



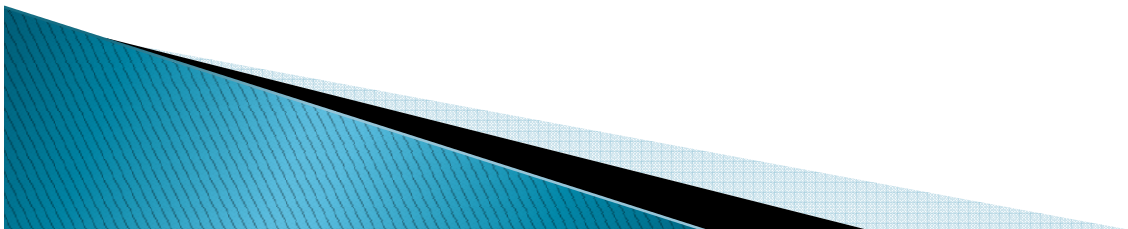
MnDOT Project Management
Office Presents:

Primavera P6 in the Project Management Process

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

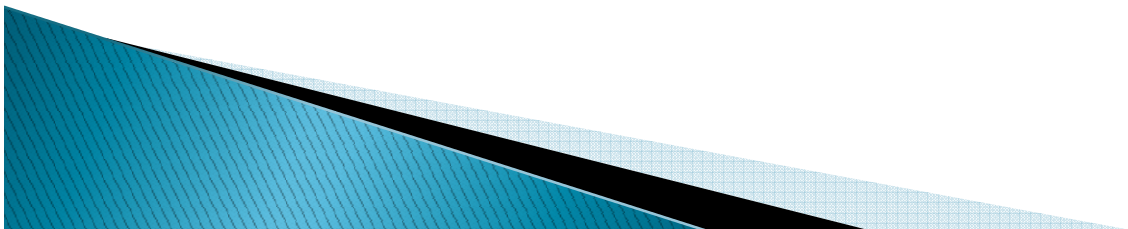
Housekeeping Items

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



Introduction

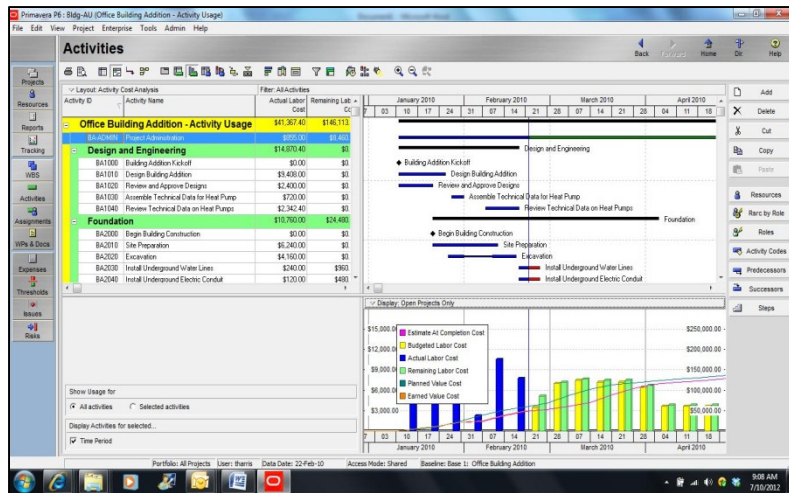
- ❖ What Is Primavera P6?
- ❖ Why Did MnDOT Choose Primavera P6?
- ❖ How is MnDOT Implementing Primavera P6?
- ❖ What Can Primavera P6 Do For MnDOT?



What is P6?

- ❖ Centralized Database – Fast/Scalable
- ❖ Multiple Projects – All Open at the Same Time
- ❖ Multiple Users – Same Project/Same Time
- ❖ Collaboration Tool – Reporting What Ifs
- ❖ Resource Allocation
 - ❖ Roles Resources Planning
 - ❖ Schedule/Cost/Budget
- ❖ Reporting Tool
 - ❖ Robust Reports
 - ❖ Detailed to the Level Needed (filters)



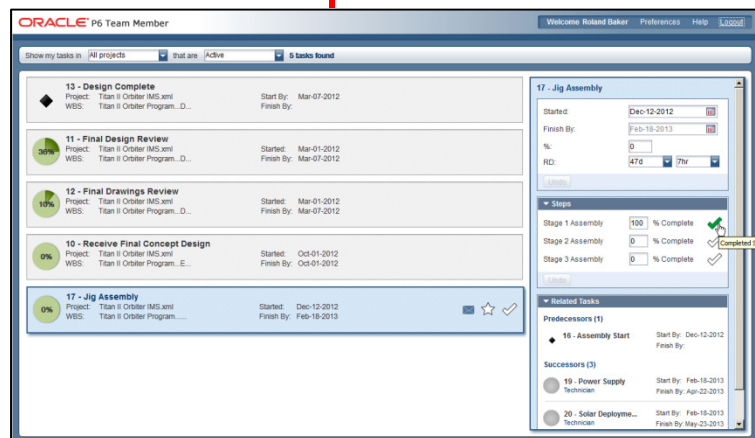


P6 Professional Client



P6 EPPM (Web)

ORACLE®
DATABASE



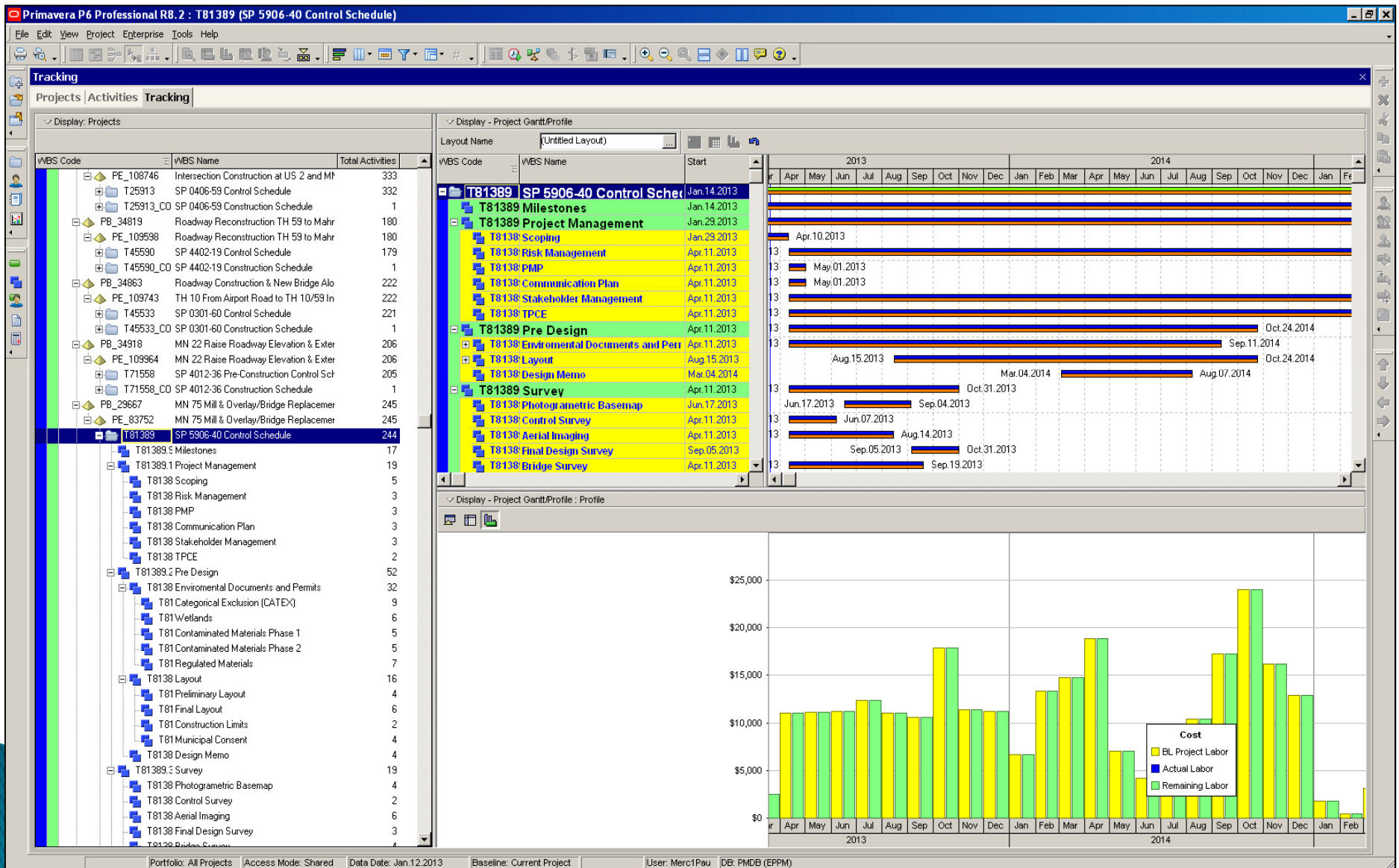
Team Member

P6 Professional Client

- ❖ CPM Scheduling (Critical Path Method)
 - ❖ Track Milestones – Project Health
 - ❖ Earned Value
 - ❖ Track Schedule Progress
 - ❖ Scope/Schedule/Budget
 - ❖ Resource Allocation
 - ❖ Planning
 - ❖ Actuals
 - ❖ Design Projects
 - ❖ Construction Projects
- All Schedules Side by Side/
All Phases

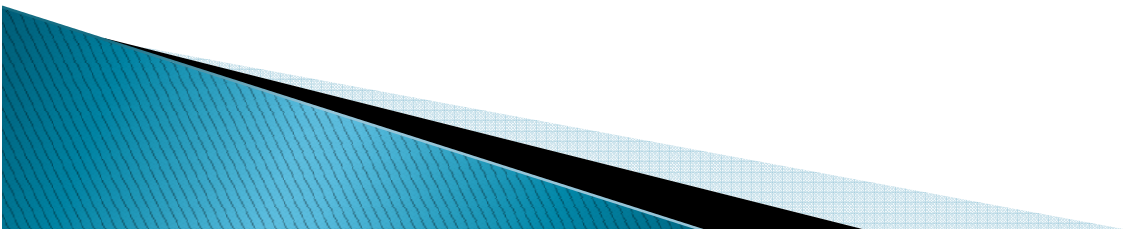


P6 Professional Client

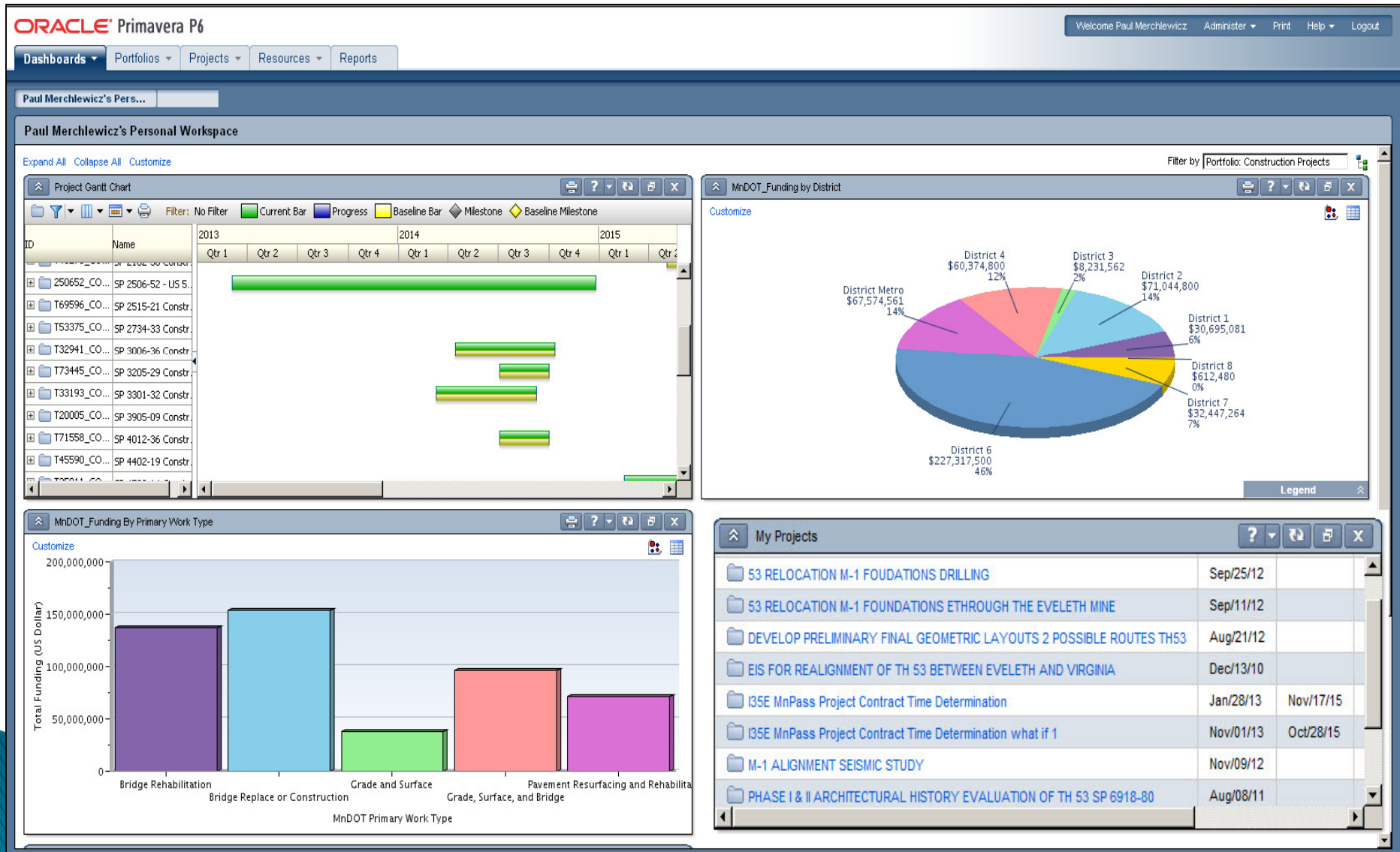


P6 EPPM (Web)

- ❖ Manage Portfolios
 - ❖ Track Progress at Macro Level
 - ❖ Program Health
- ❖ Manage Risk & Issues – Centralized Location
- ❖ Resource Management – Broad Program View
- ❖ Business Process Workflows
- ❖ Collaboration
- ❖ Custom Graphic Dashboards

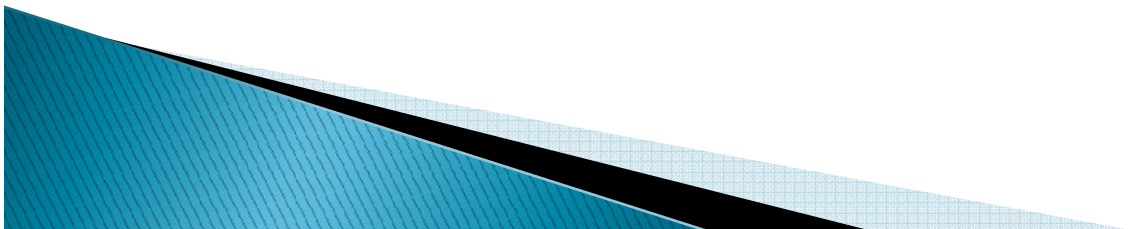


P6 EPPM (Web)



Team Member


- ❖ Easy Access for Users to Status Their Work
- ❖ View Only the Work You Are Assigned
 - ❖ Can View by Project/Status
- ❖ Determine Specific Fields for Updating
- ❖ Review and Approval of Updates for Project Integrity & Control
- ❖ iPhone and iPad Applications



Team Member

ORACLE® P6 Team MemberWelcome Roland BakerPreferencesHelpLogout


Show my tasks in All projects that are Active 5 tasks found



13 - Design Complete

Project: Titan II Orbiter IMS.xml
WBS: Titan II Orbiter Program...D...


Start By: Mar-07-2012
Finish By:



11 - Final Design Review

Project: Titan II Orbiter IMS.xml
WBS: Titan II Orbiter Program...D...

Started: Mar-01-2012
Finish By: Mar-07-2012



12 - Final Drawings Review

Project: Titan II Orbiter IMS.xml
WBS: Titan II Orbiter Program...D...

Started: Mar-01-2012
Finish By: Mar-07-2012



10 - Receive Final Concept Design

Project: Titan II Orbiter IMS.xml
WBS: Titan II Orbiter Program...E...

Started: Oct-01-2012
Finish By: Oct-01-2012



17 - Jig Assembly

Project: Titan II Orbiter IMS.xml
WBS: Titan II Orbiter Program.....

Started: Dec-12-2012
Finish By: Feb-18-2013



17 - Jig Assembly

Started: Dec-12-2012
Finish By: Feb-18-2013
%: 0
RD: 47d 7hr
Undo

Steps

Stage 1 Assembly

100 % Complete



Stage 2 Assembly

0 % Complete



Stage 3 Assembly

0 % Complete



Undo

Related Tasks

Predecessors (1)



16 - Assembly Start

Start By: Dec-12-2012
Finish By:

Successors (3)



19 - Power Supply Technician

Start By: Feb-18-2013
Finish By: Apr-22-2013



20 - Solar Deployme... Technician

Start By: Feb-18-2013
Finish By: May-23-2013

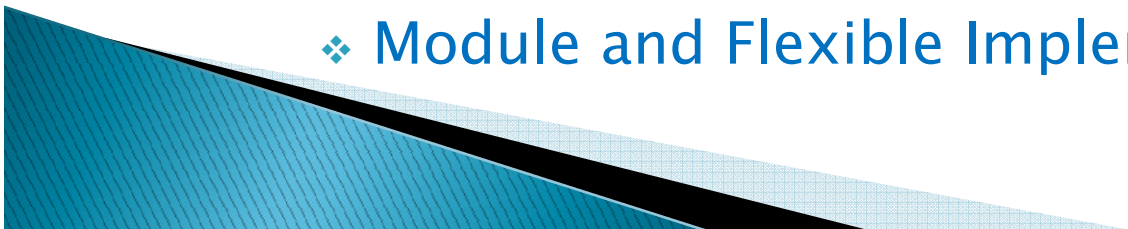
Why Did MnDOT Choose P6?

- ❖ Project and Portfolio Management are emerging trends and MnDOT is trending toward a more mature Project Management Culture
- ❖ Primavera is Scalable – small to very large and mature practices
- ❖ It is a more mature and robust product
- ❖ A good base of support throughout National Transportation Primavera User Groups – FHWA, NYDOT, VDOT, TXDOT, SCDOT, and LA Metro



Evaluation Criteria

- ❖ Portfolio Management
- ❖ Program Management
- ❖ Project Management
- ❖ Resource Management
- ❖ Data Integration with Other Systems
- ❖ Vendor Support Products
- ❖ Module and Flexible Implementation and Use



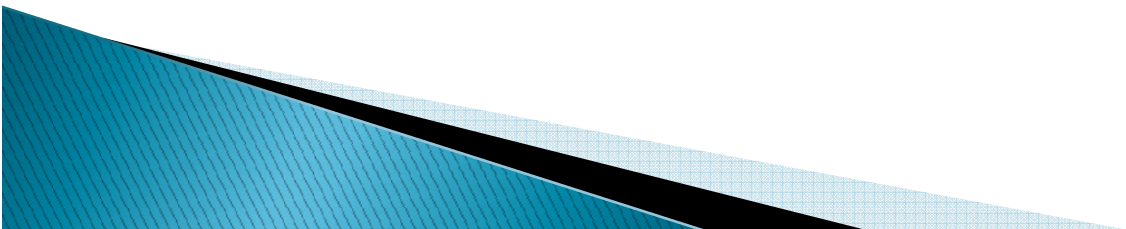
How is MnDOT Implementing P6?

- ❖ Project Team Buy-In (Own the Schedule)
- ❖ Standardize Functional Group Activities (Ex. Bridge)
- ❖ Standardize Schedule Templates
- ❖ Provide Schedule Support for Project Managers
- ❖ Better Schedule Management
- ❖ Integration with Other Systems
- ❖ Transfer of Data



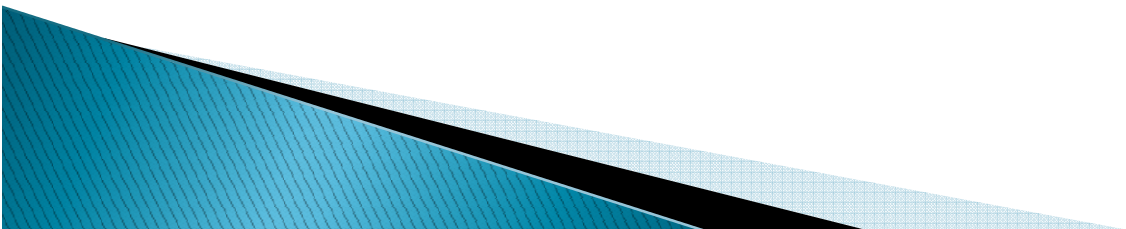
MnDOT Replacing PPMS System

- ❖ Older System Does Not Support Functionality of P6
- ❖ Tracks Only Design Phase of Project
- ❖ Need to Collect Projects from PPMS to P6
- ❖ Need to Keep Existing Data from PPMS (Conversion)
- ❖ Supports MnDOT Business Process in P6 (EPS)



What Can P6 Do for MnDOT?

- ❖ Data Rollup Reporting
- ❖ Program Wide Data
- ❖ Project Wide Data
- ❖ Increased Visibility
- ❖ Increased Transparency



What Can P6 Do For MnDOT ?

PUMA Bundle ID

PUMA Element

State Project ID

MnDOT Program

<u>Activity</u>	<u>Description</u>	<u>Actual Start Date</u>	<u>Actual Finish Date</u>	<u>Orig Dur</u>	<u>Perc Comp</u>
7324	114327	0406-60	State Highway Construction	Let Date: 01-January-2017	
1150	CULTURAL RESOURCES UNIT DETERMINATION	19-Sep-2012	20-Sep-2012	100.00	100.00
1150	PROJECT DESIGN MEMORANDUM			30.00	0.00
1194	UTILITY IDENTIFICATION			60.00	0.00
1195	UTILITY COORDINATION			1.00	0.00
1196	UTILITY VERIFICATION & RELOCATION PLANS			90.00	0.00
1250	ROAD PLANS			90.00	0.00
1254	TRAFFIC CONTROL PLAN			15.00	0.00
1270	FINAL STRUCTURE PLANS			145.00	0.00
1275	PROJECT TURN IN			14.00	0.00
1280	PERMITS	01-Sep-2012		120.00	10.00
1291	AGREEMENTS - RAILROADS			77.00	0.00
1300	PS&E			36.00	0.00
1301	STRUCTURES PS&E			14.00	0.00
1310	LETTING			28.00	0.00
1310M	LETTING HELD			0.00	0.00
1311	APPROVAL OF CONSTR CONTRACT			40.00	0.00
1030	CONTROL SURVEYS			15.00	0.00
1001	PROJECT INITIATION	18-Sep-2011	18-Sep-2012	1.00	100.00
1002	STRUCTURE STUDY / SCOPING	17-Sep-2012	19-Sep-2012	7.00	100.00
1003	PROJECT SCOPING	19-Sep-2012		15.00	90.00
1021	PRELIM DESIGN SURVEYS			15.00	0.00

MnDOT EPS Structure for EPS in P6

PUMA Bundle ID

PUMA Element

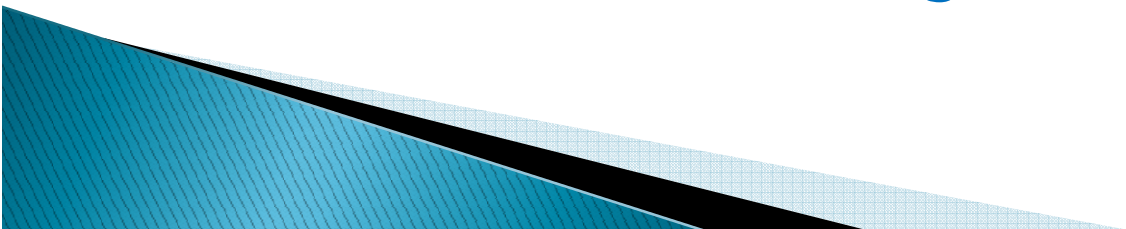
MnDOT Program

State Project ID

DOT	MnDOT	
20	State Roads	
21	Infrastructure Investment & Planning	
PB_11891	Replace Bridges 9570 & 9599 in New Brighton	
PB_13715	Bituminous Surfacing TH 55 to TH 75 in Doran	
PB_16528	Pavement Reconstruction and Bridge 74815, 74816, 74817, 74818 in Owatonna	
PB_18113	Approach and Replace Bridge 9040 & 9103 on TH 61 in Redwing	
PB_18156	I35E MnPASS Project	
PB_18515	TH 34 PASB and Overlay	
PB_18600	Bituminous Overlay TH 65 from Olgilvie to Mora	
PB_18747	Replace Bridges 9567 & 9568 Over Goose Lake Road and BNSF in Vadnais Heights	
PB_18783	Realignment of TH 53 Through Mine	
PB_18839	Replace Bridges 8392, 3958, 8393, 9394, 3959, 4463 Between Crookston and Angus	
PB_18894	Mill & Overlay From Smithville to JCT I35 in West Duluth	
PB_21322	Replace Winona Bridge #5900 Over the Mississippi River	
PE_73689	Replace Winona Bridge #5900 Over the Mississippi River	
T69584	SP 8503-46 Control Schedule	
T69584_CO	SP 8503-46 Construction Schedule	

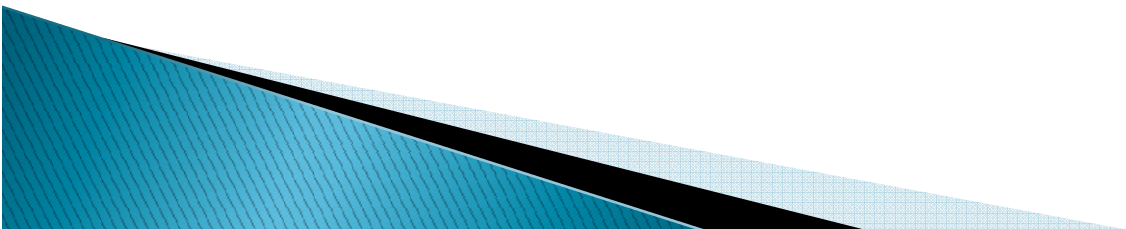
P6 Implementation Project Goals

- ❖ Better Schedule Management
- ❖ Project Team Buy-In (Own the Schedule)
- ❖ Standardize Functional Group Activities
- ❖ Easier Build out of Projects
- ❖ Standardized Templates
 - ❖ Standardized Structure
 - ❖ Easier Reporting
 - ❖ Easier Tracking



P6 Implementation Project Goals

- ❖ Portability – Staff will be More Familiar with Work Across Projects
- ❖ Familiarize Team with P6 Software
- ❖ Provide Schedule Support for Project Manager
- ❖ Protocols currently being Developed for Project Manager Interaction

















MnDOT Standardized Project Templates




- ❖ Workshop Team Access the “Control Schedule” Onsite
- ❖ Functional Groups Attend 2 Day Session
- ❖ Workshop Goals:
 - ❖ Project Scope
 - ❖ WBS
 - ❖ Functional Groups Needed for Project
 - ❖ Activities & Relationships
 - ❖ Risk Register
 - ❖ Develop Baseline Schedule to Project Letting



[-]	▲	PB_21322	Replace Winona Bridge #5900 Over the Mississippi River
[-]	▲	PE_73689	Replace Winona Bridge #5900 Over the Mississippi River
	[-]	T69584	SP 8503-46 Control Schedule
	[-]	T69584_CONST	SP 8503-46 Construction Schedule

A19270	Prepare Final Repair Recommendation	Apr/08/14	Apr/14/13
A19280	Receive District Concurrence on Final Repair Recon	Apr/15/14	Apr/17/13
A19290	Prepare Bridge Rehab Preliminary Estimate	Apr/18/14	Apr/21/13
- Bridge 85851		Jan/14/13	May/03/13
- Scoping & Structure Determination - Bridge 85851		Jan/14/13	Aug/01/13
A19430	Assemble and Review Data	Jan/14/13	Jan/28/13
A19440	Conduct Site Visit	Jan/29/13	Feb/19/13
A19450	Identify Structures and Determine	Feb/20/13	Mar/19/13

WBS Code	WBS Name
 T69584	SP 8503-46 Control Schedule
  T69584.1	Project Management
  T69584.2	Preliminary Design
  T69584.3	Final Design
  T69584.55	Environmental Review
  T69584.4	ROW
  T69584.5	Letting/Award
 T69584.6	

 Bridge	Jan/14/13	May/03/16
 Bridge 5900	Jul/23/13	Apr/21/14
 Rehab Report - Bridge 5900	Jul/23/13	Jan/07/14

Bridge		Jan/14/13	May/03/16
Bridge 5900		Jul/23/13	Apr/21/14
Rehab Report - Bridge 5900		Jul/23/13	Jan/07/14
A19300	Gather Information	Jul/23/13	Jul/29/13
A19320	Determine Capacity of Existing Bridge	Jul/30/13	Aug/05/13
A19330	Develop Rehab Alternatives	Aug/06/13	Sep/03/13
A19340	Assess Rehab Alternatives for Adverse Effects (Historic)	Sep/04/13	Oct/29/13
A19350	Estimate Rehab Costs	Oct/30/13	Nov/05/13
A19360	Write Draft Rehab Report	Nov/06/13	Dec/06/13
A19370	Review by MnDOT & FHWA	Dec/09/13	Dec/20/13
A19380	Submit Final Rehab Report	Dec/23/13	Jan/07/14
Geotechnical Investigation - Bridge 5900		Jan/08/14	Feb/14/14
A19390	Establish Scope of Investigation	Jan/08/14	Jan/09/14
A19400	Field Work	Jan/10/14	Jan/16/14
A19410	Laboratory Testing	Jan/17/14	Jan/31/14
A19420	Write Preliminary Report	Feb/03/14	Feb/14/14
Rehab Recommendation - Bridge 5900		Feb/18/14	Apr/21/14
A19250	Prepare Preliminary Repair Recommendation	Feb/18/14	Mar/17/14
A19260	Receive District Concurrence on Preliminary Repair Recommendation	Mar/18/14	Apr/07/14
A19270	Prepare Final Repair Recommendation	Apr/08/14	Apr/14/14
A19280	Receive District Concurrence on Final Repair Recommendation	Apr/15/14	Apr/17/14
A19290	Prepare Bridge Rehab Preliminary Estimate	Apr/18/14	Apr/21/14
Bridge 85851		Jan/14/13	May/03/16
Scoping & Structure Determination - Bridge 85851		Jan/14/13	Aug/01/13
A19430	Assemble and Review Data	Jan/14/13	Jan/28/13
A19440	Conduct Site Visit	Jan/29/13	Feb/19/13
A19450	Identify Structures and Determine	Feb/20/13	Mar/19/13

MnDOT Standardized Codes & Layouts

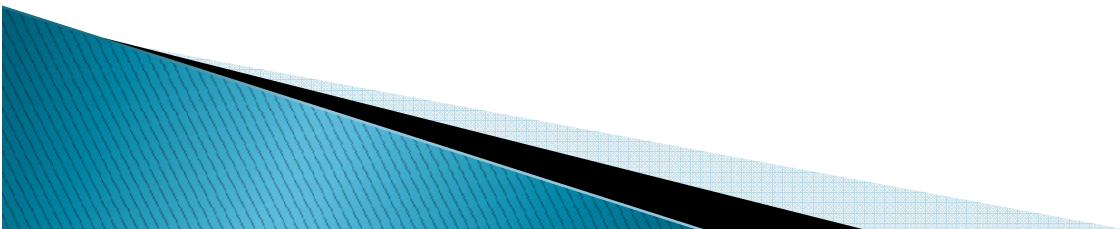
❖ Global Codes & Layouts Facilitate Reporting

Projects										
Layout: State Roads										
Project ID	Project Status	Project Name	Responsible Manager	Total Activities	MnDOT Puma Bundle	MnDOT Puma SP	MnDOT Route Number	MnDOT Schedule Classification	MnDOT Route Type	MnDOT Puma Element
DOT	Active	MnDOT	MnDOT	2557						
20	Active	State Roads	MnDOT	2557						
21	Active	Infrastructure Investment & Planning	Infrastructure Investment & Planning	2557						
PB_11891	Active	Replace Bridges 9570 & 9599 in New Brighton	PB_11891	250						
PE_109801	Active	Replace Bridges 9570 & 9599 in New Brighton	PE_109801	250						
T9H084	Active	SP 6284-163 Control Schedule (2 Bridges - New Brighton)	109801	250	11891	6284-163	35	CS	I	109801
T9H084_CONST	Active	SP 6284-163 Construction Schedule	109801	0	11891	6284-163	35	MNG		109801
PB_13715	Active	Bituminous Surfacing TH 55 to TH 75 in Doran	PB_13715	0						
PE_63619	Active	Bituminous Surfacing TH 55 to TH 75 in Doran	PE_63619	0						
T42277	Active	SP 8402-17 Control Schedule	63619	0	13715	8402-17	9	CS	MN	63619
T42277_CONST	Active	SP 8402-17 Construction Schedule	PE_63619	0	13715	8402-17	9	MNG		63619
PB_16528	Active	Pavement Reconstruction and Bridge 74815, 7481	PB_16528	0						
PE_67307	Active	Pavement Reconstruction and Bridge 74815, 7481	PE_67307	0						
T69271	Active	SP 7480-113 Control Schedule	67307	0	16528	7480-113	35	CS	I	67307
T69271_CONST	Active	SP 7480-113 Construction Schedule	PE_67307	0	16528	7480-113	35	MNG		67307
PB_18113	Active	Approach and Replace Bridge 9040 & 9103 on TH 6	PB_18113	178						
PE_69525	Active	Approach and Replace Bridge 9040 & 9103 on TH 6	PE_69525	178						
T69596	Active	SP 2515-21 Control Schedule	69525	178	18113	2515-21	63	CS	US	69525
T69596_CONST	Active	SP 2515-21 Construction Schedule	69525	0	18113	2515-21	63	MNG		69525
PB_18156	Active	I35E MnPASS Project	Infrastructure Investment & Planning	370						
PE_70496	Active	I35E MnPASS Project	Infrastructure Investment & Planning	370						
T70496CTD	Active	I35E MnPass Project Contract Time Determination	70496	185	18156	6280-367	35	MNG	I	70496
T70496CTD-1	Active	I35E MnPass Project Contract Time Determination what i	70496	185	18156	6280-367	35	MNG	I	70496

MnDOT Goals Going Forward

Projects in Construction Phase

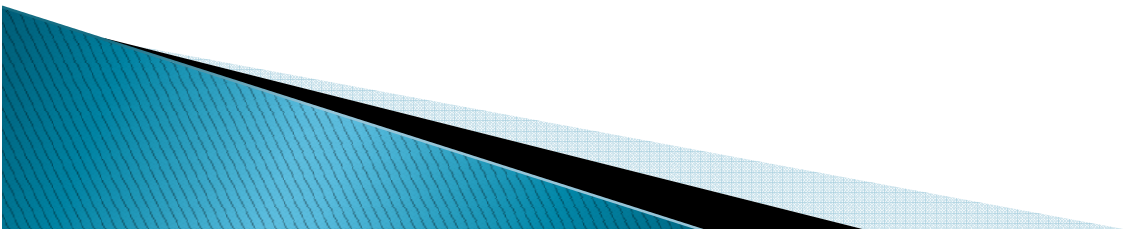
- ❖ Contractor's Build Their Schedule in our Network 1/1/13
- ❖ Piloting Providing BIM Models and CTD Schedules to Contractors 3/1/13
- ❖ Select "Unit Rate" project– Resource and Cost Loaded 3/1/13
- ❖ Role and Resource Loaded of CE&I staff 6/1/14



MnDOT Goals Going Forward

Projects in Scoping and Design Phase

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





Questions or Comments

Tom Wiener

thomas.wiener@state.mn.us

MnDOT Project Management Office

651-366-4239

Peter Harff

peter.harff@state.mn.us

MnDOT Project Management Office

507-514-1095

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

Next Webinar: Wednesday, March 27, 2013

Time: 1:00 p.m.

Topic: Collaborative Scheduling using the CPM Method

Presenter: Jonathan McNatty

DRMcNatty & Associates, Inc.