

## ITEM SPECIFIC CONTRACT REQUIREMENTS

**GENERAL.** This section shall provide for specific details of items described or listed in other sections. The contractor shall follow the specific requirements listed herein for detailed submittals to the engineer. Where there are apparent conflicts between these sections and sections 10-100, sections 10-100 shall govern.

**SCR-1 CONSTRUCTION SEQUENCE** The following items shall be shown on the schedule and completed in sequential order:

- A. Mobilization shall be completed in its entirety. This includes the Construction Schedule and all other items required in the plans and specifications.
- B. Environmental Protection Plan features must be installed prior to construction within areas that will cause uncontrolled sedimentation.
- C. No task can be abandoned once construction is begun on that item unless the construction schedule specified that to occur or unless the Contractor receives permission from the Engineer to do so. If a task is abandoned, the construction shall be left in a clean and orderly condition. The area must also be protected from other construction activities and erosion.

The Contractor shall be required to conduct his construction operations only when natural lighting is sufficient to permit safe and proper construction and to provide for complete inspection of the work by the Engineer or his representatives. Artificial lighting systems must be approved by the airport and Engineer 48 hours prior to beginning operations.

The contractor shall maintain a current set of red line, record, as built drawings through out the project. The as built drawings shall record all Change Orders, differing site conditions, differences from design elevations or alignments, existing and constructed pavement sections, drainage inverts, top of structure elevations, electrical circuits, and final survey cross sections. The Engineer may elect to review the drawings at any given time to ensure that they are being maintained through out the project. Failure of the contractor to maintain the drawings shall be cause for the Engineer to withhold any progress payments associated with item 100 - 12 Contractor Quality Control Program. The contractor shall submit the as built drawings to the Engineer for review and approval within 15 days of Substantial Completion. Release of any retainage associated with item 100 -12 Contractor Quality Control Program shall not be approved until the Engineer has approved the as built drawings as prepared by the contractor.

## **SCR-2 CONSTRUCTION SCHEDULE**

**A. Description of Requirements.** This section specifies the particular administrative and procedural requirements for time scheduling and progress reporting for the performance of the work, as indicated in the General Provisions. The project completion date is defined in these Contract Documents. Also described are twice monthly progress conferences and project superintendent progress conferences to be held at the job site.

**B. Scheduling Responsibility.** The Contractor shall submit to the Engineer and maintain a coordinated schedule for the work. Submission of the Construction Schedule shall not relieve the Contractor of his overall responsibility for scheduling, sequencing, and coordinating the work to comply with the requirements of the Contract Documents. Prior to recommending monthly payments the Contractor shall submit an updated construction schedule with each pay request.

### **C. CPM - Type Construction Scheduling**

(1) **General:** The Contractor shall prepare and maintain a system generally known as the Critical Path Method (CPM). The Contractor shall proceed with the preparations immediately following first notification of Contract Award. The Contractor shall pursue the necessary steps of development and analysis so that the first full network diagram can be approved by the Engineer and placed into unrestricted use by the Notice To Proceed date. The Construction Schedule shall be updated when revisions are made and submitted to the Engineer for approval. The Contractor is responsible for obtaining proper data in a

timely manner from subcontractors and material suppliers, and for furnishing data to these subcontractors and material suppliers for a coordinated schedule.

(2) **Standards:** Except as otherwise indicated, the Construction Schedule shall comply with "CPM in Construction - a Manual for General Contractors," published by The Associated General Contractors of America.

(3) **Program:** The Contractor shall select and use an EDP software/hardware system which is intended for heavy/highway construction progress schedule management, and is acceptable to the Engineer.

(4) **Minimum Procedures:** The Contractor shall establish procedures and processing routines and include data to whatever extent is consistent with the complexity of the work, and necessary to achieve a high degree of effectiveness and accuracy in the development of an "optimum" progress schedule. The data shall include detailed items of work such as separate Drop Inlet Construction, the manpower requirements, equipment requirements, delivery schedules, and all other items required by the specifications and Engineer.

(5) **Activities:** Before attempting to produce a network diagram, prepare a listing of all activities involved; include every activity having possible bearing on the time required to complete the work. Each activity's estimated time duration shall be listed and its interface or sequencing requirements in relation to other activities shall be documented. The Contractor shall impart the best logic which can be foreseen for the whole construction process.

(6) **Organization:** The first anticipation of a skeleton network shall be sketched to help understand the essence of a probable critical path.

(7) **Processing:** The prepared data shall be input to the EDP program and processed to produce the output data or computer-drawn network. (The network shall be drawn by hand if the equipment is unable to do so.) The data shall be revised, necessary sequences reorganized and reproduced as many times as necessary to produce an optimum arrangement within the limitations of the Contract Time. The full network shall be displayed on a single (or pieced together) sheet, with the critical path marked and located near the center of the network, and paths with the most float located near the edges. Sub-networks are permissible on separate sheet for activities clearly off the critical path.

(8) **Initial Issue:** The initial issue of the Construction Schedule network shall be prepared from a listing of straight "early start-total float" sort. For identified and described activity, associated events, duration, float, and dates for early start/finish and late start/finish shall be shown. In listings, items that are critical shall be identified. A listing of the dollar-volumes of total work performed calculated at intervals matching the projected times for payment requests shall be produced.

(9) **Submittal and Distribution:** The initial issue shall be submitted to the Engineer for acceptance and, when authorized, copies shall be distributed to the Contractor's (2 copies), principal subcontractors and suppliers or fabricators, and others identified (by the Contractor) with a need-to-know schedule responsibility. A copy shall be posted in the project field office. Subsequent updated issues shall be distributed and posted to the same entities, whenever revisions are made; except entities shall be deleted from distribution which have completed assigned work and are no longer involved in the performance of scheduled work. Copies of each computer-produced listing shall be submitted, in duplicate, to the Engineer.

(10) **Progress Conferences:** After the initial pre-construction conference, regular meetings shall be held at the job site at intervals not greater than twice monthly for the purpose of reviewing the progress to date, projecting work to be performed and discussing any other situation pertinent to the successful completion of the work. The Contractor shall require every entity involved with the status of the project at that point in time to be properly represented at each meeting. Areas to be discussed will include status of completed work, interfacing with other subcontractors and contractors, deliveries, contract modifications, security, weather conditions, and anything else of significance that could affect the progress of the work.