



What are Woven Wire Fences?

Woven, Net and Mesh Wire Fences are best suited in areas where tight control is necessary such as with sheep, goats, horses, hogs, people or predator control. These fences consist of multiple rows of horizontal smooth wires held apart by vertical wires, usually of different sizes and configurations. Space between wires varies depending on designated use.

Purpose

This practice facilitates the accomplishment of conservation objectives by providing a means to control movement of animals and people, including vehicles.

Applying the practice

The fencing materials, type and design of fence installed shall be of a high quality and durability and installed to meet the management objectives and site challenges.

Fences shall be positioned to facilitate management requirements. Ingress/egress features such as gates and cattle guards shall be planned.

Where applicable, cleared rights-of-way may be established which would facilitate fence construction and maintenance. Avoid clearing of vegetation during the nesting season for migratory birds.

Fences across gullies, canyons or streams may require special bracing, designs or approaches.

Fence design and location should consider ease of access for construction, repair and maintenance. Where practical, in order to minimize maintenance and installation costs, avoid areas such as rough and irregular terrain, excess trees and brush, areas with long-standing water and water crossings

Fence construction requiring the removal of existing unusable fence should provide for the proper disposal of scrap materials to prevent harm to animals, people and equipment.

Operation and maintenance

Regular inspection of fences should be part of an ongoing maintenance program. Inspection of fences after storms and other disturbance events is necessary to insure the continued proper function of the fence. Maintenance and repairs will be performed in a timely manner as needed, including tree/limb removal and water gap replacement.

Remove and properly discard all broken fencing material and hardware. All necessary precautions should be taken to ensure the safety of construction and maintenance crews

Specifications

Specifications included in this job sheet are prepared in accordance with the NRCS Field Office Technical Guide, Oklahoma Fence (382) practice standard.

This job sheet provides general design criteria, material specifications and installation requirements.

Any variations in materials and installation from those provided in this job sheet must be discussed and approved by the responsible planner at the time of planning and prior to installation. Failure to do so could result in the practice not being certified.

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PERMANENT FENCE CONSTRUCTION DATA SHEET – Woven Wire

Cooperator: _____ Field Office: _____

Plan No: _____ Field No: _____ Location: _____

Planned by: _____ Title: _____ Date: _____

Purpose / Livestock Type: _____

Length of Planned Fence (if more than one fence is planned, with the same materials, components and installation requirements number each fence and provide planned length for each.)

Fence # _____ Length _____ Fence # _____ Length _____ Fence # _____ Length _____

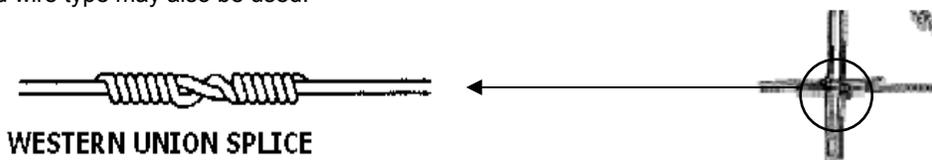
COMPONENTS – MATERIAL SPECIFICATIONS AND INSTALLATION (Check/Complete Applicable Items)

WIRE TYPE – Based on Planned Fence Type. All wire must be new and meet requirements for proper gauge, galvanization and strength.	Wire Sizes	Wire Height	Wire Spacing (openings)
<input type="checkbox"/> Standard Woven Wire - Class I zinc coating or equivalent.	Top & Bottom wires: min. 12 ½ gauge Intermediate & Stay Wires: min. 14-1/2 gauge;		
<input type="checkbox"/> High Tensile - Class III zinc coating or equivalent.	14 1/2 gauge		
<input type="checkbox"/> Mesh Wire (such as Horse-No-Climb) - Class I zinc coating or equivalent.	Top & Bottom wires: min. 10 gauge Intermediate & Stay Wires: min. 12-1/2 gauge		
<input type="checkbox"/> Barbed Wire (if needed) – 1-2 wires installed above the woven wire to achieve overall total required height of fence. Barbs will be minimum 14 gauge, 2 point spaced 4-6 inches apart.	Standard (Malleable): 12 ½ gauge; Class I galvanization; Min. 70,000 psi High Tensile: min. 15 ½ gauge; Class III galvanization, heat treated high tensile; Min. 170,000 psi		

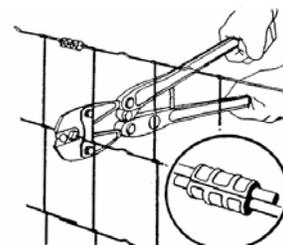
Installation: Fence wire will be stretched to sufficient tension prior to being fastened to posts. Temperature variations must be considered (wire will tighten in cold weather and expand in hot weather). Wherever possible, wire will be attached to fence post on side receiving most pressure, at top wire heights based on intended use.

Wire Splices: When wire splices are needed, specific splicing methods should be used depending on type of wire. The following splice will be used:

Standard, Malleable wire types – **Western Union** splices are the preferred method. Splices are joined at a vertical stay wire wires tightly wound, a minimum of 8 wraps, on each side of center. **Mechanical splices**, such as crimping sleeves, designed specifically for the planned wire type may also be used.



High Tensile Wire – **Mechanical splices** are the preferred method for HT Wire. Mechanical splices must be specifically designed for HT wire fence materials and have a tensile strength of at least 80% of the wire strength. Examples of mechanical splices include crimping sleeves (Nicropress).



LINE POSTS - Minimum lengths of all posts will allow for required setting depths and fence height plus at least 2 inches of post above the top wire. Post diameter sizes are minimums.

Post Type and size	Materials / Installation Specifications
<input type="checkbox"/> Wood - 3" diameter (round posts only)	<p>Must be new, sound and free from decay. Except for red cedar, mesquite, Osage orange, catalpa, and black locust, all wood posts shall be treated with a preservative which is approved by either Federal Specification TT-W-571 or the American Wood Preservers Association (AWPA)</p> <p>Attaching wire to Posts: Staples - 9 gage steel, length of 1 ½ inches for soft woods and 1 inches for hardwoods. Drive staples diagonally to the wood grain at a slight downward angle (upward if pull is up) to avoid splitting the post. Space will be left between post and staple to allow free movement of wire and to avoid damage to zinc coating.</p>
<input type="checkbox"/> Steel Pipe - 2" OD Schedule 40	<p>Posts may be new or used of good quality, free from rust and pitting, and painted or galvanized for rust resistance. Posts will have the top permanently capped to prevent rainfall from entering post.</p> <p>Attaching wire to Posts: Use 12-12 ½ gauge galvanized wire or wire clips. When using 12 - 12 ½ gauge wire on steel pipe posts, make sure wire is wrapped tightly to hold wire and prevent movement up and down the post.</p>
<input type="checkbox"/> Standard "T" Min. 1.25 lb per foot	<p>Will be galvanized, enameled and baked, or painted with weather resistant steel paint. Will have an anchor plate and be studded, embossed or punched for wire attachment.</p> <p>Attaching wire to Posts: Manufactured Wire Clips</p>

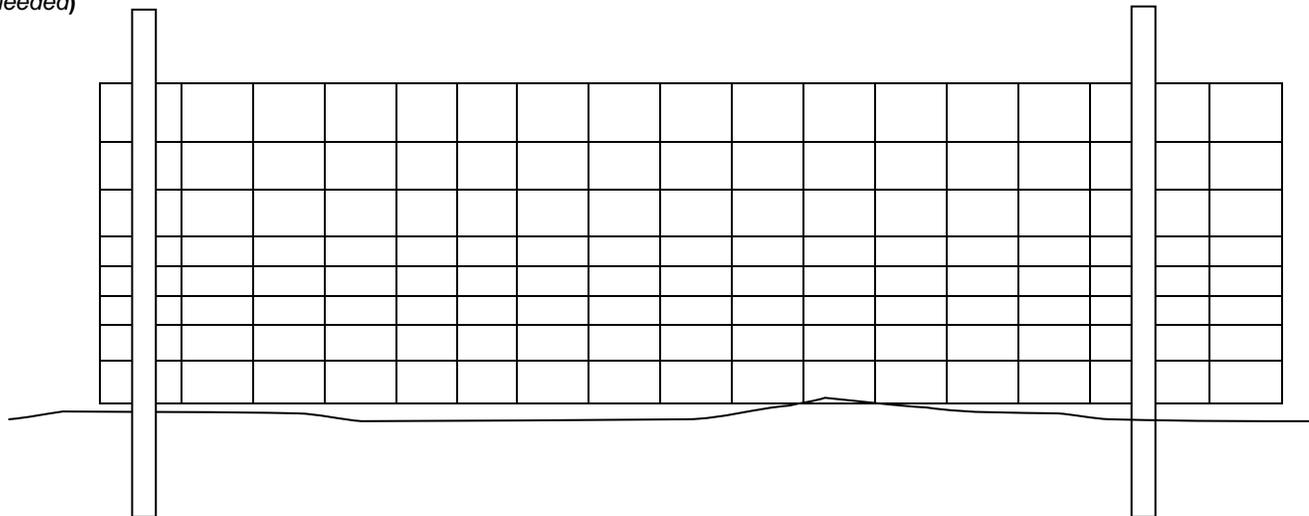
LINE POSTS INSTALLATION - Installation shall ensure that adequate fence height is maintained based on its purpose. Line posts will be set in as straight a line as possible between corners or turns. When fencing along curved lines, use straight sections with appropriate in-line bracing.

Minimum Setting Depth (inches) Rocky Soils - 18" Sandy Soils - 30" All Other - 24"
 "T" Posts - Anchor plate must be fully into ground. (15-18")

Line Post Spacing (based on livestock type and fence type. Refer to Table 1 in Fence Standard)

Maximum spacing between line posts _____ Ft.

FENCE DIAGRAM (items may include post spacing, fence height, additional wires needed above woven wire, post depth, etc. as needed)



ADDITIONAL REQUIREMENTS:

PERMANENT FENCE CONSTRUCTION DATA SHEET – Woven Wire

Fence Layout and Location Diagram: The following diagram indicates fence location, length, alignment and bracing requirements. Bracing locations and types are indicated in order to assist with proper selection of brace assemblies based on soils, length of pulls, changes in direction / elevation and fence types. An aerial photograph with the same information may also be used.

BRACING: Materials and installation requirements are included in the attached brace diagrams. The table below indicates brace types needed and reference to the appropriate brace diagram. Indicate on the map the brace locations (signify with a #), and planned lengths of pulls. Attach the appropriate brace assembly specification sheets.

Corner Braces are required at all points where the fence alignment has a change of 20 degrees or more and the pull is from two directions. **End braces** are required where the fence ends, on both sides of gate openings and for water gaps / crossings greater than 20 feet. **In – Line Pull Post** assemblies are located in straight sections of the fence line with pulls in both directions and where there are sudden changes in elevations, such as at the bottom and top of steep slopes. Best used in long stretches where fence has no corners or ends and can be used to tie off wire and stretch.

Corner Braces		End / Gate Braces		In-Line pull assemblies	
Brace #	Brace Type	Brace #	Brace Type	Brace #	Brace Type

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