

STATEMENT OF WORK
Underground Outlet (620)
Wyoming

These deliverables apply to this individual practice. For other planned practice deliverables refer to those specific Statements of Work.

Items that are marked **(TSP or Non-NRCS Engineer)** need to be completed only if design is provided by a TSP or Non-NRCS Engineer. Items that are marked **(NRCS Employee)** need to be completed only if design is provided by an NRCS Employee. All other items are required by all designers.

DESIGN

Deliverables and Documentation Requirements:

1. Design Survey
 - a. Profile along centerline of outlet.
 - b. Cross sections of centerline at critical locations, as needed.
 - c. Detailed topography at structure locations.
 - d. Limiting and controlling water and ground surface elevations.
 - e. Soil investigation, as required, to establish corrosion potential or limitations of trenching, etc.
2. Design documents that demonstrate criteria in practice standard have been met and are compatible with 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
 - c. Verify with the Field Office conservation planner that all concerns under the National Environmental Policy Act (NEPA) and the National Historic Preservation Act (NHPA) have been adequately addressed.
 - d. Certification of compliance with NRCS national and state utility safety policy (NEM Part 503-Safety, Subpart A - Engineering Activities Affecting Utilities 503.0 through 503.6).
 - e. Practice standard criteria related computations and analyses to develop plans and specifications including but not limited to:
 - i. Inlet Type
 - ii. Hydraulics
 - iii. Structure design
 - iv. Materials
 - v. Outlet Capacity and Stability
 - vi. Quantity computations
3. 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 including but not limited to:
 - a. Location map with legal description and north arrow.
 - b. Plan view of the layout of the underground outlet.
 - c. Typical cross sections and bedding requirements for the underground outlet.
 - d. Profile of the underground outlet showing grades and location of structure components.
 - e. Details of the inlet and outlet.
 - f. Structural plans and section views as required.
 - g. Material requirements.
 - h. Seeding requirements if needed.
 - i. Installation details.
 - j. Table of quantities.
 - k. Construction specifications that describe in the writing the site specific installation requirements of the underground outlet.
 - l. Cooperator's signature of review and acceptance to construct the underground outlet according to the plans and specifications.
4. Design Report as appropriate (NEM Part 511, Subpart B Documentation, 511.10 and 511.11).
5. Quality Assurance Plan (NEM Part 512 – Construction, Subpart D – Quality Assurance Activities, 512.30 through 512.33).
5. Operation and maintenance plan
6. Certification that the design meets practice standard criteria and comply with applicable laws and regulations (NEM Part 505 – Non-NRCS Engineering Services, Subpart A – Introduction, - 505.0 and 505.3). **(TSP or Non-NRCS Engineer)**
7. Engineering job classification is shown and proper engineering approval is obtained. **(NRCS Employee)**
8. Design modifications during installation as required

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INSTALLATION**Deliverables and Documentation Requirements**

1. Pre-installation 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
 - a. Centerline alignment stakes with offset grade stakes, as needed
 - b. Structure alignment, layout and reference stakes.
 - c. Verify with the Field Office conservation planner that the location of the staked practice is within the original scope of the practice and is still in compliance with the National Environmental Policy Act (NEPA) and the National Historic Preservation Act (NHPA).
4. Installation inspection
 - a. Actual materials used. (NEM Part 512, - Construction, Subpart C – Evaluation of Construction Materials, 512.20 through 512.33; Subpart 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 (NEM Subpart A, 505.3).

CHECK OUT**Deliverables and Documentation Requirements**

1. As-built documentation
 - a. Extent of practice units applied
 - b. Drawings
 - c. Conduit diameters and gage, class or rating
 - d. Dimensions and elevations of any structures
 - e. Adequacy of backfill
 - f. Final quantities
2. Certification that the installation meets NRCS standards and specifications and is in compliance with permits (NEM Part 505 – Non-NRCS Engineering Services, Subpart A – Introduction, 505.3). **(TSP or Non-NRCS Engineer)**
3. Statement of compliance signed by NRCS personnel with applicable job approval authority that the work meets the plans and specifications. **(NRCS Employee)**
4. Progress reporting

REFERENCES

- Field Office Technical Guide (eFOTG), Section IV, Conservation Practice Standard – Underground Outlet, 620.
- National Engineering Manual
- NRCS National Environmental Compliance Handbook
- NRCS Cultural Resources Handbook