SunGuide®:
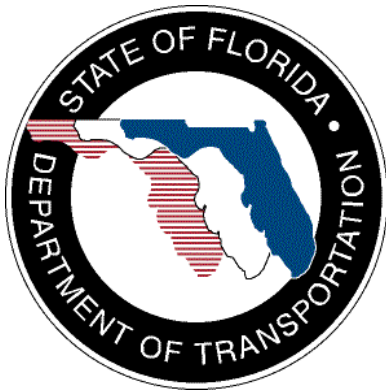
Risk Management Plan

SunGuideSMD-RMP-1.0.0 (Working Final)

Prepared for:

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List of Acronyms

aka .... also known as
FAT .... Factory Authorization Test
FDOT .... Florida Department of Transportation
ITS .... Intelligent Transportation Systems
LOA .... Letter of Authorization
PM .... Project Manager
RMP .... Risk Management Plan
SMD .... Support Maintenance and Development
SPM .... Software Project Manager
SWA .... Standard Written Agreement
SwRI .... Southwest Research Institute

Revision History

Revision	Date	Changes
1.0.0 (Draft)	July 29, 2010	Initial Release.
1.0.0 (Working Final)	August 19, 2010	Revised in response to FDOT comments on Draft.

1. Scope

1.1 Document Identification

This document serves as the Risk Management Plan (RMP) for the SunGuide® Support, Maintenance and Development (SMD) contract. SwRI will revise the RMP based on changes to the risk management philosophy within the project and Southwest Research Institute® (SwRI®) Process. However, SwRI will manage risks on a continual basis; risks and their characteristics may change in response to project or external events. Common events that may cause risks include issuance of new LOAs, staffing changes within the FDOT, the FDOT consultant or SwRI, etc.

1.2 Project Overview

The Florida Department of Transportation (FDOT) SunGuide Support, Maintenance and Development Contract, contract number BDQ69, addresses the necessity of supporting, maintaining and performing enhancement development efforts to the SunGuide software. The SunGuide software was developed by the FDOT in a contract from October 2003 through June 2010. The SunGuide software is a set of Intelligent Transportation System (ITS) software that allows the control of roadway devices as well as information exchange across a variety of transportation agencies and is deployed throughout the state of Florida. The SunGuide software is based on ITS software available from the state of Texas; with significant customization and development of new software modules to meet the needs of the FDOT. The following figure provides a graphical view of the SunGuide architecture:
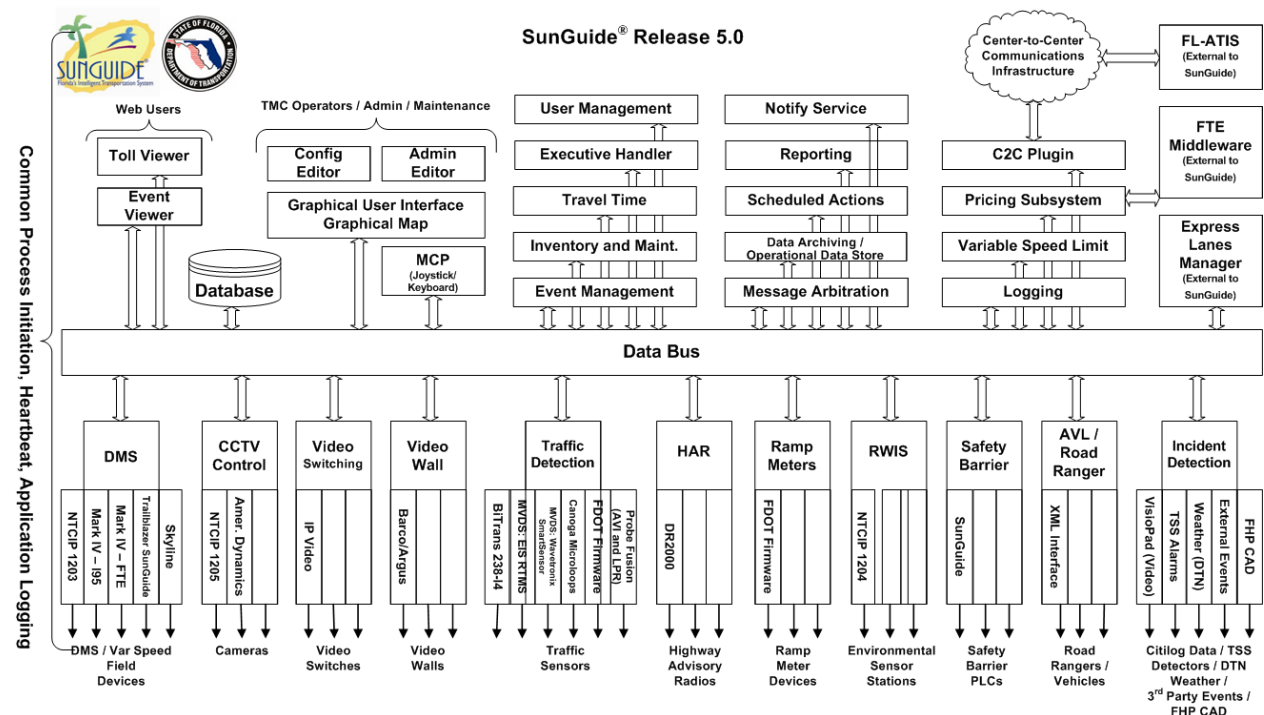

Figure 1-1 – High-Level Architectural Concept

1.3 Related Documents

Additional information regarding the SunGuide project can be found in the following documents and electronic publications:

- FDOT Scope of Services: *BDQ69, Standard Written Agreement for SunGuide Software Support, Maintenance, and Development, Exhibit A: Scope of Services.* July 1, 2010.

- Notice to Proceed: Letter to SwRI for BDQ69, July 1, 2010
- Letter of Authorization 001: Letter to SwRI for BDQ69, July 1, 2010.
- SunGuide Project website: http://sunguide.datasys.swri.edu.
- SunGuide SMD Software Development Plan, latest revision.

1.4 Contacts

The following are contact persons for the SunGuide software project:

- Elizabeth Birriel, ITS Section, Traffic Engineering and Operations Office, elizabeth.birriel@dot.state.fl.us, 850-410-5606
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- Robert Heller, SwRI Project Manager, rheller@swri.org, 210-522-3824
- Tucker Brown, SwRI Software Project Manager, tbrown@swri.com, 210-522-3035

2. Risk Management Strategy

Risk Management Strategy is the process for identifying, analyzing, and mitigating risks. This strategy addresses the specific actions and management approach used to apply and control the risk management program. This includes identifying the sources of risk, the scheme used to categorize risks, and the parameters used to evaluate, bound and control risks for effective handling.

2.1 Risk Planning

Risk Planning is the process for indentifying possible sources of risks, defining the scales used to rate the impact and probability and how those will be combined to identify risks that need to be addressed.

2.1.1 Risk Sources

Many sources of risk are accepted without adequate planning. Early identification of both internal and external risk can lead to early identification and mitigation of actual risks. The following internal and external risk sources are examined to identify risks.

- Uncertain requirements
- Continually changing requirements
- Continually changing FDOT priorities
- Poorly chosen and defined or politicized FDOT priorities
- Unprecedented efforts - estimates are unavailable
- Infeasible design
- Unavailable technology
- Unrealistic schedule estimates or allocation
- Inadequate staffing and skills
- Cost or funding issues
- Uncertain or inadequate subcontractor capability
- Uncertain or inadequate vendor capability
- Inadequate communication with actual or potential customers or with their representatives
- Disruptions to continuity of operations

2.1.2 Risk Parameters

SwRI has identified parameters for evaluating, categorizing, and prioritizing risks as described in the following paragraphs.

2.1.2.1 Risk Impact Categories

Risk Impact Categories are defined as:
- Negligible: No impact to cost and schedule will occur, available contingency will not be affected.
- Marginal: The risk can be absorbed with available cost and schedule but the risk will diminish available project contingency.
- Critical: Cost and schedule impacts will occur to the program.
- Catastrophic: The program will not be able to be completed.

2.1.2.2 Risk Probability Categories

The probability of the risk shall be determined. Risk Probability Categories are defined as:

- Very high: The risk has a 95% chance of occurring.
- High: The risk has a 75% chance of occurring.
- Medium: The risk has a 50% chance of occurring.
- Low: The risk has a 25% chance of occurring.
- Very low: The risk has a 5% chance of occurring.

2.1.2.3 Risk Criticality Map

Using both the impact and probability of the risk, a risk criticality shall be assigned to each risk. This criticality shall be used to prioritize risks. For example, if the impact of the risk is "Marginal" and the probability is "High" the risk score is "5" according to the table below.

Table 2.1 – Risk Criticality Matrix

	Very High Probability	High Probability	Medium Probability	Low Probability	Very Low Probability
Negligible Impact	4	3	2	1	0
Marginal Impact	6	5	3	2	1
Critical Impact	9	8	5	3	2
Catastrophic Impact	10	9	7	5	3

The risk criticality[1] determines the risk management priority, the higher the criticality, the higher the priority. The priorities of risks are defined as follows:

- High criticality risks (risk score > 7) have a high priority. Mitigation plans shall be explicitly discussed with the FDOT in the event the risk becomes a problem. During mitigation planning, resources are first allocated to high criticality risks to mitigate their threats.

- Moderate criticality (5 <= risk score <= 7) risks have a moderate priority. SwRI will discuss mitigation plans with the FDOT.

- Low criticality (risk score < 5) risks have a low priority. No action planning or risk tracking is necessary. However, the risk shall be periodically reviewed to ensure risk probability and risk impact conditions have not changed.

2.2 Identify and Analyze Risks

The following methods will be used to identify risks.

- Team reviews
- Peer reviews
- Feasibility studies
- Prototypes

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[1] In this risk management strategy, filled with qualitative assessments and evaluations, criticality serves as a better gate or trigger to put into motion plans to handle the risks.

- Examining each element of the project work breakdown structure
- Interviews of subject matter experts
- Reviewing risk management efforts of similar projects
- Examining lessons-learned documents or databases
- Examining design specifications and agreement requirements
- Brainstorming

Upon identification, risk management staff will complete a risk worksheet shown in Table 2.2 is completed.

Table 2.2 – Risk Worksheet

SunGuide SMD Risk Worksheet		
Risk Number		
Date identified		
Title		
Description		
Risk Classification	☐ Technical Risk ☐ Cost Risk ☐ Organization Risk ☐ Schedule Risk	☐ Other: name:
Risk Owner	☐ SwRI PM ☐ SwRI SPM ☐ SwRI Task Lead ☐ SwRI Management	☐ Other: name:
Analysis Summary	*Probability:*	☐ Very high > 95% ☐ High: > 75% ☐ Medium: > 50% ☐ Low: > 25% ☐ Very low: > 5%
	Impact:	☐ Negligible: No cost /schedule ☐ Marginal: Can absorb impact ☐ Critical: Impact cost / schedule ☐ Catastrophic: Cannot be completed
	Criticality:	Risk criticality number
Analysis Justification		
Handling		

- *Risk Number* is sequential from the beginning of the project.
- *Date Identified* is the date the risk was first identified.
- *Title* is a short phrase that summarizes the risk
- *Description* is usually multiple sentences that describe in more detail what the risk is.
- *Risk Classification* is an indication of how the risk arises.
- *Risk Owner* is the SwRI person responsible for tracking and mitigating the risk.
- *Analysis Summary* is an easily understood summary of the risk grading its impact (2.1.2.1), probability (2.1.2.2), and criticality (2.1.2.3).

- *Analysis Justification* should explain why the probability and impact have been assigned their respective values.
- *Handling options inclu*de avoidance (prevent its occurrence), mitigation (lessen the impact), and transference *(give it* to another organization).

2.3   Avoid, Mitigate and Transfer Risks

SwRI staff responsible for risks (risk owners) work with the SwRI PM, SPM and management to develop plans to handle identified risks. SwRI will include plans for avoidance, mitigation and transference on the worksheets for high criticality risks.

2.3.1   Risk Avoidance

It is possible to develop plans to avoid the occurrence of many risks. This consists of careful planning of actions to be taken at defined events during the execution of a project. By defining and implementing these plans, specific occurrences of risks can be avoided. Example: by refusing to accept new or changed requirements without providing the FDOT with cost and schedule impacts, SwRI can avoid the issues of scope creep which can lead to project cost overruns and schedule delays.

2.3.2   Risk Transference

It is possible to develop plans to transfer risks to other organizations. This consists of careful planning of actions to be taken at the occurrence of some risks. By defining and implementing these plans, specific occurrence of risks can be avoided. Example: by identifying an adverse impact an external organization is having on a project (withholding a critical resource, failure to meet schedule to deliver a required test tool or jig, etc.) and requesting assistance from the FDOT to resolve the issue, the risk is transferred to FDOT.

2.3.3   Develop Risk Mitigation Plans

SwRI staff members who are owners of identified risks will work with the SwRI PM, SPM and management to develop risk mitigation plans. These plans are typically in the form of "if *x* happens, SwRI will respond by doing *y*." Risk mitigation plans often reflect decisions and choices that have been made in advance to reduce the impact of risk occurrence. Example: If it is not apparent that a staff member is not making sufficient progress in their task, then SwRI will reallocate staff to help the staff member accomplish their goal.

3. Risks Identified

SwRI has identified the risks in the Table 3.1; these risks will be tracked in a Word Document and published to the SunGuide website (http://sunguide.datasys.swri.edu) as an Adobe Acrobat pdf file. Completed Risk Worksheets are contained in Attachment A; these will be furnished to the FDOT upon request.

Table 3.1 – Risks Identified At Plan Publication

#	Description	Identified	Probability	Impact	Criticality	Mitigation
1	SwRI PM Replaced	2010.07.29	Low	Negligible	1	Monitor and reassess.
2	SwRI SPM Replaced	2010.07.29	Low	Negligible	1	Monitor and reassess.
3	Support Funding Insufficient	2010.07.29	High	Critical	8	Monitor and reassess.
4	Number of PM & SPM requests from FDOT	2010.07.29	High	Critical	8	Monitor and reassess. Strictly interpret the Scope of Services and each LOA for scope definitions; request funding for out of scope requests.
5	Requirements volatility	2010.07.29	Medium	Critical	5	Requests for requirements changes by the FDOT will be evaluated carefully for cost and schedule impacts; requests for schedule modification will be evaluated for impacts on cost.
6	Post FAT Issues Cost	2010.07.29	Medium	Critical	5	SwRI is increasing the amount of peer reviews and testing can reduce the probability of this risk occurring; SwRI is doing just that. Furthermore, SwRI will analyze which methods are providing the greatest payback in terms of latent defect reduction.
7	FDOT PM Replacement	2010.07.29	Low	Marginal	2	Monitor all work activities to make sure they are authorized by the FDOT PM.

#	Description	Identified	Probability	Impact	Criticality	Mitigation
8	FDOT Consultant Reviews	2010.07.29	High	Critical	8	Monitor all work activities to make sure they are authorized by the FDOT PM, document in more detail all expenses; review delivery requirements in detail; respond to requests with realistic cost and schedule impacts.
9	On-site Support Personnel Resigns/Terminated	2010.07.29	Low	Marginal	2	Maintain open dialog with employees and subcontracted employees and address issues in a timely manner.
10	On-Site Travel Requirements using On-Site Support Personnel in Florida	2010.07.29	Low	Marginal	2	Monitor all Footprints issues daily. Maintain open dialog with supported Districts so requested trips are not unexpected.

**Attachment A
Risk Worksheets**

SunGuide SMD Risk Worksheet	
Risk Number	1
Date identified	July 29, 2010
Title	SwRI PM Replaced
Description	The SwRI PM is replaced by another SwRI staff member due to unavailability of the current PM.
Risk Classification	☐ Technical Risk ☐ Cost Risk ☒ Organization Risk ☐ Schedule Risk ☐ Other: name:
Risk Owner	☒ SwRI PM ☐ SwRI SPM ☐ SwRI Task Lead ☒ SwRI Management ☐ Other: name:

Analysis Summary	*Probability:*	☐ Very high > 95% ☐ High: > 75% ☐ Medium: > 50% ☒ Low: > 25% ☐ Very low: > 5%
	Impact:	☒ Negligible: No cost /schedule ☐ Marginal: Can absorb impact ☐ Critical: Impact cost / schedule ☐ Catastrophic: Cannot be completed
	Criticality:	1

Analysis Justification	SwRI has other staff members who can manage this project. As the transition takes place, the old PM will continue to be available for consulting to the new PM until the transition is complete and the new PM able to fully manage the project without additional help. Additionally, SwRI requires regular meetings between the PM and "organizational management (Irvin)" that helps keep the Impact of this in the Negligible range.
Mitigation	Monitor and reassess. The key to minimizing the impact of this risk is to identify the necessity of the transition early enough, name the successor early and then manage the transition so that when it does become effective there is not risk to the project.

SunGuide SMD Risk Worksheet		
Risk Number	2	
Date identified	July 29, 2010	
Title	SwRI SPM Replaced	
Description	The SwRI SPM is replaced by another SwRI staff member due to unavailability of the current SPM.	
Risk Classification	☐ Technical Risk ☐ Cost Risk ☒ Organization Risk ☐ Schedule Risk	☐ Other: name:
Risk Owner	☒ SwRI PM ☐ SwRI SPM ☐ SwRI Task Lead ☐ SwRI Management	☐ Other: name:
Analysis Summary	*Probability:*	☐ Very high > 95% ☐ High: > 75% ☐ Medium: > 50% ☒ Low: > 25% ☐ Very low: > 5%
	Impact:	☐ Negligible: No cost /schedule ☒ Marginal: Can absorb impact ☐ Critical: Impact cost / schedule ☐ Catastrophic: Cannot be completed
	Criticality:	1
Analysis Justification	SwRI has other staff members who can replace the software project manager. The current PM can bring in a new SPM and mentor the new SPM in that position until fully capable of fulfilling the role. This was recently demonstrated by adding Brown in the role of SPM during the transition period between contracts BD826 and BDQ69.	
Mitigation	Monitor and reassess. The key to minimizing the impact of this risk is to identify the necessity of the transition early enough, name the successor early and then manage the transition so that when it does become effective there is not risk to the project.	

SunGuide SMD Risk Worksheet	
Risk Number	3
Date identified	July 29, 2010
Title	Support Funding Inadequate
Description	The funding that FDOT has provided for LOA001 to provide software support and maintenance of the SunGuide software is not sufficient to provide the level of service expected
Risk Classification	☐ Technical Risk ☐ Other: name: ☒ Cost Risk ☐ Organization Risk ☐ Schedule Risk
Risk Owner	☒ SwRI PM ☐ Other: name: ☐ SwRI SPM ☐ SwRI Task Lead ☐ SwRI Management

Analysis Summary	**Probability:**	☐ Very high > 95% ☒ High: > 75% ☐ Medium: > 50% ☐ Low: > 25% ☐ Very low: > 5%
	Impact:	☐ Negligible: No cost /schedule ☐ Marginal: Can absorb impact ☒ Critical: Impact cost / schedule ☐ Catastrophic: Cannot be completed
	Criticality:	8

Analysis Justification	SwRI provided a cost estimate based on a very low level of effort. This was an attempt to match staffing to a funding level. It is apparent from the current discussions with the FDOT that much more is expected that the level of staffing can provide.
Mitigation	SwRI will monitor the existing funding and notify FDOT when the funding appears to be insufficient to provide coverage to the end of the fiscal year. The startup months are known to be expensive due to the cost of the early document submittals. However, SwRI will separately provide a cost estimate to FDOT to provide a plan to resolve the open footprints issues.

SunGuide SMD Risk Worksheet		
Risk Number	4	
Date identified	July 29, 2010	
Title	SwRI PM / SPM Overload	
Description	The FDOT has a part time PM and nearly full time consultant PM as well as numerous other support persons that generate tasks that need to be addressed either fully or partially by the SwRI PM. This causes the SwRI PM and SPM to bill more heavily that originally projected to satisfy the requests from the FDOT PM and consultant.	
Risk Classification	☐ Technical Risk ☒ Cost Risk ☐ Organization Risk ☐ Schedule Risk	☐ Other: name:
Risk Owner	☒ SwRI PM ☐ SwRI SPM ☐ SwRI Task Lead ☐ SwRI Management	☐ Other: name:
Analysis Summary	*Probability:*	☐ Very high > 95% ☒ High: > 75% ☐ Medium: > 50% ☐ Low: > 25% ☐ Very low: > 5%
	Impact:	☐ Negligible: No cost /schedule ☐ Marginal: Can absorb impact ☒ Critical: Impact cost / schedule ☐ Catastrophic: Cannot be completed
	Criticality:	8
Analysis Justification	SwRI has already received multiple requests that are out of scope from the FDOT (e.g. "Plan to Resolve Legacy Footprints Issues").	
Mitigation	Monitor and reassess. Strictly interpret the Scope of Services and each LOA for scope definitions; request funding for out of scope requests.	

SunGuide SMD Risk Worksheet	
Risk Number	5
Date identified	July 29, 2010
Title	Requirements Volatility
Description	Changes in requirements or differences in requirements interpretation adversely impacts cost and schedule. Holding schedule while accepting changing requirements compresses testing and results in other cost and schedule issues.
Risk Classification	☒ Technical Risk ☐ Cost Risk ☐ Organization Risk ☐ Schedule Risk — ☐ Other: name:
Risk Owner	☒ SwRI PM ☐ SwRI SPM ☐ SwRI Task Lead ☐ SwRI Management — ☐ Other: name:
Analysis Summary	**Probability:** ☐ Very high > 95% ☐ High: > 75% ☒ Medium: > 50% ☐ Low: > 25% ☐ Very low: > 5%
	Impact: ☐ Negligible: No cost /schedule ☐ Marginal: Can absorb impact ☒ Critical: Impact cost / schedule ☐ Catastrophic: Cannot be completed
	Criticality: 5
Analysis Justification	The ability to track/control this risk is fully within the power of SwRI project management. SwRI has accommodated scope creep and schedule compression in effort to meet FDOT goals in the past.
Mitigation	Requests for requirements changes by the FDOT will be evaluated carefully for cost and schedule impacts; requests for schedule modification will be evaluated for impacts on cost.

SunGuide SMD Risk Worksheet	
Risk Number	6
Date identified	July 29, 2010
Title	Post FAT Issues.
Description	Unit testing, integration testing and FAT have failed to identify latent defects subsequently discovered in IVV testing and deployments.
Risk Classification	☒ Technical Risk ☐ Other: name: ☐ Cost Risk ☐ Organization Risk ☐ Schedule Risk
Risk Owner	☐ SwRI PM ☐ Other: name: ☐ SwRI SPM ☐ SwRI Task Lead ☐ SwRI Management
Analysis Summary	**Probability:** ☐ Very high > 95% ☐ High: > 75% ☒ Medium: > 50% ☐ Low: > 25% ☐ Very low: > 5%
	Impact: ☐ Negligible: No cost /schedule ☐ Marginal: Can absorb impact ☒ Critical: Impact cost / schedule ☐ Catastrophic: Cannot be completed
	Criticality: 5
Analysis Justification	Experience with the Release 5.0 and 4.3 development efforts has shown that insufficient testing was performed and latent defects were discovered during IVV testing and during deployments of the software. These are directly attributable to insufficient testing. With 4.3, defects were identified only after the software was placed into production – uncovering performance issues with the transition to Oracle 11g that were not experienced with 10g (i.e. Oracle 11g performance issues). With 5.0, a timing issue was discovered with Internet Explorer that caused IE to close. Of these two issues, the first could have been found by performing stress testing on 11g, the second is still under investigation.
Mitigation	SwRI is increasing the amount of peer reviews and testing to reduce the probability of this risk occurring. Additionally, SwRI will perform testing in a "(simulated) device rich" environment to an environment more representative of production environments. Finally, SwRI is expanding its regression test procedures with each release.

SunGuide SMD Risk Worksheet	
Risk Number	7
Date identified	July 29, 2010
Title	FDOT PM Replacement
Description	The FDOT PM is replaced
Risk Classification	☐ Technical Risk ☐ Cost Risk ☒ Organization Risk ☐ Schedule Risk ☐ Other: name:
Risk Owner	☒ SwRI PM ☐ SwRI SPM ☐ SwRI Task Lead ☐ SwRI Management ☐ Other: name:
Analysis Summary	**Probability:** ☐ Very high > 95% ☐ High: > 75% ☐ Medium: > 50% ☒ Low: > 25% ☐ Very low: > 5% **Impact:** ☐ Negligible: No cost /schedule ☒ Marginal: Can absorb impact ☐ Critical: Impact cost / schedule ☐ Catastrophic: Cannot be completed *Criticality:* 2
Analysis Justification	Replacement of the FDOT PM should have little to no affect on authorized tasks. However, if SwRI agrees to perform work based on verbal or email authorization then the impact could be substantial to SwRI.
Mitigation	Monitor all work activities to make sure they are authorized by the FDOT PM via appropriate means (e.g. LOA)

SunGuide SMD Risk Worksheet	
Risk Number	8
Date Identified	July 29, 2010
Title	FDOT Reviews
Description	The level scrutiny has increased with the recent change of the FDOT Consultant PM. This has resulted in document comments that in the past would not have been generated.
Risk Classification	☐ Technical Risk ☐ Cost Risk ☒ Organization Risk ☐ Schedule Risk / ☐ Other: name:
Risk Owner	☒ SwRI PM ☐ SwRI SPM ☐ SwRI Task Lead ☐ SwRI Management / ☐ Other: name:

Analysis Summary	Probability:	☐ Very high > 95% ☒ High: > 75% ☐ Medium: > 50% ☐ Low: > 25% ☐ Very low: > 5%
	Impact:	☐ Negligible: No cost /schedule ☐ Marginal: Can absorb impact ☒ Critical: Impact cost / schedule ☐ Catastrophic: Cannot be completed
	Criticality:	8

Analysis Justification	Changes within the organization of the FDOT consultant result in more detailed review of deliveries; requests for additional information; additional detail; justification of all costs & expenses.
Mitigation	Monitor all work activities to make sure they are authorized by the FDOT PM, document in more detail all expenses; review delivery requirements in detail; respond to requests with realistic cost and schedule impacts.

	SunGuide SMD Risk Worksheet	
Risk Number	9	
Date Identified	July 29, 2010	
Title	FDOT Consultant Reviews	
Description	On-site Support Personnel Resigns/Terminated	
Risk Classification	☐ Technical Risk ☐ Cost Risk ☒ Organization Risk ☐ Schedule Risk	☐ Other: name:
Risk Owner	☒ SwRI PM ☐ SwRI SPM ☐ SwRI Task Lead ☐ SwRI Management	☐ Other: name:
Analysis Summary	*Probability:*	☐ Very high > 95% ☐ High: > 75% ☐ Medium: > 50% ☒ Low: > 25% ☐ Very low: > 5%
	Impact:	☐ Negligible: No cost /schedule ☒ Marginal: Can absorb impact ☐ Critical: Impact cost / schedule ☐ Catastrophic: Cannot be completed
	Criticality:	2
Analysis Justification	Staff adjustments are not completely unexpected in a project. Replacement personnel for departing staff should be able to be located in a reasonable amount of time.	
Mitigation	In addition to the yearly performance reviews that are required for all SwRI employees, including employee feedback and job satisfaction commentary, SwRI project management and organizational management will maintain an open dialog all on-site support personnel in order to address personnel issues.	

SunGuide SMD Risk Worksheet		
Risk Number	10	
Date Identified	July 29, 2010	
Title	FDOT Consultant Reviews	
Description	On-Site Travel Requirements using On-Site Support Personnel in Florida	
Risk Classification	☐ Technical Risk ☒ Cost Risk ☐ Organization Risk ☐ Schedule Risk	☐ Other: name:
Risk Owner	☒ SwRI PM ☐ SwRI SPM ☐ SwRI Task Lead ☐ SwRI Management	☐ Other: name:
Analysis Summary	**Probability:**	☐ Very high > 95% ☐ High: > 75% ☐ Medium: > 50% ☒ Low: > 25% ☐ Very low: > 5%
	Impact:	☐ Negligible: No cost /schedule ☒ Marginal: Can absorb impact ☐ Critical: Impact cost / schedule ☐ Catastrophic: Cannot be completed
	Criticality:	2
Analysis Justification	Failures requiring on-site assistance are rare for any district. Issues that do require on-site support will be handled by Florida-based staff so less travel will be necessary.	
Mitigation	Footprints are monitored on a daily basis and support calls are sent via text and email to the PM, SPM, and on-call support personnel. Issues of significance are dealt with by support personnel and monitored by the SwRI PM and SPM at all times. Issues requiring on-site support should be known about well before on-site support will be requested.	