

1.07.12 PROJECT ESTIMATE – (See Section 1.02)

The Project Estimate is the summary of total costs for a project. This estimate is often broken out into ROW, Utilities, Design, Environmental and Miscellaneous (RUDEM) phases. Additionally, the Project Estimate will include projected costs for Construction of the project. Reasonably accurate Project Estimates are important, as budgets and project limits are often established from them.

A project schedule is prepared to monitor the progress of preconstruction activities and to determine a reasonable date for the advertisement of the project.

The project schedule is developed by the Resident Engineer to monitor important events and activities required to complete the design, right-of-way acquisition, environmental clearances, utility work, and other associated tasks required to finalize design of a project. The Resident Engineer will monitor the schedule to ensure important dates are met to successfully advertise the project.

The Resident Engineer should give priority attention to critical path tasks that often require considerable time such as right-of-way acquisition, complex bridge design, consultant selection, environmental investigations, local agency agreements, utility and railroad agreements, and hazardous materials mitigation.

Microsoft Project is used to establish the project schedule, critical path and milestones. Using Microsoft Project, the Resident Engineer and the Specialty Units can coordinate production milestones for completion of assigned tasks.

The Resident Engineer needs to consider the availability of funds when determining schedules. For example, preliminary engineering should not be started until funds have been budgeted and obligated for the design phase, and a project may not be advertised until funds are available for construction, particularly if federal aid is involved. In addition, local agencies may provide funds and their processes and time constraints for providing these funds have to be considered.

The Resident Engineer will develop the project schedule and coordinate project progress with the project design team and all affected parties. The project team will be informed of activity schedule changes and accomplishments in order to coordinate plan development. Strategies should be developed for resolving critical path activity delays. The Resident Engineer will inform affected parties of any changes to the schedule and adjustment to the advertisement date.

Developing and managing a project schedule includes the following activities:

1. Conduct the project design scoping prior to preliminary design by initiating a Design Scoping Review – See [Sections 1.02](#) and [2.01](#).
2. Develop a proposed project schedule, preferably within 30 days after the Design Scoping Review.
3. Coordinate, monitor and update the project schedule with other appropriate milestones such as request and receipt of the survey, Field Inspection Review, Final Office Review, and advertisement date.
4. Update any changes to these dates in Microsoft Project.

The project schedule should be saved on a server within the Region or as a shared file on a personal computer so that specialty units and other members of the design project team may review the schedule. Any changes to the schedule or notes to be added should be coordinated through the Resident Engineer.

For Programming and Budgeting of funds refer to Sections [1.02](#), [1.03](#) and [1.04](#):

1.07.13 Milestone Dates in SAP Project Builder (CJ20N)

CDOT uses Critical Path Method (CPM) scheduling to help manage our design and construction projects. For CPM to be effective, the schedule must be maintained. Entering and reporting Milestone dates for a CDOT project is an important task for managing the schedule. However, it has historically been time-intensive. The SAP Project Systems team has eliminated several layers of networks and activities that were not being used in the CDOT Engineering template in Project Builder (CJ20N) and we have streamlined the configuration of the templates to include only the major Work Breakdown Structure (WBS) and Milestones. This new template will not have the extraneous ROW WBS, Design Networks and Design Activities. This has resulted in a simple layout that is easier for Project Managers to use and report project status. The new template became available on July 31, 2013.

The new templates have the same names (Std. Project – Eng. Cap. (with ROW) – 00010 and Std. Project – Eng. Cap (without ROW) – 00011). (See screenshot in Figure 1-2A.) The Milestones in the templates are the Standard Milestones outlined in the “Controlling Our Critical Path” document. With this change you can add additional Milestones to any WBS in the project. There is no limit to the number of additional milestones you can add. However, only the first five additional milestones will display on the Project Status Report (ZJ40).

There are two reports you can use to report Milestone dates. The first report, Project Status Report (ZJ40), will display most of the Project information including the Standard Milestones and up to five additional Milestones. (See Project Status Report sample in Figure 1-2B.) The second report is Milestones (CN53N). With this report you can call-up the Milestone dates by

Project or WBS Elements.

To add a template to a new project, refer to the help document "[CJ20N - Add Template to Project](#)" or "[CJ20N - Add Standard Template to Bridge Enterprise Project](#)" in SAPTraining.

If you created a project, added a template and released the project BEFORE August 1, 2013 you can change the template. To do this and include the new Milestones refer to "CJ20N – Update Old Template to Include New Milestones":



Update Old Template
to Include New Milest

To add dates to Milestones refer to "CJ20N – Add Milestone Dates to WBS Template":



Add Milestone Dates
to WBS Template.doc

Project Structure: Description	Identification
▼ NEW TEMPLATE DEMO	19602
▼ Std. Project - Eng. Cap. (with ROW)	19602
▼ Pre-Construction	19602.10
▼ Right of Way	19602.10.10
• Ownership XXXX	19602.10.10.01
• Utilities	19602.10.20
▼ Design	19602.10.30
• Completed Survey	80563
• Prelim. Hydraulic Information	80565
• Structure Selection Report	80566
• Field Inspection Review (FIR)	80567
• Utility Clearance	80568
• Final PS&E	80569
• Form 128 Signature (Top)	80570
• Final ROW Plans	80571
• Final Office Review (FOR)	80572
• Environmental Clearance	80573
• Right of Way Clearance	80574
• Shelf Date	80575
• Advertisement Date	80576
• Prelim. Horiz. and Vert. Alignm	80564
• Environmental	19602.10.40
• Miscellaneous	19602.10.50
▼ Construction (DO NOT CHARGE)	19602.20
• Construction	19602.20.10
• CE (Statistical)	19602.20.20
• Indirects (Statistical)	19602.20.30

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Figure 1-2A
Screenshot of Std. Project – Eng. Cap. (with ROW) Template

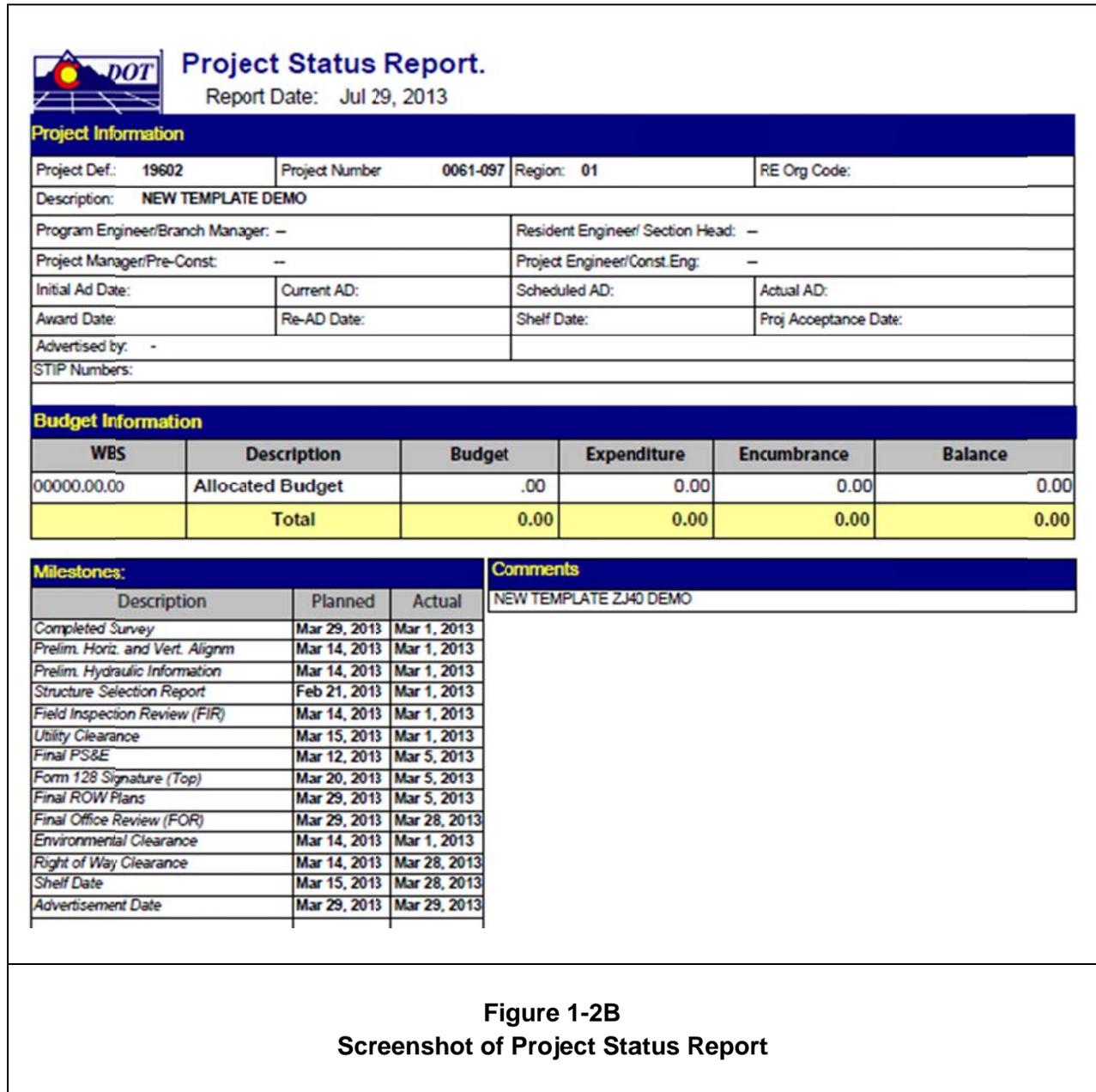


Figure 1-2B
Screenshot of Project Status Report

We are continuing to work on additional help documents and will let you know as they become available. The help documents we are working on are: “CN53N – Milestone Reporting” and “CJ20N – Add Additional Milestones”.

If you need assistance on Milestones in SAP or SAP Project Systems, please contact the BPXs:

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1.07.14 Additional References:

1. CDOT Procedural Directive 512.1, Project Scoping and the Design Scoping Review (DSR) at the following link:
<http://intranet/resources/policy-procedure/documents/0512-1/view>
2. SAP Workflows at the following site:
<http://vupweb.dot.state.co.us/gm/folder-1.11.33901?mode=EU>
3. OFMB Policy and Procedures Manual -
<http://intranet.dot.state.co.us/business/ofmb/other/current/ofmb-policy-manual-4-11/view>
4. Controlling our Critical Path guide found at the following link:
http://www.coloradodot.info/business/designsupport/design-docs/Controlling_Our_Critical_Path.pdf/view