

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE SPECIFICATION

PIPELINE
(feet)
CODE 516

SCOPE

This specification covers the installation of pipelines for livestock or recreational use. Construction shall be in accordance with the plans and these specifications.

INSTALLATION

Materials. Materials for pipelines shall meet the requirements shown in the plans and be field inspected for deficiencies prior to installation.

Placement. Pipelines shall be placed so they are protected against hazards imposed by traffic, livestock, farm operations, or soil cracking.

Plastic pipe shall be buried or covered with soil for protection from sunlight and the hazards mentioned above. Depth of cover should be 6 inches in locations where the pipeline is not subject to hazards from traffic or farm operations and protection is needed from sunlight only. If protection is needed from traffic and farm operations, the minimum depth of cover should be 18 inches.

High-density polyethylene pipe, Grade 34, PE 3408, may be laid on ground surface at locations where minimal hazards are imposed by fire, farm operations, and traffic. At vehicle crossings, encasement of pipe or other approved methods shall be used. In areas where burning is very likely, such as pineapple and sugarcane fields, the pipe shall be buried a minimum of 18 inches. Pipes laid on steep slopes should be anchored to control creep and resulting added stresses.

Trenches for plastic pipelines shall be free of rocks and other sharp-edged materials, and the pipe shall be placed in a "snake-like" position.

Plastic pipelines may be placed by "plow-in" equipment where soils are suitable and rocks and boulders will not be detrimental to the pipe.

Joints and Connections. All joints and connections shall be made to withstand the design maximum working pressure for the pipeline without leakage and shall leave the inside of the line free of any obstruction that may reduce its capacity below design requirements.

All fittings, such as couplings, reducers, bends, tees, and crosses, shall be installed in accordance with the recommendations of the pipe manufacturer.

Fittings made of steel or other metals susceptible to corrosion shall be adequately protected by wrapping with plastic tape or by applying a coating having high corrosion preventative qualities. If plastic tape is used, all surfaces to be wrapped shall be thoroughly cleaned and coated with a primer compatible with the tape before wrapping.

Testing. Before backfilling, the pipe shall be filled with water and tested at design working head or a minimum head of 10 feet, whichever is greater. All leaks shall be repaired and the test repeated before backfilling.

Plowed-in pipelines will be pressure tested at the working pressure for 2 hours. The allowable leakage shall not be greater than one gallon per diameter inch per mile. Should the test exceed this rate, the defect shall be repaired until retests show that the leakage is within the allowable limits, but all visible leaks must be repaired.

Backfilling. All backfilling shall be completed before the line is placed in service. The backfilling may be done using either hand, mechanical, or water-packing methods.

The initial backfill material shall be selected soil or sand free from rocks or stones larger than one inch in diameter. At the time of placement, the moisture content of the material shall be such that the required degree of compaction can be obtained with the backfill method to be used. The initial backfill material shall be so placed that the pipe will not be displaced, excessively deformed, or damaged.

When hand or mechanically backfilling, the initial fill shall be compacted firmly around and above the pipe as required to provide adequate lateral support to the pipe.

When water packing is used, the pipeline first shall be filled with water. The initial backfill, before wetting, shall be of sufficient depth to insure complete coverage of the pipe after consolidation has taken place. Water packing is accomplished by adding water to diked reaches of the trench in such quantity as to thoroughly saturate the initial backfill without excessive pooling of water. After saturation, the pipeline shall remain full until after final backfill is begun.

Backfill of plastic pipe should be done after the pipe reaches the same temperature as the water or soil. This can be done in a number of ways such as filling with water or by leaving the trench open overnight before backfilling.

Installation and backfilling shall be done in a workmanlike manner. Provisions shall be made for stabilizing disturbed areas and controlling erosion, as necessary.

SAFETY

Landowners or operators, sponsoring organizations, and contractors are liable for damage to utilities, and damage resulting from disruption of service caused by construction activities. The Natural Resources Conservation Service makes no representation on the existence or nonexistence of any utilities. Absence of utilities on plan drawings is not assurance that no utilities are present at the site.

It is the responsibility of the landowner or operator to determine if there are buried or overhead utilities in the vicinity of the proposed work. They should take proper procedures to insure that the utilities will not be jeopardized and that equipment operators and others will not be injured during construction operations.