

This section is used for projects over \$1,000,000 use other section if less than \$1M

SECTION 01 32 00 CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 SCOPE

- A. Preliminary Contract Schedule, Contract Schedule, updated Contract Schedules, Look Ahead Schedules and As Built Schedule.
- B. Sub-networks of activities (Fragnets) supporting Time Extension Requests.

1.2 DEFINITIONS

- A. Critical Work activities are defined as Work activities that, if delayed or extended, will cause a critical delay as defined in General Conditions Article 8. All other Work activities are defined as non-critical Work activities and are considered to have float.
- B. Float is defined as the time that a non-critical Work activity can be delayed or extended without causing a critical delay as defined in General Conditions Article 8. Neither the Contractor nor the University shall have an exclusive right to the use of float. Float is a shared resource available to each party to the contract. The Contractor shall document the effect of the use of float on the updated Contract Schedule.
- C. Look Ahead Schedule is defined as a schedule derived from the Contract Schedule (or the most current monthly update of the Contract Schedule) which indicates in detail all activities scheduled or worked on for the 2 prior weeks, and all activities scheduled to occur during the next 4 weeks.

1.3 SUBMITTALS

- A. Submit the following in accordance with Section 01 33 23 Shop Drawings, Product Data, Samples
 - 1. Proposed Scheduling Software and qualifications of individual preparing schedules
 - 2. Preliminary Contract Schedule
 - 3. Contract Schedule including graphical and tabular reports
 - 4. Monthly Updates to Contract Schedule, including Narrative Report
 - 5. Look Ahead Schedules
 - 6. Final As-Built Schedule
- B. Include an electronic version of all submittals required by this specification on CD-ROM (2 copies), prepared in MS Windows format.

1.4 EXPERIENCE REQUIREMENTS

- A. Contractor shall designate an individual from Contractor's staff or a consultant who shall be responsible throughout the duration of the project for preparation of all schedules and reports as required by this specification. This individual shall also be required to attend all meetings with the University's Representative as required by this specification. The Contractor shall demonstrate to the satisfaction of the University that the individual or consultant has at least 3 years of experience preparing, maintaining, and administering detailed project schedules on projects of the same or similar size and complexity as this project. The Contractor shall also demonstrate to the satisfaction of the University that the individual or consultant is proficient in the use of the scheduling software proposed for use by the Contractor on this project.
- B. Within 10 days after the Notice of Selection as the Apparent Lowest Responsible Bidder, Contractor shall provide the University with the identification, qualifications, and experience of and references for the proposed individual or consultant.

PART 2 - PRODUCTS

2.1 SOFTWARE

- A. The Contractor shall use P3 by Primavera Systems, or equal to produce the schedule and all required graphical and tabular reports.

PART 3 - EXECUTION

3.1 PRELIMINARY CONTRACT SCHEDULE

- A. Within 10 days after the Notice of Selection as the Apparent Lowest Responsible Bidder, Contractor shall submit a Preliminary Contract Schedule to the University's Representative for approval. The Preliminary Contract Schedule shall represent the Contractor's plan for accomplishing the work within the Contract time showing all significant milestones for the Contract period as well as a detailed work plan for the first 90 days following the Notice to Proceed. This detailed work plan shall identify in detail the following activities for the first 90 days:
1. Preparation of equipment and material submittals for review.
 2. Procurement schedule.
- B. The Preliminary Contract Schedule shall acknowledge significant known constraints and include all anticipated activities prior to the Notice to Proceed.
- C. The Preliminary Contract Schedule shall not include any actual dates or progress measured against any activities. shall identify in detail the following planned activities:
1. Preparation of equipment and material submittals for review.
 2. Procurement schedule.
- D. Approval of the Preliminary Contract Schedule is a condition for approval of the first progress payment application.
- E. The Contractor's progress shall be measured against the Preliminary Contract Schedule until such time as the University approves the Contractor's first Contract Schedule. The Preliminary Contract Schedule shall be incorporated into the Contractors proposed Contract Schedule.

3.2 CONTRACT SCHEDULE

- A. The Contract Schedule shall represent a practical plan to fully complete the Contract within the Contract Time. The Contract Schedule shall include a complete sequence of construction, in adequate detail for coordination of the Work.
- B. Form
1. The proposed first contract schedule shall be produced using CPM (Critical Path Method) techniques, in the PDM (Precedence Diagram Method) method of scheduling. The Contract Schedule shall be calculated using the Retained Logic method. Progress override calculations shall not be acceptable. The schedule shall not use negative float or constraints on work activities.
 2. The Contract Schedule shall identify all holidays, UC Davis finals weeks and non-working days
 3. Identity of the party responsible for the activity (i.e. University, General Contractor, specific subcontractor, etc.)
 4. The Contract Schedule activities shall be coded with the following information applicable to each activity
 - a. Area of the project
 - b. Identity of the party responsible for the activity (i.e. University, General Contractor, specific subcontractor...)
 - c. Specification section applicable to activity
 - d. Phase – The following phases shall be identified:
 - 1) Administrative
 - 2) Submittal and Review
 - 3) Fabrication
 - 4) Construction
 - 5) Inspection

C. Content

1. The Contract Schedule shall identify all Work activities in correct sequence for the completion of the Work within the Contract Time. Work activities shall include the following:
 - a. Major Contractor-furnished equipment, materials, and building elements, and scheduled activities requiring submittals or University's Representative's prior approval.
 - 1) Show dates for the submission, review, and approval of each such submittal. Dates shall be shown for the procurement, fabrication, delivery, and installation of major equipment, materials, and building elements, and for scheduled activities designated by the University.
 - 2) The schedule shall allow submittal review time in accordance with Section 01 33 23 Shop Drawings, Product Data, Samples
 - b. System test dates.
 - c. Scheduled overtime Work to the extent permitted by Contract Documents.
 - d. Dates Contractor requests designated workspaces, storage area, access, and other facilities to be provided by the University.
 - e. Dates Contractor requests orders and decisions from the University on designated items.
 - f. Dates Contractor requests University-furnished equipment.
 - g. Dates Contractor requests University-furnished utilities.
 - h. Planned dates for connection and relocation of existing utilities.
 - i. Planned dates for connecting to or penetrating existing structures.
 - j. Planned dates for scheduled inspections as required by Codes, or as otherwise specified.
 - k. Commissioning Sequence and activities for all Building Systems.
2. Unless approved by the University's Representative, there shall be no activities shown with durations in excess of 15 business days. Milestones should be listed for the completion of wings, floors, and other similar areas.

D. Submission

1. The first Contract Schedule shall be submitted to the University not later than 60 days after Notice to Proceed. The period covered by Contract Schedule shall be the Contract Time. The Contract Schedule shall incorporate the logic of the Preliminary Contract Schedule covering the first 90 days following the Notice to Proceed.
2. Tabular Computer Reports
 - a. As requested by the University, the Contractor shall submit various computer-generated tabular reports.
 - b. As requested by the University's Representative, the Contractor will be required to submit additional Schedule Reports.

E. Acceptance

1. Upon receipt, the University's Representative shall review the proposed first Contract Schedule. Within 5 business days of the University's receipt of the proposed first Contract Schedule, the University's Representative shall schedule a review meeting with the Contractor for the purpose of jointly reviewing the proposed first Contract Schedule. The meeting shall occur within 15 business days of the University's receipt of the proposed first Contract Schedule.
2. If the proposed first Contract Schedule is accepted by the University's Representative, it shall become the Contract Schedule. Such acceptance shall not relieve Contractor from its responsibility to fully complete the Contract within the Contract Time, nor shall it relieve Contractor from sole responsibility for any errors in the Contract Schedule.
3. If the Contractor or the University's Representative determines the proposed first Contract Schedule to be in need of revision, within 10 business days following the joint review meeting, the Contractor shall revise and resubmit the proposed first contract schedule to the University's Representative for acceptance, and, upon acceptance thereof, it shall become the Contract Schedule. Such acceptance shall not relieve Contractor from its responsibility to fully complete the Contract within the Contract Time, nor shall it relieve Contractor from sole

responsibility for any errors in the Contract Schedule. No progress payment beyond the second progress payment will be paid to the Contractor until such time as the University's Representative has approved the Contractor's first proposed Contract Schedule.

3.3 MONTHLY UPDATES

- A. After approval of the first proposed Contract Schedule, Contractor shall update the Contract Schedule monthly. The update shall reflect progress as of the end of each month. Contractor shall submit monthly schedule update to the University's Representative for approval no later than the tenth day of the following month. The updates shall be made as follows:
 1. The Monthly updates shall report progress based upon percent complete of each activity or remaining duration. Actual start dates shall be recorded for those activities that have started. Actual finish dates shall be recorded for those activities that are completed. Activities that are in progress shall reflect an actual start date and the percentage completion for the activity.
 2. The updated Contract Schedule shall reflect an up-to-date status of the contract work as completed, and materials furnished and in permanent place that qualify for payment.
 3. The updated Contract Schedule shall reflect Contract Time changes included in all processed change orders for the progress month and each preceding month.
- B. Within 5 business days after receipt of the updated Contract Schedule in conjunction with the Application for Payment, the University's Representative shall review both and determine which work and material pay items qualify for payment; the approved data will then be returned to the Contractor for input. Within 10 business days, the Contractor and the University's Representative shall meet to review the Construction CPM Schedule and discuss any changes required.
- C. The Contractor shall then revise and resubmit (if required) the Updated Contract Schedule and Application for Payment to the University's Representative for payment approval.
- D. The monthly update shall be calculated using retained logic with a required finish date specified as the current contract completion date. Progress Override calculations shall not be acceptable.
- E. No Applications for Payment will be processed nor shall any progress payments become due until updated Contract Schedules are accepted by University's Representative. The accepted, updated Contract Schedule shall be the Contract Schedule of record for the period it is current and shall be the basis for payment during that period. Acceptance of any updated Contract Schedules shall not relieve Contractor from its responsibility to fully complete the Contract within the Contract Time, nor shall it relieve Contractor from sole responsibility for any errors in the updated Contract Schedules.
- F. Contractor shall perform the Work in accordance with the updated Contract Schedule. Contractor may change the Contract Schedule to modify the order or method of accomplishing the Work only with prior agreement by the University.
- G. With each monthly updated Contract Schedule, the Contractor shall provide an accompanying narrative describing the progress anticipated during the upcoming month, critical activities, delays encountered during the prior month, delays anticipated during the upcoming month, and an audit of the Contract Time. The audit shall show current days allowed by contract, days used through the end of the month, days remaining, percent of time used to date, and percent complete as measured by cost loaded schedule, and days ahead of or behind schedule. In the event that the Contractor was delayed by any occurrence during the prior month, the narrative report shall include a listing of all delays that affected the critical path and shall clearly explain the impact the claimed delay(s) had on the critical path and shall include an accounting of days lost or gained.
- H. In the event the monthly update shows the Contractor to be behind schedule (negative float), the narrative shall include a description of actions needed to bring the project back on schedule.

3.4 LOOK AHEAD SCHEDULES

- A. Look Ahead Schedule is a schedule derived from the Contract Schedule (or the most current monthly update of the Contract Schedule) which indicates in detail all activities scheduled or worked on for the 2 prior weeks, and all activities scheduled to occur during the next 4 weeks.

- B. Provide detailed Look Ahead Schedules every 2 weeks.
- C. Submit in 11 inch by 17 inch Gantt chart format.
- D. Look Ahead Schedule shall be generated from the then current Preliminary Contract Schedule, Contract Schedule, or updated Contract Schedule.

3.5 TIME EXTENSION REQUEST DOCUMENTATION

- A. In the event the Contractor shall request an extension of Contract Time, Contractor shall comply with the requirements of the General Conditions, including without limitation, General Conditions Article 8. In addition to the requirements of the General Conditions, as a condition to obtaining an extension of the Contract Time, Contractor shall timely submit a sub-network of the events of the delay that demonstrates the impact to the activities in the Contractor's then current schedule, as well as the impact to the overall completion date of the project.
- B. If the University's Representative approves the extension of time, the next monthly updated Contract Schedule shall incorporate the subnetwork with the extension of time. In addition the monthly updated Contract Schedule shall contain all changes mutually agreed upon by the Contractor and the University during preceding periodic reviews and all changes resulting from Change Orders and Field Orders.

3.6 AS BUILT SCHEDULE

- A. As a condition precedent to the release of retention, the last update of the Contract Schedule submitted shall be identified by the Contractor as the "As Built Schedule". The "As Built Schedule" shall be submitted when all activities are 100 percent complete. The "As Built Schedule" shall reflect the exact manner in which the project was actually constructed (including start and completion dates, activities, sequences, and logic) and shall include a statement signed by the Contractor's scheduler that the "As Built Schedule" accurately reflects the actual sequence and timing of the construction of the project.

END OF SECTION 01 32 00