

SECTION 01 32 00 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Startup construction schedule.
 - 2. Contractor's Construction Schedule.
 - 3. Construction schedule updating reports.
 - 4. Daily construction reports.
 - 5. Material location reports.
 - 6. Site condition reports.
 - 7. Unusual event reports.
- B. Related Requirements:
 - 1. Section 011200 "Multiple Contract Summary" for preparing a combined Contractor's Construction Schedule.
 - 2. Section 014000 "Quality Requirements" for schedule of tests and inspections.
 - 3. Section 012900 "Payment Procedures" for schedule of values and requirements for use of cost-loaded schedule for Applications for Payment.

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction Project. Activities included in a construction schedule consume time and resources.
 - 1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
 - 2. Predecessor Activity: An activity that precedes another activity in the network.
 - 3. Successor Activity: An activity that follows another activity in the network.
- B. Cost Loading: The allocation of the schedule of values for completing an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum.
- C. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine the critical path of Project and when activities can be performed.

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- D. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- E. Event: The starting or ending point of an activity.
- F. Float: The measure of leeway in starting and completing an activity.
 - 1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
 - 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
 - 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- G. Resource Loading: The allocation of manpower and equipment necessary for completing an activity as scheduled.

1.4 GENERAL

- A. A Construction Schedule will be required on this Project. The Construction Schedule is to include all work necessary to complete the Project. To avoid conflicts Each Prime Contractor shall closely coordinate the scheduling of its work with the scheduling of the other Prime Contractors' work.
- B. The schedules shall be prepared using Oracle (Primavera) P-6, or Owner approved equal.
- C. A Start-Up Schedule shall be prepared to coordinate the early work of the Prime Contractors. This schedule will include both submittals for long lead time materials and equipment, and early work activities.
- D. Prime Contractors shall plan, schedule, and execute their work, in coordination with the other Prime Contractors, so that the Project is completed within the Project Milestones.
- E. Prime Contractors shall prosecute their work to meet activity start and completion dates. When start or completion dates are missed, the responsible Prime Contractor shall work overtime or re-sequence its work so that follow-on work, whether by the same Prime Contractor or another Prime Contractor, can start on time.
- F. Unless approved by the Harrisburg Area Community College, no activity shall have a duration longer than 20 workdays. Exceptions include:
 - 1. Activity for the ordering, fabrication and delivery of materials and equipment.
 - 2. Concrete curing.

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1.5 START-UP SCHEDULE

- A. Within fourteen (14) calendar days after the Notice to Proceed date, the Prime Contractors will meet with the Construction Manager to develop the Initial or Start-Up Schedule. For a short duration project, this schedule may become the Construction Schedule. For longer duration projects, the Start-Up Schedule will cover approximately the first three to four months of the project and will focus on procurement and early construction activities.
- B. Responsibilities:
 - 1. Prime Contractors: Within ten (10) calendar days after the Notice to Proceed date, submit a list of ALL submittal, approval, procurement, construction, inspection, and closeout activities required to complete their work. Do not limit this list to just early activities. For each activity, provide the following information. This list shall be submitted electronically and prepared on a spreadsheet.
 - a. Predecessor activity(ies) that must be completed by the Prime Contractor prior to starting the activity.
 - b. Predecessor activity(ies) that must be completed by other Prime Contractor prior to starting the activity.
 - c. The duration, in workdays, needed to complete the activity.
 - d. The activities shall be in logical order, meaning that the first activity will be listed first, the next activity listed second, and so on until the last activity is listed.
 - 2. The Architect: The Architect will schedule an Initial Construction Schedule Meeting, during which the Start-Up Schedule will be developed. Following the meeting, the Prime General Contractor will prepare the Critical Path Method (CPM) Start-Up Schedule and issue it to the Architect, Owner, and Sub-Contractors for review.
- C. Review and Finalization of the Start-Up Schedule.
 - 1. The Prime General Contractors shall review the Start-Up Construction. Within ten (10) calendar days after its issuance, Prime Contractors shall either provide comments on the schedule to address concerns or reply that the schedule is acceptable. If no response is received within ten (10) calendar days, the Prime Contractor shall by default have accepted the Start-Up Schedule.
 - 2. The Prime General Contractor will incorporate Sub-Contractor comments received and issue the completed Start-Up Schedule.

1.6 CONSTRUCTION SCHEDULE

- A. Within 45 calendar days after the Notice to Proceed date, the Prime Contractors and Architect will meet to develop the balance of the schedule. When combined with the Start-Up Schedule, this will result in the full Construction Schedule.
- B. Following the meeting, the Contractor will prepare the Critical Path Method (CPM) Construction Schedule and issue it to the Architect, Owner, and Sub-Contractors for review and comment.

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- C. Prime Contractors shall review the Construction Schedule. Within seven (7) calendar days after its issuance, Prime Contractors shall either provide comments on the schedule or reply that the schedule is acceptable. If no response is received within seven (7) calendar days, the Prime Contractor shall by default have accepted the Construction Schedule.
- D. The Prime General Contractor will incorporate Sub-Contractor comments into the Construction Schedule and issue the completed Construction Schedule, along with Construction Schedule Rider. This schedule becomes the Baseline Construction Schedule.

1.7 SCHEDULE UPDATING

- A. At each Job Conference, all Sub-Contractors shall submit a report listing
 - 1. Activities that have started since the last report, and the date that they started.
 - 2. Activities that have been completed since the last report, and the date that they were completed.
 - 3. For activities in progress, including activities that started since the last report, provide the remaining duration (workdays needed to complete the activity).
 - 4. Activities that need to be added to the Construction Schedule. For these activities, identify:
 - e. Predecessor activity(ies) that must be completed by the Prime Contractor prior to starting the activity.
 - f. Predecessor activity(ies) that must be completed by other Prime Contractor prior to starting the activity.
 - g. The duration, in workdays, needed to complete activities that are in progress, but are not yet complete.
 - h. The percentage complete for activities that are in progress but are not yet complete.
- B. Using the information submitted by the Sub-Contractor, the Prime General Contractor will update the Construction Schedule. The updated Construction Schedule will be published monthly, or more frequently based on project conditions and progress.
- C. Updating of Project Construction Schedule may result in changes in the dates on which activities start and/or finish; and may result in a change to the Project Milestones' dates. The publication of a schedule showing the late completion of any Project Milestone, or a change to any activity start or finish date, shall not constitute an approval of additional time or a change to the Project Milestones. Likewise, the publication of a schedule showing the early completion of any Project Milestone, or a change to any activity start or finish date, shall not constitute a direction to accelerate.

1.8 SCHEDULE RECOVERY

- A. When the Substantial Completion Date (typically also the date when a Certificate of Occupancy is issued) slips past the date shown for Substantial Completion on the Baseline Construction Schedule, all Prime Contractors shall work overtime or re-sequence their work so that the Baseline Substantial Completion Date can be achieved.

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- B. When the current Substantial Completion Date slips ten (10) or more working days, compared to the Baseline Substantial Completion Date, the Architect and Owner will schedule a meeting with the Prime General Contractor and Sub-Contractors to develop a Recovery Schedule. The Recovery Schedule represents a work plan, involving all Prime/Sub-Contractors, for making up the lost time (the "slip" in the schedule) and achieving the Baseline Substantial Completion Date. The Recovery Schedule may include:
 - 1. Re-sequencing of work within the Prime Contractor's scope of work, or between multiple Sub-Contractor's scope of work.
 - 2. Work additional hours (overtime).
 - 3. Increase manpower.
 - 4. If Material or equipment lead times are impacting the schedule, identify means for expediting delivery.
- C. Using this information, the Prime General Contractor will prepare a Recovery Schedule. The Recovery Schedule will be issued, review, commented on and published as described under Construction Schedule.
- D. Any costs incurred by Prime General Contractor to meet the Recovery Schedule shall be the responsibility of the Prime General Contractor. Any associated claims for delay shall be addressed under the Owner-Contractor Agreement.
- E. Weekly Disturbances Planning Meetings with The Owner's Facility Representative
 - 1. All contractors are required to attend and participate in a weekly disturbance coordination meeting that will be held as part of the weekly contractor's coordination meeting. At this meeting each Prime Contractor is responsible to notify the Architect and the Owner's representative on any and all work planned for the week, either new or continuing that could have an impact to the school's normal operation from noise, dust generating activities, traffic and parking access, adjustments or interruptions to any utility or life safety service or any change to in place barricades enclosures or site logistic items. No work on any discussed disturbance item will proceed without the approval of the owner's Representative. All contractors will be directed to "Stop Work" if they proceed with any unscheduled or any Uncoordinated work that has been properly coordinated and approved through the weekly Disturbance meetings.

1.9 SPECIAL REPORTS

- A. Reporting Special Occurrences and Unusual Events: When an event of an unusual and significant nature occurs at the site, particularly if it may affect or impact the Contract Price or Contract Time, each Prime/Sub-Contractor affected or impacted shall prepare and submit a Special Report. The Special Report shall include:
 - 1. A narrative describing the event.
 - 2. Identify the preceding schedule activities or conditions.
 - 3. Identify the persons involved in the event.
 - 4. Identify the actions taken by the affected or impacted Prime Contractor during and immediately after the event.
 - 5. Other information as necessary to address the event.

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- B. Special Reports shall be submitted at the earliest possible time after the occurrence of the event to the Architect and the Owner's Representative.
- C. If such events affect or impact site safety, public safety or may cause damage to the Project or to other property, the affected or impacted Prime Contractor shall take immediate action to protect people and property.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 32 00