

# High-Tensile Coated Wire Fence Installation Guide

Please follow directions for a long lasting installation that will not sag after tension is applied to the rails.

Proper bracing of corner and end posts is the key to a quality installation. Please note that all concrete footings need to extend past the frost line. All corner and end posts footers should have tapered bottoms as shown in the diagrams and diagonal brace footers should be squared off as shown in the preceding drawings.

## POST REQUIREMENTS

Listed Below are the post specifications recommended for use with Ramm Fence products. Use round corner, end and gate posts even when using square line posts.

### ALL WOOD POSTS MUST BE TREATED!

Post Type	Post Diameter	Length	Hole Depth (12" diameter)
Line	4"-6"	7'-8'-9'	32"-36"
Corner	6" min	8'-9'	36"-48"
Gate and/or Term	6" min	8'-9'	36"-48"
Diagonal Braces with footing	4" min	7'	18" or below frost line

## CONCRETE FOOTER REQUIREMENTS

Mix each 80lb bag of concrete according to the concrete manufacturer's methods found on the bag.

\*All concrete footer depths must be below the frost line for your area

\*If frost line is unknown talk with your local extension office.

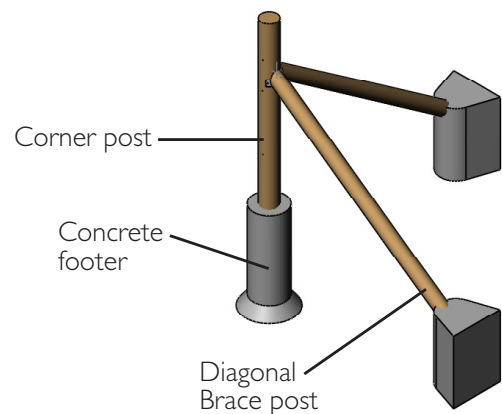
Concrete volumes for post footers can vary depending on hole size and soil conditions.

### Northern states concrete requirements (approximate)

- (4) 80lb. bags for 6"X9' corner/end posts
- (4) 80lb. bags for each diagonal brace post (4"X'8') or (5"X8')

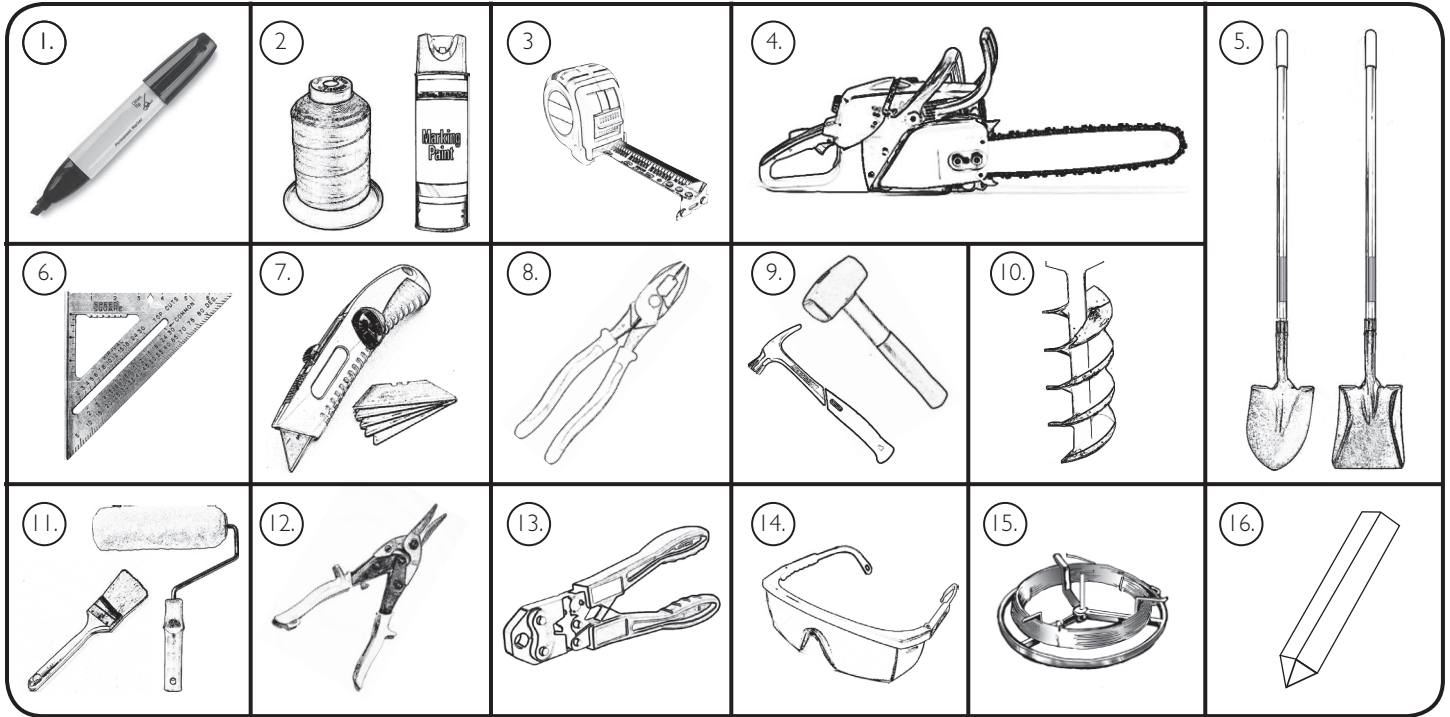
### Southern States and areas with mild weather (approximate) (no freezing temperatures)

- (3) 80lb. bags for 6"X9' corner/end posts
- (2) 80lb. bags for each diagonal post (4"X'8') or (5"X8')



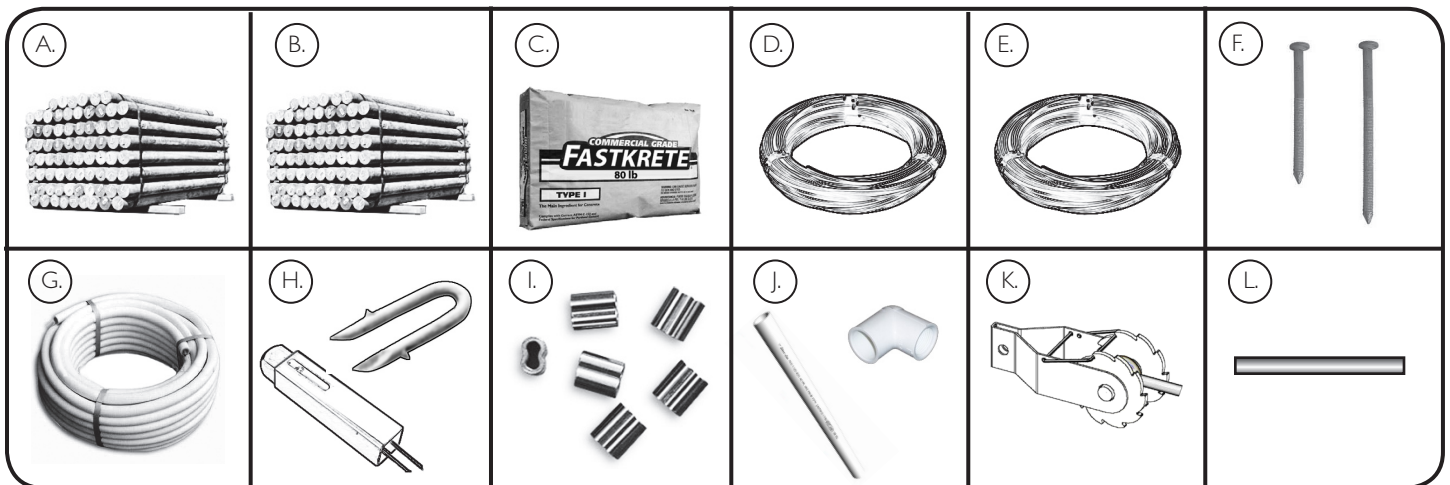
# Tools Equipment and Hardware

1. Marking Pen
2. String line and Marking Paint
3. Tape Measure-25ft minimum
4. Chain saw
5. Shovels (spade and regular)
6. Speed Square
7. Utility Knife and blades
8. Lineman pliers (heavy duty)
9. Hammers (claw and 2lb Sledge)
10. 12" auger (36"-48" as required)
11. Paint brush or Roller for painting posts
12. Tin Snips
13. Crimp tool
14. Spinning jenny
15. Safety glasses
16. Stakes



# Fencing Components and Supplies

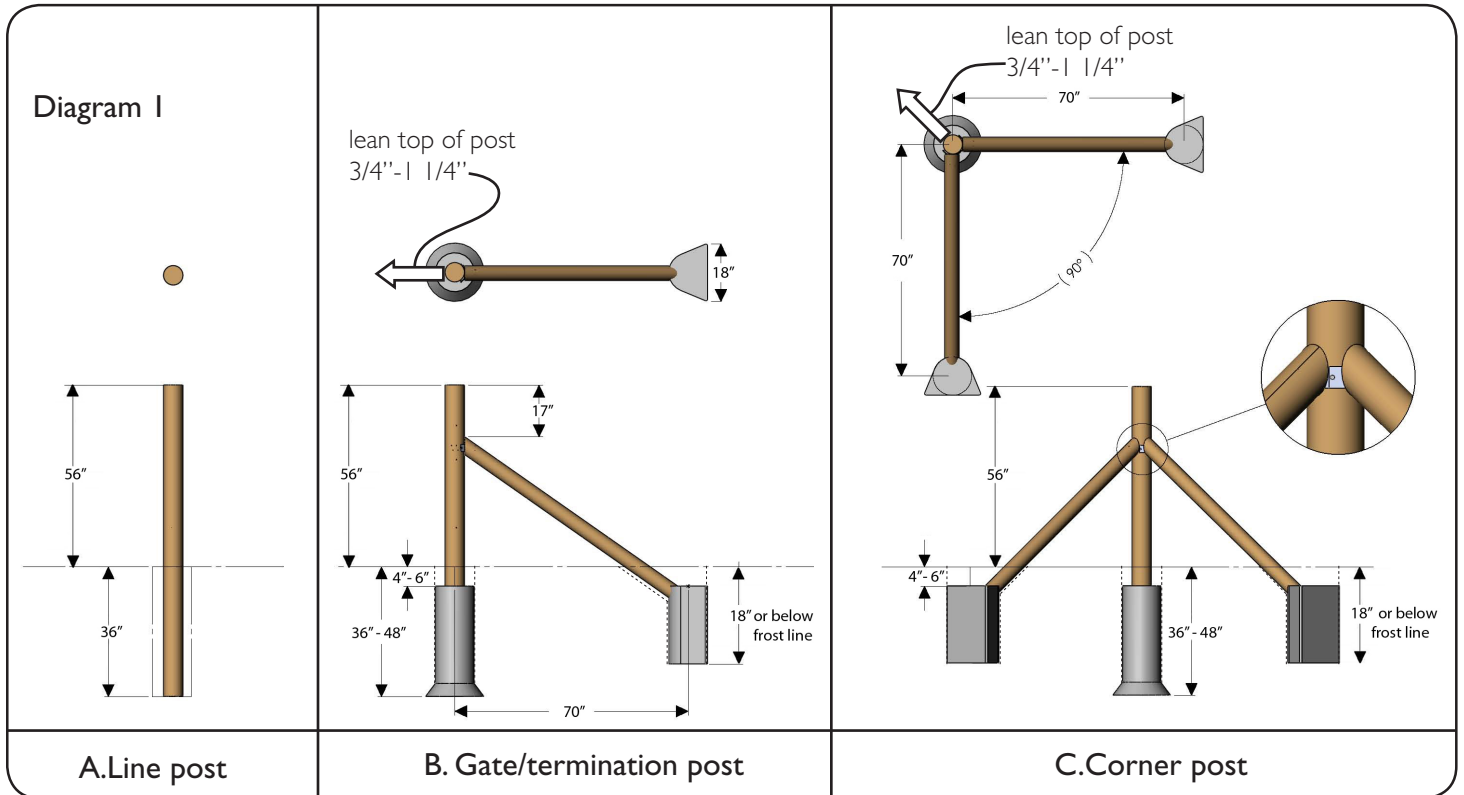
- A. Corner/end posts
- B. Diagonal brace posts
- C. Concrete
- D. Rolls of Coated Wire
- E. Rolls of Electric Coated wire
- F. 3.5" and 5" Nails
- G. Rolls of tube insulation
- H. Barbed Fence Staples and driver
- I. Crimp Sleeves Tensioners
- J. PVC pipe and elbows (for Buried electric line)
- K. Tensioners
- L. Line Post tube insulators



**Step 1** Call local utilities Before digging (dial 811 they will mark your utility lines)

**Step 2** Gather necessary tools- see page 2 for details

**Step 3** Typical Post Specifications



### A. Line post:

- typical line post with tamped soil (ground level indicated by dashed line)
- The depth of the hole should be 36"-48" deep
- The post will be cut off after the flow of the fence has been determined
- \*\* Posts will be approximately 56" above ground

### B. Gate/termination post:

- typical gate/termination post with concrete illustrated (ground level indicated by dashed line)
- Note: end post should be set to lean 3/4" - 1 1/4" away from tension to prevent sagging
- \*\* All footers must be below frost line

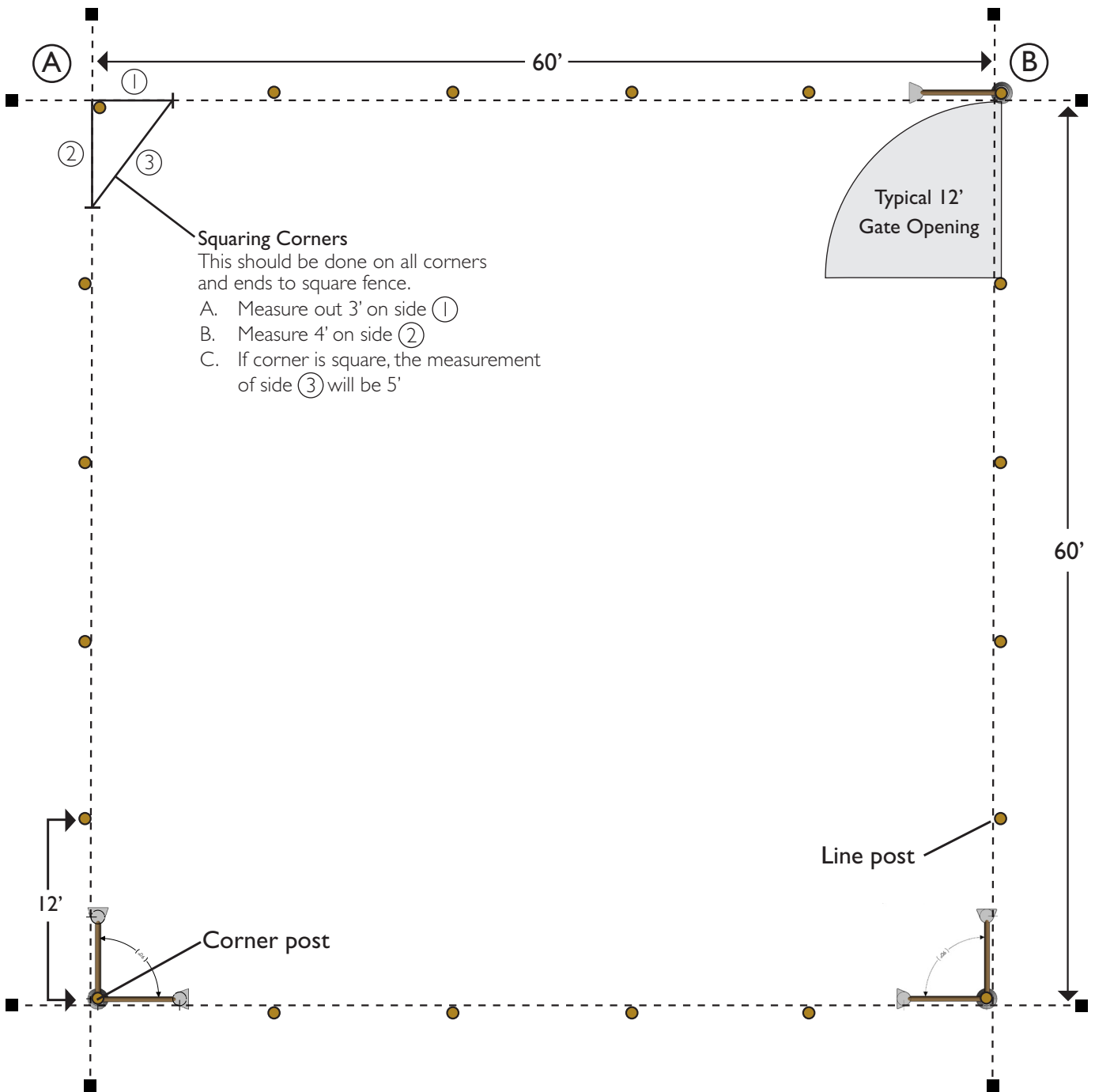
### C. Corner post:

- typical corner with concrete illustrated (ground level indicated by dashed line)
- Note: corner post should be set to lean 3/4" - 1 1/4" away from tension to prevent sagging
- \*\* All footers must be below frost line

## Step 4 Layout fence line perimeter (example below 60' X 60' perimeter)

- A. Locate all corner posts
- B. Run string lines (dashed line) approximately 6' past corners and stake (solid black squares) into ground as shown in sketch below
- C. To assure square corners use the 3'4'5' triangle method corner (A)
- D. Use marking paint to mark each post location with an 'X' this should include all gate/end, corner, diagonal brace and line post locations.
- E. When placing a gate in the a corner set the corner post to the outside of string line as shown in corner (B)
- F. When/if running rails to the inside of an area, make sure that corner and end posts are inset so the rail can be run around the outside of these posts. This will allow the rail to run next to and past each line post (see diagram below)

Diagram 2



**Step 5** Dig all line, corner, end and brace post holes using a minimum of 12" diameter auger.

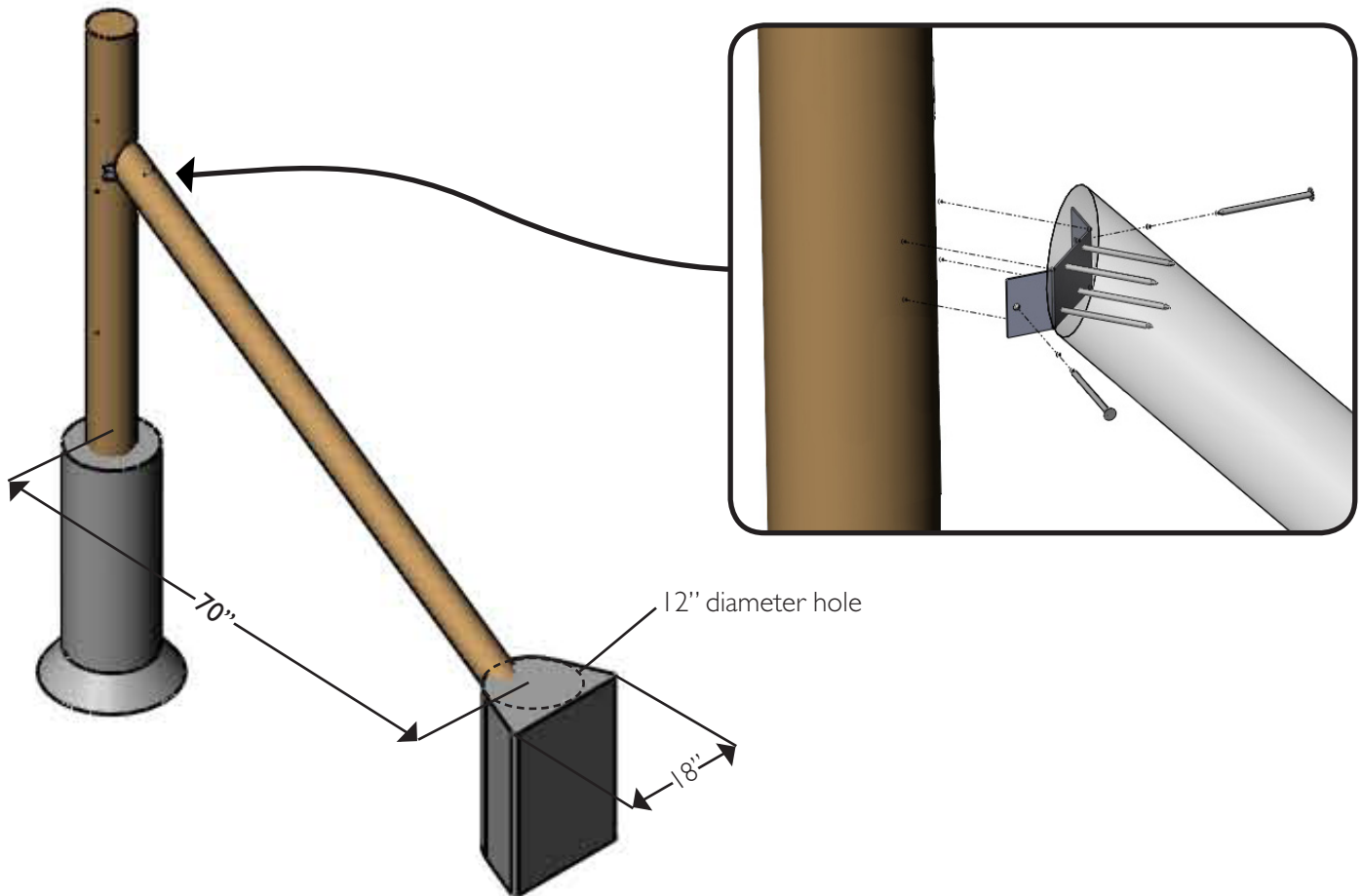
- A. **Line Post holes-** should be approximately 36" deep depending on frost line
- B. **End/Corner posts holes-** should be 36"- 48" deep (Fill hole with concrete to approximately 4" below ground level as indicated in diagram 1) Make sure that the bottom of holes is tapered at least 6" wider than top of hole. **(The hole must extend below the frost line.)**
- C. **Diagonal Brace post holes-** should be at a minimum of 18" deep with an 18" squared face as shown in illustration below and must extend below your frost line and be 70" from the end/corner post hole (center to center)

**Step 6** Set line posts

- A. Place line posts into line post holes.
- B. Backfill holes and tamp with soil.
- C. Tamp soil around line posts. Do this by adding 3"- 6" segments of soil (tamp soil between segments).
- D. Continue tamping process until hole is filled to ground level around line posts

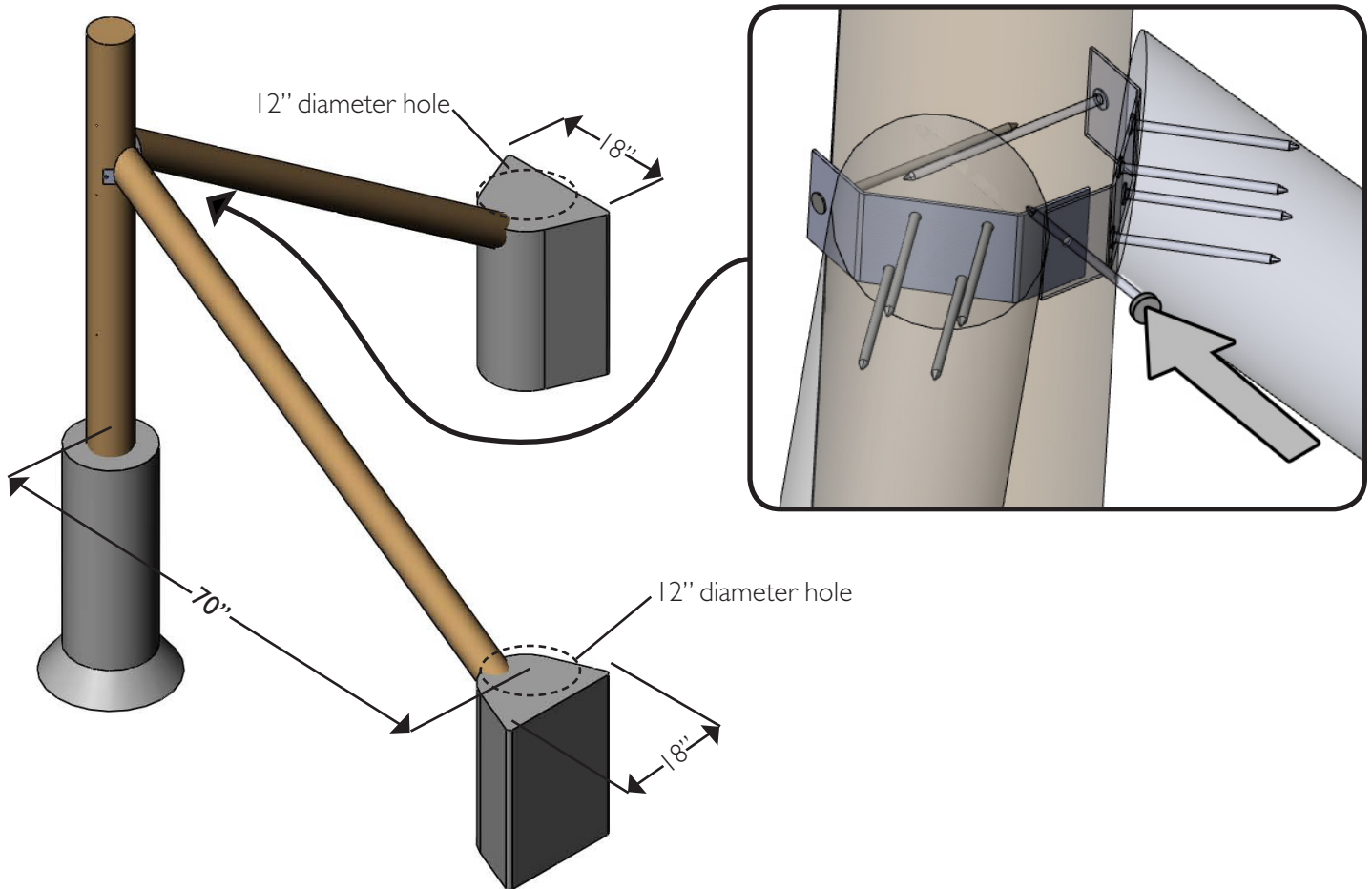
**Step 7** Assemble termination and end posts as shown in the diagram below

- A. Place corner post into hole
- B. Cut 55° angle on the end of (1) brace post
- C. Nail Brace plate to the face of the 55° angle cut as shown below using (4) 3.5" nails
- D. Nail Brace plate to Corner/End posts using (2) 3.5" nails (the top of the brace post should be 17" from the top of the corner/end post as shown below)
- E. Fill holes with concrete to approximately 4"- 6" below ground level
- F. Let concrete cure as recommended by concrete supplier.



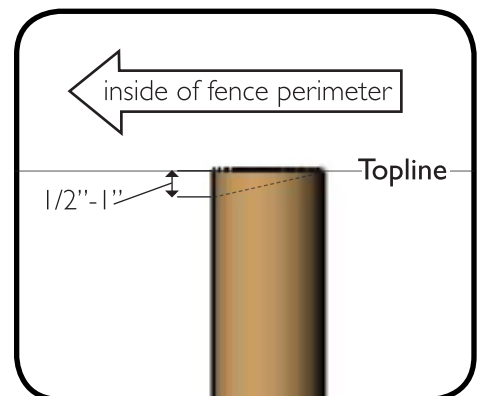
**Step 8** Assemble corner posts as shown in the diagram below

- A. Place corner post into hole
- B. Cut 55° angle on the end of (2) brace posts
- C. Nail Brace plates to the faces of both 55° angle cuts of brace posts as shown in step 6 using (8) 3.5" nails
- D. Nail Braces plate to Corner/End posts using (3) 3.5" nails (the top of the brace post should be 17" from the top of the corner/end post as shown below)
- E. Fill holes with concrete to approximately 6" below ground level



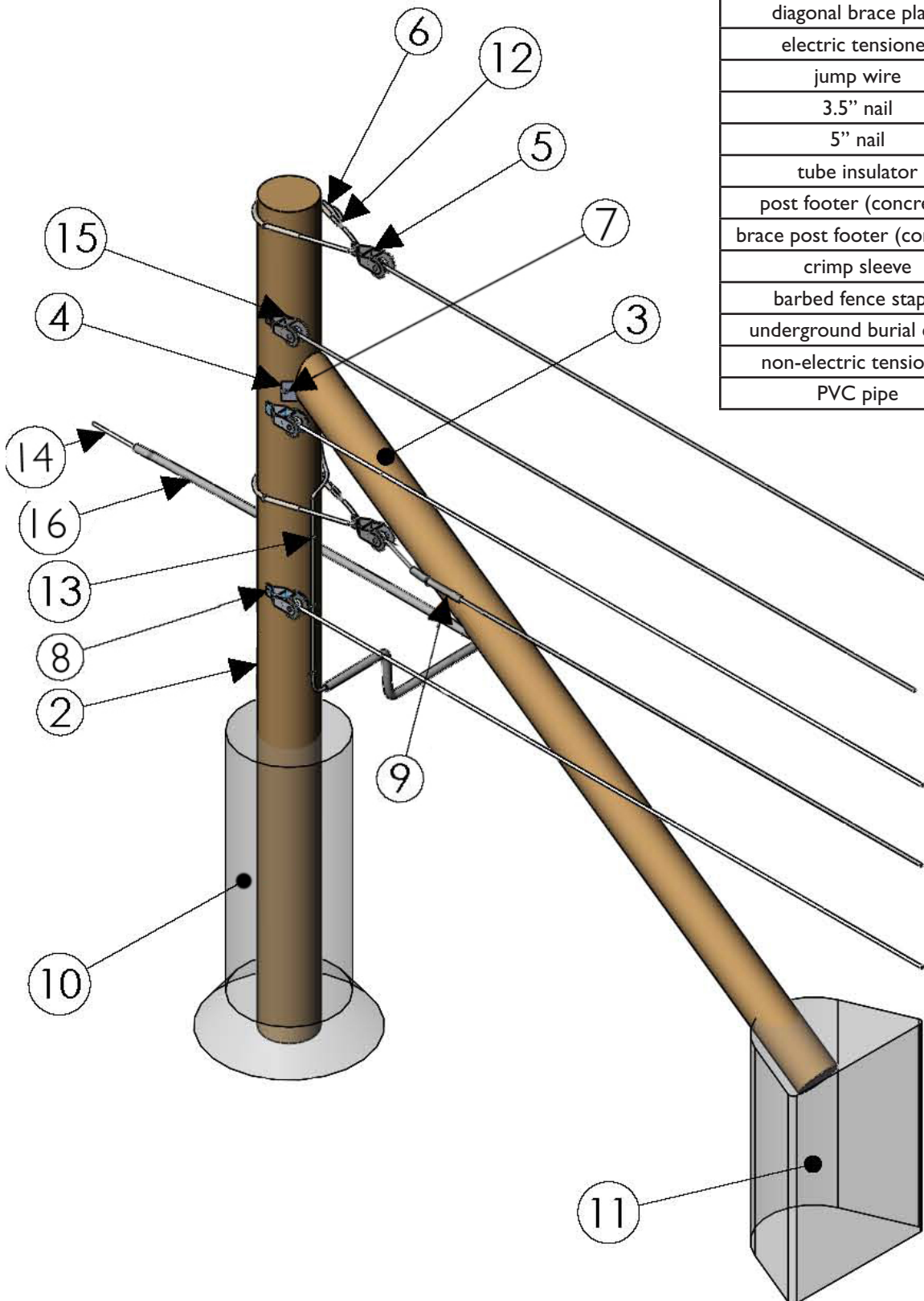
**Step 9** Establish post top line for line for corner, line, and end posts

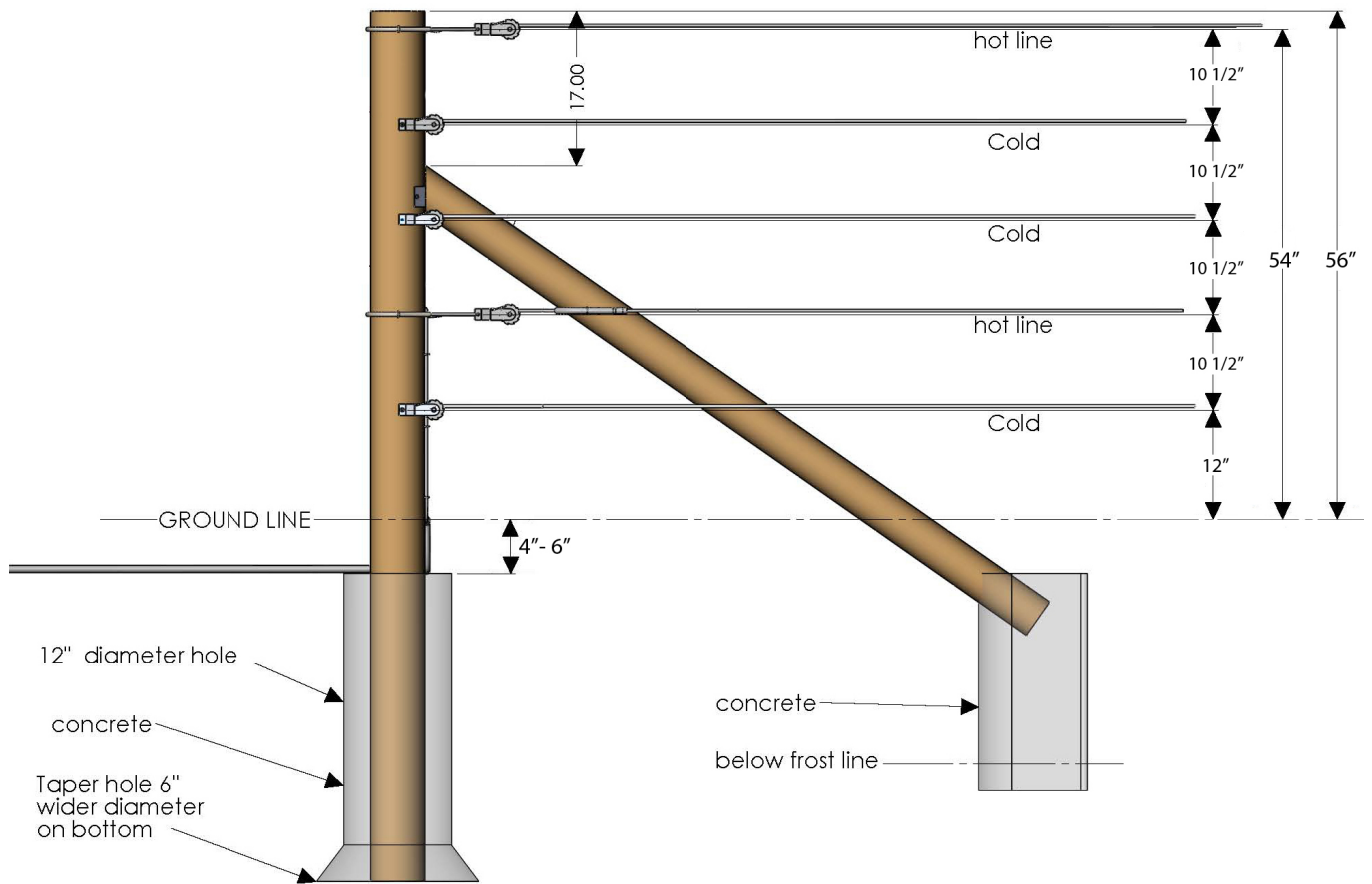
- A. Run a string line along each side of the perimeter
- B. Use a staple to raise or lower the top line
- C. Mark the top line for each post
- D. Using a chain saw, cut the tops off of each post at the established top line- the top of the post should be cut (dashed line) at a slight angle approximately 1/2"-1" down from established top line to allow for rainwater runoff. (see diagram right)
- E. Treat the top of the post with deck sealer or paint



## End Post Material List

PART NAME	ITEM #	QTY.
end post	2	1
diagonal brace post	3	1
diagonal brace plate	4	1
electric tensioner	5	2
jump wire	6	1
3.5" nail	7	7
5" nail	8	2
tube insulator	9	1
post footer (concrete)	10	1
brace post footer (concrete)	11	1
crimp sleeve	12	7
barbed fence staple	13	14
underground burial cable	14	1
non-electric tensioner	15	1
PVC pipe	16	1





Top Line

10 1/2"

10 1/2"

10 1/2"

10 1/2"

10 1/2"

10 1/2"

Ground Line

Sample Template

10 1/2"

10 1/2"

10 1/2"

10 1/2"

10 1/2"

12"

54"

56"

hot line

Cold

Cold

hot line

Cold

17

4"-6"

12" diameter hole

concrete

Taper hole 6" wider diameter on bottom

concrete

below frost line

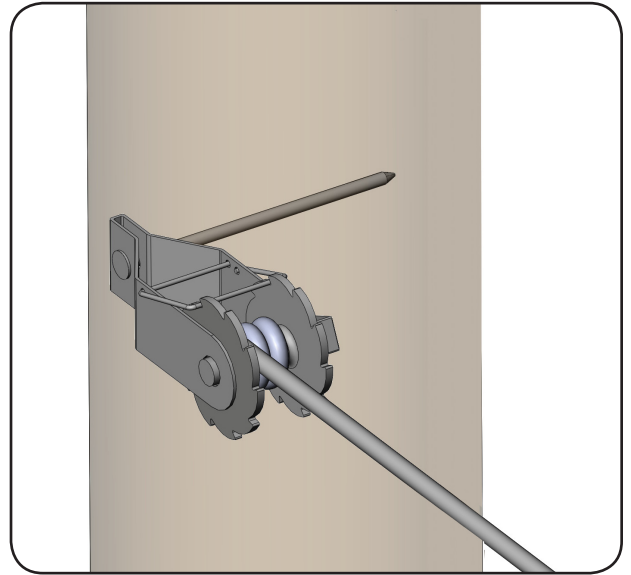
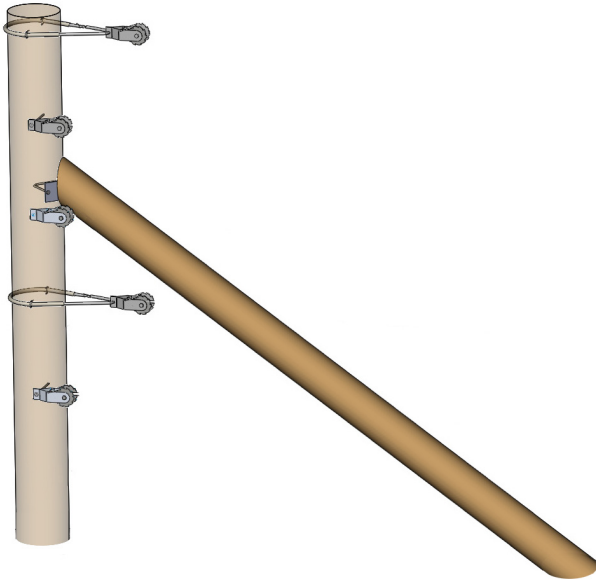
**Step 10** Mark tensioner and staple locations on all posts

- Make a template: measure down from the Top Line to determine your wire tensioner and rail layout.
- Using your template, mark each tensioner location
- Use a permanent marker to mark locations
- This illustration is an example only



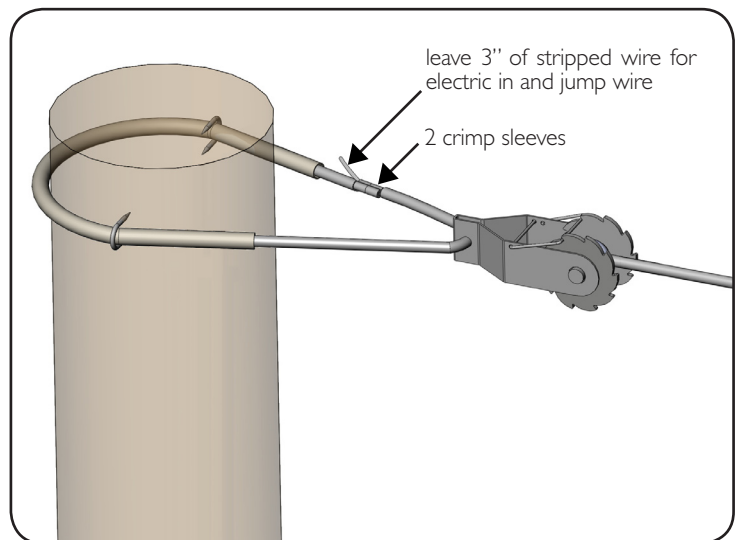
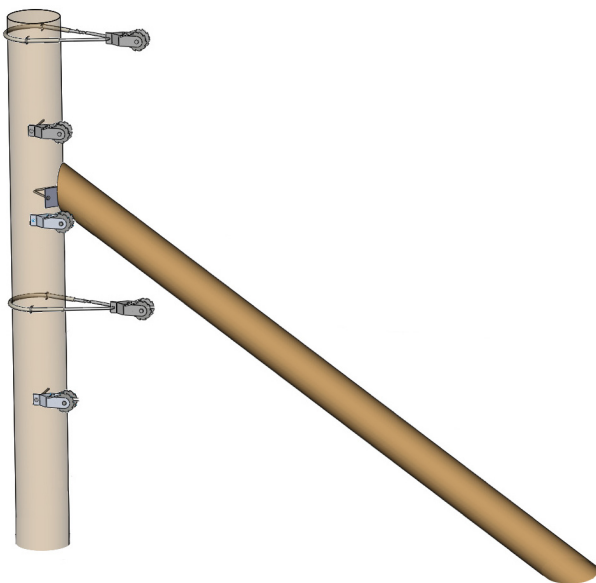
## Step 11 Attach non-electric tensioners to termination and end posts

A. Attach non electric tensioners to posts with (1) 5" nail as shown below



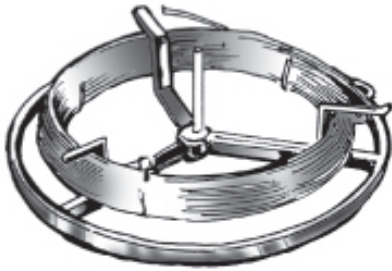
## Step 12 Attach electric tensioners

- A. Attach tensioners to posts as shown below
- B. Attach Electric Tensioners with crimp sleeves and (2) staples as shown.
- C. **\*\*Insulation tubing required\*\***

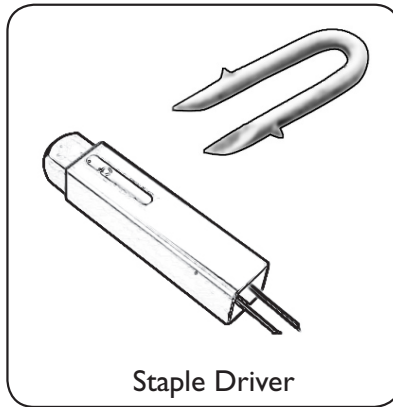


**Step 13** Run coated wire around your fence line perimeter

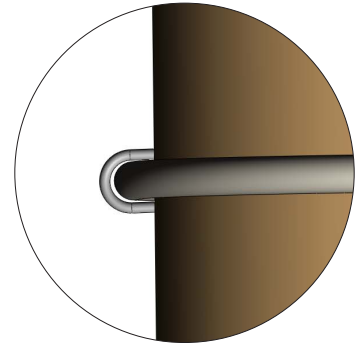
- A. Run coated wire between end posts (a spinning jenny is strongly recommended to prevent kinks in wires)
- B. Staple coated wire to line posts making sure to leave enough room for the coated wire to move smoothly during tensioning of the wire
- C. Use a staple driver for easy stapling
- D. Make sure to insulate staple locations on electric rails with a 4" piece of tube insulation or an electric fence insulator



Spinning Jenny



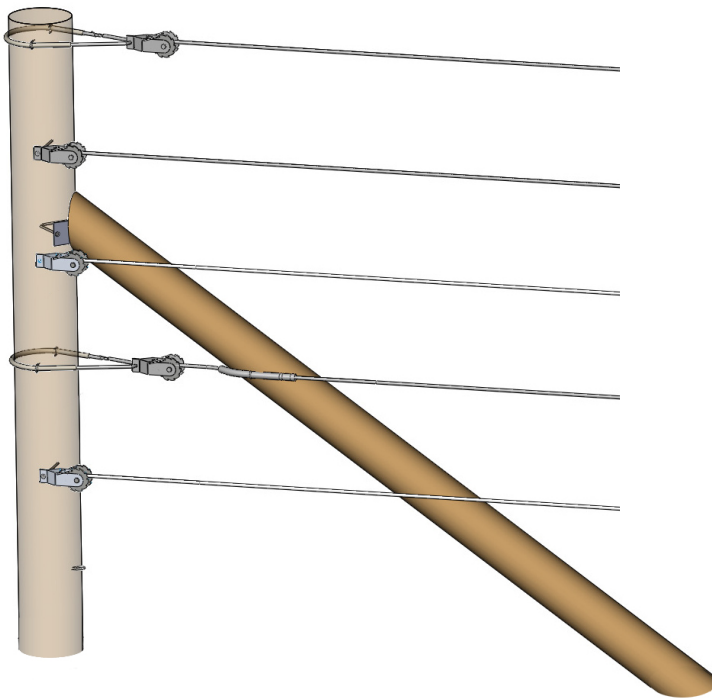
Staple Driver



Staple Detail

**Step 14** Allow concrete manufacturer's recommended time for concrete footers to cure then attach coated wires to tensioner drums and apply tension to your rails.

- A. Using a utility knife or wire stripper, strip approximately 5" of plastic from the end of each wire
- B. Insert bare wire into the hole on tensioner spool and apply tension until all bare wire is wrapped on the tensioner spool
- C. Repeat this process on other end of perimeter
- D. Tensioner are to be placed at each end post and are designed to tension a maximum of 1320'

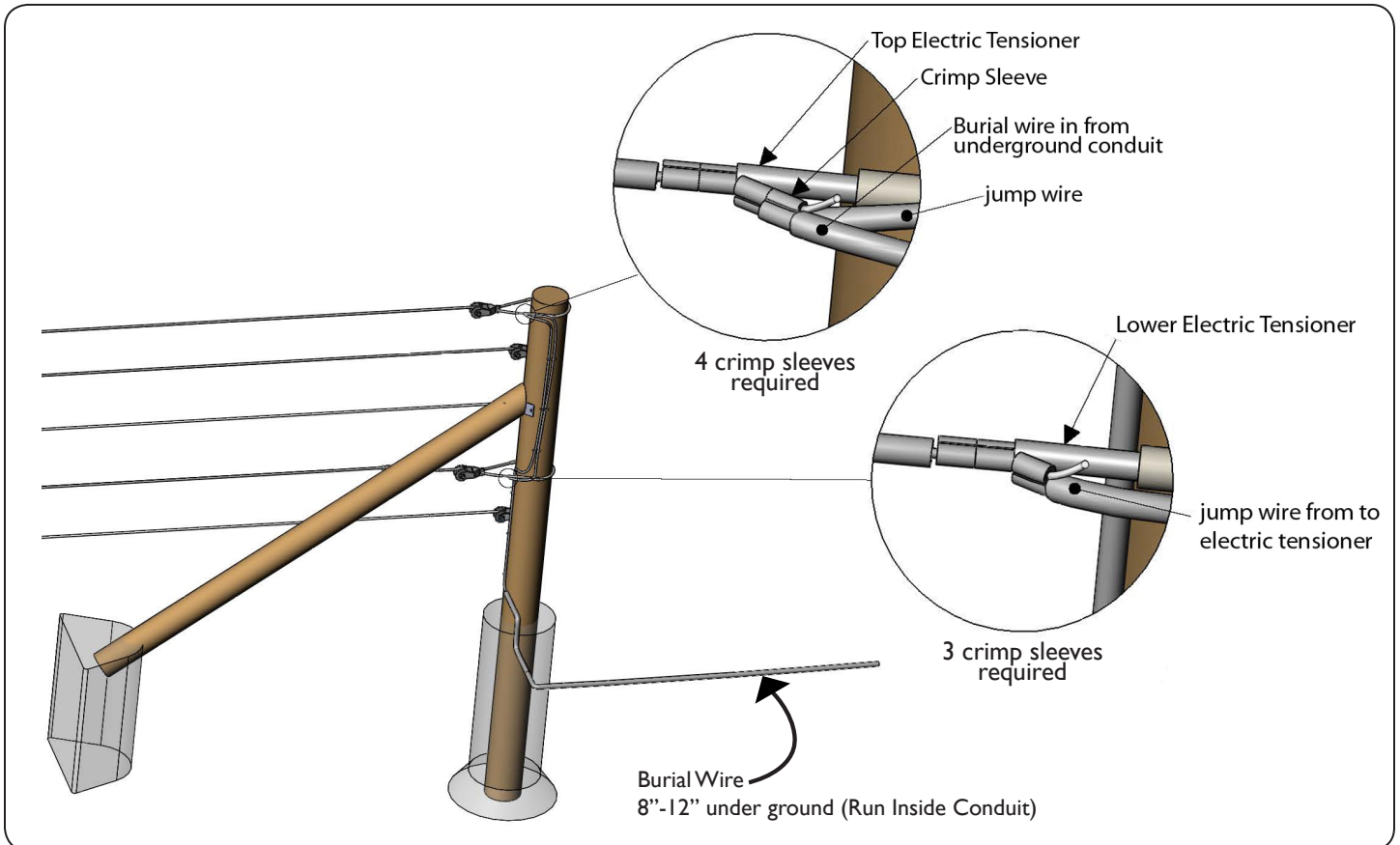


## Step 15 Electric Fence Hook-up

- A. Cut a proper length piece of underground burial cable to use as a jump wire between electric tensioners.
- B. Use (1) crimp sleeve to attach the jump wire to the 3" of stripped wire on both electric tensioners
- C. Use a crimp tool to secure connections

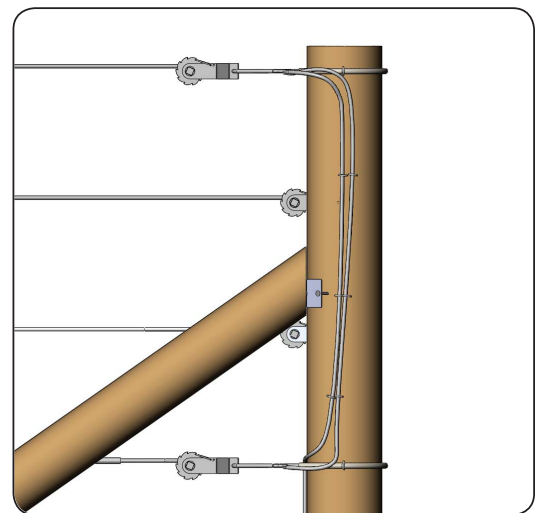
### Run underground burial wire (inside conduit) to termination post and up to the top electric tensioner

- D. Use (1) crimp sleeve to attach the burial wire to the remaining 3" of stripped wire on the top electric tensioner.
- E. Use a crimp tool to secure the connection
- F. Trim the remaining stripped wire from both electric tensioners.



**Step 16** Staple burial wire and jump wire to post every 12 inches as shown in illustration (right)

**Step 17** Installation Complete



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