

STATEMENT OF WORK DENITRIFYING BIOREACTOR (605) NEW YORK STATE

These deliverables are to be provided for the NRCS case file and apply to this individual practice. For other planned practice deliverables refer to those specific Statements of Work.

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. Practice purpose(s) as identified in the conservation plan.
 - b. List of required permits to be obtained by the client.
 - c. Impacts on adjacent properties and structures.
 - d. Compliance with NRCS national and state utility safety policy (National Engineering Manual (NEM), Part 503-Safety, Subpart A, Engineering Activities Affecting Utilities, 503.00 through 503.06).
 - e. 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). (Example: Soil log and testing reports.)
 - ii. Hydrology/Hydraulics.
 - iii. Structural including hazard class as appropriate.
 - iv. Vegetation.
 - v. A tile map that includes tile sizes, materials, depth, and locations of all tile draining to the denitrifying bioreactor. If a tile map is unavailable, provide documentation on how the denitrifying bioreactor was sized, including drainage area.
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.
 - a. Design Drawing Plans
 - b. Construction Specifications
 - c. List of designed material quantities and proposed project cost estimate
 - d. Proposed Construction Sequence
3. Design Report and Inspection Plan as appropriate (NEM Part 511, Subpart B Documentation, 511.11 and Part 512, Subpart D Quality Assurance Activities, 512.30 through 512.32).
4. Operation and Maintenance (O&M) Plan.
5. Certifications that the design meets practice standard criteria and comply with applicable laws and regulations (NEM, Subpart A, 505.03(b)(2)).

INSTALLATION

Deliverables

1. Documented Pre Construction conference with client, project certifier, project inspector, project engineer and contractor.
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):
 - a. Actual materials used (NEM, Part 512, Subpart D, Quality Assurance Reviews, 512.33)
 - b. Actual lengths, areas, and quantities installed
 - c. Inspection records.
 - i. Job Diary
 - ii. Photo Documentation
 - iii. Material verification/certifications – including but not limited to seed mix certification, pipe quality verification, compaction methods documented, media material specification documented
 - iv. Elevations, depths, and grades documented
 - v. Verification, design certification, and documentation of all design changes
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 meet design and permit requirements.

CHECK OUT

Deliverables

1. As-Built documentation:
 - a. Extent of practice units applied documented on farm map
 - b. As-built "Redlined" Drawings.
 - c. Final quantities
 - d. Copies of all INSTALLATION Deliverables
 - e. Copy of Signed Practice Operation and Maintenance Agreement
2. Certification that the installation and materials meets NRCS standards and specifications and is in compliance with permits (NEM, Subpart A, 505.03(c)(1)).
3. Progress reporting.

REFERENCES

- NRCS Field Office Technical Guide (FOTG), Section IV, Conservation Practice Standard - Denitrifying Bioreactor, 605
- NRCS National Engineering Handbook, Part 624, Section 16, Drainage
- NRCS National Engineering Handbook, Part 650, Chapter 14, Water Management (Drainage)
- NRCS National Environmental Compliance Handbook
- NRCS Cultural Resources Handbook