

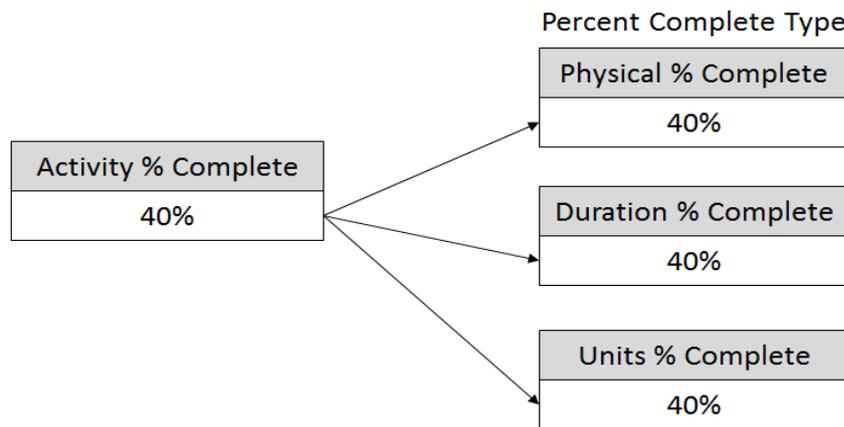
Primavera P6 Percent Complete Types

When adding activities to a Primavera P6 EPPM or Professional schedule, you have three possible percent complete types to choose from: **Duration, Physical and Units**. Which one you choose depends on your desired outcome. This article explains each of the Primavera P6 activity percent complete choices, when you should use a particular percent complete type and how they affect your process for entering status to your project's schedule.

The Activity % Complete Field

Before we get into the specifics of the percent complete types, we need to take a quick look at the Activity % Complete field. This field's existence can be a little confusing because it sounds like another percent complete type. However it is, in fact, a field (column) into which a value can be placed to update the value in the activity's selected percent complete type field. In other words you don't need to add a column for all three percent complete types that you might be using within a schedule, rather you just add the Activity % Complete field, and enter your values there.

Any option that reduces the number of columns you need to have displayed in your P6 table area is a good thing.



Duration % Complete

This option is used to calculate progress from the planned and remaining duration values. For example, if you enter 6 days of remaining duration for a 10 day duration activity, Primavera P6 will calculate 40% complete. Transversely, if you enter 40% in the Activity % Complete field, P6 will calculate a remaining duration of 6 days.

Original or Planned Duration – Remaining Duration = Percent Complete

WBS / Activity	Activity ID	Activity Status	Percent Complete Type	Activity % Complete	Planned Duration	Remaining Duration
... January 2015						
... 05 11 18 25						
Wellmont Substation					37.0d	29.0d
Contract Award	W1010	Completed	Physical	0%	0.0d	0.0d
Project Start	W1020	Completed	Physical	0%	0.0d	0.0d
Project Management	W1030	In Progress	Duration	9.4%	32.0d	29.0d
Project Complete	W1160	Not Started	Physical	0%	0.0d	0.0d
Mobilization					10.0d	6.0d
Mobilize	W1000	In Progress	Duration	40%	10.0d	6.0d
Below Grade					11.0d	11.0d
Foundation	W1040	Not Started	Physical	0%	8.0d	8.0d

Usage:

Enter a percent complete value in the Activity % Complete column or directly into the Duration % Complete column. Primavera P6 will automatically calculate the Remaining Duration for the activity. Or enter a Remaining Duration value and let P6 calculate the percentage.

This percent complete type is best used for more level of effort type activities where measurable deliverables are not expected and the percent complete represents elapsed time more than deliverables completed.

Physical % Complete

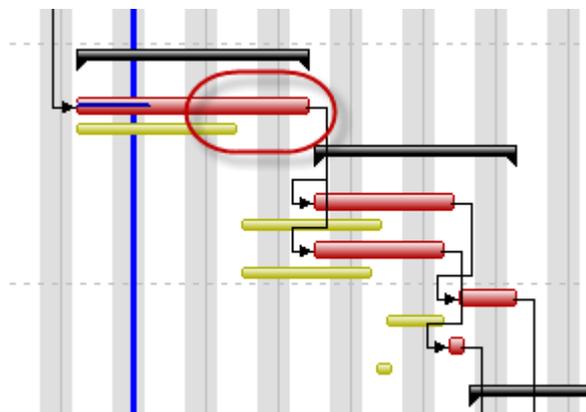
The percent complete values will be entered by the user manually. Entering a value in the Activity % Complete field will update the Physical % Complete value. The Physical % Complete type is required if you wish to use Steps to drive progress.

Caution: When Physical % Complete is used, you must adjust the Remaining Duration as this is not calculated by Primavera P6. You must enter a Remaining Duration manually, or set an Expected Finish date on the activity.

WBS / Activity	Activity ID	Activity Status	Percent Complete Type	Activity % Complete	Planned Duration	Remaining Duration	Expected Finish	Dec	January 2015		
								26	04	11	18
◆ Project Start				0%	0.0d	0.0d					
▢ Project Management				0%	32.0d	33.0d					
◆ Project Complete				0%	0.0d	0.0d					
▢ Mobilization					10.0d	10.0d					
▢ Mobilize	W1000	In Progress	Physical	40%	10.0d	10.0d					
▢ Below Grade					11.0d	11.0d					
▢ Foundation	W1040	Not Started	Physical	0%	8.0d	8.0d					
▢ Grounding	W1050	Not Started	Physical	0%	7.0d	7.0d					

Physical % Complete doesn't recalculate the Remaining Duration after the percent value is entered.

If you don't adjust the Remaining Duration, P6 will add the Actual Duration to the Remaining Duration. This will cause unnecessary variance in the project and will likely alter your critical path. As you can see in the following figure, the Remaining Duration remained at 10 days, the Actual Duration was added to it, giving an At Completion Duration of 14 days, and pushing all successor activities out but that amount.



You can use the Expected Finish date option to help control the remaining duration of Physical % Complete activities. Adding a date in the Expected Finish date field locks down the end date of the activity and forces P6 to calculate the Remaining Duration.

Percent Complete	Activity % Complete	Planned Duration	Remaining Duration	Expected Finish	January 2015					February 2015					
					Dec 28	04	11	18	25	01	08	15	22		
Physical	0%	0.0d	0.0d												
Physical	0%	0.0d	0.0d												
Duration	9.4%	32.0d	29.0d												
Physical	0%	0.0d	0.0d												
		10.0d	6.0d	27-Jan-15 05:...											
Physical	40%	10.0d	6.0d	27-Jan-15 05:...											
		11.0d	11.0d												
Physical	0%	8.0d	8.0d												
Physical	0%	7.0d	7.0d												
Physical	0%	3.0d	3.0d												

In the above image you can see that an Expected Finish date of 27-Jan-15 has pulled the end date back to its original date and caused P6 to calculate a 6 day remaining duration.

Physical % Complete and Steps

An additional advantage when using the Physical % Complete technique is the ability to progress the activity using weighted steps. Weighted Steps are simply a checklist of things that must be completed before the activity can be considered finished.

Continuing with our Mobilize activity example, weighted steps have been added from a Step Template.

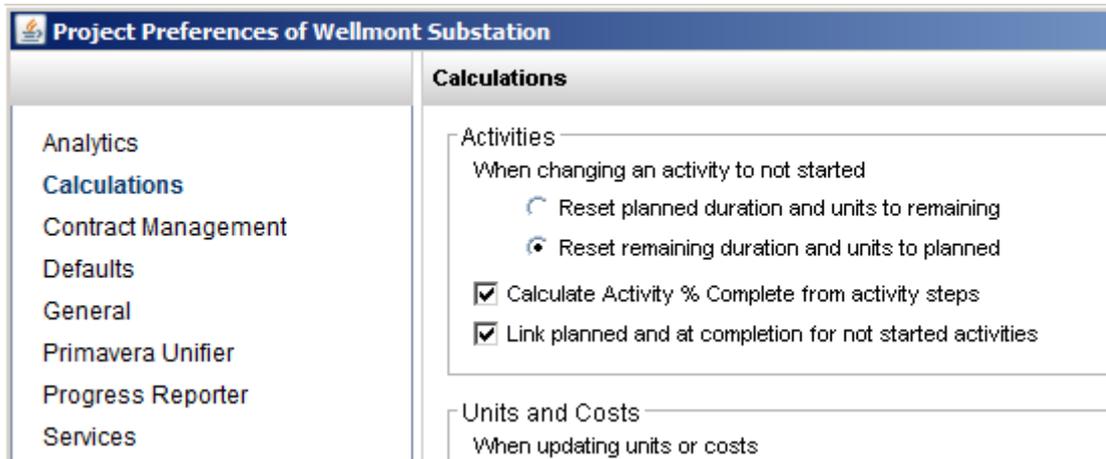
[-] Mobilization					10.0d	10.0d
[-] Mobilize	W1000	Not Started	Physical	0%	10.0d	10.0d
[-] Below Grade					11.0d	11.0d
[-] Foundation	W1040	Not Started	Physical	0%	8.0d	8.0d

Steps					
Step Name	Step Weight	Step Description	Completed	Step % Complete	Step Weight Percent
Acquire Final Drawings	2.0		<input checked="" type="checkbox"/>	0%	6.5%
Acquire First Aid Kit	1.0		<input type="checkbox"/>	0%	3.2%
Acquire Jobsite Trailer	10.0		<input type="checkbox"/>	0%	32.3%
Post Davis Bacon Schedule	1.0		<input type="checkbox"/>	0%	3.2%
Job Site Furniture	7.0		<input type="checkbox"/>	0%	22.6%
Establish Phone and Data	10.0		<input type="checkbox"/>	0%	32.3%

The weights values entered will be calculated to a percentage value by Primavera P6 and will drive the Physical % Complete value of the activity. The weight values can be any decimal number and thus spare the user from manually calculating the Percent Complete values; they just enter some arbitrary value based on whatever factor they choose; number of hours, relative degree of difficulty, whatever.

As Steps are checked off as Completed, so they will drive the Percent Complete for the activity. The user will still need to manually update the remaining duration or expected finish date values as previously described.

Note: the “Calculate Activity % Complete from the activity steps” must be set in the “Calculations” tab of the “Set Project Preferences” dialog must be set in order for this feature to work.



Usage:

The Physical % Complete progress type should be used when dealing with discrete work that equates to one or more measurable delivery items.

Units % Complete

The Units % Complete type is used when resources are assigned to an activity and actual units worked will be tracked. Actual Units may be entered manually or via the Apply Actuals feature that loads actual units from a timesheet module such as Primavera Progress Reporter.

Assignments

Resource Name	Planned Duration	Planned Units/Time	Planned Units	Actual Units	Remaining Units	At Completion Cost
Groundman	10.0d	100%	100.00h	40.00h	60.00h	6,500
HE Operator	10.0d	100%	100.00h	40.00h	60.00h	7,000
Lineman	10.0d	100%	100.00h	40.00h	60.00h	8,000

Actual Units are driving the % complete for the Units % Complete type activity.

As with Physical % Complete, Units % Complete doesn't calculate the remaining duration for activities, so you will need to use either the Remaining Duration field or an Expected Finish date to manually control the calculated end date for your activity.

Usage:

Use Units % Complete when resources are assigned to the activity and actual units will be tracked. The only drawback of this method is that hours expended doesn't necessarily equate to progress achieved, so this method is not very discrete.

Summary

I hope this article helps give you a better understanding of each of the Primavera P6 activity percent complete choices, when they should be applied and what the outcome will be when statusing your project.