

Between Glyndon and Dilworth the line was given storm repairs in 1904, 1907 and 1914, class "A" Eastern Cedar poles being used for replacements.

After these various pieces of storm repair work were completed, the pole line spacing averaged 50 poles per mile.

Between Lake Park and Hawley the line was reconstructed in 1920, using Class "A" Eastern Cedar brush-treated poles, spaced 50 per mile. This section was storm-guyed and special "H" pole fixtures were erected at this time. This work was also necessitated by reason of a heavy sleet storm.

In 1923 the entire section between 3 miles west of Lake Park and Dilworth was given heavy repairs, at which time certain partial replacements of defective poles were made with class "A" butt-tank-treated Western Cedar poles.

Between Lake Park and Hawley the line carries from 28 to 29 wires, attached on 10-ft. crossarms.

Between Hawley and Glyndon the line carries 28 wires on crossarms and 1 wire on a pole bracket.

Between Glyndon and Dilworth the line carries 33 to 35 wires on crossarms.

The Railway Company's automatic signal arm and wires are located in the fifth gain all the way between Lake Park and Dilworth.

A recent inspection of this pole line shows that 45% of the poles are defective and should be replaced by new ones. Many of the anchor logs are rotted out and require replacement; also a large number of crossarms need replacement.

Proposed

It is planned to give this line repairs by doing the following major items of work:

Replace all defective poles with 25-ft. butt-tank-treated Western Cedar poles for the body of the line; longer poles to be used for grading and clearance.

Between Glyndon and Dilworth cable pole, where the body of the line consists of 30-ft. poles, defective poles will be reset, provided a clearance of 10 ft. can be obtained for the wires on the 5th arm.

Pole spacing will be maintained substantially as at present, curves will be arranged on the corner and tangent plan and a clearance will be provided for 5 crossarms.

Between Hawley and Dilworth "H" pole fixtures will be installed so as to replace about every fifth one of the existing storm-guyed poles, i.e. about 1 mile apart.

There are several jogs in the line between Hawley and Glyndon (especially between M.P.'s 244 and 248) that will be straightened out.

The iron wires through the Dilworth yards are badly rusted and will be replaced by No. 9 B'S gage copper wire between Mile Post 2 plus 30 poles and the Dilworth office cable pole, distance about 3900 ft.

Crossarms will be replaced or re-used as follows:

Section 3 miles west of Lake Park to Glyndon:

East of Hawley:

Re-use all arms that are found to be in good condition.

Between Hawley and Glyndon:

All new poles will be fitted with new 10-ft. 10-pin crossarms in the first, second, third and fourth gains; the signal arms to be placed in the 5th and re-used as far as practicable.

The crossarms in the second and third gains will be left on poles that are not replaced and the arms will be rebored for 10 pins.

A new 10-ft. 10-pin crossarm will be attached in the fourth gain.

Section between Glyndon & Dilworth Office Cable Pole:

New 10-ft. 10-pin crossarms will be attached on all new poles placed in the line, except that where the 10-ft. 10-pin arms in the fourth gain are found in good condition, they will be re-used.

On the old poles left in the line, the existing 10-ft. arms in the second, third and fourth gains will be left in place. The arms in the second gain will be rebored for 10 pins where found necessary. All of the 6-pin crossarms will be removed from the third gain and will be replaced by 10-ft. 10-pin arms.

The following changes will be made in the anchors:

All of the present 4-ft. anchors will be replaced by 5/8" x 7' anchors and new creosoted anchor logs will be used in connection with these changes.

All of the present anchor logs fastened to the 8-ft. anchor rods will be replaced by new creosoted anchor logs.

6000-lb. guy strand will be used for all necessary replacements of guy wire.

Wires.

The wires will be transferred and re-arranged to correspond to the arrangement between Staples and Hawley with a view of placing the wires so as to obtain the maximum use of our circuits.

Summarized, the following major items of work will be done:

623 Poles to replace
19 "H" fixtures to set
15 6-ft. anchors to set
265 7-ft. anchors to set
245 6000-lb. guys to attach
15 4000-lb. guys to attach
172 Anchor logs to replace
56 Lightning rods to attach
2230 Single arms to attach
184 Double arms to attach
45 Poles to reset
182 Poles to straighten
46 Poles to move
32 Poles to set deeper
40 Guys to pull
266 Arms to rebore
552 Arms to transfer
171 Spans of brush to cut
43 Spans of trees to cut
805 Miles of slack to pull
805 Miles of wire to transfer
1200 Joints to solder
400 Joints to remove
32 Miles of iron wire to replace with No.9 copper wire

Any other necessary repair work will be done during the progress of this proposed work.

The work will be done under the terms of the General Agreement between the Northern Pacific and the Western Union, dated September 11, 1926.

A summary of the estimated expense is attached and forms part of this AFE.