

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE GENERAL SPECIFICATIONS**

STRUCTURE FOR WATER CONTROL

(No.)

CODE 587

SCOPE

These construction specifications cover the materials and installation of a structure in a water management system that conveys water, controls the direction or rate of flow, maintains a desired water surface elevation or measures water, as specified on the plans or as staked in the field.

The specifications for structures for water control within the scope of the Oklahoma NRCS Conservation Practice Standard, Pond (378) shall meet or exceed the Oklahoma NRCS Conservation Practice Specification, Pond (378), unless otherwise specified in this specification.

PUBLIC AND PRIVATE UTILITIES

Utilities are defined to be public or private, overhead and underground power or communication lines, and any pipelines. The landowner/operator/contractor shall conduct their own search and discovery for utilities in order to lessen or avoid potential damages, injuries or loss of life. Prior to construction, the owner/operator should complete an OK-ENG-45 UTILITIES INVENTORY & CONSTRUCTION RELEASE FORM to document known utilities in order to comply with State law prior to any ground disturbance and return it to a USDA-NRCS representative.

QUALITY CONTROL

Quality Control of all materials and construction procedures is the responsibility of the landowner and contractor. NRCS will make periodic review(s) of the work for the benefit of the agency which will include the final construction check.

MATERIALS

All materials shall conform to appropriate ASTM specifications.

Plastic Components. Corrugated polyethylene (PE) pipe may be used as conduits where the design head on the conduit is less than 4 feet. Prefabricated PE water control structures must be included on the Pre-approved Structures, Components, and Appurtenances list or be approved by the engineer, prior to use.

Soils Investigations. Soil investigation results including dispersion tests shall be documented as applicable on OK ENG-6 or OK ENG-12.

INSTALLATION

Turf Reinforcement Matting (TRM). Turf reinforcement matting shall be installed according to the manufacturer's recommendations and/or as specified by the design and extend completely to the downstream end of the auxiliary spillway.

Shrinkage and Construction Tolerances. Shrinkage will be 10% of the fill height regardless of equipment used unless otherwise specified. Top width shall be plus or minus 1 foot near water control structures. Any overbuild should blend into the shape and form of the embankment. In no case shall the top width be less than 1 foot of the design top width.

Side slopes shall be plus or minus 0.5:1 of design slope near water control structures. In no case shall the side slope be less than 0.5:1 of the design side slope. Care should be taken to avoid flattening backslopes too much near fences, property boundaries, etc.

The embankment height can be level provided that the maximum overbuild at the point of highest shrinkage does not exceed +0.2 feet except over water control structures. Fill over the water control structure and surrounding area should be the highest point of the embankment but blend into the finished grade of the embankment. There is no tolerance below the design height. Auxiliary spillway elevation shall be plus or minus 0.1 feet of design. Principal spillway elevation shall be plus or minus 0.1 feet of design. Flow-over embankments shall have no more than 0.2 feet above design plus shrinkage and shall be plus or minus 0.1 feet end to end and side to side. Overbuild can be detrimental to restoration. Overbuilt embankments may lead to pipe length problems, doesn't blend naturally into the environment, and could create weak points in areas that are not overbuilt.

Flow Measurement Structures and Devices. Flow measurement structures and devices shall be installed according to the manufacturer's recommendations and/or as specified by the design.