

FACILITIES ENGINEERING DIVISION
Old Laundry Building
Waterbury VT 05671-0511

GUIDANCE DOCUMENT UP-DATE - ENGINEERING FEE ALLOWANCES

Effective Date: September 1, 2011. Supersedes previous versions

Subject: Engineering Fee Allowance for Water Supply and Wastewater Projects Funded Through DEC-Administered Grant and Loan Programs

Background: An engineering fee allowance applicable to water supply and wastewater projects funded by DEC grant and loan programs was originally established in 1987 and was amended periodically to adjust for inflation. This revision addresses concerns about the appropriateness of the previous allowance to address engineering cost for very small projects and very large projects, and is based on more recent data from Vermont and Connecticut.

Allowance: The engineering allowance is based on the "C" value where "C" represents the higher of a pre-bid construction contract cost estimate (without contingency) or the actual contract bid amount plus equipment and small purchases. This amount is not adjusted by contract change orders unless there is a significant change in the approved project scope. This fee allowance applies to all engineering fees except those identified as non-standard tasks described below.

Formulas: Two formulas are used; one for Small Projects and one for Large Projects

Small Projects (C less than \$780,000)

Engineering Step	Fixed Fee Allowance	Variable Fee Allowance	Total Fee Allowance
I - Preliminary	\$ 975	$0.0345 * C$	$\$ 975 + 0.0345 * C$
II - Final Design	\$1,950	$0.0690 * C$	$\$ 1,950 + 0.0690 * C$
III - Construction	\$3,575	$0.1265 * C$	$\$ 3,575 + 0.1265 * C$
Total	\$6,500	$0.2300 * C$	$\$ 6,500 + 0.23 * C$

Large Projects (C greater than \$780,000)

Engineering Step	Variable Fee Allowance
I - Preliminary	$0.15(0.6788 * C^{0.9206})$
II - Final Design	$0.30(0.6788 * C^{0.9206})$
III - Construction	$0.55(0.6788 * C^{0.9206})$
Total	$(0.6788 * C^{0.9206})$

Process: Proposed engineering fees for preliminary engineering services will be reviewed along with a level-of-effort table for appropriateness.

Proposed engineering fees for final design and construction services will be compared to the appropriate fee allowance. In cases where the proposed engineering fees are greater than the fee allowance, additional steps will be required and include: a justification from the engineer for fees above the allowance (e.g. identification of non standard tasks not limited by the allowance), a detailed review of the level of effort table, and a notice to the owner that the fees are above the allowance. If justification is determined inadequate, engineering fees above the fee allowance will not be approved by the Department and will be deemed ineligible for state and federal funding.

When warranted, the Department may combine fee allowances for individual engineering steps and apply the combined allowance to the aggregate engineering fees.

At the time of “project closeout” by the Department, fee allowances as adjusted will be used as a limit of eligible cost for audit purposes. The Department performs a final audit at the completion of each project. The audit process determines whether the invoices for each separate engineering service are within the approved amounts for each billing category. Invoice amounts greater than the approved values will be determined ineligible for Grant and SRF Loan funding. It is important that engineering services invoices use the FED approved invoice format and use the scope items contained in the approved documents.

In cases where the scope item and/or amount of engineering service required to complete a project changes, requests for amendments to the engineering service agreement scope and/or amounts are required to be submitted and approved by the Department before reimbursement can be made.

Non-Standard Tasks not Subject to the Fee Allowance:

Technical services that fall within this designation are non-routine and of a highly specialized nature. The work is most frequently encountered as part of preliminary engineering and in particular is associated with problem identification and development of project alternatives. Examples of the most common of these services are listed below. It should be noted that the list is not all-inclusive; there may be some relatively obscure services not identified below that should be included or new services could emerge that will be so designated. When a task not included below comes up for consideration and is deemed by the department to be a service that should be exempt from the fee allowance under most circumstances, it will be added to the list, which will be updated from time-to-time.

1. Archaeological Studies
2. Source Exploration and Development Tasks
 - a. Hydrogeologic Evaluations
 - b. Pump Tests
 - c. Water Quality Tests
 - d. Source Protection Plans (when eligible)
3. Water System Contamination Investigations
4. Water Distribution System Leakage Surveys
5. Sewer I/I Studies
 - a. Sewer TV Work
 - b. I/I Flow Measurement
 - c. Smoke Detection Surveys
6. Hydrogeologic Evaluations for Indirect Discharge Systems and hazardous materials
7. Pilot Testing - water supply or wastewater projects
8. Evaluating New Technologies
9. Value Engineering
10. Materials Testing for Quality Control during Construction
11. Asbestos and Lead Surveys
12. Property Surveys to Establish Legal Boundaries
13. Bond vote assistance for re-votes following a failed vote

14. May include items in the EJCDC E-500 Part 2 A2.01 A., when preapproved by the Department

Note: The department will review requests and reserves the right to designate a task that might ordinarily be regarded as a non-standard to be a standard task under certain circumstances, and vice versa. When requests are submitted, required documentation includes:

- 1) Scope of services and budget for the proposed non-standard task ;
- 2) Level-of-effort table for the budget for reimbursable expenses, including sub-contracted services, project overhead and profit; and
- 3) An explanation as to why the service should be considered non-standard for the project.

Standard Tasks subject to the Fee Allowance:

The following is a list of technical services that typically are regarded as standard services and are subject to the fee allowance. As with the listing of non-standard services, the following is not necessarily an all-inclusive listing of applicable services.

- a. Data Review and Collection
- b. Soil Borings
- c. Topographic Surveys/Aerial photo derived plans and topographic maps??
- d. Preliminary Engineering Report
- e. Preparation of Basis for Final Design
- f. Development Project Meetings
- g. Construction Cost Estimates
- h. Plan and Specification Preparation
- i. Bid Assistance
- j. Construction Contract Management
- k. Resident Project Representation
- l. O&M Manual (but exempt from construction proration)
- m. Record Drawings (but exempt from construction proration)
- n. Review of material testing results, 11th month inspection and quarterly performance evaluation/reports when required
- o. Permit application submittals. Note: technical analyses may be approved as a non-standard task.
- p. Initial bond vote assistance

Proration of Engineering Fees:

Engineering fee proration is determined using the following terms:

Total C/SP Cost - The sum of all construction and/or small purchase costs.

Eligible C/SP Cost - The sum of all construction and/or small purchase costs which are eligible for State Revolving Fund Loans or State Grants.

Proration – Eligible C/SP Cost divided by Total C/SP Cost expressed as a percentage.

Engineering fees are reimbursed are at:

- 100 percent when the Proration is greater than 90 percent.
- The Proration percentage when the Proration is less than 90 percent.

Exceptions which are funded and reimbursed at 100 percent regardless of proration value:

Preliminary Engineering Services

- 1) Record Drawings
- 2) Operation & Maintenance Manuals
- 3) Disadvantage Business Enterprise related work

Disallowed Engineering fees will need to be funded locally or from another funding source.