

Project Scheduling and Control Procedures

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Approved By [REDACTED] (Acting Director)

DHQ, Stations

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Active Divisions/Departments

FEMC

Raytheon Polar Services Company

Facilities, Engineering, Maintenance, and Construction (FEMC)

Contract No. OPP 0000373

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Purpose

To create, maintain, and publish an integrated system of schedules that coordinate engineering, procurement, shipping, and construction activities or tasks.

Scope/Applicability

This procedure applies to all projects assigned and undertaken by the Facilities Engineering, Maintenance and Construction Division (FEMC), Raytheon Polar Services Company (RPSC).

Responsibilities

Director, FEMC

- Assures that this procedure is implemented for all engineering and construction projects.
- Reviews and approves all schedules prior to release to the NSF or other organizations.
- Reviews and approves all resource and cost loading in schedules prior to use.
- Reviews all schedules and approves options to minimize the impact of schedule deviations on planned cost and performance.
- Interfaces with the National Science Foundation (NSF) on all scheduling matters.

Manager, Planning and Controls

- Supervises the establishment of standard procedures for creating and maintaining schedules.
- Supervises the creation of schedules.
- Reviews all schedules for accuracy and consistency.
- Develops and supervises the implementation and execution of the cost and performance reporting systems.
- Reviews the reporting systems for accuracy and reasonableness.

Manager, FEMC

- Reviews construction schedules for completeness and accuracy.
- Establishes manpower allocations and activity duration for all construction schedules.
- Approves projected deviations from Engineered Standards.
- Establishes the format and frequency of construction schedules.
- Approves selected options to reduce the impact of deviations from the schedule.
- Provides actual performance data to the Project Control Office through schedule updates.

Construction Coordinator

- Assists the scheduler with the creation of construction schedules.
- Performs a detailed review of the schedule for construction logic and reasonableness.
- Reviews manpower allocations and activity duration for all construction activities.
- Supervises project execution to ensure adherence to the schedule to the extent possible.
- Reports deviations from or additions to the schedule to the Manager, FEMC, and the Project Scheduler.

- Utilizes construction schedules to determine deviations from planned cost or performance and evaluates options to minimize impacts.
- Provides actual performance data to the Project Controls Office.

Manager, Engineering

- Coordinates the gathering of project information prior to schedule preparation, including the Engineering Project Definitions (EPD), design drawings, and resources.
- Reviews Engineering and Procurement (EP) schedules for accuracy and reasonableness.
- Assigns resource allocations and activity duration for engineering and design schedules.
- Establishes the format and frequency of engineering and design schedules.
- Coordinates and reports deviations from the schedule to the Project Controls Office.
- Reports actual cost and performance data to the Project Control Office.

Project Engineer

- Provides engineering requirements to the Engineering Manager and Scheduler.
- Assists the Construction Coordinator/Supervisor and the Scheduler by identifying relevant engineering standards and evaluating the need for planned deviations from those standards.
- Reviews the construction schedule for integration of logic.
- Provides accurate schedule updates to the Master and Engineering, Construction, and Procurement schedules for engineering and design activities.
- Utilizes the published schedules to detect deviations from planned performance of engineering design that affect procurement and construction activities, and to recommend options to reduce impacts.
- Assists the scheduler to interpret the plans and specifications.

Scheduler

- Creates cost and resource schedules with input from the Estimator, Engineering Manager, and Construction Management.
- Maintains compatible baseline and as-built schedules to provide comparative data between planned and actual costs and between schedules and productivity performance.
- Provides projected resource requirements from the scheduling system to the Manager, FEMC, and the Engineering Manager.
- Provides schedules as required by the Manager, FEMC, and the Engineering Manager, to ensure early warning of deviations from planned performance.

FEMC Assistant Manager, Materials

- Assists the scheduler by identifying needed procurement and logistics activities and estimating the activity duration.
- Provides continuous tracking of procurement and logistics activities for schedules and immediately notifies the scheduler of deviations from planned cost or performance.

Procedures

This procedure will be used to produce 3 types of schedules: Master Schedule, Engineering, Procurement (EP) Schedules and Construction Schedules.

Master Schedule

The Master Schedules are used for total project planning of SPSE and SPSM and to summarize detailed engineering, procurement, and construction. The Master Schedule is resource and cost loaded based upon the package summary of the detailed Final estimate. It outlines the start, execution, and completion of a project. Milestone activities are shown as well as engineering, design, procurement, logistics, and construction activities. The Master Schedule summarizes the EP and Construction Schedules to facilitate management review. Updates and reporting to the client occurs as required by the client.

Engineering and Procurement Schedule (EP)

An EP Schedule is prepared immediately upon authorized inclusion of a project in the Annual Program Plan. This schedule defines the activities necessary for timely commencement of the detail engineering and design functions. This schedule details in weeks the production of engineering reports, design drawings, material procurements, and construction efforts. The ECP is updated and statused weekly.

Construction Schedule

The Construction Schedule is developed from the detailed estimate. The estimate work packages are incorporated into construction activities based upon logical criteria not necessarily comparable with Engineered Standards. It is resource and cost loaded using mandays, and can be summarized using hammock and milestone activities. The Construction Schedule is updated and statused weekly and functions as a basis for the Program Plan development.

Distribution/Use

The schedules are intended as planning and control schedules for use internally by RPSC. The schedules will not normally be distributed outside RPSC. The Director of FEMC, the Manager of Engineering, or the Manager of SPSM may provide copies of schedules to the National Science Foundation as required.

References

Engineering Project Definitions (EPD) (EN-D-200)

Records

This procedure generates no records.