

AACE
INTERNATIONAL
RECOMMENDED
PRACTICE

90R-17

**STATUSING THE CPM SCHEDULE –
AS APPLIED IN CONSTRUCTION**

SAMPLE

AACE
INTERNATIONAL



AACE® International Recommended Practice No. 90R-17

STATUSING THE CPM SCHEDULE – AS APPLIED IN CONSTRUCTION

TCM Framework: 9.2 – Progress and Performance Measurement

Rev. March 2018

Note: As AACE International Recommended Practices evolve over time, please refer to www.aacei.org for the latest revisions.

Contributors:

Disclaimer: The opinions expressed by the authors and contributors to this recommended practice are their own and do not necessarily reflect those of their employers, unless otherwise stated.

Ronald M. Winter, PSP FAACE (Primary Contributor)

Brian Celeste, CCP PSP

David H. Doughty, PSP

Lisa A. Enloe

Donald F. McDonald, Jr. PE CCP PSP FAACE
Hon. Life

Mehdi Takabi, PSP

John P. Orr, PSP

Dr. Stephen P. Warhoe, PE CCP CFCC FAACE

STATUSING THE CPM SCHEDULE – AS APPLIED IN CONSTRUCTION

TCM Framework: 9.2 – Progress and Performance Measurement



March 19, 2018

TABLE OF CONTENTS

Table of Contents	1
Introduction	1
Recommended Practice	2
Activity Status	2
Activity Status Elements	2
Conditions of Activity Status	3
Not Started Activities	3
In-Progress Activities	3
Percent Complete Measurements	4
Relationship Lag Status	5
Status Front-End Loading	5
Completed Activities	5
Frequency of Statusing	6
Status Involvement	6
Schedule Update Process	6
Reviewing Status	8
Negative Progress	9
Delays	9
Project Status	9
Conclusion	10
References	10
Contributors	10

INTRODUCTION

This recommended practice (RP) for critical path method (CPM) construction schedule status provides guidelines for the project scheduler to determine and assess the ramifications of project status and progress. This document is intended to provide a guideline, not a standard.

This recommended practice is aligned with the Total Cost Management (TCM) Framework Section III, Project Control Process, Chapter 9.2 – *Progress and Performance Measurement* on construction projects. [14]

The subject of CPM status encompasses two different issues; activity status and project status. Activities are pre-defined units of work that are typically the focus of status assessment. Once the activity status is defined, the logic and CPM calculations provide for an assessment of project status.

There may be instances where the improper or imprecise definition of activity status may cause conflict between project stakeholders. Disagreement about start and finish status updates may cause critical path, float, and contractor payment timing concerns.

In a dispute resolution situation, the evaluation of delay cost (quantum) is in part dependent upon the status assessment of active activities and hence the status of the schedule. Before the project starts, the meaning of activity status should be clearly defined to drive consistency in the understanding and application of schedule updates.

March 19, 2018

RECOMMENDED PRACTICE**ACTIVITY STATUS**

Statusing refers to the process of periodically posting the current progress of active activities to the execution schedule. Accurate statusing (including determination of milestone achievement) depends upon a clear definition of the activity scope and an understanding of the amount of work remaining.^[1]

The primary reasons for updating project CPM schedules are to:^[2]

- Reflect current project status
- Maintain the schedule's usefulness as a predictive management tool
- Evaluate work procedures, performances, and any delays and associated causes
- Satisfy contractual requirements

ACTIVITY STATUS ELEMENTS

A typical activity undergoes a lifecycle composed of many steps (see Figure 1 and a diagram of this concept).

Administrative requirements and logical predecessor work must be completed before the substantial start of an activity can occur. The actual start date of an activity should be the date on which work has substantially started. Minor preparatory work for the activity may occur prior to this time and should not define activity substantial start. For example, marshalling of equipment or supplies may be considered minor prep work prior to the actual start of an activity.

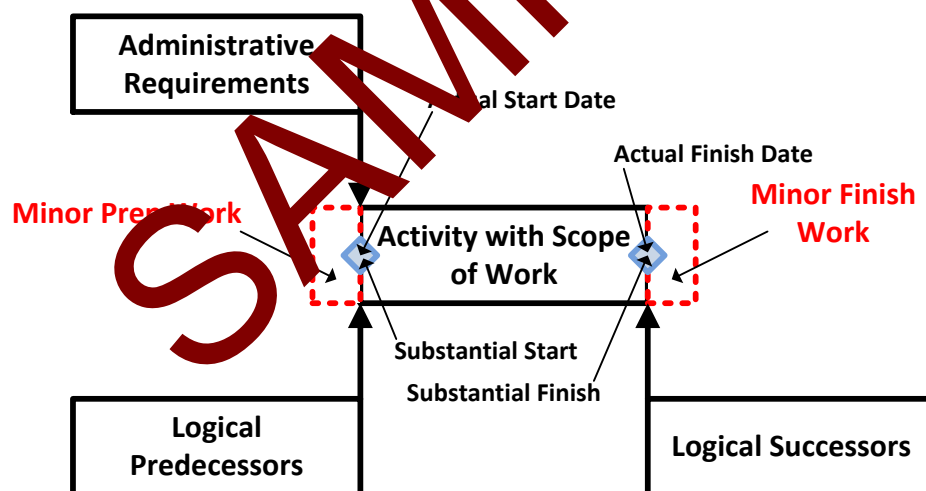


Figure 1. The Elements of Activity Status

Once the activity is substantially completed, key resources are released to other work fronts and all logical successor activities may begin without interference from this activity. This marks the activity's actual finish date. Minor finish work may occur after the actual finish date but prior to the completion of the project. For example, applying a pipeline label may be considered minor finish work that does not delay the start of successor activities.

March 19, 2018

CONDITIONS OF ACTIVITY STATUS

An activity's status can be in one of the three conditions; not started, in-progress, or completed. Activities that have not started are 0% complete, completed activities are 100% complete, and in-progress activities must be somewhere between 0% and 100% complete. Figure 2, Conditions of Activity Status illustrates this concept.



Figure 2. Conditions of Activity Status

NOT STARTED ACTIVITIES

Activities that have not started should not indicate an actual start date (and time), nor an actual finish date (and time).

Nominal preparatory work should not generate an actual start date. An indication of this is an actual start with no reduction in remaining duration. Incurring cost or earning revenue would not necessarily cause an actual start to be generated.^[4] An example would be paying for stored materials before work starts.

On the other hand, an activity may correctly be statused as having started without any work being visible on the production site. It is possible that work was pre-fabricated at an off-site location and will be transported to the work site later. In cases such as these, an explanation for the non-observed status should be included with the submittal. If such offsite work is significant, it is recommended that it be included as a separate activity.

IN-PROGRESS ACTIVITIES

Before an activity can start, logical predecessors, and administrative requirements must be considered. Administrative requirements may include:

- Appropriate workers are present