CONSTRUCTION SPECIFICATION
CS-OR-092 FIELD FENCE

092.1 SCOPE

The work shall consist of furnishing and installing field fence, including gates and fittings.

092.2 MATERIAL

Material for field fence shall conform to the requirements of MS-OR-591, Field Fencing Materials. All wooden posts shall be of the same species, when available.

Unless otherwise specified, surfacing, cutting, and boring of preservative treated wooden posts and braces shall be completed before treatment. If field cutting or field repair of treated material is approved, all cuts and abrasions shall be carefully trimmed and coated with copper naphthenate preservative containing a minimum of 2.0 percent copper metal. The treatment preservative shall be applied according to the product label. Any excess preservative not absorbed by the wood member shall be cleaned from the surface prior to the use of the member. Bored holes for connectors or bolts may be treated by pumping coal-tar roofing cement meeting ASTM D5643 into the holes using a caulk gun or similar device. After assembly, any unfilled holes shall be plugged with tightly fitting wooden plugs that have been treated with preservative as specified.

092.3 SETTING POSTS

Concrete or wood posts shall be set in holes and backfilled with earth except where otherwise specified. Wood posts may be driven when approved by the engineer. Steel posts shall be driven unless otherwise specified.

Holes for installing fence posts shall be at least 6 inches larger than the diameter or side dimension of the posts.

Earth backfill around posts shall be thoroughly tamped in layers not thicker than 4 inches and shall completely fill the posthole up to the ground surface. Concrete backfill around posts shall be rodded into place in layers not thicker than 12 inches and shall completely fill the posthole to the surface of the ground. Backfill, either earth or concrete, shall be crowned-up around posts at the ground surface.

No stress shall be applied to posts set in concrete for a period of not less than 24 hours following the development of a firm set of the concrete.

092.4 CORNER ASSEMBLY

Unless otherwise specified in Section 092.10 of this specification, corner assemblies shall be installed at all points where the fence alignment changes 15 degrees or more.

092.5 END PANELS

End panels shall be built at gates and fence ends.

092.6 PULL POST ASSEMBLY

Pull post assembly (bracing within a section of straight fence) shall be installed at the following locations:

(a) In straight fence sections, at intervals not to exceed 660 feet.

(b) At any point where the vertical angle described by two adjacent reaches of wire is upward and exceeds 10 degrees (except as provided in Section 092.10 of this specification).

(c) At the beginning and end of each curved fence section.

092.7 ATTACHING FENCING TO POSTS

The fencing shall be stretched and attached to posts as follows:

(a) The fencing wire or netting shall be placed on the side of the post opposite the area being protected except for installation along curved sections.

(b) The fencing wire or netting shall be placed on the outside for installation along curved sections.

(c) The fencing wire or netting shall be fastened to each end post, corner post, and pull post by wrapping each horizontal strand around the post and tying it back on itself with not less than three tightly wound wraps.

(d) The fencing wire or netting shall be fastened to wooden line posts by means of steel staples. Woven-wire fencing shall be attached at alternate horizontal strands. Each strand of barbed wire shall be attached to each post. Steel staples shall be driven diagonally with the grain of wood and at a slight downward angle and shall not be driven so tightly as to bind the wire against the post.

(e) The fencing wire or netting shall be fastened to steel or concrete line posts with either two turns of 14 gauge galvanized steel or iron wire or in accordance with recommendations provided by the post's manufacturer.

(f) Wire shall be spliced by means of a Western Union splice or by suitable splice sleeves applied with a tool designed for that purpose. The Western Union splice shall have no less than eight wraps of each end about the other. All wraps shall be tightly wound and closely spaced. Splices made with splice sleeves shall have a tensile strength no less than 80 percent of the strength of the wire being spliced.

092.8 STAYS

Stays shall be attached to the fencing at the spacing outlined in Section 092.10 of this specification or as shown on the drawings to ensure maintenance of the proper spacing of the fence wire strands.

092.9 CROSSINGS AT DEPRESSIONS AND WATERCOURSES

Where fencing is installed parallel to the ground surface, the line posts subject to upward pull shall be anchored.

(a) If the fence wire or netting is installed parallel to the ground surface, the line posts subject to uplift shall be anchored by means of extra embedment or by special anchors as detailed on the drawings.

(b) If the fence wire is installed with the top wire straight and parallel to the ground surface on either side of the depression, extra length posts shall be used to allow normal post embedment. Unless otherwise specified, excess space between the bottom of the fence and the ground shall be closed with extra strands of barbed wire or with netting.

092.10 ITEMS OF WORK AND CONSTRUCTION DETAILS