<b>Bidder or end user influences Procurement bid evaluator</b>  <i>Violation of laws and regulations; lawsuit; negative impact on agency certification; harm to reputation; protest delays process</i>	9	3	 Adequate	<b>1. Ethics training for all staff annually</b>  Ineffective (Observation 5.1 E1 on page 21)		
					3. Procurement policies and procedures training and refresher prior to commencing procurement activities  Partially Effective (Observation 5.1 E2 on page 23)		
					<b>5. Independent centralized procurement review</b>  Effective		
					<b>6. Procurement supervisory reviews of procurement staff decisions</b>  Effective		
					9. Training of HQ Procurement staff  Effective		
16	<b>Proposer influences RFP bid evaluator</b>  <i>Violation of laws and regulations; lawsuit; negative impact on agency certification; harm to reputation; protest delays process</i>	9	3	 Adequate	<b>1. Ethics training for all staff annually</b>  Ineffective (Observation 5.1 E1 on page 21)		
					3. Procurement policies and procedures training and refresher prior to commencing procurement activities  Partially Effective (Observation 5.1 E2 on page 23)		
					<b>5. Independent centralized procurement review</b>  Effective		
					<b>6. Procurement supervisory reviews of procurement staff decisions</b>  Effective		
					<b>7. Procurement staff control RFP process including the panel review and scoring</b>  Effective		
					10. Nondisclosure and Procurement Integrity forms must be signed by RFP panel members  Partially Effective (Observation 5.1 E4 on page 26)		

	A	B	C	E	F	G	H
	SIGNIFICANT RISKS <i>and Consequences</i>	INHERENT RISK SCORE (Before Considering Controls)	RESIDUAL RISK SCORE (After Considering Design of Controls)	MANAGEMENT'S ASSESSMENT OF CONTROL DESIGN	KEY CONTROL(S) TESTED BY INTERNAL AUDITOR (Primary Controls Which Provide Greatest Risk Treatment are in Bold)	INTERNAL AUDITOR ASSESSMENT OF CONTROL EFFECTIVENESS	CURRENT RISK EXPOSURE TO SCODT
		1 = Low 25 = High Risk Appetite = 4 or Less (See Scoring Matrix in Appendix A)					
17	<b>Evaluation factors are not clearly defined</b>  <i>Negative impact on agency certification; harm to reputation; protest delays process</i>	16	4	 Adequate	5. Independent centralized procurement review	 Effective	Acceptable (Low)
					6. Procurement supervisory reviews of procurement staff decisions	 Effective	
					7. Procurement staff control RFP process including the panel review and scoring	 Effective	
					9. Training of HQ Procurement staff	 Effective	
18	<b>Approval process to begin acquisition delays procurement past the needed date</b>  <i>Projects delayed; additional costs</i>	9	3	 Adequate	2. Review and approval workflow in SCEIS	 Effective	Acceptable (Low)
					5. Independent centralized procurement review	 Effective	
					6. Procurement supervisory reviews of procurement staff decisions	 Effective	
					9. Training of HQ Procurement staff	 Effective	
19	<b>Solicitation development delays procurement past the needed date</b>  <i>Projects delayed; additional costs</i>	16	4	 Adequate	2. Review and approval workflow in SCEIS	 Effective	Acceptable (Low)
					5. Independent centralized procurement review	 Effective	
					6. Procurement supervisory reviews of procurement staff decisions	 Effective	
					9. Training of HQ Procurement staff	 Effective	

	A	B	C	E	F	G	H
	SIGNIFICANT RISKS <i>and Consequences</i>	INHERENT RISK SCORE (Before Considering Controls)	RESIDUAL RISK SCORE (After Considering Design of Controls)	MANAGEMENT'S ASSESSMENT OF CONTROL DESIGN	KEY CONTROL(S) TESTED BY INTERNAL AUDITOR (Primary Controls Which Provide Greatest Risk Treatment are in Bold)	INTERNAL AUDITOR ASSESSMENT OF CONTROL EFFECTIVENESS	CURRENT RISK EXPOSURE TO SCDOT
		1 = Low 25 = High Risk Appetite = 4 or Less (See Scoring Matrix in Appendix A)					
20	<b>Approval process for awards delays procurement past the needed date</b>  <i>Projects delayed; additional costs</i>	6	3	 Adequate	5. Independent centralized procurement review	 Effective	Acceptable (Low)
					6. Procurement supervisory reviews of procurement staff decisions	 Effective	
21	<b>Protest process steps delay procurement past the needed date</b>  <i>Projects delayed; additional costs</i>	9	3	 Adequate	<b>5. Independent centralized procurement review</b>	 Effective	Acceptable (Low)
					6. Procurement supervisory reviews of procurement staff decisions	 Effective	
					9. Training of HQ Procurement staff	 Effective	
22	<b>Fail to answer all Q and A questions</b>  <i>Protest leads to delay of project</i>	9	3	 Adequate	<b>5. Independent centralized procurement review</b>	 Effective	Acceptable (Low)
					6. Procurement supervisory reviews of procurement staff decisions	 Effective	
					9. Training of HQ Procurement staff	 Effective	
23	<b>Misfile paper bids</b>  <i>Protest leads to delay of project</i>	9	3	 Adequate	<b>5. Independent centralized procurement review</b>	 Effective	Acceptable (Low)
					6. Procurement supervisory reviews of procurement staff decisions	 Effective	
					9. Training of HQ Procurement staff	 Effective	
					<b>11. SCEIS access control; prevents information release prior to bid opening</b>	 Effective	

	A	B	C	E	F	G	H	
	SIGNIFICANT RISKS <i>and Consequences</i>	INHERENT RISK SCORE (Before Considering Controls)	RESIDUAL RISK SCORE (After Considering Design of Controls)	MANAGEMENT'S ASSESSMENT OF CONTROL DESIGN	KEY CONTROL(S) TESTED BY INTERNAL AUDITOR (Primary Controls Which Provide Greatest Risk Treatment are in Bold)	INTERNAL AUDITOR ASSESSMENT OF CONTROL EFFECTIVENESS	CURRENT RISK EXPOSURE TO SCDOT	
		1 = Low 25 = High Risk Appetite = 4 or Less (See Scoring Matrix in Appendix A)						
24	Mis-keying surrogate bids <i>Protest leads to delay of project</i>	9	3	 Adequate	<b>5. Independent centralized procurement review</b> 6. Procurement supervisory reviews of procurement staff decisions 9. Training of HQ Procurement staff <b>11. SCEIS access control; prevents information release prior to bid opening</b>	 Effective  Effective  Effective  Effective	Acceptable (Low)	
25	Award unknowingly made to non-bona fide vendor for fraudulent purposes <i>Asset misappropriation; harm to reputation</i>	12	8	 Partially Adequate (Observation 5.1 D2 on page 25)	<b>1. Ethics training for all staff annually</b> 3. Procurement policies and procedures training and refresher prior to commencing procurement activities <b>6. Procurement supervisory reviews of procurement staff decisions</b> 9. Training of HQ Procurement staff 10. Nondisclosure and Procurement Integrity forms must be signed by RFP panel members	 Ineffective (Observation 5.1 E1 on page 21)  Partially Effective (Observation 5.1 E2 on page 23)  Effective  Effective  Partially Effective (Observation 5.1 E4 on page 26)		Medium

	A	B	C	E	F	G	H
	SIGNIFICANT RISKS <i>and Consequences</i>	INHERENT RISK SCORE (Before Considering Controls)	RESIDUAL RISK SCORE (After Considering Design of Controls)	MANAGEMENT'S ASSESSMENT OF CONTROL DESIGN	KEY CONTROL(S) TESTED BY INTERNAL AUDITOR (Primary Controls Which Provide Greatest Risk Treatment are in Bold)	INTERNAL AUDITOR ASSESSMENT OF CONTROL EFFECTIVENESS	CURRENT RISK EXPOSURE TO SCODT
		1 = Low 25 = High Risk Appetite = 4 or Less (See Scoring Matrix in Appendix A)					
26	<p><b>Award unknowingly made to non-bona fide vendor for fraudulent purposes</b></p> <p><i>Violation of laws and regulations; lawsuit; negative impact on agency certification; harm to reputation; protest delays process</i></p>	<b>9</b>	<b>3</b>	 Adequate	<p><b>1. Ethics training for all staff annually</b></p>	 Ineffective (Observation 5.1 E1 on page 21)	Medium-Low
					<p>3. Procurement policies and procedures training and refresher prior to commencing procurement activities</p>	 Partially Effective (Observation 5.1 E2 on page 23)	
					<p><b>5. Independent centralized procurement review</b></p>	 Effective	
					<p><b>6. Procurement supervisory reviews of procurement staff decisions</b></p>	 Effective	
					<p><b>7. Procurement staff control RFP process including the panel review and scoring</b></p>	 Effective	
					<p>9. Training of HQ Procurement staff</p>	 Effective	
					<p>10. Nondisclosure and Procurement Integrity forms must be signed by RFP panel members</p>	 Partially Effective (Observation 5.1 E4 on page 26)	

## Observations on Control Design and Effectiveness

### Assessment of Control 1 – Ethics Training for All Staff Annually

**Control Description:** SCDOT employees are required to take code of conduct training every year (offered mid-June to mid-July). This is an online training class that is provided by the South Carolina Department of Administration. In addition to the annual training, all agency employees are required to take and confirm completion of SCDOT ethics training. This training is given every two years, most recently (at the time of our engagement) in June 2015. There are also two departmental directives that outline principles, standards of conduct and reporting requirements relating to ethics. In addition, section 57-1-500 of the South Carolina Code of Laws states “The secretary must provide for a workshop of at least two biennial contact hours concerning ethics and the Administrative Procedures Act for the commissioners, the secretary, the chief internal auditor, and senior management employees of the Department of Transportation; and a biennial ethics workshop of at least two contact hours for all other department employees.”

#### Observation 5.1 E1 Enhance Ethics Training

Of the 602 SCDOT employees who have any type of procurement role, 570 (94.7%) have completed the most recent Code of Conduct and Ethics training. There are 15 (2.5%) employees who have completed training in prior years but have not completed the most current offering. There are 17 (2.8%) employees who have procurement roles but have not completed the training or failed to have the training assigned to them. Failure to have employees attend ethics training could cause a lack of awareness on making ethical decisions. We noted that the training module does not include a quiz or similar knowledge assessment. Additionally, the training module allows the viewer to fast forward through the presentation without having to listen to the entire audio for each slide.

#### Management Action Plan (MAP) 5.1 E1

As of June 2017 the SCDOT Ethics Training has been incorporated into the SC Department of Administration’s Code of Conduct Training as the seventh (7<sup>th</sup>) module creating one online training class. Beginning June 2017, SCDOT employees are required to take the combined online class every year offered mid-June to mid-July.

The SC Department of Administration Code of Conduct modules developed by them do not include a quiz to check knowledge.

Require answers and feedback on the scenario training in the SCDOT Ethics module before allowing the next page to be loaded.

<p>A report will be provided by August 15<sup>th</sup> of every year to each division director listing all employees assigned to their area that have not taken the training.</p> <p>An agency-wide report will be provided to the Secretary of Transportation by August 15<sup>th</sup> of every year listing all employees, by division, that have not taken the training.</p>	
MAP Owner:	Director of Human Capital Investment
Division:	Human Resources
Scheduled Date:	Update to SCDOT Ethics module will be completed by May 15, 2018

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## Assessment of Control 2 – Review and Approval Workflow in SCEIS

**Control Description:** The workflow process within SCEIS starts with the creation of a shopping cart. The shopping cart is automatically routed to an approver. If the first approver does not have an authority limit that is more than the dollar of the shopping cart, the cart will be automatically routed to the next level for additional approval. This process will continue until the shopping cart has been approved by someone with an approval level greater than the amount of the shopping cart. Within the districts, new users requesting SCEIS procurement roles must complete a form and obtain approval by their respective District Engineer Administrator (DEA) for district requests. Headquarter requests must be approved at the director level and above. Approved forms are emailed to the Chief Procurement Officer and the Procurement Director. After the employee has completed training, the Procurement Director sets up a user profile in SCEIS. This profile includes the organization codes they have access to, authority limits and the routing of requests.

Approved shopping carts that are connected to a contract will become purchase orders since contracts have previously been awarded through the appropriate solicitation method. If the requested purchase is over \$10,000 and not on a contract, then the request is routed to the appropriate headquarters procurement staff to manage the solicitation process.

### Observation 5.1 D1 Enhance SCEIS Reviewer Responsibilities

For many employees, reviewing and approving purchase orders is a small part of their job responsibilities. The procurement law is complex and procurements at SCDOT have the potential for errors and fraudulent activity that could be significant to the Agency. An employee who is not knowledgeable about the procurement code and the potential risks



associated with procurements could, in effect, become a “rubber stamp” approver of the transaction. Therefore, a refresher class on the procurement process, directed at specific reviewers would help reinforce adherence to the procurement law. Adding specific language to the supervisory job duty in position descriptions could enhance the performance of effective procurement reviews by providing heightened accountability for reviewers.

Management Action Plan (MAP) 5.1 D1	
<p>SCDOT Procurement Services proposed training tailored for Shopping Cart approvers. This training has not been available before therefore will be new training and not a refresher. All employees assigned the role of approver must take this training as well as anyone to be assigned the approver role. Procurement Services will track the attendance to ensure all shopping cart approvers take this training. The training will encompass areas of responsibility for review by the approver and what to look for to ensure procurement requests adhere to procurement laws and internal policies and procedures. This training will be offered every other month in conjunction with the Policies and Procedures class. Initial training will be offered bi-monthly until an electronic module can be developed.</p>	
MAP Owner:	Procurement Director
Division:	Procurement Services
Scheduled Date:	March 31, 2018

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### Assessment of Control 3 – Procurement Policies and Procedures Training and Refresher Prior to Commencing Procurement Activities

**Control Description:** According to the Procurement Services intranet webpage, the Procurement Policies and Procedures class is required prior to receiving procurement roles in SCEIS. This class is offered at headquarters multiple times during the year. In order to be granted procurement rights, a grade of 70 or higher must be obtained on a test at the end of the class.

#### Observation 5.1 E2 Procurement Policy and Procedure Training

We tested SCEIS procurement system access rights for all 32 employees who were granted system access since January 1, 2016. We found that two had not taken the required policy and procedure training prior to receiving access.

### Management Action Plan (MAP) 5.1 E2

A user may be given access to SCEIS prior to taking the Policies and Procedures class if it will cause a hardship on their organization, i.e. they are the only individual who is assigned the particular roles being requested. In those instances we ask that they review the Procurement Policies and Procedures and take the next available class which is conducted every other month. One-on-one training is also offered when necessary. If the exam is not passed roles are taken away until additional training is provided and the exam is retaken. Roles are reassigned if exam is passed. If not, the DEA is contacted to determine the next course of action. Attendance and exam scores are tracked in a database maintained by the Procurement Office.

After each exam, all participants not scoring 100% are contacted by their District Headquarters Procurement Manager and the questions missed are reviewed to ensure field personnel understand the appropriate answers.

MAP Owner:	Procurement Director
Division:	Procurement Services
Scheduled Date:	Implemented

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## Assessment of Control 4 – Ratification Process on Unauthorized Procurement (Requires Disciplinary Action and Chain of Command Signatures)

**Control Description:** An unauthorized procurement occurs when an employee does not comply with the requirements of the South Carolina Consolidated Procurement Code. Unauthorized procurements must be ratified and reported quarterly to the State Fiscal Accountability Authority (SFAA), Division of Procurement Services, Audit and Certification. A ratification is a written report prepared by the appropriate District Engineer Administrator (DEA) or appropriate director at Headquarters stating the cause and the corrective action to be taken to prevent a future occurrence.

### Observation 5.1 E3 Unauthorized Procurement Ratification

We tested a sample of ten purchase orders that were submitted to the SFAA as unauthorized and found two ratifications lacked the requisite signature by headquarters' management indicating approval of the ratification and acceptance of the corrective action. Failure to follow the accountability process for unauthorized procurements could lead to repeated instances of noncompliance.

<b>Management Action Plan (MAP) 5.1 E3</b>	
Personnel in Procurement Services responsible for processing unauthorized procurement ratifications paperwork have been instructed to ensure all necessary signatures have been obtained and filed prior to reporting to SFAA.	
MAP Owner:	Director of Procurement – Commodities and Services
Division:	Procurement Services
Scheduled Date:	Implemented

## Assessment of Control 6 – Procurement Supervisory Reviews of Procurement Staff Decisions

**Control Description:** “Responsible bidder or offeror” and “responsive bidder or offeror” are defined in section 11-35-1410 (6) and (7) of the South Carolina Consolidated Procurement Code. Regulation 19-445.2125 provides the standards for determining that the responsibility has been met. Supervisory reviews include verifying documented facts and decisions made by procurement staff.

### Observation 5.1 D2 Verification that Vendor is Bona Fide

There is not a formal documentation process to evidence that procurement staff has performed a review to determine that a bidder meets the State standard for responsibility and responsiveness. Without such documentation, the supervisory review will not detect whether procurement staff determined that a vendor is bona fide. Documentation should include, for example, a vendor review checklist for determining responsibility (the vendor is registered and has a reasonable business history; the customer base extends beyond SCDOT, references are checked, etc.)

<b>Management Action Plan (MAP) 5.1 D2</b>	
SCDOT Procurement Managers currently use an already established check list for determining responsibility. The managers will begin initialing the form indicating the necessary steps to assure the awarded vendor is responsible have been completed. A new form will be created for responsiveness checks and the Procurement Managers will initial indicating the necessary steps to determine the lowest bidder has met the requirements of responsiveness are performed. The checklists will be reviewed by a supervisor and placed in the contract file.	
MAP Owner:	Director of Procurement – Commodities and Services
Division:	Procurement Services
Scheduled Date:	March 31, 2018

## Assessment of Control 10 – Nondisclosure and Procurement Integrity Forms Must be Signed by RFP Panel Members

**Control Description:** According to the South Carolina Consolidated Procurement Code, if a procurement is over \$50,000 and the purchasing agency determines in writing that the use of competitive sealed bidding is either not practicable or not advantageous, a Request for Proposal (RFP) is solicited. While price is normally a factor in the selection process, there are other factors that need to be evaluated prior to award. For example, vendor experience or knowledge of a process or training may be a key factor. Solicitations for RFPs list the factors being evaluated and each factor is listed in the order of importance in the solicitation, with the highest ranked factor being listed first. The weighting factors are determined prior to the publishing of the solicitation. Members of the review panel must read and agree or disclose pertinent information as discussed on the nondisclosure form and the integrity form. By signing and agreeing to the terms of the nondisclosure form, the panel member is stating they will hold all information received as part of the solicitation as confidential. This includes the name and number of bids received. By signing and agreeing to the terms of the integrity form, the panel member is stating that they have no conflicts of interest with the offerors. Failure to sign and agree to the terms outlined in the two forms may result in removal from the review panel. In addition to the nondisclosure and integrity forms, the panel members are also required to sign and date an evaluation panel form. The evaluation form includes general instructions for review panel members that addresses appropriate laws, review of bids, scoring, etc.

### Observation 5.1 E4 Nondisclosure and Integrity Forms

We tested five solicitations that met the requirements for RFP. We verified that four out of the five solicitations tested had properly signed and dated nondisclosure and integrity forms for all RFP panel members. The Procurement Division was unable to provide evidence of the required signed forms for one of the five solicitations tested.

#### Management Action Plan (MAP) 5.1 E4

SCDOT Procurement Managers have been cautioned about the critical nature of immediately scanning all pertinent documentation into the procurement files. SCDOT Procurement Office handles hundreds of solicitations a year and paperwork can easily get misplaced if it is not properly scanned and added to the procurement files. The supervisors who approve the Statement of Award or Intent to Award have been cautioned that it is their responsibility to review procurement files to ensure all necessary documentation is in the file prior to approving the Award or Intent to Award. After review is complete the supervisors send an e-mail statement to the managers stating file is complete and ready to award and publish.

MAP Owner:	Director of Procurement – Commodities and Services
Division:	Procurement Services
Scheduled Date:	Implemented

## 5.2 PROCESS 2 Work Order Assignment and Invoice Processing

### Process Objectives











1. To ensure timely and accurate development and assignment of work orders to contractors.
2. To ensure timely and accurate processing of contractor invoices.
3. To ensure payments are for bona fide work performed by bona fide contractors.











### Process Description









Intelligent Transportation Services (ITS) uses the on-call process for assigning installation and maintenance work to its contractors. Currently, contractors are paid monthly based on hours and/or work performed. A majority of the invoices are calculated using hourly rates multiplied by hours worked. Some installation projects are paid based on tasks performed. For example, the contractor could be paid on linear feet of fiber installed instead of an hourly rate. The process starts with ITS personnel emailing a work order to each contractor the Thursday before the start of a work week. This work order states the tech level of personnel needed for the upcoming week and a generalized estimate of projected repairs or installation projects to be performed (e.g., repair cameras as directed by SCDOT and then perform preventative maintenance). Since much of the work is unexpected repairs, it is impossible to include specific location or camera number details on the work orders. After the work has been completed each week, the contractors email their employees' time sheets (which also include mileage) to ITS personnel who accumulate the data for supporting the monthly payment of invoices.

## Summary of Significant Process Risks and Controls

Internal Controls determined to be inadequate or ineffective are described in the Control Observations following the table.

	A	B	C	E	F	G	H
	SIGNIFICANT RISKS <i>and Consequences</i>	INHERENT RISK SCORE (Before Considering Controls)	RESIDUAL RISK SCORE (After Considering Design of Controls)	MANAGEMENT'S ASSESSMENT OF CONTROL DESIGN	KEY CONTROL(S) TESTED BY INTERNAL AUDITOR (Primary Controls Which Provide Greatest Risk Treatment are in Bold)	INTERNAL AUDITOR ASSESSMENT OF CONTROL EFFECTIVENESS	CURRENT RISK EXPOSURE TO SCODOT
		1 = Low 25 = High Risk Appetite = 4 or Less (See Scoring Matrix in Appendix A)					
1	<b>Contractor-submitted invoice or timesheet has errors</b>  <i>Over or under charge</i>	<b>9</b>	<b>3</b>	 Adequate	<b>1. FTS Tech III reviews invoice and timesheets for reasonableness and compares charges to the Excel control sheet</b>	 Ineffective (Observation 5.2 E1 on page 32)	Medium
					<b>2. FTS Manager II reviews invoice and supporting documentation received from FTS Tech III</b>	 Ineffective (Observation 5.2 E1 on page 32)	
					<b>3. Procurement Specialist reviews invoice and supporting documentation for payment</b>	 Ineffective (Observation 5.2 E1 on page 32)	
2	<b>Invoice processing is delayed because FTS Tech III is on extended absence or position becomes vacant</b>  <i>Delay in process</i>	<b>6</b>	<b>4</b>	 Adequate	<b>4. Trained Backup Employee</b>	 Partially Effective (Observation 5.2 E2 on page 33)	Medium-Low
3	<b>Invoice or timesheet is falsified by contractor</b>  <i>Improper Payment</i>	<b>12</b>	<b>4</b>	 Adequate	<b>1. FTS Tech III reviews invoice and timesheets for reasonableness and compares charges to the Excel control sheet</b>	 Ineffective(Observation 5.2 E1 on page 32)	Medium
					<b>2. FTS Manager II reviews invoice and supporting documentation received from FTS Tech III</b>	 Ineffective(Observation 5.2 E1 on page 32)	
					<b>3. Procurement Specialist reviews invoice and supporting documentation for payment</b>	 Ineffective (Observation 5.2 E1 on page 32)	

	A	B	C	E	F	G	H
	SIGNIFICANT RISKS <i>and Consequences</i>	INHERENT RISK SCORE (Before Considering Controls)	RESIDUAL RISK SCORE (After Considering Design of Controls)	MANAGEMENT'S ASSESSMENT OF CONTROL DESIGN	KEY CONTROL(S) TESTED BY INTERNAL AUDITOR (Primary Controls Which Provide Greatest Risk Treatment are in Bold)	INTERNAL AUDITOR ASSESSMENT OF CONTROL EFFECTIVENESS	CURRENT RISK EXPOSURE TO SCODT
		1 = Low 25 = High Risk Appetite = 4 or Less (See Scoring Matrix in Appendix A)					
4	Fictitious need created for contractor kickback (Fictitious invoice and timesheets processed against available purchase order authority)  <i>Improper payment; reputational harm</i>	12	8	 Partially Adequate (Observation 5.2 D1 on page 21)	5. Ethics training for all staff annually	 Ineffective (Observation 5.1 E1 on page 21)	Medium
5	Contractor overbills for work performed to make excess profit  <i>Waste of resources</i>	16	4	 Adequate	1. FTS Tech III reviews invoice and timesheets for reasonableness and compares charges to the Excel control sheet	 Ineffective (Observation 5.2 E1 on page 32)	Medium-High
					2. FTS Manager II reviews invoice and supporting documentation received from FTS Tech III	 Ineffective (Observation 5.2 E1 on page 32)	
					3. Procurement Specialist reviews invoice and supporting documentation for payment	 Ineffective (Observation 5.2 E1 on page 32)	
6	Procurement controls (shopping cart, purchase order, etc.) are bypassed to speed up process  <i>Improper payment; reputational harm</i>	6	3	 Adequate	7. Ratification process on unauthorized procurement (requires disciplinary action and chain of command signatures)	 Ineffective (Observation 5.1 E3 on page 24)	Medium-Low
7	Assign work to specific contractor for kick-back  <i>Improper payment; reputational harm</i>	9	3	 Adequate	8. Contract Specifications and selection	 Effective	Acceptable (Low)

	A	B	C	E	F	G	H
	SIGNIFICANT RISKS <i>and Consequences</i>	INHERENT RISK SCORE (Before Considering Controls)	RESIDUAL RISK SCORE (After Considering Design of Controls)	MANAGEMENT'S ASSESSMENT OF CONTROL DESIGN	KEY CONTROL(S) TESTED BY INTERNAL AUDITOR (Primary Controls Which Provide Greatest Risk Treatment are in Bold)	INTERNAL AUDITOR ASSESSMENT OF CONTROL EFFECTIVENESS	CURRENT RISK EXPOSURE TO SCODT
		1 = Low 25 = High Risk Appetite = 4 or Less (See Scoring Matrix in Appendix A)					
8	Inspector does not inspect or inspects poorly  <i>Problems could go undetected</i>	12	3	 Adequate	9. Final Project Inspection	 Ineffective (Observation 5.2 E3 on page 34)	Medium
9	Contractor overbills for work performed to provide kickback  <i>Improper payment; reputational harm</i>	8	4	 Adequate	1. FTS Tech III reviews invoice and timesheets for reasonableness and compares charges to the Excel control sheet	 Ineffective (Observation 5.2 E1 on page 32)	Medium-Low
					2. FTS Manager II reviews invoice and supporting documentation received from FTS Tech III	 Ineffective (Observation 5.2 E1 on page 32)	
					3. Procurement Specialist reviews invoice and supporting documentation for payment	 Ineffective (Observation 5.2 E1 on page 32)	
					5. Ethics training for all staff annually	 Ineffective (Observation 5.1 E1 on page 21)	
					6. Inspection	 Ineffective (Observation 5.2 E3 on page 34)	



## Observations on Control Design and Effectiveness

### Assessment of the Following Related Controls:

**Control 1 – FTS (Field Technical Services) Tech III reviews invoice and timesheets for reasonableness and compares charges to the Excel control sheet**

**Control 2 – FTS Manager II reviews invoice and supporting documentation received from FTS Tech III**

**Control 3 – Procurement Specialist reviews invoice and supporting documentation for payment**

**Control Description:** SCDOT staff review the contractor-submitted time sheets and transfer the information to an Excel spreadsheet. This spreadsheet is then emailed back to the contractor for concurrence. Per ITS personnel, concurrence is not formally tracked. This step is performed weekly in order to address any discrepancies prior to the end of the month when contractors remit monthly invoices. ITS personnel review the monthly invoices by comparing the information to the spreadsheet and original work orders. The invoices are then sent, along with the work orders, cover sheets, timesheets, receipts (if any), and charge code information to a Procurement Specialist for processing payments.

### Observation 5.2 D1 Verification of Daily Reported Issues

The current work assignment process does not require formal documenting of unexpected repairs. Unexpected work can be determined from various sources. Camera outages can be viewed using Palguide, an integrated software package, which is a web based application. The ITS manager will also receive calls informing him of equipment issues. A white board is used to temporarily capture issues but a permanent record is not developed and maintained.

#### Management Action Plan (MAP) 5.2 D1

As aforementioned, the sample invoices used for testing were from April 1, 2016 through March 31, 2017. Improvements to the work order process have been implemented, and are in conjunction with input from the Internal Audit Team. These improvements are currently in use today.

1. Currently generic work orders for a week's work are issued on the previous Thursday. They include requests for a technician and a helper for the following week. Then an ITS camera report is generated for each District Traffic Management Center (TMC) which is used to dispatch the technician to specific sites (camera, overhead message board, portable message board, highway advisory radio, etc.). Once the technician arrives, he or she

contacts SCDOT ITS staff to provide an estimated repair time. Upon completion of the repair the technician calls in for testing and verification and is then assigned another trouble call to repair. At the end of the week the technician turns in a checklist for each site that was visited detailing the work performed.

2. Digital copies of invoices are retained.

MAP Owner:	FTS Manager
Division:	Traffic Engineer-ITS
Scheduled Date:	Implemented

### Observation 5.2 E1 ITS Invoice Processing

We tested 10 invoices and discovered that 8 out of 10 invoices did not have adequate details or approvals on the timesheet to support the charges included on the invoice.

- ITS personnel calculated tooling charges (6 out of 7 invoices) and specialized tech-III hours (4 out of 10 invoices) instead of requiring the contractors to include this information on the timesheets.
- There is insufficient documentation to support SCDOT’s approval of hours worked in excess of the amount noted on the work order (7 out of the 7 invoices with excess hours) and workers assigned to a job that were not included on the work order (3 invoices).
- There is insufficient documentation to support SCDOT management’s approval of mileage from their physical starting point other than the SCDOT ITS location at Shop Road in Columbia (7 out of nine applicable invoices).
- A work order was dated after the invoice date (1 invoice).
- Work order is generic and does not indicate the location to support the invoice (7 out of 10 invoices). Contractors provide a high level of planned work for the week which SCDOT uses to create a generic weekly work order. Neither SCDOT’s work order nor contractors’ planned work are updated to reflect detailed daily job assignments. The absence of an updated detailed list of job assignments creates the risk that work assigned could go unperformed or that SCDOT could be invoiced for non-existent work assignments.

#### Management Action Plan (MAP) 5.2 E1

In conjunction with the audit, Traffic Engineering now requires additional documentation in order to review, verify, and approve invoices submitted under this contract.

MAP Owner:	FTS Manager
Division:	Traffic Engineer-ITS
Scheduled Date:	Implemented

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## Assessment of Control 4 – Trained Backup Employee

**Control Description:** Trained backup and written desk procedures will enable a consistent, uninterrupted work flow in case of an unexpected absence or job vacancy.

### Observation 5.2 E2 No written desk procedures

There are no existing documented desk procedures for creating work orders and reviewing invoices. Step by step, written procedures, including screen shots, should be developed for these processes.

Management Action Plan (MAP) 5.2 E2	
SCDOT ITS staff are in the process of assembling a documented desk procedure that includes: <ol style="list-style-type: none"><li>1. Screen shots.</li><li>2. Step by Step written procedures for work order issuance.</li></ol>	
MAP Owner:	FTS Manager
Division:	Traffic Engineer-ITS
Scheduled Date:	January 31, 2018

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## Assessment of Control 5 – Ethics Training

This is the same control as described on page 21 for the Contract Award process. See related observation 5.1 E1 on page 21.

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## Assessment of the Following Related Controls:

### Control 6 – Inspection

### Control 9 – Final Project Inspection - Install

**Control Description:** There are times when inspections are necessary as part of an ITS maintenance job. This is primarily when there is a need for traffic control set up and monitoring. The inspectors ensure that the lane closure is properly set up and then monitor it during the job to ensure that signs, cones, etc. are not knocked down. SCDOT employs one individual whose job duties include inspections. Since there can be multiple installation projects going on at one time, there are three contracted employees that perform inspections. These three individuals are sub-contractors for Premier and Utility Lines.

## Observation 5.2 E3 Inspections – Conflicts of Interest

We discovered conflicts of interest where inspections performed on maintenance work orders were performed by inspectors who are subcontractors of the primary contractor. Because the subcontractors work for the primary contractor, this relationship may impair their objectivity in the inspection process. The absence of an independent inspection creates the risk that sub-par work or tasks that are not performed will go unreported which would also cause SCDOT to be invoiced for services that they did not receive.

### Management Action Plan (MAP) 5.2 E3

1. SCDOT currently has two Prime Contractors that each has a sub-contractor to perform inspection services. These sub-contractors are licensed Professional Engineering Companies that additionally provide non-ITS inspection services to SCDOT statewide on other projects. SCDOT ITS staff make every effort not to allow a sub-contractor to inspect the work of their Prime Contractor, but it does take place from time to time due to the limited number of inspection sub-contractors under contract (2), and in order to maintain project schedules.

However, a quality assurance measure currently employed by SCDOT ITS staff is weekly visits to projects sites to ensure proper procedures are being followed with regard to specifications, traffic control and required material sampling.

In addition, the expectation is to increase the number of Prime Contractors and sub-contractors with the new ITS Installation contract when it is re-procured in early 2018. The Scope of Work is currently under review by SCDOT Audit staff.

Finally, another control measure that could be employed to improve this finding would be to procure a separate on-call ITS inspection contract. This would eliminate the opportunity for a sub-contractor to inspect the work of his or her Prime Contractor.

2. Final inspection of all construction projects is conducted by SCDOT personnel as well as the Prime contractor. This consists of a ride through of the project with random examination of sites. The new additions to the system are required to run without failure for 30-days before acceptance by SCDOT and the Prime Contractor is required to maintain the new additions to the system for a period of one year under normal conditions.

MAP Owner:	FTS Manager
Division:	Traffic Engineer-ITS
Scheduled Date:	Implemented

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**Assessment of Control 7 – Ratification Process on Unauthorized Procurement (Requires Disciplinary Action and Chain of Command Signatures)**

This is the same control as described on page 24 for the Contract Award process. See related observation 5.1 E3 on page 24.

# 6 PERFORMANCE MANAGEMENT OPPORTUNITIES

While our engagement was primarily focused on risk management, we have identified other matters that represent opportunities for cost savings, revenue enhancement, process improvement, strengthened control environment, or more effective performance.

## **Opportunity 6.1 P1 SiteManager for On-Call Work Orders**

As noted in Observation 5.2 E1, we determined that the lack of detailed documentation as to the location, timing, and nature of each contractor’s daily work assignment made it difficult for reviewers to discern if invoices properly reflect the work performed. SiteManager, a web-based application used by the construction division, may be a possible tool for documenting details of assigned work. If SiteManager is not the right solution, the Agency should consider procuring or developing a similar automated work order tracking system.

### **Management Action Plan (MAP) 6.1 P1**

SCDOT ITS staff currently utilize SiteManager for all construction projects that are administered through the SCDOT construction office. While it is designed to track quantities, project schedules, and other construction related activities, it may not be structured to efficiently produce and track work orders. The intent for the task force will be to meet with SCDOT Headquarters Construction staff to ascertain whether SiteManager may meet these needs, and if so how best to implement its usage globally with SCDOT ITS work.

MAP Owner:	Traffic Management Engineer
Division:	Traffic Engineer
Scheduled Date:	June 30, 2018

## **Opportunity 6.1 P2 Status Reports to Monitor for Potential Procurement Delays**

There are currently no reports available in SCEIS to show the aging status of procurements. Procurements have to be manually tracked. A procurement could be delayed if someone is unexpectedly out and the procurement is waiting for that person to perform an action. An aging report would assist in identifying slow moving procurements. This would assist in assuring the procurement is finalized to meet the end users’ time frame.

**Management Action Plan (MAP) 6.1 P2**

SCDOT Procurement Services is working with SCEIS and SCDOT IT to develop an aging report to assist in identifying stalled procurement actions or other issues needing investigation. The aging report will also be sorted by district and distributed to DEA's to help with management and timing of procurements to ensure priority purchases are completed first.

MAP Owner:	Director of Procurement – Commodities and Services
Division:	Procurement Services
Scheduled Date:	Request for SCEIS report submitted – February 1, 2018 Draft Aging Report – Follow up with SCEIS June 1, 2018 Final Aging Report for Distribution - One year from Draft Age Report

# APPENDIX A

## RISK SCORING MATRIX

Risk significance is rated on a scale of 1 (lowest) to 25 (highest) and is the product of the risk consequence score (1 to 5) multiplied by the risk likelihood score (1 to 5). Risks scoring 4 and below are within Management’s risk appetite for the On Call Activity and require no further risk management. The following matrix provides a color scale corresponding to risk significance scores.

Likelihood	Frequent or Almost Certain	3-4 Low	9-13 Medium	14-17 Med-High	18-21 High	22-25 Extreme
	Likely	3-4 Low	5-8 Med-Low	9-13 Medium	14-17 Med-High	18-21 High
	Possible	3-4 Low	5-8 Med-Low	5-8 Med-Low	9-13 Medium	14-17 Med-High
	Unlikely	1-2 Minimal	3-4 Low	5-8 Med-Low	5-8 Med-Low	9-13 Medium
	Rare	1-2 Minimal	1-2 Minimal	3-4 Low	3-4 Low	3-4 Low
		Incidental	Minor	Moderate	Major	Extreme
		Consequence				