

**STATE OF NEW JERSEY DEPARTMENT OF AGRICULTURE
WILDLIFE FENCING GRANT PROGRAM**

AGREEMENT

THIS AGREEMENT is made on the date signed below on behalf of the Department
("Commencement Date")

BETWEEN _____,

whose address is _____,
and is referred to as the **Awardee**;

AND

The New Jersey Department of Agriculture,

whose address is _____,
and is referred to as the **Department**.

The tax map reference for the Premises is:

Township of _____, County of _____
Block(s) _____, Lot(s) _____

WHEREAS, the Department conducts a grant program pursuant to N.J.S.A. 4:20-6.1 to issue matching wildlife fence grant Awards to eligible owners, operators, and lessees of unreserved farmland; and

WHEREAS, the Awardee is the owner, operator, or lessee of an unreserved farm located at _____
(the "Premises") on which wildlife fencing is to be install and a portion of the construction costs are to be shared by the Department through the grant program; and

WHEREAS, N.J.S.A. 4:20-6.1(d)(1) requires that the Awardee and the Department enter into an Agreement as a condition of the Awardee's receipt of the Grant funds; and

WHEREAS, N.J.S.A. 4:20-6.1(d)(1) further requires that said Agreement shall require that the Premises are to be retained in agricultural or horticultural production for eight years; and

WHEREAS, the Awardee is the person who applied for and will receive matching grant Award money from the Department, and shall be solely liable to the Department if Awardee fails to adhere to any part of this Agreement; and

WHEREAS, the legislature of the State of New Jersey has declared that the development of agriculture and the retention of farmlands are important to the present and future economy of the State and the welfare of the citizens of the State; and

Definitions

“High-tensile woven wire deer fencing” or “deer fencing” means deer fencing constructed pursuant to the design and installation specifications prescribed in “Appendix A” attached hereto.

“Electric fencing” or “bear fencing” means bear fencing constructed pursuant to the design and installation specifications set forth in “Appendix B” hereto.

“Wildlife fencing is no longer useful” shall mean that most or all of the deer fencing or bear fencing or other wildlife fencing constructed pursuant to the Agreement becomes superfluous, redundant, or serves little or no benefit to agriculture because the Premises are no longer retained in agricultural or horticultural production.

“Premises” means the farm location address identified above as the Premises, together with the tax map reference for the Premises as set forth above.

“Other encumbrances” means any lease, deed restriction, lien, or any other legal encumbrance on the Premises that exists separately from this Agreement. It shall also include the requirements of any other law or regulation concerning construction or land use. This Agreement shall not be construed to modify, supersede, or revoke any other encumbrance on the Premises.

“Repayment on a pro rata basis” means a proportional monetary value to be repaid to the Department by the Awardee if the Awardee fails to adhere to the Agreement. The dollar amount to be repaid will be based on the portion of time remaining on the 8-year term stipulated in the Agreement when the wildlife fencing constructed pursuant to this Program is no longer useful because the premises are no longer being retained in agricultural or horticultural production. The amount to be repaid will be calculated as follows:

Time Remaining: The total dollar amount of the grant will be multiplied by the portion of time remaining on the 8-year term (e.g., if 6 out of 8 years remain on the term, the amount to be repaid is 75% of the total grant. If the grant was \$10,000, the Awardee must repay \$7,500). The portion of time remaining on the 8-year term will be based on the number of full calendar months remaining.

“Sells the land” or “land is sold” means to dispose of the land in a manner that results in the premises no longer being retained in agricultural or horticultural production. If a tenant applies for and receives matching grants, and the landowner sells the premises, the tenant shall not be required to repay the Division so long as the land is retained in agricultural or horticultural production for the remainder of the eight-year term. If an owner applies for and receives matching grants and sells the premises, the owner shall not be required to repay the Division so long as the land is retained in agricultural or horticultural production for the remainder of the eight-year term.

“Unpreserved farmland” means a commercial farm, as that term is defined in section 3 of P.L.1983,

c.31 (C.4:1C-3), on which a development easement has not been conveyed to, or retained by, the State Agriculture Development Committee, a county agriculture development board, a county, a municipality, or a qualifying tax exempt nonprofit organization pursuant to any State law enacted for farmland preservation purposes.

NOW THEREFORE, in consideration of the benefits, obligations, terms and conditions hereof and intending to be legally bound, the parties agree as follows:

The Department will provide the Awardee with matching grant funds pursuant to N.J.S.A. 4:20-6.1 in an amount not to exceed \$ _____ (FILL) to construct on the Premises approximately

_____ (FILL) feet of high tensile woven wire deer fencing
 _____ (FILL) feet of electric bear fencing
 _____ (FILL) feet of other wildlife fencing

in exchange for the Awardee retaining the Premises in agricultural or horticultural production for eight (8) years as more fully explained below. Nonetheless, the Award to be provided by the Department will not exceed 50% of the total cost of construction as documented by invoices or receipts, on a reimbursement basis after the completion of the fencing project.

(Example: The Department authorizes an award of up to \$10,000 in matching grant money for a project estimated to cost \$20,000. However, at the project's completion, if the total cost was \$18,000, the matching grant award from the Department to the awardee will be \$9,000.)

In exchange, the Awardee will:

1. Retain the Premises in agricultural and horticultural production for a period of eight (8) years from the Commencement Date, unless the land is withdrawn from the program in compliance with NJSA 4:20-6.1. Agricultural or horticultural production shall mean the use of land for common farmsite activities including, but not limited to: production, harvesting, storage, grading, packaging, processing and the wholesale and retail marketing of crops, plants, animals and other related commodities and the use and application of techniques and methods of soil preparation and management, fertilization, weed, disease and pest control, disposal of farm waste, irrigation, drainage and water management, and grazing.
2. If Awardee is not the Owner of the Premises, but is an Operator or Lessee in relation to the Premises, then Awardee represents that the Awardee has written approval to install wildlife fencing on the land from the Owner of the land on which the fencing is to be installed, and that Awardee has provided a copy of said written approval to the Department, and that the Awardee understands that the Department has relied on that written approval for purposes of awarding the grant and entering this Agreement.
3. Awardee certifies that, at the time of this Agreement, the nonagricultural uses indicated on attached **Schedule A** existed on the Premises.

4. All nonagricultural uses existing on the Premises as set forth in Section 3 above may be continued and any structure may be restored or repaired in the event of partial destruction thereof.
5. The land and its buildings which are affected hereby may be sold collectively or individually for continued agricultural production and related uses as defined in Section 1 of this AGREEMENT. In the event Awardee intends to transfer or assign their interest in the Premises, Awardee shall advise the Department prior to initiating such action so that the Department may determine if pro rata repayment of the grant award money is required.
6. Awardee may not alter the Premises to such an extent that the wildlife fencing is no longer useful. If the wildlife fencing is no longer useful, then repayment of the award money on a pro-rata basis to the Department shall be required.
7. Nothing in this Agreement shall be construed to convey a right to the public of access to or use of the Premises, except for the Department's right of access as described below in Section 18 or as otherwise permitted by law.
8. Nothing shall impose upon the Awardee any duty to maintain the Premises in any particular state or condition, except as provided for in this Agreement.
9. Awardee may use, maintain, and improve existing buildings on the Premises, consistent with any other encumbrances, for agricultural, residential, and recreational uses so long as the Premises are retained in agricultural or horticultural production.
10. Awardee may construct any new buildings, consistent with any other encumbrances, for agricultural purposes or residential purposes so long as the Premises are retained in agricultural or horticultural production. Awardee shall notify the Department of any construction of new buildings or major soil disturbance within 90 days of the start of such activities.
11. Nothing in this Agreement shall be deemed to restrict the right of Awardee to maintain all roads and trails existing upon the Premises as of the date of this agreement. Awardee shall be permitted to construct, improve or reconstruct any roadway necessary to service crops, bogs, buildings, or reservoirs as may be necessary, consistent with any other encumbrances.
12. In the event of any violation of the terms and conditions of this AGREEMENT, the Department may institute, in the name of the State of New Jersey, any proceedings to enforce these terms and conditions including the institution of suit to recover the grant monies awarded by the Department in consideration of Awardee's obligation to retain the Premises in agricultural and horticultural production for 8 years. The Department does not waive or forfeit the right to take any other legal action necessary to ensure compliance with the terms, conditions, and purposes of this Agreement by a prior failure to act.
13. It is understood that this AGREEMENT imposes no obligation or restriction on the Awardee's use of the Premises except as specifically set forth in this AGREEMENT.

14. It is understood that Awardee is solely liable for complying with any other encumbrances on the property when constructing or maintaining wildlife fencing pursuant to this Agreement.
15. Throughout this AGREEMENT, the singular shall include the plural, and the masculine shall include the feminine, unless the text indicates otherwise.
16. The word 'Awardee' shall also include any and all persons who lawfully succeed to the rights and responsibilities of the Awardee, including but not limited to his heirs, executors, administrators, personal or legal representatives, successors and assigns.
17. Wherever in this AGREEMENT any party shall be designated or referred to by name or general reference, such as 'Awardee', such designation shall have the same effect as if the words 'heirs, executors, administrator, personal or legal representatives, successors and assigns' have been inserted after each and every designation.
18. The Department and its agents shall be permitted access to, and to enter upon, the Premises at all reasonable times, but solely for the purpose of inspection in order to enforce and assure compliance with the terms and conditions of this Agreement. The Department agrees to give Awardee at least 24 hours advance notice of its intention to enter the Premises, and further, to limit such times of entry to the daylight hours on regular business days of the week.

ADDITIONAL TERMS

19. The Department hereby agrees that Awardee may request to withdraw the Premises from this program prior to its termination date in the case of death or incapacitating illness of the Awardee or other serious hardship or bankruptcy. The Department may grant or deny such request consistent with N.J.S.A. 4:20-6.1 in its sole discretion.
20. Project Completion and Payment
 - a. Project completion means installing the fence, scheduling an inspection by NJDA, Division of Agricultural and Natural Resources staff, correcting any deficiencies noted during the inspection, and submitting bills for reimbursement to the NJDA, Division of Agricultural and Natural Resources using a form authorized by the NJDA, Division of Agricultural and Natural Resources. The Awardee shall notify the Department when the fencing has been installed and request payment on a payment claim voucher form authorized by the Department.
 - b. The payment request shall be accompanied by the completed payment claim voucher, itemized bills, and related documentation that substantiates all eligible costs incurred.
 - c. In-kind services performed by the Awardee or Awardee's employees shall be permitted to be used as the applicant's matching portion of costs for a project or any component of a project funded under the provisions of this program. All contributions, including cash and approved third party in-kind, shall be accepted as part of the Awardee's cost sharing or matching when such contributions meet all of the following criteria:

1. The contributions are verifiable from the Awardee's records;
 2. The contributions are not included as contributions for any other Federally or State assisted project or program;
 3. The contributions are necessary and reasonable for proper and efficient accomplishment of project objectives;
 4. The contributions are not paid by the State and/or Federal government under another award, except where authorized by State and/or Federal statute to be used for cost sharing or matching;
 5. Volunteer services furnished by professional and technical personnel, consultants, and other skilled and unskilled labor, if approved by the Department, may be counted as cost sharing or matching if the service is an integral and necessary part of an approved project. Rates for volunteer services shall be consistent with those paid for similar work in the applicant's organization. In those instances in which the required skills are not found in the Awardee's organization, rates shall be consistent with those paid for similar work in the labor market in which the applicant competes for the kind of services involved. In either case, paid fringe benefits that are reasonable, allowable, and allocable may be included in the valuation;
 6. When an employer other than the Awardee furnishes the services of an employee, these services shall be valued at the employee's regular rate of pay (plus an amount of fringe benefits that are reasonable, allowable, and allocable, but exclusive of overhead costs), provided these services are in the same skill for which the employee is normally paid;
 7. Donated supplies may include such items as expendable equipment, office supplies or workshop supplies. Value assessed to donated supplies included in the cost sharing or matching share shall be reasonable and shall not exceed the fair market value of the property at the time of the donation;
 8. The following requirements pertain to the applicant's supporting records for in-kind contributions from third parties:
 - i. Volunteer services shall be documented and, to the extent feasible, supported by the same methods used by the applicant for its own employees; and
 - ii. The basis for determining the valuation of personal service, material, equipment and buildings shall be documented.
- d. In order to make payment, the Department shall verify that the project has been completed in accordance with the design and installation specifications attached hereto (Appendix A and Appendix B, as applicable) and in the location identified in the Awardee's application form. The Department shall also verify applicant's payment claims. If payment claims are satisfactory, the Department shall pay the Awardee.

- e. No Federal or State cost share program shall be used as the applicant's matching portion of costs for a project(s) or any component of a project(s) funded under the provisions of this program.
 - f. No portion of the State cost share program shall be used as the landowner's portion of costs for a project(s) or any component of a project funded under the provisions of any Federal or State cost share program.
21. Awardee must commence construction of the wildlife fencing project within 6 months of the Commencement Date of this Agreement and must complete the project within three years of the Commencement Date. The Division may revoke the award if the Awardee fails to adhere to the timing requirements for commencing or completing the construction of the wildlife fencing.
22. The Awardee agrees that it is not an agent of the Department with respect to all activities connected with the purchase, construction, installation and maintenance of the fencing that is the subject of this Agreement, and the Awardee further agrees to hold the Department harmless with respect to any liability or claim of liability that might arise out of the Awardee's purchase, construction, installation and maintenance/use of any fencing that is the subject of this Agreement.
23. The persons whose signatures appear hereby represent that they are duly authorized to sign this Agreement on behalf of the party indicated and thereby bind said party to the terms and conditions set forth in this Agreement.

SIGNATURES

The foregoing is Agreed to on behalf of the Awardee by:

_____ Date: _____

Name:

Title (if applicable):

The foregoing is Agreed to on behalf of the Department by:

_____ Date: _____

Name:

SCHEDULE A

(nonagricultural uses currently existing on the Premises)

APPENDIX A

(High-Tensile Woven Wire Deer Fencing
Design and Installation Specifications)

New Jersey Department of Agriculture (“NJDA”)

Wildlife Fence Cost-Share Program for Unpreserved Farms
 (“WFCS Grants”)

Appendix A

High-Tensile Woven Wire Deer Fencing
Design and Installation Specifications



NEW JERSEY
DEPARTMENT OF AGRICULTURE

Table of Contents

| | |
|---|-------|
| Introduction | 3 |
| General Requirements..... | 3 |
| Additional Awardee Responsibilities | 3 |
| Fence Materials and Specifications | 4 |
| – High-Tensile Woven Wire Fence..... | 4 |
| – High-tensile Wire..... | 4 |
| – Posts | 4 |
| – Fasteners | 4 |
| Brace Assemblies | 5 |
| – Placement..... | 5 - 6 |
| – Length..... | 5 |
| – Components | 6 |
| – Typical Single-Span Brace Assembly at a Corner or End | 6 |
| – Typical Double-Span Brace Assembly at a Corner or End | 7 |
| – Typical Line Brace Assembly..... | 7 |
| Terminating a Fence..... | 9 |
| Splicing a Fence..... | 10 |
| Woven Wire Fence Placement..... | 11 |
| Fastening Woven Wire Fence to Posts..... | 11 |
| Setting Posts in the Ground | 12 |
| Line Post Spacing on Curves | 12 |
| Deer Fence Installation Training Video | 13 |

Introduction

The specifications included in this Appendix must be followed at a minimum for the effective implementation of exclusionary deer fence. Farmers wishing to deviate from the specifications must seek and get approval from the Division of Agricultural and Natural Resources (“Division”) in writing prior to installation.

General Requirements

- All fence materials must be new and in unused condition.
- The minimum fence height is 96 inches (8 feet).
- Two fence systems are permitted:
 - System using full 96-inch high-tensile fixed-knot woven wire.
 - System using 75 to 96-inch high-tensile fixed-knot woven wire, with high-tensile wires spaced a maximum of 9 inches apart to reach the full 96-inch height.

Additional Awardee Responsibilities

Awardees must:

- Obtain all applicable permits and comply with all permit conditions.
- Act as General Contractor to obtain the services of all subcontractors required to perform the works of improvement.
- Contact the NJ One Call system at 1-800-272-1000 three to ten days prior to any construction activity to verify the location of any buried utilities. (The protection of private utilities is the responsibility of Awardee.)
- Seek and get prior approval from the Division, in writing, for any deviations from the design and installation specifications in this Appendix.

Awardees can contact the NJDA at:

PO Box 330, Trenton NJ, 08625-0330

nidadeerfence@ag.nj.gov

Ph: (609) 913-6490

Fence Materials and Specifications

- High-Tensile Woven Wire Fence and High-Tensile Wire
 - All wire must be high-tensile 12.5-gauge steel class 3 galvanized or greater.
 - High-tensile woven wire shall be fixed-knot.
 - The horizontal wires of a high-tensile woven wire fence shall have graduated spacing from 3 to 8 inches, with the smaller spacing placed nearest the ground. Vertical wires shall have a maximum spacing of 6 inches apart.
 - High-tensile woven wire shall be a minimum height of 75 inches. This minimum height must be achieved using a single roll of wire. Additional strands of high-tensile wire then must be added on top, at a maximum of 9-inch intervals, until reaching the full height, 96 inches.
 - All high-tensile woven wire and high-tensile wire shall be attached to the outside of the posts where practical. In all cases, it shall be attached to the outside of corners.
- Posts
 - Post shall be preservative pressure treated such as CCA 0.40 lbs., e.g., Southern Yellow Pine or equivalent. Do not use Red Pine. Posts shall be well-seasoned or kiln-dried to minimize warping. Well-seasoned means cut, debarked, and dried for a minimum of 1 year.
 - Alternatively, untreated posts also may be used, provided they are well seasoned, durable posts of species such as red cedar, black locust or Osage orange with the bark removed. Well-seasoned means cut, debarked, and dried for a minimum of 1 year.
 - Posts shall be a minimum of 12 feet long.
 - Line posts shall be a minimum 4"x4" or 4" round, installed at least 36 inches in the ground.
 - Brace posts shall be a minimum 5"x5" or 5" round, installed at least 36 inches in the ground.
 - Corner and end posts shall be a minimum of 6"x6" or 6" round, installed at least 42 inches in the ground.
 - Post spacing shall be 25 feet or less. See page 12 regarding post spacing along curves.
 - Posts may be pounded or augured. When augured, posts must be anchored on corners, ends, and low points. See page 12 regarding setting posts in the ground.
- Fasteners
 - 1 3/4" barbed, class 3 galvanized steel staples shall be used.

Brace Assemblies

Locating Braces Assemblies at Corners, Ends, Gate Posts, and Mid-Line (Line)

| Length of Straight Run of Fence between Corner, End, Gate Posts, and/or Line Brace | Type of Brace Assembly needed at Corner, End, and/or Gate posts | Line Brace Assemblies: Whether they are required, and if so, at what Intervals in a straight run of fence |
|--|---|---|
| <i>Less than 700 feet</i> | Single-Span Brace | Line braces are not required at fixed intervals for this run of fence. Use line braces as needed at top and bottom of hills. |
| <i>700 to 1,300 feet</i> | Double-Span Brace | Line braces are not required at fixed intervals for this run of fence. Use line braces as needed at top and bottom of hills. |
| <i>More than 1,300 feet</i> | Depends on the spacing of line braces used in the run of fence: <ul style="list-style-type: none"> • Use a single-span brace if the distance to the line brace is less than 700 feet. • Use a double-span brace if the distance to the line brace is 700 to 1,300 feet. | Line braces are required: <ul style="list-style-type: none"> • Use at least one line brace (double-span) every 1,300 feet in the run of fence, and as needed on the tops and bottoms of hills. |

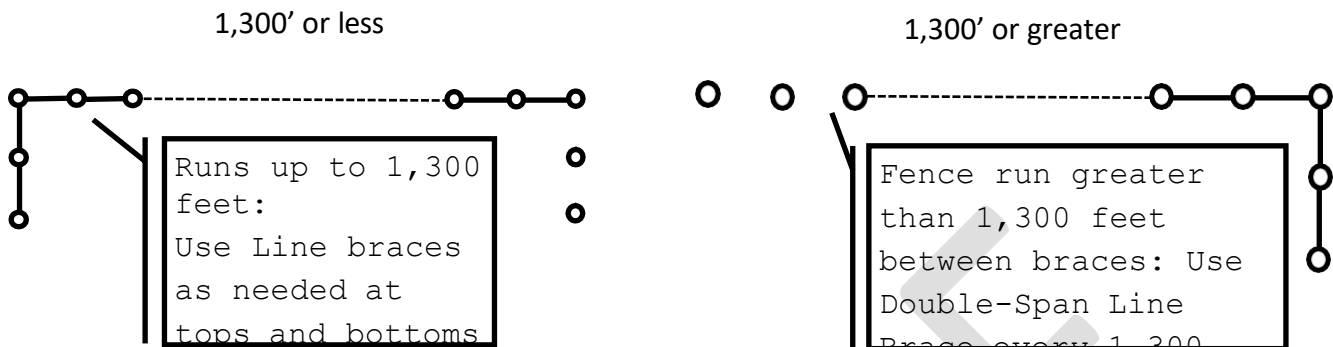
Note: A **run** is the distance between a corner, end, gate, or brace post and the next corner, end, gate, or brace post.

Brace Assembly Length

Single-span brace assemblies shall be a minimum of 10 feet long. Double-span brace assemblies shall be a minimum of 16 feet long.

Brace Assembly Placement in Line

Line brace assemblies shall be installed at appropriate intervals in a run of fence and at all sharp breaks in grade, typically when the change in slope is greater than 15%.



Brace Assembly Placement at Corners, Ends, and Gates

Single-span or double-span brace assemblies are required at all corners, ends, and gates, and where the fence alignment changes direction by more than 40 degrees.

If a wide stream or gully is to be crossed, the fence section shall be terminated on one bank with a brace assembly, and a new section with a brace assembly shall be started on the other bank.

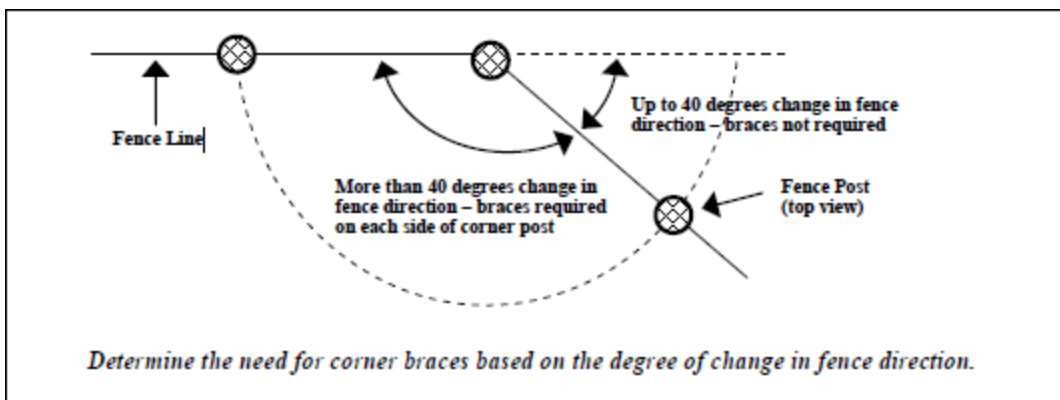
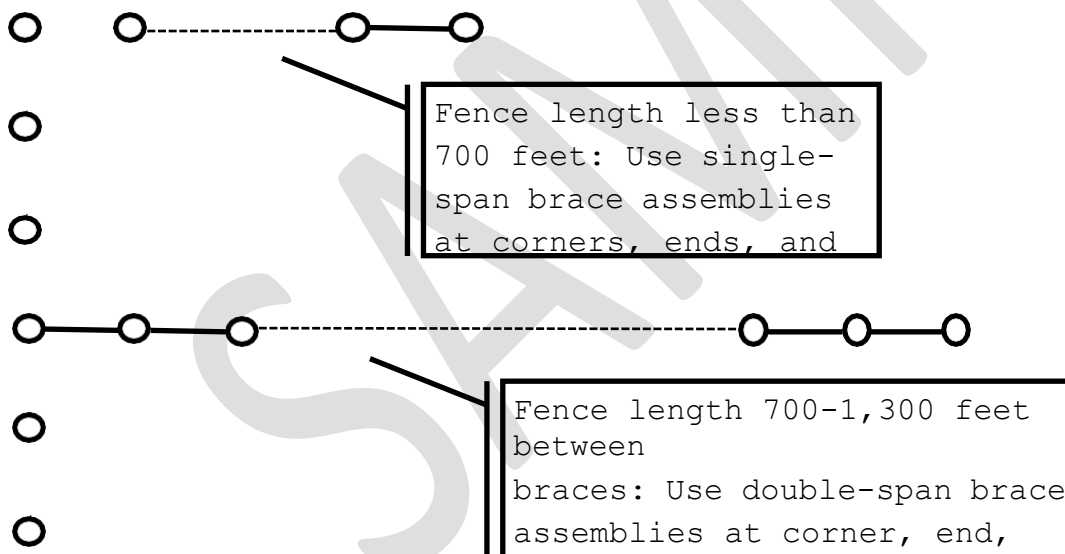


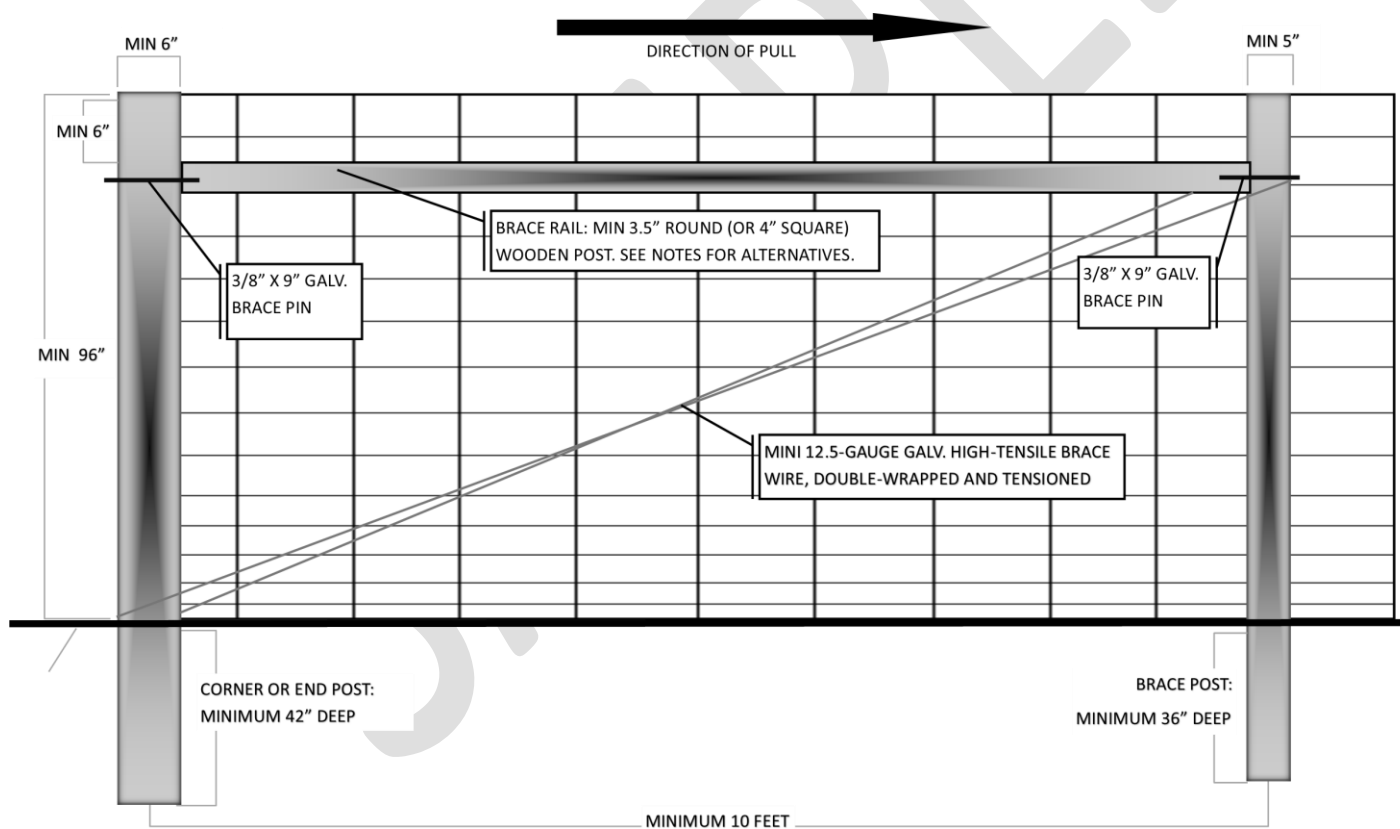
Diagram courtesy of NRCS

Brace Assembly Components

- Horizontal Brace Rails shall be wooden posts a minimum of 4"x 4" square or 3 1/2-inch diameter round. One alternative is to use galvanized steel pipe with a minimum 2-inch diameter and with the minimum wall thickness as specified for a water supply pipe.
- Brace post pins shall be steel rods a minimum of 3/8-inch x 9-inch.
- Brace wires shall consist of 12½ gauge or stronger, galvanized, high-tensile wire, double wrapped with a 1½-inch x 2-inch x 2-foot twist stick. A double wire with a tightener also may be used. Brace wires shall be tightened to secure the brace and post assemblies. Other commercially available tension systems may be used with prior SADC approval.

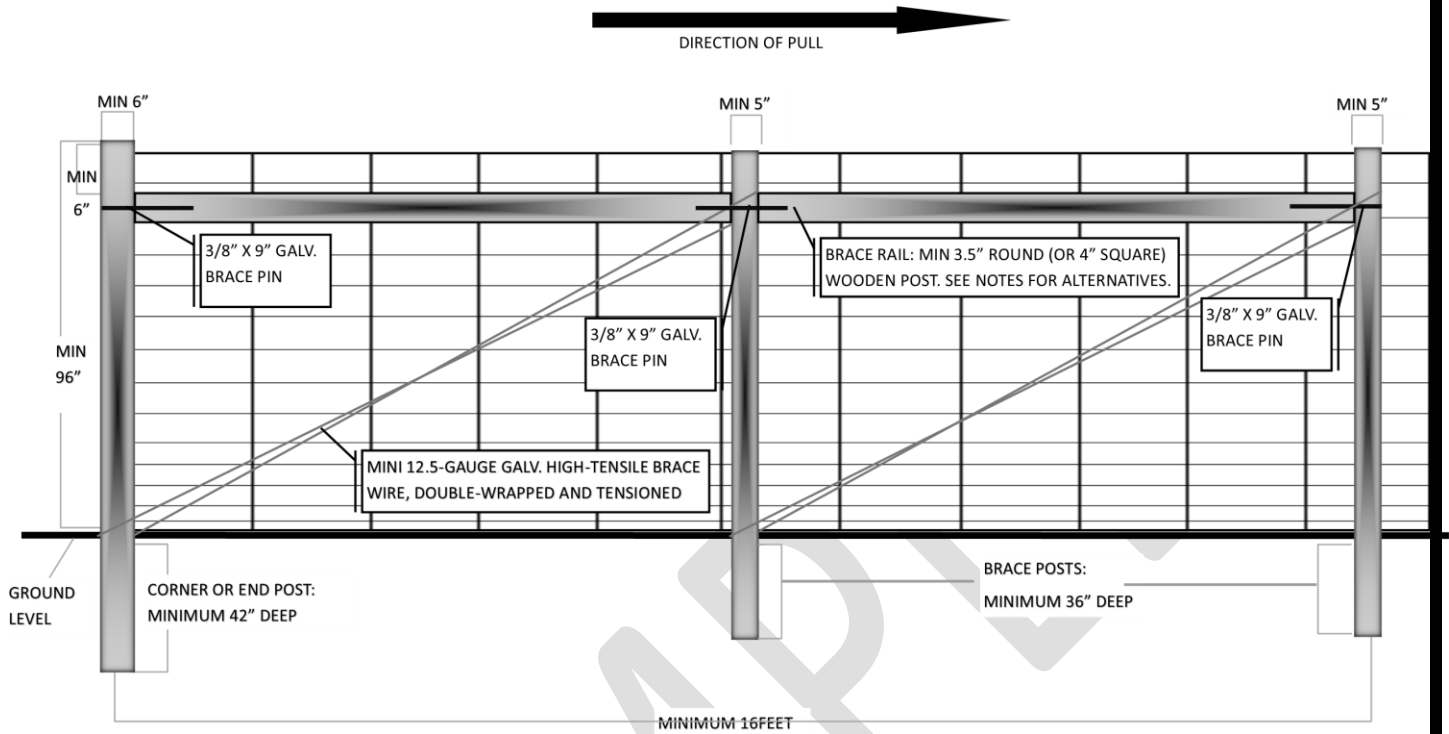
Typical Single-Span Brace Assembly at a Corner or End

- Used when the run of fence is less than 700 feet



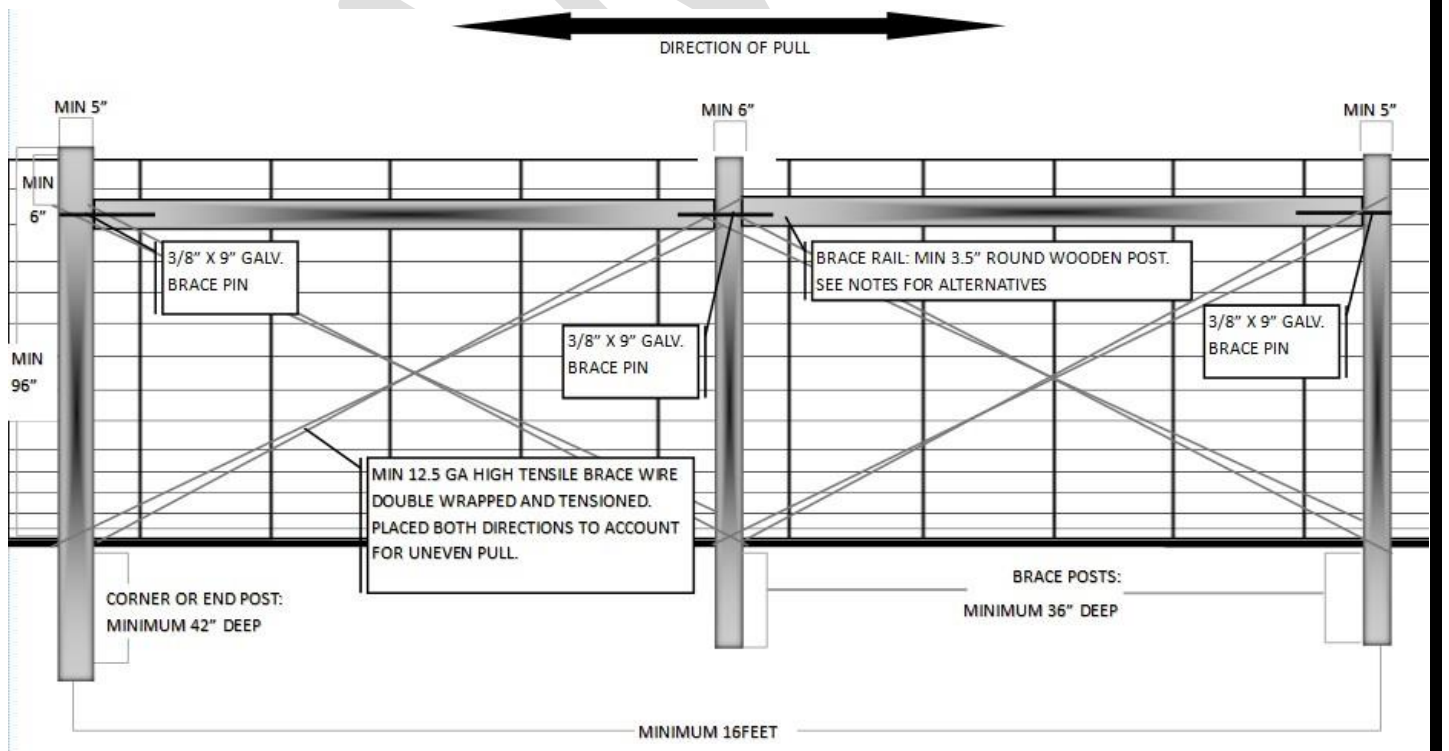
Typical Double Span Brace Assembly at a Corner or End

- Used when the run of fence is greater than 700 feet



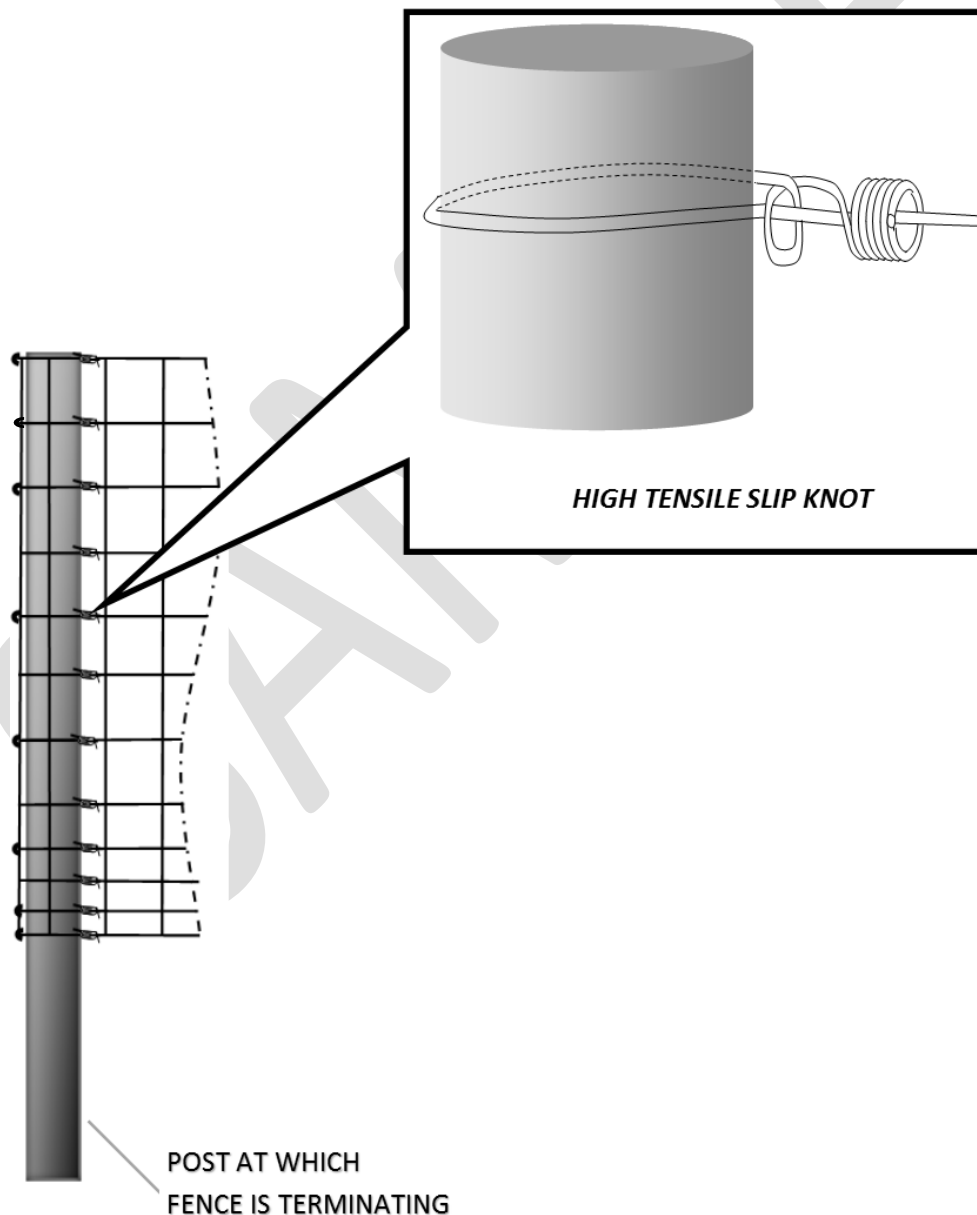
Typical Line Brace Assembly

- Used when the run of fence is greater than 1,300 feet, or otherwise as needed



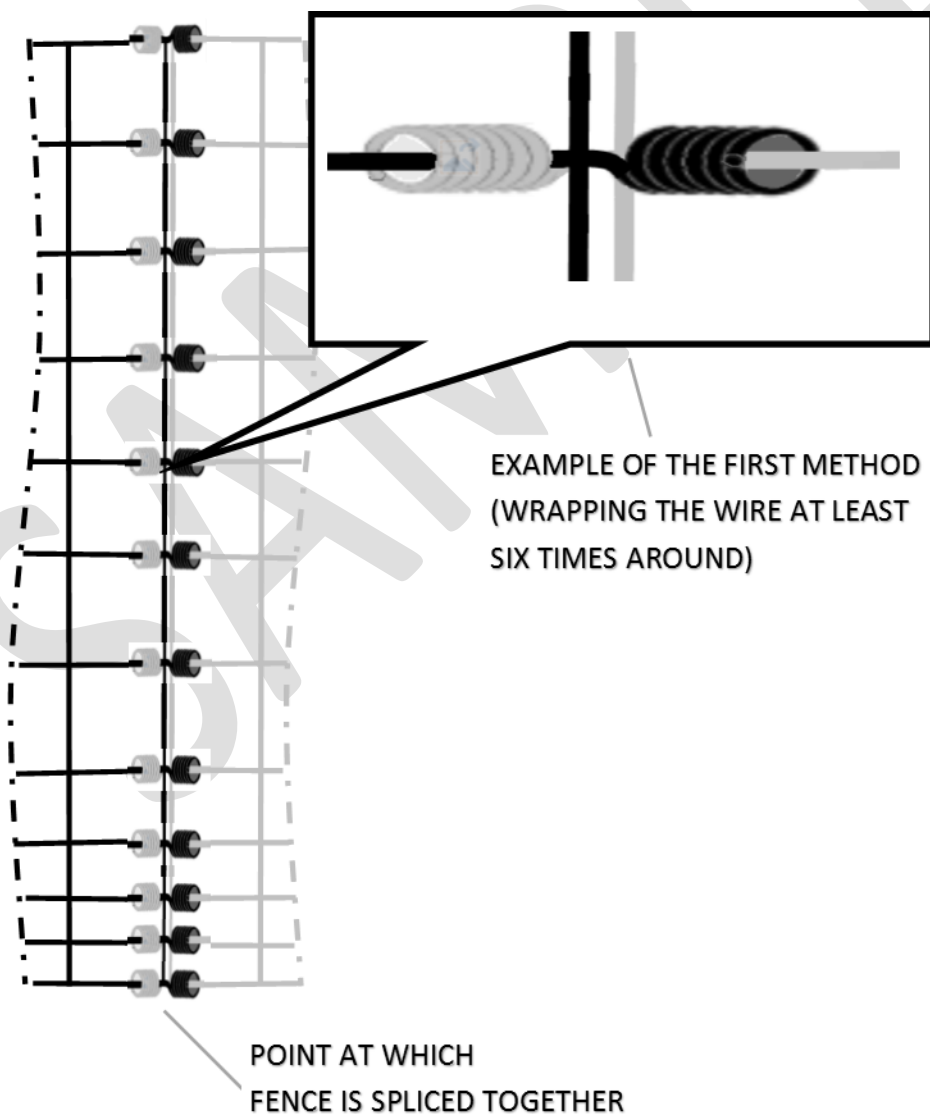
Terminating a Fence

- When fence is terminated at a post, it shall be terminated using one of the following methods:
 - High-tensile slip knot;
 - Crimp sleeves rated for the appropriate gauge wire according to manufacturers instructions; or
 - Any other commercially available termination device, rated for the appropriate gauge wire according to manufacturers instructions.



Splicing a Fence

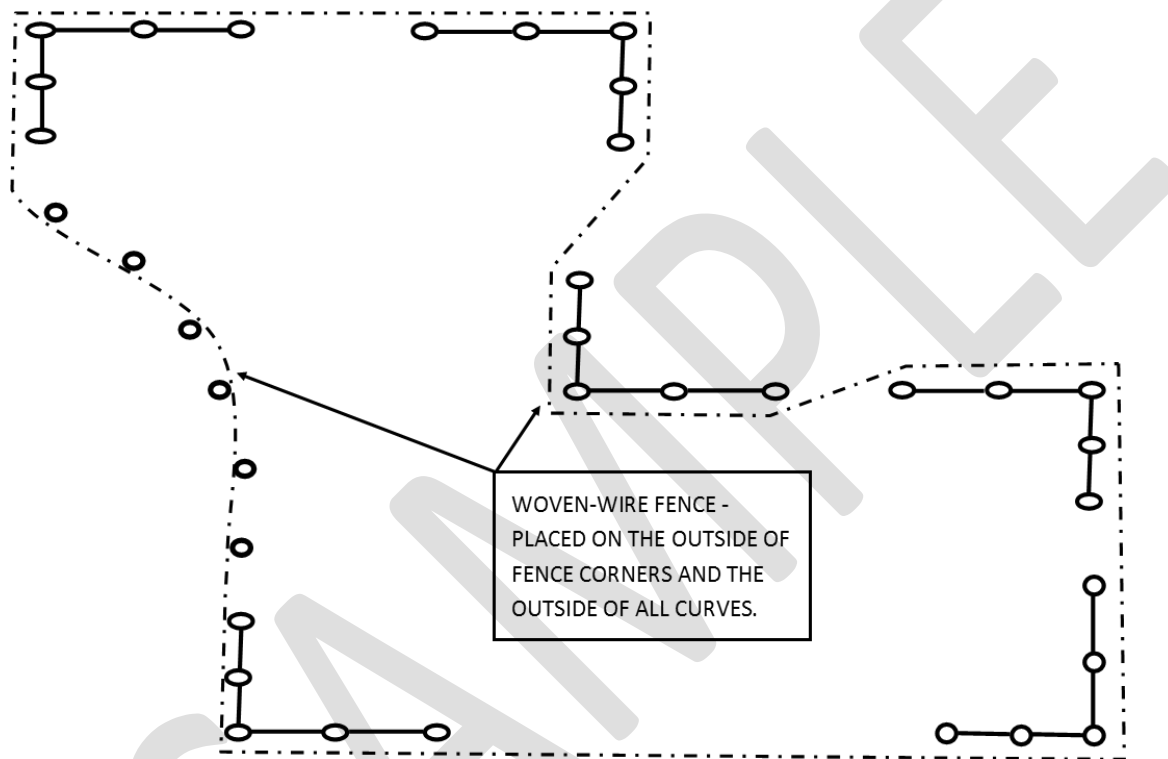
- When it is necessary to splice two sections of fence together, one of the following methods shall be used:
 - Place each fence's vertical stays over each other and wrap the loose horizontal ends of the wires around the corresponding horizontal wire not less than 6 times around;
 - Apply crimp sleeves rated for the appropriate gauge wire according to manufacturers instructions; or
 - Employ any other commercially-available splicing device rated for the appropriate gauge wire according to manufacturers instructions.



Woven Wire Fence Placement

Woven wire fencing shall be placed on the outside of all corners, brace assemblies, and curves. When tensioned, the wire fencing should pull against the post, not the staples. **All fencing shall be sufficiently tensioned using commercially available methods. Tightening by hand is not acceptable.**

In all other areas, fence should be stapled on the side of the posts that will experience the most deer pressure. This side is typically the outer (non-cropped) side of the post. Exceptions may be made when site conditions make placement on the outside of the post impractical.



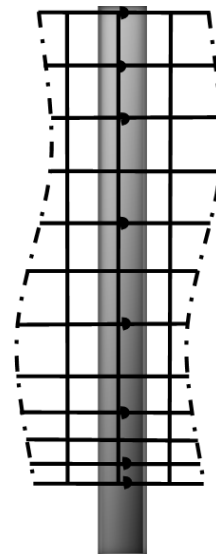
Fastening Woven Wire Fence to Posts

Staples shall be used to fasten woven wire fence to posts. The bottom two and top two horizontal wires shall be stapled to each post, and every other horizontal wire in between shall be stapled to each post.

If a fence includes single-strand high-tensile wires above the woven wire portion of the fence, the single strand high-tensile wires shall be stapled to each post.

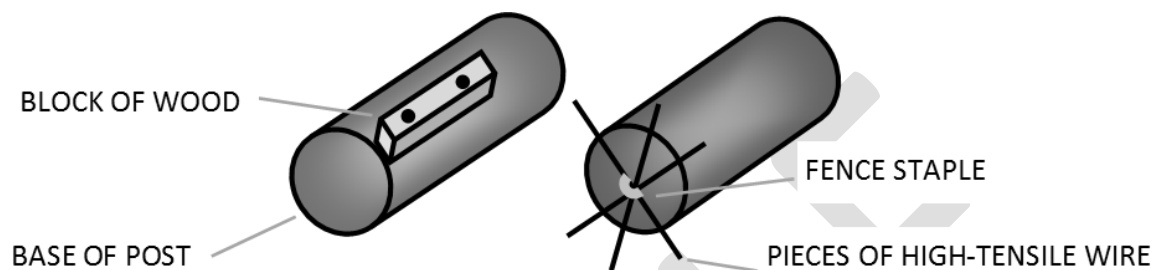
Wire should be held in place by the staple, but the staple should allow the wire to move back and forth freely.

When driving staples, rotate the flat face of the staples 30-45 degrees from the flat face of the post to prevent splitting.



Setting Posts in the Ground

Posts may be pounded or augured. When augured, posts must be anchored at corners, ends, and low points. The following are two ways to anchor and set a post: 1) Attach a wood block near the bottom of the post (block system); or 2) Attach pieces of high-tensile wire and a fence staple at the bottom (spider system).

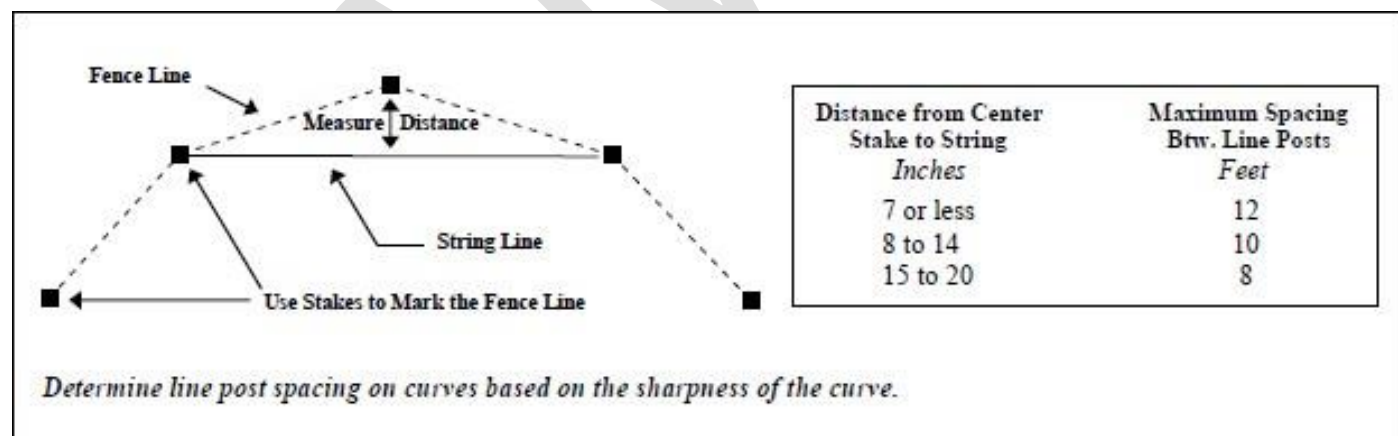


Line Post Spacing on Curves

The spacing of line posts on curves is determined by the sharpness of the curve. Refer to the diagram below to determine the correct spacing.

Fence alignments that change direction by less than 40 degrees are considered curves.

Fence alignments that change direction by more than 40 degrees are considered corners.



*Diagram courtesy
of NRCS*

Deer Fence Installation Training Video

To be eligible for NJDA Matching Grants for Deer Fencing on Unpreserved Farms, applicants must watch the “SADC Deer Fence Installation Training Video”*. The video is available here: <https://youtu.be/Ok00ObsIHSg>. You are only required to watch the fence installation portion of the video, which begins at 1:02:26 and concludes at 1:27:36.

Source Notes

The specifications in this Appendix are derived from the following sources:

- High-tensile Woven Wire Fences for Reducing Wildlife Damage – FS889 – Rutgers University, March 2010.
- Deer Fence Bid Specifications – NJ Department of Agriculture, Division of Agriculture and Natural Resources, November 2004.
- Fence Technical Reference (382) – NJ-NRCS, November 2014.
- NJ Deer Exclusion Fence Installation and Removal Guidance for (382) Fence – NJ-NRCS October 2015.
- SADC Farmland Stewardship Deer Fencing Program Training on Proper Installation and Maintenance, July 2017. <https://youtu.be/Ok00ObsIHSg>.

Where discrepancies exist between these sources and this Appendix, the standards set forth in this Appendix shall apply.

* The training video was produced by the SADC, but the NJDA requires the same specifications for deer fences constructed pursuant to this Program.

APPENDIX B

(Electric Bear Fence Specifications)

New Jersey Department of Agriculture (“NJDA”)

Wildlife Fence Cost-Share Program for Unpreserved
Farms (“WFCS Grants”)

Appendix B

Electric Bear Fencing

Design and Installation Specifications



NEW JERSEY
DEPARTMENT OF AGRICULTURE

NJDA Wildlife Fencing Program

Appendix B:

Electric Bear Fencing

Design and Installation Specifications

Electric bear fencing shall be installed in accordance with the attached NJ DEP Electric Fencing factsheet, other electric fencing construction guidance provided by NJ DEP as appropriate, and the following provisions:

- The installed fencing must be permanent, i.e., it must have a lifespan of at least 10 years.
- The installed fencing may not be temporary, i.e., any recommendations in the factsheet regarding temporary fencing shall not be considered part of this Appendix B.
- Any other recommendations in the factsheet shall be considered requirements.
- The installed fencing must follow generally accepted standards for materials and construction.

The specifications included in this Appendix B must be followed at a minimum for the effective implementation of exclusionary bear fencing. Farmers wishing to deviate from the specifications must seek and get approval from the NJDA in writing, in advance, prior to installation.



ELECTRIC FENCING



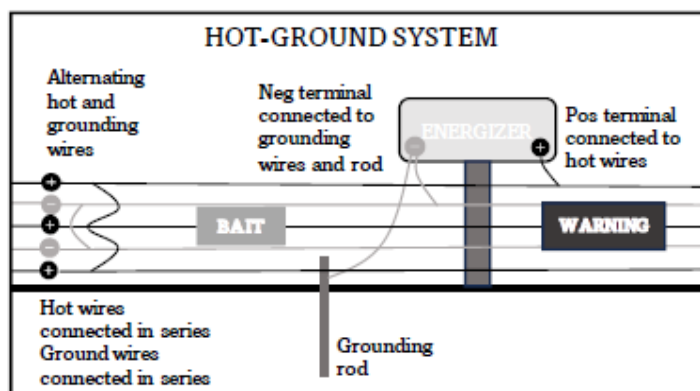
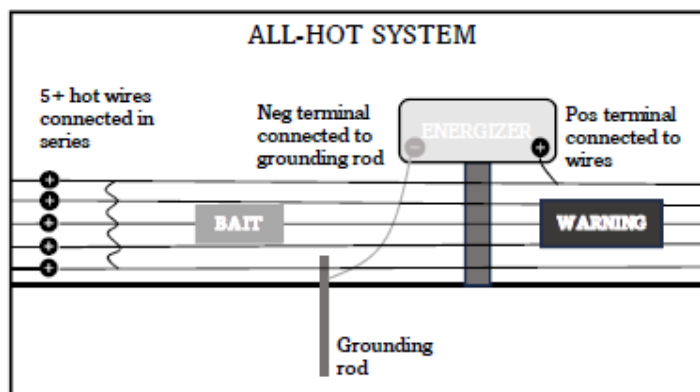
Properly installed electric fencing is the most effective and efficient method of preventing black bear damage to livestock, beehives, crops, silage bags, orchards, gardens and compost piles.

Supplies

| Item | Description |
|--------------------|--|
| Energizer | AC, DC, or solar. Must have a minimum joule rating of 0.7 J and deliver at least 6,000 volts. |
| Posts | One for each corner and every 8 ft of fencing. For permanent fences, pressure treated 4x4s or metal T-posts are recommended. Both wooden and metal posts require post insulators to prevent the wires from touching the posts and thereby grounding the system. Plastic or fiberglass posts may be used for temporary fences. |
| Wire | 14 or 12 Ga steel wire. 14 Ga aluminum wire or 9+ strand polywire may be used for temporary fences. |
| Ground rod | At least 6.5 ft of 3/4" or 5/8" galvanized steel. One per joule of energizer's output. |
| Voltmeter | Allows safe measurement of a fence's voltage. |
| Vegetation control | Herbicide, mulch, wood chips, or landscaping fabric. |
| Warning signs | To inform people that the fence is electrified. |

Construction

- Establish where the fence will be located. It should be 4-5 ft from the structure it will protect. This should be away from any trees, which a bear could climb and then drop down into the area.
- Clear all vegetation in an 18-in strip along the fence line.
- Install fence posts at corners and at every 8 ft of fencing.
- Install post insulators if using. There should be an insulator for each strand of wire on each post.
- Put up wires, starting at the gate post. Stretch wires to eliminate sagging.
 - For an All-Hot system, use 5+ strands of wire with the lowest wire 8-12" above the ground and the top wire 36-42" high. Wires should be spaced to prevent a bear from going under, passing through or climbing over without fully touching at least 1 of the wires.
 - For a Hot/Ground system, use 5+ strands of alternating hot and ground wires with the lowest wire 8-12" above the ground and the top wire 36-42" high. The bottom and top wires should always be hot wires. Wires should be spaced to prevent a bear from going under, passing through, or climbing over without fully touching 2 of the wires.
- For Hot/Ground system: Attach extra wire to the positive terminal and hot wires. Attach a second wire to the negative terminal, ground rod(s) and ground wires.
- Drive the ground rod(s) at least 6 ft into moist soil near the post where the energizer will be located.
 - In very dry or rocky soils, drive the rod deeper than 6 feet or drive it at a steep angle at a shallow depth to maximize surface area. Frequently water dry soil around the ground rod.
- Attach energizer to post.
- Energize all wires in the fence system.
- Verify with a voltage meter that sufficient current is running through each hot strand.



All-hot vs. hot-ground electric fences: Which one is right for you?

While both systems can provide great protection from black bear damage, there are some considerations to make before you begin construction. All-hot systems require consistently moist ground, as the soil moisture is what completes the circuit between the bear and the energizer's ground system. As long as there is soil moisture, the bear will receive a shock when touching any one of the hot wires. Hot-ground systems are better for dry areas or during a drought. No soil moisture is required in this system, but the bear must touch both a hot wire and a ground wire to complete the circuit and receive a shock.

Baiting

- Bait the fence on all sides at 3 ft high. This will direct a mild shock to the muzzle of a bear, which is the most sensitive area. If the shock is delivered to a bear's hide, it may not be felt.
- Options for bait include bacon or peanut butter in tin foil wrapped around the wire.

Maintenance

The following tips are offered to ensure proper maintenance and effectiveness of your electric fence.

Every time you visit the site, and at least one a week, check the following:

- Make sure the wires are tight.
- Check voltage on all wires with a voltage meter.
- Keep wires baited at all times.
- Ensure solar-powered chargers are positioned properly and are not located in the shade.
- Change the batteries as needed. Marine battery terminals and lead composition eyelets resist corrosion.
- Remove vegetation beneath the fence that may be touching the wires and any debris, like branches, that may fall on the fence.

To report black bear nuisance or aggressive behavior, contact your local police department or NJDEP Fish & Wildlife at 1-877-WARNDEP (1-877-927-6337).