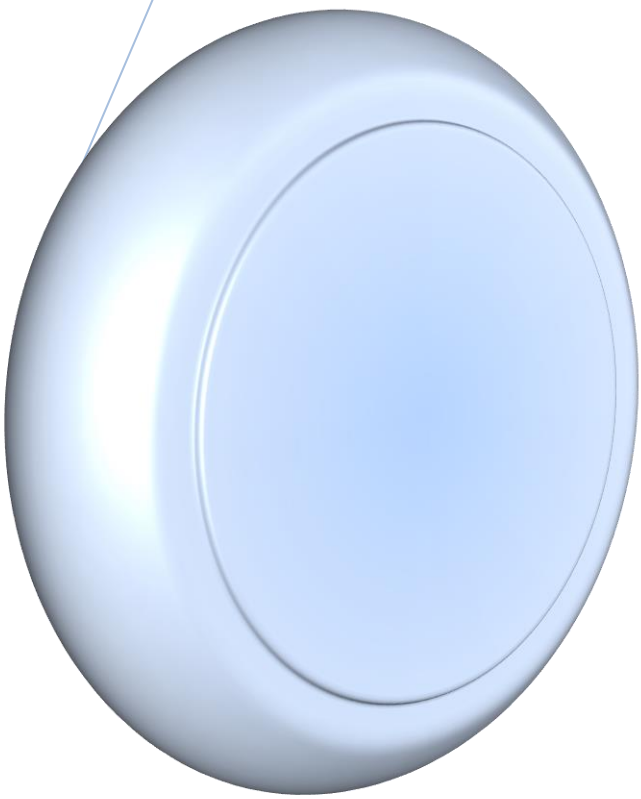

Milestones Tracker

A Users' Guide

January 2021

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I. About

This document provides an explanation on the contents of the Milestones Tracker and serves as a guide on how to navigate through it to effectively utilise it. If used and maintained properly, the Milestones Tracker is a powerful tool for an effective and efficient management and overall control of projects or a portfolio of projects.

The steps in updating the Milestones Tracker is also provided at the latter part of this document.

II. Milestones Tracker Coverage

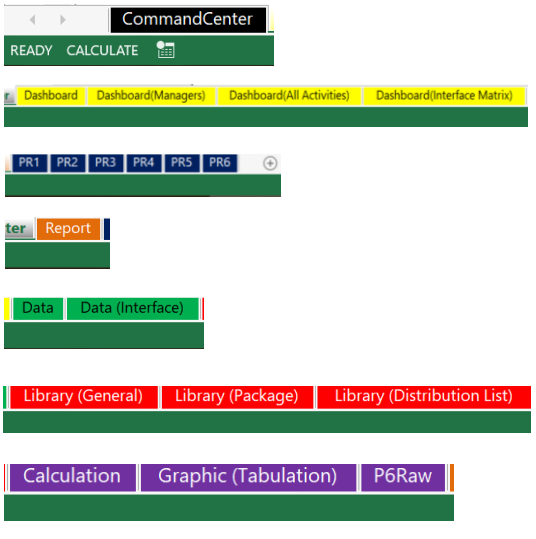
A. General Contents

The Milestones Tracker contains key activities and milestones, including interfaces, of a number of projects in a multi-project environment.

Dates and activities are referenced to the corresponding Primavera P6 schedules. As a general principle to ensure that a sole source of information is communicated out of the Milestones Tracker, only activities that are present in the Primavera schedules are included and reported in the Milestones Tracker.

B. Worksheet Tabs

A number of worksheet tabs are available in the Milestones Tracker and are color-grouped per its intent and function. Below is a general description of the worksheet tabs per group:



Contains action buttons for worksheet navigation and tasks execution.

Contains interactive dashboards projecting useful information about the project and package progress.

Report table of individual projects.

More detailed and consolidated report table of the projects.

Consolidated activity details wherein the dashboard and report information are generated from.

Contains the list of details mostly ulitised in the Data Tabs and function buttons in CommandCenter.

Contains the P6 extracted schedules and calculations used and showed in the reports and dashboards.

Figure 1. Milestones Tracker Worksheet Tabs Contents.

III. Milestones Tracker Worksheets

The Milestones Tracker is developed with VBA/Macro codes and is processed from a large amount of data (dump of Primavera P6 schedules) to make the reports comprehensive yet easy to follow, informative, and more effective in communicating project progress while at the same time, easier and faster to update to meet the target reporting deadlines. As such, opening the file prompts the user to activate Excel Marco. The user needs to enable Marco to utilise the file as shown in Figure 2 below.

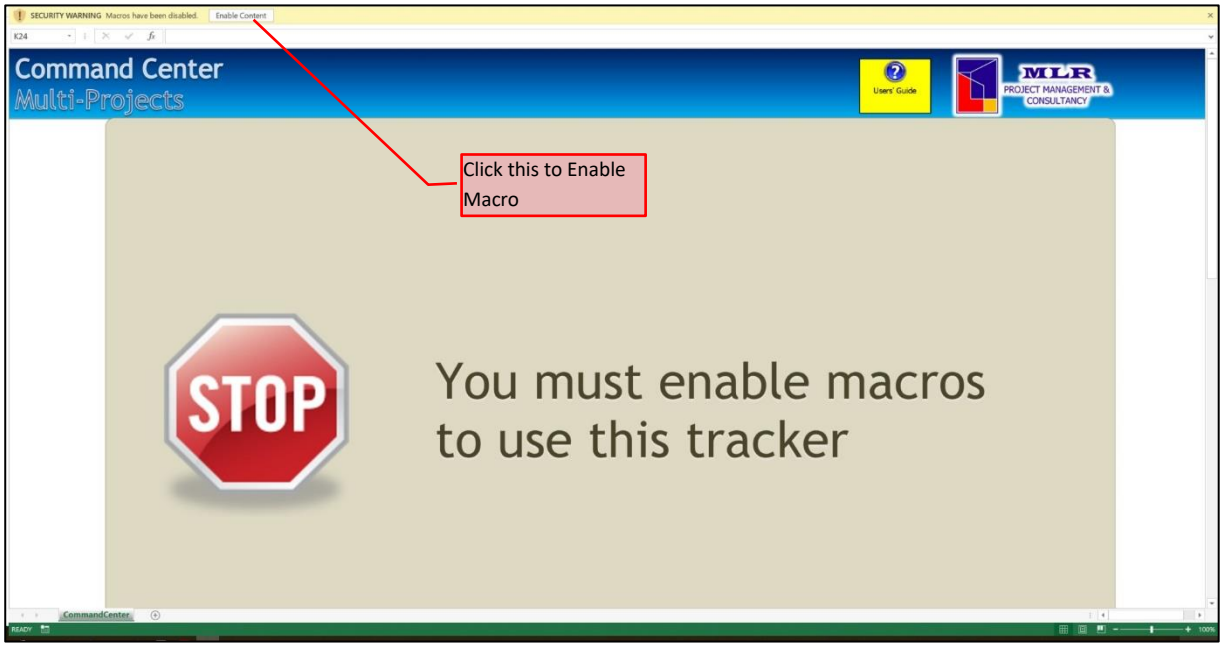


Figure 2. Message Prompt After Opening the Milestones Tracker (User Needs to Enable Macro to Use the File).

A. CommandCenter

After the Macro is enabled, the user is directed to the CommandCenter tab wherein a number of function buttons can be found to execute various tasks. Each button is provided with a corresponding description.

a. View Options

Function buttons in the View Options are especially useful for end-users in displaying just selective worksheet tabs to suit the purpose or needs of the user at the particular time.

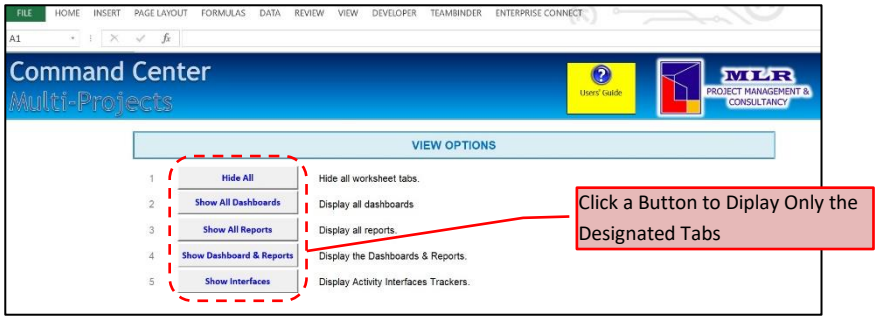


Figure 3. CommandCenter View Options.

b. Work Mode

Function buttons in the Work Mode area are particulary useful for schedulers working and updating the Milestones Tracker.

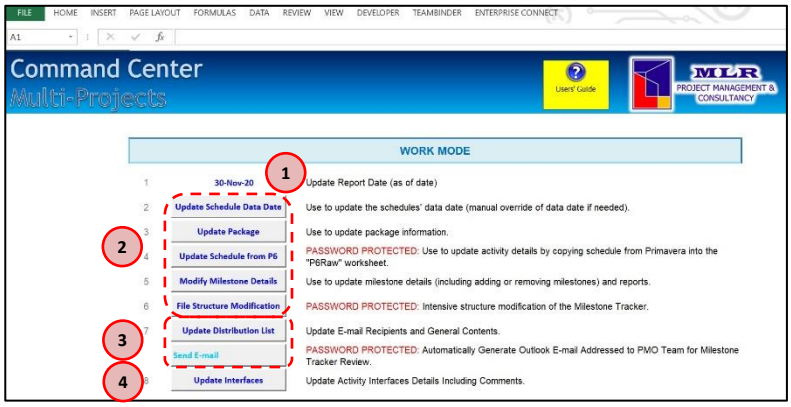


Figure 4. CommandCenter Work Mode.

1. Update Report Date – The "as of date" of the report (normally end day of the month). Used to calculate for the look-ahead in case the schedule data date is not updated. Otherwise, calculation of the 2-month look-ahead is based on the individual schedule's data date.
2. Various Updating Buttons – Used to display selective worksheets depending on the section of the Milestones Tracker to be updated. Note that some buttons are password protected to hide information that are not intended for the general users.
3. E-mail from Outlook – This is to quickly generate an Outlook e-mail with the generic message body contents and with the Milestones Tracker file attached. An "Update Distribution List" is available to modify the e-mail's contents and recipients. Note that e-mail generation is password protected to prevent accidentally sending an e-mail to the list of recipients.
4. Update Interfaces – Display selective worksheets related to updating interfacing activities between contracts/packages.

c. Convert Reports to PDF

Figure 5. CommandCenter Convert Reports to PDF.

By clicking one of the buttons, a particular report or a group of reports is immediately converted to PDF and saved to the folder where the Milestones Tracker is located.

Filename of the converted reports are automated with the report date on it. This comes handy in "freezing" the reports for the month-end by converting them to PDF.

B. Dashboards

The dashboards provide an overarching information on each project and the portfolio as a whole. The interactive setting of the dashboards makes it possible to examine and understand the progress of a particular project and the overall project dynamics.

a. Dashboard (Project)

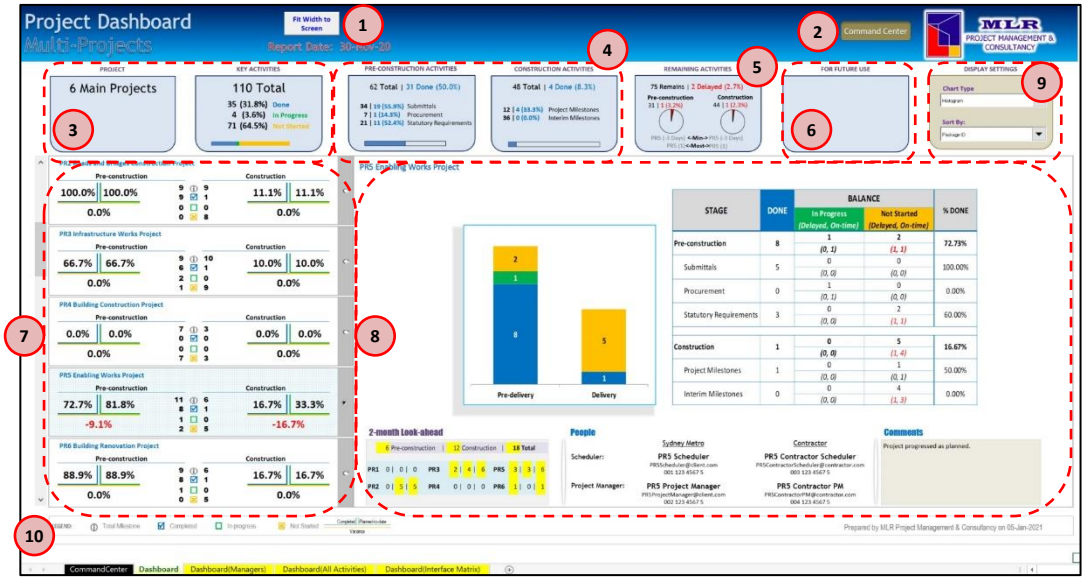


Figure 6. The Milestones Tracker Dashboard.

1. Fit Width to Screen – Clicking this button fits the Dashboard column to the width of the computer screen.

2. CommandCenter Button – Clicking this directs the user to the CommandCenter tab.

3. Project and Key Activities Widgets – Provides information on the number of projects in the Milestones Tracker and the total number of key activities, respectively. The number of activities, whether completed, in-progress, or not started, are shown in the Key Activities widget. Finally, the key activities progress is indicated by the bar shown at the bottom of the widget.

4. Pre-construction and Construction Activities Widgets – The total activities are brokendown per stage of the project (pre-construction and construction). The total activities and the number completed are provided in these widgets whilst further breaking them down to designated work group (i.e., submittals, procurement, etc.). Finally, a progress indicator bar is provided in these widgets.

5. Remaining Activities Widgets – This widget shows the total number of key activities and milestones that have yet to be completed. They are further divided to pre-construction and construction groups. Of the remaining activities, the number that

are in delays are shown along with the chart indicator. At the bottom of the widget are the minimum and maximum values of delays. The former provides information on the project with the most negative variance in terms of calendar days and the corresponding project number while the later provides information on the number or count of activities with negative variance and the corresponding project number.

6. This widget for future development and enhancements of the Milestones Tracker.

7. Project Navigation Pane – A project can be selected from this navigation pane such that details about it is shown in the Project Details section of the Dashboard. Project details in this section can be interpreted as follows (refer to Figure 7 below):
    a. 72.7% (8 out of 11) pre-construction key activities and milestones have been completed.
    b. However, to this date, the completion should have been 81.8%
    c. Hence, the project is in delay by 9.1% of the milestone count.

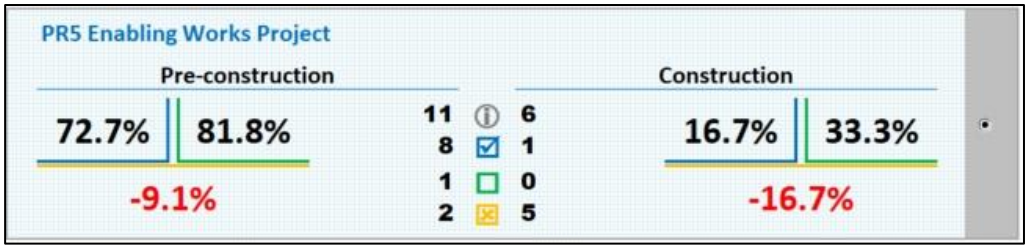


Figure 7. Navigation Pane Details.

Refer to the footnote section of the dashboard for understanding of the graphic legends.

8. Project Details – Details of the selected project are shown here in graphical and tabulated formats. Figure 8 provides the graphical representation of the project selected in Figure 7. The table breaks down the pre-construction activities into work groups. At the bottom of the graphics is contact information about the project and a general comment. Also, the number of activities that needs to commence/completed in 2 months (2-month look-ahead) is provided.

9. Display Settings – This is to set the chart type (whether histogram or pie chart) displayed in Project Details window and to sort the Project Navigation Pane by Project ID, % Completed or % Variance.

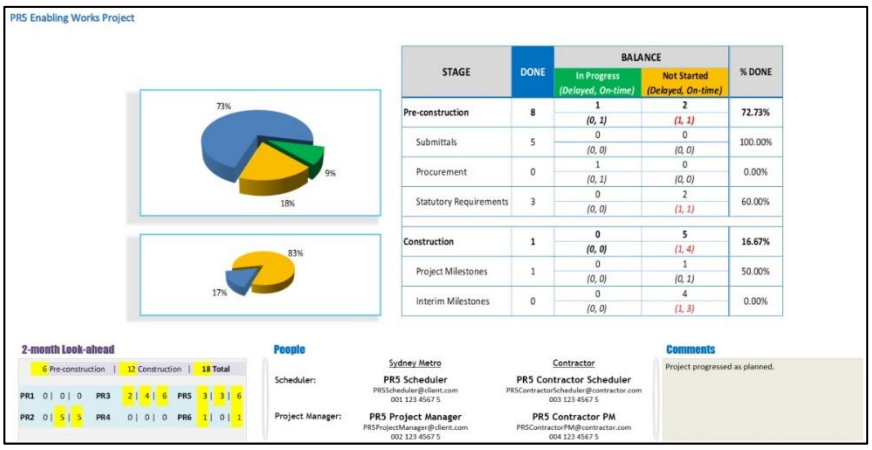


Figure 8. Project Details Graphical Representation.

10. Dashboard Footnote – The legend key is provided in this section of the dashboard.

b. Dashboard (Managers)

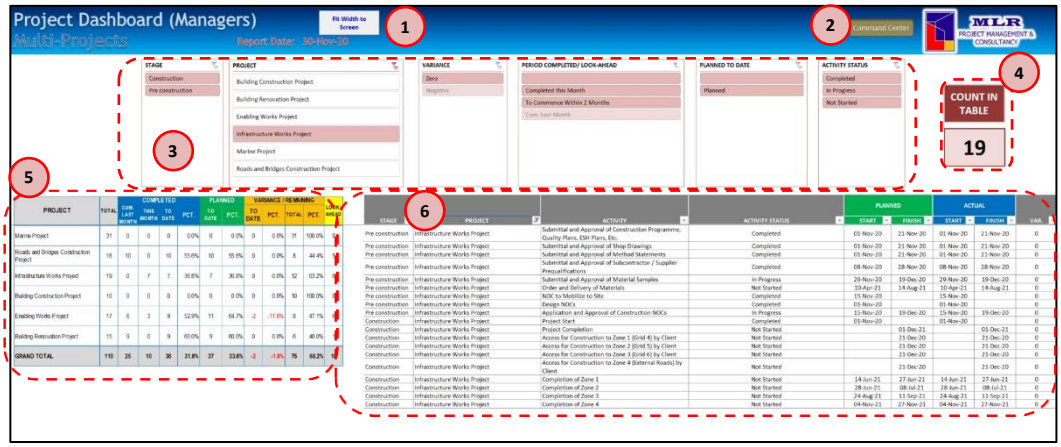


Figure 9. The Managers' Dashboard.

1. Fit Width to Screen – Clicking this button fits the Dashboard column to the width of the computer screen.

2. CommandCenter Button – Clicking this directs the user to the CommandCenter tab.

3. Display Filters – Useful to filter activities shown in the tables below by stage, project, variance, etc. for a dynamic navigation milestones/key events.

4. Activity Count – Provides a quick information on the number of activities displayed in the dynamic table positioned below.

5. Summary Table – Provides the summary of milestones/key events per project and their progress filtered by "Stage" (pre-construction, construction, or both).
    a. Project – Description or name of the project.
    b. Total – Provides information of the total number of milestones/key events as filtered by the activity stage (pre-construction, construction, or both).

c. Completed Cumulative Last Month – Total number of milestones completed in the previous month with respect to the schedule's data date.
d. Completed This Month – Number of milestones completed 1 month ago from and up to the schedule's data date.
e. Completed-To-Date – Total activities that has been completed up to the schedule's data date.
f. Completed Percentage – Completed activities divided by the total milestones/key events.
g. Planned-To-Date – Total number of milestones that should have been completed by now.
h. Planned Percentage – Planned-to-date divided by the total number of milestones/key events.
i. Variance-To-Date – Difference between the number of activities completed-to-date and the number of activities planned-to-date (negative variance means that the completed activities are less than the planned).
j. Variance-To-Date Percentage – Difference between the percentage of activities completed-to-date and the percentage of activities planned-to-date (negative percentage means that the completed activities are less than the planned).
k. Variance Total – Difference between the total number of milestones/key events and the number of activities completed-to-date.
l. Variance Total Percentage – Variance total divided by the total number of activities (in percentage format).
m. 2-month Look-ahead – Number of milestones falling inside the 2-month look-ahead period.

6. Activity Details Table – Provides the tabular list of filtered activities.

c. Dashboard (All Activities)

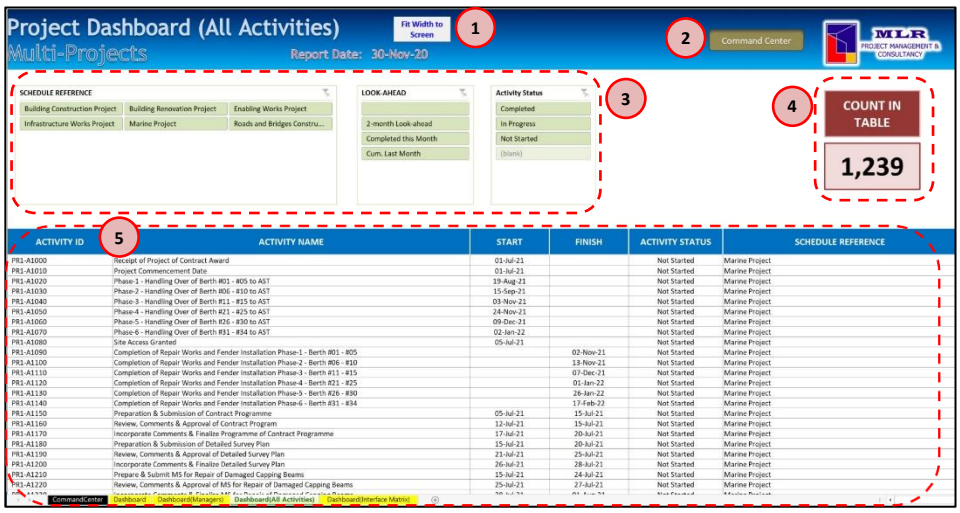


Figure 10. The Dashboard for All the Activities in the Project Portfolio.

The Dashboard (All Activities) provides details of all the driving and milestone type activities in the project portfolio.

1. Fit Width to Screen – Clicking this button fits the Dashboard column to the width of the computer screen.

2. CommandCenter Button – Clicking this directs the user to the CommandCenter tab.

3. Display Filters – Useful to filter activities shown in the table below by schedule reference, look-ahead status, and the activity status.

4. Activity Count – Provides a quick information on the number of activities displayed in the dynamic table positioned below.

5. Activity Details Table – Provides the tabular list of filtered activities with information on the Primavera activity ID, description, dates, activity status, and schedule name/source.

d. Dashboard (Interface Matrix)

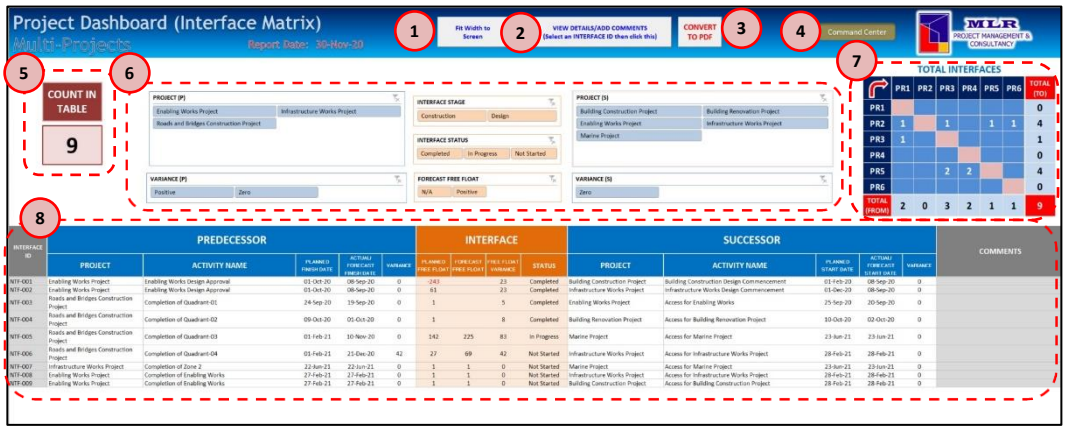


Figure 11. The Dashboard for Interfacing Activities.

The Dashboard (Interface Matrix) provides information on activities/milestones that are interfacing with or linked with other projects.

1. Fit Width to Screen – Clicking this button fits the Dashboard column to the width of the computer screen.

2. View Details/Add Comments – Toggling this button redirects to the source worksheets to view further details and/or add notes in the comments column to reflect in the dashboard's table.

3. Convert to PDF – Use this button to convert the table to PDF wherein the file is saved to the folder where the Milestones Tracker is located.

4. CommandCenter Button – Clicking this directs the user to the CommandCenter tab.

5. Activity Count – Provides a quick information on the number of interfaces displayed in the dynamic table positioned below.

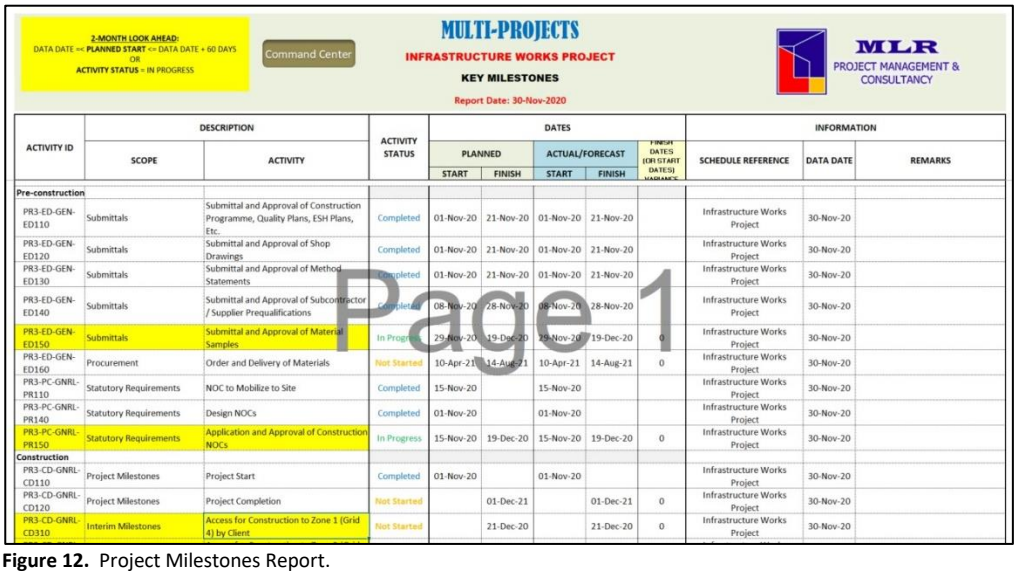
6. Display Filters – Useful to filter activities shown in the table below by project, variance, interface stage, etc.

7. Total Interfaces Summary Table – Provides an overview on the number of interfaces between contracts as filtered by the interface stage (construction, design, or both).

8. Inteface Details Table – Display details of the filtered interface activities.
    a. Interface ID – Used as reference to interfacing activities.
    b. Predecessor Project – Provides details of the activities whose completion drives the commencement of activities in another project.
    c. Interface Planned Free Float – The variance in days calculated by subtracting the Predecessor Planned Finish Date from the Successor Planned Start Date.
    d. Interface Forecast Free Float – The variance in days calculated by subtracting the Predecessor Forecast Finish Date from the Successor Planned Start Date.
    e. Interface Free Float Variance – Calculated by subtracting the Planned Free Float from the Forecast Free Float.
    f. Interface Status – The status of the interface is determined by the following:
        i. Not Started – both the predecessor and successor activities have not started.
        ii. In Progress – The predecessor activity has been completed while the successor has yet to start.
        iii. Competed – both the predecessor and successor activities have been completed.
    g. Successor Project – Provides details of the activities whose commencement depends on the completion of activities in another project.

C. Project Milestones Report

The Project Milestones Report is arrange in a tabular form wherein activity status, planned and actuals dates, variances, and the schedule reference information are provided. Activities inside the 2-month look-ahead are highlighted.



2-MONTH LOOK AHEAD:
DATA DATE =< PLANNED START <= DATA DATE + 60 DAYS
OR
ACTIVITY STATUS = IN PROGRESS

Command Center

MULTI-PROJECTS
INFRASTRUCTURE WORKS PROJECT
KEY MILESTONES
Report Date: 30-Nov-2020

MLR PROJECT MANAGEMENT & CONSULTANCY

ACTIVITY ID	DESCRIPTION		ACTIVITY STATUS	DATES					INFORMATION		
	SCOPE	ACTIVITY		PLANNED		ACTUAL/FORECAST		FINISH DATES (OR) START DATES) VARIANCE	SCHEDULE REFERENCE	DATA DATE	REMARKS
				START	FINISH	START	FINISH				
Pre-construction											
PR3-ED-GEN-ED110	Submittals	Submittal and Approval of Construction Programme, Quality Plans, ESH Plans, Etc.	Completed	01-Nov-20	21-Nov-20	01-Nov-20	21-Nov-20		Infrastructure Works Project	30-Nov-20	
PR3-ED-GEN-ED120	Submittals	Submittal and Approval of Shop Drawings	Completed	01-Nov-20	21-Nov-20	01-Nov-20	21-Nov-20		Infrastructure Works Project	30-Nov-20	
PR3-ED-GEN-ED130	Submittals	Submittal and Approval of Method Statements	Completed	01-Nov-20	21-Nov-20	01-Nov-20	21-Nov-20		Infrastructure Works Project	30-Nov-20	
PR3-ED-GEN-ED140	Submittals	Submittal and Approval of Subcontractor / Supplier Prequalifications	Completed	08-Nov-20	28-Nov-20	08-Nov-20	28-Nov-20		Infrastructure Works Project	30-Nov-20	
PR3-ED-GEN-ED150	Submittals	Submittal and Approval of Material Samples	In Progress	29-Nov-20	19-Dec-20	29-Nov-20	19-Dec-20	0	Infrastructure Works Project	30-Nov-20	
PR3-ED-GEN-ED160	Procurement	Order and Delivery of Materials	Not Started	10-Apr-21	14-Aug-21	10-Apr-21	14-Aug-21	0	Infrastructure Works Project	30-Nov-20	
PR3-PC-GNRL-PR110	Statutory Requirements	NOC to Mobilize to Site	Completed	15-Nov-20		15-Nov-20			Infrastructure Works Project	30-Nov-20	
PR3-PC-GNRL-PR140	Statutory Requirements	Design NOCs	Completed	01-Nov-20		01-Nov-20			Infrastructure Works Project	30-Nov-20	
PR3-PC-GNRL-PR150	Statutory Requirements	Application and Approval of Construction NOCs	In Progress	15-Nov-20	19-Dec-20	15-Nov-20	19-Dec-20	0	Infrastructure Works Project	30-Nov-20	
Construction											
PR3-CD-GNRL-CD110	Project Milestones	Project Start	Completed	01-Nov-20		01-Nov-20			Infrastructure Works Project	30-Nov-20	
PR3-CD-GNRL-CD120	Project Milestones	Project Completion	Not Started		01-Dec-21		01-Dec-21	0	Infrastructure Works Project	30-Nov-20	
PR3-CD-GNRL-CD310	Interim Milestones	Access for Construction to Zone 1 (Grid 4) by Client	Not Started		21-Dec-20		21-Dec-20	0	Infrastructure Works Project	30-Nov-20	

Page 1

Figure 12. Project Milestones Report.

D. Portfolio Milestones Report

The Portfolio Milestones Report is intended for a more elaborative analysis of the preceding Project Milestones Report. Figure 13 has a sample of the Portfolio Milestones Report.

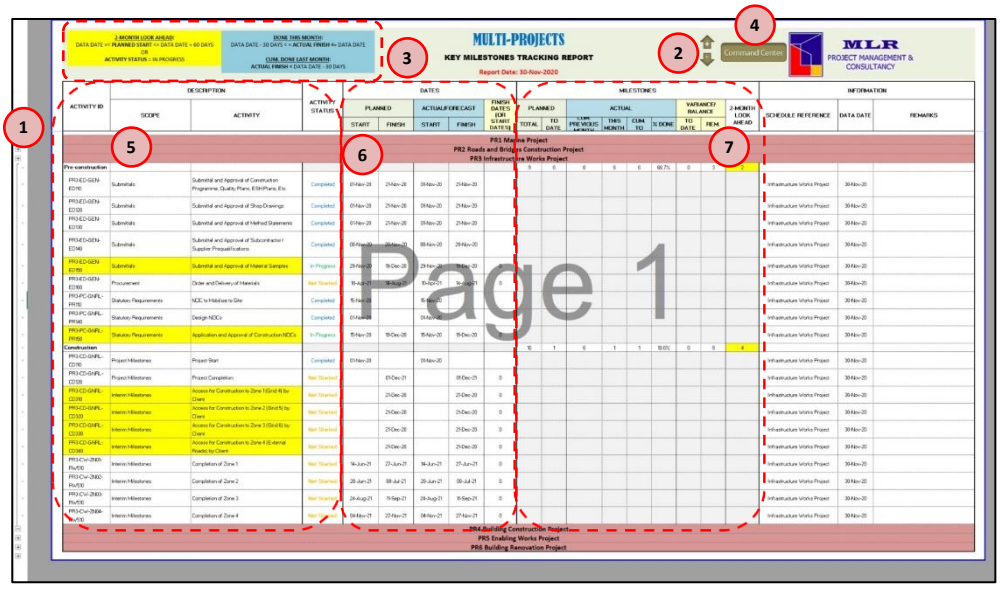


Figure 13. Portfolio Milestones Reports.

1. Collapse/Expand Buttons – use to hide/view project details.
2. Collapse/Expand All Buttons – use to collapse(↓)/expand(↑) all rows.
3. Legend Key – Provides brief explanation on the parameters used to determine status in the column fields of the report.
4. CommandCenter Button – Clicking this directs to user to the CommandCenter tab.
5. General Activity Information – Provides generic informatin about the project's activities. Automatically highlighted in yellow are 2-month look-ahead activities.
6. Dates Details – Planned and actual/forecast dates are provided in this section as well as the variances in terms of calendar days.
7. Milestones Details – The number of milestones per work group is shown in this section.
    i. Planned Total – Total number of milestones.
    ii. Planned-To-Date – Total number of milestones that should have been completed by now.
    iii. Actual Previous Month – Total number of milestones completed in the previous month with respect to the schedule's data date.
    iv. Actual This Month – Number of milestones completed 1 month ago and up to the schedule's data date.
    v. Actual Cumulative to Date – Sum of previous month's and this month's number of milestones completed.
    vi. Variance/Balance to Date – Number of milestones remaining against the total count of how many should have been completed-to-date (planned-to-date).
    vii. Variance/Balance Remaining – Overall number of milestones that have yet to be completed.
    viii. 2-month Look-ahead – Number of milestones falling inside the look-ahead period (highlighted with yellow if not equal to zero).

IV. Updating the Milestones Tracker

Activities and milestones details are sourced from the Primavera P6 schedules. As such, updating the Milestones Tracker is only possible after the schedules are updated. Assumming that no milestones or key activities are added into the Milestones Tracker, this can be updated by direct copying of the schedule from P6 and pasting it in the Milestones Tracker's P6Raw tab. Below are the steps in updating the tracker:

1. Update the Primavera P6 schedules.
2. Arrange the Primavera P6 columns as shown in Figure 14 below. Select all activies (Ctrl + A) then copy (Ctrl + C).

Figure 14. Primavera P6 Columns for Milestones Tracker.

3. Open the Milestones Tracker. In the Work Mode in the CommandCenter, toggle "Update Schedule from P6" button and enter the password.

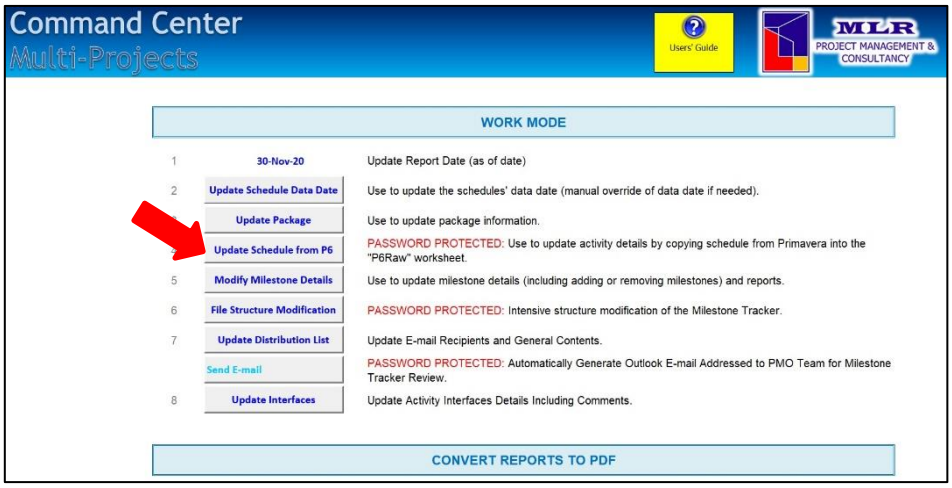


Figure 15. "Update Schedule from P6" in the CommandCenter.

4. In tab "P6Raw," select cell "K5" and paste (Ctrl + V) the copied Primavera P6 activties.

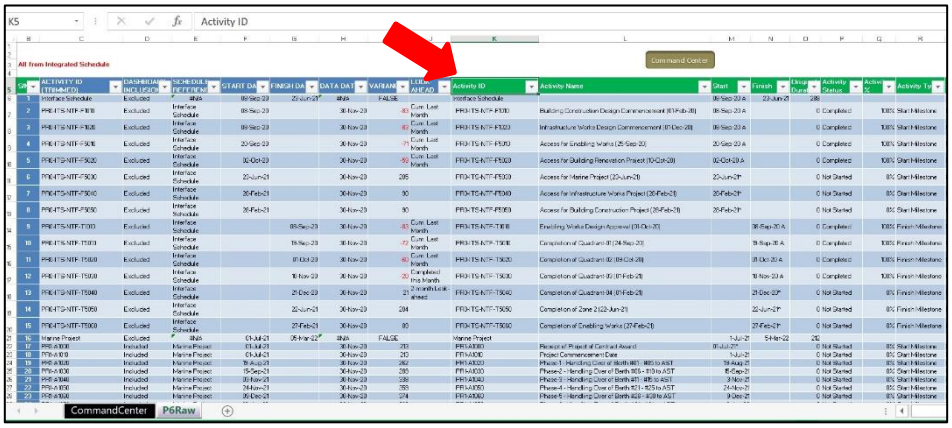


Figure 16. Paste Primavera P6 Activities in the Milestones Tracker's "P6Raw."

5. Refresh the PivotTables in the Dashboard (Managers), Dashboard (All Activities), and Dashboard (Interface Matrix).

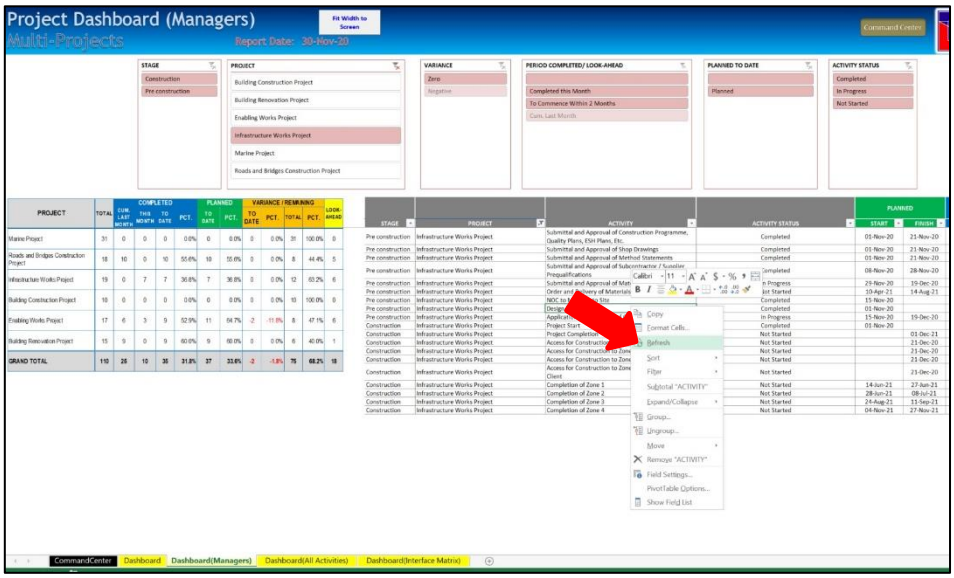


Figure 17. Refresh PivotTables in the dashboards.

6. That's it! All dashboards and reports are now completed updated.