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ENGINEERING INSTRUCTION

NEW YORK STATE DEPARTMENT OF TRANSPORTATION

SUBJECT: R.O.W: FENCING

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APPROVED:



J.R. LAMBERT, Deputy Chief Engineer (Fac. Des. Div.)

Supersedes:

EI 91-19

Standard Sheet 607-2R2 and a proposal insert titled "Right-of-Way Fencing" are attached. The new standard sheet and proposal insert supersede Standard Sheet 607-2R1 issued by EI 91-19 and the proposal insert titled "ROW Fencing" that was also issued by EI 91-19.

The revisions to the standard sheet are as follows:

1. The steel end, corner, or intermediate posts and braces have been revised to allow either Class A. Schedule 40 Pipe or Class B, Steel Tubing conforming to the requirements of §710-10.03 as an alternate to steel angles previously specified.

The revisions to the specification are as follows:

1. The specification for steel end, corner, or intermediate posts and braces have been revised to allow either Class A. Schedule 40 Pipe or Class B, Steel Tubing conforming to the requirements of §710-10.03 as an alternate to steel angles previously specified.
2. The specification for wood posts and braces has been revised to provide a list of wood species that shall be used for wood posts and braces. The old specification specified southern yellow pine or native pine and permitted other species upon approval of the Deputy Chief Engineer Construction.
3. The specification for wood posts and braces has been revised to change the wood preservative to a water-borne preservative conforming to §708-31. The creosote oil and pentachlorophenol previously approved will no longer be allowed.

This instruction and proposal insert shall become effective with the letting of May 6, 1993.

If any questions arise regarding this instruction or the proposal insert you may contact W. E. Hopkins at (518)457-6399.

RIGHT-OF-WAY FENCING

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Delete §710-30 "Right-of-Way Fencing" in its entirety and substitute the following:

"710-30 RIGHT-OF-WAY FENCING

SCOPE. These specifications cover the material requirements required for the construction of right-of-way fences comprised of (a) galvanized steel or aluminum coated steel fence fabric, and (b) posts, braces and hardware designed to support and retain the fencing.

MATERIAL REQUIREMENTS

Fence Fabric. Right-of way fencing fabric shall conform to the requirements of ASTM A116 "Zinc Coated (Galvanized) Steel Woven Wire Fence Fabric" or ASTM A584 "Aluminum-Coated Steel Woven Wire Fence Fabric." The fabric shall be woven in accordance with Design Number 1047-6-9 or 1047-6-11 as shown in Table 1 of both ASTM A116 and ASTM A584. The weight of the coating on the Zinc-Coated (Galvanized) Fence Fabric shall conform to the coating weight requirements of Class 3 shown in Table 3 of ASTM A116.

Fence Posts and Braces. Posts and brace sizes shall be as indicated on the Standard Sheets.

Steel line posts shall conform to the requirements of ASTM A702. Steel end, corner or intermediate posts and braces shall conform to the requirements of Section 6.5 through Section 6.5.4 of ASTM A702; or the requirements for Class A, Schedule 40 Pipe or Class B, Steel Tubing of §710-10.03 of the Standard Specifications. Posts and braces conforming to the requirements of ASTM A702 shall be galvanized in accordance with the requirements of §719-01 Type I. Type A Schedule 40 Pipe and Type B Steel Tubing shall use one of the protective coating systems specified in subsection 7A of §710-10.03.

Wood posts and braces shall be seasoned southern yellow pine, red (Norway) pine, spruce, douglas fir, hemlock, larch, or redwood.

All wood posts and braces shall be pressure treated with a water-borne wood preservative conforming to the requirements of §708-31. The wood posts shall be subject to inspection before and during treatment at the option of the Department. They shall be sound, free from loose knots or decay, and with no through checks on tops or butts. Posts shall be machine

RIGHT-OF-WAY FENCING (CONTINUED)

peeled to a smooth uniform appearance and free from all inner bark. The preservative pressure treatment shall be by the empty cell process in accordance with C5 of the American Wood-Preserves Association Standards.

Fittings. Fittings shall be manufactured of weldable steel, malleable iron, cast steel, cast iron, or aluminum alloy. Fittings other than aluminum shall be galvanized in accordance with the requirements of §719-01 Type II.

Fasteners. Bolts, nuts, and washers shall conform to the following, unless specified otherwise in the contract documents:

Bolts.	ASTM A307 Grade B
Nuts	ASTM A563 Grade A or better
Washers	ASTM F844

The fasteners shall be galvanized in accordance with the requirements of §719-01 Type II.

Right-Of-Way Fence Gates

A. Gates. Gates shall be constructed of Class A Schedule 40 Pipe conforming to §710-10.03 of the Standard Specifications welded at all corners or assembled with corner fittings. The size of the pipe used to fabricate the gate shall be as shown on the Standard Sheets. When corner fittings are used the gates shall have 3/8"Ø truss rods to prevent sag or twist. Gates leaves shall have vertical intermediate bracing so that no vertical members are more than 8 feet apart. Gate leaves over 10 feet shall have a 3/8"Ø truss rod even though the corners are welded. The fence fabric used on the gate shall conform to the fence fabric in the remainder of the fence.

B. Hinges. Hinges shall be weldable steel, cast steel, or malleable iron 180° offset industrial type. The hinges shall not twist or turn under the action of the gate. The gate shall be able to be opened by one person. The hinges shall be galvanized in accordance with the requirements of §719-01 Type I.

C. Latches. Latches, stops, and keepers shall be provided for all gates. Latches for single leaf gates may be a forked latch type. Double leaf gates shall have a plunger bar type latch arranged to engage a stop. Latches shall be capable of being locked and the Contractor shall provide a lock with triplicate keys for each gate. Keepers shall consist of a mechanical device

RIGHT-OF-WAY FENCING (CONTINUED)

for securing the free end of a gate when in the full open position.

D. Gate Posts. Gate posts shall conform to the dimensions shown on the Standard Sheets.

Steel gate posts shall be fabricated from either Class A Schedule 40 Pipe or Class B Steel Tubing conforming to the requirements of §710-10.03 of the Standard Specifications.

Wood gate posts shall be made from wood conforming to the requirements for wood posts and braces as specified in the subsection titled "Fence Posts and Braces" of this specification.

BASIS OF ACCEPTANCE. Fabric acceptance will be based on sampling and testing conducted by the Materials Bureau, in accordance with procedural directives of the Department. The acceptance of all other materials specified in this specification for use in the construction of Right-of Way Fencing will be based on the Manufacturers certification with supplementary sampling and testing at the direction of the Materials Bureau."