

CHAPTER 7 – MAINTENANCE PROJECT MANAGEMENT

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Introduction

The term Project Manager (PM) is a general term used throughout this chapter for the Florida Department of Transportation (FDOT) employee responsible for managing a project. Unless specifically indicated otherwise, PM refers to the Maintenance PM.

The [Florida Department of Transportation \(FDOT\)](#) must maintain over 12,000 centerline highway miles of roadway; 6,300 bridges; and 67 rest areas, welcome centers, service plazas and other roadside facilities in order to provide efficient and safe transportation and to preserve its substantial investment. The maintenance program, accessible at the [Maintenance Office](#) website, consists of a mixture of in-house and contract work, with the trend favoring more contract maintenance in future years.

Florida Department of Transportation Maintenance Program

Maintenance programs are projected in the FDOT Five-Year Work Program. An automated Maintenance Management System (MMS) is used to assist in planning, organizing, budgeting and controlling the overall maintenance operations for the FDOT. The overall Maintenance Contract Program consists of some large projects and numerous small projects, some of which are repetitive in nature. Whether large or small, a project requires a skilled Project Manager (PM) to make the program successful. A PM in maintenance must have management and leadership skills and be able to handle contract administration, reporting responsibilities and enforcement of contract provisions.

Project Manager Titles

A PM generally has the overall responsibility for producing a quality product within time and budget. A PM might have any of the following titles:

- Maintenance Contract Engineer
- Assistant Maintenance Engineer
- Maintenance Engineer
- Maintenance Contract Administrator
- Operations Center Engineer
- Operations Center Manager
- Operations Center Contract Engineer
- Operations Center Contract Manager

Contract Maintenance

The FDOT maintenance program is mostly contract-driven. Examples of contracts administered by PMs are:

- Asset Maintenance Contracts (for a corridor, geographic area or specific component)
- District Contracts (annual, work-order driven or site specific)
- Contractual Services (service contracts)
- Professional Services Contracts (bridge inspection)
- Emergency Contracts
- Temporary Contracts

Most of these contracts are procured and managed in accordance with ***Procedure No. 375-000-001, [District Contracts](#)***. Asset management contracting instructions can be found on the Maintenance Office website. Part I, Chapters 12, 13 and 14 of this handbook, discuss contracts for consultant services.

In addition, maintenance frequently enters into agreements with other state agencies, local governments and other organizations. These agreements include the following:

- Memorandum of Agreements (MOAs)
- Agreements (see Appendix C of this handbook)
- Negotiated Agreements with groups certified as a Florida Youth Work Experience Program
- Department of Correction Inmate Programs

The PM must be fully knowledgeable of contract document preparation, procurement of services, negotiations, and administration of various types of contracts. The PM must have a full understanding of the specifications or scope of services to be rendered under the contract and how the contractor will be paid. Procedure No. 375-020-002, ***[Contract Maintenance Inspection and Reporting](#)***, contains specific instructions related to the management of maintenance contracts.

PMs may be called upon to fully develop bid packages for any of the contract types listed above. Such activities will include a complete review of the work requirements to determine the optimum contracting method. Once the contracting method has been determined, a complete set of contract documents is developed.

Information concerning the development of specifications and special provisions can be found in *Procedure No. 850-000-020, [Standard Maintenance Special Provision Development](#)*, and *Procedure No. 850-000-025, [Maintenance Specification Package](#)*.

Figure 1, **Contract Document Checklist**, shows some of the required documents.

The contract package is then submitted to the appropriate FDOT Contracts Administration personnel for advertising, bidding, review and award. The PM must work closely with the contracts personnel; she/he will be expected to review bids or proposals and provide inputs to the awards committee when required. Once the contract is awarded, the PM must then implement the project start-up and controls as required by the contract documents.

Figure 1
Contract Document Checklist

- | | |
|-------------------------------------|-------------------------------------|
| <input checked="" type="checkbox"/> | Plans for the work |
| <input checked="" type="checkbox"/> | Scope of service |
| <input checked="" type="checkbox"/> | Maintenance special provisions |
| <input checked="" type="checkbox"/> | Standard maintenance specifications |
| <input checked="" type="checkbox"/> | Special provisions |
| <input checked="" type="checkbox"/> | Supplemental specifications |
| <input checked="" type="checkbox"/> | Standard specifications |
| <input checked="" type="checkbox"/> | Design standards |
| <input checked="" type="checkbox"/> | Cost estimate |
| <input checked="" type="checkbox"/> | Quantities & pay items |
| <input checked="" type="checkbox"/> | Fund encumbrances |

Maintenance Rating Program

The Maintenance Rating Program (MRP) is a uniform method for evaluating the performance of maintenance operations. The Maintenance Rating Program, described in *Procedure 850-065-002, [Maintenance Rating Program](#)*, provides the PM with a uniform procedure to evaluate maintenance features on the State Highway System. The information contained in this procedure together with that in the Maintenance Rating Program Handbook defines a method for conducting a visual and mechanical evaluation of routine highway maintenance conditions.

Maintenance ratings can be a valuable resource early in the development of new construction projects to help ensure that maintenance needs are adequately considered in the project scope. It is also a good practice to perform maintenance ratings on new projects as they near construction completion to help identify problems that might be corrected during construction.

Asset Maintenance

Asset maintenance contracts are generally used for routine maintenance work and management services for a designated corridor, geographic locale, or specific roadway components such as rest areas, weigh stations, welcome centers, bridges or other fixed assets within a specified boundary. The contracts are usually long term, fixed lump sum contracts. The *[Highway Asset Maintenance Scope of Service](#)* is located on the Maintenance Office website. Under this type of contract, the contractor assumes all risks associated with the specific scope of work and posts an annual performance bond. The contractor's performance is rated periodically using the FDOT Maintenance Rating Program,

and other performance measures that have pre-determined deducts in payment for sub-standard or unacceptable performance. The Maintenance Office website contains useful information related to asset maintenance.

Because of the size and complexity of these contracts, they are generally awarded through a Request for Proposal process. Proposals are first evaluated and scored against the scope requirements. The proposals include the contractor's plan to comply with the FDOT maintenance requirements as presented in the scope of services. Final contractor selection is made with price 30-40% and the technical portion of the proposal 60-70% of the total score.

These contracts must be monitored to assure the contractor's proper performance of all requirements in the scope of services. Reductions in payments are assessed if the maintenance contractor's performance is substandard. The desired level of maintenance is included in the scope of services, and the MRP is part of the evaluation process.

Other Maintenance Contracts

The FDOT maintenance projects that are not under an asset management type contract are generally performed by other maintenance contracts. Some contract maintenance is specialty work; other contracts may cover routine maintenance. The contract portion of maintenance may cover the following areas:

- Pavement Marking and Striping
- Asphalt Repair
- Roadway Lighting Maintenance
- Mechanical Roadway Sweeping
- Concrete Repairs and Joint Sealing
- Roadside, Intermediate and Slope Mowing
- Maintenance of Traffic
- Guardrail, Attenuator and Fence Repair
- Maintenance of Signs and Delineators
- Litter Removal
- Tree Trimming and Removal
- Drainage Repairs
- Shoulder, Slope and Ditch Repair

The above list is by no means a complete list, but it serves as an example of the areas of roadway maintenance that can be contracted. Controlling these many separate contracts requires a PM skilled in contract inspection and administration. Contractors who demonstrate an inability or lack of willingness to

comply with the terms of the contracts should be declared non-responsible, as described in *Procedure No. 850-070-001*, [Contractor Non-Responsibility for Maintenance Projects](#).

Coordination with Developing Projects

It is the District Maintenance Office that will “own” the ultimate result of projects that work their way through the planning, project development, design, right of way and construction pipeline. All PMs in this pipeline should consult with and seek the input of the responsible maintenance professional. Avoidable maintenance problems are frequently “built in” to a project. PMs in the pipeline should actively seek and consider suggestions from maintenance, and maintenance professionals should take advantage of opportunities to improve the quality of the final product. The design should facilitate easy maintenance of all features of the project, such as shoulders, slopes, drainage features, and signs. The designer should take into account space needed for maintenance activities without creating traffic problems. The maintainability of new products and equipment should always be considered before including them in the plans and specifications.

Because funding is always a challenge for maintenance operations, maintenance reviewers should seek to have all appropriate work included in the construction contract. It makes sense to include the correction of any maintenance problems in a construction contract. However, construction contracts are not usually used to perform routine maintenance that is the responsibility of the local maintenance office, such as ditch cleaning or tree trimming. PMs must understand that there are funding limits on construction, and it is not always possible to get everything “fixed” with the construction project. These discussions should take place at the time of project scoping,

very early in the project development process. The construction PM has very limited ability to change the scope of work during active construction. The emphasis for coordination during construction should be on quality and maintainability of the work.