

SUBPART A - PROCEDURES

PART 511 - DESIGN

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MT511.05(a)(iv)c)

MT511.05(a) Design checking and review

(i) Designs from Engineering Job Class I to VIII shall be checked for design consistency as discussed in NEM 511.05(a) and MT511.05(a), and reviewed as discussed in NEM 511.05(b) and MT511.05(c) to determine if criteria have been met, and guarantee that adequate design procedures have been followed. Design checking should preferably be completed by an individual with proper design approval authority but can be checked by an individual with appropriate skills. All design sheets shall be initialed by the checker and include the date checked.

(ii) Design checking requirements will increase as the complexity of the job increases. For those designs where the engineering job approval authority is at the field office level, the district conservationist shall make sure that all final designs have been checked before the project is reviewed with the cooperator. For those jobs that require higher approval authority, the appropriate designer shall be responsible to make sure that adequate checking has been completed before a final set of drawings is completed.

(iii) Mathematical computations, quantities, and computer input data shall be checked by an individual with appropriate math skills before the final design is completed.

(iv) When a design checker with appropriate approval authority is not available to check the design at the field office, (Engineering Job Class I thru III) the following steps shall be taken in this order of preference:

a) Mathematical computations, computer input data, quantities and design consistency from design sheets and charts to the plans shall be checked by an individual with appropriate math skills.

b) A design check can be performed by the designer (with appropriate engineering design approval authority) by using two methods of checking and signing the design as such.

c) The area conservationist and area engineer can designate another appropriate field office, multi-county technician, or area staff to perform the required design checking.

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PART 511 - DESIGN

MT511.05(b)

MT511.05(b) Design checking and review

(i) Review of designs shall be completed by an individual with appropriate job approval authority.

(ii) Prior to transmitting a design for review from the field office to the multi-county technician, area or project engineer, all design computations and quantities shall be well organized and checked.

(iii) Designs submitted to the state office shall be reviewed and approved by the area or project engineer prior to transmittal. The area or project engineer shall make sure all appropriate portions of the design report and folder are complete. (See NEM 511.11 Design Folders.)

MT511.05(c) Design checking and review

(i) As a minimum, review of designs for Engineering Job Class I thru III will be completed by quality assurance reviews and spot checks. All Engineering Job Class IV to VIII designs will be reviewed by an individual with appropriate approval authority.

(ii) Additional reviews shall be conducted on specific designs from Engineering Job Class I thru VI as determined necessary by the Area Engineer or State Conservation Engineer (i.e., for non-typical, costly, or a seldom applied practice in a county or area).

(iii) Field and area office visits, quality assurance reviews, spot checks, and appraisals will determine if design checking and review, quantity checking, and engineering job approval policies are being followed.

MT511.07(b) Design criteria

(i) All engineering designs for CO-01, Great Plains, Water Quality, and other project measures are to meet the design criteria shown in the Practice Standards and Montana Supplements of Section IV of the Technical Guide.

MT511.08(a) Construction plans

(i) Construction plans (including specifications) shall meet the SCS technical guide or special design standards and specifications as approved by the appropriate SCS official.

(ii) A complete set of plans and specifications shall be developed to meet the specific federal or state program compliance responsibilities, i.e., ACP referrals shall meet Part 535.4 and other appropriate sections of the National Manual for Assisting ASCS Cost-Shared Programs. GP shall meet Part 404.22 and other appropriate sections of the Long-Term Contracting Manual.

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