

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

**DIKE
(ft)
CODE 356**

1. SCOPE

The work shall consist of all construction operations and furnishing all materials as required by the drawings and specifications for the complete installation of the work of improvement.

2. LOCATION

The location of the dike, borrow area, emergency spillway, and structure(s) for water control shall be as specified on the drawings or as staked in the field.

3. PUBLIC AND PRIVATE UTILITIES

Utilities are defined to be overhead and underground power or communication lines, and pipelines. All utilities discovered to be in the work area will be identified on drawings or sketches. However, the absence of indicators on the drawings or sketches does not assure the nonexistence of utilities in the work area. The contractor is alerted to conduct his/her own search and discovery for utilities in order to avoid potential damages. The owner/operator shall complete TX-ENG-80, UTILITIES INVENTORY prior to layout or any ground disturbance and return it to an NRCS representative.

4. MATERIALS

Materials required for water control structures shall be as specified on the drawings or in the Construction Detail section of this specification.

5. CONTROL OF WATER

Control or removal of surface or groundwater shall be performed as needed to complete the required construction in accordance with specifications and drawings.

6. WATER CONTROL STRUCTURE

Structures shall be placed on a firm foundation to the lines and grades specified on the detail drawings or as staked in the field. Selected backfill material shall be placed around the conduit in layers not exceeding 4 inches thickness before compaction, and each layer shall be thoroughly compacted to the density of surrounding material. A minimum of one foot of fill shall be placed over the top of the pipe before construction equipment is allowed to pass. Anti-seep collars or anti-vortex devices shall be installed as specified on the drawings or as

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specified in construction detail. All weirs shall be installed as specified on the drawings, or as specified in the construction details.

7. EMERGENCY SPILLWAY EXCAVATION

The completed spillway excavation shall conform to the lines, grades, bottom width, and side slopes specified on the drawings or as staked in the field.

8. PLACEMENT OF EARTHFILL

Earthfill shall be constructed to the dimensions specified on the drawings or as staked in the field. Material placed as fill shall be free of all sod, roots, frozen soil, stones and other matter which will interfere with the performance of the earthfill material. Topsoil will be stripped and stockpiled, to be placed after the initial fill is constructed. The placing and spreading of the fill material shall be started at the lowest point of the foundation and the fill shall be brought up in approximately horizontal layers of such thickness that the required compaction can be obtained with the equipment used. The distribution and gradation of materials throughout the fill shall be such that there will be no lenses, pockets, streaks or layers of material differing substantially in texture or gradation from the surrounding material. Where it is necessary to use materials of varying texture and gradation, the more impervious material shall be placed in the upstream and center portions of the fill. Materials shall not be placed until the required excavations, bank sloping, and site preparation is complete, inspected and approved by NRCS personnel. The maximum uncompacted layer thickness shall be nine inches and the maximum permissible particle size shall not exceed six inches.

The compaction of earthfill shall be by one of the following methods:

- (1) Controlled operation of the earth-moving and spreading equipment over the fill so that the entire surface of each lift or layer is traversed by not less than one tread track of the equipment.
- (2) Compaction of each lift by not less than two (2) complete passes of a roller weighing not less than one thousand (1000) pounds per foot of roller width.
- (3) Other equivalent methods approved by the on site technician.

9. MOISTURE CONTROL

Unless otherwise specified, the in place moisture content of the earthfill material shall range from 12% to 18% by weight as determined by NRCS personnel using the feel method, or other appropriate methods. Water shall be added to fill material as needed to comply with the above requirement.

10..SLOPE PROTECTION

A protective vegetative cover shall be established on all the exposed surfaces of the dike and other disturbed areas by approved methods.

11. MEASUREMENT

Excavation. Unless otherwise specified, measurement for excavation will not be made.

Earthfill. Unless otherwise specified, the volume of earthfill will be determined from design dimensions as shown on the drawings and as staked in the field.

Unless otherwise specified, the design dimensions shall be defined as follows. The lower limit shall be the original ground surface as it existed prior to the start of construction and the upper limit shall be the specified neat lines of the settled fill surface.

Volume of earthfill will be computed to the nearest cubic yard. No reduction in volume will be made for embedded conduits and appurtenances.

Water Control Structure

Unless otherwise specified, measurement of quantities for the cost of the water control structure(s) installed will not be made.

12..CONSTRUCTION DETAILS

The following listed drawings are attached and are a part of these Construction Specifications: (Include other applicable items - mark out and initial items listed and not applicable.)

- a. TX-ENG-204-2b-E-D - Low Head Pipe Drop Data Sheet (Flashboard Riser).
- b. 4-L-15072 - Corrugated Metal Pipe Drop Structure (Flashboard Riser).
- c. Bill of Materials for Low Head Pipe Drop.
- d. Construction Data Sheet for Levee.
- e. Concrete Footing Design.
- f. Data Sheet for Weir.