

PRACTICE CERTIFICATION CHECKLIST
USDA, Natural Resources Conservation Service
Wisconsin

Fence (382) High Tensile Wire Fence

Program Participant Information

Name (print): _____

Contract Number: _____ Contract Item #(s): _____

Tract Number: _____ County: _____ Location: T. _____ R. _____ S. _____

Livestock Type _____

Contractor Information (If installed by someone other than participant)

Name (print): _____

- Minimum number of strands (select all that apply)
 - 4 strand high tensile "non-electric" fence
 - 1 strand high tensile electric fence (interior fence only)
 - Fence type as constructed meets the Fence Selection Criteria, Table 1 of the 382 Fence conservation practice standard based on the livestock types present on the site.

- Wire Quality: ASTM A 854 or equivalent documentation by manufacturer
 - Class 3 galvanization of wire.
 - 12.5 gauge or heavier.
 - 140,000 psi tensile strength or greater.
 - 900 lbs. Minimum breaking strength.

- Wire Fasteners (select type and circle specific type of fastener used)
 - Minimum 9 gauge Class 3 galvanized steel staples with barbs, 1 inch hardwood posts/1.75 inch softwood post.
 - Manufacturer supplied clips or minimum 14 Gauge wire.
 - OTHER (must be pre-approved by fence designer).

- Wood Post (Select all that apply)
 - Red/white cedar, tamarack, osage orange, black locust (circle the type of wood used) with ALL bark removed.
 - Treated Wood (provide manufacturer certification of treatment).
 - Minimum ½ of post diameter is heartwood.
 - Line post minimum diameter 4 inches.
 - Wooden posts shall be a minimum of 7 feet long.
 - Corner, end pull and gate assembly posts minimum 5 inch diameter.

- Steel Post
 - Documentation of conformance with ASTM A702, Steel Fence Posts and Assemblies, Hot Wrought or equivalent from the supplier OR verification of all of the following:

- Standard T cross-section with minimum dimensions of 1³/₈" x 1³/₈" x 1¹/₈" with an anchor plate at the base and studded for wire retention.
- Minimum weight of 1.25 lbs./foot of length.
- Steel posts shall be a minimum of 5 feet long.
- Corrosion Protection: paint, enameled/baked, galvanized (circle protection type).

Plastic/Composite Posts

- Minimum 1 inch diameter.
- UV protected for the life of the fence.

Fiberglass Posts

- Fiberglass reinforced round posts minimum 7/8 inch diameter.
- Fiberglass reinforced T-post minimum 1 inch cross section and durable for the life of the fence.

OTHER materials used with per-approval by fence designer (attach documentation)

COMMENTS:

Post Spacing.

- 70 feet maximum lane electric fence.
- 50 foot maximum interior electric fence.
- 50 foot maximum perimeter electric fence when land slope is less than 5%.
- 30 foot maximum electric perimeter fence (no stays).
- 100 foot maximum electric perimeter with stays placed at maximum of 33 feet.
- 12 foot minimum "non-electric" high tensile used to restrain animals.

Brace Installation

- Corner posts shall be installed to a minimum depth of 4 feet below ground.
- Floating or H Brace (circle type used) placed on all corners and ends (except for one wire electric interior fences).
- Pull assembly with H Brace at a maximum of 660 feet (Number Installed_____).
- Size of brace member and installation per specification.
- Single H Brace (minimum 3 foot post depth) used.
- Double H Brace used when post depth restricted to less than 3 feet.
- Corner posts wherever horizontal/vertical alignment varies by more than 30 degrees (Number of corner posts installed_____).

Line Post Installation (Select ALL that apply)

- Wood, fiberglass, steel and plastic/composite posts for "non-electrified" fences set a minimum of 24 inches below ground (one of more strands).
- Wood posts for permanent electric fence set a minimum of 24 inches below ground.
- Fiberglass, steel and plastic/composite posts for permanent electric fence set a minimum of 12 inches below ground SINGLE wire fence.
- Fiberglass, steel and plastic/composite posts for permanent electric fence set a minimum of 18 inches below ground MULTIPLE wire fences.
- Backfill around non-driven posts well compacted.
- Where post placement depth is restricted document the number and location additional anchors or deadmen installed against the direction of pull on the fence.

Wire Fastening (Select ALL that apply)

- Wooden Post: Top wire minimum 2 inches below post top.

- Staples driven into wood posts diagonal to wood grain and in the direction of fence pull.
- Steel, fiberglass, composite/plastic post: Top wire minimum 1 inch below post top.
- Wires attached to steel, fiberglass or plastic/composite posts using manufactured clips or 2 turns of 14 gauge galvanized wire.
- All wires attached to all posts.
- Wires attached to wood posts by staples, wires and clips will allow the free movement of the wire.

High Tensile Wire Installation

- Tension on high tensile wire fence will be a minimum of 200 -250 psi.
- In-line stretcher placed on each wire.
- Minimum of 1 tension spring per pull of wire to gauge tension.
- Wire stapled to wood posts to allow free movement.

Wire splicing:

- Splices will be according fence wire manufacturer recommended splice of knot or by suitable splice sleeves applied with a tool designed for this purpose.

Electric Fence Energizers

- Lightning protection applied to all electric fences using the fence energizer manufacturer's recommendations.
- Install the fence energizer according to the manufactures recommendations.
- High power/low impedance system, minimum 5000volt peak output, 300 mAmps intensity, 0.003 second pulse length at a rate of 35-65 pulses per minute.
- Minimum 1 joule/mile of fence energizer power rating.
- Minimum voltage: sheep/goats 4000v, cattle 3000v, hogs/horses 2000v.
- Battery operated units: 3 week capacity battery pack, solar recharger required for units of greater than 4 joules capacity.
- Energized adequately grounded based on manufacturer or 3 feet of ground rod per joule of power rating. Additional ground requirements if provided by the fence design shall be met and inspected.
- Lightning protection: follow energized manufacturer recommendations. Combined grounding systems for fence and energizer must meet capacity requirements of the energizer and the lightning arrestor.
- A surge protector shall be installed between the energizer and the power source.
- Fence wire insulators on posts made of "conductive" material shall have a current leakage rating of 10,000v and made of porcelain or UV resistant polyethylene.

- Lightning protection – non-electrified high tensile wire fence: non-electrified fences with wood posts shall be grounded at least every 1320 feet of fence. Minimum ½ inch diameter, 4 foot long galvanized ground rods shall be utilized and attached to ALL line wires of the fence utilizing a 12.5 gauge or heavier lead out wire.

- Map attached to checklist documenting the "As Built" location of the fence by type (include a separate checklist for each fence type) including location of all corner/ end posts, gate assemblies and pull post assemblies.

- Fence is constructed of "new" materials, is properly aligned to meet the intent of the practice and does not have any gaps that would jeopardize the functionality of the practice.

I certify that the Fence (382) has been implemented in accordance with the 382 practice standard and WI NRCS Specification 10, was installed according to the practice design and meets the documentation requirements of this checklist.

Client Certification of Practice Completion

Date

Practice Approval Rational:

Approved By Certified Conservation Planner or TSP

Date