

§MN501.03 Compliance of engineering work with laws and regulations.

(b) NRCS registered professional engineers may seal engineering plans when required by a permitting or funding agency. The need for sealing must be identified during the planning phase to ensure that all work is done under the direction of the responsible professional engineer.

(c) The State Conservation Engineer (SCE) will be notified when any engineering plans prepared by the NRCS will need to be sealed by a licensed Professional Engineer rather than using the agency approval process.

(4) Plans prepared by the NRCS for dams, which require a dam safety permit, must be approved by an NRCS engineer but sealing is not required.

§MN501.04 Engineering technical approval authority (TAA).

(b) Engineering technical approval authority (Classes I thru V)

(2) The practice of engineering is regulated in Minnesota by the Board of Architecture, Engineering, Land Surveying, Landscape Architecture, Geoscience and Interior Design (referred to herein as the Registration Board). The Registration Board has determined that "the responsible professional engineer" (for NRCS the SCE) must determine if "the design of a non-hazardous project constitutes the practice of engineering." If it does, the design of that project may only be approved by a professional engineer or a qualified federal employee working within the scope of their employment. All practices marked with an asterisk on the technical approval authority chart have been determined by the SCE to constitute professional engineering practice. In certain circumstances, complicating factors may cause other work to be considered professional engineering practice also.

NRCS Employees

- TAA for Class I to V practices may be delegated to qualified NRCS employees.
- TAA will be recommended by the Area Engineer familiar with that person's abilities. Form MN-ENG-013 (Exhibit §MN501.09) will be used to record the recommendation.
- TAA recommendations for work which is considered professional engineering practice must have the concurrence the SCE.
- TAA will be issued by the employee's administrative supervisor.
- TAA for Area Engineers will be recommended by the SCE.
- Employees must sign the TAA ethics statement on Form MN-ENG-013 before the approval authority is valid.

Soil and Water Conservation District (SWCD) or Joint Powers Area (JPA) Employees

- TAA will be recommended by the NRCS Area Engineer on Form MN-ENG-013 upon request by the SWCD Board. The Area Engineer will obtain input from others as appropriate.
- TAA for SWCD employees who are not registered professional engineers may only include Class I thru V practices which are not considered professional engineering practice.
- TAA for SWCD employees will be assigned by the SWCD Board.
- If the SWCD Board does not agree with the recommended TAA, they can forward it to the Board of Water and Soil Resources Chief Engineer and NRCS SCE for review.

MN501.04(b)(2)

- Employees must sign the TAA ethics statement on Form MN-ENG-013 before the approval authority is valid.
- Other public agency or non-profit employees operating under agreement with the NRCS may receive TAA under this same process.

Licensed Professional Engineers (PEs) Operating under Contribution Agreements

- Licensed PEs operating under Contribution Agreements with the NRCS are considered to have TAA for all work within the scope of their license.
- PEs operating under contribution agreements will be required to certify plans in accordance with NEM 505.03b, Site Specific Plans and Specifications.
- The NRCS review of work submitted by PEs under contribution agreements will be limited to that described in NEM 505.03 (b)(3).

Filing

Copies of TAA forms and charts will be maintained by the employee and the recommending engineer. TAA should be reviewed annually and revised as necessary.

Project Design

Employees are encouraged to work on certain phases of projects that exceed their approval level under the guidance and technical supervision of more experienced employees with the proper TAA.

It is not necessary or practical for the person with TAA to perform all the steps leading to a complete job. It is expected that employees without TAA will carry out functions (survey, design drafting, etc.) as far as their knowledge and abilities will permit.

All engineering designs will be checked for accuracy. This should be done by someone other than the one preparing them if possible. Staff in one-person field offices can check their own work on Class I and II projects.

Technical approval for engineering projects must be indicated with the signature, title, and date of signature being placed upon the engineering plans, investigation report, construction records or other supporting data.

Construction Changes

Significant changes to engineering plans must be approved by the person who approved the original design. If this approval is done verbally, this conversation must be documented in the file. Significant changes may also require approval from permitting authorities such as the Minnesota Pollution Control Agency for feedlot plans.

(c) Designs for Class VI to Class VIII jobs will be coordinated with the SCE individually. A design review and approval process specific to the job that is in accordance with policy and sound engineering practice will be used.

(f) At the time that engineering plans are delivered to a cooperator, an approval statement must be signed and dated by the cooperator. Required wording for this cooperator approval statement is:

MN501-12(2)

I have reviewed and understand the plans and specifications and agree to complete the work accordingly. Failure to meet these plans and specifications may jeopardize any cost share applied for. I understand that it is my responsibility to secure all necessary permits and licenses, and to complete the work in accordance with all local, state, and federal laws. Modification of these plans or specifications must be approved by the Natural Resources Conservation Service before installation. I assume responsibility for negotiations and agreements with the contractors.

Except as described below, this statement must be on the first page of engineering drawings.

For simple plans that do not use CAD drawings, this statement may be included on a separate sheet instead of having it on the drawings. If separated, the cooperators' approval must include a reference to the plan it is being signed for, and must be kept in the cooperators' file.

§MN501.05 Engineering job review.

(b) Post Reviews.

(1) Engineers on the area staff will review at least 5 percent of Class I, II and III jobs approved by area and field office personnel each year. The State Conservation Engineer (SCE) will review at least 5 percent of the Class IV and V jobs approved by area/field office personnel each year. The Area Engineer is to send the SCE a summary list of jobs in this category by October 1 for the jobs that were designed and/or constructed during the past year. The SCE will select jobs to be reviewed. Supporting design folders, drawings and specifications for those jobs selected for review are to be submitted to the SCE. The material submitted will be checked for conformance to state standards and sound engineering practices. On-site reviews to evaluate construction quality and other features may be scheduled. The SCE will make a written report to the State Conservationist when the review is complete.

(2) Area staff will conduct a post review of the first plan submitted by each engineering Technical Service Provider (TSP) and a minimum of 5 percent of all plans submitted thereafter.

Subpart A - Review and Approval

MN501.09 Exhibit - Engineering Technical Approval Authority

See Form MN-ENG-013 - Ethics Statement and Engineering Technical Approval Authority.

MN501.31 National Handbook of Conservation Practices (NHCP).

In some cases, compensating conditions may justify a variance from a conservation practice standard. Variances from the requirements of the NHCP cannot be approved at the state level, but are handled according to GM Part 450-401.16. Variances from the requirements of Minnesota Practice Standards as contained in the Technical Guide, Minnesota Supplements to the NEM, Minnesota Engineering Field Handbook Supplement, and other Minnesota technical references may be granted by the State Conservation Engineer.

(a) The request for a variance shall be made by the responsible Area Engineer or Project Engineer on a case-by-case basis. The decision to grant a variance must be based upon complete documentation showing that the variance is justified and will result in an effective and acceptable practice. The Area Engineer or Project Engineer is responsible for providing the documentation. The level of documentation depends upon the complexity of the request. The following may be required:

1. Project name, location, and sponsor/owner name and address.
2. Description of the project, including purpose, protected features, existing problems, and physical features, etc.
3. Reason for the requested variance.
4. Hydrology and hydraulic analysis for the design required by the standard and for the proposed design if different from the standard.
5. Geology and/or soil descriptions for the site.
6. Photographs of the site.
7. Proposed design, including design documentation, drawings and specifications.
8. Cost and benefit economic analysis for both proposed design and standard design.
9. Description of the operation and maintenance requirements for the proposed design.
10. Supporting evidence that shows the proposed design will work, especially existing successful installations.

The detail and extent of the documentation should be commensurate with the size and estimated cost of the proposed project.

(b) A variance may result in increased levels of operation and maintenance and/or a decreased level of protection. The owner/sponsor must understand the level of protection being provided and their responsibility for maintenance and repair. The owner/sponsor may be required to provide a written acknowledgement of their willingness to assume all risk and operation and maintenance involved with the design.

(c) Variances will not be granted where:

1. Failure of a structural measure due to a high-intensity storm would create an immediate hazard to life or result in serious damage to buildings, residence, roads or other high-value property.
2. Installation of the proposed measure would have significant adverse effects on the environment or other natural or cultural resources.
3. The proposed design is not in accordance with the laws and regulations of Federal, State, and local governments (e.g., dam safety rules, ordinances).