

STATEMENT OF WORK
Roofs and Covers (367)
Minnesota

These deliverables are the minimum requirements that apply to this individual practice. Service providers (TSP or other) shall prepare and document deliverables for the Design, Installation and Checkout sections and submit deliverables to both the landowner and NRCS.

PRE-DESIGN

Deliverables:

Documents that demonstrate that adequate planning activities have been completed.

- a. Initial site visit with client to assess resource concerns and collect planning information
- b. Report or conservation assistance notes summarizing pre-design meeting(s) with client.
 - i. Identify the resource concern being addressed and the landowner objectives.
 - ii. Define roles and responsibilities of all parties that will be involved in the project.
 1. Landowner
 2. Designer
 3. NRCS and/or other funding source(s).
 4. Contractor
 - iii. Advise client on potential compliance issues with federal, state, tribal and local laws, regulations, and NRCS policies.
- c. The practice is included in a conservation plan and meets one or more of the purpose(s) described in the Conservation Practice Standard.
- d. Completed MN-CPA-052 showing NEPA requirements have been met and documented (i.e. cultural resources and threatened and endangered (T&E) species).

DESIGN

Deliverables:

1. Design documentation that will demonstrate that the criteria in NRCS practice standard have been met and are compatible with other planned and applied practices.
 - a. List of required permits to be obtained by the client.
 - b. Compliance with NRCS national and state utility safety policy (NEM Part 503-Safety, Subpart A - Engineering Activities Affecting Utilities, 503.0 through 503.6).
 - c. Design Report as appropriate (NEM Part 511, Subpart B Documentation)
 - d. Practice standard criteria related computations and analyses to develop plans and specifications including but not limited to:
 - i. Type of Cover
 - ii. Structural, including site specific loadings and resulting shears, moments, and other forces for all structural components as applicable, such as:
 1. Timber structural design.
 2. Structural steel design.
 3. Reinforced concrete design.
 4. Reinforcing steel bar selection and detailing.
 5. Trusses, sheathing, cladding, and roofing materials.
 6. Design of fasteners and anchor bolts.
 - iii. Erosion control/Seeding.
 - iv. Safety
 - v. Environmental Considerations (e.g. air quality, water quality).
 - e. All design documentation is shown as checked by staff with appropriate job approval authority. Service providers shall identify and engage a qualified person to check the design methodology, technical references, plan drawings and computations for accuracy.
2. Written plans and specifications including sketches and drawings shall be provided to the client that adequately describes the requirements to install the practice and obtain necessary permits (NEM Part 511, Subpart A, Procedures; NEM Part 541, Drafting and Drawing; NEM Part 542, Specifications; NEM Part 543, Materials).

Drawings shall include but are not limited to the following items:

STATEMENT OF WORK
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- a. For roofs diverting rainfall from livestock areas.
 - i. Location map and plan view of the site showing the location of outdoor lots and practices to be installed.
 - ii. Surveying coordinate system used and the location, elevation and description of any benchmarks used.
 - iii. Soil boring locations and elevations
 - iv. Water well locations
 - v. Identify any outdoor lots or storage facilities to be abandoned
 - vi. Adequate topographic detail to show project layout and how both clean and contaminated runoff will be addressed when this is a factor on the design.
- b. For all rigid and semi-rigid roofs and covers:
 - i. Risk Category.
 - ii. Ground snow load, P_g and associated factors:
 1. Snow exposure factor, C_e .
 2. Snow load importance factor, I .
 3. Thermal factor, C_t .
 - iii. Basic wind speed, V
 - iv. Enclosure classification.
 - v. Soil bearing strength requirements.
 - vi. A Gopher State One-Call advisory. The required wording is: "State law and NRCS policy require that the excavator contact Gopher State One-Call at (800)252-1166 for utility locations 48 hours prior to the start of excavation work".
 - vii. The Minnesota Engineering Job Class (NEM Part 501, Form MN-ENG-13).
 - viii. A signed and dated cooperator approval statement per NEM Part 501, Subpart A and Minnesota Amendments.

3. Inspection Plan

The inspection plan must describe the type and frequency of testing and inspection and the qualifications of the person doing the work. (NEM Part 512, Subpart D Quality Assurance Activities, 512.30 through 512.33). At least one site visit during construction shall be required to ensure project is installed according to plans and specifications.

4. Operation and Maintenance Plan, including but not limited to.

- a. Critical elements of operation and maintenance.
- b. Frequency of inspection.
- c. Normal operating range or conditions.
- d. Typical problems that may occur.
- e. Minor maintenance procedures.
- f. Contact information for entities that can provide assistance with problems.

5. Certifications that the design meets practice standard criteria and complies with applicable laws and regulations. (NEM Part 501 Subpart A, or Part 505 Subpart A).

6. Design modifications during installation as required.

7. Service provider shall submit design deliverables to the appropriate NRCS field office for a deliverables and/or functional review before proceeding to the pre-installation conference and installation phase of the project.

INSTALLATION

Deliverables

1. Documentation of pre-construction conference with client and contractor.
2. Verification that client has obtained required permits.
3. Staking and layout according to plans and specifications including applicable layout notes.

STATEMENT OF WORK
Roofs and Covers (367)
Minnesota

4. Installation inspection documentation which meets the requirements of the inspection plan. (Part 512, Subpart D Quality Assurance Activities, 512.30 through 512.33). This includes, but is not limited to:
 - a. Dates and record of inspections made, testing completed, instruction provided to the contractor, etc., to document compliance with standards and specifications.
 - b. Actual materials used.
5. Facilitate and implement required design modifications with client, original designer, and permitting and funding agencies. Design modifications required during installation are properly approved and documented.
6. Advise client/NRCS on compliance issues with all federal, state, tribal, and local laws, regulations and NRCS policies during installation.

CHECK OUT

Deliverables

1. As-Built documentation.
 - a. Extent of practice units applied
 - b. Drawings with changes from the original construction plans clearly shown
 - c. Final quantities
2. Certification that the installation meets NRCS standards and specifications and is in compliance with permits (NEM Part 501 Subpart A, or Part 505 Subpart A).
3. Competition report in accordance with any permit requirements.

REFERENCES

- NRCS Field Office Technical Guide (eFOTG), Section IV, Conservation Practice Standard – Roofs and Covers, 367.
- NRCS National Engineering Manual (NEM).
- NRCS National Environmental Compliance Handbook
- NRCS Cultural Resources Handbook