

# Organization of Railroad Signal Departments\*

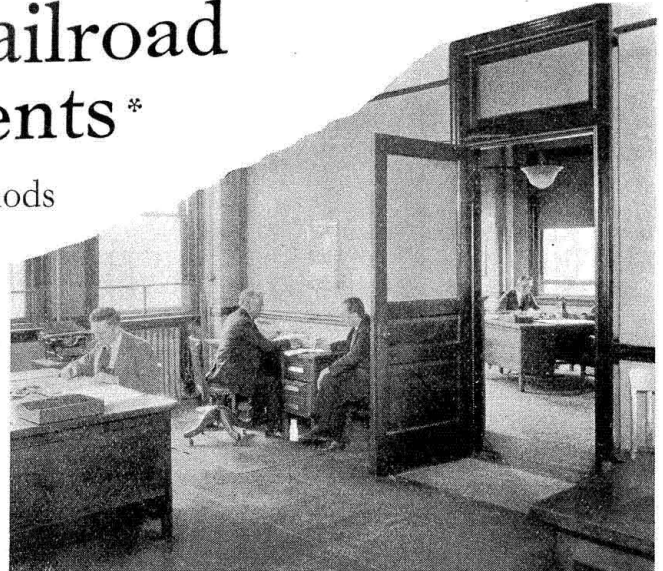
Study shows decided variations in methods of supervising installation, maintenance and operation of signaling facilities.

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**T**HE question of the organization of the signaling branch of railway work is one which has received very little, if any, literary attention. I am going to submit a brief outline only of what is being done in other countries. It must, of course, be understood that in each country conditions vary and usually organizations are planned to meet these conditions.

Railway signaling had its birth, I believe, in the civil engineering departments; anyway, as a general rule, such was the case, and, for that reason, signaling has been looked upon as part and parcel of the per-



It might be as well at this stage to compare the organizations of two great railway systems in Canada, the Canadian Pacific and the Canadian National. Fig. 1 shows the organization tree of the former and Fig. 2 that of the latter.

## Canadian Railways

The Canadian Pacific system is divided into two districts: East and West, with a signal engineer for each district; they report to the engineer of maintenance of way; one being located for Eastern lines at Montreal and one for Western lines at Winnipeg. The signal engineers act as advisory officers; they also prepare plans and estimates for new work, control the issues of stores for maintenance purposes and carry out inspections of new installations. The actual maintenance work is the responsibility of signal supervisors who report to the general superintendents; the former confer with the district signal engineer on technical matters only. The supervisors of signals also carry out a certain amount of new

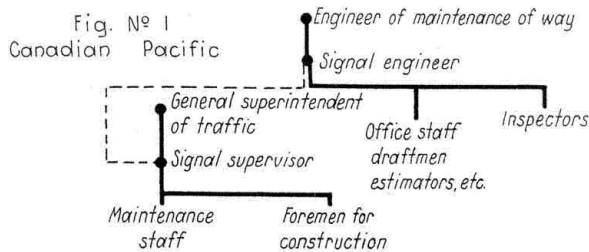


Fig. 1—Canadian Pacific signal organization

manent way work; with few exceptions, it has continued with the civil engineer.

In the beginning the apparatus used and the means of operation were very crude, and were principally of a mechanical nature. When electricity began to play its part, the telegraph engineer was made responsible in most instances for such devices. The result has been that two sections of one branch of engineering have grown up side by side having their own distinct chiefs, but they in turn report to separate heads of departments.

Such an organization did not cause much inconvenience until the introduction of what may be termed "modern signaling." I mean by that, power, track circuiting and automatic. With the employment of these new devices it would appear rather difficult specifically to define the responsibilities between the signal engineer and the telegraph superintendent. In new countries and on new railways, the tendency has been to a great extent to keep everything that appertains to signaling under the signal engineer, or to combine the duties of the signal engineer and telegraph superintendent. Where a fresh start is to be made, there is no great difficulty in planning out a suitable organization, particularly as there would be no sentimental reasons or prejudices to contend with.

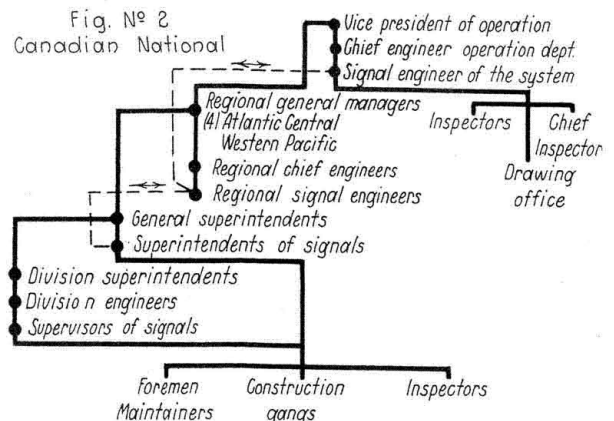


Fig. 2—Canadian National signal organization

construction work. The signaling staff has no jurisdiction over telegraph and telephone work or station and yard lighting.

On the Canadian National the signal engineer of the system reports to the chief engineer, operation department, who, in turn, reports to the vice-president of operation. The signal engineer is responsible for the general signaling policy over the whole system

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