STATEMENT OF WORK
Grassed Waterway (412)
Iowa 7-2006

These deliverables are the minimum requirements that apply to this individual practice. For other planned practice deliverables refer to those specific Statements of Work.

DESIGN

Deliverables:

Waterways with drainage area < 30 Ac.

1. Documentation of waterway slope.
    a. If slope is greater than 2%, no survey is required.
    b. If slope is equal to or less than 2%, survey to verify actual slope.
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. NEPA requirements have been met and documented on the IA CPA52 (i.e. cultural resources and T&E species).
    c. Documentation that adequate land rights have been obtained if needed.
    d. List of required permits to be obtained by the client.
    e. A note on the drawings stating that the contractor is responsible for calling Iowa One Call at 1-800-292-8989 at least 48 hours prior to beginning any excavation work.
    f. Completed Iowa waterway design and construction record sheet for < 30 acres.
    g. If tile is needed to establish and maintain the waterway, design and documentation shall be in accordance with the Subsurface Drain (606) Standard and Statement of Work.
    h. Outlet capacity and stability. If an outlet structure is needed to protect the waterway outlet, design and documentation shall be in accordance with the Grade Stabilization Structure (410) Standard and Statement of Work.
    i. Erosion Control/Seeding Plan.
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.
    a. Iowa waterway design and construction record sheet or Iowa Standard Drawing 653.
    b. Label all waterways on an aerial photo.
    c. IA-5 Pollution Control Construction Specification is to be included on all projects.
    d Bill of Materials and Cost Estimate.
4. Operation and maintenance plan.
5. All design documentation is shown as checked.
6. Engineering job class is shown on the drawings.
7. Certification that the design meets practice standard criteria and complies with applicable laws and regulations (NEM Subpart A, 505.03) or is approved by an employee with the appropriate delegated engineering job approval authority (NEM Subpart A, 501).
8. Design modifications required during installation are properly documented.

Waterways with drainage area 30 to 100 Ac.

1. Documentation of waterway slope.
    a. If slope is greater than 2%, survey to verify actual slope.
    b. If slope is equal to or less than 2%, a profile survey is required.
        i. Survey notes shall be in accordance with NRCS Technical Release 62, Engineering Field Handbook, Chapter 1 and/or standard industry practice.
        ii. If survey equipment with automatic / electronic data collection devices is used, a print out of the data shall be included in the file.

iii. Elevations shall be referenced to a bench mark. A temporary bench mark with an assumed elevation is acceptable. Examples of a TBM could be a nail in a post, the top of a post, or a wooden hub in the ground.

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. NEPA requirements have been met and documented on the IA CPA52 (i.e. cultural resources and T&E species).
    c. Documentation that adequate land rights have been obtained if needed.
    d. List of required permits to be obtained by the client.
    e. A note on the drawings stating that the contractor is responsible for calling Iowa One Call at 1-800-292-8989 at least 48 hours prior to beginning any excavation work.
    f. Completed Iowa waterway design and construction record sheet for 30 - 100 acres.
    g. If tile is needed to establish and maintain the waterway, design and documentation shall be in accordance with the Subsurface Drain (606) Standard and Statement of Work.
    h. Outlet capacity and stability. If an outlet structure is needed to protect the waterway outlet, design and documentation shall be in accordance with the Grade Stabilization Structure (410) Standard and Statement of Work.
    i. Erosion control/seeding plan.

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.
    a. Iowa waterway design and construction record sheet or Iowa Standard Drawing 653.
    b. Label all waterways on an aerial photo.
    c. IA-5 Pollution Control Construction Specification is to be included on all projects.
    d. Bill of Materials and Cost Estimate.
4. Operation and maintenance plan.
5. All design documentation is shown as checked.
6. Engineering job class is shown on the drawings.
7. Certification that the design meets practice standard criteria and complies with applicable laws and regulations (NEM Subpart A, 505.03) or is approved by an employee with the appropriate delegated engineering job approval authority (NEM Subpart A, 501).
8. Design modifications required during installation are properly documented.

Waterways with drainage area over 100 Ac.

1. Survey notes which show that a thorough and detailed site survey was completed.
    a. Survey notes shall be in accordance with NRCS Technical Release 62, Engineering Field Handbook, Chapter 1, and/or standard industry practice.
    b. If survey equipment with automatic / electronic data collection devices is used, a print out of the data and/or a disk with the electronic files shall be included in the file.
    c. Elevations shall be referenced to a bench mark. A temporary bench mark with an assumed elevation is acceptable. An example of a temporary bench mark could be an “X” chiseled into a corner of an existing concrete floor slab, culvert or similar permanent structure.
2. A plot of the survey data with the scale shown as a bar scale shall be maintained in the file.
3. 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. NEPA requirements have been met and documented on the IA CPA52 (i.e. cultural resources and T&E species).
    c. Documentation that adequate land rights have been obtained if needed.
    d. List of required permits to be obtained by the client.
    e A note on the drawings stating that the contractor is responsible for calling Iowa One Call at 1-800-292-8989 at least 48 hours prior to beginning any excavation work.

f. Practice standard criteria related computations and analyses to develop plans and specifications including but not limited to:
   i. Hydrology/hydraulics.
   ii. If tile is needed to establish and maintain the waterway, design and documentation shall be in accordance with the Subsurface Drain (606) Standard and Statement of Work.
   iii. Outlet capacity and stability. If an outlet structure is needed to protect the waterway outlet, design and documentation shall be in accordance with the Grade Stabilization Structure (410) Standard and Statement of Work.
   iv. Erosion Control/Seeding Plan.

4. 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. Iowa NRCS Standard Drawing 653 with CPA-4 attached.
   b. Iowa NRCS Standard Drawing 854
   c. Label all waterways on an aerial photo.
   d. Include profiles or cross sections if needed to clearly define the project.
   e. IA-5 Pollution Control Construction Specification is to be included on all projects.
   f. Bill of Materials and Cost Estimate.
5. Operation and maintenance plan.
6. All design documentation is shown as checked.
7. Engineering job class is shown on the drawings.
8. Certification that the design meets practice standard criteria and complies with applicable laws and regulations (NEM Subpart A, 505.03) or is approved by an employee with the appropriate delegated engineering job approval authority (NEM Subpart A, 501).
9. Design modifications required during installation are properly documented.

INSTALLATION

Deliverables:

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.
4. Installation inspection documented in the case file.
   a. Actual materials used.
   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.

CHECK OUT

Deliverables:

1. Survey for Checkout.
   a. Cross section at typical location for waterways less than 100 acres drainage area.
   b. Cross sections every 400 feet for waterways over 100 acres drainage area. There must be at least one cross section in each design reach.
   c. Check waterway slope:
      i. For waterways less than 30 acres with a slope equal to or less than 2%.
      ii. For waterways with 30 – 100 acres drainage area and when the slope is over 2%.

   d. Profile survey:
      i. For waterways with 30 – 100 acres drainage area and the waterway slope is equal to or less than 2%.
      ii. For all waterways over 100 acres drainage area.
   e. Reference to the bench mark.
2. As-built documentation (450-GM, IA407).
   a. Extent of practice units applied.
      i. Length, size and location of tile.
      ii. Length, width, and cross section of constructed waterway. Cross sections shall include shots on the edges, quarter points, and centerline of the waterway.
      iii. Number, length, and spacing of fabric checks.
   b. Drawings.
   c. Final quantities.
3. Certification that the practice meets NRCS standards and specifications and is in compliance with permits (NEM Subpart A, 505.03.
4. Progress reporting.

REFERENCES

- Field Office Technical Guide (eFOTG), Section IV, Conservation Practice Standard –Grassed Waterway, 412
- National Engineering Manual
- NRCS National Environmental Compliance Handbook
- NRCS National Cultural Resources Procedures Handbook
- Technical Release 62
- Engineering Field Handbook
- General Manual

STATE CONTACT

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