Fire-control Roads and Motorway Fire Lines in the Lake States Region

Rehabilitation of the devastated timber lands in the Lake States region, under the provisions of the Clarke-McNary law, is primarily a protection and reforestation problem. Destructive logging methods of the past, followed by repeated fires, have rendered nonproductive millions of acres of the one-time highly productive timber lands in northern Michigan, Minnesota, and Wisconsin. Under present conditions the speculative value of these lands is not sufficient to justify the annual carrying charge, or to warrant their retention in private ownership.

Out of this vast area of denuded lands several demonstrational forest units have been created by the National Forest Reservation Commission. The reclamation of these lands under intensive forest management, in order to demonstrate the timber-growing possibilities of the region and to encourage the practice of forestry and the retention of the lands in private ownership for timber production, is the major objective of the Forest Service in the reforestation program now under way.

FIGURE 46.—Standard double firebreak, Huron National Forest.

These areas are largely of the sand-plains type, wherein destructive cutting, followed by numerous fires, has caused a conversion to grass and brush types of extremely high fire hazard. To overcome the fire menace and reduce the fire risk to a minimum, a transportation system of protection roads and motorway fire lines is being developed, together with a plan for the placement of firemen at strategic points, so that it will be possible to reach any portion of a given area within a safe allowable elapsed time after a fire is reported.

For the protection of plantations and such limited areas as support natural reproduction of jack and Norway pine, a system of motorway fire lines is being provided to facilitate fire suppression as an added insurance against loss by fire. This development is restricted, however, to the sand-plains areas of extremely high fire hazard, and the fire lines are so located as to block out areas of approximately 1 square mile. The fire lines consist of two graded strips, each 8 feet wide, having a 12-foot strip between them, which is cleared and otherwise developed to a low-standard motorway, suitable for truck travel at speeds of 10 to 15 miles per hour. The fire-line strips are so graded as to expose the mineral soil and are kept free of vegetation, leaves, and other accumulations of inflammable material by disking. They are designed to serve the dual purpose of a place to make a stand against an approaching fire, by back-firing or otherwise, and a low-speed road for the transportation of men, water, and other fire-fighting equipment.

The construction work is performed with caterpillar-type tractors and graders. Except to remove large stumps, very little blasting, clearing, or other hand work is required (fig. 46).

Some 300 miles of motorway fire lines have been constructed at an average cost of $158 per mile. A total of 1,100 miles, estimated to cost $165,000, is planned for the protection of the existing and proposed planting areas within the several forest units now under Forest Service administration.

Maintenance work is done on the fire-line strips once or twice each season, with a light track-type tractor and a tandem disk, at an average cost of $1 per mile of double line, per maintenance operation (fig. 47).

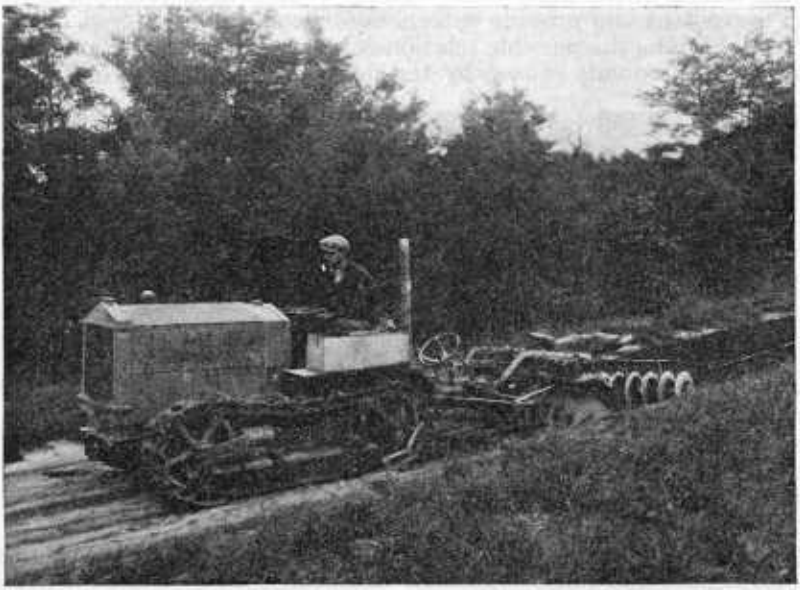

FIGURE 47.—Fire-line maintenance with tractor and disk.

The motorway fire-line system is being further supplemented with a sufficient mileage of somewhat higher speed protection roads to afford rapid transportation of fire crews and fire-fighting equipment. Such roads are suitable for light-car travel at speeds of 20 to 30 miles per

FIGURE 48.—Newly constructed protection road widened for fire control.

hour and truck speeds of 15 to 25 miles per hour. Within the areas of high fire hazard and risk these roads are turnpiked to a 26-foot width, and are kept clean of vegetation by grader maintenance, to insure their usefulness as a firebreak. During 1931, 160 miles of road of this type were improved or constructed to this standard at an average cost of $320 per mile (fig. 48).

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