FY 17&18 Project Baseline Process

February 9, 2015

Purpose

This document provides direction on how obtain a project baseline (a.k.a. resource concurrence) on FY 2017 and 2018 pre-construction schedules in P6.

Project Baseline means all stakeholders (district and functional groups with tasks) in a project schedule have agreed to the activities, logic, activity durations, roles, and point in time when activities will be completed, and letting date of a project.

This document also provides guidance on developing recovery plans for projects with negative float.

Overview

The Project Management Battle is part of MnDOT Wildly Important Goal of Enhancing Financial Effectiveness. The goal of the current PM battle is to improve the project letting schedule from 44% to 90% by July 1, 2015 (% measured in the first ¾ of the state fiscal year). This includes a balanced letting schedule (based on the # of projects) of:

1st Quarter:	20%
2nd Quarter:	35%
3rd Quarter:	35%
4th Quarter:	10%

When developing a balanced letting schedule, the district and central office will attempt to:

A. Minimize the number of large projects (> $5M) and similar work types in a single letting period (e.g. do not let all of the un-bonded overlay projects in one letting)
B. Limit the number of projects let per month to 30
C. Limit the total dollar value of single letting to $100,000,000
D. Balance the budget using similar percentages to the number of projects.

ELLAs: There are no limits on the number of ELLA projects a district can propose. The following guidance will be used on how ELLAs are counted towards the above balanced letting schedule goals:

A. Quarters 1, 2, and 3: ELLAs will count toward the quarterly percentage.
B. Quarter 4:
    a. The first ELLA project in each Outstate district will not count towards the 10% goal.
    b. The first five ELLA projects in metro will not count towards the 10% goal.
    c. All subsequent ELLAs will count.

Role & Responsibilities

Creating a balanced letting schedule requires a cooperative effort from the district, functional groups, shared service center and a balanced letting coordinator. Listed below are the primary roles:

District (Project Manager) – Ultimately responsible for delivering the project on schedule. For a project the PM will:

- Lead coordination and communication between the functional groups and district team.
- Develop preliminary schedule through the SSC.
- Provide schedule edits to the SSC.
- Champion the Scoping process.
- Provide role loading information for district activities.
- Identify activity owners for SSC Staff to assign to the activities.

District (Management) – Provides district resources to the PM, provides district leadership on incorporating all district projects into the balanced letting schedule and is directly responsible for supervising the Project Manager.

Functional Groups (Management) – Provides resources to meet the project schedules and leadership on incorporating workload into the balanced letting schedule.

Shared Service Center (SSC) – Builds and maintains project schedules. The SSC will:

- Incorporate edits requested from the Project Manager.
- Generates reports requested by the Project Manager and the District.
- Provide guidance to Project Managers and CO Functional Groups on how to baseline projects.

Balanced Letting Coordinator – Coordinates balanced letting schedule from a statewide perspective between the functional groups and districts.

Process

Step 1: Schedule Creation Process

1. Project Manager completes the Scoping Document.

   District Management recommends district wide program letting schedule and updates PPMS with proposed letting dates based on balanced letting schedule guidance.

2. Balanced Letting Coordinator (BLC) reviews program on a statewide level and adjusts letting dates after consultation with the district ADE.

   The balanced letting coordinator will consider:
   - ✓ Number of projects in a letting
   - ✓ Types of projects in a letting
   - ✓ Location of work types throughout the state

3. The Program Delivery ADE will have the letting dates updated in PPMS.

4. Project Manager outlines the anticipated process (deliverables, timelines) anticipated for the project. The Project Manager requests a P6 Schedule by completing the Schedule Initiation Form and meets with the SSC to review the outline. (See PM web site at http://www.dot.state.mn.us/pm/index.html for additional information).

   The SSC will work with the PM to add float limits (planned start date) to the schedule.

   Float limits help define the "point in time" when work on an activity will occur. For example, if a small project has a letting date in May, the P6 schedule will show that the work can occur anytime between "now" and May due to a large amount of float. The PM and functional groups may want to show the actual design occurring in January to balance the workload. By using a float limit, it minimizes the float and moves the start of the project to a point in the future. Float limits should follow the general "rules of thumb":

   a. 0 Days – minor projects
   b. 20 Days – moderate projects
   c. 40 Days – major projects

5. SSC prepares the schedule and provides the Project Manager with the following:

   a. Gantt Chart Layout Report {*1-MnDOT - Gantt Chart Layout*; Global Activity Layout}
   b. Relationships Report – {*MnDOT Schedule Report: Relationships by WBS*; Report}
   c. Roles Layout Reports –

      i. *MnDOT - Role Review by Activity* {Resource Assignment Global Layout}
      ii. *MnDOT - Role Review by Role* {Resource Assignment Global Layout}

6. Project Manager reviews reports with district staff, district functional groups and provides comments back to SSC scheduler for updating in P6. Project Manager:

   a. obtain roles and role hour information for all district functions, and
   b. consult with central office functional groups on appropriate work packages, logic, and durations, but minimizes the amount of e-mail.

7. Upon incorporation of revisions, the SSC will change the MnDOT Baseline Status code to Under Review Schedule and provide the following documents to the PM (see Attachment A for examples):

   - ✓ Gantt Chart
   - ✓ Relationship Report
   - ✓ Roles Report

8. Upon incorporation of revisions, Project Manager posts the following information on the following Sharepoint site {See Attachment B}:

   - ✓ Scoping Document
   - ✓ Early Notification Memo
   - ✓ Gantt Chart
   - ✓ Relationship Report
   - ✓ Roles Report

9. After all projects are loaded onto the Sharepoint site, the SSC prepares the following report for review by the district and functional groups and loads them in the functional group directory on the Sharepoint site (See Attachment E for examples):

   a. Activity Layout Report: MnDOT Functional Group Summary Report
   b. Activity Layout Report: 5-MnDOT – Functional Group Activity – Let Date
   c. Resource Assignment Layout Report: Schedule Review – Role W Role Spreadsheet

Step 2: Baseline Process

10. Functional Groups (Bridge, Foundations, Land Management, ADA, Environmental Stewardship, Railroad, Technical Support) review all work packages for the following:

    - ✓ Work package – is it correct?
    - ✓ Relationships – are they correct? Do they have the right predecessors and successors?
    - ✓ Activities – are they correct? Missing activities?
    - ✓ Activity Durations – Are the estimated working days accurate for this type of project?
    - ✓ Roles – are the classes of expertise correct?
    - ✓ Role Units – do the estimated hours that it will take to complete the work accurate?

11. Functional Groups will work with Chris Thomas (Christopher.Thomas@state.mn.us) and Nancy Hanzlik (Nancy.Hanzlik@state.mn.us) to adjust roles and role hours in the schedules.

12. Functional Groups will discuss the following items with the Project Manager and address the changes to the schedule at the statewide Letting Schedule Program Review meeting.

    - ✓ Were changes made to the roles and role units?
    - ✓ Can I meet the deliverable dates as shown (**late start and late finish**)? If no, what start date and finish date can you commit to?
    - ✓ Do I have the resources to meet this schedule?
    - ✓ If I don't have the resources, do others in MnDOT have excess capacity or can I hire a consultant?
    - ✓ Do we need to adjust the letting date?

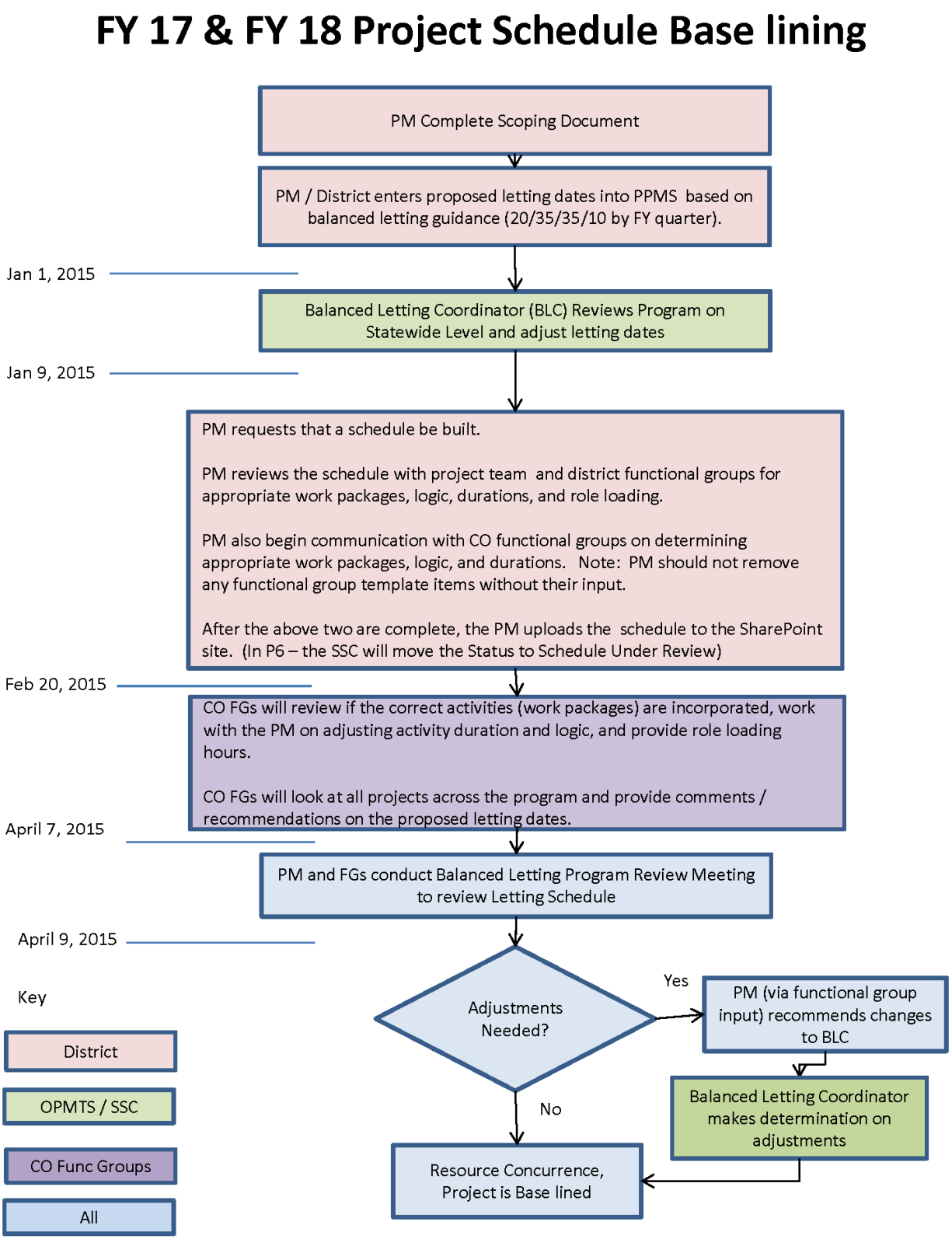
13. Balanced Letting Coordinator schedules a statewide Letting Schedule Program Review meeting. This meeting includes Program Review ADEs, and at least one manager from each functional group. Attendees must have authority to make decisions on adjusting project schedules. This meeting will:

    a. review each letting and determine if adjustments are necessary
    b. Identify additional resources (consultants) to meet the schedule
    c. Identify opportunities for work sharing across districts

14. At the conclusion of this meeting, the SSC will make any adjustments to the schedules and the balanced letting schedule will be set.

15. The SSC will baseline each project in accordance with the Schedule Creation and Baseline Process document PD-10-01. Projects with negative float require a recovery plan according to the Recovery section of this document.

Timelines for Implementation



Recovery Plan

When a project enter negative float, it is the Project Manager's responsibility to develop a Recovery Plan.

If a project has negative float of more than 10 working days following the data date move, the SSC will change MnDOT Baseline Status Code from Baselined to Recovery. When the recovery plan moves the negative float to 10 days or less, the SSC will change the MnDOT Baseline Status code from Recovery to Baselined if the impacted functional groups (district and CO) have accepted the written recovery plan.

The Recovery Plan needs to be developed in close coordination with the project team. Recovery from negative float can be achieved through multiple methods:

- Updating activity progress
- Crashing the schedule – decreasing the total project durations by adding resources (human and material) to the project schedule without altering activity sequence.
- Fast tracking activities - compressing the project schedule by overlapping activities normally performed in sequence
- Changing the letting date – PPMS is the authoritative source for the letting date. The letting date must be changed in PPMS prior to changing the letting date in P6

Listed below are the levels of Recovery Plans required:

- A written recovery plan is not required for projects with one to ten days of negative float that meet all four items listed below:
  - Do not require any adjustments to CO functional group resources or timelines
  - Do not require moving the letting date
  - Do not require logic changes
  - Can be mitigated through simple schedule updates or rebalancing the district resources.

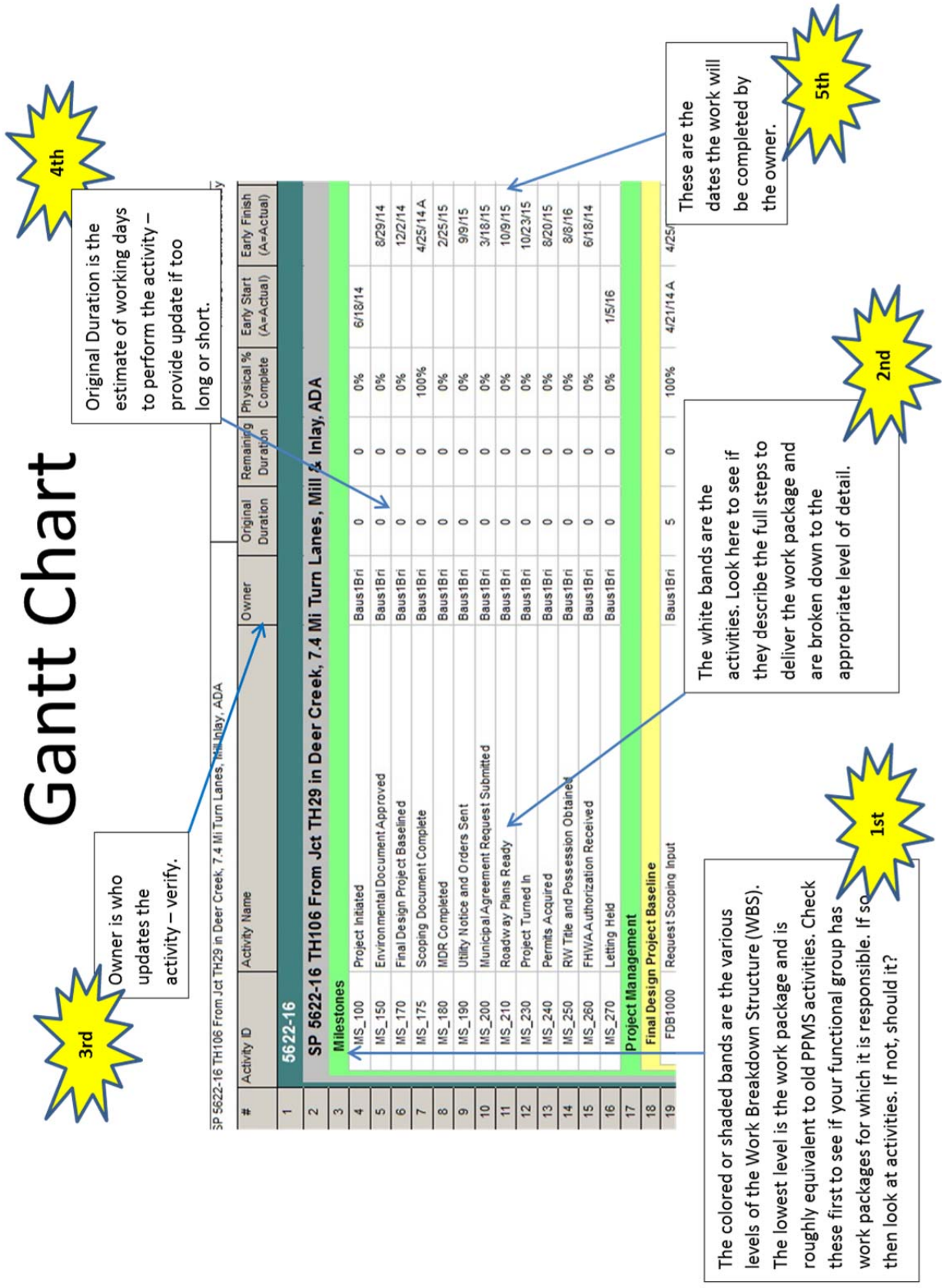
- A written recovery plan is required for all other projects with negative float. The written recovery plan should:
  - Use the attached recovery plan template (Attachment D), or
  - Be documented with the appropriate approvals from the impacted users (for example, this could be an e-mail between PM and functional groups, a memo, meeting minutes, or an agreed upon red-line schedule.

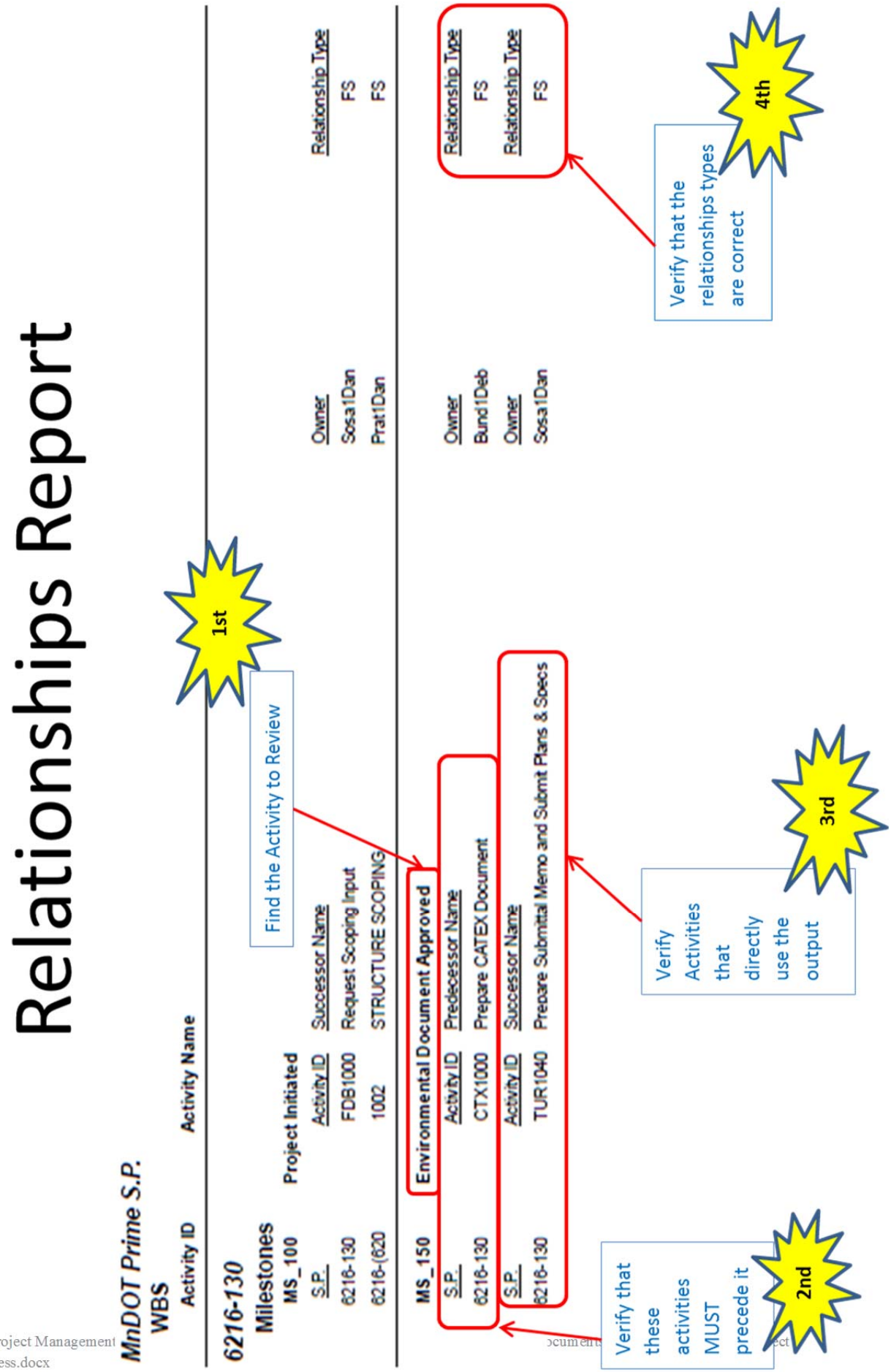
The SSC will only adjust schedules that meet the above criteria. In addition, modifications in letting dates will not change in P6 until PPMS is updated.

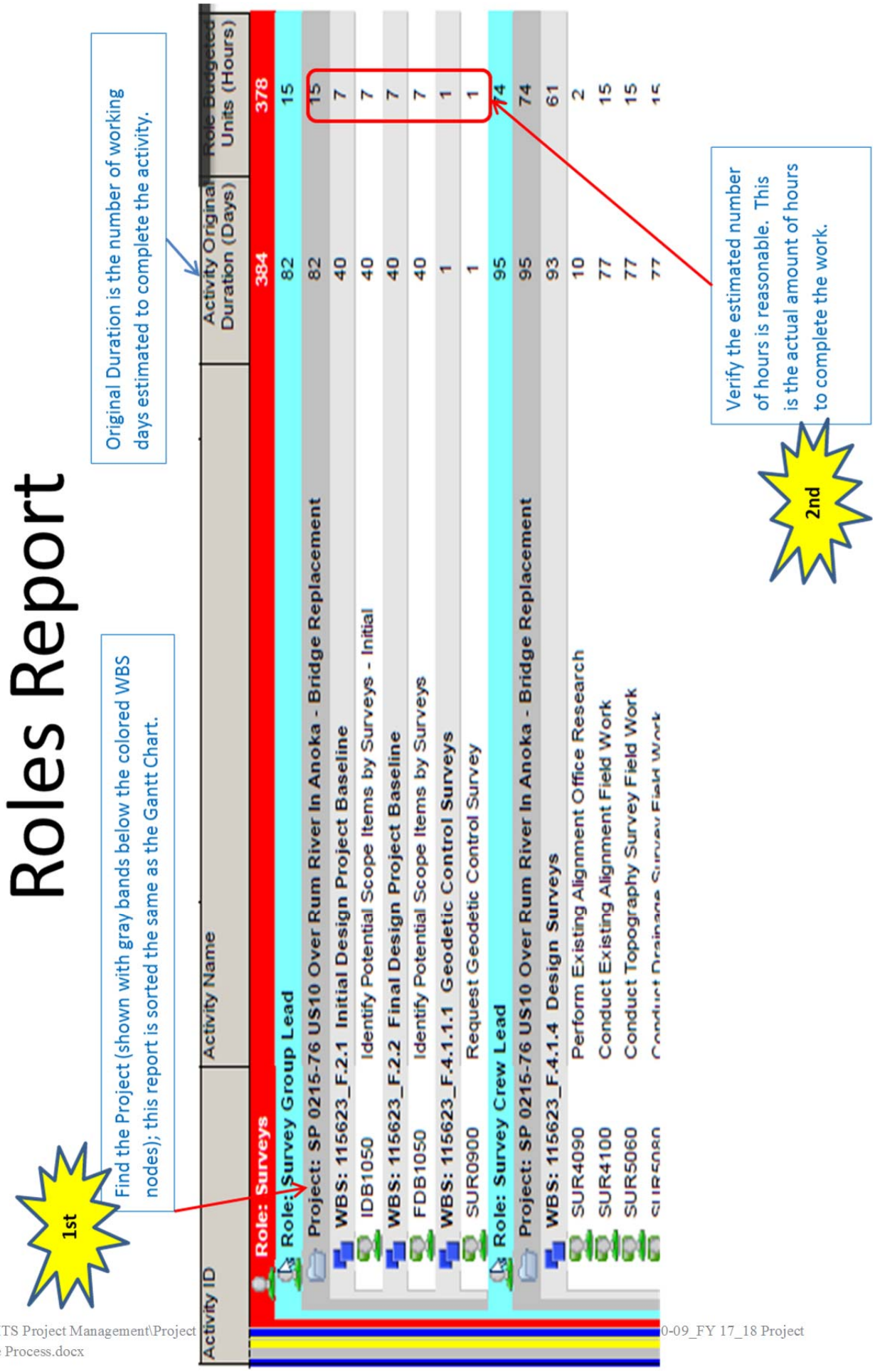
Upon updating the schedule, the SSC will make a Baseline of the Project Schedule in accordance with Procedure PD-20-01 Schedule Maintenance, and change the MnDOT Baseline Status Code from Recovery to Baselined.

Attachment A – Reading Reports

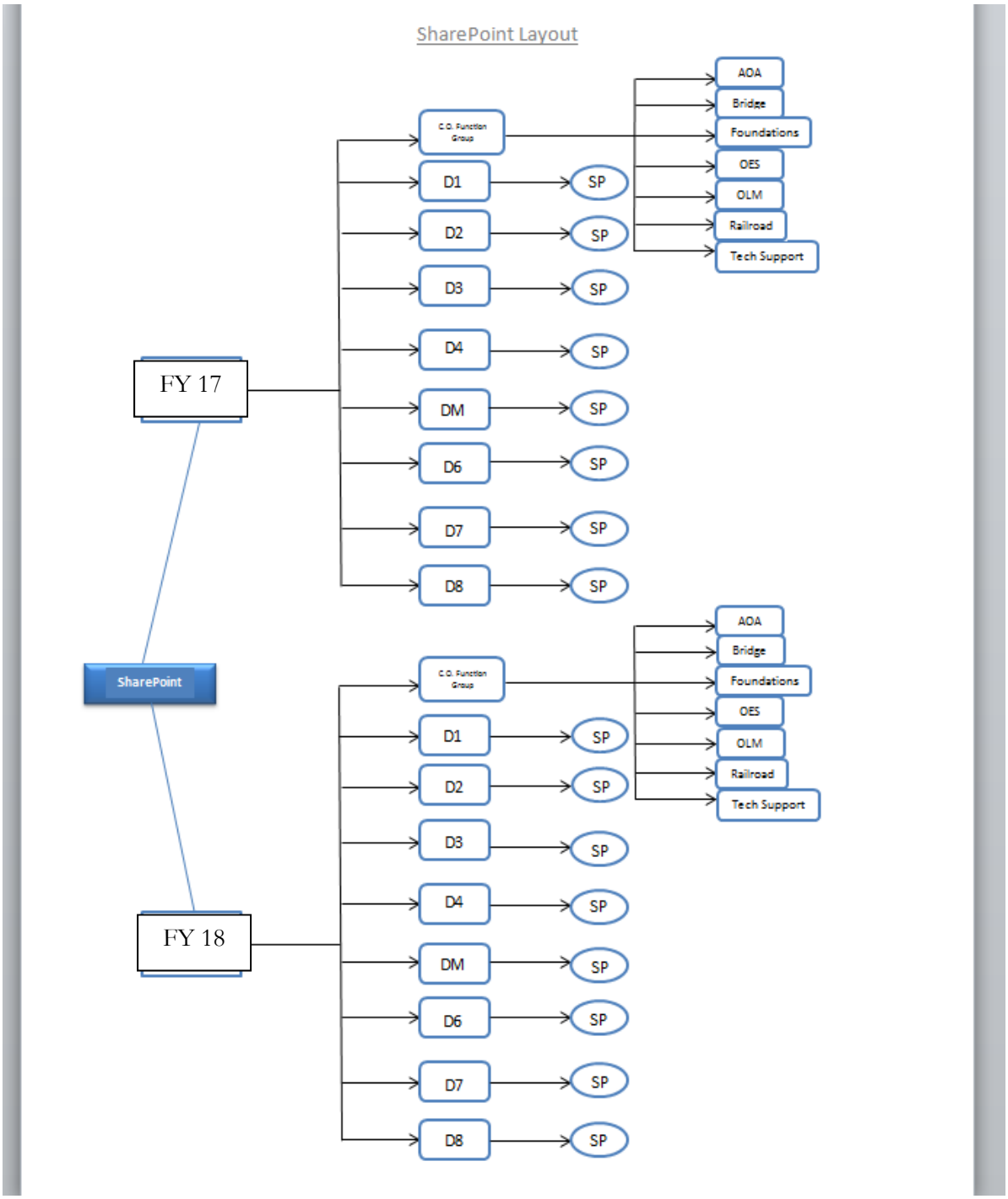
Shown below are guides on how to read P6 reports.




Relationships Report
MnDOT Prime S.P.
WBS
Activity ID
Activity Name
6216-130
Milestones
MS_100
Project Initiated
S.P.
Activity ID
Successor Name
Relationship Type
6216-130
FDB1000
Request Scoping Input
FS
Owner
Sosa1Dan
6216-(620
1002
STRUCTURE SCOPING
FS
Prat1Dan
MS_150
Environmental Document Approved
S.P.
Activity ID
Predecessor Name
Relationship Type
6216-130
CTX1000
Prepare CATEX Document
FS
Owner
Bund1Deb
S.P.
Activity ID
Successor Name
Relationship Type
6216-130
TUR1040
Prepare Submittal Memo and Submit Plans & Specs
FS
Owner
Sosa1Dan
1st
Find the Activity to Review
2nd
Verify that these activities MUST precede it
3rd
Verify Activities that directly use the output
4th
Verify that the relationships types are correct


Roles Report
1st
Find the Project (shown with gray bands below the colored WBS nodes); this report is sorted the same as the Gantt Chart.
Original Duration is the number of working days estimated to complete the activity.
Verify the estimated number of hours is reasonable. This is the actual amount of hours to complete the work.
2nd
Activity ID
Activity Name
Activity Original Duration (Days)
Role Budgeted Units (Hours)
Role: Surveys 384 378
Role: Survey Group Lead 82 15
Project: SP 0215-76 US10 Over Rum River In Anoka - Bridge Replacement 82 15
WBS: 115623_F.2.1 Initial Design Project Baseline 40 7
IDB1050 Identify Potential Scope Items by Surveys - Initial 40 7
WBS: 115623_F.2.2 Final Design Project Baseline 40 7
FDB1050 Identify Potential Scope Items by Surveys 40 7
WBS: 115623_F.4.1.1.1 Geodetic Control Surveys 1 1
SUR0900 Request Geodetic Control Survey 1 1
Role: Survey Crew Lead 95 74
Project: SP 0215-76 US10 Over Rum River In Anoka - Bridge Replacement 95 74
WBS: 115623_F.4.1.4 Design Surveys 93 61
SUR4090 Perform Existing Alignment Office Research 10 2
SUR4100 Conduct Existing Alignment Field Work 77 15
SUR5060 Conduct Topography Survey Field Work 77 15

Attachment B – Typical Sharepoint Site Structure



Attachment C – Schedule Types

Listed below are the MnDOT Baseline Status codes that will be used to track the development of a schedule from inception through "resource concurrence." The SSC schedulers will be responsible for modifying the above codes as the schedule advances.

- ✓ **Undeveloped** – P6 Admin team has created the shell.
  - Planned Status (P6 Project Status)`
  - Planned or Programmed (MnDOT Project Status)
  - *not in the scorecard for negative float*

- ✓ **Preliminary Schedule** – Initial schedule set up by SSC staff based on schedule initiation form prepared by the project manager.
  - Planned Status (P6 Project Status)
  - Planned or Programmed (MnDOT Project Status)
  - *Not in the scorecard for negative float*

- ✓ **Schedule Under Review** – Preliminary Schedule has been updated by the SSC based on project manager comments and input from the functional groups. The project manager then distributes this schedule to the functional groups.
  - Planned Status (P6 Project Status) until functional groups buy-in to work packages, activities, relationships (logic), durations, role hours, and activity owners. This does not include the schedule dates (date in time when the activities will occur).
    - Planned or Programmed (MnDOT Project Status)
    - *Not in the scorecard for negative float*

  - Active Status (P6 Project Status) when PM obtains function group buy-in.
    - Planned or Programmed (MnDOT Project Status)
    - *In the scorecard for negative float*

- ✓ **Baselined** – PM and functional groups have agreed on the schedule dates from the Schedule Under Review schedule. SSC staff will record the baseline schedule in P6.
  - Active Status (P6 Project Status)
  - Planned or Programmed (MnDOT Project Status)
  - *In the scorecard for negative float*

- ✓ **Recovery** – After a schedule is baselined and a project is impacted, the status will change to Recovery until a recovery plan has been accepted by the district and functional groups. After acceptance of the recovery plan, the status will move back to baselined.
  - Active Status (P6 Project Status)Planned or Programmed (MnDOT Project Status)
  - *In the scorecard for negative float*

Attachment D – Recovery Plan Template

Attached is a draft recovery plan that can be used by a Project Manager.

NEGATIVE FLOAT RECOVERY PLAN
PRIME S.P. (ROUTE)
ELEMENT ID

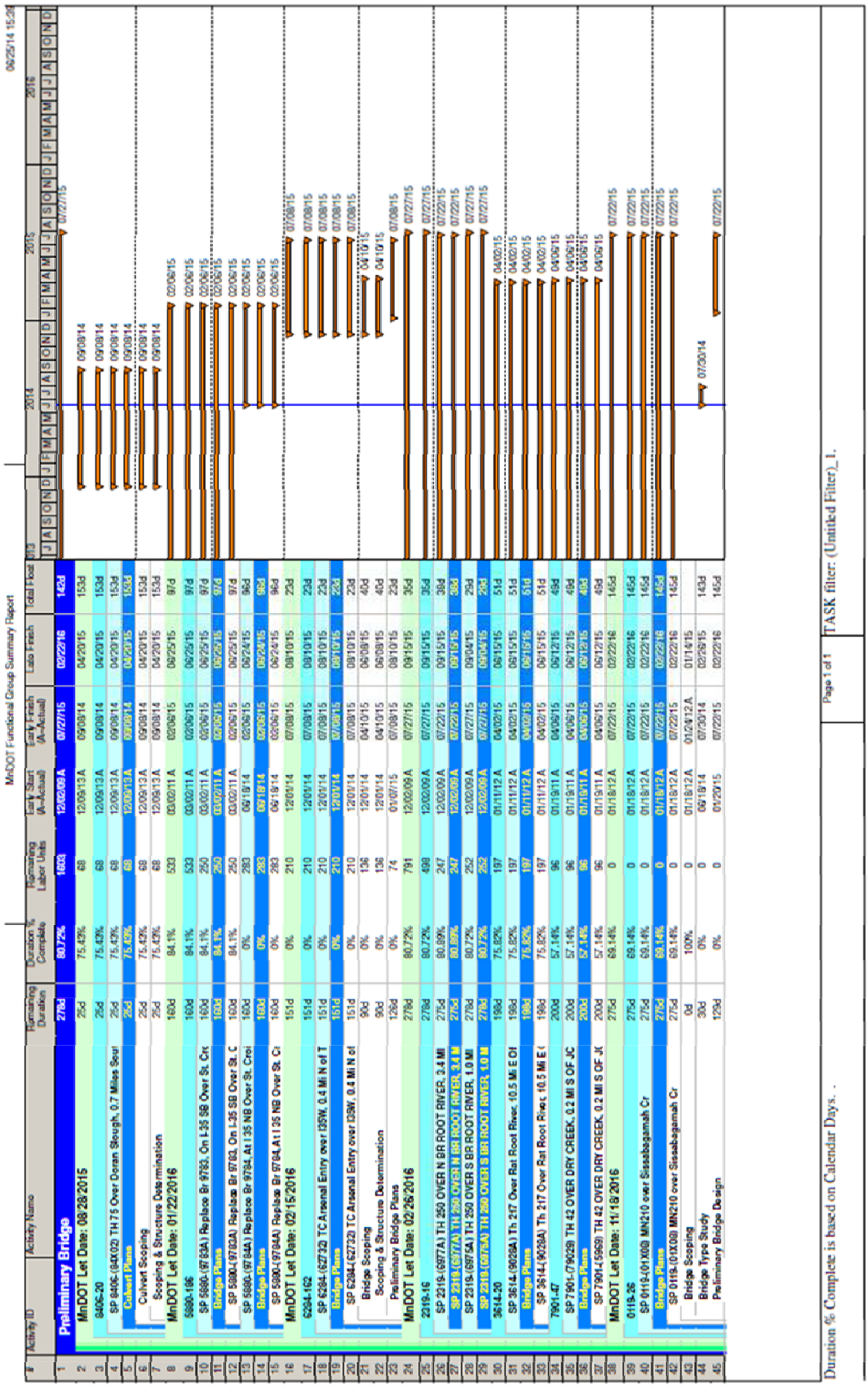
Date	Date of Recovery Plan
Amount of Negative Float	
Origin of Negative Float	What is the origin of the Negative Float? What functional areas or external partners/organizations is the origin and/or cause of the Negative Float? Are there multiple causes and multiple occurrences? List.
Recovery Options	The following recovery strategy will be used (use more than 1 if applicable): ☐ Re-sequencing of work ☐ Schedule Crashing ☐ Allocating more internal resources ☐ Adding Consultants ☐ Change the Letting Date Current Letting Date: Proposed Letting Date:
Recovery Resolution & Justification	The following steps and actions are necessary to eliminate the negative float on this project:
Project Budget	Does the recovery plan impact project budget? ☐ No ☐ Yes, by If Yes, How much? Why? What is the additional source of funding?
Project Risk Register	Are there additional Risks with the Negative Float Recovery Plan?
Concurrence Checklist	The following groups need to concur with the recovery plan. Use N/A if not applicable. Concurrence Date ☐ District Functional Groups ☐ Bridge ☐ Land Management ☐ Environmental Stewardship ☐ Railroad ☐ Technical Support ☐ ADA

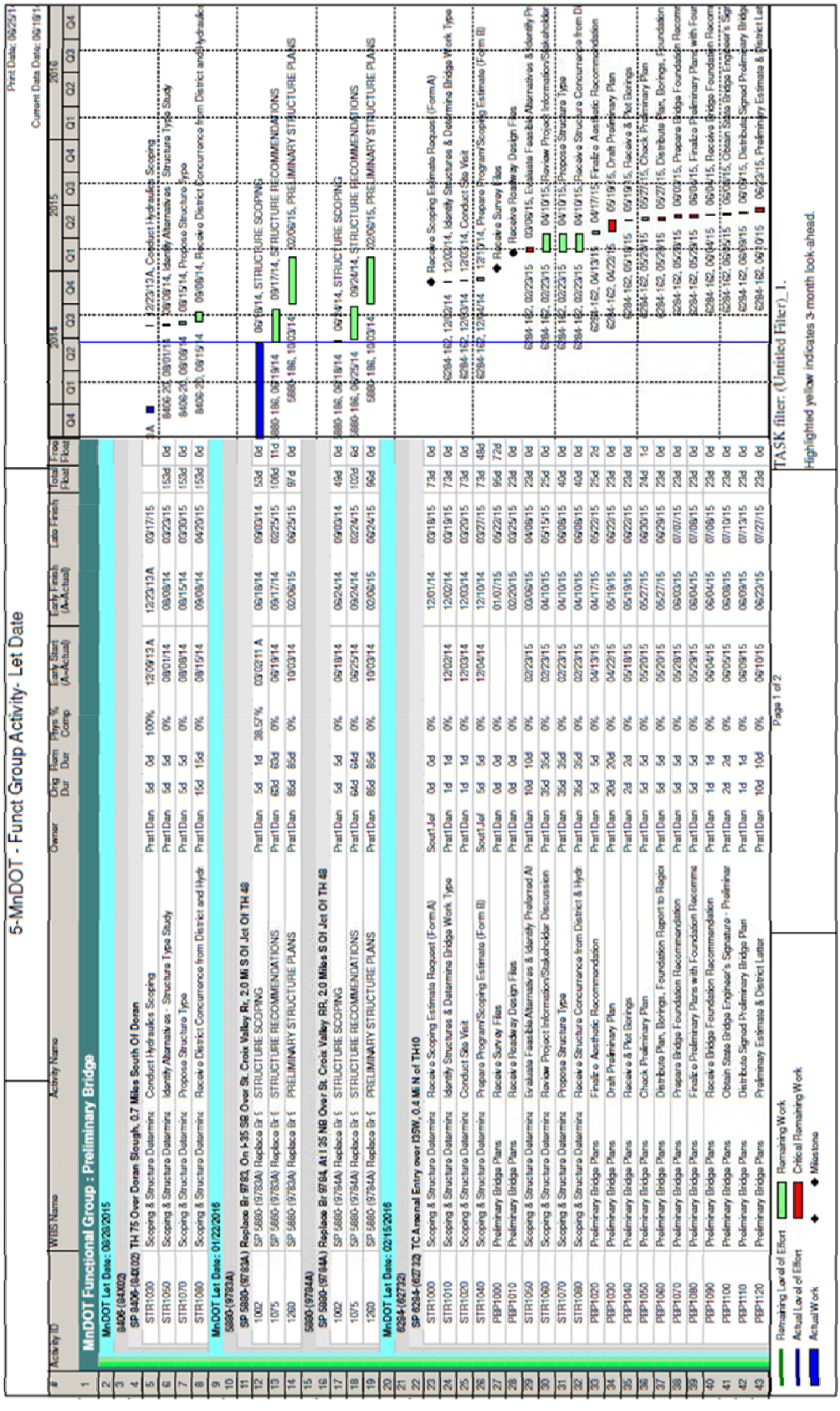
Attachment E – CO Functional Group Reports

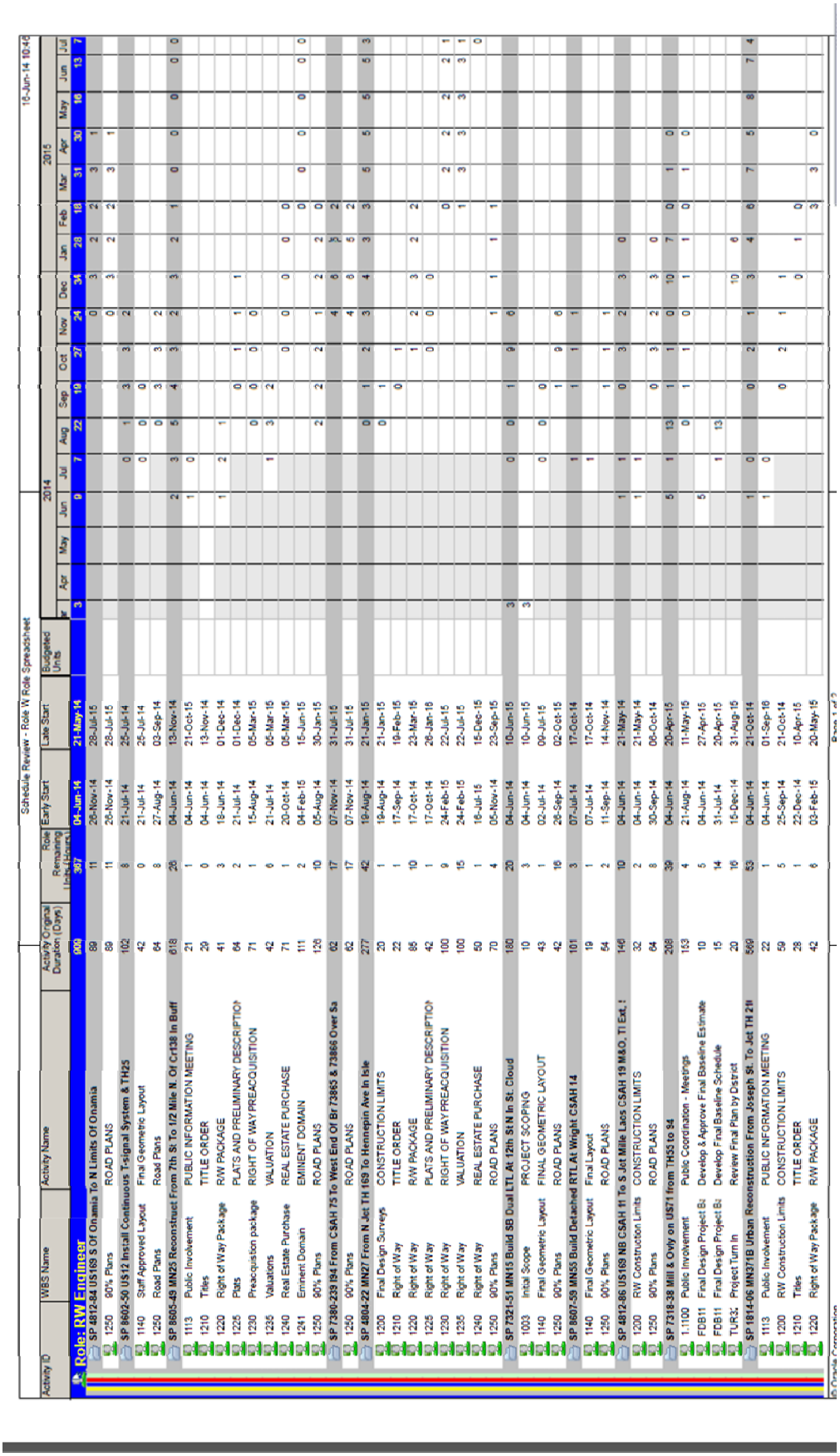
- Attached are draft reports that the Central Office Functional Groups will use to view projects at the program level. These reports include:

- *Functional Group Summary Report* – Shows all of a functional groups work (sorted by SP). Example provided is for OLM.
- *Functional Group Activity Report* – Same as the Functional Group Summary Report, but also includes detailed on all of the activities. Shows all of a functional groups work (sorted by SP) and includes all of the activities.
- *Role breakdown* – Provides the role hours for each task

Functional Group Summary Report




5-MnDOT - Funct Group Activity- Let Date
Print Date: 05/29/15
Current Data Date: 05/18/15
TASK filter: (Untitled Filter)_1.
Highlighted yellow indicates 3-month look-ahead.
Page 1 of 2
Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone


Schedule Review - Role W Role Spreadsheet
16-Jun-14 10:46
Activity ID
WBS Name
Activity Name
Activity Original Duration (Days)
Role Remaining Hist Labor
Role Early Start
Late Start
Budgeted Units
2014
2015
Role: RW Engineer
SP 4812-84 US169 S Of Onamia To N Limits Of Onamia
1250 90% Plans
SP 8602-50 US12 Install Continuous T-signal System & TH25
1140 Staff Approved Layout
1250 Road Plans
SP 8605-49 MN25 Reconstruct From 7th St To 1/2 Mile N. Of Cr138 In Buff
1113 Public Involvement
1210 Titles
1220 Right of Way Package
1225 Plats
1230 Preacquistion package
1235 Valuations
1240 Real Estate Purchase
1241 Eminent Domain
1250 90% Plans
SP 7380-239 I94 From CSAH 75 To West End Of Br 73865 & 73866 Over Sa
1250 90% Plans
SP 4804-22 MN27 From N Jct TH 169 To Hennepin Ave In Isle
1200 Final Design Surveys
1210 Right of Way
1220 Right of Way
1225 Right of Way
1230 Right of Way
1235 Right of Way
1240 Right of Way
1250 90% Plans
SP 7321-51 MN15 Build SB Dual LTL At 12th St N In St. Cloud
1003 Intial Scope
1140 Final Geometric Layout
1250 90% Plans
SP 8607-59 MN55 Build Detached RTL At Wright CSAH 14
1140 Final Geometric Layout
1250 90% Plans
SP 4812-86 US169 NB CSAH 11 To S Jct Mille Lacs CSAH 19 M&O, TI Ext. I
1200 RW Construction Limits
1250 90% Plans
SP 7318-38 Mill & Ovly on US71 from TH53 to 94
1.1100 Public Involvement
FDB11 Final Design Project Bu
FDB11 Final Design Project Bu
TUR3: Project Turn In
SP 1814-96 MN371B Urban Reconstruction From Joseph St. To Jct TH 2in
1113 Public Involvement
1200 RW Construction Limits
1210 Titles
1220 Right of Way Package
Oracle Corporation