

**Guidance on Construction Project Re-baselining due to COVID-19 Impacts**  
**NSF Large Facilities Office**  
**November 12, 2020**

NSF has briefed the NSB, OMB and Congress on the agency's intent NOT to de-scope construction projects at this time. NSF intends to seek additional appropriations, as needed. Per NSF Guidance related to OMB Memorandum M-20-26:

- Any added costs due to COVID-19 should be tracked separately to help document and justify any future supplemental funding requests.
- If a funding shortfall due to pandemic-related issues is anticipated prior to project re-baseline, construction project Recipients can submit a supplemental funding request to NSF when the costs are understood. Until then, Recipients should charge actual expenses to funds allocated to the performance baseline.
- **Budget contingency should not be used to offset COVID-19 impacts.**
- **Recipients should not consider the implementation of scope reduction at this time to offset the COVID-19 impacts.**

I. Guidance on management of baseline changes prior to the project re-baseline:

- A. **NSF anticipates project performance indicators will progressively decline due to COVID impacts and inefficiencies.** Until re-baseline, Recipients should not be concerned about reporting negative performance indicators. It is more important that indicators accurately reflect progress against plan. Baseline changes should not be executed just to improve the performance indicators.
- B. If COVID-19 induced variances have rendered a Project's baseline schedule as unreliable for management of the project, Recipients may execute baseline changes associated with COVID-19 impacts under the following conditions:
1. Use separate baseline changes for COVID-19 related re-planning efforts and do not combine with other baseline changes.
  2. COVID-19 baseline changes follow the approved Project change control process.
  3. COVID-19 baseline changes are tracked in the Project Change Log. The Project Change Log should be modified to track the cost and schedule impacts of the COVID-19 baseline changes in a new column separate from other changes that use the approved budget and schedule contingencies.
  4. Approval of COVID-19 baseline changes should follow the same baseline change thresholds established for the Project in the Project Execution Plan and/or EVMS System Description including NSF approvals as required.
- C. Retroactive changes for COVID-19 related delays may only be executed as follows:
1. Baseline changes may move past "not started" activities into the future to improve on the visibility of variances for "in-progress" activities. The effort and duration of these "not started" activities should only be changed if the activity is scheduled to be completed in the near-term (3-6 months) and the specific COVID-19 parameters affecting the activity are relatively stable. It is anticipated that these types of changes

will be handled similar to rolling-wave planning.

2. Baseline changes may revise the estimated duration of “in-progress” activities based on current COVID-19 working conditions by splitting the activity into two separate activities. One activity is based on the planned to date and the other is for the remaining planned effort in the future with an extended duration. This will not change the performance indicators of the “in-progress” activities to date; but should provide better visibility into non COVID-19 variances in the future. The planned effort (Budgeted Cost for Work Scheduled, BCWS) of these “in-progress” activities should not be made equal to the earned value to date (Budgeted Cost for Work Performed, BCWP).

II. Guidance on the re-baseline process:

- A. For each project, NSF and the Recipient will collectively determine when the COVID-19 situation has stabilized sufficiently, and the impacts of COVID-19 can be reasonably bounded to start the re-baseline process.
- B. Recipient summarizes the COVID-19 cost impacts incurred (part of the Actual Cost of Work Performed; ACWP) and updates the estimate to complete (ETC) and the project risk exposure, based on a probabilistic analysis, to establish a current risk-adjusted estimate at completion (RAEAC).
- C. Recipient submits a supplemental funding request for COVID-19 impacts in accordance with normal NSF procedures specifying the amount of baseline, contingency or fee that the funds represent. The request should include the following updated PEP components per Section 3.4.1 of the Major Facilities Guide (MFG). Any changes to the baseline scope may require additional technical documents.
  1. 4.1 Summary of Total Project Definition
  2. 4.2 & 4.3 Updated WBS and Dictionary, if required.
  3. 4.4 Updated Scope Contingency
  4. 4.5 Updated cost estimating plan with assumptions associated with COVID-19 and baseline budget
  5. 4.6 Budget contingency
  6. 4.7 Cost book and basis of estimates for the supplemental request (Cost Model Data Set per MFG 4.2.2.2)
  7. 4.8 Funding profile
  8. 4.9 Baseline schedule (resource loaded) for the remaining work (ETC).
  9. 4.9 Forecast schedule prior to COVID-19 (approximately March 2020).
  10. 4.10 Schedule contingency
  11. 6.2 Risk registers (current for the RAEAC and prior to COVID-19 impacts)
  12. 8.2 Log(s) for baseline changes and contingency usage
- D. NSF will conduct a cost analysis per Section 4.2.1 of the MFG similar to an FDR cost analysis including a comparison of the current RAEAC with the Project’s RAEAC prior to incurring impacts due to COVID-19. The Core IPT should collectively determine what level and types of cost reviews to conduct, and the extent to which an expert panel may be used to assess other

aspects of the revised project baseline, including any scope changes.<sup>1</sup> The charge to the panel should be crafted accordingly. Independent estimate reviews may be utilized to inform the NSF cost analysis in accordance with SOG NSF-LFO-FY19-01-Rev0, *Selection of Independent Cost Estimate Reviews*.

- E. A new Total Project Cost (TPC) will be established based on the updated performance baseline costs, budget contingency and fee. The new TPC may also include management reserve as determined by NSF, separate from the NSF cost analysis, in accordance with SOG NSF-LFO-FY19-02-Rev1, *Management Reserve Authorization and Use*. If requested and authorized, it would likely be a percentage of the remaining ETC.
- F. NSF will request NSB authorization of re-baselined TPC assuming it exceeds the supplement threshold allowed under the NSB delegation order (currently \$10M or 20%, whichever is less). Given that baseline changes caused by COVID-19 may not conform easily to the schedule of regular NSB meetings, some process flexibility may be needed in order to re-baseline projects in a timely way. For example, NSB approval may be sought in a special meeting outside of the regular NSB meeting schedule.
- G. With approval from NSF (Grants and Agreements Officer or Contracting Officer), the Recipient should process baseline changes to incorporate the approved ETC into the baseline and may reset the performance indicators to 1 (Planned=Earned=Actual Cost). As part of this re-baseline effort, separate baseline changes to the extent possible should be processed for COVID-19 related changes and non-COVID-19 related changes. If the performance indicators are reset to 1, the original budget funds are required to be used for non-COVID-19 induced variances.

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<sup>1</sup> Any returns to scope from previously descope actions would need to be covered by contingency.

**Major Facilities Guide (MFG) Definitions:**

***Re-Baselining.*** A modification to the Construction Project Definition that results in a change that is outside the terms set forth in the award instrument for any of the following: 1) Total Project Cost (TPC); 2) total project duration; or 3) project scope, except for approved options in the scope management plan. The initial TPC and award duration are part of the NSB authorization for the Construction Stage and inform the terms of the award. Re-baselining actions require special review, notification or approval by NSF beyond those of the typical change control approval process for re-planning actions.

***Re-Planning.*** A normal project management process to modify or re-organize the Performance Measurement Baseline cost and/or schedule plans for future work without impacting total project cost, total project duration, or overall scope objectives; or the implementation of approved scope management options. Formal change control processes are followed for all baseline changes. Retroactive changes to past performance should not be included in re-planning.