

EXHIBIT "A"

SCOPE OF SERVICES

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STATEWIDE COST & SCHEDULE RISK WORKSHOP AND ANALYSIS SERVICES

I. Objective

The objective of this contract is to provide risk management services related to transportation facilities and to conduct training in the principles of risk management. The project management services related to risk management may include, but not limited to the following:

- Conduct cost and schedule risk analysis workshops
- Provide training in risk management principles
- Other activities related to risk analysis and risk management
- Other engineering disciplines (geometric design, construction, environmental, etc.)

Consultant must have the capability to provide subject matter experts (SME's) in the following areas:

- Project risk management
- Project scheduling
- Project cost estimating (including quantity take-offs)
- Engineering economic analysis

The Department shall request services on an as-needed basis.

Special Note: The consultant firm that provides services under this contract will not be eligible to compete for Department Public Private Partnership (PPP) or Design/Build contracts.

II. Services

A. Cost and Schedule Risk Analysis Workshops

The consultant will conduct the Cost and Schedule Risk Analysis Workshops in accordance with the Federal Highway Administration's (FHWA) Major Project Program Cost Estimating Guidance – January 2007, Project Management Institute's (PMI) Project Management Body of Knowledge (PMBOK) and the Florida Department of Transportation's (FDOT) Project Management Guide.

The following practices are general for conducting Cost and Schedule Risk Analysis Workshops. One or more of the steps may not be necessary depending on the scope of the individual Task Work Order.

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1. Identify team members required for the workshop, including the Cost, Schedule and Risk Leads and subject matter experts as necessary.
2. Coordinate with the FDOT project manager to schedule any pre-workshop meeting, the workshop and any post-workshop meeting. This may include but not limited to securing facilities, scheduling team members, insuring adequate project information to conduct the workshop.
3. Initial Contact & Preparatory Session:
This will consist of up to a one day meeting with project specific personnel and the cost, schedule and risk lead members. The Risk Lead will confirm project scope, assumptions, and delivery strategy. Characterize the sequence of major project schedule activities in terms of a "flow chart". The Cost and Schedule Lead will facilitate an initial discussion on base cost and schedule. Establish responsibilities for additional preparation for subsequent Risk Assessment Workshop. General work assignment and staff hours will be based on activities in accordance with Department policy and practices.
4. Risk Assessment Workshop:
A typical workshop will be approximately three (3) day duration and may vary depending on project scope and analysis needs. Confirm project flow chart. The Cost and Schedule Lead will conduct review of the "base" cost and schedule. The Risk Lead will identify and assess "risk factors", to include the following: identify a comprehensive, non-overlapping set of threats and opportunities consistent with the "base"; facilitate defensible and adequate quantification of risk factors (probability of occurrence and impacts to cost & schedule) by eliciting subjective assessments from project team and SMEs; adequately document the assessments in a "risk register". General work assignment and staff hours will be based on activities in accordance with Department policy and practices.
5. Risk Analysis and modeling:
Within three weeks after the conclusion of the risk assessment workshop, submit a draft report that combines the "base" and non-mitigated "risk" factors with the flow chart to quantify uncertainty in the project cost and schedule. Prioritize the critical threats and opportunities. General work assignment and staff hours will be based on activities in accordance with Department policy and practices.
6. Risk Assessment Workshop Results Presentation:
Present the draft results of the Risk Assessment and Risk Management. General work assignment and staff hours will be based on activities in accordance with Department policy and practices.

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7. Risk Assessment and Risk Management Workshop Analysis and Report:
Within approximately two weeks of the approved draft report, finalize the Risk Assessment analysis (assuming no significant changes to the Risk Assessment). Prepare a written report on the Risk Assessment and Risk Management Workshop results. General work assignment and staff hours will be based on activities in accordance with Department policy and practices.
8. Risk Response Strategies & Additional Modeling:
Conduct an analysis for the proposed risk response strategies plan. Quantify uncertainty in mitigated cost and schedule, and prioritize the residual threats and opportunities. Finalize Risk Assessment inputs. If results from the risk assessment indicate the need, a) facilitate the identification of potential risk-management actions to address critical risks and key opportunities as identified during the Risk Assessment, b) facilitate quantification of the costs and benefits of proposed actions (in terms of changes to base factors and risk factors), and c) document adequately.

B. Risk Management Training

Provide training in risk management. The training may include, but not be limited to the following topics:

1. Risk Management Planning – development of Risk Management Plan (RMP); identification and establishment of risk management activities for the project; establishment of agreed-upon basis for evaluating risks.
2. Risk Identification – development of Risk Register; identification of threats, opportunities and triggers; consideration of residual risks, secondary risks, and risk interaction.
3. Qualitative Risk Analysis – prioritization of identified risks based on probability of occurrence and the corresponding impact to project's objectives; consideration of project's time frame and risk tolerance to project constraints of cost, scope, schedule and quality;
4. Quantitative Risk Analysis – numerical estimation of the probability that the project will meet its cost and time objectives; simultaneous evaluation of identified and quantified risks through statistical analysis of uncertainties using Monte Carlo Simulation software based on 3-point estimates and probability distribution of each element; calculation of project's probability to complete on schedule and within cost, contingency reserve needed for sufficient level of confidence, and sensitivity analysis of activities and elements which cause the most variations.

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5. Risk Response Planning – development of strategies for identified threats including avoid, transfer, mitigate, accept; development of strategies for identified opportunities including exploit, enhance, share, and accept.
6. Risk Monitoring and Control – tracking of identified risks, residual risks, and new risks; monitoring the execution of planned strategies on identified risks and evaluating their effectiveness; updating and reviewing the Risk Register and revising the prioritization and ratings of risks; choosing alternative response strategies, implementing contingency plans, taking corrective actions, and re-planning the project.
7. Earned Value Management – assessing/quantifying parameters in measuring work performed, development of Earned Value Management (EVM) data, recommended methodologies in projecting estimate-at-completion, evaluating data, and reporting.
8. Cost Estimating – assessing bases for estimating costs for both labor primary and material primary processes. Critical review of cost elements to assure no significant element is overlooked. Application of currently available tools and techniques, and databases that may include economic modeling, probabilistic or statistical measures.
9. Cost and Schedule Control - assessing and implementing any appropriate additional monitoring indicators; assessing remedial options to implement when analytical indices trigger action alerts pertaining to scope, cost, or schedule of an activity, group of activities, or the entire project.

C. Other Project Management related activities

Provide individual mentoring or assistance to district project managers related to risk analysis or risk management. The areas for mentoring or assistance may include, but not be limited to the topics identified in section B.

III. Responsibilities of the Department

The Department shall provide a Project Manager who shall be responsible for all coordination with the Consultant pertaining to all contractual matters, invoicing and reporting. The Department may also designate a manager for each Task Work Order who shall be responsible for working with the Consultant Project Manager to define the specific work to be performed and the schedule for completion of each task, the Consultant staffing to be provided, and the cost. The Department Project Manager shall be responsible for approval of any additional staffing to be provided including additional consultant staff (approval must be coordinated with the Procurement Office), and shall give approval of all products and services.

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The FDOT will supply the necessary meeting rooms and subject matter experts for the cost and schedule risk assessment studies. Also, the Department's Cost Statewide Risk Management Team may be participants in these studies.

IV. Responsibilities of the Consultant

The Consultant shall provide and maintain an up-to-date list of staff with agreed-to classifications and approved salaries (subject to the contract Exhibit "B") that would be available to be assigned to specific Task Work Orders. No consultant staff, except those specifically identified in a Task Work Order or those specifically agreed to by the Department Project Manager, shall charge time to that particular Task Work Order.

Consultant must request approval from the Department's Project Manager for any modifications or additions to the list of available staff prior to the initiation of any work by that individual. If applicable, new job classifications may be added to the contract via contract amendment. Consultant shall submit a copy of the resume and payroll register before new staff can be added.

For a Task Work Order where Consultant staff are anticipated to work the majority of a 40 hour week at Department facilities, the Consultant will be reimbursed at the field rate, and staff who are anticipated to work on average the majority of the week at the home office should be reimbursed at the home rate.

V. Personnel Qualifications

The Consultant shall assign only competent technical and professional personnel qualified by the necessary experience and education to perform assigned work. The Consultant is responsible for ensuring that staff assigned to work under this Agreement has the training established by the Department as a prerequisite for consultant staff to perform work. If the required training is such that it can be applied by the trainee to work on other contracts, (regardless of whether or not the trainee would work on other agreements), the cost of the trainee's time and expenses associated with the training is not directly billable to the Department on this contract, and shall only be recoverable thru overhead for the Consultant firm.

VI. Subconsultant Services

Services assigned to any subconsultants must be approved in writing and in advance by the Department Project Manager, Procurement Office, and the Consultant Project Manager in accordance with this Agreement. All subconsultants must be technically qualified by the Department to perform all work assigned to them. Additional subconsultants with specialized areas of expertise may be required to complete specific Task Work Order assignments. Any subconsultant to be hired and all work assignments to be performed, and all rates of compensation shall be agreed to by the Department Project Manager, Procurement Office and the Consultant Project Manager and documented in the contract file prior to any work being performed by the subconsultant.

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Any new subconsultant must be added to the contract via contract amendment (in coordination with the Procurement Office) prior to any issuance of work on a Task Work Order.

VII. Consultant Not Employee or Agent

The Consultant and its employees, agents, representatives, or subconsultants/subcontractors are not employees of the Department and are not entitled to the benefits of State of Florida employees. Except to the extent expressly authorized herein, Consultant and its employees, agents, representatives, or subconsultants/subcontractors are not agents of the Department or the State for any purpose or authority such as to bind or represent the interests thereof, and shall not represent that it is an agent or that it is acting on the behalf of the Department or the State. The Department shall not be bound by any unauthorized acts or conduct of Consultant.

VIII. Ownership of Works and Inventions

The Department shall have full ownership of any works of authorship, inventions, improvements, ideas, data, processes, computer software programs, and discoveries (hereafter called intellectual property) conceived, created, or furnished under this Agreement, with no rights of ownership in Consultant or any subconsultants/subcontractors. Consultant and subconsultants/subcontractors shall fully and promptly disclose to the Department all intellectual property conceived, created, or furnished under this Agreement. Consultant or subconsultant/subcontractor hereby assigns to the Department the sole and exclusive right, title, and interest in and to all intellectual property conceived, created, or furnished under this Agreement, without further consideration. This Agreement shall operate as an irrevocable assignment by Consultant and subconsultants/subcontractors to the Department of the copyright in any intellectual property created, published, or furnished to the Department under this Agreement, including all rights thereunder in perpetuity. Consultant and subconsultants/subcontractors shall not patent any intellectual property conceived, created, or furnished under this Agreement. Consultant and subconsultants/subcontractors agree to execute and deliver all necessary documents requested by the Department to effect the assignment of intellectual property to the Department or the registration or confirmation of the Department's rights in or to intellectual property under the terms of this Agreement. Consultant agrees to include this provision in all its subcontracts under this Agreement.

IX. Conflict of Interest

The Consultant and its subconsultants will not enter into another contract during the term of this agreement which would create or involve a conflict of interest with the services herein. The Consultant and its subconsultants must comply with FDOT Procedure No. 375-030-006, Conflict of Interest Procedure for Department Contracts.