

Tender No. []

1.0 GENERAL

1.1 DETAIL DRAWINGS

- .1 The following detail drawing is appended hereto and forms part of this section.

<u>Number</u>	<u>Title</u>
[]	Typical Barbed Wire Fence Details

1.2 REFERENCES

- .1 Provide barbed wire fencing in accordance with the following standards (latest revision) except where specified otherwise.
- .2 Canadian Standards Association (CSA)
- .1 CSA-O80 SERIES Wood Preservation.
- .3 Canadian General Standards Board (CGSB)
- .1 CAN/CGSB-1.181 Ready-Mixed Organic Zinc-Rich Coating.
- .4 American Society for Testing and Materials (ASTM)
- .1 ASTM A121 Standard Specification for Metallic Coated Carbon Steel Barbed Wire.

2.0 PRODUCTS

2.1 MATERIALS

- .1 Provide materials in accordance with the following.
- .2 Pressure treated lumber as follows:
- .1 Sound, seasoned fir or pine timber, free of surface bark, decay, splits, multiple crooks, excessive knots, or any other defects which, in the opinion of the Minister, may impair the strength of the member. Excessive knots include any knots greater than 38 mm in diameter on any face.
- .2 Posts: Round and straight, with a minimum 100 mm top diameter and a length of 2130 mm for line posts and brace posts, and a minimum top diameter of 175 mm and a length of 2440 mm for end posts, corner posts, and gateposts.
- .3 Cross braces: 100 mm by 100 mm.
- .4 Stays: 50 mm diameter or 50 mm by 50 mm.
- .3 Pressure treatment: In accordance with CSA-O80 Series using water-borne preservatives as specified for posts, braces, and stays.

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- .4 Field cuts: Treat in accordance with CSA-O80 Series.
- .5 Barbed wire: Double-strand, galvanized coated wire, 2.5 mm diameter (12.5 gauge) with 4 point, 2.1 mm diameter (14 gauge) barbs spaced no more than 150 mm apart in accordance with ASTM A121 Class 1 or better.
- .6 Cross bracing tension ties: Soft annealed, smooth, galvanized 3.8 mm diameter (9 gauge) wire.
- .7 Galvanizing: Minimum zinc coating of 245 g/m² of uncoated wire surface in accordance with ASTM A121.
- .8 Staples: U-shaped wire staples, manufactured from 3.8 mm diameter (9 gauge) galvanized wire with a minimum length of 40 mm for each leg of the staple.
- .9 Nails: 127 mm galvanized Ardox spiral nails.
- .10 Gate latch: Lever operated gate latch fabricated from steel painted with 2 coats of zinc-rich coating in accordance with CAN/CGSB-1.181 or galvanized.

3.0 EXECUTION

3.1 DEMOLITION OF EXISTING FENCES

- .1 Demolish, salvage and remove existing barbed wire fencing as specified in Section 02220 – Demolition, Salvage and Removal.
- .2 Sequence demolition of the existing barbed wire fences and construction of the new fencing or provide temporary fencing so that existing fenced areas are enclosed at all times.
- .3 Do not use salvaged material in the construction of the new fence.

3.2 GRADING

- .1 Level the ground along the fence line to maintain the bottom wire of the fence at no more than 400 mm above the ground surface.

3.3 INSTALLATION

- .1 Install the barbed wire fencing at the locations specified in the Contract Documents.
- .2 Do not locate posts within 1 m of existing utilities, instrumentation, buried piping or other facilities as directed by the Minister. When such situations arise, request direction from the Minister as to where to locate the fence posts.
- .3 Drill holes large enough to allow proper tamping of fill materials. Set the posts in the holes to the required depth, and tamp in a plumb and firm position to the lines and spacing specified in the Contract Documents. Place fill in layers not exceeding 100 mm and compact using pneumatic or mechanical hand tamping equipment. Crown the compacted fill slightly to provide drainage away from the posts.

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- .4 Driving of posts, including methods employing drilled pilot holes, will be permitted if these methods produce satisfactory, uniform, undamaged posts, that are firmly implanted into the soil, straight and plumb, and to the specified depth. Discontinue driving the posts if, in the opinion of the Minister, the results are unsatisfactory. Sharpening of posts is not permitted.
- .5 Provide intermediate brace posts and cross braces at a maximum spacing of 400 m on tangent and every 200 m on curve.
- .6 Install the line posts at a maximum spacing of 4 m.
- .7 Securely join cross braces into end, corner, and gateposts.
- .8 Erect wires and stretch with hand stretchers or tensioning apparatus capable of adjustment to provide a uniform tension. Do not use tractors or trucks for tightening the fence wire unless an adjustable tensioning apparatus controls the pull. Install fencing free of sags, buckles, or loose sections, such that the completed fence displays continuous rigidity.
- .9 Fasten wire to each post by driving staples diagonally to the grain of the wood and in a manner that holds the wire securely without causing bends or nicks to the wire.
- .10 At outside curves, install wire on the private property side of the posts. At inside curves, install wire on the project right of way side of the posts. At tangents, install wire on the private property side of the posts.
- .11 Install stays and latches for gates.

END OF SECTION