



Connecticut DOT
Office of Engineering

Number: 2015-8-E
Date: December 30, 2015

ENGINEERING DIRECTIVE

Engineering Administrator

Design Phase Scheduling

To increase the reliability of project schedules, this directive establishes certain protocols and minimum requirements for design-phase schedules.

An Engineering working group evaluated several scheduling software options to support the goal of increased schedule reliability. Microsoft Project 2010 was selected because it offers the following features and advantages:

- Accommodates any number of milestones and tasks (i.e., easily scalable),
- Graphically displays series and parallel tasks,
- Displays critical path,
- Provides baseline and tracking Gantt charts,
- Ability to link notes and documents, and
- Interfaces with Outlook, Excel, SharePoint and other Microsoft products.

Microsoft Project 2010 shall be used to develop design phase schedules meeting the following minimum requirements:

1. Includes all the activities identified by the attached template; more detailed templates and project-specific schedules are encouraged,
2. Baseline schedule,
3. Task Indicator columns are used to link applicable instructional and reference documents,
4. Explanations for changes in task durations are added as task notes,
5. Tracking View/Gantt chart functions are used,
6. Task-level progress is tracked regularly,
7. Files are stored in the ProjectWise project container as indicated by the Digital Project Development Manual, and
8. Microsoft Project files are maintained and current, with projected schedules in accord with the obligation plan.

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The activity durations shown in the template are for illustration only. Project managers are responsible for estimating task durations and may over-ride any of the values in the template.

Each permit required for a project (e.g., Inland Wetlands & Watercourse, Corps Section 404 Individual, Flood Management Certification) shall be scheduled and tracked as separate activities.

Some design activities are currently using other scheduling software (e.g., Primavera). Other scheduling tools may be used to supplement, but not as a substitute for, a Microsoft Project file meeting the minimum requirements of this directive.

Each Engineering division has designated a scheduling subject matter expert (SME). The SME is responsible for the development and maintenance of their division's discipline-specific Microsoft Project templates, which must meet or exceed the minimum requirements of this directive. Each Engineering division is further charged with developing guidance, supportive of this directive and tailored to its operating mode and project types.

For all projects with scheduled Final Design Plan submissions after October 1, 2016, a Microsoft Project schedule meeting the above-stated requirements shall be stored in ProjectWise by April 1, 2016. The lead division is responsible for developing and maintaining schedules.

The schedule template will be periodically reviewed and, when necessary, updated and reissued by Engineering Bulletin.

Attachment: Microsoft Project Schedule Template

Schedule Template - Attachment to "Design Phase Scheduling" Engineering Directive

ID	Task Name	Duration	Start	Finish	1	January 1			May 1		September 1		January 1		May 1		September 1		January 1		May 1					
					11/22	1/17	3/13	5/8	7/3	8/28	10/23	12/18	2/12	4/9	6/4	7/30	9/24	11/19	1/14	3/11	5/6	7/1				
0	Project XXXX-XXXX	34.65 mons	Fri 12/4/15	Wed 8/1/18	[Gantt bar for Project XXXX-XXXX]																					
1	1 Project Initiation	13 mons	Fri 12/4/15	Thu 12/1/16	[Gantt bar for Project Initiation]																					
2	1.1 Prepare and Submit PPI	6 mons	Fri 12/4/15	Thu 5/19/16	[Gantt bar for 1.1 Prepare and Submit PPI]																					
3	1.2 Prepare and Approve RPM	4 mons	Fri 5/20/16	Thu 9/8/16	[Gantt bar for 1.2 Prepare and Approve RPM]																					
4	1.3 Secure Funding/Authorization	3 mons	Fri 9/9/16	Thu 12/1/16	[Gantt bar for 1.3 Secure Funding/Authorization]																					
5	2 Preliminary Design	6 mons	Fri 12/2/16	Thu 5/18/17	[Gantt bar for Preliminary Design]																					
6	2.1 Survey	3 mons	Fri 12/2/16	Thu 2/23/17	[Gantt bar for 2.1 Survey]																					
7	2.2 NEPA/CEPA	6 mons	Fri 12/2/16	Thu 5/18/17	[Gantt bar for 2.2 NEPA/CEPA]																					
8	2.3 Develop PD through Design Approval	6 mons	Fri 12/2/16	Thu 5/18/17	[Gantt bar for 2.3 Develop PD through Design Approval]																					
9	2.4 Design Approval	0 mons	Thu 5/18/17	Thu 5/18/17	[Milestone for Design Approval]																					
10	3 Final Design	13 mons	Fri 5/19/17	Thu 5/17/18	[Gantt bar for Final Design]																					
11	3.1 Prepare Semi-Final Design Submission	7 mons	Fri 5/19/17	Thu 11/30/17	[Gantt bar for 3.1 Prepare Semi-Final Design Submission]																					
12	3.2 Prepare Final Design Submission	5 mons	Fri 12/1/17	Thu 4/19/18	[Gantt bar for 3.2 Prepare Final Design Submission]																					
13	3.3 ROW Coordination	9 mons	Fri 5/19/17	Thu 1/25/18	[Gantt bar for ROW Coordination]																					
14	3.3.1 Prepare and Submit Final Accepted Property Maps	3 mons	Fri 5/19/17	Thu 8/10/17	[Gantt bar for 3.3.1 Prepare and Submit Final Accepted Property Maps]																					
15	3.3.2 Acquire Properties	6 mons	Fri 8/11/17	Thu 1/25/18	[Gantt bar for 3.3.2 Acquire Properties]																					
16	3.4 Permit Acquisition Process	13 mons	Fri 5/19/17	Thu 5/17/18	[Gantt bar for Permit Acquisition Process]																					
17	3.4.1 Permit A	7 mons	Fri 5/19/17	Thu 11/30/17	[Gantt bar for Permit A]																					
18	3.4.1.1 Prepare and Submit Permits to Regulatory Authority	3 mons	Fri 5/19/17	Thu 8/10/17	[Gantt bar for 3.4.1.1 Prepare and Submit Permits to Regulatory Authority]																					
19	3.4.1.2 Regulatory Authority Review and Issuance of Permit	4 mons	Fri 8/11/17	Thu 11/30/17	[Gantt bar for 3.4.1.2 Regulatory Authority Review and Issuance of Permit]																					
20	3.4.2 Permit B	7 mons	Fri 5/19/17	Thu 11/30/17	[Gantt bar for Permit B]																					
21	3.4.2.1 Prepare and Submit Permits to Regulatory Authority	3 mons	Fri 5/19/17	Thu 8/10/17	[Gantt bar for 3.4.2.1 Prepare and Submit Permits to Regulatory Authority]																					
22	3.4.2.2 Regulatory Authority Review and Issuance of Permit	4 mons	Fri 8/11/17	Thu 11/30/17	[Gantt bar for 3.4.2.2 Regulatory Authority Review and Issuance of Permit]																					
23	3.4.3 Permit C	8 mons	Fri 10/6/17	Thu 5/17/18	[Gantt bar for Permit C]																					
24	3.4.3.1 Prepare and Submit Permits to Regulatory Authority	2 mons	Fri 10/6/17	Thu 11/30/17	[Gantt bar for 3.4.3.1 Prepare and Submit Permits to Regulatory Authority]																					
25	3.4.3.2 Regulatory Authority Review and Issuance of Permit	6 mons	Fri 12/1/17	Thu 5/17/18	[Gantt bar for 3.4.3.2 Regulatory Authority Review and Issuance of Permit]																					
26	4 This row required to force FDP,DCD,ADV to Wednesday-Do not remove	1 min	Wed 5/23/18	Wed 5/23/18	[Milestone for FDP]																					
27	5 FDP	0 mons	Wed 5/23/18	Wed 5/23/18	[Milestone for FDP]																					
28	6 DCD	0 mons	Wed 7/4/18	Wed 7/4/18	[Milestone for DCD]																					
29	7 ADV	0 mons	Wed 8/1/18	Wed 8/1/18	[Milestone for ADV]																					

Project: Project XXXX-XXXX Date: Wed 12/30/15	Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
	Split		External Tasks		Inactive Summary		Manual Summary		Critical	
	Milestone		External Milestone		Manual Task		Start-only		Critical Split	
	Summary		Inactive Task		Duration-only		Finish-only		Progress	