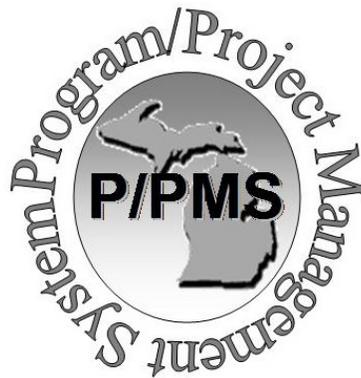


# **Basic Training For Project Managers and Scheduling Specialists**



April 27, 2009

Prepared by:  
Michigan Dept. of Transportation  
Design Division



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# Introduction

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## **After reading this section, you will learn:**

- Overall Objectives of this Course
- About the Manual
- How to Contact the P/PMS Staff
- Overview of Job Scheduling
- How to Install P/PMS on Your Machine.

## **Course Objective**

The objective of this course is to give Project Managers and Scheduling Specialists the knowledge to be productive and effective in managing the planning, design and Right of Way activities of the Department's highway program, by becoming proficient users of the P/PMS tool, which includes the following skills: Network Creation, Network Refinements and utilizing various reports to retrieve information on jobs and programs.

## **After completing this course, you will know how to:**

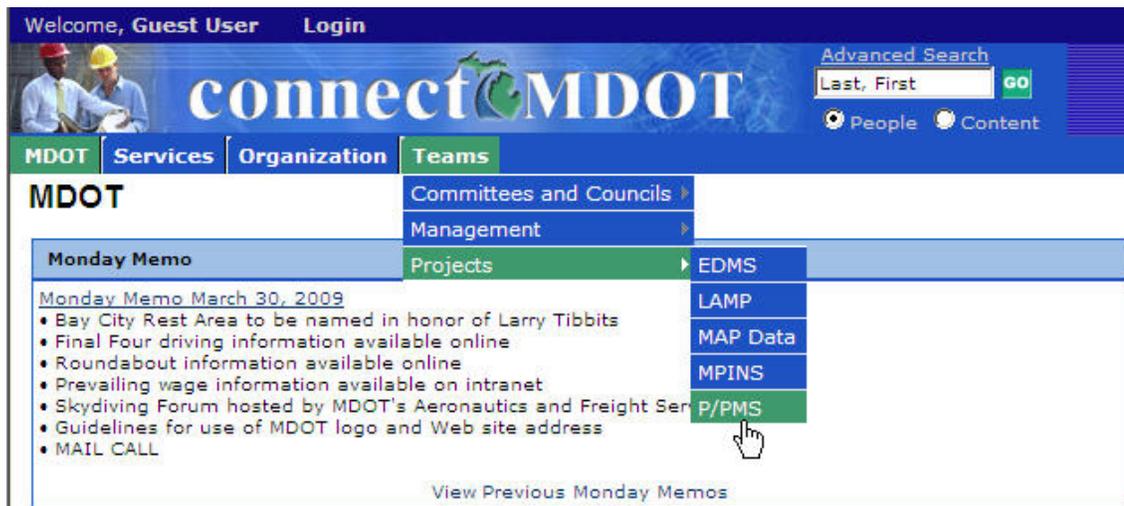
- Install P/PMS on Your Machine
- Log Into P/PMS
- View and Understand the Job Status report
- Understand the various Job Status types in P/PMS
- Initiate a new job
- Generate a new Job Network
- Enter and Modify a Jobs Characteristics
- Understand and Create a Network Logic Summary
- Understand the various dates in P/PMS reports/schedules
- Understand what the Critical Path is
- Refine a network, including:
  - Deleting and Adding Tasks
  - Adjusting Task Durations
  - Adding Actuals
  - Constraints and how they affect the Network
  - Adjusting Plan Completion and Letting Dates
- Network Analysis Techniques
- Know when your network is ready to be submitted
- Submitting Your Network
- Copy a job
- Change Resources
- Add Project Remarks and Comments
- Understand the use of various reports available and how to access them including:
  - Job reports
  - Task reports
  - Milestone reports
  - Resource Reports
  - Web Reporting Options
- Techniques for Network management
- How to Create a Version

## About the Manual

We have designed this manual to be used in an instructor-led classroom environment. The additional comments and notes included in each section are designed to act as a future reference for you and will be reviewed in class by the instructor. This is designed to free you from note taking and allow you to focus on the hands-on portion of this class.



Throughout the document, reference will be made to other familiar P/PMS manuals. Many P/PMS manuals exist to cover system functions, menu structures, task standards, job characteristics and much more. The intent of this manual is to provide answers to most questions in a concise, easy to find way. In many cases, one of the other manuals will provide detail that will not be reproduced here. Current manuals can be found on the P/PMS Help Page through ConnectMDot under Teams, Projects, PPMS.

A screenshot of the ConnectMDOT website. The top navigation bar includes 'Welcome, Guest User', 'Login', and an 'Advanced Search' box with 'Last, First' and a 'GO' button. Below the navigation bar are tabs for 'MDOT', 'Services', 'Organization', and 'Teams'. The 'Teams' tab is selected, and a dropdown menu is open showing 'Committees and Councils', 'Management', and 'Projects'. The 'Projects' dropdown is further expanded to show 'EDMS', 'LAMP', 'MAP Data', 'MPINS', and 'P/PMS', with a mouse cursor pointing at 'P/PMS'. On the left side, under the 'MDOT' tab, there is a 'Monday Memo' section with a list of news items dated March 30, 2009, and a 'View Previous Monday Memos' link at the bottom.

## Manual Components

The manual uses the following components:

- Table of Contents
  - The outline of the entire training course
- Introduction
  - Contains information about the manual, course objective, contact information and background information on Job Scheduling.
- Training Modules
  - Each module has training objective, hand-on detailed steps on how to achieve each objective, and any additional relevant information to that objective.
  - Hand-on activities are presented using two columns: “Here’s How”, which give the step by step instructions on how to accomplish the desired result, and “Explanation”, which provides explanations or additional references.
  - Activities which require your involvement are also marked with our “Try it! Smiley” for quick identification.
- Appendices
  - Contains concepts and explanations that are not explained in detail in the modules. These do not include any hand-on activities.
- Glossary
  - Used to explain or define terminology used throughout this manual.



## P/PMS Support Team Personnel

These are the current P/PMS Team members. We are currently located on the 2nd floor, west end of the Van Wagoner building.

Please feel free to contact any of us by phone or e-mail with questions or comments concerning P/PMS!

Dennis Kelley	(517) 373-4614	User Support, Training, Tasks & Data Standards, Availability, Documentation
Lenny Robinson	(517) 335-3291	User Support, Reports, Analysis
Scott Habetler	(517) 335-3278	User Support, Code, Reports, System Interfacing
Melissa Tucker	(517) 335-7298	User Support, Training, Documentation, Availabilities
Tonya Nobach	(517) 335-1927	User Support, Training, Availabilities

### P/PMS Help Page:

There is a web site with downloadable manuals, contact names and numbers, frequently asked questions with answers, and web based report options. You can access the web site through ConnectMDOT

From connectMDOT (use the pull-down menu) go to:

- Teams
  - Projects
  - P/PMS

## Overview of Job Scheduling

The Program/Project Management System (P/PMS) was designed and built to assist the Department in planning and scheduling the pre construction design process for trunk line road and bridge projects.

Once a project is selected from the Job/Project Area of P/PMS, the project manager enters the characteristics describing the project into the system.

- The system creates a scheduling network using those characteristics, and using the standards provided by the Department's operational and supporting units, to determine which tasks will be included in the network and what the durations should be.
- At the same time, the resources, or the people required to perform the task are identified and added to the schedule.

Following this generation process, project managers may need to further refine the schedule since all projects are unique in some way.

When schedules have been created and refined, they can be pulled together to summarize, analyze, and report on jobs, tasks, resources, and costs throughout the Department.

- Project schedules are brought together in the system's Program Area where system and program managers can assess the impacts of progress, changing schedules and organizational changes.

Some information from the project schedules is automatically rolled together and presented in the Executive Information System where users can quickly review and evaluate what's going on with all projects. (*Please refer to the EIS Users Guide for more details on that application.*)

## Installation Instructions for “Go-Global for UNIX”

“Go-Global for Unix” is the new P/PMS interface software. This software is web browser based and it prevents the need for a computer support person to visit/install P/PMS on each machine that requires P/PMS access.

P/PMS is client-server software, meaning very little is actually installed and done on your computer. Everything is performed quickly and efficiently on the central server.

Before installation, users need to get a **username, password, and access** to the software’s database. Contact any P/PMS Team member for this **HERE**. They will notify you once this is done (should be within 24 hrs or less).

*Please Note:* P/PMS is best viewed at a screen resolution of 1024 x 768 or higher. Smaller resolutions may require use of a function key or quick key combination to accomplish certain functions. These combinations can be provided for you if necessary. Otherwise, change resolutions at this time before continuing.

1. Open Internet Explorer on your desktop.
2. Enter the web site <http://webxsvr1/docs/bridges.html> in the Browser’s Address field and click Enter.

[ Note: This site cannot be accessed from a remote location (i.e. home) without accessing the MDOT network. ]

The very first time that the above site is visited, Steps 3 and 4 will occur. Subsequent sessions should proceed from here to Step 5.

3. You should be prompted to grant permission via a Security Warning -- see Figure 1. Click on the Yes button, but only provided that the request specifies GraphOn Corporation or a familiar source.



Figure 1

4. By default, Bridges will open a server selection window. See Figure 2 below.

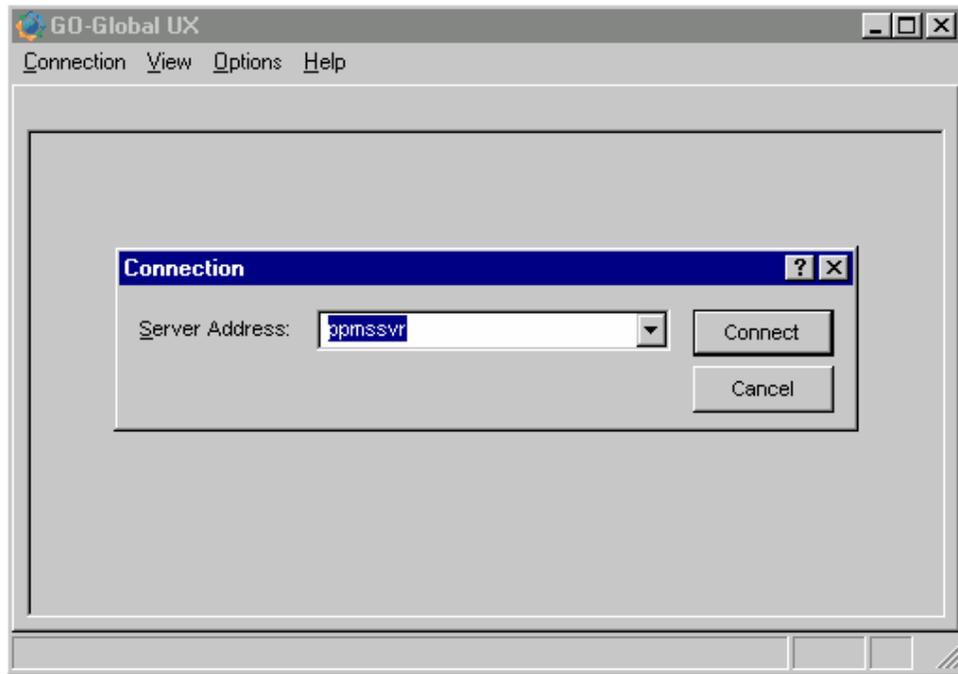


Figure 2

4. Input ppmssvr in the Server Address field and click **Connect**. Connect will not be available until after a server has been specified in the field.
5. After you click connect the following screen will appear Figure 3. This is the screen for you to input your username and password.

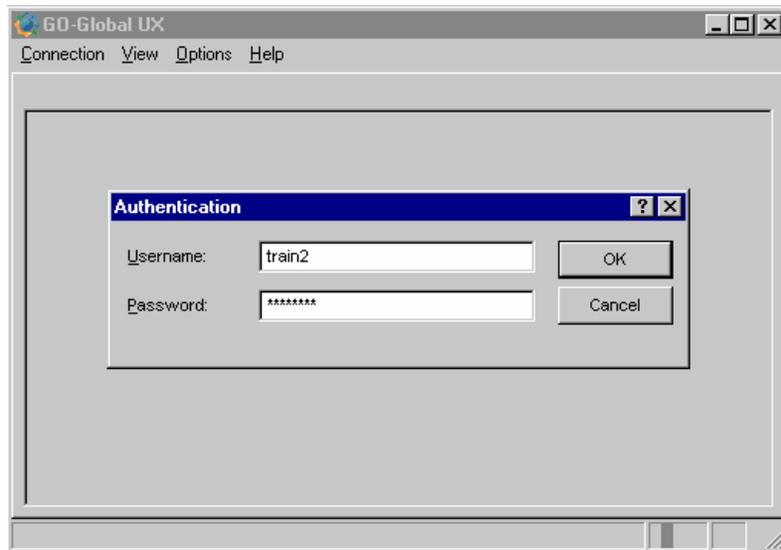


Figure 3

Your *username* is up to 8 characters – it's the first seven letters of your last name and your first initial. Examples: Dennis Kelley would have a username of kelleyd. Lenny Robinson would have a username of robinsol.

Your default *password* takes the form of 1<lastname>. Example: Dennis Kelley would have a default password of 1kelley. Lenny Robinson would have a default password of 1robinson.

Your Username and Server Address will automatically be saved. You may bookmark this location for future reference. You will see how to save your password later in this document.

6. After you correctly enter your login and password the following screen will appear Figure 4.

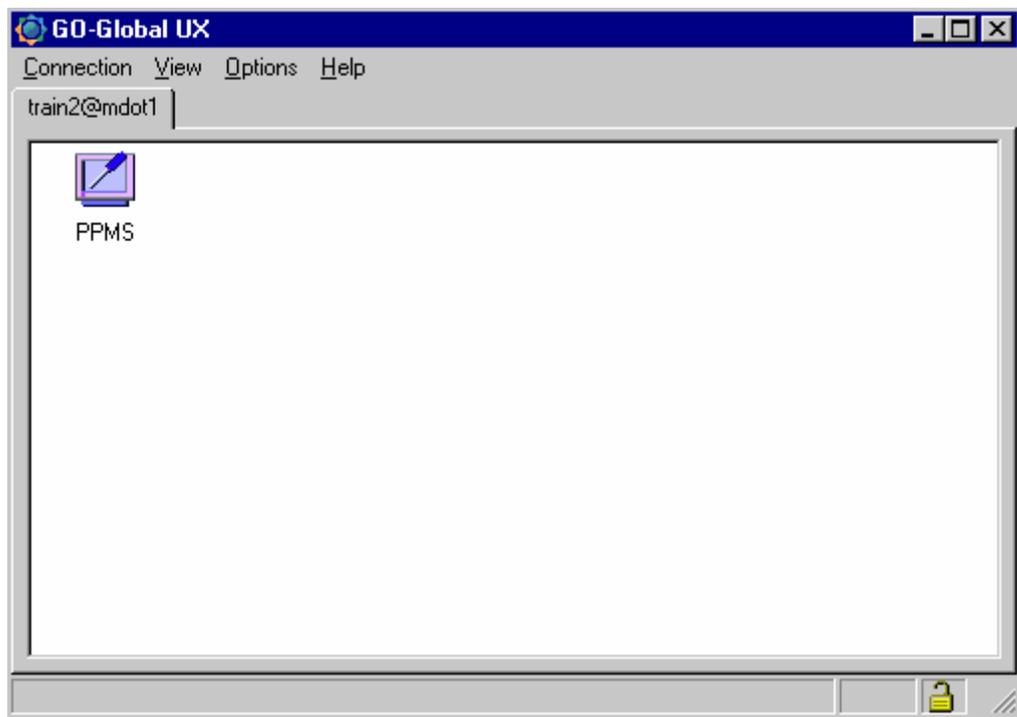


Figure 4

7. Select Options, Preferences and the preferences screen will appear. See Figure 5.

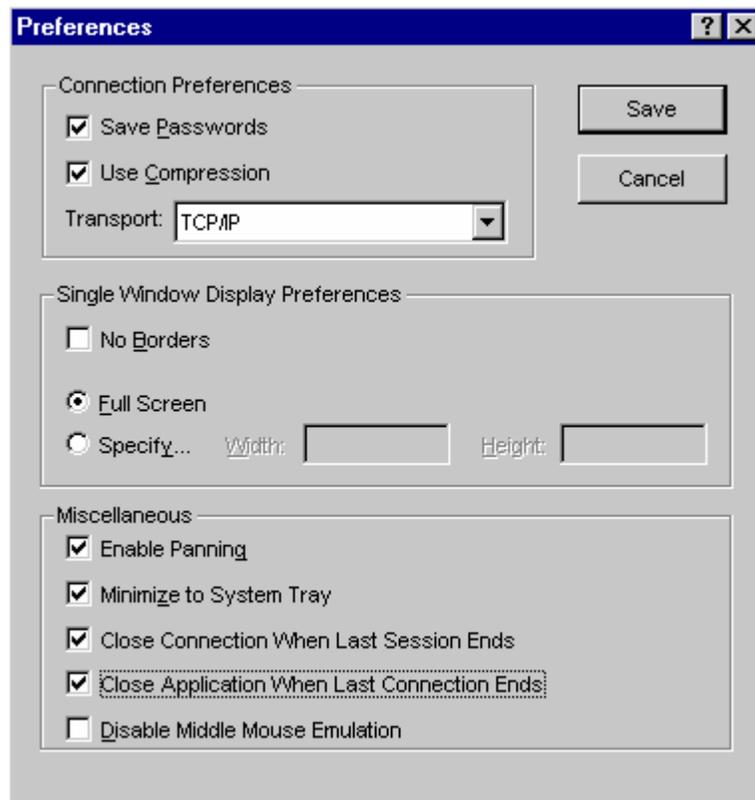


Figure 5

8. Make sure that Save Passwords is checked in Connection Preferences.
9. Under Miscellaneous ensure that all of the following have check marks.
  - a. Enable Panning
  - b. Minimize to System Tray
  - c. Close Connection When Last Session Ends
  - d. Close Application When Last Connection Ends
10. Click Save.
11. Figure 4 then shows on the screen again.
12. Click and drag the P/PMS icon to your desktop.
13. Exit the Connection in Figure 4.
14. You may now access P/PMS by double clicking the new icon. Your login information is saved in your Internet cache. Clearing your cache, a system failure, or getting a new computer may remove this information and you will need to re-install.

*NOTE: If you have to reinstall, and forget or lose your password, you will have to contact a P/PMS Team Member to get it reset to the default.*

15. If you have any trouble please contact Lenny Robinson at 517-335-3291 or Dennis Kelley at 517-373-4614.



# Module 1: Getting Started

---

**After reading this section, you will learn:**

- How to Log Into P/PMS
- How to Create and Understand the Job Status Report
- Definitions of the Various Job Status Types
- How to Install P/PMS on Your Machine

# 1.1 How to Log Into P/PMS



Here's How	Explanation	
1. Double-click the P/PMS icon on your desktop.	If... A login screen appears	Then... Type in your login name, ENTER, and your password, and proceed to the next step.
	The Main Menu appears	Proceed to the next step.
2. Click the P/PMS button on the Main Menu window		

Figure 6- Log in Window

## 1.2 Understanding the Job Status Report

---

If you have jobs assigned to you as a Project Manager, a Job Status Report will appear immediately after you log into P/PMS.

- If you do not have jobs assigned to you, this report will not launch and you will immediately see the open job/version menu options. To view a job status report, you can run it from the P/PMS menu under:  
**Reports, Job, Job Status**



Figure 7-Reports Menu

You will be prompted to choose the Project Manager whose report you wish to view.



Figure 8- Project Manager Selection

## What is a Job Status Report?

Job status reports include the Job Status type (see Table-Job Status Types) control section, job #, route, location description, approved date, scheduled date and float. This report gives an overview of all jobs assigned to a Project Manager, typically ordered by float, that is, the jobs furthest behind will be at the top of the list for each category. This will give you some idea of where you need to direct your attention.

Project Manager	Road Leader	Bridge Leader	Control Section	Job Number	Ver	Route	Location Description	Approved Date	Scheduled Date	Float (App-Sch)	Comment Entered
<b>NEW JOBS (Data loaded from MWP. Network creation not started)</b>											
sweeney			63043	106133	1	M-59	at Dequindre Road and M-	11-02-2009			NO
sweeney	sweeney		82400	105221	1	Detroit Ea	From GM Plaza to Gabriel	04-03-2009			NO
<b>UNREFINED JOBS (Network needs Project Manager review and submittal)</b>											
sweeney			82062	102335	1	US-12	at Wyoming	06-05-2008	04-26-2011	-716	YES
sweeney	sweeney	barryt	63043	56850	1	M-59	From Crooks Road to Ryan	03-05-2009	10-12-2010	-463	NO
scallisp	sweeney		77111	52729	1	I-94/Blue	Blue Water Bridge Plaza	07-01-2010	03-09-2009	330	YES
<b>PROGRAMMED JOBS (Network approved and included in the P/PMS Program)</b>											
sweeney	sweeney		82022	81328	1	I-94	Five ramps at I-275	08-05-2009	08-21-2009	-12	NO
sweeney	sweeney		50062	85543	1	I-696	at I-94	04-01-2010	04-09-2010	-6	NO
sweeney	sweeney		82023	87112	1	M-85	Miller to west of Spring	04-01-2010	02-12-2010	33	NO
sweeney	sweeney		82023	87146	1	M-85	West of Springwells to C	04-01-2010	02-12-2010	33	NO
mathies	sweeney		63053	80318	1	US-24	Dixie Hwy @ Telegraph R	06-01-2009	03-31-2009	43	YES
sweeney	sweeney		82073	80011	1	M-85	I-75/Schafer to Oakwood	04-05-2013	10-14-2009	860	YES
sweeney	sweeney	guarrazz	63043	30154	1	M-59	Rt Adams Road	03-09-2015	12-02-2009	1302	NO

Sorted By: Net Status, Float, Control Section, Job Number

Note: - "\*" after the Scheduled Date indicates an Actual has been entered.  
 - Float is displayed in work days. (Negative Float = behind schedule, Positive Float = ahead of schedule)

Figure 9-Sample Job Status Report

As a Project Manager, after exit you will end up at the Job/Project Area of P/PMS

- User should make sure that they do in fact own the jobs that are displayed on the report. If not, ownership can be corrected in MPINS.
- Once it is changed in MPINS, P/PMS will reassign the jobs automatically.
- After viewing, you may print it out or exit the report.

It is important to understand that Job status reports help you keep up to date on whether your jobs are on time. They provide the basis for schedule alteration or improvements.

## Job Status Types

Category	Description
New Job	A job that has been created in the MAP database (through MPINS), which is defined as requiring a P/PMS network. P/PMS looks for and loads new jobs from MAP nightly.
Ungenerated Job	A job that has been opened in P/PMS. The job may have some characteristics entered, but does not yet have a network generated.
Generic Job	The day after all P/PMS characteristics are entered into the MPINS Concept Area, a generic network is automatically created in P/PMS. A Generic Job has characteristics and a network, but is missing the Management Units.
Unrefined Job	A job that has characteristics, management units, and a network, but needs the user to make any task and resource changes necessary.
Refined Job	A job network waiting to be included in the P/PMS Statewide Program. The network must have satisfactory dates and/or coincide with an approved 2604 before it can be "programmed" in P/PMS.
Programmed Job	A job network that has been approved and added to the P/PMS Statewide Program. These jobs require updating and monitoring for progress.



# Module 2: Network Creation

---

**After reading this section, you will learn:**

- How to Initiate a New Job
  - Understand the Job Details Screen
  - Identify and Modify Job Characteristics
  - Copy Existing Networks
- How to Generate a Network
- How to Create and Utilize the Network Logic Summary
- How to Define the Various Dates in P/PMS

# 2.1 How to Initiate a New Job

*Note: If you are not the Project Manager for the new job you are initiating, or a scheduling specialist able to be assigned to that new job, you will not be able to work with that job after it is initiated.*

*You may find the job number you wish to initiate on the Job Status Report.*

## Here's How

## Explanation



1. Select **File**, **New**, **Job** from the P/PMS Job/Project Area menu

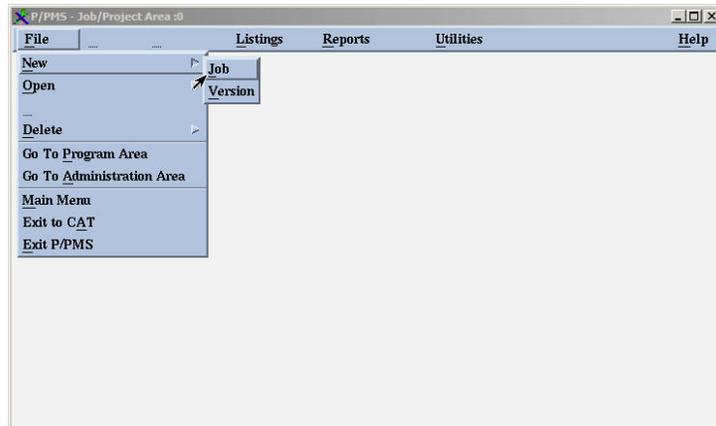


Figure 10- File, New, Job

Upon making the selections, a list of new jobs from MAP will appear in a pop-up menu, ordered by control section. These jobs do not have an existing network in P/PMS.

2. Click on the desired **Job**, or type it in the selection box

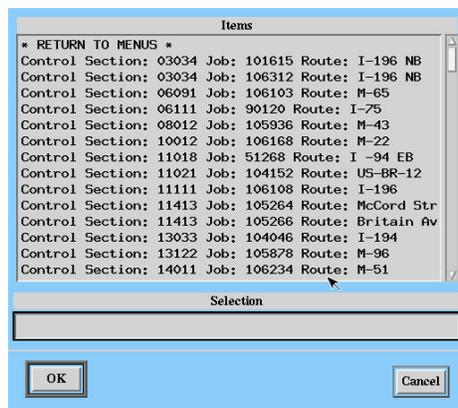


Figure 11- New Job Selection list

## Here's How

## Explanation

### 3. Review the Job Details screen

You will see a Job Details screen for the job you choose. Much of these details are brought in from MAP.

**NOTE: Items in black are not changeable.**

MICHIGAN DEPARTMENT OF TRANSPORTATION - P/PMS	
Job Details	
Control Section .....	20014
Job Number .....	88877
Version .....	1
Route .....	US-31
Location Description ....	Franklin Street north to
Target Start .....	07-JAN-2009
Target Plan Completion ..	09-06-2013
Target Letting .....	03-07-2014
Target Finish .....	04-21-2014
Target Float .....	(in work days)
Project Manager .....	vannorwc
Scheduling Specialist ...	
Construction Cost .....	\$6,500,000.00
Funding Template .....	011 - CAPACITY IMPROVEMENT
Consultant Name .....	
Remarks .....	practice exercise
Job Status .....	Approved

RECORDSET: proj\_dir Find: 1 of 1 Rec: 3373

Figure 12-Sample Job Details Screen

### 4. Enter any details of the job that are missing that you would like to see in this screen

- The Target Start - the day you started working on a job/project, or expect to begin.
- Target Float allows you to build in a certain amount of slack time to your job.
- The Project Manager of the job is read into P/PMS as it is assigned in MAP. The Project Manager may also assign a Scheduling Specialist to have read/write access to the network.

The remarks field is for any comments the PM or scheduling specialist provides.

## Here's How

## Explanation

5. Click **Update** at the bottom of the data entry screen.



Figure 13- Data entry buttons

This will save any changes you made to the Job Details Screen.

6. Click **exit** at the bottom of the data entry screen.

**Note:** If you made any changes, and did *not* hit the Update button before you try to exit, the system will prompt you to save your changes or continue without saving.

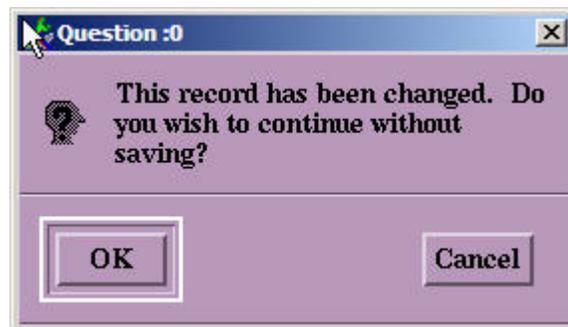


Figure 14- Save Changes Prompt

## 2.2 How to Create a Network

Once you initiate your new job, and close the Job Details Screen, you will be presented with the Existing Jobs screen:

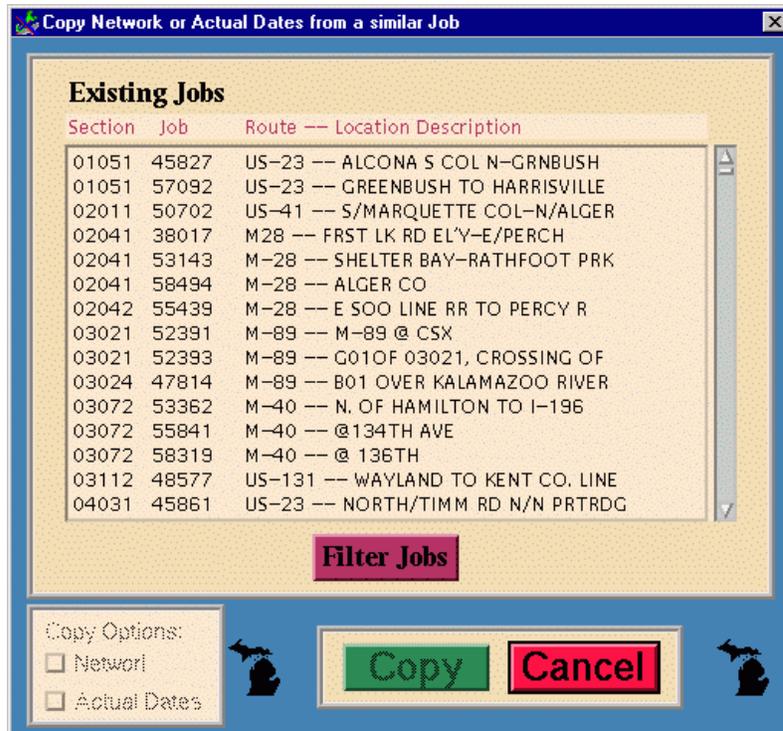


Figure 15-Copy Network Dialog Box

You have two choices:

If...	Then...
A. You decide to copy one or more items from an existing network...	Go to: Module 2.2.1-Copying an Existing Network
B. You decide to create the network by entering the job characteristics...	Click 'Cancel' and Go to: Module 2.2.2- Creating a Network from P/PMS Characteristics

## 2.2.1 Copy an Existing Network

Note: We recommend using this option to save some work time and effort.



### Here's How

1. Select a job to copy

### Explanation



Figure 16- Copy Network Dialog Box

You should select a job which is similar to the one you are creating. The “Copy Network” dialog box allows you to do this, and even allow you to filter what jobs show up on your copy list.

Click on the “Filter Jobs” button and you will see your filter options selection screen:

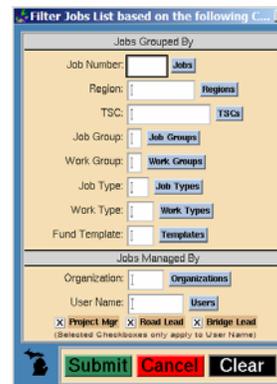


Figure 17- Filter Options Selection screen

Once you have your list, select/highlight the job identifying what job you wish to copy, and select the Copy button.

## Here's How

## Explanation

2. Check the Items you wish to copy

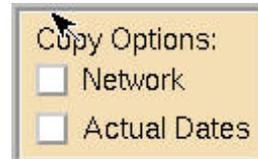


Figure 18- Copy Options Box

You can choose which items to copy from your selected job by clicking on the buttons next to each:

- Copy Network and/or
- Actual Dates

3. Click the **Copy** button.

You will see some feedback from the system as it copies the information required.

4. Review and Refine Network

The copied network needs to be reviewed and refined, if needed. *(This process is discussed in Module 3: Network Refinement.)*

## 2.2.2 Creating a Network from P/PMS Characteristics

---

After you initiate your new job and are presented with the Existing Jobs Screen, you would choose “Cancel” to copy a job.

You will end up in the Job/Project Area, with your job open and basic details at the bottom of the screen.

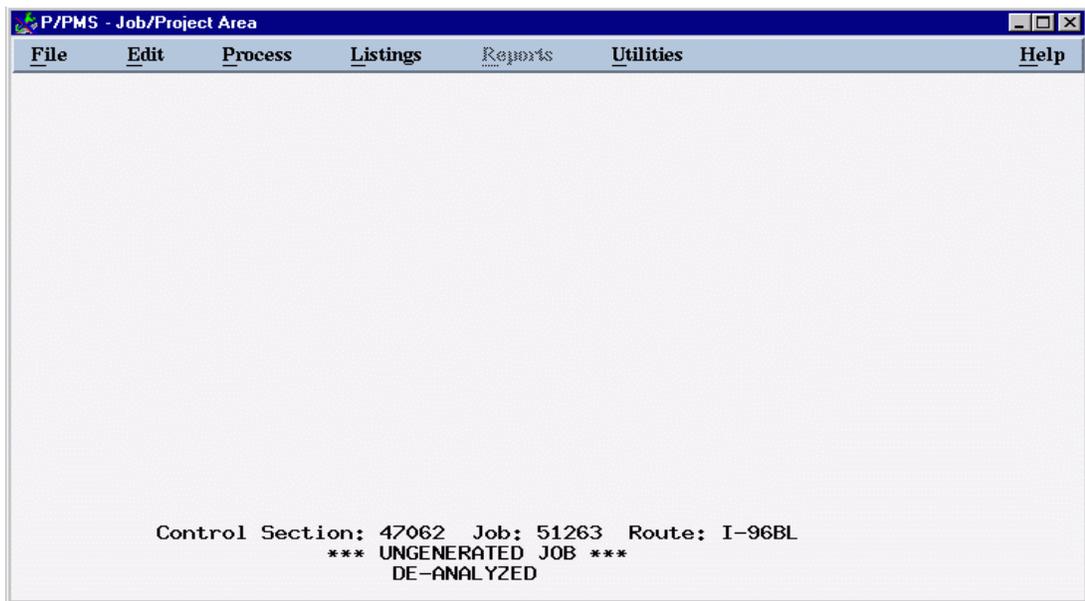


Figure 19- Open Job

- The Control Section, job, and route will show on this screen when the job is open
- The status of the job is on the second line, and will currently be “Ungenerated”
- The last line shows as “de-analyzed” because there are no network changes (because there is no network to analyze yet!)



## Here's How

1. Select **E**dit, **C**haracteristics from the Job/Project Area menu.

## Explanation

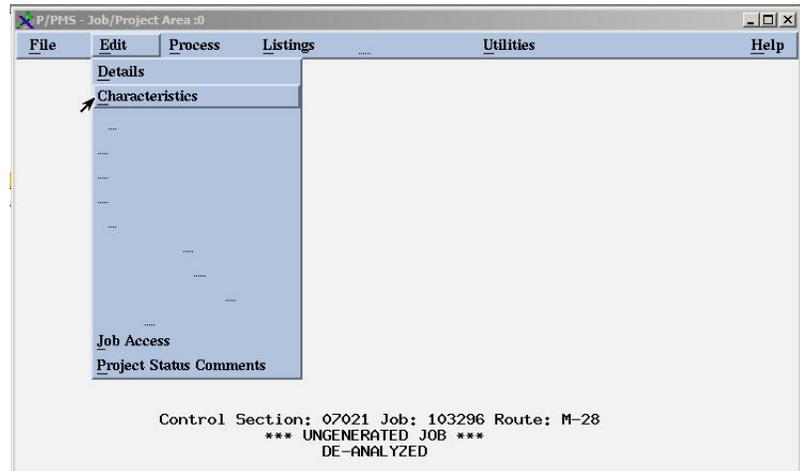


Figure 20- Edit Menu

2. Fill out the Characteristics

- There are 3 Sections, or “Pages” of Characteristics:
  - Section 1: General Characteristics
  - Section 2: More Specific Characteristics
  - Section 3: Management Units/Consultant Involvement
- Many of the P/PMS characteristics of the job may have been read in from the Project Concept Area in MAP.
  - *Be sure to check any existing characteristics for accuracy.*
  - *Management units must be entered through P/PMS and can not originate from MPINS*
- See the [P/PMS Job Characteristics Manual](#) for detailed descriptions of all characteristics, how to fill them out, and what they are for.
  - Different networks can result depending on which characteristics are entered.
- You may scroll through the “pages” by clicking in the grey area either above or below the right edge scroll bar.

## Here's How

## Explanation

### 3. Fill In Management Units

MANAGEMENT UNITS

This information is NOT required to generate an initial Network

Project Manager ...

Project Development Unit ..  Road Design Unit ..  Structure Design Unit ..

Survey Unit .....  Project Development - Design .....  Project Development - Planning ...

CONSULTANT INVOLVEMENT - Entire Phase

This information is required to generate an initial Network

EPE Consultant .....  N Name ..

Photogrammetry Consultant ..  Name ..

Design Survey Consultant ...  Name ..

Design Consultant .....  N Name ..

Right of Way Consultant ....  N Name ..

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Exit Clear

Figure 21- Management Units Screen

- If you fill in all the appropriate Management units, and **unrefined network** will be created.
- If you choose *not* to fill in any of the management units at this time, a **generic network** will be created.
  - A generic network may be useful if you just want to see the schedule, but don't want to assign the job's tasks to work units just yet. However, units *must* be entered before the job can be included in the Program.

The initial step towards consultant involvement is at the bottom of this screen as well. Entire phases may be assigned here.

**NOTE:** In some cases you will find that characteristics have been entered in to MPINS at the Concept Statement. This results in the automatic generation of a Generic Network.

## 2.2.3 Deleting a Job and Re-loading it as New

While automatic network generation may be beneficial, you may already have a job in mind that is very similar that you wish to copy. To enable you to do this, we have enacted a feature easily enabling you to delete a job and reload it as new.

*NOTE: This can only be performed by you if your initial network is not refined or programmed. To perform this for a programmed job, please contact a P/PMS Staff Person.*

### Here's How

### Explanation



1. Click on **File**, **Delete**, **Job**

You must be in the Job/Project Area of P/PMS to access this menu option

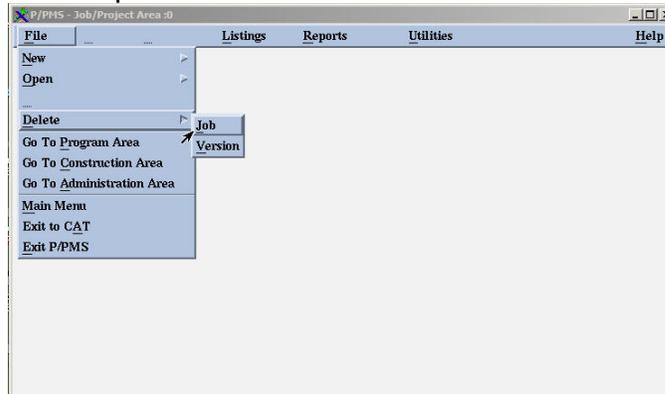


Figure 22- Delete Job menu

2. Click on the Job Number you wish to Delete.

Click on "OK", and you will be presented with a confirmation message (figure 18 next page)

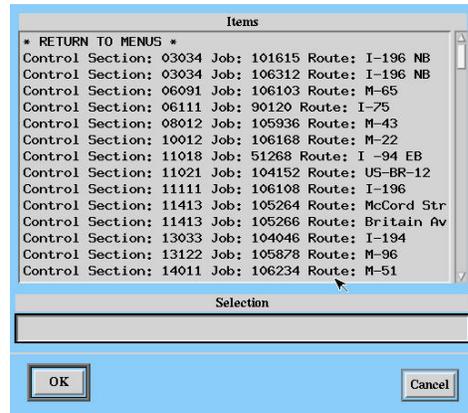


Figure 23- Job Selection List

## Here's How

## Explanation

3. Click "OK" to Verify

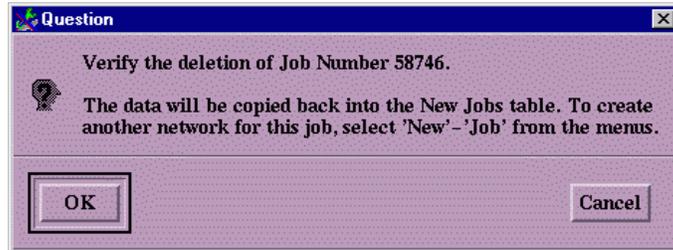


Figure 24- Verification of Job Deletion

4. Reload Job as New

Go through the same procedure as initiating a new job (*Module 2.1*) and copy the network of your selected job.

## 2.3 Generating Your Network

---

Once you fill in all the characteristics for your job, you can then generate a network, which has been customized to the characteristics entered into the system.

The system will use the input characteristics combined with standard factors, including task base durations and labor hours, duration and labor hour multipliers, switches and additives. These will be used to generate a scheduling network which includes tasks, task durations, the resources required to complete the tasks and constraint rules (see *Appendix B- Constrains*) between tasks.

Once you generate a network using the characteristics and standards in the system, you can then review the network using the reports in the job project Area, and refine the network to tailor the results to meet the specific needs of this particular job.

*Note: Don't forget that if you do not fill in all the appropriate Management Units before you generate your network, a Generic network will be created, and you must go back and enter them before the job can be included in the Program. You will be notified of this when you generate your network.*



Figure 25-Missing MGT units warning

---



# Module 3: Network Refinement

---

## After reading this section, you will learn:

- How to Create and Utilize a Task Listing
- How to Delete or Add Tasks
- How to Edit Durations
- How to Update you Actual Dates
- When to Use Estimated Completion Dates
- How to Analyze your Network
- How to Run a Network Logic Summary
- How to Identify the Critical Path
- How to Adjust the Plan Completions and/or Letting Date

# 3.1 How to Create a Task Listing

The very first step in determining what refinements your network may need is to get a list of the tasks that are included in the network. This will help you decide if there are tasks that need to be added or deleted, or any durations that you may want to change.



## Here's How

1. Go to listings, tasks.

*Note: You need to have your Job or Version open to get this menu option*

## Explanation

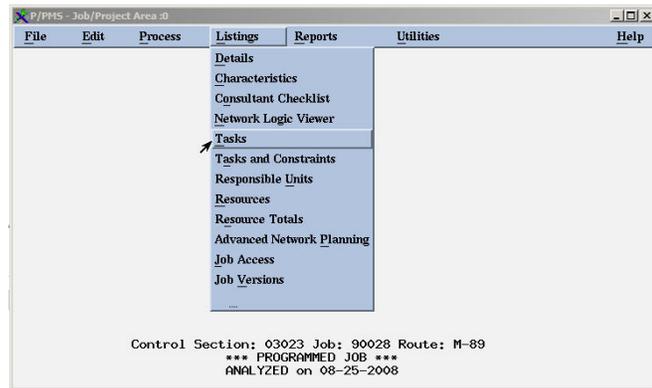


Figure 26- Listing Menu

2. Choose your sorting Option

You will be presented with a list of useful sorting options to choose which order you would like your tasks sorted in.

You can sort by task, by float, by scheduled start, approved start, scheduled finish or approved finish.  
(see Figure 25- Next Page)



Figure 27- Task Listing Sorting Options

When you first start, it's usually recommended to present the tasks in numerical order by task number, which is also the default setting.

**3. Review the Report**  
(see Figure 26- Next Page)

*Note: Since the report is sometimes larger than the viewing screen can display, we recommend that you print this report so you have a reference, or worksheet, to take notes on changes you would like to make.*

When viewing the report, take note:

- An asterisk next to a task number indicates that a planned start and finish has been entered for that task.
- The duration and float are always displayed in work days. Remember that a negative float means you are behind schedule.
- Tasks that are on the critical path are highlighted in Blue and bolded.

Task Number	Task Description	Duration	Approved Start	Approved Finish	Scheduled Start	Scheduled Finish	Actual Start	Actual Finish	Float
0000	Start - payroll default	0	08-18-2009	08-18-2009	01-05-2009	01-05-2009	01-05-2009	01-05-2009	0
2120	Prepare Traffic Analysis Report	21	08-19-2009	09-17-2009	01-20-2009	03-24-2009	01-20-2009	**--**--**--	124
2155	Request/Perform Safety Analysis	10	09-03-2009	09-17-2009	03-25-2009	04-07-2009	**--**--**--	**--**--**--	114
311M	Utility Notification	0	10-16-2009	10-16-2009	02-19-2009	02-19-2009	02-19-2009	02-19-2009	0
312M	Department Concurrence of Design Scope	0	10-15-2009	10-15-2009	01-05-2009	01-05-2009	01-05-2009	01-05-2009	0
3130	Verify Design Scope of Work and Cost	21	09-18-2009	10-16-2009	02-23-2009	03-24-2009	02-23-2009	**--**--**--	145
3150	CE Environmental Clearance Coordination	47	01-26-2010	04-01-2010	03-25-2009	05-29-2009	**--**--**--	**--**--**--	208
3390	Develop Maintaining Traffic Concepts	5	10-28-2009	10-30-2009	03-25-2009	03-31-2009	**--**--**--	**--**--**--	150
352M	THE Plan Review	0	02-03-2010	02-03-2010	07-01-2009	07-01-2009	**--**--**--	**--**--**--	145
3535	Conduct Structure Architectural and Aesthetic Review	5	12-28-2009	01-05-2010	03-25-2009	03-31-2009	**--**--**--	**--**--**--	190
3540	Develop Maintaining Traffic Plan	12	12-15-2009	01-05-2010	03-25-2009	04-09-2009	**--**--**--	**--**--**--	183
3560	Conduct Preliminary Geometrics and Roadside Safety Reviews	15	01-28-2010	02-18-2010	03-25-2009	04-14-2009	**--**--**--	**--**--**--	210
3570	Prepare Preliminary Structure Plans	50	10-19-2009	01-05-2010	03-25-2009	06-03-2009	**--**--**--	**--**--**--	145
3580	Develop Preliminary Plans	40	11-02-2009	01-05-2010	04-01-2009	06-03-2009	**--**--**--	**--**--**--	145
3590	Review Preliminary Plans - THE Plan Review	30	01-06-2010	02-18-2010	06-04-2009	07-16-2009	**--**--**--	**--**--**--	145
380M	Plan Completion	0	04-02-2010	04-02-2010	08-28-2009	08-28-2009	**--**--**--	**--**--**--	145
3810	Conduct Final Geometrics and Roadside Safety Reviews	10	04-16-2010	04-29-2010	07-17-2009	07-30-2009	**--**--**--	**--**--**--	185
3822	Complete Pavement Marking Plan	5	03-26-2010	04-01-2010	07-17-2009	07-23-2009	**--**--**--	**--**--**--	170
3830	Complete Maintaining Traffic Plan	5	03-26-2010	04-01-2010	07-17-2009	07-23-2009	**--**--**--	**--**--**--	170
3840	Develop Road Final Plans and Specifications	35	02-11-2010	04-01-2010	07-02-2009	08-27-2009	**--**--**--	**--**--**--	145
3850	Develop Structure Final Plans and Specifications	40	02-04-2010	04-01-2010	07-02-2009	08-27-2009	**--**--**--	**--**--**--	145
3870	Omissions/Errors Check Plan Review	19	04-05-2010	04-29-2010	08-31-2009	09-25-2009	**--**--**--	**--**--**--	145
387M	Omissions/Errors Check Meeting	0	04-21-2010	04-21-2010	09-17-2009	09-17-2009	**--**--**--	**--**--**--	145
389M	Plan Turn In	0	08-09-2010	08-09-2010	01-12-2010	01-12-2010	**--**--**--	**--**--**--	145
3910	Prepare Final Job Package and Obtain Authorization	9	08-10-2010	08-20-2010	01-13-2010	01-26-2010	**--**--**--	**--**--**--	145
391M	Certification Acceptance	0	08-10-2010	08-10-2010	01-13-2010	01-13-2010	**--**--**--	**--**--**--	145
3920	Advertise and Let Job	35	08-23-2010	10-11-2010	01-27-2010	04-02-2010	**--**--**--	**--**--**--	133
392M	Job Let	0	10-01-2010	10-01-2010	04-02-2010	04-02-2010	**--**--**--	**--**--**--	127
3930	Award Job Construction Contract	25	10-12-2010	11-17-2010	04-05-2010	05-07-2010	**--**--**--	**--**--**--	133
393M	Job Award	0	11-17-2010	11-17-2010	05-07-2010	05-07-2010	**--**--**--	**--**--**--	133
9999	Finish	0	11-17-2010	11-17-2010	05-07-2010	05-07-2010	**--**--**--	**--**--**--	133

Sorted By: Task Number, Scheduled Start

Note: - '\*\*' before the Task Number indicates a Planned Start and Finish has been entered, Positive Float = ahead of schedule,  
 - Duration and Float are displayed in work days, (Negative Float = behind schedule, - Tasks that are BLUE / BOLD indicate that they are on the Critical Path.

Exit Continue Select Another Find Print

Figure 28- Sample Task Listing

## 3.2 How to Delete and/or Add Tasks

Before jumping into deleting or adding tasks, you should first examine your task listing, and determine which tasks you feel need to be deleted and/or added.



### Here's How

1. Delete tasks by selecting **Edit**, **Delete Tasks and Constraints**.

(the process is the same for Adding Tasks, only you would select **Edit**, **Add Task and Constraints** instead)

2. Choose which tasks you wish to Add/Delete

### Explanation

*Note: You need to have your Job or Version open to get this menu option*

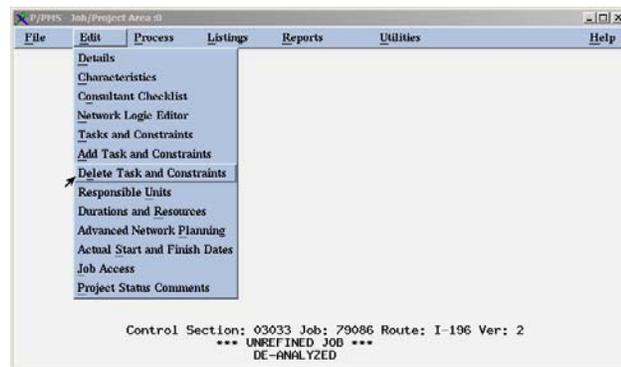


Figure 29-Edit, Delete Tasks Menu

You are presented with a list of tasks that are currently available.

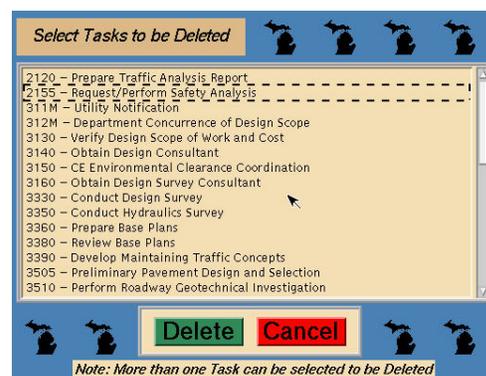


Figure 30-Select Tasks to be Deleted

Just click on the task, or tasks, that you wish to add or delete. You may highlight more than one task by just clicking on multiple tasks.

## Here's How

## Explanation

3. Click on the **Delete (or Add) Button**



Figure 31-Delete/Cancel button



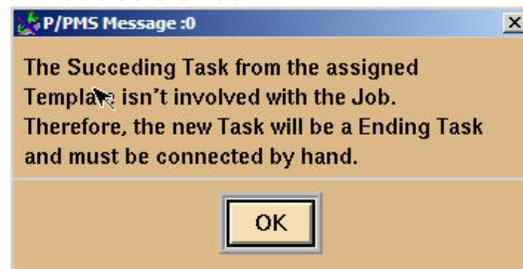
Figure 32-Add/Cancel Button

Once you have made all your selections, click the Delete or Add button at the bottom of the window, as appropriate.

*Note: If you change your mind, and decide not to add or delete any tasks, simply click the cancel button.*

The system will go through the process of adding and/or deleting the tasks and any associated labor hours, constraints and resources, and automatically reconnect all the tasks in your network for you.

*Note: Occasionally when Adding tasks, you may get a message saying that certain tasks and/or constraints will need to be added by hand. If this happens to you, please contact P/PMS Support for assistance.*



4. Click on **Process, Analyze Network**

When you complete any changes you make, you should always perform process, analyze network. This will make the system go through and update all appropriate areas in your network, including any dates affected by the changes.

**Note:**

I would like to point out that if any refinements or changes are made, you **do not** want to go to Process, Generate Network. To incorporate your changes, you need to only analyze your schedule.

If a network currently exists for the selected job and you go to Process, Generate Network, you **will** wipe out the existing network if you continue.

If you accidentally try to re-generate your network, you will see a bright red warning message regarding network replacement.

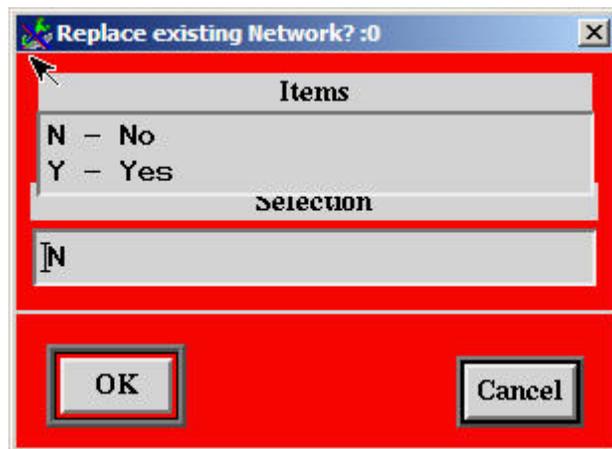


Figure 33-Confirmation message

If you do not want to completely re-generate the network and erase any changes you may have made, you should hit "cancel" on this message.

The default setting is "No", so you if accidentally hit OK, it will still cancel the Network Generation process.

*Network generation should only be done once when first creating your network.*

### 3.3 Network Logic Summary

A Network Logic Summary is the summary of a job that is displayed every time after the job network is generated or analyzed.

- It gives you all the information critical to establishing a good network, including key dates, constraints and float.
- There should be a start and finish task and no error messages.
- If you see an Out of Order Update of Actuals, this is not critical, but is a flag provided to indicate tasks completed out of order according to network logic. This may indicate tasks should be finished and marked with actuals, or constraint changes need to be made.

Once a network logic summary is generated, we can get a better look at how network dates compare to plan. The 3 PPMS dates and float also appear on numerous reports from P/PMS.

**MAHDAVIA NETWORK TOTALS**  
 47 Tasks  
 115 Constraints  
 66 FS  
 35 FF  
 14 SS  
 162 Total Records

**NETWORK LOGIC SUMMARY**  
 0000-100217-1 - Start Task (OK)  
 9999-100217-1 - Finish Task (OK)

Task	Target Date	Approved Date	Scheduled Date	Actual Date	Float
Job Start:	**--**--**	11-18-2009	04-01-2009	**--**--**	161
Base Plans:	**--**--**	07-21-2010	11-09-2009	**--**--**	171
Plan Review:	**--**--**	01-04-2011	05-07-2010	**--**--**	161
Plan Comp:	04-01-2011	04-01-2011	08-04-2010	**--**--**	161
OEC Meeting:	**--**--**	04-21-2011	08-24-2010	**--**--**	161
Plan Turn In:	**--**--**	08-13-2012	12-20-2011	**--**--**	161
Letting:	10-05-2012	10-05-2012	03-02-2012	**--**--**	152
Award:	**--**--**	11-21-2012	04-06-2012	**--**--**	158
Job Finish:	11-21-2012	11-21-2012	04-06-2012	**--**--**	158

Note: - Red/Bold output indicates that network or schedule problems exist.  
 - PC, Let and Finish Target Dates should always match Approved Dates.

Figure 34- Network Logic Summary

### 3.3.1 Dates Explained

---

**Target Date** – Major dates for the Plan Completion, Letting, and other major milestones that are initially set up in MPINS. The Project Concept Author may choose workable dates by creating and refining a job schedule network while the job is still in Concept phase.

The remaining dates originate from PPMS.

**Approved Date** – The latest date a task or milestone can be completed and still be on time.

- A backwards pass is made, beginning from the calculated finish date (one month after letting), and going backwards through all task constraints and durations to set the Approved Dates.

**Scheduled Date** – The date of completion of a task or milestone given the network properties, as calculated forward from today.

- A forward pass is made, starting from today and the earliest scheduled unfinished task, and calculating forward through all tasks and constraints to determine the Scheduled Dates.

**Actual Date** – Any start/finish dates that have actually occurred and been entered into P/PMS for each related task or milestone.

**Float** – The Calculated difference in work days between the Scheduled Date and Approved Date for each task or milestone. (If it's negative, you are behind schedule!!)

## 3.4 How to Adjust Task Durations

---

Check the Task Listing (**Listings, Tasks**) for durations that seem to be incorrect and possibly need adjusting. The Tasks Listing can sort task durations and float values by task number, schedule, or float.

Use your experience to verify that durations are reasonable. Start by simply checking for the tasks with the longest durations. Then identify tasks with the biggest - most negative - float.

- Remember that durations are in work days, not calendar days.
- **Where possible, contact the responsible unit (Listings, Responsible Units) for advice and commitment on task duration.**
- Reducing the durations of tasks that are on the critical path (the longest determining path of tasks. *See Appendix D*) will directly influence the job's float. On the Task Listing Report, items on the Critical Path are highlighted in Blue. (*see Figure 23- Sample Task Listing*)

*Note: A special note here for jobs with consultant involvement. In the following steps, focus on the tasks to be performed by the Department.*

*When you have accurately reflected the Department's work, you can possibly reduce the durations on the consultant's tasks to fit within your letting date. See Module 4, Section 4.1.2 for assigning consultants to tasks.*



## Here's How

1. Select **Edit**, **Durations and Resources**

2. Enter new Durations

3. Click **Exit**

4. Click on **Process**, **Analyze Network**.

## Explanation

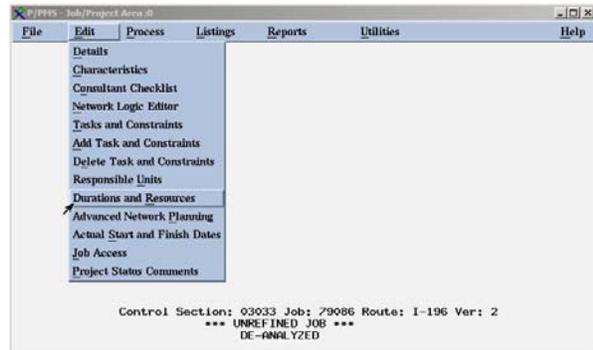


Figure 35-Edit menu options

RN:	Task	Task Description	Duration
2253	8130	Verify Design Scope of Work and Cost	40
2254	8150	Environmental Clearance Coordination	42
2307	8320	Conduct Bridge/Hydrologic and Scope Analysis	80
2266	8330	Conduct Structure Foundation Investigation	80
2255	8350	Conduct Preliminary Geometrics and Roadside Safety	20
2256	8520	Prepare Preliminary Structure Plans	80
2264	8580	Develop Preliminary Plans	80
2257	8590	Review Preliminary Plans - THE Plan Review	50

5 RN:	Resource	Resource Description	Hours	People	Resp Unit
1573	38000	On - Plan & Field Review	12	0.04	39000
1574	33720	Coloma TSC Dev/Design	12	0.04	39000
1575	39000	Bridge 2	73	0.23	39000
1576	81720	Coloma TSC Construction	6	0.02	39000
1577	44400	Program Management	6	0.02	39000
1578	48220	Coloma TSC Traffic & Safety	6	0.02	39000
1579	87100	Border Project Analysis	12	0.04	39000

Figure 36- Resources & Durations menu

*Note: Labor hours will be changed automatically for each involved unit, by the same ratio as the duration was changed.*

Use the arrow keys to move down to the next task duration to be changed.

After all durations have been changed, this will save the changes and close the edit window.

When you complete any changes you make, you should always perform process, analyze network. This will make the system go through and update all appropriate areas in your network, including any dates affected by the changes.

## 3.5 Entering Actual Start & Finish Dates

---

Always verify that your schedule is up to date. That is, review the tasks to make sure all started/completed tasks are marked with an actual start/finish date in the system. Usually tasks with expended hours have started. In many cases, updating a network with actual status, or progress, will bring the scheduled letting back within acceptable parameters.

Correct usage of actuals will result in the most correct and updated schedule.

We highly suggest that for accuracy's sake, the units responsible for the tasks be the one to enter the actuals. Being closer to the source of the information increases accuracy and reliability. They are also being asked to be more accountable for this information.

There are many ways to get your actuals updated. For example:

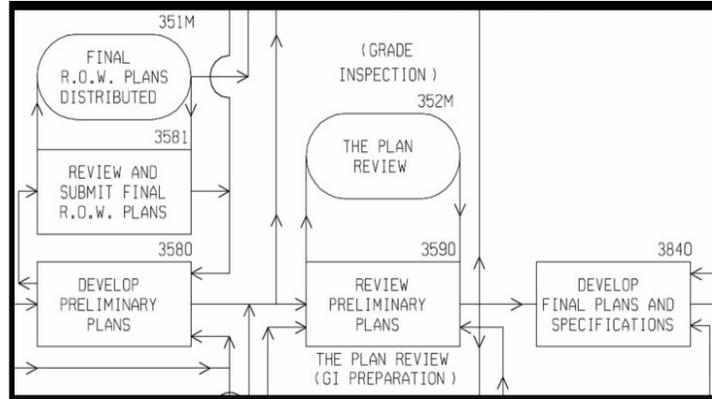
- You can e-mail your dates to the project manager or P/PMS personnel.
- You can also run a task status report, fill in the appropriate dates on that, then send that to your project manager, or P/PMS personnel.

Also be aware that actual start and finish dates may come into P/PMS from other systems, such as REMIS, ESS, Safestat, etc. Actuals may also be entered through MPINS and DCDS (see Appendix C - Other Ways to Enter Actuals)

**Note: You should always be sure that you are using the correct start and finish definitions for your tasks.**

- If you are unsure, you should consult the Task Manual or the Global Network Diagram (Appendix E) for reference. The Global Network provides clues to the start and finish for a task, by finding those tasks that lead into, and start after the task you are interested in.

Here you can see the Review of Preliminary Plans begins once the Preliminary Plans are complete, and ends after the Plan Review Meeting itself when the Final Plans are started.



In this case, the Review of Preliminary Plans starts with the receipt of the Plan Review Meeting Request by Quality Assurance from the Project Manager.

The Task Manual has a defined start and finish for each task, as well as a description of that task overall and the separate work steps involved. The defined start and finish will often provide you with a paper trail and the details you need to find the proper dates. This will provide you with the most accurate dates.

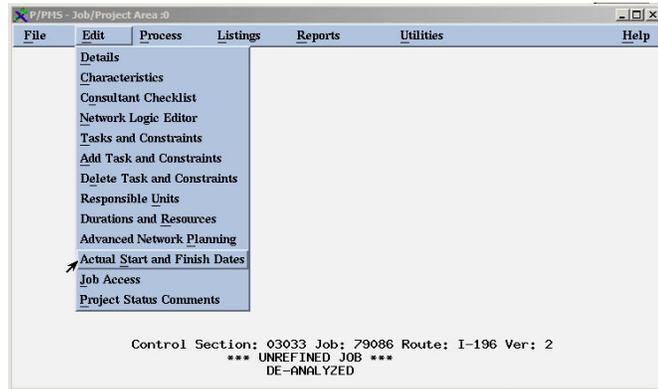


## Here's How

1. Select **Edit**, **Actual Start** and **Finish Dates**.

## Explanation

*Note: This must be done in an open Job or Version.*



**Figure 37-Edit menu**

2. Enter Dates

You will be presented with a data entry screen showing you all the tasks in your network and any actual dates that may have been entered already.

RN:	Task	Description	Act Start	Act Finish	Est Comp
3923	0000	Start	01-JUN-99	06-01-1999	
3928	2120	Prepare Traffic Analysis Repo			
3903	3110	Gather Existing Soils and Pav	06-01-1999	10-05-1999	
4002	311M	Utility Notification			
4008	312M	Department Concurrence of De	06-01-1999	06-01-1999	
3904	3130	Verify Design Scope of Work c	06-01-1999	06-01-1999	
3929	3150	CE Environmental Clearance Co			
4003	352M	Preliminary GI			
3905	3530	Prepare Base Plans	07-27-1999	01-20-2000	
3906	3530	Review Base Plans	01-20-2000		
3925	3530	Develop Maintaining Traffic C			
3907	3510	Perform Roadway Geotechnical			
4004	352M	THE Plan Review Meeting			
3908	3540	Develop Maintaining Traffic P			
3926	3552	Develop Preliminary Pavement			
3909	3560	Conduct Preliminary Geometric			
3910	3580	Develop Preliminary Plans			
3911	3590	Review Preliminary Plans - TH			
3912	3610	Compile Utility Information	10-05-1999		

RECORDSET: thayers\_net Find: 1 of 36

**Figure 38-Actual Dates Entry Screen**

- To enter the dates, just click on the task you wish to update, then type in the date.
- For milestones, if you type either the start or finish date, then up or down arrow, the remaining date will be filled in automatically for you.

Take Note:

- actual dates are only dates that have already occurred.
- Estimated completion dates are the only future dates that may be entered.

If a task has an actual start date, and an estimated completion date, the scheduled date will be set to the estimated completion date, as long as there aren't any constraints to prevent it.

**3. Click Exit**

When you are finished, just click exit at the bottom of the screen.

**4. Click on Process, Analyze Network.**

When you complete any changes you make, you should always perform process, analyze network. This will make the system go through and update all appropriate areas in your network, including any dates affected by the changes.

---

## 3.6 How to Adjust the Plan Completion and Letting Date

---

When all else fails and you've tried every refinement technique discussed, and are still having a late schedule, then it's probably worth serious consideration to change the Target Plan Completion and Letting.

***Note: This needs to be performed in a Version (see Chapter 7) and in conjunction with an MPINS Program Revision Change Request (2604 Form)***

### **MPINS Program Revision Change Request Form (2604)**

You may have heard 2604's mentioned before now, but what exactly are they?

A 2604 Form is now the program revisions change request form in MPINS, used to obtain authorization for adding or deleting job phases, splitting a job, as well as making changes to a job's cost, work type, major milestones (plan completion and letting dates), etc.

It should be noted here that in cases of change requests, it is advisable and easier to *create and submit the corresponding P/PMS version first before going into MPINS*. If your network requires scope or major milestone changes, then submit a matching Program Revisions Change Request Form in MPINS.

Remember that a scope change almost always requires an adjustment to the job cost or schedule.



## Here's How

1. Select **E**dit, **D**etails.

## Explanation

*Note: This must be done in an open Version. Programmed Jobs, or Version 1, are blocked from these editing capabilities.*

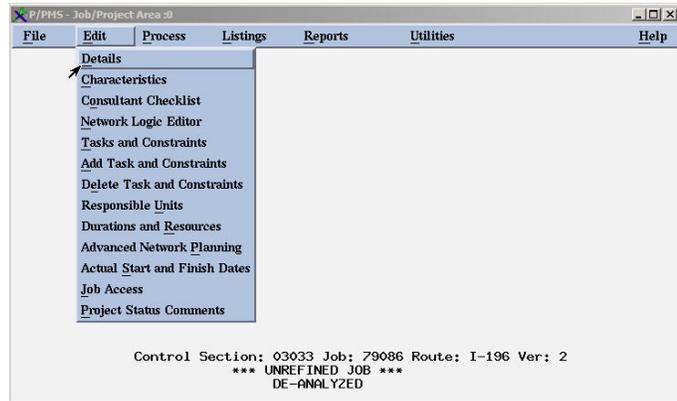


Figure 39- Edit Menu

2. Change Dates

Change the PC and/or Letting to desired dates. These dates may be the best dates obtained from the Network Logic Summary.

- These dates *must match* the dates submitted in the 2604

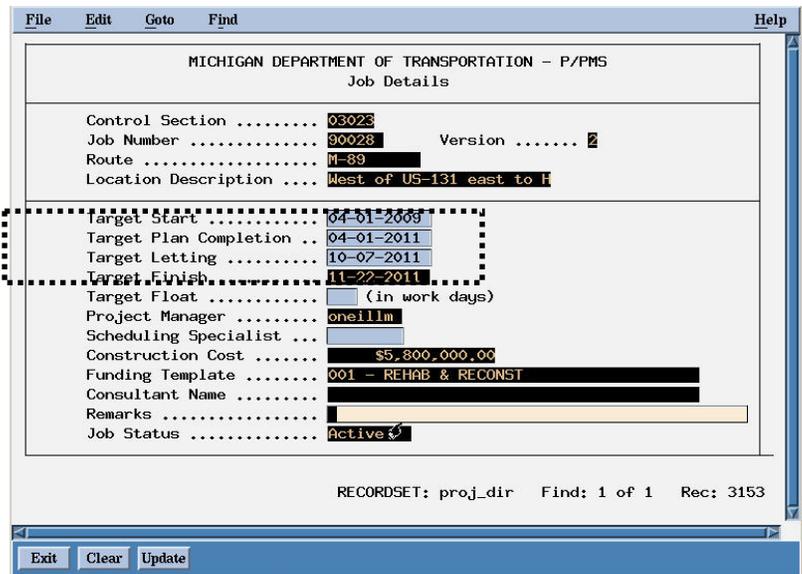


Figure 40-DetailsScreen

3. Click on **P**rocess, **A**nalyze Network.

When you complete any changes you make, you should always perform process, analyze network. This will make the system go through and update all appropriate areas in your network, including any dates affected by the changes.



# Module 4: Resources

---

**After reading this section, you will learn:**

- How to Check Resources
- How to Identify Consultant Involvement
- How to Adjust Labor Hours and Resources

## 4.1 How to Check Resources

---

First, look at the listing under **Listings, Resources** on the Job/Project Area main menu. Select all tasks and all resources.

- This report will show who's working on all the tasks in the job, and how much work is assigned to them.
- Other reports are also available from the menu under **Reports, Resources**.
- Be aware: You may not always know who is involved in tasks that you are not responsible for.

Now, you have the option to change or adjust the resources assigned to tasks, if it appears that a unit has been assigned to one or more tasks in error.

## 4.1.1 Adjusting Resources

---

### Changing Resources Assigned to Tasks



If...	Then...
<p>1. The wrong unit is assigned to <u>many</u> tasks</p>	<ul style="list-style-type: none"><li>• Verify the characteristics management units by reviewing the listing under <b><u>L</u>istings, <u>C</u>haracteristics</b>, or by entering the characteristics data entry screen under <b><u>E</u>dit, <u>C</u>haracteristics</b>.</li><li>• Make any changes to the Characteristic Management Units, if necessary</li><li>• Incorporate changes by running <b><u>P</u>rocess, <u>A</u>ssign MGT Units</b>. This will remove all management unit assignments and assign them again based on the new characteristic information.</li></ul> <p><i>NOTE: If you made any manual changes to resources, they will not be lost, but actual hours and dollars charged to the job are not affected by these changes.</i></p>
<p>2. You need to change the resources assigned to one or just a few tasks</p>	<ul style="list-style-type: none"><li>• Select <b><u>E</u>dit, <u>D</u>urations and <u>R</u>esources</b> (Figure 36-Previous page).</li><li>• Select a task to edit by clicking on its duration.</li><li>• Drop to the sub record to change the resource involved.</li><li>• Delete or add resources by clicking on the Delete or New buttons.</li></ul>

---

## 4.1.2 Identifying Consultant Involvement

As mentioned in Module 2.2.2, you can assign a whole phase to consultant using characteristics when you generate the network. The following steps can be used to assign a consultant to individual tasks when they are not performing the complete phase.



### Here's How

1. Select **Edit, Consultant Checklist**

### Explanation

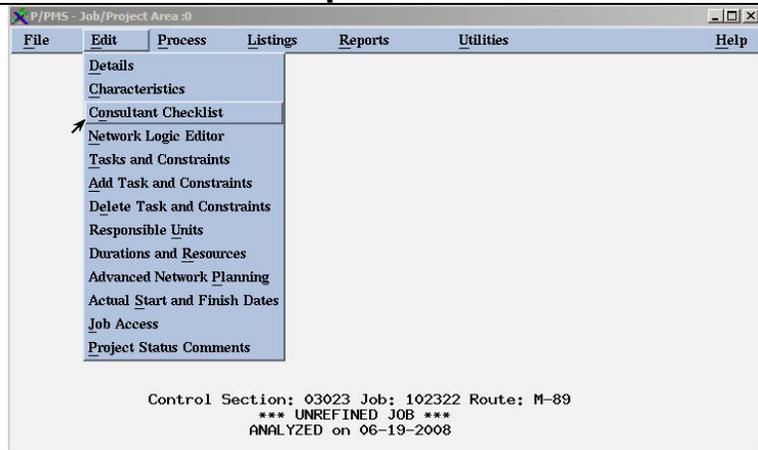


Figure 41-Edit Menu

2. Click on the task that will be performed by consultants.

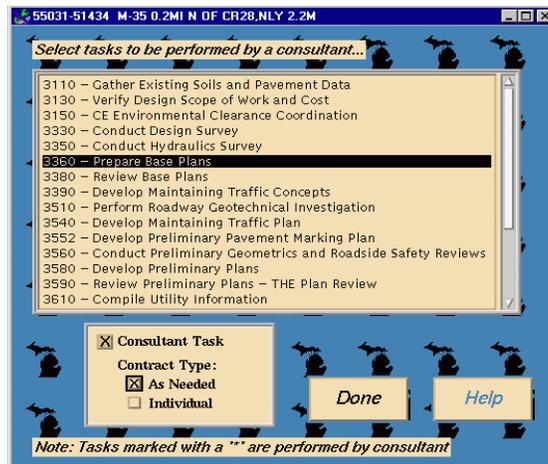


Figure 42-Consultant Checklist

*Note: If you identified a consultant in the characteristics, you will see that all the tasks for that phase are marked as consultant tasks with an "\*".*

## Here's How

## Explanation

3. Choose **Contract Type**

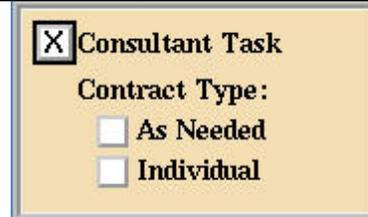


Figure 43-Consultant Check Box

Click on the appropriate Contract Type to mark it. See the Job Characteristics Manual for Contract Types.

- Repeat Steps 2 and 3 until all appropriate tasks are marked.

4. Click **Done**

When finished, click 'Done' at the bottom of the window and your changes will be saved.

*Note: Making changes in the Consultant Checklist will override settings in the characteristics, and vice versa.*

5. Run **Process, Re-Assign Resources**

Incorporate changes by running Process, Re-Assign Resources.

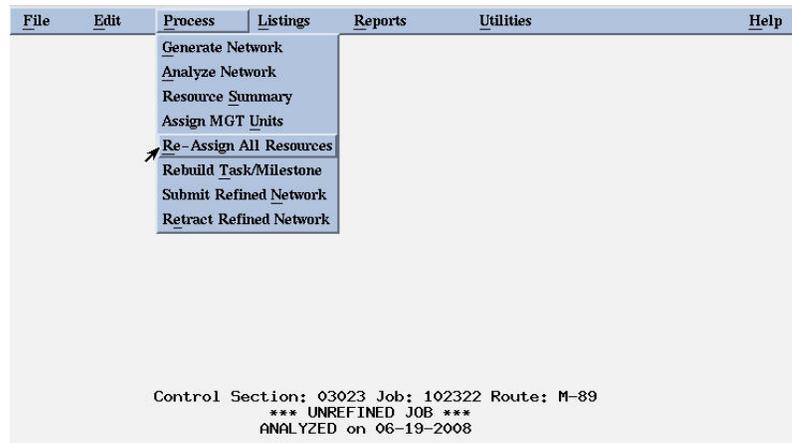


Figure 44- Process Menu

This process will remove all resource assignments from your network and rebuild them based on the management units and consultant involvement identified.



# Module 5: Network Submittal

---

**After reading this section, you will learn:**

- How to determine if your network will be approved.
- How to submit your refined network.

# 5.1 How to Determine if Your Network will be Approved

---

How do you know if job networks are good and will be approved?

- First look at the float on the Plan Completion and Letting in your network logic summary. This can tell you how far behind, ahead or on target you are. Remember, large negative floats are bad!

A job is late if:

- the approved finish for the task is within 1 month from today and the approved or scheduled date is greater than 5 days late,
- the approved finish for a task is within three to 6 months and the approved or scheduled date is greater than 20 days late
- if the approved finish for a task is within 6 months to a year away and the approved or scheduled date is greater than 30 days late.

Generally, there is a pattern here that the farther away the approved finish dates, the more negative float you are allowed to have. As we move closer to the approved finish date, we are assuming that a certain amount of negative float can be made up.

If the schedule is late, or there are logic errors, *you must refine your network* or it will not be approved.

If the schedule is on time, then you may proceed to Submitting your Network.

Plan Completion and Letting dates may also be viewed from the Plan Completion and Letting Dates Report. This is found under **Reports, Job, PC and Letting**.

Project Manager	Control Section	Job Number	Ver	Route	Location Description	Net Status	Approved Plan Comp	Scheduled Plan Comp	Float (App-Sch)	Approved Letting	Scheduled Letting	Float (App-Sch)
kleikamm	02041	80181	1	M-28	Autrain Easterly to Chr	PRG	09-19-2008	06-18-2009	-183	03-06-2009	12-04-2009	-189

Sorted By: Control Section, Job Number

Figure 45- Sample PC & Letting Date Report

# 5.2 How to Submit Your Network

When you have your network tasks and constraints correct, all your resources assigned correctly, and your job's schedule is complete and on time, it's time to notify management that your network is ready for Programming into the P/PMS Statewide Master Program.

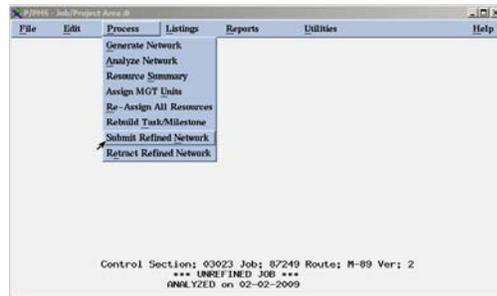
## Here's How

## Explanation



1. select **Process, Submit Refined Network**

*Note: You need to have your Job or Version open to get this menu option*

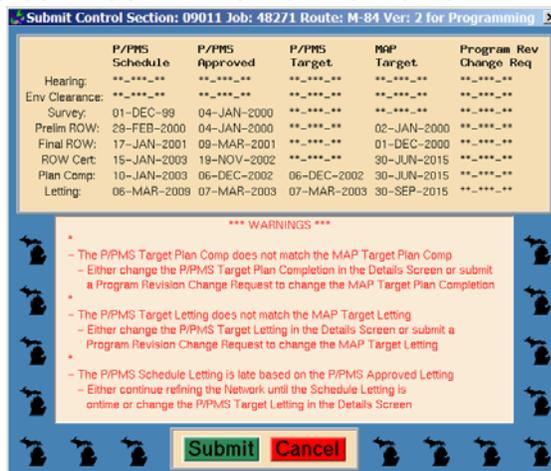


**Figure 46-Process menu**

This will now bring up a screen displaying all relevant date data in P/PMS and MAP, as well as informational messages dependant on date comparisons.

2. Review any warning messages

Any warning messages may prevent the submitted network from being programmed in P/PMS. This screen provides the user with an additional option to either continue & submit dates to MAP, or to cancel and continue with network refinement.



**Figure 47- Submit Job Review Box**

*Note: If you have a Plan Completion or Letting date change as in Module 3.4, it is OK to submit the network. Your warning message(s) about Target Dates should be resolved by the Change Request.*

Once submitted, the job is flagged as **Refined** to be easily identified in PPMS.

- Refinement changes are prohibited at this point.
- The job will be programmed in PPMS if the network and associated dates are good.
- Project managers are notified by email once a network or version is programmed in PPMS.

If the job has *not* been programmed yet, and you find you need to make more changes, refinement changes may be made after running **Process, Retract Refined Network**.

- This retraction will remove the dates previously submitted to map and return the job to the unrefined status, so editing options are open again.
- PPMS staff and program managers can quickly find jobs and versions whose networks have been refined.
  - They will check that the job's scheduled plan completion and letting dates are not late.
  - They may look for an in-review change request if the target plan completion and letting do not match MPINS. *It should be noted that in cases of change requests, it is advisable, and easier, to create and submit the corresponding version first, before going into MPINS.*

# Module 6: Versions

---

**After reading this section, you will learn:**

- What a Version is
- Why you would need a Version
- How to create a Version
- How to submit a Version
- How to enter Project Remarks
- How to enter Project Status Comments

## 6.1 What is a Version?

---

How do I adjust my schedule now that design has started?

Once a job has been programmed in P/PMS, it is protected. Only certain details, job ownership/access, and actual start and finish dates may be modified. The only processes that may be run are schedule analysis and resource summarization.

A **Version** is an exact copy of a job network.

- This copy allows you to make *any* edits to your job, *without* actually affecting the protected network.

If you need to make changes to protected items affecting a job's schedule after it has been programmed, you should create a new version. *Certain changes may require a 2604 to be submitted along with the version.*

Versions are also beneficial to perform various “what if” scenarios *without* affecting your original schedule.

Versions need to be created for refinement and changes to a programmed job, to keep them up to date, such as changing the target plan completion and target letting dates, updating characteristics and management units, adding or deleting tasks to the network, or changing constraints.

Once the version has been edited, and the network has been refined, the version may be submitted to replace the programmed network. For changes to major target dates, or major scoping changes, a corresponding MPINS program revision change request form should be subsequently submitted in MPINS. **Remember that versions are not required for entry of actual dates.**



## Here's How

1. Select **File, New, Version**

## Explanation

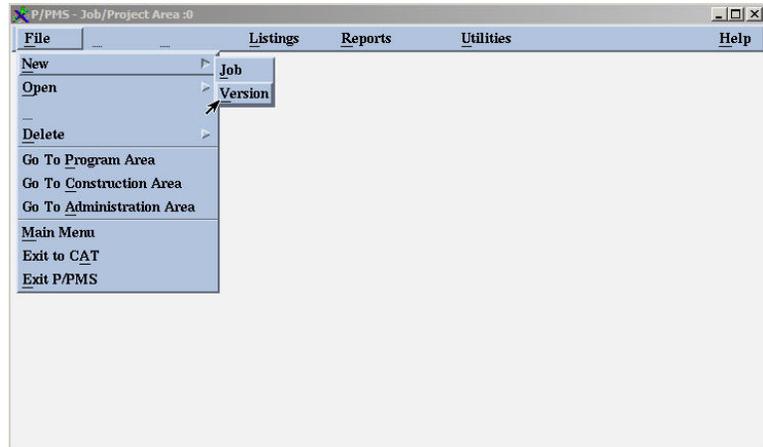


Figure 48-File, New, Version Menu

This will create a version of your job that you can change as necessary to get your schedule back in line with changes in the status of the job.

2. Select a Job to copy and click **OK**

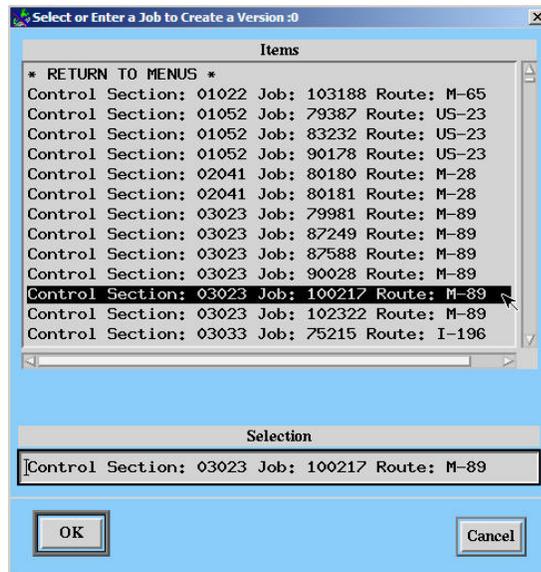


Figure 49-Copy Job Selection Box

**3. Select a version to copy**

The selection box shows all available versions for the selected job.

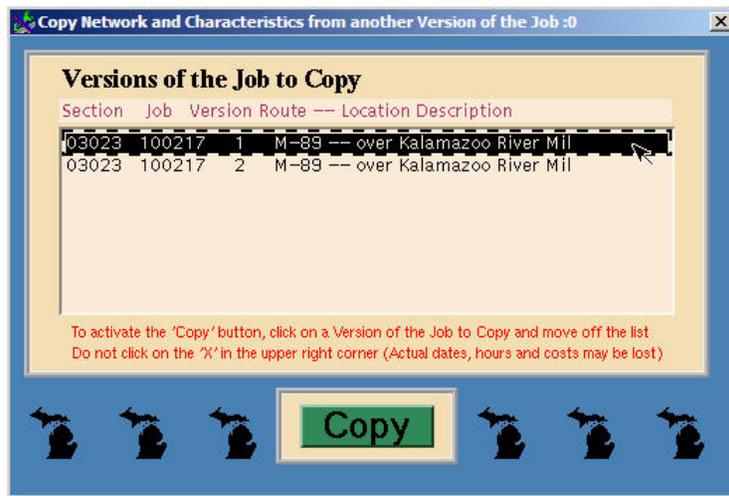


Figure 50-Copy Version Selection Box

Typically your choice should be Version 1 – the programmed (master) version. Nonetheless, circumstances may exist under which you would want to copy another version for modification.

**NOTE:**

From this point, working with a version is the same as working with an unrefined job.

See Module 3 – Network refinement, for updating your version.

- Remember to select **Version** instead of **Job** from the **File, Open** menu in subsequent sessions.

A non-submitted version can be edited at any time (by a user who has permissions to the job).

Once submitted, a version can still be edited – as long as it has not yet been programmed – by retracting the submission using **Process, Retract Refined Network**.

## 6.1.1 Version Changes Gantt Chart

---

Once you have created your version, it is sometimes helpful to see a comparison between your original job and the changes you have made in your version.

With your version open, go to **Reports, Task, Version Changes Gantt chart**.

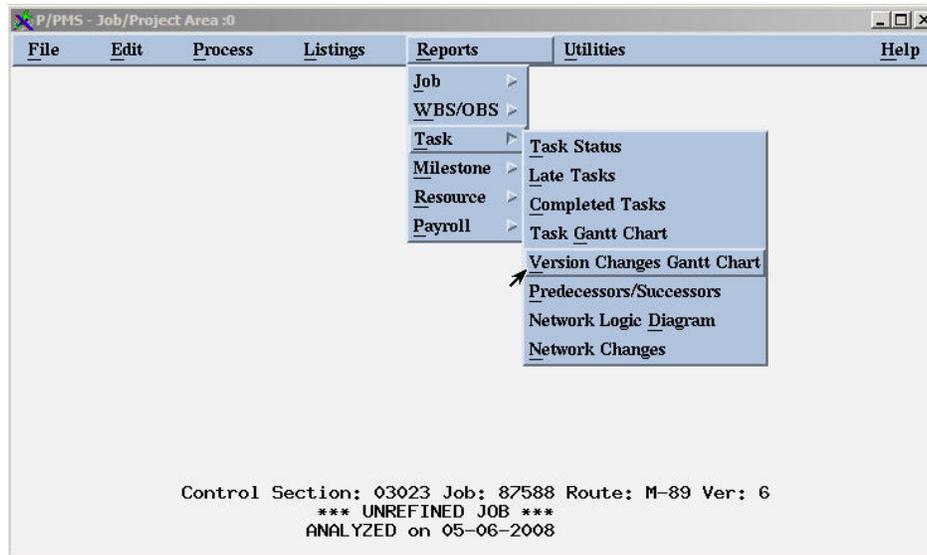


Figure 51- Report Menu

You will be presented with a Gantt chart, which is a charted representation of task status that compares a job's version to the master job. This chart will help you graphically compare the original version of your job and the refined version. (see *Figure 49- Next page*)

This is a sample of a version changes Gantt chart. The key at the bottom helps explain what all the markups represent. You will be able to get a good overview of the effects of any changes between the job and the version, such as added or deleted tasks, duration changes, or date changes.

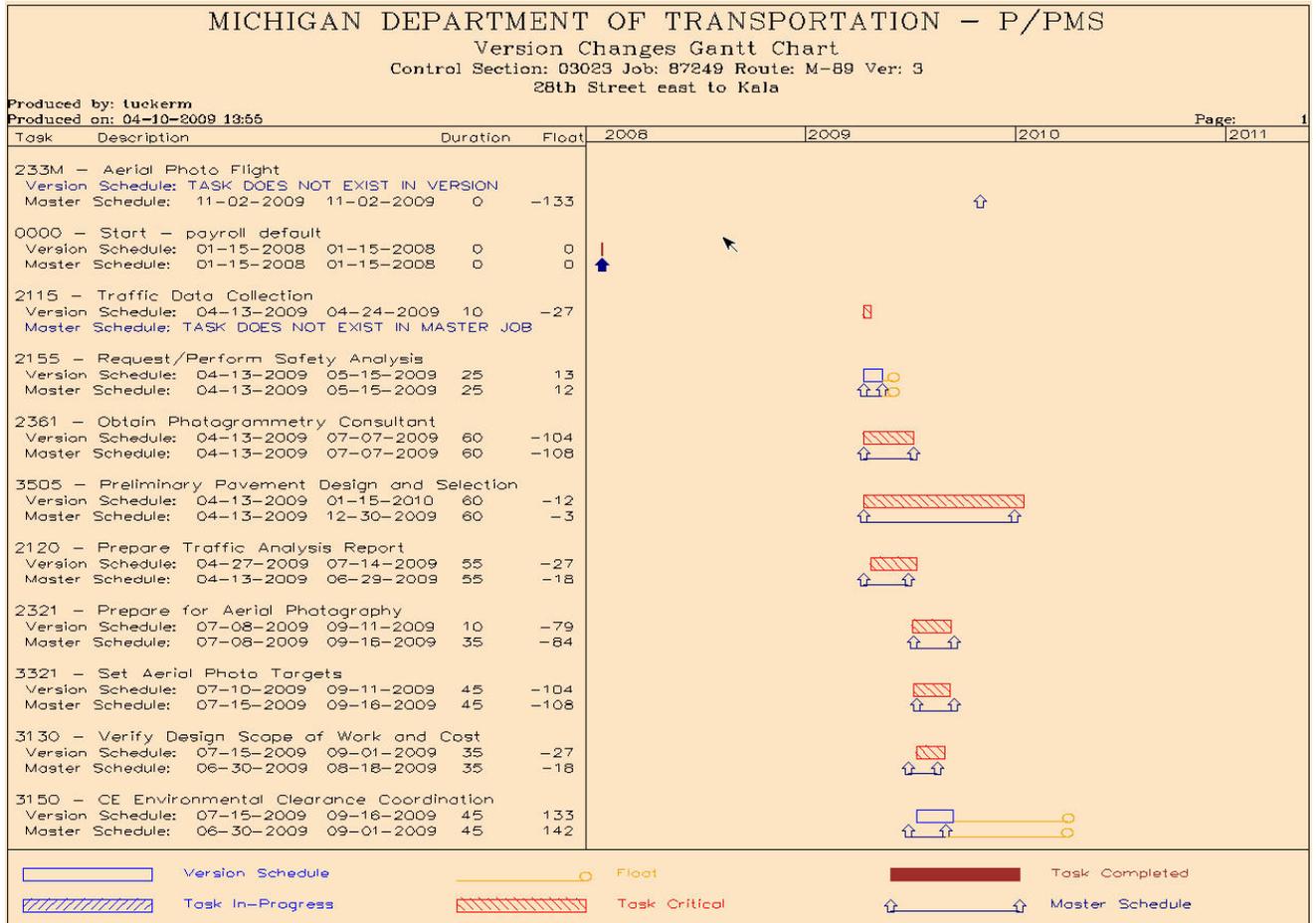


Figure 52- Sample Version Changes Gantt chart

A Similar report to this would be a Network Changes report. With your version open, just go to **Reports, Task, and Network changes**. This report shows all network changes in a table format, and is used to look at versions before submitting for programming.

## 6.2 How to Add Project Remarks

There may be times when you wish to remark on certain job versions for yourself, or you may wish to provide explanatory comments for management regarding job status. Both of these actions may be performed under the Edit menu in the job project area.



### Here's How

### Explanation

1. Select **Edit, Details**

*Note: You must have your job or version open to perform this function*

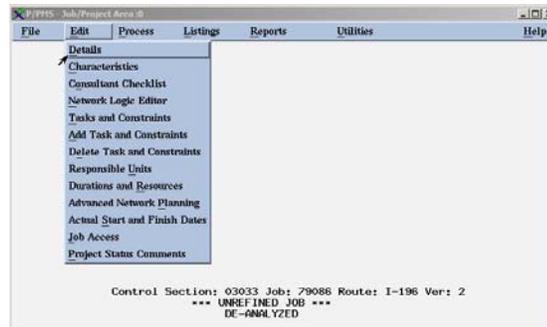


Figure 53-Edit, Details Menu

2. Enter Remarks

Near the bottom of the details screen is the remarks field. This is a text field which is seen on the editing screen and on the details listing for each version. This field could be valuable for identifying different versions of jobs and general descriptions of them and their changes. **Each version can have its own remark.**

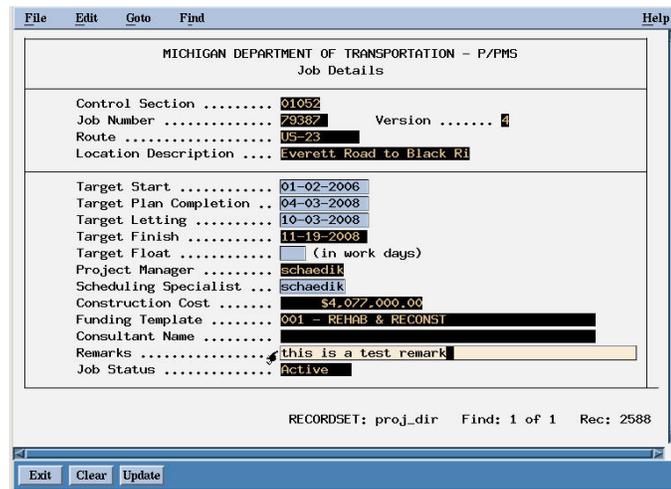


Figure 54-Project remarks

## 6.3 How to Add Project Status Comments

---

There may be times when you wish to comment on certain job versions for yourself, or you may wish to provide explanatory comments for management regarding job status.

### 6.2.1 From the Program Area



#### Here's How

1. Select **Edit, Project Status Comments**

#### Explanation

*Note: You must be in the Program Area to perform this function*

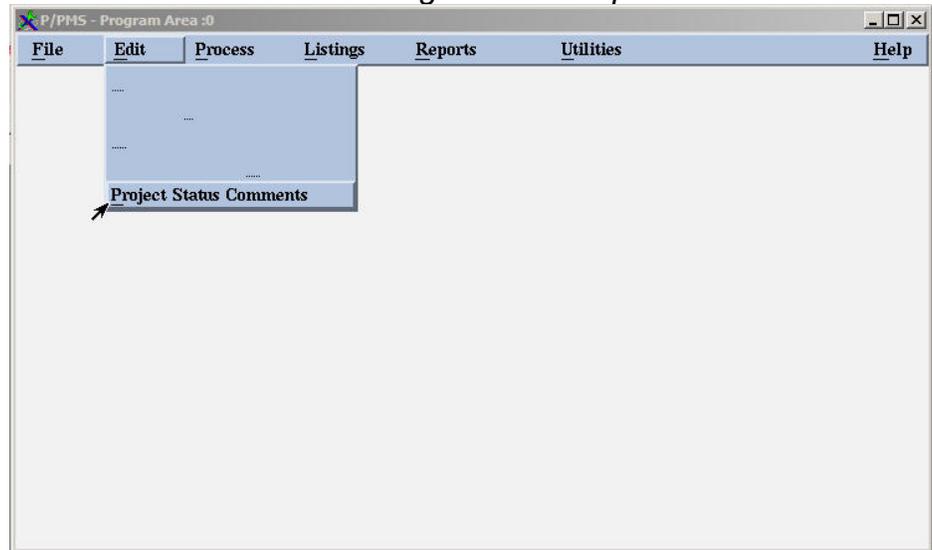


Figure 55-Program Area Proj Status Comment menu

2. Search for Selected Job

You will be presented with a selection screen which will allow you to search for the job(s) for which you want to add the Project Status Comments.

The screenshot shows a software interface for searching jobs. The title bar reads "Selection Screen: Query the data based on the following Criteria :0". A note at the top says "(This Report should be printed using the 8.5x11 paper size)". The interface is divided into several sections:

- Top Section:** Includes dropdown menus for "Beginning Year" (set to 2009) and "Ending Year" (set to 2009). It has radio buttons for "FY/Qtr" (checked) and "CY/Mth". There are also dropdowns for "1st" and "4th" quarters/months, and fields for "Region" and "TSC".
- Job Number:** A dropdown menu and a "Jobs" button.
- Job Types:** Radio buttons for "All Jobs" (checked), "In-House Jobs Only", and "Consultant Jobs Only".
- Jobs Managed By:** Fields for "Organization", "Org Group", and "User Name", each with a corresponding dropdown button. Below these are checkboxes for "Project Mgr", "Road Lead", and "Bridge Lead", all of which are checked. A note says "(Selected Checkboxes only apply to User Name)".
- Jobs Grouped By:** Fields for "Job Group", "Work Group", "Job Type", "Work Type", "Fund Template", "Task Number", and "Job Status", each with a dropdown button.
- Bottom Section:** A "Sorted By:" dropdown menu and a row of four large buttons: "Submit" (green), "Cancel" (red), "Query" (yellow), and "Clear" (black).

Figure 56-Selection Screen

The selection screen is divided into 6 parts however, some of the selection screen may be unavailable for some search options.

Top Section:

- Select jobs to be let between certain fiscal years (and quarters), or between certain calendar years (and months).
- May also narrow down those jobs in a specific region or TSC, and additionally may single out Build MI jobs.

Jobs Owned By:

- Allows selection of jobs owned by all PM's within one organizational unit, or by one specific project manager.

Tasks By:

- This section of the selection screen is unavailable for this function.

Sorted By:

- Output sorted order of: region, project manager, plan completion date, letting date, job status or work type.

Jobs Grouped By:

- Loosely top-down in increasing detail. Include jobs of:
- Job group – from expand/increased capacity to preventative maintenance.
- Work group – road, bridge, safety, traffic, landscape, rest area
- Job Type – 8 categories per WG i.e. Preserve: resurf/restore, Expand: relocation, etc.
- Funding templates
- Jobs containing certain task numbers in their network

Submit/Cancel:

You may submit the criteria for searching or cancel without searching.

**3. Choose Job & Click on Subrec**

Search results will be displayed based on your search criteria. Highlight the line for the job you wish to add the comments, and then click on the **Subrec** button.

RN:	Region	Sect	Job	Manager	Route	Plan Cmp	Letting	Status
270	NORTH	05031	53361	niemig	M-88	09-02-2005	04-07-2006	ARC
2542	Bay	32092	86010	phillipr	M-25	10-01-2008	10-03-2008	ARC
2927	SOUTHWEST	03023	87588	oneillm	M-39	04-04-2008	12-05-2008	PRG
24	UNIVERSITY	47082	31289	wallacek	M-59		12-05-2008	PRG
3063	METRO	82022	86420	gungg	M-94	06-30-2008	01-12-2007	URF
3213		84900	89250	akinjemo	Statewide	12-19-2008	05-01-2008	PRG
1669	SUPERIOR	02041	80180	kleikamm	M-28	05-07-2008	11-07-2008	PRG
1670	SUPERIOR	02041	80181	kleikamm	M-28	09-19-2008	03-06-2008	PRG
373	SUPERIOR	17063	60289	ruschd	M-28	06-05-2008	12-05-2008	PRG
3317	SUPERIOR	21022	52160	kleikamm	US-2/US-4		01-09-2008	PRG

5 RN:	Project Status Comments	Comment Date
1538	Submitted change request to move to FY2009 to coincide with	06-04-2007

RECORDSET: projcomms\_rec Find: 2 of 185 NSUB: 1

Exit Subrec

Figure 57-Search results

3. Click on **New**



Figure 58-Project Status Comments Button Options

A line will appear in the sub record where you can type in your project status comments

4. Add Comments

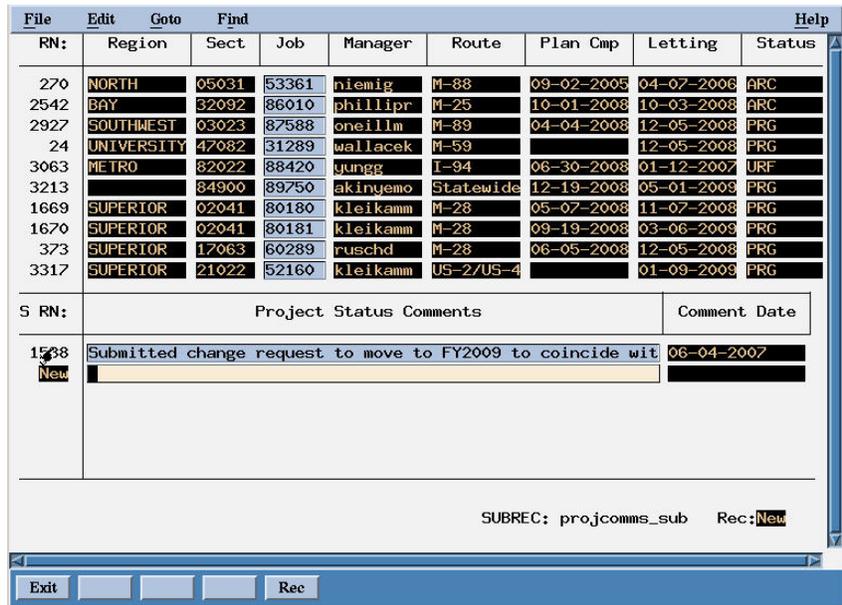


Figure 59-New Project Status Comment

5. Click on **Rec** or **Exit**

After comments are added, click **Exit** to save comments. The date entered will default to today's date.

- You can also add additional comments or delete a line of comments from the sub record as well by using the **New** or **Delete** button.
- To add comments to another job from the list, click **Rec** and you will go back to the list of jobs at the top.

All comments will be saved, but only the *most recent comments* will be displayed on the Project Status Report.

## 6.2.2 From the Job/Project Area with a Job or Version Open

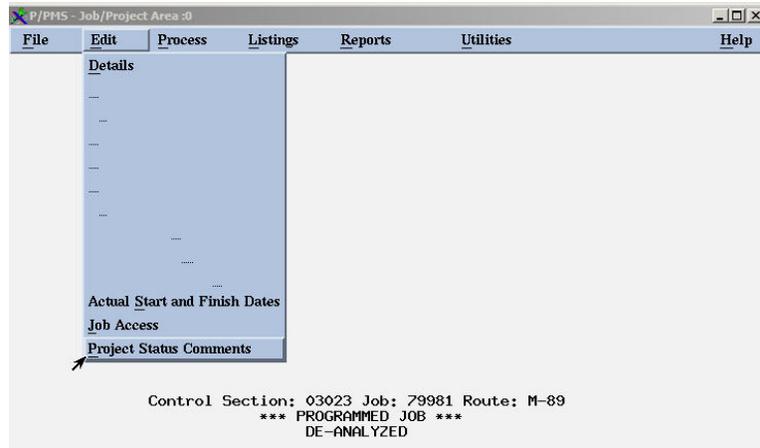


### Here's How

1. Select **Edit, Project Status Comments**

### Explanation

*Note: You must have your job or version open to perform this function*



**Figure 60-Edit, Project Status Comments**

You will be presented with a window showing all comments or remarks that have been made for that job number, if any have been made.

File	Edit	Goto	Find	Help					
RN:	Region	Sect	Job	Manager	Route	Plan Cmp	Letting	Status	
2129	SOUTHWEST	80024	83935	rudlaffk	I-94 EB	02-01-2007	05-04-2007	FRG	
S RN: Project Status Comments									
1255	Advertised for May 07 Letting.						04-13-2007		
RECORDSET: projcomms_rec Find: 1 of 1 NSUB: 1									
Exit Subrec									

**Figure 61-Project Status Comments Display**

2. Click on **Subrec**



Figure 62-Subrecord button

Click on the sub record button to drop to the sub record and enable your entry.

3. Click **Exit**

After comments are added, click **Exit** to save comments. The date entered will default to today's date.

- You can also add additional comments or delete a line of comments from the sub record as well by using the **New** or **Delete** button.
- All comments will be saved, but only the most recent comments will be displayed on the Project Status Report.



# Module 7: Reports

---

**After reading this section, you will learn:**

- Reporting Options, including:
  - Listings
  - Job/Project Area Reporting Options
    - Job reports
    - Task Reports
    - Milestone Reports
    - Resource Reports
  - Program Area Reporting Options
    - Project Status Reports
  - Web Reporting Options

## 7.1 Reports Overview

---

You've developed schedules for your jobs. You've submitted them to programming and they have been included in the appropriate programs. Now what?

Reports may be run:

- From the job/project area, with or without a job or version open.
- From the Program Area of PPMS,
- From the P/PMS Help Page via the Web

The types of reports available to you will vary depending on the area you are in.

*(See Appendix A for details on using the report viewer.)*

Several pre defined listings, reports and graphs are available under the **Listings and Reports** menus that let you review the progress your job is making, find out where problems may have arisen and communicate your situation to interested parties. Items of interest are listed below, arranged according to the menu structure.

### **Listings**

Use the **Tasks** listing to show the status of all of the individual tasks contained in your network. The report shows the Approved, Scheduled and Actual starts and finishes for each task in the network. It also shows the float and duration. This report is listed by scheduled date.

The **Tasks and Constraints** listing shows the logic associated with your network. Use this report to get a listing of the logic of your network before you make any changes to it.

The **Responsible Units** listing shows the unit responsible for reporting progress on a particular task.

The **Resources** listing shows the organizational codes assigned for each task and the number of hours that each unit is allotted to work on the task.

## Reports

### Jobs

To find out the status of schedules for all jobs assigned to you, select the **Job Status** report from this menu. This report identifies jobs you haven't initialized yet (new jobs), which ones need networks and which ones need to be refined as well as those already programmed. This is the same report that pops up when you log in.

Also available on this menu is the **PC and Letting Dates report**. This report is useful when working with a job to quickly determine the schedule's validity as it produces one line for the job showing the current schedule for Plan Completion and Letting with the latest approved letting date and float. If you run this report without having a job open, the report will have one line for each of your jobs, sorted by control section.

### Tasks

Use the **Late Tasks** report to determine which tasks for a particular job are late. This report shows the Approved, Scheduled, and Actual starts and finishes for all late tasks in a particular network. Use this report in conjunction with the **Responsible Units** listing to determine who to contact about the status of a particular task.

### Milestone

The **Milestone Status** report can be used to show the status of all of the milestones for a job. This report also shows the Approved, Scheduled and Actual dates for each milestone. This report will let the user know ahead of time which milestones are in jeopardy of slipping behind schedule and which have missed their completion dates.

Use the **Milestone Summary Gantt Chart** to see what your schedule looks like broken down by major process components. Design Scope Verification and Preliminary Plan Preparation are examples of the level of detail on the Summary Gantt. The schedule for the combined tasks that make up these summary level items will be displayed with the associated milestones directly below. This Gantt chart is useful in communicating the status of your job.

### Payroll

Payroll reports may be based on either DCDS (more detailed) or P/PMS (less detailed). Under DCDS, you may see reports by

job, employee, or resource. By job, you may choose the fiscal year of info you want. By employee and resource, you can pick the FY and quarter. Under P/PMS, you have the option of payroll by job, manager, resource, or batch for all jobs, and the subsequent picks work similar to the DCDS. You can use these reports to see what unit/people have logged time and money against a given job, or you can see how many hours and dollars have been logged by your unit against all jobs, among other things.

## 7.2 Job Reports

---

Reports serve as an important means for reviewing the validity of your network. There is a reports menu with various types of reports. All reports are generated from this menu.

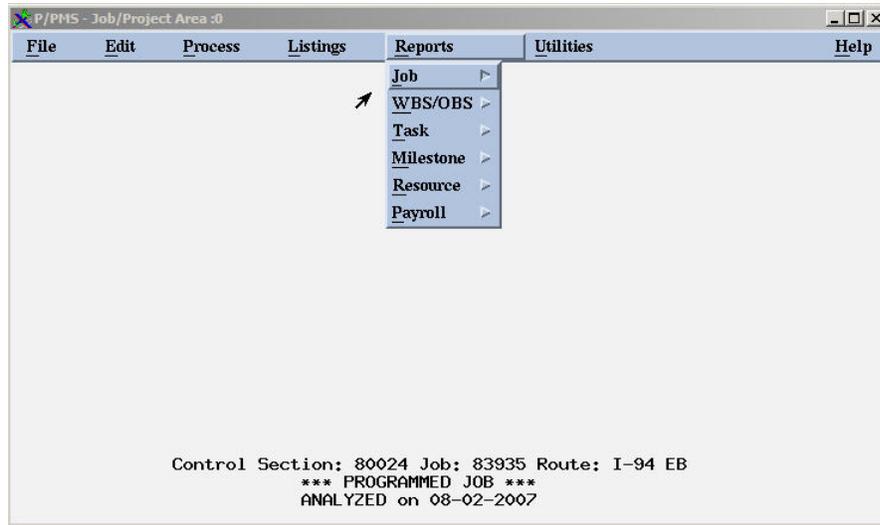


Figure 63-Report Menu

First we will discuss reporting options in the job project area. There are various job reports that will give you all kinds of useful info about the status and schedule of your jobs and their tasks, milestones, and resources.

You have already seen some useful reports such as the job status report (Module 1.2).

## 7.2.1 Plan Completion and Letting Report

This report is similar to the Job Status report, as it shows approved and scheduled plan completion dates and Lettings, and float. It may be run with or without a job or version open.



**Here's How**

1. Go to **Reports, job, PC and Letting.**

### Explanation

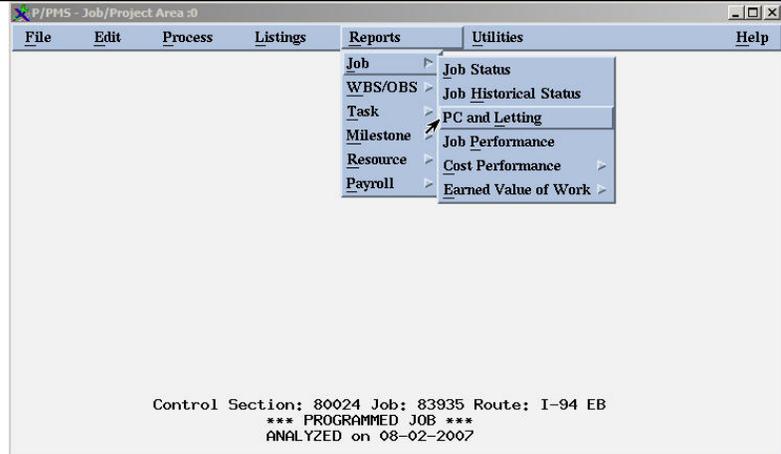


Figure 64-Job reporting menu

**Note:** If you do not have a job or version open, you are prompted to select a project manager to run the report on and your sorting options:



Figure 65-Project Manager Selection

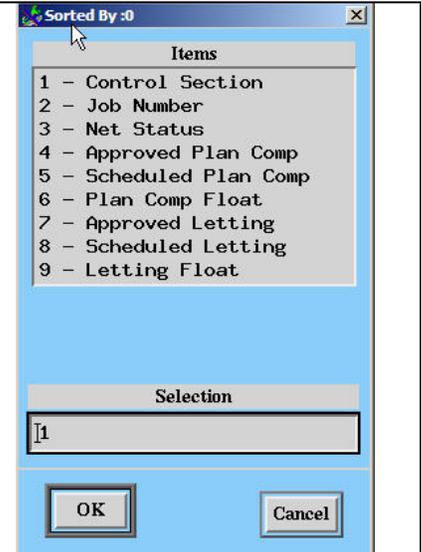


Figure 66-Sorting Options

Default Sorting Option is by Control Section

In this sample, this report was run from the Job/Project Area with no job or version open, and we chose the Project manager:

MICHIGAN DEPARTMENT OF TRANSPORTATION - P/PMS												
PC and Letting Report												
For: Zielinski, Robert												
Produced by: tuckerm											Page: 1 of 1	
Produced on: 04-10-2009 15:53												
Project Manager	Control Section	Job Number	Ver	Route	Location Description	Net Status	Approved Plan Comp	Scheduled Plan Comp	Float (App-Sch)	Approved Letting	Scheduled Letting	Float (App-Sch)
zielinsr	25084	87660	1	I-69	from I-475 to Center Ro	PRG	06-08-2012	04-21-2009	780	12-07-2012	11-06-2009	764
zielinsr	25132	87636	1	I-475	At Pierson Road and at	PRG	09-04-2007	09-04-2007*	0	12-07-2007	12-07-2007*	0
zielinsr	25132	87641	1	I-475	Interchanges at Broadwa	PRG	09-04-2007	09-04-2007*	0	12-07-2007	12-07-2007*	0
zielinsr	25132	87717	1	I-475	At the Stewart intercha	PRG	04-02-2007	03-27-2007*	0	07-06-2007	07-06-2007*	0
zielinsr	33044	87676	1	I-496	From Lansing Road to US	PRG	12-05-2007	09-28-2007*	0	03-07-2008	01-04-2008	43
zielinsr	33083	100287	1	I-96	I-96/Cedar St Interchan	PRG	06-01-2011	04-21-2011	28	01-06-2012	12-02-2011	21
zielinsr	41027	87457	1	I-196	the Grand River East to	PRG	04-03-2009	04-25-2008	232	12-04-2009	01-09-2009	227
zielinsr	41029	87395	1	I-196	at M-11 (28th Street) I	PRG	07-20-2007	07-03-2007*	0	10-05-2007	10-05-2007	0
zielinsr	41029	90110	1	I-196	M-45 East to Monroe Ave	PRG	09-03-2010	03-25-2009	363	03-04-2011	10-02-2009	348
zielinsr	41131	87397	1	US-131	I-196 North to Ann Stre	PRG	09-03-2010	05-07-2008	580	03-04-2011	11-07-2008	571
zielinsr	41131	87456	1	US-131	M-11 North to Wealthy S	PRG	02-04-2008	02-19-2008	-10	10-03-2008	11-07-2008	-24
zielinsr	50061	86812	1	I-696	at Mound Road	PRG	10-04-2007	10-09-2007*	0	03-07-2008	04-04-2008*	0
zielinsr	50111	87499	1	I-94	at I-696	PRG	04-01-2010	07-15-2008	424	10-01-2010	02-06-2009	414
zielinsr	63043	86813	1	M-59	at Opdyke Road	PRG	10-04-2007	10-02-2007*	0	03-07-2008	03-07-2008*	0
zielinsr	63043	87497	1	M-59	from Opdyke to Widetrac	PRG	04-01-2009	04-01-2009	0	10-02-2009	10-02-2009	0
zielinsr	70014	56925	1	US-31	at M-104 Interchange	PRG	03-04-2008	08-21-2007	130	09-05-2008	03-07-2008	127
zielinsr	82022	59731	1	I-94	W/I-275 - W/MERRIMAN	PRG	07-06-2015	01-18-2008	1854	10-09-2015	05-02-2008	1849
zielinsr	82023	86811	1	I-94	at M-10	PRG	04-01-2009	09-24-2007	375	10-02-2009	04-04-2008	374
zielinsr	82023	87498	1	I-94	East of I-96 to West of	PRG	04-01-2009	01-30-2008	291	10-02-2009	08-01-2008	291
zielinsr	82025	100497	1	I-94	Gratiot Avenue to 8 Mil	PRG	04-01-2011	08-02-2010	163	10-07-2011	03-04-2011	152
zielinsr	82193	87496	1	M-39	from South of McNichols	PRG	06-02-2008	04-16-2008	32	12-05-2008	11-07-2008	17

Sorted By: Control Section, Job Number

Note: - 'PRG' = Programmed, Network approved and included in the P/PMS Program.  
 - 'REF' = Refined, Network submitted, waiting for approval, 'URF' = Unrefined, Network needs PM review and submittal.  
 - 'GEN' = Generic, Network needs Management Units entered, 'UNG' = Ungenerated, Network started but not generated.  
 - '\*' after the Scheduled Plan Comp or Letting Date indicates an Actual has been entered.  
 - Float is displayed in work days. (Negative Float = behind schedule, Positive Float = ahead of schedule)

Figure 67-Sample PC & Let report

Here is a Sample of this same report, run from an Open Job. Only the information from that selected job appears:

MICHIGAN DEPARTMENT OF TRANSPORTATION - P/PMS												
PC and Letting Report												
Control Section: 02041 Job: 80181 Route: M-28												
Produced by: tuckerm											Page: 1 of 1	
Produced on: 04-10-2009 11:00												
Project Manager	Control Section	Job Number	Ver	Route	Location Description	Net Status	Approved Plan Comp	Scheduled Plan Comp	Float (App-Sch)	Approved Letting	Scheduled Letting	Float (App-Sch)
kleikamm	02041	80181	1	M-28	Autrain Easterly to Chr	PRG	09-19-2008	06-18-2009	-183	03-06-2009	12-04-2009	-189

Sorted By: Control Section, Job Number

## 7.3 Task Reports

There are task reports available to check the status and progress of job tasks. With your job or version open, you would find them under reports, task.

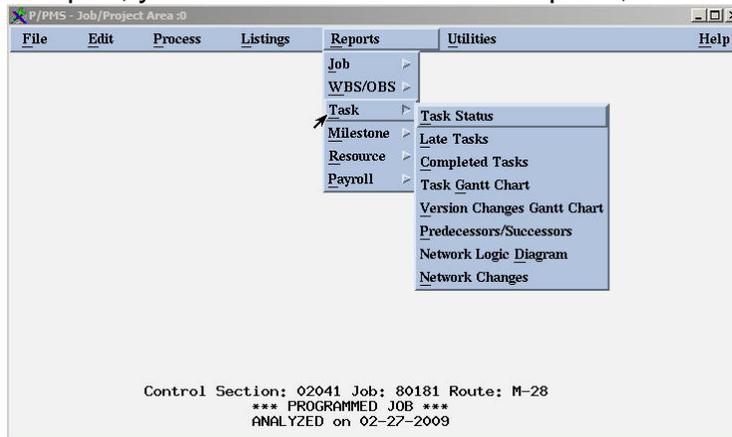


Figure 68- Task Report Selection Menu

Most of these reports involve the selection screen shown here:

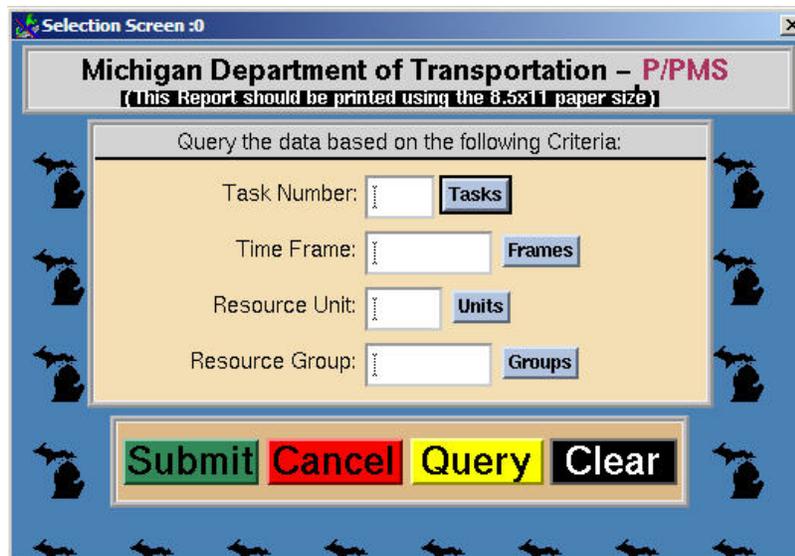


Figure 69- Report Selection Screen

You can choose:

- tasks scheduled in a precise time frame, or
- tasks performed by an individual unit or group of units.
- If you leave all options blank, it will give you information for all tasks in that job.

## 7.3.1 Task Status Report

This is an example of a **Task Status Report**. This report shows tasks, durations, unit, approved, scheduled and actual dates and float.

Task Number	Task Description	Duration	Resp Unit	Approved Start	Approved Finish	Scheduled Start	Scheduled Finish	Actual Start	Actual Finish	Float
2120	Prepare Traffic Analysis Report	4	67800	08-24-2007	08-29-2007	06-20-2008	06-25-2008	**--**	**--**	-204
2155	Request/Perform Safety Analysis	10	48710	03-17-2008	03-28-2008	06-20-2008	07-03-2008	**--**	**--**	-68
3160	Obtain Design Survey Consultant	35	36600	08-30-2007	10-18-2007	06-26-2008	08-14-2008	**--**	**--**	-204
3565	Preliminary Constructability Review	9	33330	06-02-2008	06-12-2008	06-26-2008	07-09-2008	**--**	**--**	-18
3130	Verify Design Scope of Work and Cost	21	33330	03-31-2008	04-28-2008	08-15-2008	09-15-2008	**--**	**--**	-97
3150	CE Environmental Clearance Coordination	47	67300	09-26-2008	12-05-2008	08-15-2008	10-21-2008	**--**	**--**	29
3350	Conduct Hydraulics Survey	70	36600	10-19-2007	02-05-2008	08-15-2008	11-25-2008	**--**	**--**	-204
3370	Prepare Structure Study	65	39300	01-28-2008	04-28-2008	08-15-2008	11-18-2008	**--**	**--**	-141
3520	Conduct Hydraulic/Hydrologic and Scour Analysis	200	39700	10-19-2007	08-08-2008	08-15-2008	06-08-2009	**--**	**--**	-204
3530	Conduct Structure Foundation Investigation	120	41800	02-21-2008	08-08-2008	08-15-2008	06-08-2009	**--**	**--**	-204
3535	Conduct Structure Architectural and Aesthetic Review	22	37700	07-10-2008	08-08-2008	08-15-2008	09-16-2008	**--**	**--**	-26
3720	Assemble Environmental Permit Application Information	60	67400	08-25-2008	12-05-2008	08-15-2008	12-12-2008	**--**	**--**	-5
3730	Obtain Environmental Permits	70	67400	08-25-2008	12-05-2008	08-15-2008	11-25-2008	**--**	**--**	6
312M	Department Concurrence of Design Scope	0	33330	04-25-2008	04-25-2008	09-12-2008	09-12-2008	**--**	**--**	-97
3390	Develop Maintaining Traffic Concepts	5	48710	06-06-2008	06-12-2008	09-16-2008	09-22-2008	**--**	**--**	-70
3510	Perform Roadway Geotechnical Investigation	33	41100	06-24-2008	08-08-2008	09-16-2008	10-30-2008	**--**	**--**	-58
3540	Develop Maintaining Traffic Plan	12	48710	07-24-2008	08-08-2008	09-16-2008	10-01-2008	**--**	**--**	-37
3560	Conduct Preliminary Geometrics and Roadside Safety Reviews	20	47700	08-25-2008	09-22-2008	09-16-2008	10-13-2008	**--**	**--**	-15
3710	Develop Required Mitigation	60	67400	09-09-2008	12-05-2008	09-16-2008	12-12-2008	**--**	**--**	-5
3580	Develop Preliminary Plans	40	33330	06-13-2008	08-08-2008	09-23-2008	06-08-2009	**--**	**--**	-204
311M	Utility Notification	0	33330	03-12-2008	03-12-2008	09-30-2008	09-30-2008	**--**	**--**	-141
3570	Prepare Preliminary Structure Plans	72	39300	04-29-2008	08-08-2008	11-19-2008	06-08-2009	**--**	**--**	-204
3590	Review Preliminary Plans - THE Plan Review	30	38000	08-11-2008	09-22-2008	06-09-2009	07-21-2009	**--**	**--**	-204
3860	Final Constructability Review	9	33330	12-11-2008	12-23-2008	06-09-2009	06-19-2009	**--**	**--**	-121
352M	THE Plan Review	0	38000	09-08-2008	09-08-2008	07-07-2009	07-07-2009	**--**	**--**	-204
3840	Develop Road Final Plans and Specifications	14	33330	11-14-2008	12-05-2008	07-08-2009	09-30-2009	**--**	**--**	-204
3850	Develop Structure Final Plans and Specifications	60	39300	09-09-2008	12-05-2008	07-08-2009	09-30-2009	**--**	**--**	-204
3810	Conduct Final Geometrics and Roadside Safety Reviews	11	47700	12-16-2008	01-05-2009	07-22-2009	08-05-2009	**--**	**--**	-148
3822	Complete Pavement Marking Plan	2	48710	12-04-2008	12-05-2008	07-22-2009	07-23-2009	**--**	**--**	-156
3830	Complete Maintaining Traffic Plan	5	48710	12-01-2008	12-05-2008	07-22-2009	07-28-2009	**--**	**--**	-159
380M	Plan Completion	0	33330	12-08-2008	12-08-2008	10-01-2009	10-01-2009	**--**	**--**	-204
3870	Omissions/Errors Check Plan Review	16	33330	12-09-2008	01-05-2009	10-02-2009	10-23-2009	**--**	**--**	-204
387M	Omissions/Errors Check Meeting	0	33330	12-23-2008	12-23-2008	10-16-2009	10-16-2009	**--**	**--**	-204
389M	Plan Turn In	0	37900	01-09-2009	01-09-2009	10-29-2009	10-29-2009	**--**	**--**	-204
3910	Prepare Final Job Package and Obtain Authorization	9	37900	01-12-2009	01-23-2009	10-30-2009	11-12-2009	**--**	**--**	-204

Figure 70-Sample Task Status Report

The **Late Tasks report** and **Completed Tasks Report** are similar, only they show just the late tasks or completed tasks for that network.



### 7.3.3 Network Logic Diagram

A network logic diagram is a graph showing the logical sequence of network tasks, their interrelationships, and those tasks that make up the critical path for the open job or version.

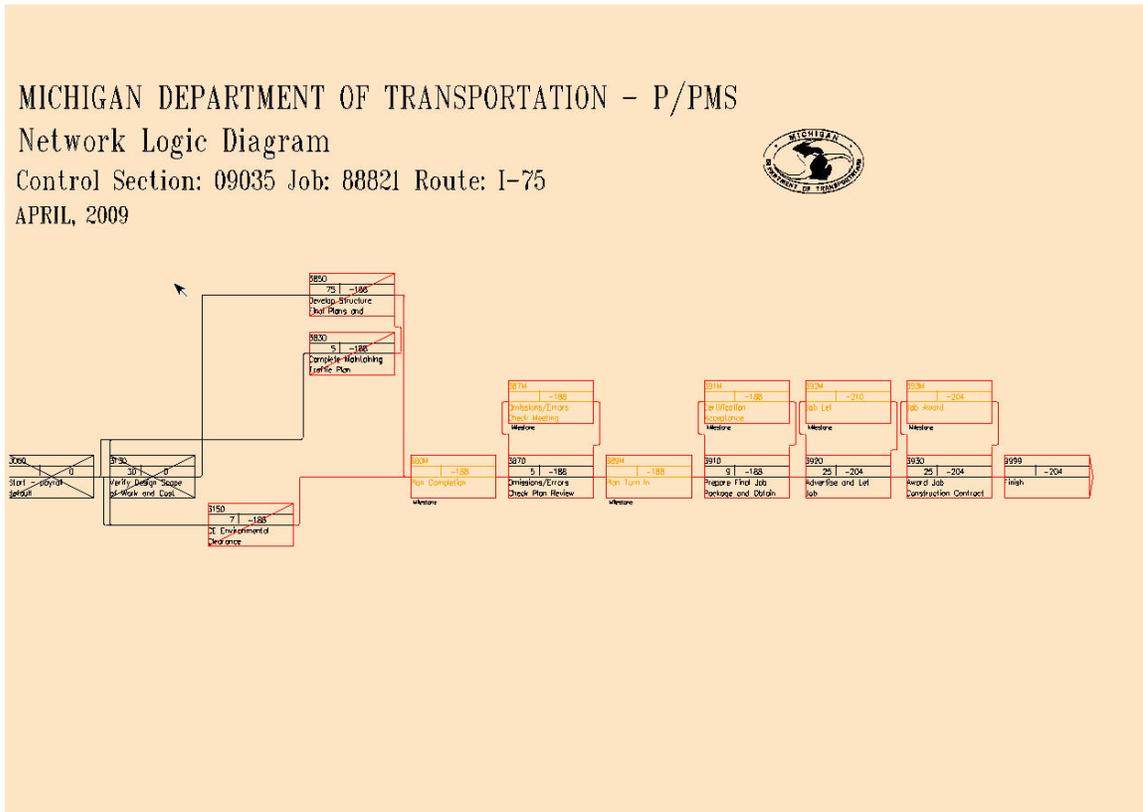


Figure 72- Sample Network Logic Diagram

- If a task has started, a line will be drawn from the lower left corner to the upper right corner of the task box.
- If the task has finished, an x will be drawn through the box.

This diagram can be formatted for a large plotter or laser printer, depending on the detail the user would like to see.

- The laser print will only show the task numbers and relationships.
- If you are able to send the network to an 11 x 17 printer, you will be able to view task descriptions and other task information.

To zoom in on any area of the chart, left click and hold the mouse, drag the outline over desired selection and release.

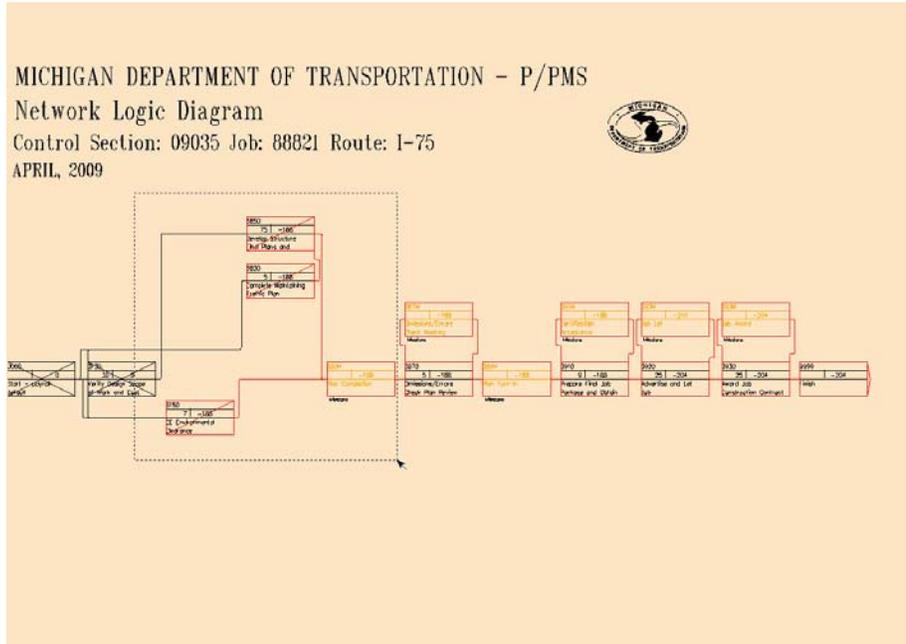


Figure 73- Zoom in Selection

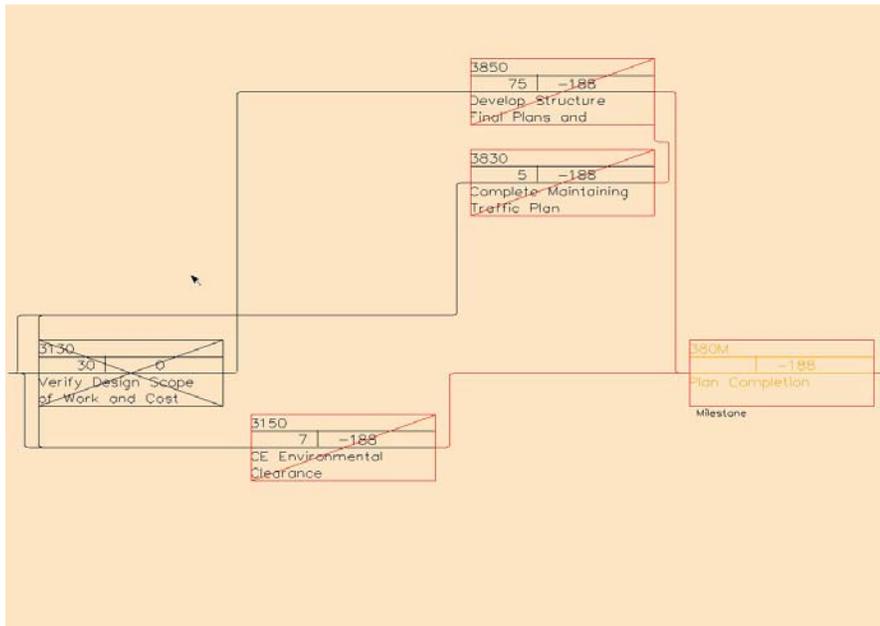


Figure 74- Zoom results

## 7.4 Milestone Reports

In addition to job and task reports, there are also milestone reports which give more of an overview of a job's status. These reports use the same selection screen (see figure 66) as used for tasks, and provide similar reports.

### 7.4.1 Milestone Summary Gantt Chart

You may also view a Milestone Summary in table or Gantt chart form.

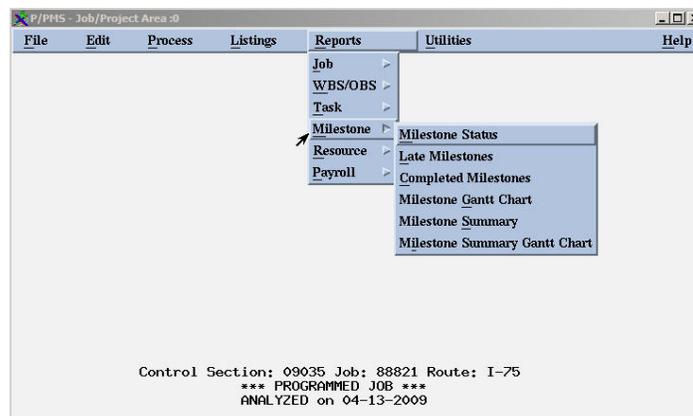


Figure 75-Milestone Reports Menu

The screenshot shows a software window titled '/usr/tmp/u004125586 :0'. The menu bar includes File, Goto, and Help. The main content area displays the following text: 'MICHIGAN DEPARTMENT OF TRANSPORTATION - P/PMS Milestone Status Report Control Section: 09035 Job: 88821 Route: I-75 NB & SB over North Branc'. Below this, it says 'Produced by: tuckerm' and 'Produced on: 04-13-2009 10:55'. The page number is 'Page: 1 of 1'. A table follows with the following data:

Task Number	Milestone Description	Resp Unit	Approved Date	Scheduled Date	Actual Date	Float
380M	Plan Completion	39300	07-09-2008	01-09-2008	***-**-****	126
387M	Omissions/Errors Check Meeting	39300	07-14-2008	01-14-2008	***-**-****	126
389M	Plan Turn In	37900	11-24-2008	05-23-2008	***-**-****	126
391M	Certification Acceptance	37900	11-25-2008	05-27-2008	***-**-****	126
392M	Job Let	22700	01-09-2009	07-11-2008	***-**-****	121
393M	Job Award	22700	02-25-2009	08-18-2008	***-**-****	126

Sorted By: Control Section, Job Number, Scheduled Date, Task Number

At the bottom of the window, there are buttons for Exit, Continue, Select, Another, Find, and Print.

Figure 76-Sample Milestone Status Report

# 7.5 Resource Reports

There are Resource Reports available on who's working on the job. Again, these also make use of the previously shown selection screen (see figure 66).

Resource reports tie directly to the availabilities. You may have been involved in availability requests each year, detailing how much of each person's time in a unit is dedicated to design unique tasks.

## 7.5.1 Responsibilities Work Schedule Report

Here is a sample of a Responsibilities Work Schedule Report. You can choose tasks by a specific time frame and the responsibility of an individual unit or group of units.

Task Number	Task Description	Dur	Budgeted Hours	Actual Hours	Approved Start	Approved Finish	Scheduled Start	Scheduled Finish	Actual Start	Actual Finish	Float
For Responsible Unit: 22200 - Contract Services Division											
3920	Advertise and Let Job	25	6.0	0.0	12-10-2008	01-20-2009	06-09-2008	07-14-2008	*****	*****	126
392M	Job Let		0.0	0.0	01-09-2009	01-09-2009	07-11-2008	07-11-2008	*****	*****	121
3930	Award Job Construction Contract	25	2.0	0.0	01-21-2009	02-25-2009	07-15-2008	08-18-2008	*****	*****	126
393M	Job Award		0.0	0.0	02-25-2009	02-25-2009	08-18-2008	08-18-2008	*****	*****	126
For Responsible Unit: 32900 - QA - Stds/Cert/Value Engineering											
389M	Plan Turn In		0.0	0.0	11-24-2008	11-24-2008	05-23-2008	05-23-2008	*****	*****	126
3910	Prepare Final Job Package and Obtain Authorization	9	28.0	0.0	11-25-2008	12-09-2008	05-27-2008	06-06-2008	*****	*****	126
391M	Certification Acceptance		0.0	0.0	11-25-2008	11-25-2008	05-27-2008	05-27-2008	*****	*****	126
For Responsible Unit: 39300 - Bridge 5											
3850	Develop Structure Final Plans and Specifications	75	540.0	0.0	03-24-2008	07-08-2008	09-17-2007	01-08-2008	01-14-2008	*****	126
380M	Plan Completion		0.0	0.0	07-09-2008	07-09-2008	01-09-2008	01-09-2008	*****	*****	126
3870	Omissions/Errors Check Plan Review	5	13.0	0.0	07-10-2008	07-16-2008	01-10-2008	01-16-2008	*****	*****	126
387M	Omissions/Errors Check Meeting		0.0	0.0	07-14-2008	07-14-2008	01-14-2008	01-14-2008	*****	*****	126
For Responsible Unit: 48820 - Bay City TSC Traffic & Safety											
3830	Complete Maintaining Traffic Plan	5	14.0	0.0	07-01-2008	07-08-2008	08-03-2007	08-09-2007	02-11-2008	*****	226
For Responsible Unit: 62300 - Clearance & Cultural Resource Coordination											
3150	CE Environmental Clearance Coordination	7	13.0	0.0	06-27-2008	07-08-2008	08-03-2007	08-13-2007	01-07-2008	*****	224

Sorted By: Resp Unit, Control Section, Job Number, Scheduled Start, Task Number

Note: - Only those tasks for which the unit is responsible for actuals are reported here.

Figure 77-Sample responsibilities Work Schedule report

## 7.6 Program Area Reports

---

In addition to the reports highlighted earlier, you may also be interested in reviewing some program reports. The program area contain all reports as in the job project area, with some modifications

Program reports can be found in the program area of PPMS. Many of these reports allow you to see data regardless of a job's status. The PPMS statewide master program is analyzed nightly. If you need program report information more expediently than that, PPMS personnel can analyze the program in a matter of minutes.

### 7.6.1 Program Reports Selection Screen

---

The Program Reports use an extensive selection screen, allowing you to make your choices as broad or as narrow as you wish. Certain areas of the screen may be unavailable for certain types of reports. The selection screen is divided into 6 parts.

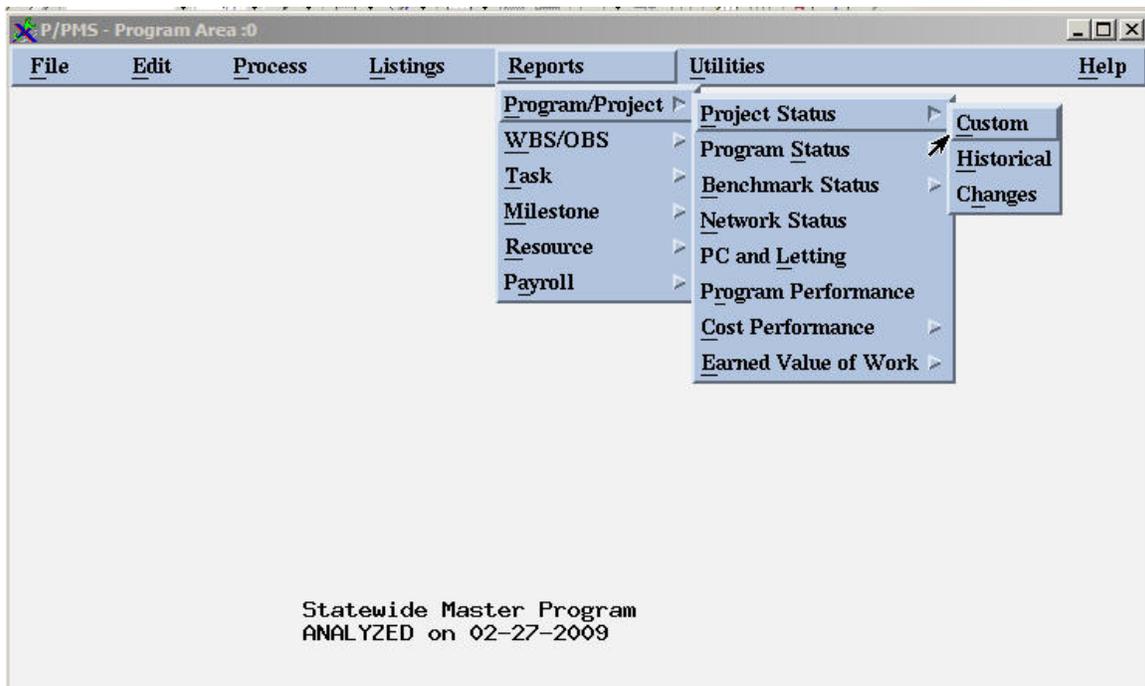


Figure 78- Program Area Reports Menu

The screenshot shows a software interface titled "Selection Screen: Query the data based on the following Criteria :0". At the top, a note states "(This Report should be printed using the 8.5x11 paper size)". The interface is organized into several functional areas:

- Top Section:** Contains dropdown menus for "Beginning Year" (set to 2009) and "Ending Year" (set to 2009). It also includes options for "FY/Qtr" (selected) and "CY/Mth", with sub-selects for "Years" and "Qtrs/Mths". There are also fields for "Region" (with a "Regions" button) and "TSC" (with a "TSCs" button), and a "Job Number" field (with a "Jobs" button).
- Job Selection:** Includes checkboxes for "All Jobs" (checked), "In-House Jobs Only", and "Consultant Jobs Only".
- Jobs Managed By:** A section for filtering by user or organization, including fields for "Organization", "Org Group", and "User Name" (with a "Users" button). Below this, it notes "(Selected Checkboxes only apply to User Name)" and has checkboxes for "Project Mgr", "Road Lead", and "Bridge Lead", all of which are checked.
- Jobs Grouped By:** A section for hierarchical grouping, including fields for "Job Group", "Work Group", "Job Type", "Work Type", "Fund Template", "Task Number", and "Job Status" (set to "AAA").
- Tasks/Resources Grouped By:** A section for further filtering, including fields for "Time Frame", "Resource Unit", and "Resource Group".
- Sorted By:** A dropdown menu for sorting options.
- Buttons:** A row of four buttons at the bottom: "Submit" (green), "Cancel" (red), "Query" (yellow), and "Clear" (black).

Figure 79- Program Reporting Selection Screen

1. The Top Section lets you Select jobs to be let between certain fiscal years and quarters, or between certain calendar years and months. You May also narrow down to those jobs in a specific region or TSC, and additionally may view data on a single job.
2. The Jobs Managed By section allows selection of jobs owned by all Project managers within one organizational unit, or by one specific project manager.
3. The Jobs Grouped By section is loosely top-down in increasing detail. You may choose from:
  - a. Job groups: from Expand or Increased Capacity to Preventative Maintenance.
  - b. Work Group: including Road, Bridge, Safety, Traffic, Landscape, or Rest Area.

- c. Job Type: includes 8 categories per work group, such as Resurface or Restore. Reconstruct or Widen. Relocation, etc.
  - d. You may also select specific Work Types, Funding Templates, jobs containing certain task numbers in their networks, or jobs of a certain job status within MPINS.
4. The Tasks or Resources Grouped By section allows you to select tasks scheduled to start within a certain time frame, with involvement by a certain unit or group of units. The Sorting options allow you to choose the order the data is output: by Project Manager, plan completion date, letting date, job control section, etc. Finally, the Submit or Clear options allow you to submit the criteria for generating the report or reset and re-select your choices without generating a report. Once you enter the submit button, the system will process your request and present you with your chosen report options.
  5. The Sorting option allow you to choose the order the data is output: by Project Manager, plan completion date, letting date, job control section, etc.
  6. Finally, the Submit or Clear options allow you to submit the criteria for generating the report or reset and re-select your choices without generating a report. Once you enter the submit button, the system will process your request and present you with your chosen report options.

## 7.6.2 Project Status Report

The Project status report shows the status of selected jobs by major milestone approved and scheduled dates. This report is formatted as an 11 x 17 size report so you will not be able to view the entire report on the screen without utilizing your scroll bars.

With P/PMS in the Project Area, go to **Reports, Program/Project, Project Status**

MICHIGAN DEPARTMENT OF  
Project St  
FY 2009 1st  
Design In  
Approved, Active, Awarded.

Produced by: TUCKERM  
Produced on: 04-13-2009 12:51

Region	Control Section Number	Job Number	Project Manager	Road Leader	Bridge Leader	Location Route Description	Work Type	Work Description	Fund Taplt	Const Cost\$M	Net Status	Env Clr	SRV Inv	ROM Inv	Approved Base Plans	Schedule Base PI
*** NON-LETTING JOBS (Studies or B-Phase Abandoned/Suspended) ***																
	84900	105407	kellejd			Stat- Indian owide Trails	195			\$0.0	GEN		YES	YES		
	Job Subtotal: 1									Const Cost Subtotal: \$0.0						
SUPERIOR	84911	104838	maloneya			Regi- Superior onwl- Region de	473	STUDIES/SC- OPING		\$0.0	NEW	CL				
	Job Subtotal: 1									Const Cost Subtotal: \$0.0						
NORTH	84912	104538	deanng			Regi- North onwl- Region de	473	STUDIES/SC- OPING		\$0.0	NEW	CL				
	Job Subtotal: 1									Const Cost Subtotal: \$0.0						
BAY	32092	86010	phillipr	phillipr		M-25 Huron City Road to M-53	190	NON-MOTORI- ZED PATH	020	\$0.8	ARC	CL	NO	NO		
BAY	73101	87639	ziamerk	zielinsr		I-675 From South NB Junction of I	185	MISCELLANE- OUS ROADSIDE	046	\$1.0	PRG	CL	NO	NO		
BAY	84914	104856	Friends			Regi- Bay Region onwl- de	473	STUDIES/SC- OPING		\$0.0	NEW	CL	NO	NO		
BAY	84914	104857	Friends			Regi- Bay Region onwl- de	193	STUDIES		\$0.0	NEW	CL	NO	NO		
	Job Subtotal: 4									Const Cost Subtotal: \$1.8						

Figure 80- 1<sup>st</sup> half of Project Status Report

File Help  
TRANSPORTATION - P/PMS  
atus Report  
- 4th Quarter  
Formation  
Completed & Research Jobs

Page: 1 of 13

ed	Approved	Scheduled	Approved	Scheduled	Project								
ans	Plan	Plan	Comments										
	Revw	Revw	Comp	Comp									
			02-28-2012								12-05-2008		
											10-03-2008		
											10-03-2008		
	07-11-2007	07-24-2007	08-31-2007	09-14-2007	09-17-2007	09-28-2007	09-25-2007	10-08-2007	11-02-2007	12-07-2007			Submitted change request to move to FY2009 to coincide with CM90 project.
	03-13-2008	02-26-2008	04-04-2008	05-08-2009	04-18-2008	05-22-2009	09-16-2008	10-20-2009	11-07-2008	01-08-2010			
											10-03-2008		
											10-03-2008		
007*	03-06-2008	02-13-2008	04-04-2008	07-28-2009	04-23-2008	08-14-2009	10-08-2008	02-08-2010	12-05-2008	04-02-2010			Consultant to begin August. On schedule for Dec. Letting. MLO
											02-06-2009		

Figure 81- 2<sup>nd</sup> half of Project Status Report

## 7.6.3 Resource Summary Report

Any hours on unfinished tasks scheduled within a certain month are rolled up and compared to the reported availabilities total for that month. This information can be viewed in the Resource Summary Report. This information can help enable important staffing decisions to be made.

MICHIGAN DEPARTMENT OF TRANSPORTATION - P/PMS									
Resource Summary Report									
Control Section: 09035 Job: 88821 Route: I-75									
NB & SB over North Branch									
Produced by: tuckerm								Page: 1 of 4	
Produced on: 04-13-2009 11:05									
From Date	To Date	Budgeted Hours per Period	Budgeted Hours per Day	Available Hours per Period	Available Hours per Day	Overload Hours per Period	Overload Hours per Day	Underload Hours per Period	Underload Hours per Day
<b>For Resource: 22700 - Contract Services Division</b>									
09-01-2009	09-30-2009	2.05	0.10	866.88	41.28	0.00	0.00	864.83	41.18
10-01-2009	10-31-2009	2.22	0.15	908.16	41.28	0.00	0.00	904.94	41.13
11-01-2009	11-30-2009	1.77	0.10	743.04	41.28	0.00	0.00	741.27	41.18
12-01-2009	12-31-2009	0.96	0.05	825.60	41.28	0.00	0.00	824.64	41.23
<b>TOTALS:</b>		<b>8.00</b>	<b>0.40</b>	<b>3343.68</b>	<b>165.12</b>	<b>0.00</b>	<b>0.00</b>	<b>3335.68</b>	<b>164.72</b>
<b>For Resource: 31620 - Bay City TSC Utilities &amp; Permits</b>									
04-01-2009	04-30-2009	16.00	0.73	88.00	4.00	0.00	0.00	72.00	3.27
<b>TOTALS:</b>		<b>16.00</b>	<b>0.73</b>	<b>88.00</b>	<b>4.00</b>	<b>0.00</b>	<b>0.00</b>	<b>72.00</b>	<b>3.27</b>
<b>For Resource: 33620 - Bay City TSC Dev/Design</b>									
01-01-2008	01-31-2008	5.25	0.25	1221.36	58.16	0.00	0.00	1216.11	57.91
02-01-2008	02-29-2008	1.75	0.09	1163.20	58.16	0.00	0.00	1161.45	58.07
08-01-2009	08-31-2009	0.22	0.01	1241.52	59.12	0.00	0.00	1241.30	59.11
09-01-2009	09-30-2009	0.78	0.04	1120.56	53.36	0.00	0.00	1119.78	53.32
<b>TOTALS:</b>		<b>8.00</b>	<b>0.39</b>	<b>4746.64</b>	<b>228.80</b>	<b>0.00</b>	<b>0.00</b>	<b>4738.64</b>	<b>228.41</b>
<b>For Resource: 37900 - QA - Stds/Cert/Value Engineering</b>									
08-01-2009	08-31-2009	6.22	0.30	67.20	3.20	0.00	0.00	60.98	2.90
09-01-2009	09-30-2009	21.78	1.04	67.20	3.20	0.00	0.00	45.42	2.16
<b>TOTALS:</b>		<b>28.00</b>	<b>1.34</b>	<b>134.40</b>	<b>6.40</b>	<b>0.00</b>	<b>0.00</b>	<b>106.40</b>	<b>5.06</b>
<b>For Resource: 38000 - QA - Plan &amp; Field Review</b>									
01-01-2008	01-31-2008	5.25	0.25	705.60	33.60	0.00	0.00	700.35	33.35
02-01-2008	02-29-2008	1.75	0.09	672.00	33.60	0.00	0.00	670.25	33.51
04-01-2009	04-30-2009	8.00	0.36	739.20	33.60	0.00	0.00	731.20	33.24
<b>TOTALS:</b>		<b>15.00</b>	<b>0.70</b>	<b>2116.80</b>	<b>100.80</b>	<b>0.00</b>	<b>0.00</b>	<b>2101.80</b>	<b>100.10</b>
<b>For Resource: 39300 - Bridge 5</b>									
01-01-2008	01-31-2008	52.57	2.50	1335.60	63.60	0.00	0.00	1283.03	61.10
02-01-2008	02-29-2008	44.73	2.24	1272.00	63.60	0.00	0.00	1227.27	61.36
03-01-2008	03-31-2008	36.46	1.74	1335.60	63.60	0.00	0.00	1299.14	61.86
04-01-2008	04-30-2008	38.20	1.74	1399.20	63.60	0.00	0.00	1361.00	61.86
05-01-2008	05-31-2008	36.46	1.74	1335.60	63.60	0.00	0.00	1299.14	61.86
06-01-2008	06-30-2008	36.46	1.74	1335.60	63.60	0.00	0.00	1299.14	61.86
07-01-2008	07-31-2008	38.20	1.74	1355.20	61.60	0.00	0.00	1317.00	59.86
08-01-2008	08-31-2008	36.46	1.74	1293.60	61.60	0.00	0.00	1257.14	59.86
09-01-2008	09-30-2008	36.46	1.74	1293.60	61.60	0.00	0.00	1257.14	59.86
10-01-2008	10-31-2008	39.94	1.74	1416.80	61.60	0.00	0.00	1376.86	59.86
11-01-2008	11-30-2008	27.78	1.74	934.40	58.40	0.00	0.00	906.62	56.66

Figure 82-Resource Summary Report

## 7.6.4 Resource Histogram

A Resource Histogram is a report that graphically displays the resource quantity required, available, and overloaded over time for an open job, version or multi job project, i.e. the Resource Summary Report.

This report can be used to see what resources are required for a program of jobs, or individual jobs, over a specific time frame, and even down to specific units or groups of units. It uses the same selection screen as the previous mentioned reports (see *Figure 66*)



Figure 83- Sample Resource Histogram

Time units shown on the x axis of the histogram will be those selected when the Resource Summarization was run.

To zoom in on any area of the chart, left click and hold the mouse, drag the outline over desired selection and release.

# 7.7 Web Reports

The web based reports are available on the PPMS Web Site. They are easy to use and access!

The web based reports work without having to log in to P/PMS. The web-based query works off of a snap-shot of P/PMS taken each night. P/PMS is analyzed nightly.

- If you need Program Report information more up to date than that, P/PMS personnel can analyze the Program in a matter of minutes.

You can also view information related to individual programmed jobs with the web reports.

From Connect MDot, use the pull-down menu under Teams, Projects, and then click on the PPMS link that appears at the bottom of the menu.

The P/PMS Help Page appears. Select The P/PMS Web Reports Link under Quick Links on the top right of the page.

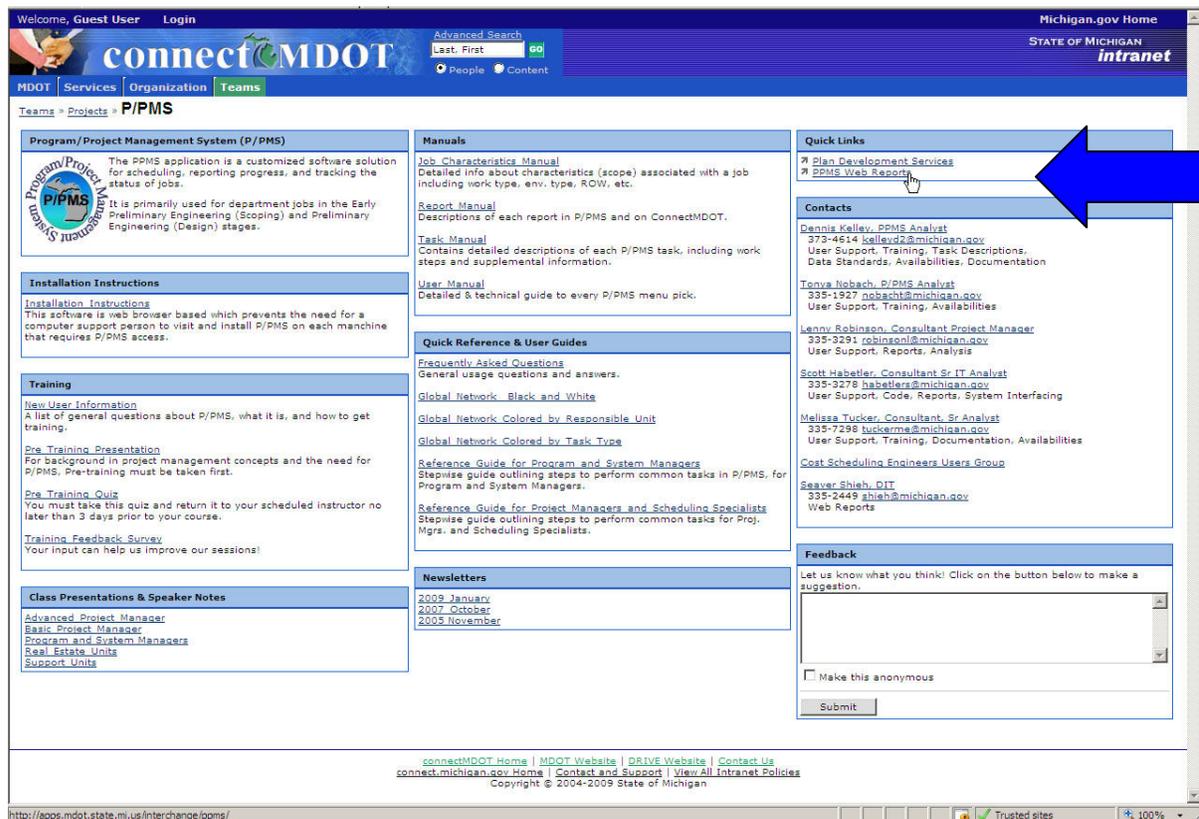


Figure 84- Help Page

The MDOT Program and Project Management System Window opens and you are presented with the Web Reporting Home page.

Department of Transportation Michigan.gov

Michigan.gov Home | MDOT Home | MDOT Intranet | Engineering Help | P/PMS Help

Program Reports  
Project Reports  
Task Reports  
Milestone Reports  
Resource Reports  
Payroll Reports  
OBS/WBS Reports  
Jobs/Tasks Estimator  
Benchmark Status  
P/PMS Reports Help  
P/PMS Help  
Engineering Help

To search for job information, please enter data into one or more of the search fields: JOB NUMBER, CONTROL SECTION, ROUTE, LETTING and PROJECT ID. Use the checkboxes to control what data show up on the report.

Fiscal Year Start: 2009 Fiscal Year End: 2009

Job Number: [ ] Control Section: [ ]  
Route: [ ] Letting(mm/dd/yyyy): [ ]  
Project ID: [ ] Order By: REGION [ ]

Region  TSC  
 Project Manager  Construction Cost  
 Route  Location Description  
 Work Type  Work Description  
 Fund Template  Job Status  
 Environmental Clearance  Survey Involved  
 Right of Way  Project Comments

Submit Reset

Michigan.gov Home | MDOT Home | State Web Sites  
MDOT Intranet | Engineering Help | P/PMS Help | System Support  
Copyright © 1998 - 2009 State of Michigan

Figure 85- Web reporting Home Page

You will see on the left a list of reports that are currently available to you, and the selection options to help you narrow and refine your reporting choices to fit your specific needs.

## 7.7.1 Web Reports Selection Screen

This is what the selection screen for the Web Reports looks like. Like the Program Area Reports in P/PMS, the Web Reports use an extensive selection screen, allowing you to make your choices as broad or as narrow as you wish.

The screenshot shows the 'Program Project Management System(P/PMS)' interface. At the top, it says 'Create a Project Status Report Based on the Following:'. Below this, there are several input fields and dropdown menus:

- FY/Quarters:** A radio button is selected.
- Start Year:** A dropdown menu showing '2009' and a text input field for '(Quarter/Month)'.
- Year/Months:** A radio button is selected.
- End Year:** A dropdown menu showing '2009' and a text input field for '(Quarter/Month)'.
- Job Number:** A text input field.
- Jobs in Region:** A dropdown menu showing 'ALL REGIONS'.
- TSC:** A dropdown menu.
- All Jobs:** A radio button is selected.
- In-House Jobs:** A radio button is unselected.
- Consultants Jobs:** A radio button is unselected.

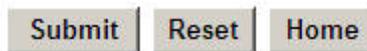
Below these fields, there are several more dropdown menus and a button:

- Organization:** A dropdown menu.
- Order By Names:** A button.
- Users:** A dropdown menu.
- Task Number:** A dropdown menu.
- Report Type:** A dropdown menu showing '1 - Design Information'.
- Sorted By:** A dropdown menu showing 'REGION'.
- Job Group:** A dropdown menu.
- Work Group:** A dropdown menu.
- Job Type:** A dropdown menu.
- Work Type:** A dropdown menu.
- Fund Template:** A dropdown menu.
- Job Status:** A dropdown menu showing 'AAA - Approved, Active, Awarded, Completed & Research'.

At the bottom, there are three buttons: **Submit**, **Reset**, and **Home**. Below the buttons, there is a footer: 'Report errors to [Seaver Shieh](#) 517-335-2449, shiehs@michigan.gov'.

Figure 86-Web reports selection screen

At the bottom of the selection screen you will see the Submit or Reset options.



These allow you to submit the criteria for generating the report or reset and reselect your choices without generating a report.

Once you enter the submit button, you will be presented with another brief review of your selections for your confirmation. You can either select create report to finalize your report, or if there are changes you would like to make, select Change criteria to return to the selection screen.

---



P/PMS Web Information Service



Create a Project Status Report Based on the Following:

---

Letting(FY) From Year(Quarter): 2009(1st Quarter)  
Letting(FY) To Year(Quarter): 2009(4th Quarter)  
Job Group: ALL JOB GROUPS  
Work Group: ALL  
Job Type: ALL  
Work Type: ALL  
Finance Template: ALL  
Task Number: ALL  
Sorted By: Regions  
Report Type: Design Information  
Job Status: Approved, Active, Awarded, Completed & Research  
Jobs Done By: In House Jobs and Consultant Jobs

---

Create Report Change Criteria

Questions or Comments? Please Contact: Seaver Shieh, 517-335-2449 [shiehs@michigan.gov](mailto:shiehs@michigan.gov)

Figure 87- Web Reports Confirmation Screen

## 7.7.2 Am I Late?

Its very important that your tasks are kept up to date, as this may affect the overall status of the job, But When you look at the Web Task Report, how do you know the status of your tasks?

At the bottom of the report is a note chart that tells you how we define when a task is late.

Section: 84917 Job: 104245 Ver: 1 Route: Region wid - Metro Region(LET: 03-Apr-2009) (Morena, Jill)										
392M	Job Let	0	22700	04-03-2009	04-03-2009	04-03-2009	04-03-2009	04-03-2009	04-03-2009	0
3910	Prepare Final Job Package and Obtain Authorization	9	35000	02-18-2009	03-02-2009	04-13-2009	04-23-2009	---	---	-38.0
391M	Certification Acceptance	0	35000	03-02-2009	03-02-2009	04-13-2009	04-13-2009	---	---	-30.0
3920	Advertise and Let Job	30	22700	03-03-2009	04-13-2009	04-24-2009	06-05-2009	---	---	-38.0
Section: 84917 Job: 87828 Ver: 1 Route: Region Wid - Metro Region(LET: 06-Feb-2009) (Muelky, Michelle)										
3930	Award Job Construction Contract	10	22700	02-18-2009	03-03-2009	04-13-2009	04-24-2009	---	---	-38.0
393M	Job Award	0	22700	03-03-2009	03-03-2009	04-24-2009	04-24-2009	---	---	-38.0

Sorted By: , job\_section job\_no ses task\_no

Note: Late = Approved Finish w/in 1 month and Float > 5 days late.  
 = Approved Finish w/in 1 mo to 2 mos and Float > 10 days late.  
 = Approved Finish w/in 2 mos to 3 mos and Float > 15 days late.  
 = Approved Finish w/in 3 mos to 6 mos and Float > 20 days late.  
 = Approved Finish w/in 6 mos to 1 yr and Float > 30 days late.  
 = Approved Finish w/in 1 yr to 2 yrs and Float > 50 days late.  
 = Approved Finish w/in 2 yrs to 3 yrs and Float > 70 days late.  
 = Approved Finish w/in 3 yrs to 4 yrs and Float > 90 days late.  
 = Approved Finish over 4 yrs and Float > 110 days late.

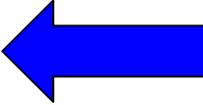


Figure 88-Web Task Status Report

As we discussed in Module 5.1 (How Do I Know if My Network Will be Approved), there is a pattern here that the farther away the approved finish date, the more negative float you are allowed to have.

As we move closer to the approved finish date, we are assuming that a certain amount of negative float can be made up.

If you see tasks whose Approved dates are far out in the future, but are late, it's likely that your task is not the critical one. Still, keep an eye on these tasks and their jobs, for soon your task may be next on the list.



# Module 8: Keeping Schedules up to Date

---

**After reading this section, you will learn:**

- Tools for helping you keep your network schedules up to date

## 8.1 How do I keep my Schedules up to date?

---

1. Check your Job Status Report for any jobs that have negative float and/or have late schedules.
2. Open the job and click **Edit, Actual Start and Finish Dates** (See *Module 3.4 Entering Actual Start and Finish Dates*).
  - a. **Support units should enter actuals for tasks through MPINS**
  - b. Consultants are required to send e-mails with files reporting actual dates.
3. Enter actual start and finish dates for all work on tasks and milestones.
  - a. Future dates are only accepted as Estimated Completion Dates on tasks with actual start dates.
4. Analyze the network – using **Process, Analyze Schedule** – and check the results on the resulting report, or go to **Reports, Jobs/Projects, PC and Letting Dates**. (See *Module 7.2.1*).
5. If the job is still late, repeat any steps under *Module 3 Network Refinement* to further work on the problem.

# Module 9: Benefits & Quick Tips

---

**After reading this section, you will learn:**

- Benefits of using P/PMS
- Best screen Resolution to use P/PMS
- Function Keys
- How to “Unfreeze” your screen if P/PMS “locks up”
- How to Quit, Close, Exit, Log Off or Out, or Otherwise Leave the System

## 9.1 Review of Benefits of P/PMS

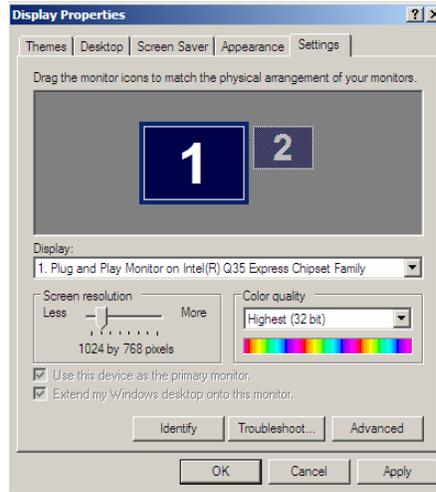
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- Department wide usage of Project Management on a regular basis can benefit productivity for the following reasons:
- Having a standard tool, ensures that everyone is using the same tool, and looking at the same info . MPINS is another example.
- P/PMS dates allow you to view your accomplishments and progress vs how it was planned to go.
- Reports can enable and improve communication between Management, project managers, and the work units designing a job.
- Reports also enable looking to the future to identify upcoming jobs, and P/PMS data can assist in early identification of time frame conflicts, conflicts between jobs, or work overloads, to take early problem solving action.
- Project Management implementation, at its best, can help us as a Department to increase our public and legislative credibility by creating quality jobs on time and within budget.

## 9.2 Screen Resolution and Function Keys

---

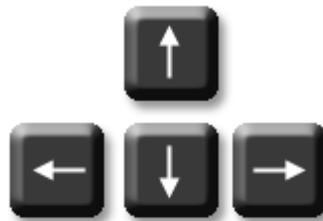
PPMS is best viewed as a screen resolution of 1024 by 768.



Smaller resolutions may result in the buttons normally shown at the bottom of the data entry screen as being obscured. This will require the use of the function keys or quick key combinations to accomplish certain functions. This is also available for download on our website.



Be sure to utilize the tab and enter keys to move through data entry fields, and use the scroll bars to be sure you are viewing the entire report shown. The Up and Down arrows also help you navigate through data entry screens.



**Function Keys in Screen Form data entry screens:**

F1	Exit the data entry screen. If elements on a screen have been modified and the record has not been written to the table, the user will be asked to verify quitting without saving the current record.										
F2	Go to the previous record in the current list.										
F3	Go to the next record in the current list.										
F4	Enter FIND mode. When in FIND mode, the following keys change function: <table border="1"> <tr> <td>F1 -</td> <td>Exit FIND mode.</td> </tr> <tr> <td>F2 -</td> <td>Find a specific record number.</td> </tr> <tr> <td>F4 -</td> <td>Find records where elements match those entered.</td> </tr> <tr> <td>F5 -</td> <td>Clear data from all elements on the screen.</td> </tr> <tr> <td></td> <td></td> </tr> </table>	F1 -	Exit FIND mode.	F2 -	Find a specific record number.	F4 -	Find records where elements match those entered.	F5 -	Clear data from all elements on the screen.		
F1 -	Exit FIND mode.										
F2 -	Find a specific record number.										
F4 -	Find records where elements match those entered.										
F5 -	Clear data from all elements on the screen.										
F5	Clear data elements - offers a new record.										
F6	Add the current record or subrecord appearing on the screen.										
F7	Update the current record.										
F8	Delete the current record.										
F9	Display the first subrecord belonging to the current record when in the parent table. Display the parent record when in the sub-table. In split-screen data entry screens, F9 moves back and forth between the tables on the top of the screen and sub-tables on the bottom. Not available if the table has no sub-table.										

**Function Keys in Spreadsheet data entry screens:**

F1	Exit the data entry screen. If elements on a screen have been modified and the record has not been written to the table, the user will be asked to verify quitting without saving the current record.										
F2	Go to the first field of the current record. If the cursor is already on the first field, go to the first field of the first record in the table.										
F3	Go to the last field of the current record. If the cursor is already on the last field, go to the first field of the last record in the table.										
F4	Enter FIND mode. When in FIND mode, the following keys change function: <table border="1"> <tr> <td>F1 -</td> <td>Exit FIND mode.</td> </tr> <tr> <td>F2 -</td> <td>Find a specific record number.</td> </tr> <tr> <td>F4 -</td> <td>Find records where elements match those entered.</td> </tr> <tr> <td>F5 -</td> <td>Clear data from all elements on the screen.</td> </tr> <tr> <td></td> <td></td> </tr> </table>	F1 -	Exit FIND mode.	F2 -	Find a specific record number.	F4 -	Find records where elements match those entered.	F5 -	Clear data from all elements on the screen.		
F1 -	Exit FIND mode.										
F2 -	Find a specific record number.										
F4 -	Find records where elements match those entered.										
F5 -	Clear data from all elements on the screen.										
F5	Present a new, empty record.										
F6	Copy the current record to a new record.										
F7	Restore all fields on the current record to the values they had prior to data entry.										
F8	Delete the current record.										
F9	Display the first subrecord belonging to the current record when in the parent table. Display the parent record when in the sub-table. In split-screen data entry screens, F9 moves back and forth between the tables on the top of the screen and sub-tables on the bottom. Not available if the table has no sub-table.										

## **Data Entry Special Keys**

<Ctrl-B>	Moves the cursor to the first character position in the current data entry field.
<Ctrl-D>	Invokes the system editor if the cursor is positioned in a field.
<Ctrl-E>	Moves the cursor to the end of the text in the current data entry field.
<Ctrl-K>	Deletes all the characters from the cursor position to the end of the field.
<Ctrl-N>	Moves the cursor to the first data entry field of the next page.
<Ctrl-O>	Toggles between typeover and insert mode. The message "Insert Mode" is displayed when insert mode is activated.
<Ctrl-R>	Restores the field to its original value, if the cursor has not moved from the field following the value change. This functions only for the field in which the cursor is positioned.
<Ctrl-T>	Displays the definition of the current field.
<Ctrl-U>	Displays the previous page. Cursor is positioned in the first data entry field of the previous page.
<Ctrl-V>	Displays the last page. Cursor is positioned in the first data entry field of the last page.
<Ctrl-W >	Moves the cursor to the next word in the current data entry field.
<Ctrl-X>	Delete the character at the current cursor position.
<Ctrl-Z>	Redisplays the previous status or error message.
< Backspace >	Deletes the character to the left of the cursor.
< Enter >	Moves the cursor to the first character position in the next data entry field.
< Home >	Move the cursor to the first data entry field of the first page.
< Tab >	Moves the cursor back to the previous data entry field.
< up arrow >	Moves the cursor up to the input field in the row/record above the current field.
<down arrow>	Moves the cursor down to the input field in the row/record below the current field.
< left arrow >	Moves the cursor one character position to the left. If it is at the first character position, it moves the cursor to the preceding input field.
< right arrow >	Moves the cursor one character position to the right. If it is at the last character position, it moves the cursor to the preceding input field.

## 9.3 Closing Pop-up and Data Screens in P/PMS

PPMS is not a true windows software but access to a database. As such, we recommend that **you never use the x at the top right to close a window.**

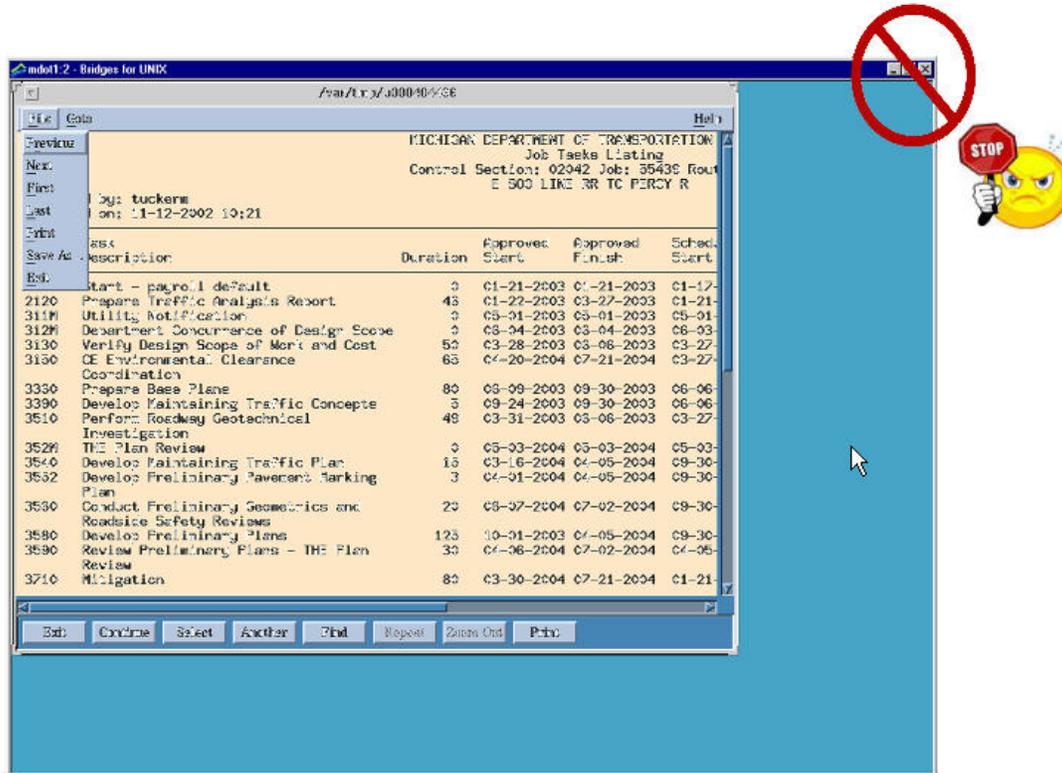
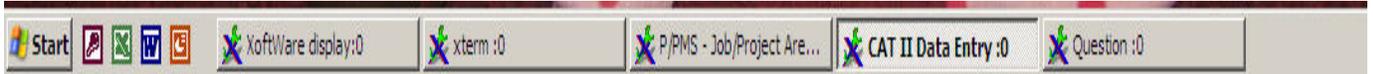


Figure 89-Don't hit the X

- Use the **menu exits** or **exit buttons**. Otherwise, you run the possibility of locking people out of certain areas of data by leaving your session running.
- Be sure to not leave a data entry screen unattended.
- Reply to any informational screen or prompts and close out of data screens before leaving your workstation.

**If you are at a standstill or seem to be locked up:**

- Call the PPMS support personnel!
- If you look in the windows task bar at the bottom of your screen, you can see if there are any informational screens or prompt boxes that are waiting for you to hit “enter” or “ok” in, that may have been moved behind another active window.



**Figure 90- Task Bar**

- Your system may not let you continue and appear to be “locked up” if one of these pop ups are left unattended.
- *Call the PPMS support personnel!*

## 9.4 Exiting P/PMS

---

Choose **Exit** from the **File** Menu.

- Note that it is *not* necessary to close your template, job, scenario, or program session before exiting.

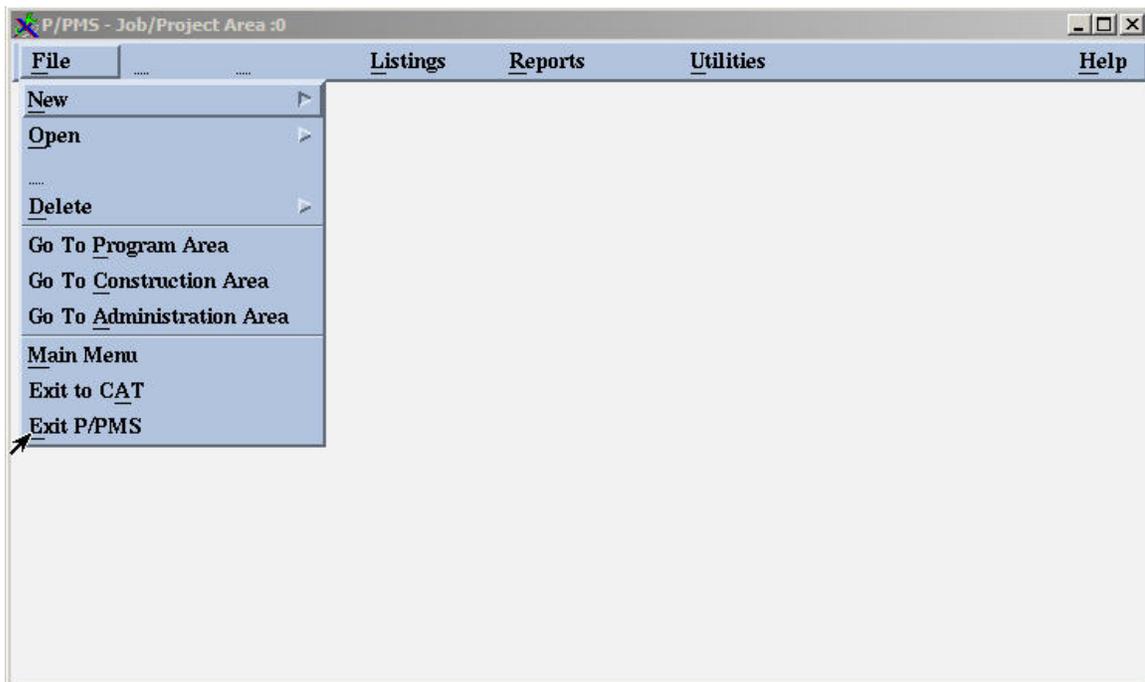


Figure 91-File, Exit P/PMS

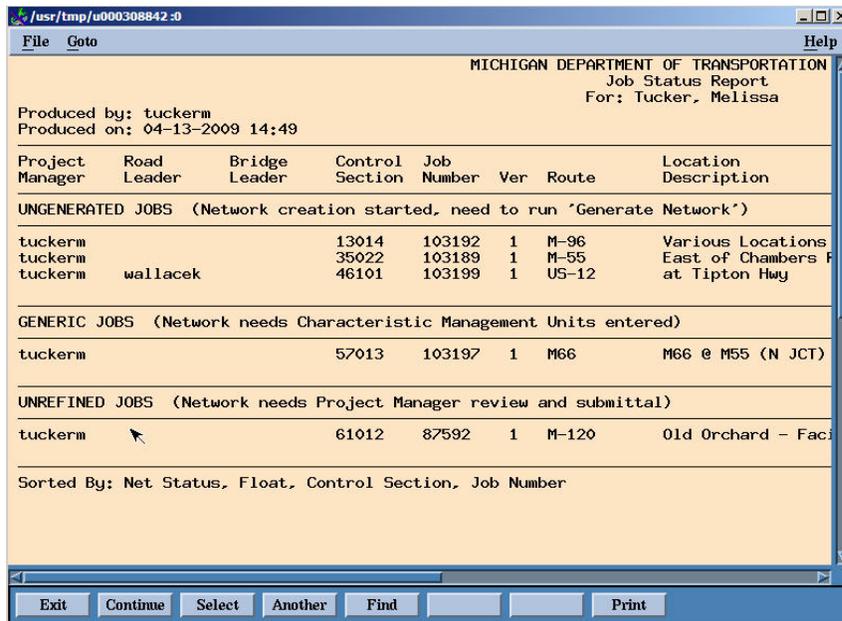
**Reminder:** Use of the Window Control button (the “X” sign in the upper right of the window) to close windows is **not** recommended, as this will kill your sessions abnormally, and may leave things running on the P/PMS server which may preclude you from accessing the system later, or preclude other users from accessing certain system data.



# Appendices

## Appendix A- The View File Window

The window, in which listings and reports are displayed, shown below, is called the View File window.



MICHIGAN DEPARTMENT OF TRANSPORTATION  
Job Status Report  
For: Tucker, Melissa

Produced by: tuckerm  
Produced on: 04-13-2009 14:49

Project Manager	Road Leader	Bridge Leader	Control Section	Job Number	Ver	Route	Location Description
UNGENERATED JOBS (Network creation started, need to run 'Generate Network')							
tuckerm			13014	103192	1	M-96	Various Locations
tuckerm			35022	103189	1	M-55	East of Chambers F
tuckerm	wallacek		46101	103199	1	US-12	at Tipton Hwy
GENERIC JOBS (Network needs Characteristic Management Units entered)							
tuckerm			57013	103197	1	M66	M66 @ M55 (N JCT)
UNREFINED JOBS (Network needs Project Manager review and submittal)							
tuckerm			61012	87592	1	M-120	Old Orchard - Faci

Sorted By: Net Status, Float, Control Section, Job Number

Exit Continue Select Another Find Print

Figure 92- view file window

This screen allows you to:

1. Scroll up and down the listing using the vertical scroll bar
2. Scroll right and left in the listing using the horizontal scroll bar
3. Search for a text string in the listing
4. Print the listing
5. Save the listing to a file
6. Display listing files you have saved (by clicking on **Utilities, View a File**)

You can also maximize the View File window to see a larger part of the listing.

## Appendix A - the View File Window, continued

The menu bar at the top of the screen gives you access to three menus:

- File
- Goto
- Help

In addition, there are seven buttons at the bottom of the screen. The functions assigned to menu items and buttons are summarized below.

MENU BAR FUNCTIONS: VIEW FILE WINDOW		
MENU	MENU ITEM	FUNCTION
<u>F</u> ile		
	Print	Prints the listing on the default printer.
	<u>S</u> ave As	Saves the listing to the file you specify in the Prompt pop up window.
	<u>E</u> xit	Closes the View File window and returns you to the P/PMS area window.
<u>G</u> oto		
	<u>T</u> op	Moves the View File window to the top of the listing.
	<u>B</u> ottom	Moves the View File window to the bottom of the listing.
	<u>L</u> eft	Moves the View File window to the left side of the listing.
	<u>R</u> ight	Moves the View File window to the right side of the listing.
<u>H</u> elp		
	About <u>V</u> iewfile	Displays information about the View File window.
	About <u>W</u> indows	Displays information about X Windows.

## Appendix A - the View File Window, continued

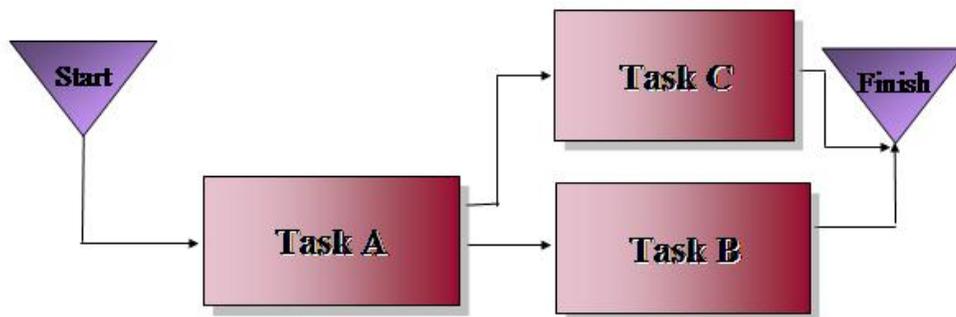
<b>BUTTON BAR FUNCTIONS: VIEW FILE WINDOW</b>	
<b>BUTTON</b>	<b>FUNCTION</b>
EXIT	Closes the View File window and returns you to the P/PMS area window.
CONTINUE	Allows processing to continue in the P/PMS area window.
SELECT	Displays in a View File window the file you select in the File Requestor pop-up window.
ANOTHER	Displays a selected file in another View File window.
FIND	Searches for the text string you enter in the Prompt pop-up window.
REPEAT	Searches for the next occurrence of the text string.
PRINT	Prints the listing on the printer you select from the pop-up window.



## Appendix B- Constraints

As a refresher from the Pre-training, you may recall that:

- Constraints are the logical relationships between tasks or milestones.
- These represent the flow or sequence of work.



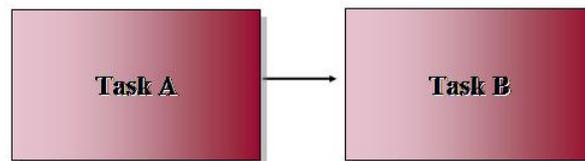
**Predecessors** are the tasks or milestones that affect the beginning of a given task or milestone.

**Successors** are the tasks or milestones that are dependant on the finish of a given task or milestone.

The three types of constraints utilized in PPMS are:

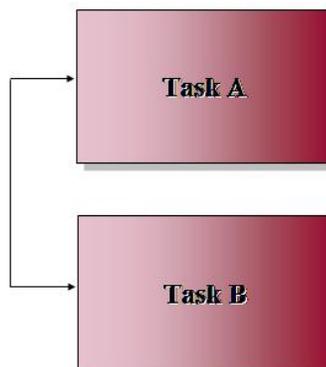
1. **Finish to Start**, where the preceding task must be 100% complete before the successor can begin.

### **Finish- to -Start**



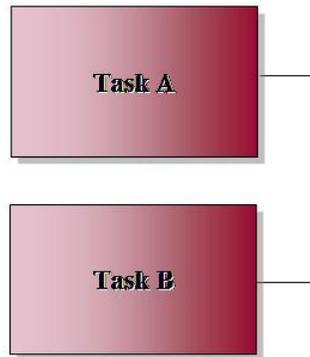
2. **The Start to Start**, where the start of the successor is constrained by the start of the predecessor

### **Start- to -Start**



3. **The Finish to Finish**, where the finish of the successor is constrained by the completion of the predecessor.

### **Finish- to -Finish**



### **Why possibly change constraints?**

It may be necessary to reconnect tasks or milestones into the network due to missing predecessor or successor tasks, that you may have encountered when adding or deleting tasks. This should not happen too often. Remember that each task must have a predecessor and a successor; no dangling tasks are allowed.

There may also be times when tasks can be performed out of order, or in parallel to save time. You may also find that consultants tend to perform tasks or groups of tasks in parallel according to their schedule.

Changing constraints can account for all of these situations, and may shorten your schedule. Many constraints are shown on the Global Network. Constraints can be difficult to track or change for the average user, so we will discuss actually how to change them in our Advanced Assistance Presentation.

If you, as a Basic user, believe or find that you need to change constraints, please contact a PPMS representative.



## Appendix C- Other Ways to Enter Actuals

Other than in P/PMS itself, actual start and finish dates get to us through MAP from other systems, MPINS, and now from DCDS. The MPINS and DCDS methods are presented here.

### How to assign an employee to a P/PMS Task in MPINS

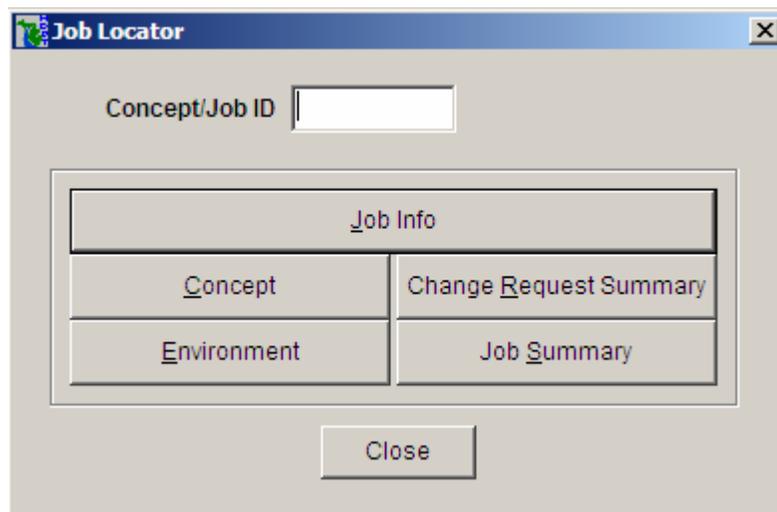
This function can be performed by the Supervisor of the Unit for an employee assignment to be made.

<p>1. Identify the job record for which an employee assignment is to be made as described in <b><u>How to Identify Desired Records</u></b>. From the Job List, select <b>Job/Phase Task Status</b> from the menu bar, and in the Job Locator select <b>Jobs</b> and <b>Phase Task Status</b>.</p>	
<p>2. In the <b>Phase Tasks</b> section of the Phase Task Status window, use the vertical scroll bar to locate and select the PPMS Task Number/Unit record in which an employee assignment is to be made.</p>	
<p>3. In the <b>Task Status</b> section of the window use the pick list associated with the <b>Employee</b> field to select the employee to be assigned to the task.</p>	
<p>4. Save the changes by clicking on the <b>Save</b> tool bar button.</p>	
<p>5. Repeat from step 2 as desired. When done, the user can close the window by clicking on the <b>Close</b> tool bar button.</p>	

## How to record dates for P/PMS Tasks in MPINS

This function can be performed by the Unit Leader or Project Manager for a given job, and by the Supervisor of the Unit or an employee they designate as assigned to the Task.

1. Open the Job Locator by clicking on the **Job Loc.** Icon in the toolbar. The **Job Locator** window opens, as illustrated here.



2. Enter the desired job number in the **Concept/Job ID** field.
3. Select the **Job Info** button.
4. Select **Task Status** tab.

Job Information [JOB# 102322]

Job# 102322 C.S# 03023 Route M-89  
 Project # 139143 Job Type Trunkline Proj. Manager MAHDAVI ALI

Job Info. CS/PR Phase Cost Task Status Milestone Status Phase Info. Structure Info. Change Request Environment

Tasks  
 Incomplete  Completed  All  Unit Task  Responsible Unit

Phase Task

PPMS	Task	Index	Unit	Resp. Unit
2120	Prepare Traffic Analysis Report	67700	SW, GRAND, NORTH, 1/2 SUPERIOR REGI	Yes
2155	Request/Perform Safety Analysis	48710	KALAMAZOO TSC - TRAFFIC & SFTY	Yes
3130	Verify Design Scope of Work and Cost	39300	BRIDGE 5	Yes
3150	Categorical Exclusion Environmental Clearenc	67300	PROJECT COORDINATION UNIT	Yes
3390	Develop Construction Zone Traffic Control Con	48710	KALAMAZOO TSC - TRAFFIC & SFTY	Yes
3535	Conduct Structure Architectural and Aesthetic R	37700	ROADSIDE DEVELOPMENT	Yes
3540	Develop Construction Traffic Control Plan	48710	KALAMAZOO TSC - TRAFFIC & SFTY	Yes

Task Status

Unit Name	67700	SW, GRAND, NORTH, 1/2 SUPERIOR REGIONS		
Est Completion Date	00/00/0000	Employee		
Approved Start Date	06/25/2008	Approved Finish Date	07/24/2008	
Actual Start Date	06/16/2008	Actual Finish Date	08/14/2008	

- The Task Status Screen opens, and defaults to select Incomplete Tasks.
- In the **Phase Tasks** section of the Phase Task Status window, use the vertical scroll bar to locate and select the PPMS Task Number/Unit record in which dates are to be recorded.
- In the **Task Status** section at the bottom of the window enter any of the **Est. Completion Date, Actual Start Date, Actual End Date** fields as appropriate.
- Save the changes by clicking on the **Save** tool bar button.
- Repeat from step 2 as desired. When done, the user can close the window by clicking on the Close tool bar button.



## Start and Finish Dates in DCDS

The P/PMS Team has developed a way for users to input P/PMS task start and finish dates through DCDS (current methods of entering actuals in MPINs and P/PMS are still supported). Task actuals can now be entered through the Multi field in DCDS. This is accomplished by entering a 5 digit code SMMDD or FMMDD where **S** indicates a start, **F** indicates finish, **MM** represents the month and **DD** represents the day. In the case that a task was started and finished during the same pay period the two codes can be combined resulting in SMMDDFMMDD. For the example below:

**S0612** - would be an actual start date of June 12, 2000 (year from pay period) for task 3310.

**F0622** - would be actual finish date of June 22, 2000 for task 3310.

**S0612F0616** - would be a Start and Finish in the same pay period for task 2320.

AG1 (task code), Project (Job Number) and Index (old Org. Code) fields must be present for the actuals to be valid. The Index (old Org. Code) will be checked to insure that the unit listed is the Responsible Unit for the task.

**Note: A delay of up to 3 weeks is possible for P/PMS to receive the DCDS information.**

DCDS 32  
File Edit Options Functions Params Reports Window Help

Employee Data Collection  
Selection Time Activity Equipment Inventory Emp Info History

Eff Dt: 10/04/1998 PP EndDt: 01/08/2000 Ver: 0 Adj Type:

Hours Entry by Coding Block

AY	Index	PCA	Grant	Ph	AG1	Project	Ph	AG2	AG3	Multi	Std
											<input checked="" type="checkbox"/>
00	35300	51400			3310	43793C	00			S1228	<input type="checkbox"/>
00	35300	51400			3320	34098C	00			F0106	<input type="checkbox"/>
00	35300	51400			2320	39674C	00			S1228F0106	<input type="checkbox"/>

Month: December

Hours Type	Sum Total	26 S	27 M	28 T	29 W	30 Th	31 F	01 S	Wkly Total	02 S	03 M	04 T	05 W	06 Th	07 F	08 S	Wkly Total	PP Total
REG1				2.0	2.0				4.0		4.0	3.0		3.0			10.0	14.0
Totals:	0.0	0.0	0.0	5.0	6.0	0.0	0.0	0.0	11.0	0.0	5.5	11.0	0.0	3.0	2.5	0.0	22.0	33.0

Hours Entry Coding Block Comments Pers Miles Errors Display

<=> Modifv Submit Prev Used CB Delete Save Close

Ready

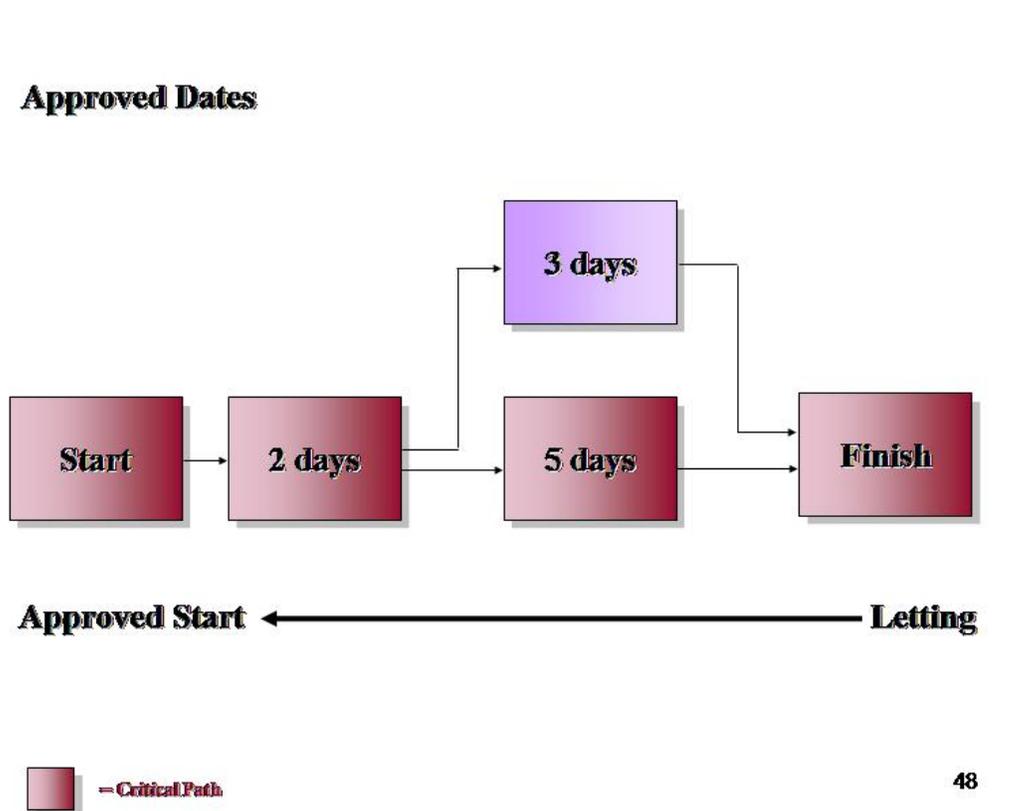
## Appendix D- Critical Path

Dates in P/PMS are determined using the Critical Path Methodology.

The critical path method to scheduling examines task durations and constraints in a backward and forward pass to sequence the tasks. This determines the overall length of a job. It defines when each task can, and must, start and finish. It tells us the longest continuous path through the network, or the critical path itself, and it defines how much each non-critical task can float, or slip, before it becomes critical.

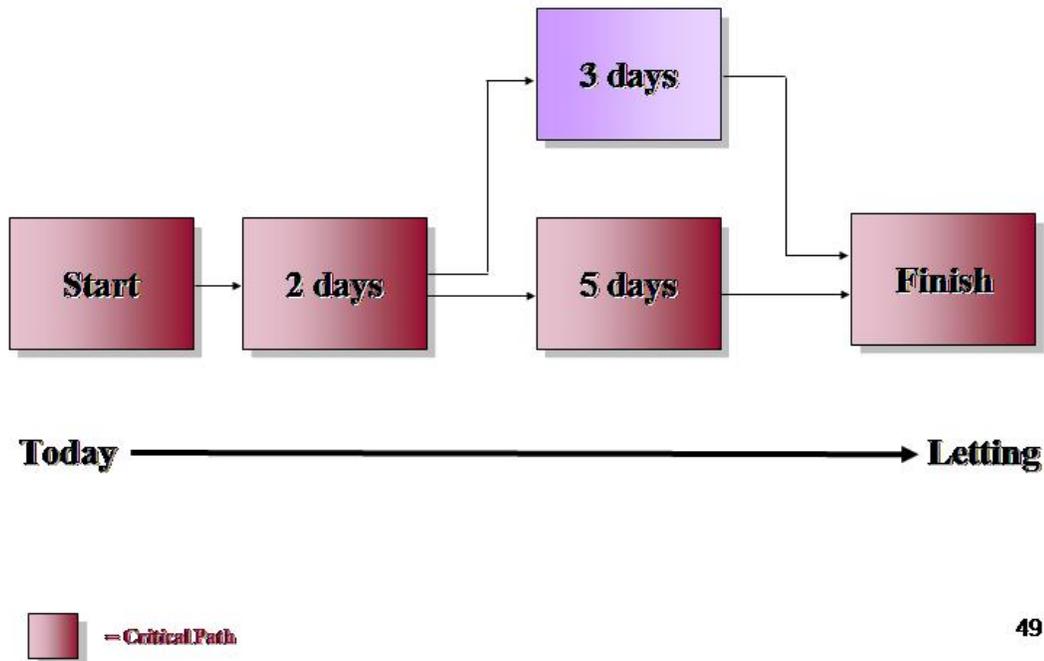
The critical path relates to the dates in the following way:

First, a backwards pass is made, beginning from the calculated finish date, and going backwards through all tasks, constraints, and durations, to set the *approved dates*.



Then a forward pass is made, starting from today, and the earliest scheduled unfinished task, and it calculates forward through all tasks and constraints to determine the *scheduled dates*.

## Scheduled Dates



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**Note:** It is important to remember that the critical path in your network is the sequence of tasks that have the greatest total duration.

- It is the longest and least flexible sequence of tasks.
- Any negative float on the critical path will delay your job.
- The only way to shorten your schedule is to shorten the critical path.

## Appendix E- Global Network

The Global Network consists of approximately 80 to 100 tasks and milestones that make up the overall procedures a job could go through, from Concept to Letting. This consists of Early Preliminary Engineering and Preliminary Engineering, which can include tasks related to Project Development, Design, and many more task types.

Each box represents a detail task. Ovals represent milestones which occur at strategic times in the project development process. The network is a precedence network where the lines are used to describe the relationships or constraints between tasks.

In the Global Network, three types of constraints are shown — finish to start, finish to finish, and start to start. Each task/milestone has a unique number along the top of the box. This number corresponds to the task description in the Task Manual and the task codes used in the MDOT payroll system.

The Global Network is modified to reflect the characteristics of each project. For example, the tasks needed to secure a permit will be dropped if permits are not required. This "switching off" of tasks occurs for several other sets of tasks (Environmental, Right-of-Way, Utilities, etc.), and is related to the Job's Work Type and Characteristics (Scope).

On the P/PMS Help page, we have three views of the global network available for download:

Global Network in black and white (see figure 90 next page)

Global Network in color, color-coded by the Task Type

Global Network in color, color-coded by Responsible Unit (Major Work Unit)



# Glossary of Terms

**2604 FORM** - A Program Revision Change Request form in MPINS used to obtain authorization for such changes to a job such as adding or deleting phases, splitting a job, job costs, major work type, location, financial cost divisions, and major milestone dates. This form is usually submitted before creating a version of a job.

**ABANDONED JOB** – A job which has been discontinued and removed from the MDOT Master Program and is not expected to be restarted.

**ACTIVE JOB** – A job in the MDOT Master Program that is actively being worked on. Access to key job data is limited to read-only since changes could impact the highway program.

**ACTUAL FINISH DATE (AF)** - The actual point in time that work is finished on a task. (Note: in some cases, the task is considered “finished” when work is “substantially complete”).

**ACTUAL START DATE (AS)** - The actual point in time that work started on a task.

**ANNUAL CALL-FOR-PROJECTS** – The annual call-for-projects is the mechanism by which Project Concept Statements are forwarded annually to the Screening Committee for job selection and assignment to construction years. The Screening Committee reviews each Region's jobs and priorities and how they relate to the statewide strategy with the respective Region Engineer. This is done before the selected jobs are placed in the MDOT Master Program.

**APPROVED FINISH DATE** – The planned point in time that work should finish on a task in order for the job to meet its targeted plan completion date.

**APPROVED START DATE** - The planned point in time that work should start on a task in order for the job to meet its targeted plan completion date.

**APPROVED JOB** – A job officially included in the MDOT Master Program, but no work has been performed yet. When a job's status is first set to Active, the latest start and completion dates for on-time delivery are saved and used as the approved start and finish dates for comparison purposes. These first approved dates are also set as the original dates.

**APPROVED DATES** – The planned start and finish dates for the tasks within a job.

**ARCHIVED JOB** – A job that has been completed, suspended, or abandoned and is removed from the P/PMS Statewide Master Program.

**AWARDED JOB** – A job that has been awarded in MPINS and will be removed from the P/PMS Statewide Master Program and archived.

**BENCHMARK** – A standard by which something can be measured or judged.

**CHARACTERISTICS** - Items in the scope of a job that make it unique, including work type, region, road class, FHWA involvement, subgrade work or work outside existing shoulders, and many more. Specifically, these items of scope determine what tasks are in P/PMS job networks, their durations, and resources.

**COMPLETED JOB** – A job in the MDOT Master Program that has one or more phases designated as completed in MPINS. All work on the job is physically completed.

**CONCEPT JOB** – A job being considered for inclusion into the MDOT Master Program.

**CONSTRAINTS** – Defines the sequence of tasks and determines how they relate to each other in a network. Four possible types of constraints exist in a Precedence Diagram; start-to-start, start-to-finish, finish-to-start, and finish-to-finish.

**CONSTRUCTION COST** – The obligated A-phase amount retrieved from the MAP database and shown on the MPINS Job Info Screen.

**CRITICAL PATH** - The series of tasks determining the duration of the job. The critical path is usually defined as those activities with float less than or equal to a specified value, often zero. It is the longest path through the job. The critical path will generally change from time to time as tasks are completed ahead of or behind schedule.

**CRITICAL PATH METHOD (CPM)** – A method of analyzing networks to determine early and late start and finish dates, durations, float and critical path.

**CRITICAL RESOURCE** – A resource that is overloaded with more work than they can accomplish in the given time frame.

**CRITICAL TASK** – A task that must finish on time for the entire project to finish on time. If a critical task is delayed, the project completion date is also delayed. A critical task has zero float. A series of critical tasks make up the project's critical path.

**DURATION** - Number of work days (not including holidays/other non-working days) required to complete a task.

**EARNED VALUE** - The Budgeted Cost of Work Performed for an activity or group of activities.

**EXCEPTION REPORT** - Report giving information about thresholds exceeded, eg., tasks ahead or behind schedule by more than a designated amount of time.

**FLOAT** - The amount of time, in days, that a task may be delayed from its approved dates without delaying the job finish date. Float is a mathematical calculation and can change as the project progresses and changes are made to the job. Also called slack time, total float, and path float.

**GANTT CHART** – Horizontal bar charts depicting progress in relation to time of projects, tasks, schedules, etc.

**GENERIC JOB** - A job containing all of the tasks, milestones, and constraints necessary to constitute a network, but missing the necessary Management Units to finish assigning all resources to tasks.

**HISTOGRAM** – a bar chart representing a frequency distribution; heights of the bars represent observed frequencies.

**HISTORICAL** – Based on data from past jobs/projects entered into P/PMS Statewide master Program.

**IMPROVE/EXPAND JOB** – "Improve" jobs increase the capacity of a road or facility and may require additional right of way. The threshold for an "Improve" job is a road widening of one lane's width or longer than a half mile, or greater than \$500,000. An "Expand" job builds a new facility where none currently exists, relocates a current facility, or adds a road currently under local jurisdiction to the trunk line system.

**INACTIVE JOB** - A status assigned to a job that was once funded and in the MDOT Master Program, but is no longer in either category. Inactive jobs have a P/PMS Job Status of "4".

**JOB** – A series of tasks grouped into phases that lead to the accomplishment of an objective(s).

**JOB DETAILS** – In P/PMS, Job Details are loaded from MAP and include:

- Control Section and Job Number
- Route
- Location Description
- Project Manager
- Construction Cost
- MPINS Status

**JOB STATUS** – Current standing of a job within the Master Program. Possible values are:

- ABANDONED
- ACTIVE
- APPROVED
- COMPLETED
- CONCEPT
- RESEARCH
- SUSPENDED

See the entry for each individual status code in this appendix for further explanation.

**JOB TYPE**- A job classification in P/PMS that utilizes four categories: Preserve, Improve, Expand, and Highway Preservation (Maintenance). Of these, the Preserve and Expand categories are further broken down into three sub-categories each. All are used to select a network template and to calculate duration and labor hours required on a job.

**LABOR HOURS** - The amount of actual “hands-on” time a resource spends performing a task or group of tasks.

**LETTING DATE** - The date that a job is put up for bid by contractors.

**MANAGEMENT UNIT** – An established group of employees responsible for completing a unique set of job tasks.

**MAP** - Michigan Architectural Project. The MDOT corporate database.

**MILESTONE** - A significant event in the job, usually the completion of a major deliverable. These are designated by a task number that ends in “M” and have duration of zero.

**MPINS** - Michigan Project Information System. The user interface to the MAP database.

**NETWORK** – A work flow plan consisting of all tasks and constraints that must be completed to reach job objectives showing their planned sequence of accomplishment and logical relationships.

**NETWORK ANALYSIS** - The process of identifying early and late start and finish dates for the uncompleted portions of job tasks.

**NETWORK GENERATOR** – The computerized subsystem within P/PMS that generates job schedules. As input, it uses certain information from the scoping checklist, as well as a standard template of task's and constraints. By applying a precisely designed algorithm, it is able to compute durations and resource requirements for all tasks within a network.

**NEW JOB** - A valid job whose basic data has been loaded from MAP and needs a P/PMS network created. Valid jobs include:

- Concepts valid P/PMS work types, region codes greater than 0, and which will be let by MDOT during or after the current fiscal year.
- Approved or active trunk line jobs, valid P/PMS work types, region codes greater than 0, and which will be let by MDOT during or after the current fiscal year (or Study jobs).

**ORGANIZATIONAL BREAKDOWN STRUCTURE (OBS)** – A hierarchical organizational matrix, which defines the relationships of all MDOT resources involved in a P/PMS job. This data is used primarily for summarizing labor data and producing customized reports.

**ORGANIZATIONAL UNIT** - Any organizational function within the Department which is responsible for completing work included in a P/PMS job, e.g., district, section, squad, or unit. Corresponds to an organizational code

**PLAN COMPLETION DATE** - The date at which all plans are complete, and the job is turned in to Specifications and Estimates for packaging to be advertised and let.

**P/PMS** - The Program/Project Management System. The MDOT Project Management software.

**PREDECESSOR** - The tasks that affect the beginning of a given task/milestone.

**PRESERVE JOB** – A job that is geared toward correcting deficiencies along an existing road and usually does not require right of way acquisition. Resurfacing, recycling, and safety jobs are examples of preservation work types. Replacement "in-kind" is considered preservation. The addition of passing lanes is also considered preservation because they improve traffic flow and safety, but do not increase the overall capacity of the road.

**PRODUCTION SCHEDULE** - The proposed plan of the Michigan Department of Transportation for developing and constructing highway improvement jobs for a specific multi-year period of time, e.g., five-year program. It is the schedule of the Master Program. The Annual Program and the Bi-Monthly Work Schedule are subsets of it.

**PROGRAM** – A group of jobs oriented toward a common objective, usually to be carried out in a specified time frame.

**PROGRAMMED JOB** - A status describing a job that has been approved by the Screening Committee (Preserve Job) or the Steering Committee (Improve/Expand Job) and a detailed network has been developed for the job, which has been approved and added to the P/PMS Statewide Master Program. These jobs require updating and monitoring for progress. The job is in the current MDOT Master Program, but has not yet been funded.

**PROGRAM REVISION CHANGE REQUEST FORM** – formally known as a 2604 FORM. A Program Revision Change Request form in MPINS used to obtain authorization for such changes to a job such as adding or deleting phases, splitting a job, job costs, major work type, location, financial cost divisions, and major milestone dates. This form is usually submitted after creating a corresponding P/PMS version of that job.

**PROJECT** – Two or more jobs to be designed, let, and constructed together.

**PROJECT MANAGEMENT** - The application of knowledge, skills, tools, and techniques to job tasks in order to meet or exceed stakeholder needs and expectations from a job.

**PROJECT MANAGER** – The Project Manager plays a leadership role in project development and is responsible for coordinating the tasks of participants on the project team and for keeping the job on schedule and within budget. The Project Manager works cooperatively with team members to set priorities with each person contributing to project development by obtaining an estimate of the time and dollars needed for each major project development function (design, right of way, traffic control plans, traffic estimation and environmental clearance). Project Managers coordinate job tasks to assure that the job remains consistent with the job concept statement and is within the estimated cost reflected in the long-range program. It is also the Project Manager's responsibility to make sure that all team members are informed of changes that will influence their participation in the job.

**PROJECT STATUS** - Current standing of a job within the Master Program. Possible values are:

- Proposed
- Programmed
- Active
- Inactive
- Completed/Archived

See the entry for each individual status code in this appendix for further explanation.

**REFINED JOB** - A job that has a version waiting to be included in the P/PMS Statewide Master Program. The version must have satisfactory dates and/or coincide with an approved 2604 (for changes in major dates, work type, etc.) before it can be "programmed" in P/PMS.

**RESEARCH JOB** – A Job currently under study only.

**RESPONSIBLE UNIT** - the resource responsible for reporting the actual start and actual finish for a P/PMS task. This is often the resource with the most work to perform on a task.

**RESOURCE** – A unit that performs at least some of the work on the task or tasks they're involved with.

**RESOURCE LEVELING** – The adjustment of job schedules to balance the job workload based on the available labor hours for each resource assigned.

**ROLL -UP** – The summarizing or "rolling-up" of job-related data along OBS or WBS lines.

**SCENARIO** – An alternative to the P/PMS Statewide Master Program which demonstrates the affect on the schedule of running a different mix of jobs (Program "what-if").

**SCHEDULE** - The set of expected start and finish dates for the tasks within a job based on resource requirements and availability.

**SCHEDULE DATES** – The current start and finish dates for the tasks within a job.

**SCHEDULED FINISH DATE** – The current point in time that work will be finished on a task.

**SCHEDULED START DATE** - The current point in time that work will be started on a task.

**SCHEDULER** – The computerized subsystem within P/PMS which generates the Master Program Schedule. It takes in the schedule's output from the Network Generator, other data from the Payroll and Real Estate sub-systems and balances resource load requirements against resource availability and desired priorities to produce the Master Schedule.

**SCHEDULING SPECIALIST** - The “right-hand” of a project manager, whose duty with regards to P/PMS is to perform the ground work necessary to create and update the P/PMS network for a job.

**STATEWIDE MASTER PROGRAM** – The proposed plan of the Michigan Department of Transportation for developing and constructing highway improvement jobs for a specific multi-year period of time (e.g., five-year program).

**SUCCESSOR** – The tasks/milestones that are dependant on the finish of a given task

**SUSPENDED JOB** – A job which was at one time included in the MDOT Master Program, but has been temporarily removed. It is anticipated that the job will be returned to "Approved" or “Active” status sometime in the future.

**TARGET DATE** - An imposed date which constrains or otherwise modifies the network analysis. Target dates are set approved dates from which the network approved dates are calculated. These include the Target Start (Task 0000), Target Plan Completion (380M), Target Letting (392M) and Target Finish (Task 9999).

**TASK** – A specific work responsibility performed by one or more resources. Tasks include both resource labor hour and duration commitments. A task is usually composed of several work steps.

**UNGENERATED JOB** - A job that has been opened in P/PMS, but does not yet have a network generated.

**UNREFINED JOB** - A job containing all of the tasks, milestones, constraints, and resources necessary to constitute a network, but that needs to be checked, updated, and verified to ensure the network correctly reflects all work to be done.

**VERSION** - A copy of a job network which is used to make changes to the tasks, constraints or resources.

**WORK GROUP** - A classification of jobs including Landscaping, Rest Areas, Roadway, Safety, Structures, and Traffic that is used to select a network template and to generate durations and resources required on a job.

**WORK BREAKDOWN STRUCTURE (WBS)** – A hierarchical job matrix which defines relationships of Tasks, Phases, etc., within a P/PMS job. This data is used primarily for summarizing task data and producing customized reports.

**WORK STEPS** – One or more specific actions which are performed to complete a task