## Project Management Procedure

### SUBJECT: POST-AWARD CONSTRUCTION SCHEDULE MANAGEMENT

| NUMBER: | PMO-12.3 |
| RESPONSIBILITY: | PROJECT MANAGER |
| EFFECTIVE DATE: | July 1 2011 |
| SUPERSEDES: | PMO-12.2 |

### TASK: Establish and Maintain Schedule Control on Construction Projects

### PURPOSE: This procedure outlines the process and actions required of the Project Manager during the construction phase of the project life-cycle in establishing and maintaining the project schedule, as well as managing other schedule related issues.

### STEPS:

1. **Establishing the Baseline Schedule of Record (SOR)**

   A. **Planning the Baseline Schedule** – If a schedule development planning meeting is required by specifications or if requested by either the Engineer or the Contractor, the Project Manager will schedule the planning meeting, upon notification of intent to award and prior to preparing the schedule. The meeting will be held to review the requirements of the contract concerning the schedule or to discuss any project specific issues required for preparation of the schedule.

   B. **Reviewing the Baseline Schedule** – Upon receipt of the Contractor’s progress schedule submittal, the submittal will be reviewed within the time limit allowed in the specifications to ensure that the Baseline Schedule of Record (SOR) is established in a timely manner so as to avoid schedule delays and possible cost overruns. The Contractor’s...
baseline progress schedule submittal will be reviewed in accordance with the guidelines defined in the VDOT Post-Award Scheduling Guide.

C. Establishing the Baseline SOR – Upon acceptance of the baseline schedule submittal, the Baseline SOR will be established and communicated to all parties involved. The Baseline SOR will be used to establish the control system for the purpose of monitoring and assessing progress, managing the day-to-day operations, and for coordinating all work required to complete the project.

2. Monitoring the Work and Assessing Progress

A. Monitoring the Work – Once the project is underway, accurate as-built schedule information will be recorded to create a historical record of the project. The as-built schedule information will be used for reviewing the Contractor’s monthly progress update schedules for accuracy and for performing periodic schedule analysis to identify deviations from scheduled performance to determine if and when corrective actions are necessary for timely completion of the project. The as-built information will also be used to update the schedule when using the schedule to perform a contemporaneous Schedule Impact Analysis (SIA) to evaluate the effects of time-related changes in the work or work plan.

B. Updating the Project Schedule – If required by specification, the Project Manager will ensure that the Contractor furnishes a Monthly Schedule Update of the project to accurately reflect the current status of the work as well as to represent the Contractor’s proposed plan to complete the remaining work. The Project Manager will also ensure that the Contractor’s progress schedule update submittal is reviewed within the time limit allowed in the specifications. The progress schedule update submittal will be reviewed in accordance with the guidelines defined in the VDOT Post-Award Scheduling Guide. Upon review and acceptance, the current schedule update will be used to monitor, coordinate, and assess progress of the work. The currently accepted schedule update will also serve as the baseline for performing contemporaneous SIA’s when changes occur.

C. Progress Evaluation – Status of the work will be assessed monthly to ensure that the work is progressing accordingly and that the project goals and objectives are still being met. Progress will be assessed as of the Contractor’s progress estimate date relative to the Baseline SOR (or Revised SOR, if applicable). Progress of the work will be evaluated on the basis of the total dollar value of work completed and total dollar
value of work planned to determine if the work is being accomplished as planned. Progress will also be evaluated based on the schedule to ensure that the controlling items of work or critical activities are progressing as planned.

D. Progress Deficiency and Schedule Slippage – When the schedule has slipped or when progress of the work is deemed to deficient based on the progress metrics as defined in the Progress Schedule Special Provision, the Project Manager will apply a 3-step approach as defined in the VDOT Post-Award Scheduling Guide, when dealing with progress deficiency or schedule slippage.

3. Managing Contract Changes and Maintaining Schedule Control

A. Managing Contract Changes – When time-related changes occur that are deemed to be beyond control of the Contractor including, but not limited to changes in the work as defined in Section 104 of the Specifications, the Project Manager will utilize the currently accepted schedule to perform a contemporaneous SIA to evaluate the effects of the changes in order to make informed decisions on how to proceed. The Contractor is required by specification to submit a SIA to demonstrate impacts to his work plan or schedule or to substantiate any requests for adjustments to the contract for such time-related changes.

B. Maintaining Schedule Control – The current SOR will be revised to reflect any schedule impacts for significant changes to the work or work plan. The following describe the various conditions under which the schedule may be revised:

i) If the Contractor proposes to make significant changes to his work plan including phasing, sequencing, and proposed means and methods, the Contractor is required to submit a revised schedule for the Engineer’s review and acceptance;

ii) If in the opinion of the Project Manager, the SOR no longer reflects the Contractor’s current work plan, the Contractor is required to submit a revised schedule for the Engineer’s review and acceptance;

iii) If the Engineer authorizes any changes to the work that has or will significantly impact the Contractor’s work plan or schedule, the Contractor is required to submit a revised schedule to incorporate the changes reflected in the approved SIA;
iv) If the work or the Contractor’s work plan has been significantly impacted by conditions deemed to be beyond control of the Contractor, the Contractor is required to submit a revised schedule to incorporate the changes reflected in the approved SIA.

C. **Revising the Baseline SOR** – The current SOR is revised accordingly and as determined by the Project Manager to reflect any changes in the Contractor’s work plan or to incorporate the approved changes in the work or work plan. The Contractor’s progress schedule is revised and reviewed in accordance with the guidelines defined in the VDOT Post-Award Scheduling Guide.

D. **Establishing the Revised SOR** – Upon acceptance of the Contractor’s revised progress schedule submittal, the Revised SOR will be established and communicated to all parties involved. The Revised SOR will replace the Baseline SOR or any previous Revised SOR and will be used to re-establish the monitoring and control system for the purpose of assessing progress, monitoring the work, managing the day-to-day operations, and for coordinating all work required to complete the remainder of the project.

4. **Other Schedule-Related Project Management Objectives**

A. **Risk Management** – The Project Manager will ensure that the Contractor’s work plan and schedule is reviewed to identify any potential concerns that may result in schedule delays, safety hazards, quality issues, or possible cost overruns. The potential schedule issues should be addressed early and proactively before the problems are encountered.

B. **Resource Management** – The Project Manager will ensure that the Contractor’s work plan and schedule is utilized as the basis for planning, analyzing, and balancing the Department resources with needs for the project as well as at the program level.

C. **Electronic Schedule Management** – The Project Manager will ensure that the Contractor’s project schedule (including any applicable Final As-built schedule) is stored electronically for future use in resolving any outstanding time-related disputes or to establish best practice methodology schedules.

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<tr>
<th><strong>TOOLS AND RESOURCES:</strong></th>
<th>Construction Directive Memorandum – Post-Award Schedule Management – Category I <a href="#">CD-2008-14</a></th>
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<td>Construction Directive Memorandum – Post-Award Schedule Management</td>
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<td>Category II (CD-2008-14) Contractor’s Progress Earnings Schedule (Form C-13C) Category I Progress Schedule Review Checklist Category II Progress Schedule Review Checklist VDOT Post-Award Scheduling Guide VDOT Training Module – Establishing Schedule Control on Category I and FHWA National Highway Institute, Course No. 134049 - &quot;Critical Path Method for Estimating, Scheduling, and Timely Completion&quot; Project Management Body of Knowledge (PMBOK) - Chapter 6, Project Time Management.</td>
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<td><strong>DELIVERABLES:</strong> Contractor Progress Schedule submittals as required by Specifications: 1. Progress Schedule Narrative 2. Progress Schedule (Tabular, Bar-chart, CPM) 3. Contractor’s Progress Earnings Schedule (C-13C)</td>
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<td><strong>DELIVERABLE SAMPLES:</strong> 1. <strong>Progress Schedule Narrative</strong> 2. <strong>Tabular Progress Schedule</strong> 3. <strong>Bar-chart Progress Schedule</strong> 4. <strong>Contractor’s Progress Earnings Schedule (C-13C)</strong></td>
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<td><strong>DESCRIPTION:</strong> The Post-award Construction Schedule Management is a process that involves schedule related project management functions including, but not limited to establishing the project contract baseline schedule, utilizing the schedule to monitor and assess progress on the project, and revising the baseline schedule to maintain schedule control when changes occur or when the schedule no longer reflects reality.</td>
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