

Fencing FACTSHEET

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FENCE PLANNING AND ESTIMATING WORKSHEET

The purpose of this worksheet is to aid in the planning steps in fence construction. It covers site considerations, fence type and design, rights-of-way, and cost estimations for labour and materials. Not all points will apply to every fence. The first four pages are a filled-in example, followed by a blank worksheet.

PLANNING

FENCE PURPOSE	primary: grazing secondary: breeding pasture at south end	
TYPE OF ANIMAL(S)	beef cattle - cow/calf	
SITE INFORMATION	topography: rolling - some steep areas soil types: firm, compacted - some rock accessibility: ok watercourses: none snow: not a problem vegetation: lightly forested with open grass areas wildlife: deer, moose visual impact: no unusual concerns	
TYPE OF FENCE	<input checked="" type="checkbox"/> permanent <input type="checkbox"/> temporary (moveable) <input type="checkbox"/> boundary (legal) requirements <input checked="" type="checkbox"/> non-electric design <input type="checkbox"/> electric design	
	type of wire: htsw number of wires: 5,- 6 in breeding pasture wire spacing: 12/8/8/8/8; 12/6/6/6/7/7 top wire height: 44 inch bottom wire height: 12 inch post spacing: 30 ft dropper spacing: 10 ft	type of wire: _____ number of wires: _____ wire spacing: _____ wires electrified: _____ wires grounded: _____ type of insulators: _____ post spacing: _____ dropper spacing: _____
COMMENTS		

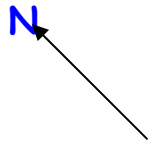
RIGHT-OF-WAY CONSTRUCTION

METHOD	<input type="checkbox"/> by hand <input checked="" type="checkbox"/> by machine	Size: 4600 feet long X 12 - 15 feet wide Fence Location: 4 feet from either side of right of way
WOODWASTE	<input type="checkbox"/> piled to burn <input checked="" type="checkbox"/> cut & left to rot	
DISTURBED GROUND	<input checked="" type="checkbox"/> seeded <input type="checkbox"/> left as is	
COMMENTS	Fence line to be as straight as possible	

SITE SKETCH

Not to Scale

NOTES

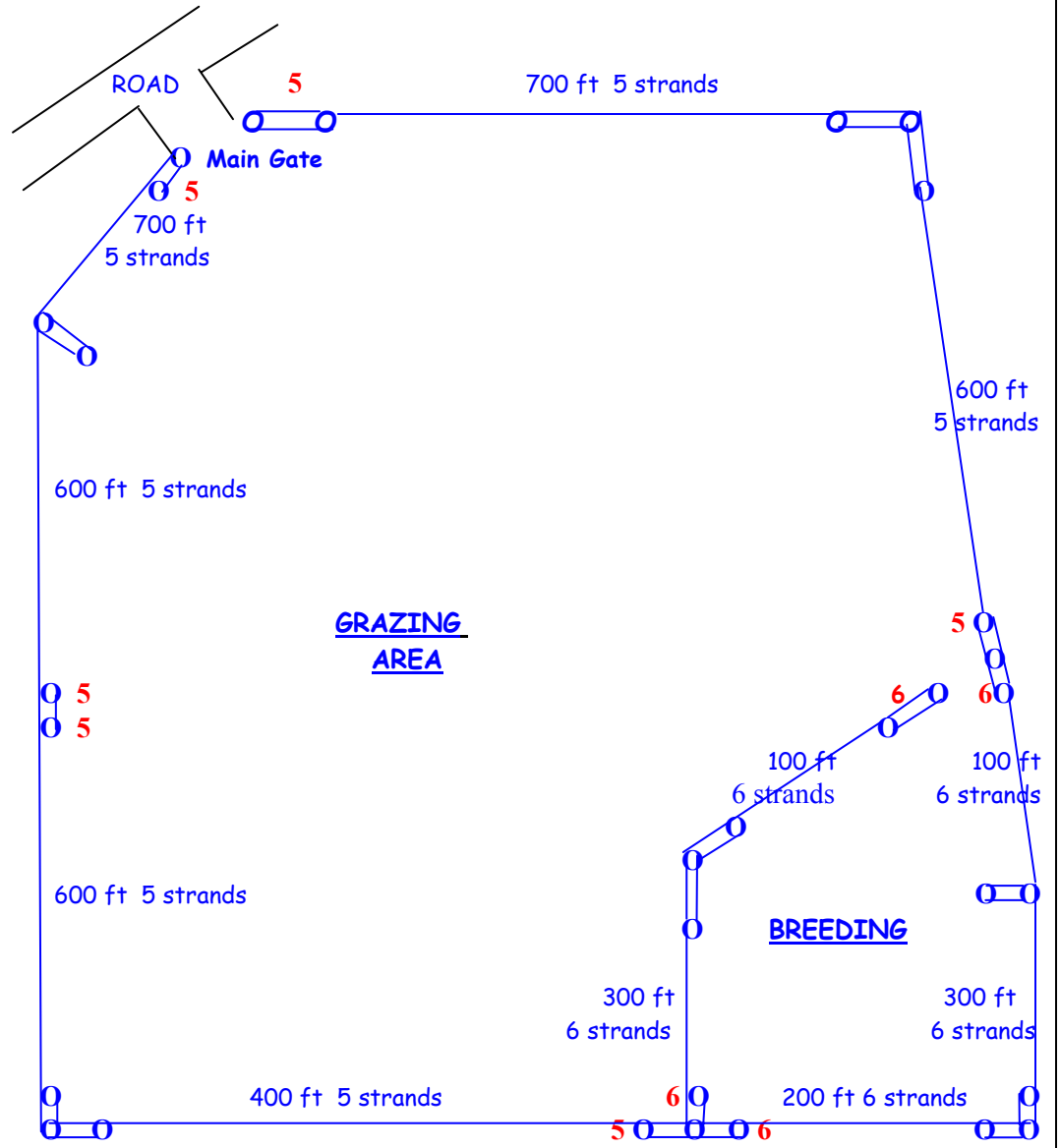


5 = number of wire tie-offs

= brace

Main gate is setback 20 ft from road

Fence is on D.L.966



COMMENTS

length of fence

total fence = 3600 ft of 5 strand htsw perimeter fence
600 ft of 6 strand htsw perimeter fence
400 ft of 6 strand htsw interior fence

line posts

line posts = 4600 ft fence / 30 ft average post spacing = 154 line posts

wire

htsw wire = 3600 ft x 5 = 18,000 ft
1000 ft x 6 = 6000 ft total = 24,000 ft
of rolls = 24,000 / 3,750 ft per roll = 6.4 rolls; plus brace wire etc. = 7 rolls

tie-offs

tie-offs = 6 for the 5 strands & 4 for the 6 strands
= 54 tie-offs

tensioners

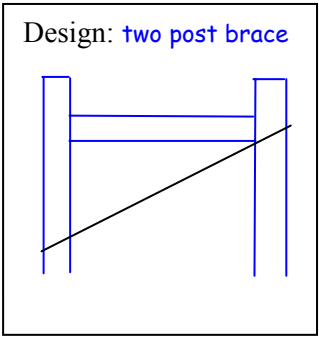
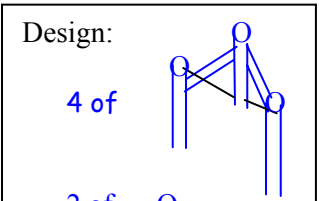
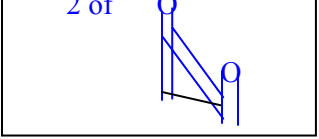
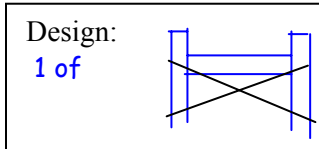
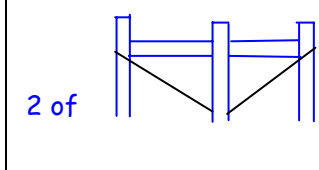
tensioners = 1 per wire per brace section = 3 for 5 strands and 2 for 6 strands
= 27 tensioners

braces

end braces = 3 + 1/2 as south end brace has a "shared post" with an inline brace
corner braces = 2 - 2 post and 4 - 3 post corner braces
inline braces = 1 - 2 post and 2 - 3 post inline braces (one with a "shared post" end brace)

ESTIMATING MATERIAL COSTS

NONELECTRIC FENCE MATERIALS

		Size	Quantity	\$ Each	\$ Total
BRACE ASSEMBLY MATERIALS posts and rails ✓ treated ✓ pointed ✓ domed	END BRACE: how many?: $3 + 1/2$ Design: two post brace 	post rail nail or pin ✓	3 @ 2post 1 @ 1 post 7 total 4 @ 1 rail 4 @ 2 pins	\$5.25 \$5.25 \$0.10	\$36.75 \$21.00 \$0.80
	CORNER BRACE: how many?: 6 Design: 4 of  2 of 	post rail nail or pin ✓	4 @ 3 post 2 @ 2 post 16 total 4 @ 2 ea 2 @ 2 ea 10 total 4 @ 4 ea 2 @ 2 ea 20 total	\$5.25 \$5.25 \$0.10	\$84.00 \$52.50 \$2.00
	INLINE BRACE: how many?: 3 Design: 1 of  2 of 	post rail nail or pin ✓	1 @ 2 post 2 @ 3 post 8 total 1 @ 1 ea 2 @ 2 ea 5 total 1 @ 2 ea 2 @ 4 ea 10 total	\$5.25 \$5.25 \$0.10	\$42.00 \$26.25 \$1.00
LINE POSTS	material: wood if wood: ✓ treated ✓ pointed ✓ domed	3"-4" x 7'	154	\$3.25	\$500.50
WIRE	material: htsw (# rolls = ft. fence x #strands ÷ ft. per roll)	12.5 ga.	7 rolls	\$80.00	\$560.00
STAPLES	staples – type: standard slash point (# staples = # posts x #strands ÷ # per box)	2 inch	$\frac{154 \times 5}{2900}$ = 1/3 box	\$48.00	\$16.00
CONNECTORS	splices – mechanical connectors? ✓ Y <input type="checkbox"/> N (# connectors = # per splice x # wire rolls x 2)	sleeves	3x7x2=42	\$0.30	\$12.60
TENSIONERS	tie-offs – mechanical connectors? ✓ Y <input type="checkbox"/> N (# connectors = # per tie-off x # tie-offs)	sleeves	2x5x6 2x6x4 = 108	\$0.30	\$32.40
	Tensioners – used? ✓ Y <input type="checkbox"/> N (# tensioners = # strands x # braced sections)	slotted drum	5x3+6x2 = 27	\$2.50	\$67.50

		Size	Quantity	\$ Each	\$ Total
DROPPERS	used? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N type: wood - home made (total droppers = # per panel x # line posts)	1"x3" x42" long	2 x 154 = 308	\$1.00	\$308.00
GATES	How many: 2	12' wood	1	\$75.00	\$75.00
	Type of gate: 1 wood & 1 slip wire Size: 12 ft Type of hinge: screw-in pin Type of latch: chain	12' wire	1	\$15.00	\$15.00
TOTAL NONELECTRIC FENCE MATERIAL COSTS				\$ 1853.30	

ELECTRIC FENCE MATERIALS

CONTROLLER	<input type="checkbox"/> utility power: make: _____ model: _____ <input type="checkbox"/> battery powered: make: _____ model: _____ voltage: _____ <input type="checkbox"/> wet cell battery: voltage: _____ capacity: _____ <input type="checkbox"/> solar panel: make: _____ model: _____ wattage: _____				
GROUNDING SYSTEM	<input type="checkbox"/> Ground rods material: <input type="checkbox"/> Ground wire material:				
INSULATORS	line post (# insulators = # hot wires x # line posts) material: _____ type: _____ tie off (# insulators = # hot wires x # brace sections x 2) material: _____ type: _____ offset (# insulators = # offset wires x # line posts) material: _____ type: _____				

TOTAL ELECTRIC FENCE MATERIALS COSTS \$

MATERIAL COSTS PER FOOT Fence length **4600** feet Materials cost **\$1853.30** \$/ft. **0.41**

ESTIMATING LABOUR COSTS

Labour costs vary for many reasons (terrain, accessibility, etc..) but they will be between one and two times the material costs. MATERIALS \$/ft. **0.41** EST. LABOUR \$/ft. **0.41** to **0.82**

ESTIMATING TOTAL COSTS

For estimating total costs, a labour cost must be selected from the range above.

MATERIALS \$/ft. **0.41** + LABOUR \$/ft. **0.64** = **TOTAL \$/ft. 1.05**

FENCE LENGTH **4600** ft. X TOTAL \$/ft. **1.05** = **TOTAL \$4830**

FENCE PLANNING AND ESTIMATING WORKSHEET

PLANNING

FENCE PURPOSE	primary: secondary:																	
TYPE OF ANIMAL(S)																		
SITE INFORMATION	topography: soil types: accessibility: watercourses: snow: vegetation: wildlife: visual impact:																	
TYPE OF FENCE	<input type="checkbox"/> permanent <input type="checkbox"/> temporary (moveable) <input type="checkbox"/> boundary (legal) requirements																	
	<table border="1"> <tr> <td><input type="checkbox"/> non-electric design</td> <td><input type="checkbox"/> electric design</td> </tr> <tr> <td>type of wire: _____</td> <td>type of wire: _____</td> </tr> <tr> <td>number of wires: _____</td> <td>number of wires: _____</td> </tr> <tr> <td>wire spacing: _____</td> <td>wire spacing: _____</td> </tr> <tr> <td>top wire height: _____</td> <td>wires electrified: _____</td> </tr> <tr> <td>bottom wire height: _____</td> <td>wires grounded: _____</td> </tr> <tr> <td>post spacing: _____</td> <td>type of insulators: _____</td> </tr> <tr> <td>dropper spacing: _____</td> <td>post spacing: _____</td> </tr> <tr> <td></td> <td>dropper spacing: _____</td> </tr> </table>	<input type="checkbox"/> non-electric design	<input type="checkbox"/> electric design	type of wire: _____	type of wire: _____	number of wires: _____	number of wires: _____	wire spacing: _____	wire spacing: _____	top wire height: _____	wires electrified: _____	bottom wire height: _____	wires grounded: _____	post spacing: _____	type of insulators: _____	dropper spacing: _____	post spacing: _____	
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	dropper spacing: _____																	
COMMENTS																		

RIGHT-OF-WAY CONSTRUCTION

METHOD	<input type="checkbox"/> by hand <input type="checkbox"/> by machine	Size: ____ feet long X ____ feet wide Fence Location: ____ feet from either side of right of way
WOODWASTE	<input type="checkbox"/> piled to burn <input type="checkbox"/> cut & left to rot	
DISTURBED GROUND	<input type="checkbox"/> seeded <input type="checkbox"/> left as is	
COMMENTS		

NOTES

COMMENTS

ESTIMATING MATERIAL COSTS

NONELECTRIC FENCE MATERIALS

Size Quantity \$ Each \$ Total

<p>BRACE ASSEMBLY MATERIALS</p> <p>END BRACE: how many?: _____</p> <div style="border: 1px solid black; width: 150px; height: 100px; margin: 5px 0;"></div> <p style="margin-left: 100px;">Design: _____ post</p> <p style="margin-left: 100px;">_____ rail</p> <p style="margin-left: 100px;">_____ nail or pin</p> <p>posts and rails</p> <p><input type="checkbox"/> treated</p> <p><input type="checkbox"/> pointed</p> <p><input type="checkbox"/> domed</p>			
<p>CORNER BRACE: how many?: _____</p> <div style="border: 1px solid black; width: 150px; height: 100px; margin: 5px 0;"></div> <p style="margin-left: 100px;">Design: _____ post</p> <p style="margin-left: 100px;">_____ rail</p> <p style="margin-left: 100px;">_____ nail or pin</p> <p>nail type _____</p> <p>pin type _____</p> <p>brace wire type _____</p>			
<p>INLINE BRACE: how many?: _____</p> <div style="border: 1px solid black; width: 150px; height: 100px; margin: 5px 0;"></div> <p style="margin-left: 100px;">Design: _____ post</p> <p style="margin-left: 100px;">_____ rail</p> <p style="margin-left: 100px;">_____ nail or pin</p>			
<p>LINE POSTS</p> <p>material: _____</p> <p>if wood: <input type="checkbox"/> treated <input type="checkbox"/> pointed <input type="checkbox"/> domed</p>			
<p>WIRE</p> <p>material: _____</p> <p>(# rolls = ft. fence x #strands ÷ ft. per roll)</p>			
<p>STAPLES</p> <p>staples – type: _____</p> <p>(# staples = # posts x #strands ÷ # per box)</p>			
<p>CONNECTORS</p> <p>splices – mechanical connectors? <input type="checkbox"/> Y <input type="checkbox"/> N</p> <p>(# connectors = # per splice x # wire rolls x 2)</p>			
<p>TENSIONERS</p> <p>tie-offs – mechanical connectors? <input type="checkbox"/> Y <input type="checkbox"/> N</p> <p>(# connectors = # per tie-off x # tie-offs)</p> <p>Tensioners – used? <input type="checkbox"/> Y <input type="checkbox"/> N</p> <p>(# tensioners = # strands x # braced sections)</p>			

		Size	Quantity	\$ Each	\$ Total
DROPPERS	used? <input type="checkbox"/> Y <input type="checkbox"/> N type: _____ (total droppers = # per panel x # line posts)				
GATES	How many: _____ Type of gate: _____ Size: _____ Type of hinge: _____ Type of latch: _____				

TOTAL NONELECTRIC FENCE MATERIAL COSTS \$

ELECTRIC FENCE MATERIALS

CONTROLLER	<input type="checkbox"/> utility power: make: _____ model: _____ <input type="checkbox"/> battery powered: make: _____ model: _____ voltage: _____ <input type="checkbox"/> wet cell battery: voltage: _____ capacity: _____ <input type="checkbox"/> solar panel: make: _____ model: _____ wattage: _____				
GROUNDING SYSTEM	<input type="checkbox"/> Ground rods material: <input type="checkbox"/> Ground wire material:				
INSULATORS	line post (# insulators = # hot wires x # line posts) material: _____ type: _____ tie off (# insulators = # hot wires x # brace sections x 2) material: _____ type: _____ offset (# insulators = # offset wires x # line posts) material: _____ type: _____				

TOTAL ELECTRIC FENCE MATERIALS COSTS \$

MATERIAL COSTS PER FOOT Fence length _____ feet Materials cost \$ _____ \$/ft. _____

ESTIMATING LABOUR COSTS

Labour costs vary for many reasons (terrain, accessibility, etc.,) but they will be between one and two times the material costs. MATERIALS \$/ft. _____ EST. LABOUR \$/ft. _____ to _____

ESTIMATING TOTAL COSTS

For estimating total costs, a labour cost must be selected from the range above.

MATERIALS \$/ft. _____ + LABOUR \$/ft. _____ = **TOTAL \$/ft.** _____

FENCE LENGTH _____ ft. X TOTAL \$/ft. _____ = **TOTAL \$** _____

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Resource Management Branch

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