

## STATEMENT OF WORK

### Dam

#### CODE (402)

#### DESIGN

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##### 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. Practice purpose(s) as identified in the conservation plan
  - b. List of required permits to be obtained by the client, along with other participant (client) responsibilities (Reference Form CO-ENG-13, Notification of Participant Responsibilities).
  - c. Compliance with NRCS national and state utility safety policy (NEM Part 503-Safety, Subpart A - Engineering Activities Affecting Utilities 503.00 through 503.06)
  - d. Practice standard criteria related computations and analyses to develop plans and specifications including but not limited to:
    - i. Geology and Soil Mechanics (NEM Subpart 531a)
    - ii. Hydrology/Hydraulics
    - iii. Structural including hazard class as appropriate
    - iv. Vegetation
    - v. Environmental Considerations
    - vi. Safety Considerations (NEM Part 503-Safety, Subpart A, 503.10 through 503.12)
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. All applicable State and Federal (OSHA) safety requirements shall be addressed in the plans and specifications where appropriate.
3. Quality Assurance Plan, where appropriate (NEM Part 511, Subpart B Documentation, 511.11 and Part 512, Subpart D Quality Assurance Activities, 512.30 through 512.32). Construction, to include, but not limited to, the following items:
  - a. General description of work
  - b. Items of work requiring inspection or testing
  - c. Timing of inspections or tests
  - d. Skills or certifications required by inspectors
4. Operation and Maintenance Plan
5. Certification that the design meets practice standard criteria and comply with applicable laws and regulations (NEM Subpart A, 505.03 (a) (3)). For jobs completed by NRCS employees, affix the approval signature of the individual with delegated engineering job approval authority to the drawings. For jobs completed by non-NRCS employees, affix a Colorado Professional Engineer's seal to design and construction documents, when required by state laws and regulations.
6. Itemized cost estimate and list of materials.
7. Design modifications during installation as required.

#### INSTALLATION

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##### Deliverables

1. Pre Installation conference with client and contractor. (Reference Form CO-ENG-13, Notification of Participant Responsibilities).
2. Verification that client has obtained required permits.
3. Staking and layout according to plans and specifications including applicable layout notes.

4. Installation inspection (according to inspection plan as appropriate).
  - a. Actual materials used (Part 512, Subchapter D Quality Assurance Activities, 512.33)
  - b. Inspection records
5. Facilitate and implement required design modifications with client and original designer
6. Advise client/NRCS on compliance issues with all federal, state, tribal, and local laws, regulations and NRCS policies during installation.
7. Certification that the installation process and materials meets design and permit requirements. Form CO-ENG-1 may be used for this certification.

## **CHECK OUT**

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### **Deliverables**

1. As-Built documentation.
  - a. Extent of practice units applied
  - b. Drawings
  - c. Final quantities
2. Certification that the installation meets NRCS standards, specifications, and all design requirements, and is in compliance with permits (NEM Subpart A, 505.03 (c) (1)). Form CO-ENG-12 may be used for this certification.
3. Progress reporting

## **REFERENCES**

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- NRCS Field Office Technical Guide (eFOTG), Section IV, Conservation Practice Standard – Dam, 402
- CO-ENG Forms: eFOTG Section IV, Tools
- NRCS National Engineering Manual (NEM).
- NRCS Technical Release 60, Earth Dams and Reservoirs
- NRCS National Environmental Compliance Handbook
- NRCS Cultural Resources Handbook