

Fence

Non-Electric, Standard Woven and Barbed Wire

Conservation Practice WV Job Sheet

Code 382



Definition

A constructed barrier to livestock, wildlife, or people.

Conditions where practice applies

This practice may be applied on any area where access management is needed.

General Criteria

Fencing materials shall be of a quality and durability that meets the intended management objectives. Construction shall be performed in a manner that meets the intended management objective. Wire and hardware will be new, galvanized material.

Height, number, and spacing of wires will be installed to facilitate control and management of the animal(s) and /or people of concern.

Height size, spacing, and type of posts will be used that best provides the needs for the style of fence required and is best suited for the topography of the landscape.

Manufacturers' guidelines shall be adhered to during installation of each type of fence to ensure proper component assembly.

All fence construction shall comply with federal, state and local fencing codes.

Fences for large animals (cattle and horses), will be constructed of 5 to 6 strands of barbed wire but 4 strands may be used for interior pasture and 3 strands for livestock exclusion of woodland.

Fences for mixed livestock will be constructed of woven wire at least 39 inches high topped with two strands of barbed wire or 47 inches high topped with one strand of barbed wire.

Barbed wire: Double strand 15 ½ gauge or larger with 4 point barbs.

Woven wire: 11 gauge or larger top and bottom wires, 14 ½ gauge or larger intermediate line and stay wires. Maximum of 12 inches between stay wires.

Posts: Black locust is preferred as the most durable wood to use untreated. All other woods will be treated with preservative if used. Steel posts may also be used. Live trees in line with fence and at least 5 inches in diameter can be used as a substitute for posts. The wire must be attached to a black locust or pressure treated 2x4 nailed to the tree.

- Wood line posts – 6-1/2 feet or longer, 4 inch minimum diameter (3 inch for pressure treated posts). Wood corner, gate and brace posts – 8 feet or longer, 5 inch minimum diameter.
- Steel line posts – Standard “T” Section 1 ¾ inch X 1 ¾ inch x 1/8 inch, galvanized or painted, with anchor plate. Every third or fourth post shall be wood.

Braces:

- Wood – 3 ½ inches diameter at small end; or 3 ½ inches square, 8 feet long.
- Brace wire – High tensile, galvanized steel, 9 gauge softwire.

Staples: Staples used to fasten fence wire to wooden posts will be 9 gauge galvanized wire with a minimum length of 1½ inches for softwood and 1 inch for hardwood. Staples will be driven cross-wise to the grain and will not be driven in tight against wire.

Installation

Wood line posts - maximum of 16 ½ feet apart and set a minimum of 2 feet deep.

Steel line posts - maximum of 16 ½ feet apart and set to top of anchor plate.

Brace assemblies in line - are placed not more than 660 feet apart on level or gently sloping

land; and at any significant change in the land surface - 15° change in alignment or slope.

Brace posts - are placed 8 feet from corner posts, end posts, and gate posts; and 8 feet apart in line brace assemblies.

Corner, gate, and brace posts – are set at least 3 feet deep.

Posts may be driven or set in post holes and hand tamped with earth or filled with concrete.

Considerations

Fences across gullies or streams require special braces and design. Breakaway fences or swinging water gaps allow debris and water to flow past the fence line without destroying the adjacent fence.

Any permanent fencing for grazing livestock should allow flexibility to facilitate implementation of the grazing plan and permit land management activities such as nutrient application, pest control, forage harvest, and other appropriate practices.

Follow all manufacturers’ safety precautions for handling and installing fencing materials.

Wire shall be attached on the sides of posts that will receive the greatest pressure from animals. Wire will be placed on the outside of posts on curves.

Locate fences to facilitate maintenance. Where applicable, clear right of ways should be established and maintained to facilitate fence construction and maintenance.

When possible, install fences across slopes to improve grazing distribution, rainfall infiltration, and reduce soil erosion.

Locate fences to facilitate livestock management, handling, watering, and feeding.

Fence – WV Job Sheet Specifications

Site-specific requirements are listed on the specifications sheet. Additional provisions are entered on the job sketch sheet. Specifications are prepared in accordance with the NRCS Field Office Technical Guide. See practice standard (382) Fence.

Client:	Farm #:
Field(s):	Tract #:
Planned By:	Location:
Date:	Length of Fence:
Landowner Objectives:	

Purpose (check all that apply)	
<input type="checkbox"/> Reduce erosion and improve water quality by controlling livestock access to streams, springs, wetlands, and ponds	<input type="checkbox"/> Protect sensitive environmental areas and the flora from vehicular, pedestrian, or animal traffic use
<input type="checkbox"/> Protect newly planted areas from disturbance until established	<input type="checkbox"/> Protect the safety of people, livestock, and wildlife by limiting or denying access to hazardous areas
<input type="checkbox"/> Facilitate handling, movement, and feeding of livestock in the pasture environment	<input type="checkbox"/> Improve distribution and timing of livestock grazing
<input type="checkbox"/> Other (specify)	

Type of Fence (Check all that apply)		
<input type="checkbox"/> Non-Electric High Tensile <input type="checkbox"/> 8-strand non-electric high tensile <input type="checkbox"/> 10-strand non-electric high tensile	<input type="checkbox"/> Standard Woven <input type="checkbox"/> 1-strand barbed wire and woven <input type="checkbox"/> 2-strand barbed wire and woven	<input type="checkbox"/> Barbed Wire <input type="checkbox"/> 3-strand barbed wire <input type="checkbox"/> 4-strand barbed wire <input type="checkbox"/> 5-strand barbed wire <input type="checkbox"/> 6-strand barbed wire

Posts		
Type Black Locust <p style="text-align: center;">OR</p> Eastern redcedar <p style="text-align: center;">OR</p> pressure treated pine or other preservative treated wood <p style="text-align: center;">OR</p> standard steel line posts (every 3 rd or 4 th post is wooden)	Size Line posts are wood 6 ½ feet or longer 4 inch minimum diameter <p style="text-align: center;">OR</p> Standard steel line post 1 ¾ inch X 1 ¾ inch x 1/8 inch, with anchor plate <p style="text-align: center;">OR</p> Live trees in line with fence at least 5 inches in diameter (use black locust or pressure treated 2 x 4.)	Spacing Wood line posts spaced a maximum of 16 ½ feet apart set 2 feet deep minimum <p style="text-align: center;">OR</p> Steel line posts spaced a maximum of 16 ½ feet apart set to top of anchor plate

Braces	
Wooden Braces (8 feet minimum length) 3 ½ inches diameter at small end OR 3 ½ inches square	Brace Wire High Tensile, Galvanized Steel, 9 Gauge OR 12 ½ Gauge High Tensile, Galvanized, Double Wrapped

Fence – WV Job Sheet

If needed, an aerial view or a side view of the practice can be shown below. Other relevant information, complementary practices and measures, and additional specifications may be included.

Operation and Maintenance

Regular inspection of fences should be part of an on-going management program. Inspection of fences after storm events is needed to facilitate the function of the intended use of the fence. Keep heavy vegetation away from fences. Maintenance and repairs will be performed as needed. Retain and properly discard of all broken fencing material and hardware to prevent ingestion by animals or injury to equipment, people, or animals. Precautions should be taken to ensure the safety of construction and maintenance crews.

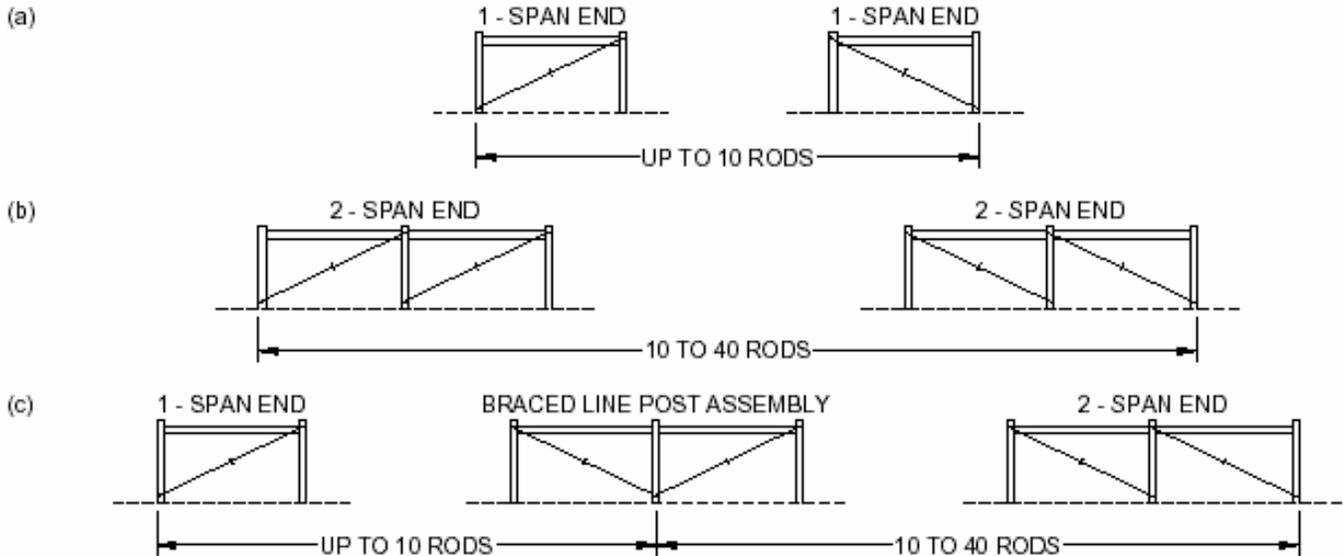
Other:

For information regarding this practice contact:
 _____ at _____.

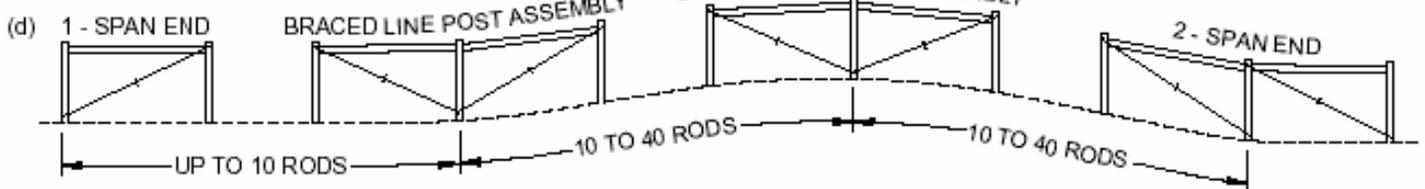
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STRAIGHT FENCES
ON FLAT LAND



STRAIGHT FENCES
ON ROLLING LAND



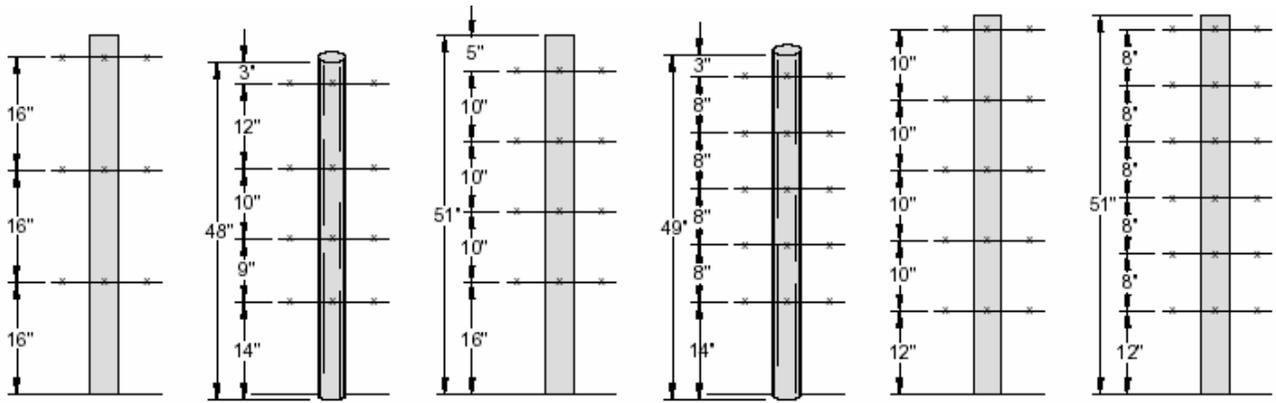
CURVED FENCES



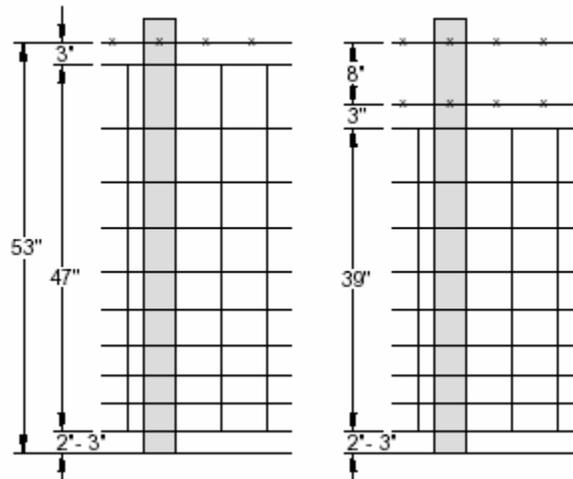
Types of anchor-and brace assemblies and where to locate them: (a) For fence lengths of 10 rods (165 feet) or less, use single-span end construction. (b) For fence lengths of 10 to 40 rods (165 to 660 feet), use double span end construction. (c) For fences more than 40 rods (660 feet) long use a braced-line-post assembly to divide the fence lengths. (d) On rolling land, fence stretching is easier if braced line-post assemblies are located at the foot and top of each hill. (e) Contour fences, more than 20 rods (330 feet) long, should have a braced-line-post assembly installed to keep the stretches to 20 rods (330 feet) or less. Install in straight section at least one post span away from a curve. Do not install on a curve.

Note: One rod equals 16 ½ feet.

SUGGESTED SPACING FOR BARBED WIRE



MOUNTING HEIGHTS FOR BARBED WIRE USED WITH WOVEN WIRE FENCE



The first barbed wire above woven wire fence should be within 3" of top line wire. This reduces the possibility of animals getting their head between woven wire and barbed wire, and mashing down the fence.