



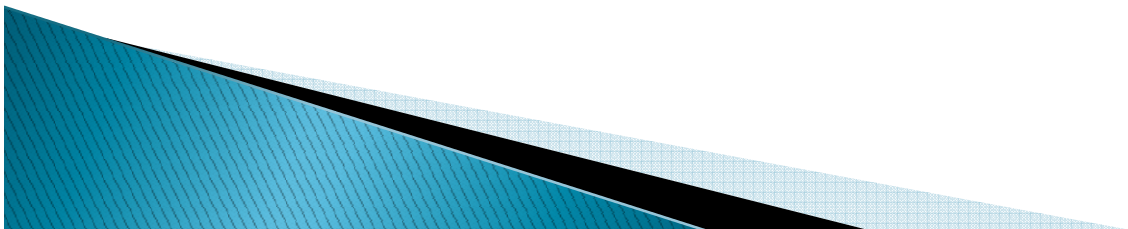
MnDOT Project Management  
Office Presents:

# MnDOT use of Calendars in Primavera P6

**Presenter: Jonathan McNatty, PSP**  
Senior Schedule Consultant  
DRMcNatty & Associates, Inc.

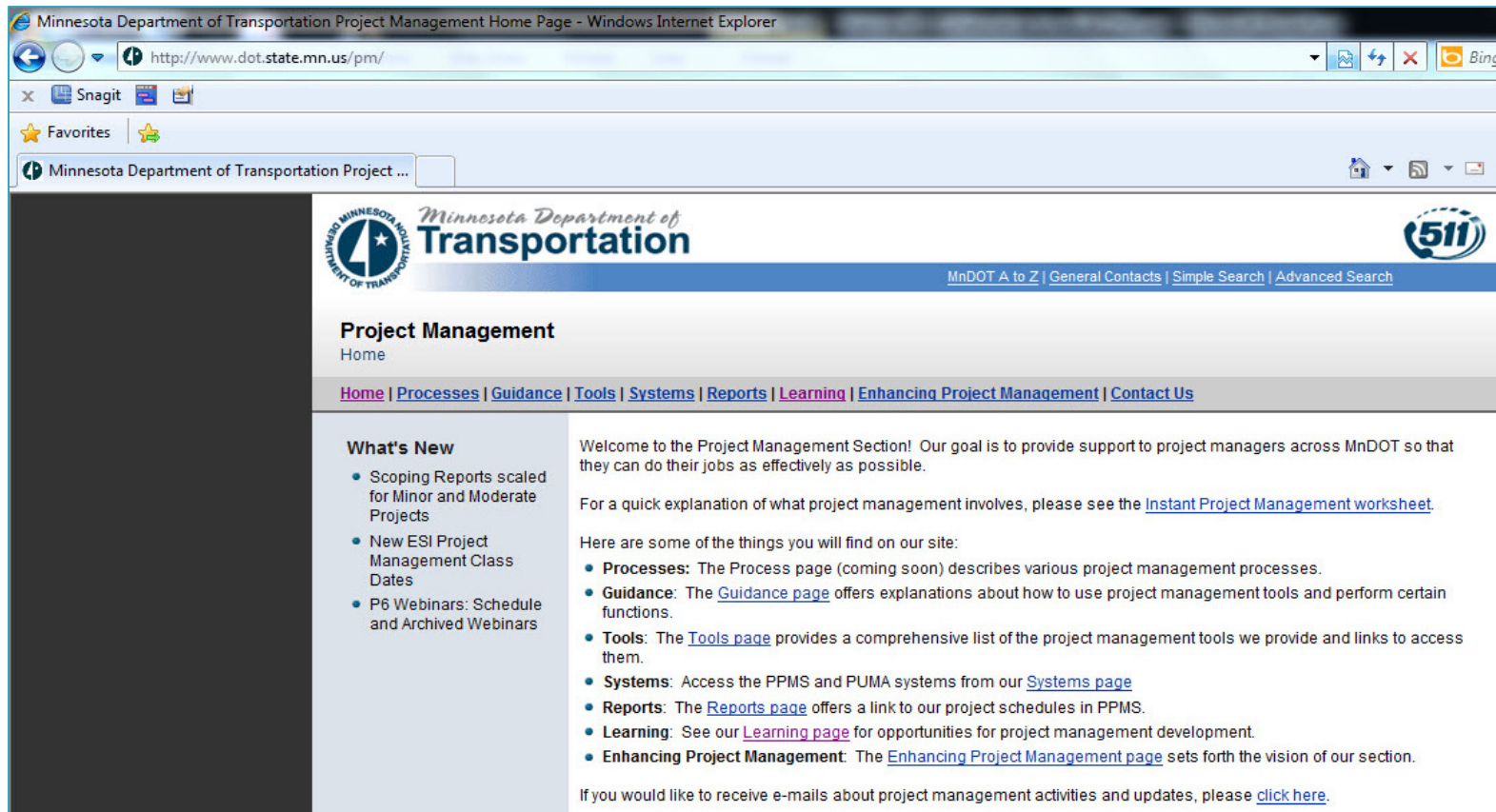
# Housekeeping Items

- ❖ Lines will be muted during the webinar
- ❖ Questions can be submitted thru the GoToWebinar Questions box on right of your screen
- ❖ Webinar slides available in pdf on MnDOT website within 5 days
- ❖ Questions will be posted on the MnDOT website with answers within in 5 days
- ❖ Webinar is being recorded and will be available on the MnDOT website within 5 days
- ❖ <http://www.dot.state.mn.us/pm/>



# MnDOT Webinars

❖ <http://www.dot.state.mn.us/pm/>



The screenshot shows a web browser window with the address bar displaying <http://www.dot.state.mn.us/pm/>. The page title is "Minnesota Department of Transportation Project Management Home Page - Windows Internet Explorer". The browser interface includes a search bar, a "Favorites" section, and a "Minnesota Department of Transportation Project ..." dropdown menu. The main content area features the MnDOT logo and navigation links: "MnDOT A to Z", "General Contacts", "Simple Search", and "Advanced Search". The page is titled "Project Management Home" and includes a navigation menu with links to "Home", "Processes", "Guidance", "Tools", "Systems", "Reports", "Learning", "Enhancing Project Management", and "Contact Us".

**What's New**

- Scoping Reports scaled for Minor and Moderate Projects
- New ESI Project Management Class Dates
- P6 Webinars: Schedule and Archived Webinars

Welcome to the Project Management Section! Our goal is to provide support to project managers across MnDOT so that they can do their jobs as effectively as possible.

For a quick explanation of what project management involves, please see the [Instant Project Management worksheet](#).

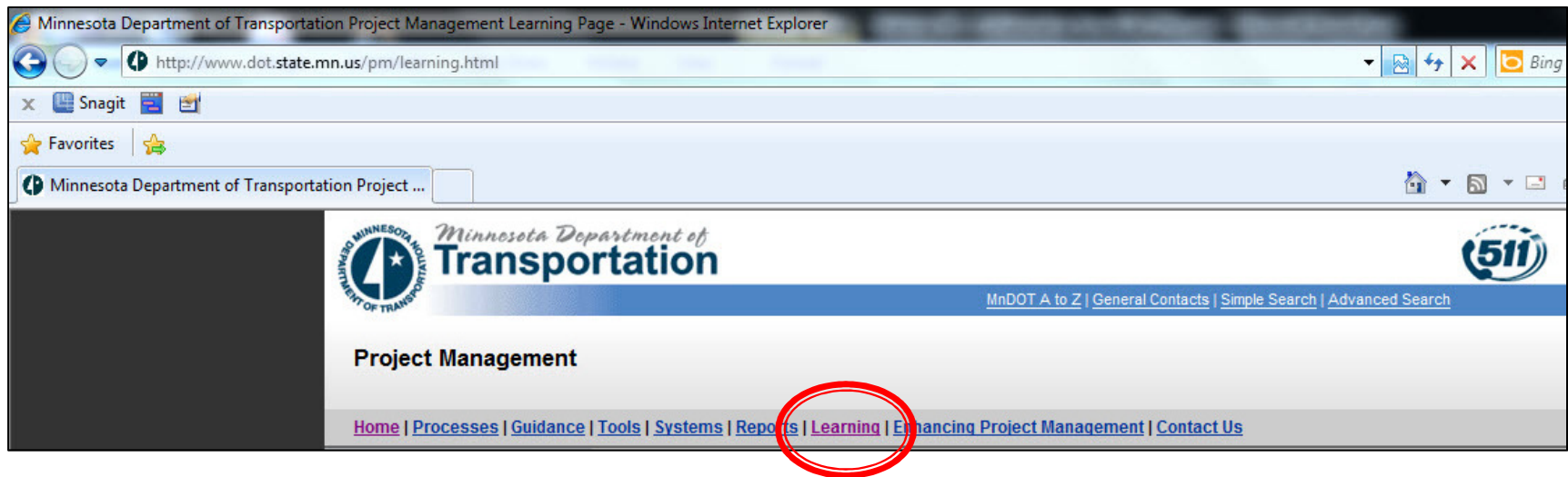
Here are some of the things you will find on our site:

- **Processes:** The Process page (coming soon) describes various project management processes.
- **Guidance:** The [Guidance page](#) offers explanations about how to use project management tools and perform certain functions.
- **Tools:** The [Tools page](#) provides a comprehensive list of the project management tools we provide and links to access them.
- **Systems:** Access the PPMS and PUMA systems from our [Systems page](#)
- **Reports:** The [Reports page](#) offers a link to our project schedules in PPMS.
- **Learning:** See our [Learning page](#) for opportunities for project management development.
- **Enhancing Project Management:** The [Enhancing Project Management page](#) sets forth the vision of our section.

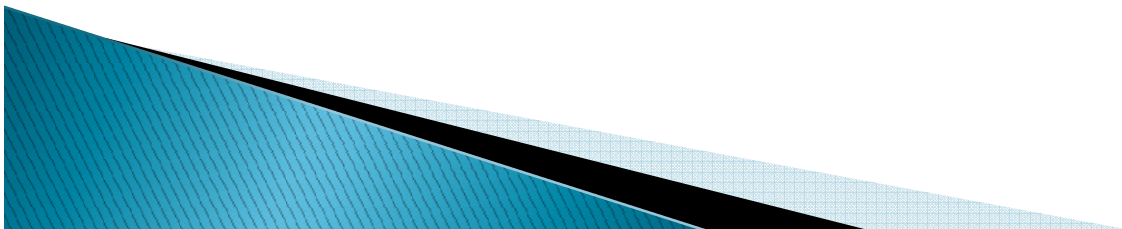
If you would like to receive e-mails about project management activities and updates, please [click here](#).

# MnDOT Webinars

❖ <http://www.dot.state.mn.us/pm/learning.html>



❖ Click on the “Learning” link



# MnDOT Webinars

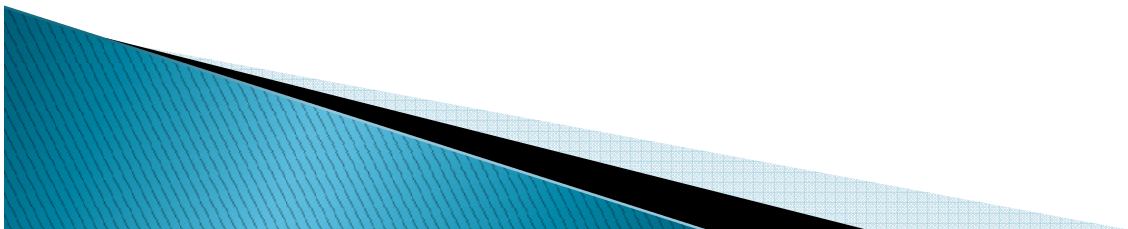
**Primavera P6 Webinars:** Each webinar will start at 1:00 p.m. and last 1/2 hour. Click the links below to register for a session. After each webinar, a recording will be made available from this page.

To request ASL or a foreign language interpreter or other reasonable accommodations call Janet Miller at [651-336-4720](tel:651-336-4720) or [1-800-657-3774](tel:1-800-657-3774) (Greater Minnesota). You may send an email to [janet.rae.miller@state.mn.us](mailto:janet.rae.miller@state.mn.us) (please request at least one week in advance).

|   |                |  |
|---|----------------|--|
| The Future of MnDOT Project Controls            | March 8, 2013  | <a href="#">View Project Controls Presentation (13:51 wmv 17 MB)</a> |
| Primavera P6 in the Project Management Process  | March 20, 2013 | View Project Management Process (coming soon)                        |
| Collaborative Scheduling using the CPM Method   | March 27, 2013 | <a href="#">Reserve your Webinar seat now</a>                        |
| Work Breakdown Structures                       | April 3, 2013  | <a href="#">Reserve your Webinar seat now</a>                        |
| Scheduling Float                                | April 10, 2013 | <a href="#">Reserve your Webinar seat now</a>                        |
| Schedule Baselines                              | April 17, 2013 | <a href="#">Reserve your Webinar seat now</a>                        |
| Schedule Updates                                | April 24, 2013 | <a href="#">Reserve your Webinar seat now</a>                        |
| Project Reporting                               | May 1, 2013    | <a href="#">Reserve your Webinar seat now</a>                        |
| Impact Schedules                                | May 8, 2013    | <a href="#">Reserve your Webinar seat now</a>                        |
| MnDOT use of Calendars in Primavera P6          | May 15, 2013   | <a href="#">Reserve your Webinar seat now</a>                        |
| Roles and Resource Management                   | May 22, 2013   | <a href="#">Reserve your Webinar seat now</a>                        |
| Risk Management                                 | May 29, 2013   | <a href="#">Reserve your Webinar seat now</a>                        |
| Views and Layouts for Program Management        | June 5, 2013   | <a href="#">Reserve your Webinar seat now</a>                        |
| Dashboards and Reporting for Program Management | June 12, 2013  | <a href="#">Reserve your Webinar seat now</a>                        |

# Introduction to Webinar

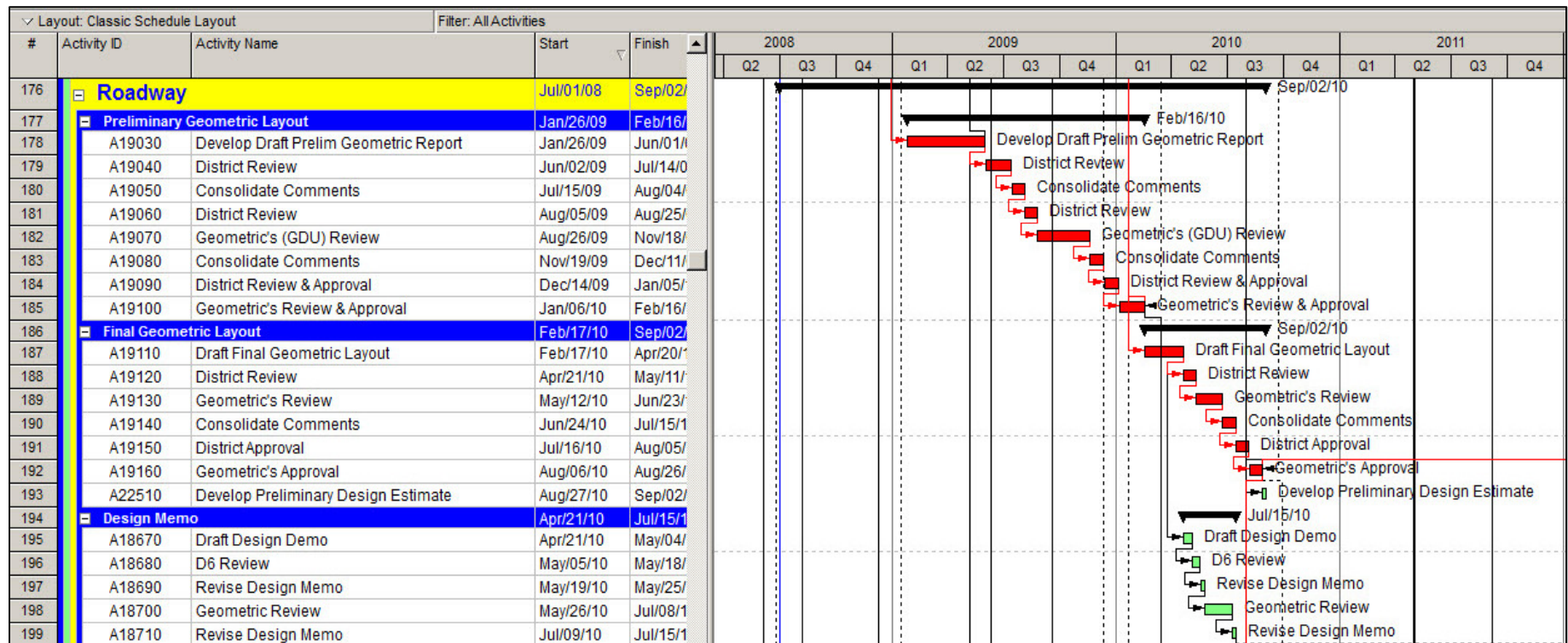
Understand the difference between MnDOT global calendars and project calendars and how they are assigned to activities.





# Calendars in P6

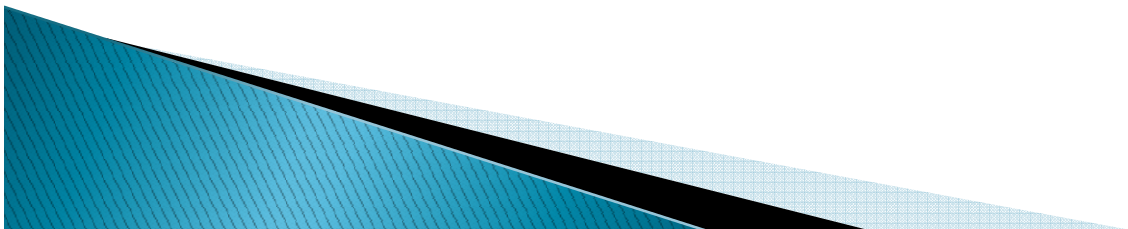
- ❖ Calendars are assigned to activities in each project.



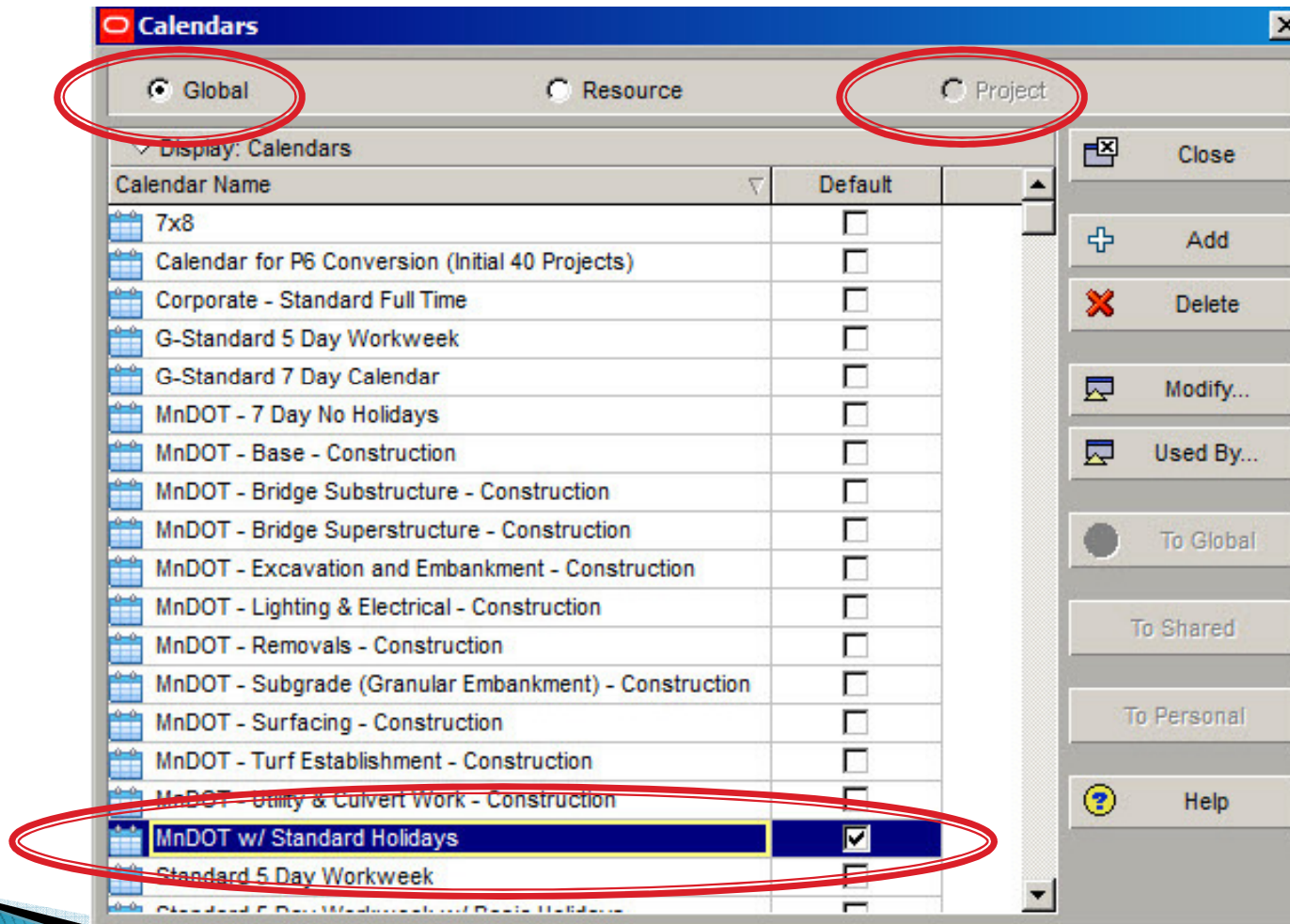


# Types of Calendars in P6

- ❖ MnDot Global Calendars – are assigned to activities and are setup in P6 and can not be edited by users.
- ❖ Project Calendars – Can be created at the Project level and is only assigned and used for that specific project.



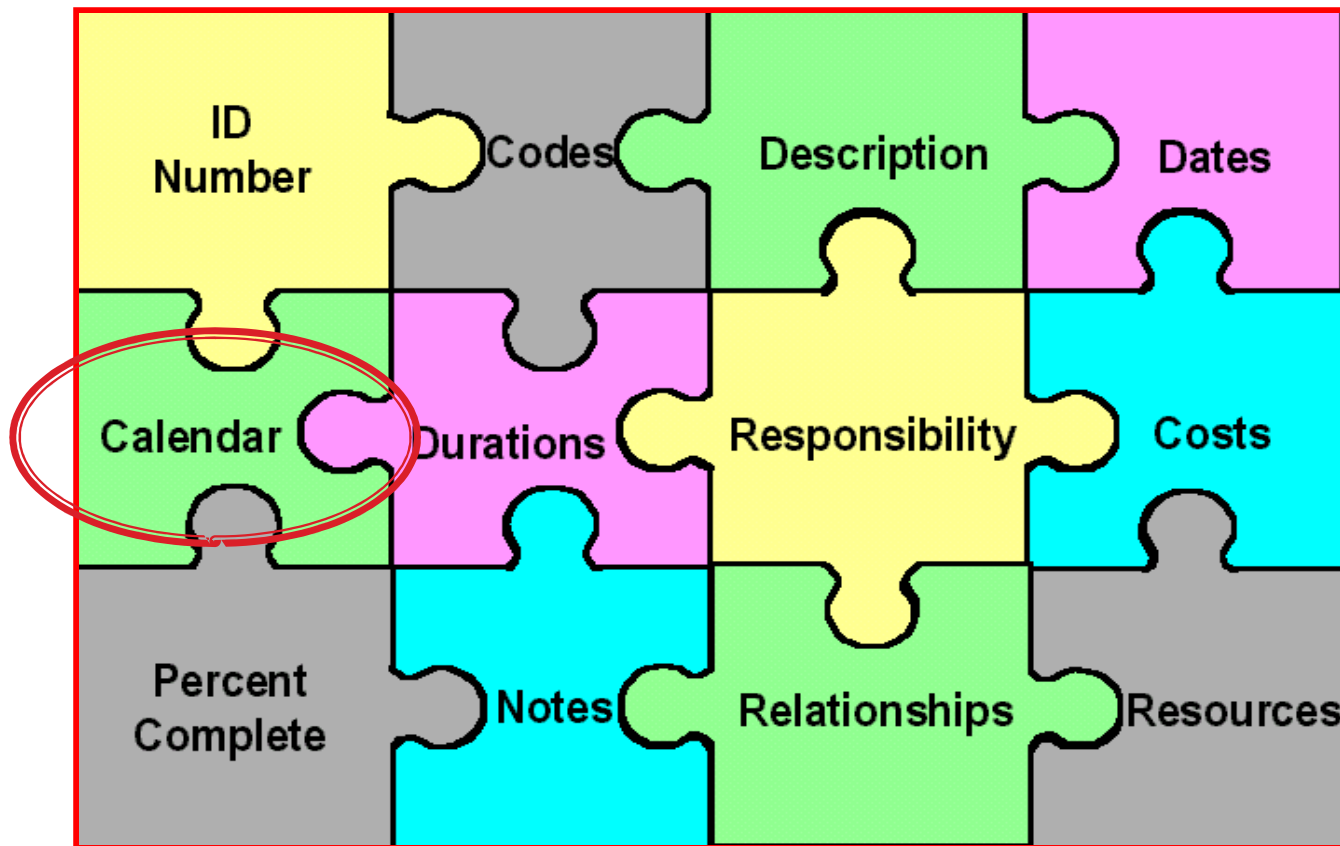
# Types of Calendars in P6





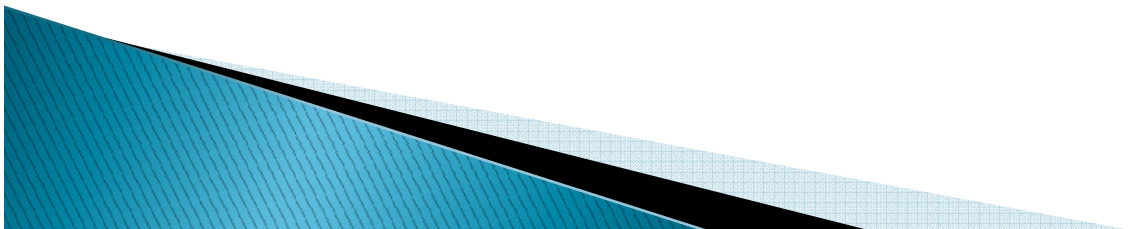
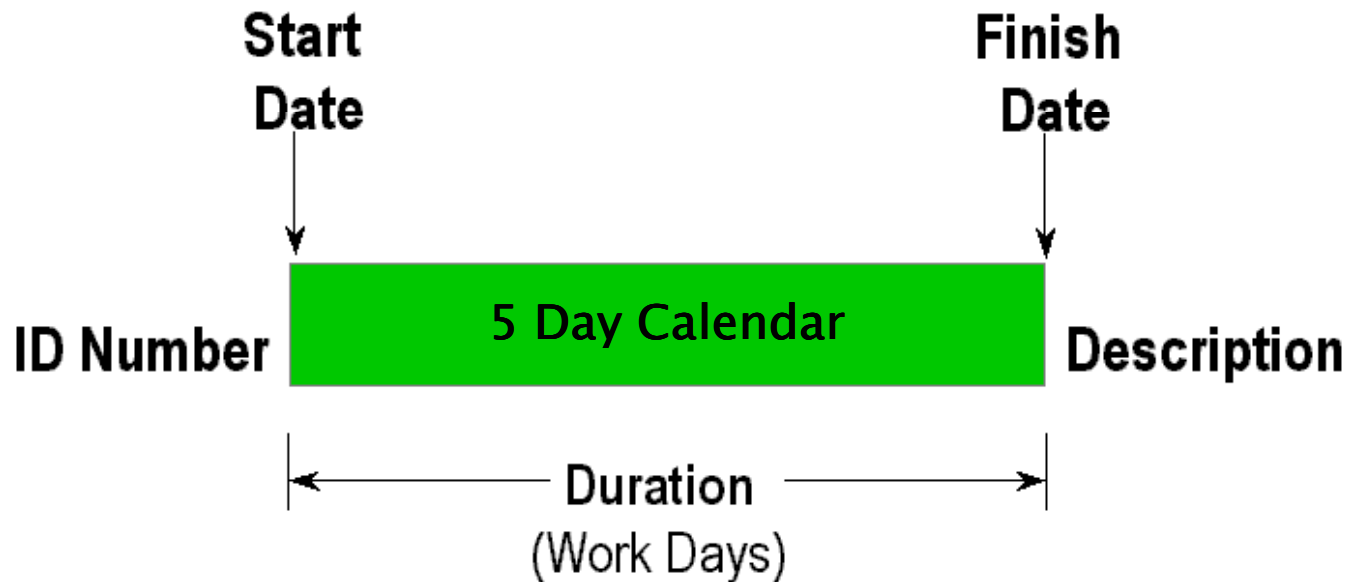
# Activity Components

## ❖ Minimum Requirements for an Activity



# Activity Components

- ❖ Activities have unique information
- ❖ Activities can be part of Filters & Layouts for Reporting



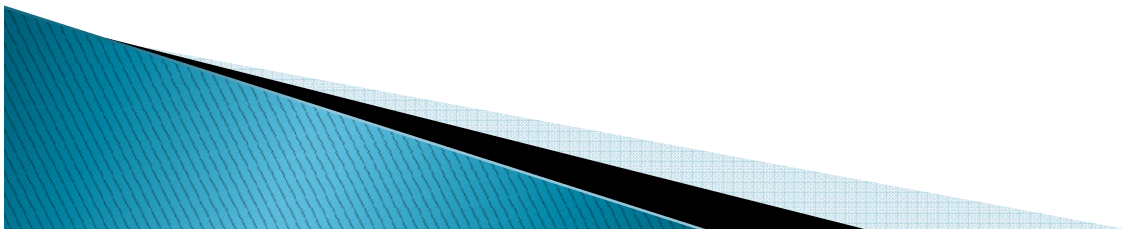
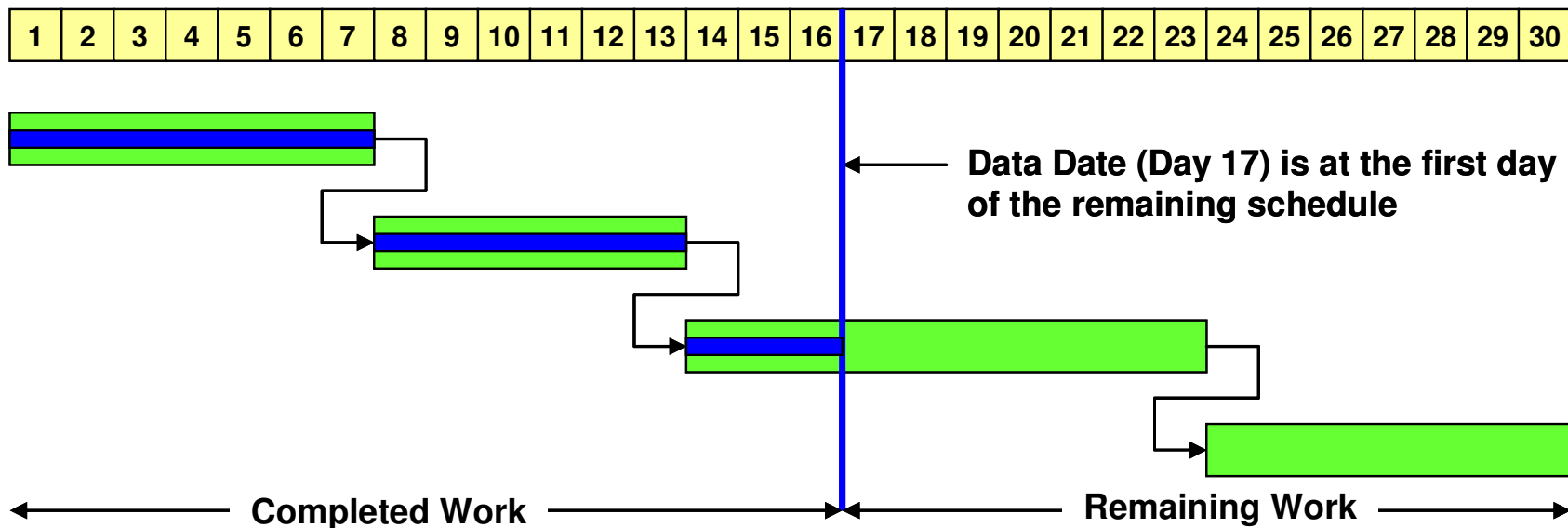
# Activities & Calendars

- ❖ Each Activity is assigned to a specific Calendar (Dates)

|       | M | T | W | T | F | S | S | M | T | W | T | F | S | S | M |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4-Day | 1 | 2 | 3 | 4 | X | X | X | 5 | 6 | 7 | 8 | X | X | X | 9 |
| 5-Day | 1 | 2 | 3 | 4 | 5 | X | X | 6 | 7 | 8 | 9 |   |   |   |   |
| 6-Day | 1 | 2 | 3 | 4 | 5 | 6 | X | 7 | 8 | 9 |   |   |   |   |   |
| 7-Day | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |   |   |   |   |   |   |

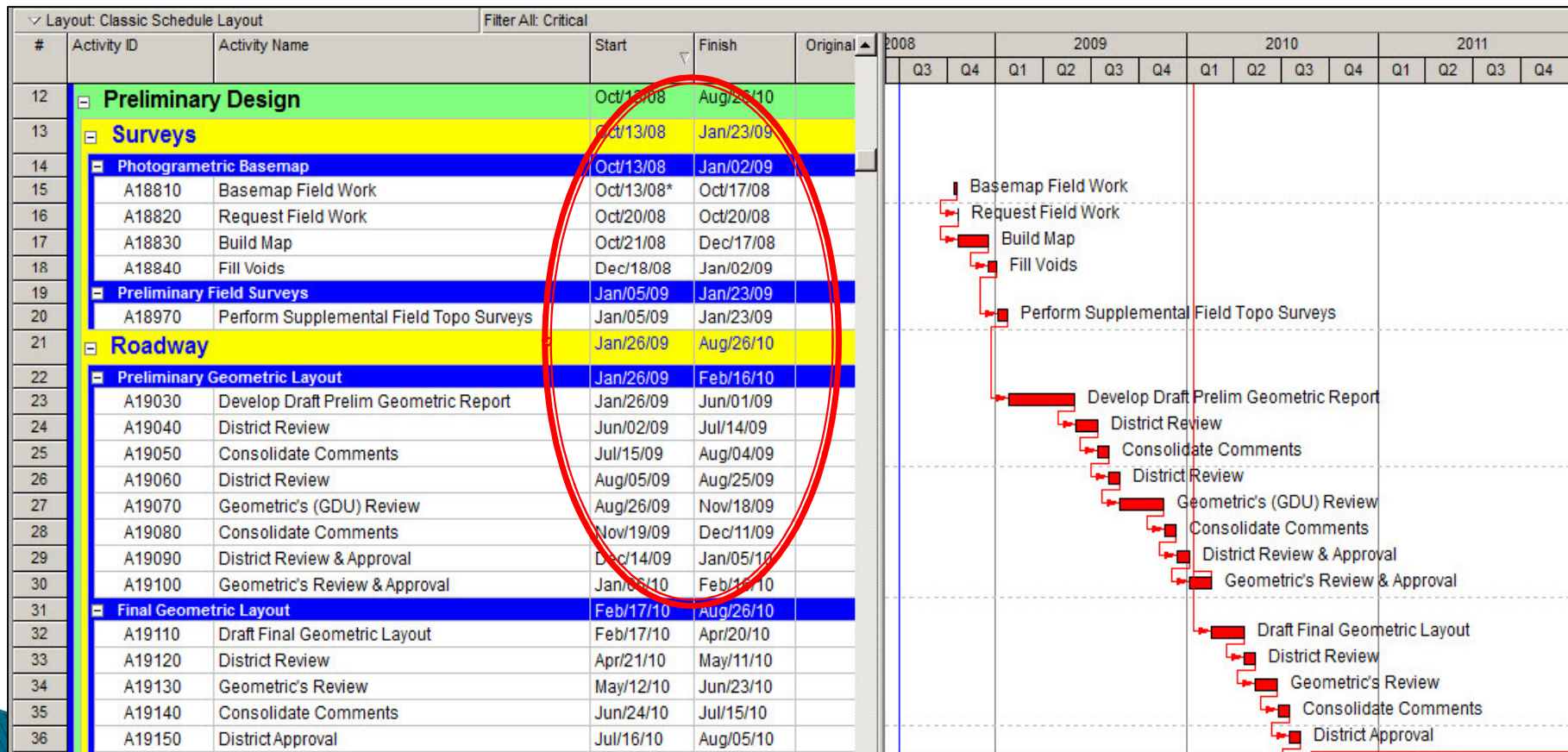
# Activities & Calendars

- ❖ Activities will follow the assigned Calendar.
- ❖ Only one calendar can be assigned to one activity



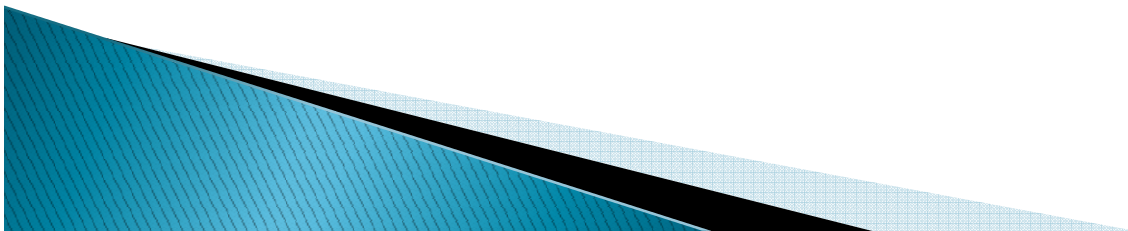
# Critical Path "Filter"

- ❖ Review the dates for activities, if the dates do not match the project management plan, first thing to look at is the calendars

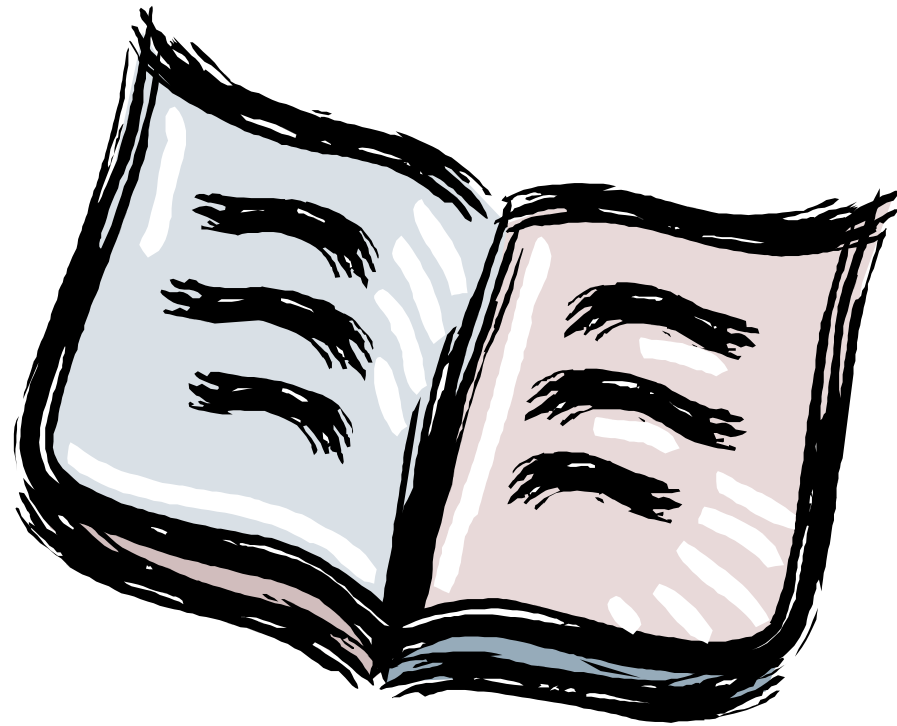




# Let's Look at Calendars in P6



# Glossary of CPM Terms



# Glossary of CPM Terms

**Activity** - An individual work task that is the basic component of a project.

**Activity Codes** - Values assigned to project activities to organize them into manageable groups for updating, analyzing, reporting, plotting, and summarizing.

**Actual Cost** - The cost incurred to date for a resource or activity.

**Actual Dates** - Start (AS) and Finish (AF) dates that you record for an activity that has progress or is complete.

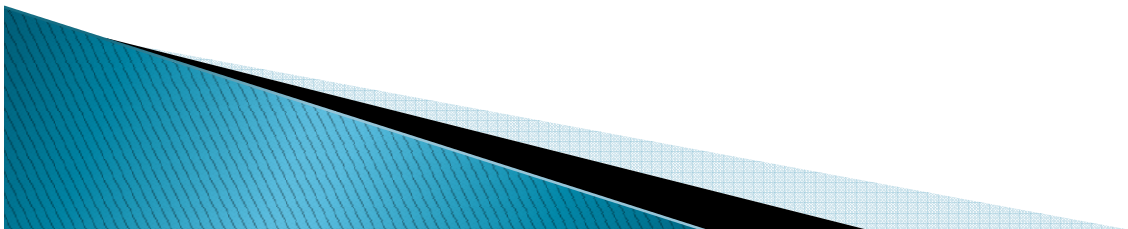
**Actual Quantity** - The amount of a resource used to date.

**Backward Pass** - The calculation of a network's late dates.

**Bar Chart** - The graphical display of activities according to time. Relationships between activities are not shown. A bar chart is also called a Gantt Chart.

**Baseline Schedule** - The original planned schedule for a project.

**Budget** - The estimate of the total units or costs required by a resource or cost account for an activity.



# Glossary of CPM Terms

**Calendar** - The workdays and holidays defined for a project that determine when an activity can be scheduled.

**Completion** - The date on which a project is to be finished.

**Constraint** - A restriction imposed on the start or finish of an activity.

**Critical Activity** - An activity that has the least amount of total float.

**Critical Path** - The series of activities in a project that will take the longest to complete.

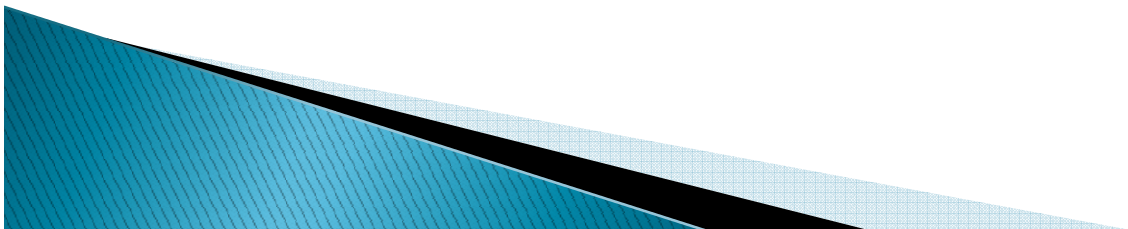
**Critical Path Method (CPM)** - The calculation of the earliest and latest start and finish dates of activities based on their duration and relationships to other activities.

**Data Date** - The date used as the starting point for schedule calculations.

**Driving** - A predecessor/successor relationship in which the predecessor

**Relationship** - Determines the successor's early dates.

**Duration** - The amount of time (in workdays) needed to complete an activity.



# Glossary of CPM Terms

**Early Start (ES)** - The earliest date when an activity can begin after its predecessors have been completed.

**Earned Value** - The value of work performed rather than actual work performed.

**Exception** - A day when work must occur that was originally designated as a nonworkday.

**Finish to Finish** - A type of relationship in which a successor activity finish depends on its **(FF)** predecessor activity's finish.

**Finish-to Start** - A type of relationship in which a successor activity can begin only when its **(FS)** predecessor activity finishes.

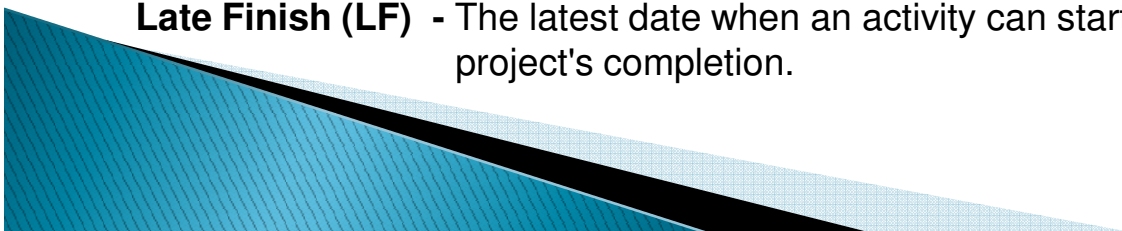
**Float** - The amount of time that the start or finish of an activity can be delayed without affecting the project finish date.

**Forward Pass** - The calculation of the network's early dates.

**Free Float** - The amount of time that an activity's early start can be delayed without delaying the early start of a successor activity.

**Lag** - An offset or delay from an activity to its successor.

**Late Finish (LF)** - The latest date when an activity can start without delaying the project's completion.



# Glossary of CPM Terms

**Late Start (LS)** - The latest date when an activity can start without delaying the project's completion.

**Loop** - Circular logic within a network.

**Milestone** - An activity that represents a significant point in time, that has no duration.

**Negative Float** - The total number of days that the start or finish of an activity exceeds the time allowed. Negative float indicates a delay in the schedule.

**Negative Lag** - An offset or lead time from an activity to its successor in which the successor's start date is earlier than the predecessor's start date.

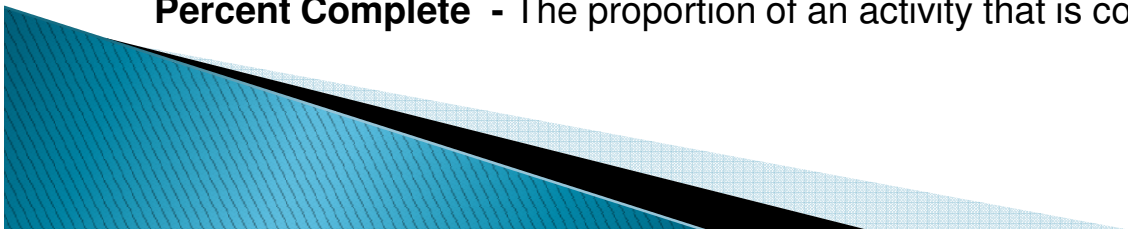
**Network** - The series of activities required to complete a project.

**Nonworkperiod** - A period of time when work may not occur.

**Open End** - An activity that has no successor or predecessor relationships to other activities in the network.

**Out-of-Sequence Progress** - Work completed for an activity before it is logically scheduled to occur.

**Percent Complete** - The proportion of an activity that is complete.



# Glossary of CPM Terms

**Performance Measurement** - The comparison of the current plan to a target plan to assess whether it is progressing as intended.

**Planning Unit** - The increment of time used to schedule a project. The planning unit can be in hours, days, weeks, or months.

**Predecessor** - An activity that must logically occur before another activity.

**Progress** - The completion of work.

**Resources** - The people, materials, equipment or services required to complete a project.

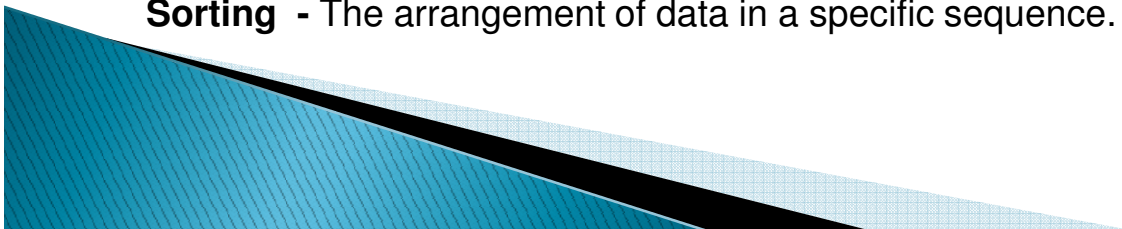
**Schedule** - A list of the activities needed to complete a project, along with their start and finish dates.

**Schedule Calculation** - The calculation of early and late dates for each activity in the project.

**Slack** - See Float.

**Slippage** - Lateness determined by measuring the target finish of an activity from its actual or current early finish.

**Sorting** - The arrangement of data in a specific sequence.



# Glossary of CPM Terms

**Start-to Start** - A type of relationship in which a successor's start depends on the start of **(SS)** its predecessor.

**Status** - The process of updating a project by indicating progress at regular intervals.

**Successor** - An activity that must logically occur after another activity.

**Target** - A project plan that can be compared to the current schedule to measure progress.

**Task** - A unit of work. Also called an activity.

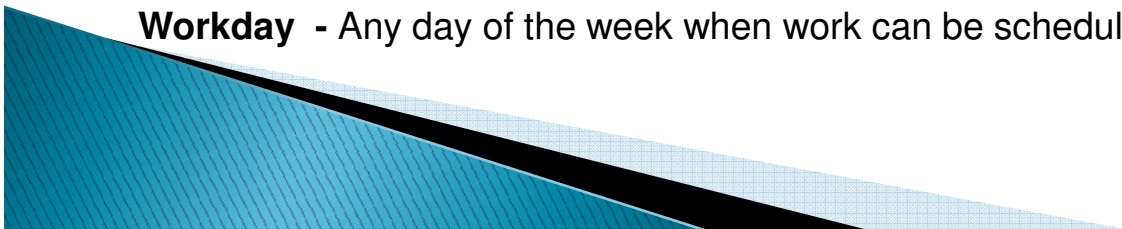
**Total Float (TF)** - The total number of days that the start or finish of an activity can be delayed without affecting the project finish date. Float can be negative, zero, or positive.

**Updating** - The process of recording progress in a project at regular intervals.

**Variance** - The difference between the current and target schedule dates.

**Work Breakdown Structure (WBS)** - The graphical depiction of the hierarchy of work needed to complete a project.

**Workday** - Any day of the week when work can be scheduled.





# MnDOT Goals Going Forward

## Projects in Construction Phase

- ❖ Contractor's Build Their Schedule in our Network 1/1/13
- ❖ Piloting Providing BIM Models and CTD Schedules to Contractors 3/1/13
- ❖ Select "Unit Rate" project– Resource and Cost Loaded 3/1/13
- ❖ Role and Resource Loaded of CE&I staff 6/1/14

# MnDOT Goals Going Forward

## Projects in Scoping and Design Phase

- ❖ “Active Projects” Role and Resource Loaded 6/30/13
- ❖ All planned projects Role loaded by June 30, 2014
- ❖ Taxpayer Transportation Accountability Act



# Questions or Comments

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**Peter Harff**

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MnDOT Project Management Office

507-514-1095

<http://www.dot.state.mn.us/pm>

**Next Webinar: Wednesday, April 03, 2013**

**Time: 1:00 p.m.**

**Topic: WBS – Work Breakdown Structure**

**Presenter: Jonathan McNatty**

**DRMcNatty & Associates, Inc.**

