

Section 1110. Progress Scheduling

1110.01 GENERAL.

- A.** When specified in the contract documents, the Contractor shall submit a progress schedule of construction activities based on the CPM by the principles defined in the most current issue of THE USE OF CPM IN CONSTRUCTION published by the AGC. The CPM progress schedule may be hand or computer developed.
- B.** The CPM progress schedule shall be used for coordination and monitoring of all work under the contract including all activity of subcontractors, vendors and suppliers. The CPM progress schedule shall include provisions for traffic control, any staging, and other events to complete a project or tied projects. This schedule shall be the Contractor's intended working schedule and shall be used to plan, organize and execute the work; record and report actual performance and progress; and forecast remaining work.

1110.02 SUBMITTAL OF A CPM PROGRESS SCHEDULE.

A. Submitting a CPM Progress Schedule.

When a submittal of a CPM progress schedule is specified in the proposal form, the successful bidder for the project must submit 5 copies of a satisfactory CPM progress schedule to the Contracts Engineer with the signed contract. Failure to submit a CPM progress schedule may result in suspension of bidder qualifications in accordance with [Article 1102.03, A](#).

B. Compliance with Intended Work.

Upon receipt of the CPM progress schedule, the schedule will be reviewed for compliance with the intended work. The Contracting Authority will notify the Contractor within 10 calendar days after receiving the CPM progress schedule if the schedule is approved or if any corrections or revisions are needed. If corrections or revisions are required for the initial CPM progress schedule, the Contractor shall submit 3 copies of the revised CPM progress schedule to the Engineer 10 or more calendar days before the preconstruction conference. If the Contractor fails to submit a revised CPM progress schedule as stated above, the Contractor's bidder qualification may be suspended according to [Article 1102.03, A](#), and the contract may be declared in default according to [Article 1108.10](#).

1110.03 REQUIREMENTS FOR THE CPM PROGRESS SCHEDULE.

The CPM progress schedule submitted shall be a network diagram with a numerical tabulation for each activity.

A. Network Diagram.

- 1.** The network diagram shall show a logical sequence and quantities of the required work. The network diagram shall also show the order and interdependence of activities. The Contractor shall prepare the network diagram making use of the crew hour estimates and material delivery schedules so that the project or tied projects are completed within the specified contract period. The Contractor shall take account in the

network diagram for any critical closure periods and limitations of operations specified in [Article 1108.03](#), the contract proposal, or the plans.

2. The basic concept of network scheduling shall be followed to show how the start of a given activity is dependent on the completion of preceding activities and how its completion may affect the start of following activities. The network diagram shall include the following:
 - activity description
 - activity duration (work days)
 - intended production rates
 - any activity done by a subcontractor noted (the subcontractor identified)
 - location of activity
 - critical path noted
 - event nodes numbered
 - all restraints noted
 - slack "or float" for each activity (work days)
 - work days calendar which extends for the length of the contract plus 25% additional time
 - dummy paths noted
 - start/completion dates

B. Numerical Tabulation.

1. The Contractor shall include a numerical tabulation for each activity shown on the detailed network diagram. The following information shall be furnished as a minimum for each activity on this tabulation:
 - event nodes numbered
 - activity description
 - activity location
 - if activity done by a subcontractor (identify the subcontractor)
 - estimated duration (work days)
 - earliest start date (calendar date)
 - earliest completion date (calendar date)
 - latest start date (calendar date)
 - latest completion date (calendar date)
 - contractor's intended start date (calendar date)
 - contractor's intended completion date (calendar date)
 - slack or float for each activity (work days)
 - quantities involved on each activity based on the Contractor's intended start and completion date
2. This numerical tabulation may be either a computer printout or prepared manually. There shall be a column for each of the above requirements.

C. Other Specific Requirements.

1. The construction time, as determined by the CPM progress schedule, for the entire project or any milestone shall not exceed the specified

contract period. No individual activity duration shall be longer than 20 working days unless specified in the contract proposal or by the Contracting Authority. A unique activity numbering system shall be used to identify activities by bid items, work items, areas, procurements, or subcontractors. If subnetworks are used, no two activities shall bear the same activity number or description.

2. There shall be a legend with the CPM progress schedule defining all abbreviations, terms, or symbols used.

1110.04 USE OF CPM PROGRESS SCHEDULE IN CONSTRUCTION OPERATIONS.

- A. No contract work shall be done without a CPM progress schedule approved by the Engineer. The items in the activities for the denoted critical path will determine the controlling operations of the work for the charging of working days.
- B. During the life of the project, the Contractor shall review the CPM progress schedule with the Engineer biweekly unless otherwise specified. The Contractor shall submit a revised CPM progress schedule within 5 working days of the review meeting if the Contractor is behind schedule or if the schedule has been modified. All revised CPM progress schedules must be approved by the Engineer. For each revised CPM progress schedule, the Contractor shall submit three copies to the Engineer.
- C. If the Contractor deviates from the current approved CPM progress schedule by not following the logical sequence of the critical path, payment will be withheld for the pay items for the affected activities until the Contractor submits a revised CPM progress schedule and this schedule is approved by the Engineer.
- D. A revised CPM progress schedule will be required if the controlling operation falls 10 working days behind schedule, the Engineer then may take steps specified in [Article 1108.02, K](#), to insure satisfactory completion of the project. If the controlling operation falls 20 working days behind schedule and it appears that the completion of the project in the specified time is in jeopardy, the Contracting Authority may take action described in [Article 1102.03, B](#), and [Article 1103.01](#) and may take further action described in [Article 1108.02, K](#).

1110.05 METHOD OF MEASUREMENT AND BASIS OF PAYMENT.

The cost of preparing and revising the CPM Progress Schedule shall be included in the bid item for Mobilization.