How to Use the Appropriate Risk Management Tools

There are many strategies and tools available for risk management. This section describes how each risk management step can be accomplished and documented by the risk management tool. This section will describe these processes and tools: The Risk Based Graded Approach, the Project Risk Register, Qualitative and Quantitative Risk Analysis tools, and Risk Workshops.

Several tools are provided to assist in the identification, analysis, planning and implementing a plan for risk management. The ***Project Managers Toolbox*** contains a risk-based "graded approach analysis" methodology, used to determine requirements for planning and control of the project work effort. This procedure results in an overall risk evaluation for a project, as well as identification of general risk elements within a project. It is a simplified approach to risk analysis.

FDOT Risk Management Tools

FDOT provides access to tools for every cost range risk analysis. The tools correspond to the cost ranges described in ***PMG 240 Risk Management - General***. Risk management on Low Range projects is based on a qualitative analysis where the project team can identify project risks or select applicable risks from a list of common risks (Risk Starter List). This qualitative analysis can be a more detailed expansion of the Risk Based Graded Approach Worksheet. Mid and High Range projects require a greater level of risk management but differ in the level of quantitative analysis required.

The risk management approach strongly encourages project integration and using information from other project evaluation tools and processes. The risk management tools simply help the project team focus on the highest severity risks and to ensure that a risk owner will follow up appropriately. It is important to keep in mind that low severity risks will typically not warrant mitigation or attention.

Risk Management Plan - A risk management plan should identify the risks that need to be managed (the highest priority risks and possibly some or all of the intermediate priority risks) and the selected risk response strategy for each. The plan should include specific actions to be taken and responsible parties. A new risk management plan should be developed at the initiation of each project phase, involving the FDOT Project Managers of the preceding, current and subsequent phase. Plans should be developed early enough to include necessary strategies in the consultant scope of services. A risk management plan will also be a valuable tool in selecting design-build and other innovative contracting methods for construction contracts.

It is a good idea for both the FDOT and consultant Project Managers to develop separate risk management analyses from their own perspectives as part of their preparations for contract negotiations. Managing high-priority risks are valid interests that should be addressed by both parties as part of mutual gains negotiations. The analyses should then be updated after negotiations reflecting any agreements reached.

Risk management plans should be monitored to identify new risks and to ensure that selected strategies are executed and the effectiveness of actions taken are evaluated. Monitoring of the plan should continue throughout the life of a project. Detailed updates of the plan should be made at selected milestones, especially on large projects. It is recommended that the risk management plan be provided to the Value Engineering team prior to the VE workshop.

Risk Based Graded Approach - The most basic type of risk management tool is a Risk Based Graded Approach Worksheet which the project manager uses to grade and prioritize different risk elements. This is the starting point for all projects and it can be completed in very little time. A Risk Based Graded Approach is a process to define, in rough terms, the overall risk value of the project. It should be used by the FDOT Project Manager during the initial scoping phase of the project to assess overall project risk. The Risk Based Graded Approach Analysis is used during project scoping by the

FDOT Project Manager to determine requirements for planning and control of the project work effort. This analysis will maximize project control effectiveness at the lowest cost and assist in identification and mitigation of project risks.

The Risk Based Graded Approach Analysis is a management tool used to:

- Determine where to assign what PM resources
- Helps define the scope for the Project
- Evaluate risk elements based on risk (vs. cost of project)
- Get agreement from all members of the project team

The Risk Based Graded Approach Worksheet should take no more than fifteen minutes to complete, even on the most complex project. The worksheet is completed as part of the project planning process with the total Risk Score included in the project documentation. Completion of the Risk Based Graded Approach Worksheet is a fast way to assess project risk early in the project timeline and should not be used as a substitute for formal risk identification, qualification, quantification, and response planning.

A Risk Based Graded Approach Worksheet identifies and documents values for predetermined risk elements. Identification of a total risk score denotes the probability of any potential impacts on project deliverables and cost/schedule baselines during project execution. Identification of project risk qualifies the possibility of baseline impacts (e.g., not meeting intended functions, internal or external schedule commitments or cost thresholds.