

man in charge of the shop, before an accident happens, and ask him to supply proper guard.

"Avoid jumping upon moving cars or engines. Your work does not require it and you cannot afford to take the risk.

"Never strike tempered steel with hammer or other metal object. Many eyes are injured and destroyed from this cause every year."

In addition to the above which are posted in the shops, there are corresponding "memory gems" for the other branches of

railroading, each emphasizing the special risks which that class is liable to, with cautionary remarks thereon.

"The "safety first" movement has been in use such a short time on the Michigan Central Rd. that no definite conclusion as to the efficacy of the scheme can as yet have been deduced, but indications point to its success if carefully followed out. It will be interesting to observe the extent to which the accidents will be reduced, as reflected in the accident reports compiled by the company in future.

Negotiations are under way to obtain the necessary authority for construction in New Hampshire.

As indicated by the foregoing, when all the projected construction is completed the G.T.R. will have a direct line from Montreal to Boston, a short line from Boston to Providence which will form part of a through rail and water route between Boston and New York, and a direct route from Montreal and northern New England to tidewater at Providence through the most prosperous sections of Massachusetts and Rhode Island. The branch between Douglass and Worcester, Mass., will also tap a rich manufacturing region.

The line between Palmer and Providence, which is now under construction, will be a single track for the present, but no expense is being spared to produce a road that can be operated at maximum economy. It extends in a general southeastern direction, passing through the cities of Southbridge, Webster and Blackstone, Mass., thence proceeding directly from Woonsocket to Providence, Rhode Island. In Massachusetts there are 57.69 miles of main line and 7.45 miles of siding. In Rhode Island there is a passenger line from Woonsocket

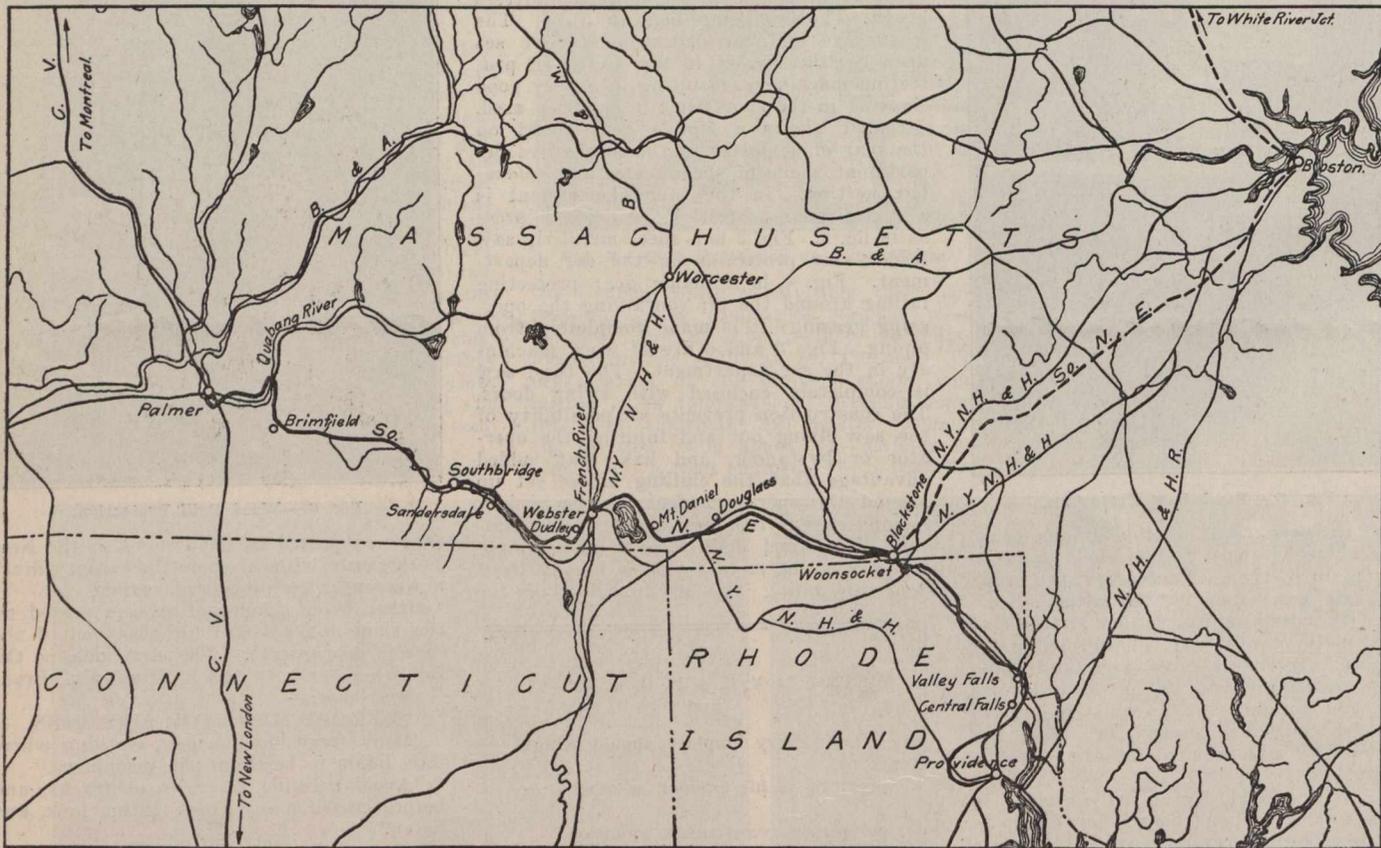
The Grand Trunk Railway Palmer-Providence Line in New England.

By H. Cole Estep, Engineer of Construction.

Contracts have recently been signed and construction begun on the new line of the Southern New England Ry., a subsidiary of the Grand Trunk Ry. Co., which is to extend from a junction with the Central Vermont Ry. in Palmer, Mass., to tidewater terminals at Providence, R.I. The new road, although important in itself, is

through Nashua, N.H., to Boston, 133 3/4 miles. In all, these projects will require approximately 275 miles of main line, together with the numerous sidings and industrial spurs and extensive terminals in Providence and Boston.

The Palmer-Providence line in Massachusetts is being constructed under permission



The G.T.R.'s Palmer-Providence Line and Proposed Boston Line.

only a part of a general scheme which has been developed by E. H. Fitzhugh, President of the G.T.R. properties in New England, for the extension of this system into the rich commercial territory in Rhode Island, New Hampshire and Massachusetts, including the city of Boston, hitherto occupied almost exclusively by the New York, New Haven & Hartford Rd. and its affiliated interests. The G.T.R. plans, in addition to the Palmer-Providence line, include a line of 35.9 miles from Blackstone, Mass., a station on the new road 17 miles north of Providence, to Boston; also another branch from Douglass on the Palmer-Providence line to Worcester, Mass., 21 miles; and finally a road extending south-eastward from a junction with the Central Vermont Ry. at White River Junction, Vt.,

of the state railway commission; the construction of the other lines in Massachusetts, including the Boston terminals, has been authorized by a special act of the legislature; and similar legislative authority has been obtained for the work in Rhode Island. The Massachusetts law provides that the various lines authorized must be located within one year, relocations being permitted; construction must begin within a year from the time of filing the location, and be completed in three years. Under certain conditions the state railway commission is granted the power to extend these periods. Two companies have been organized for construction purposes, one in Massachusetts, the Southern New England Railroad Corporation, and the one in Rhode Island, the Southern New England Ry. Co.

to the Union station at Providence, 17.13 miles, and a freight line from a junction with the passenger line in North Providence to docks at Fielas Point, 9.89 miles, together with 37.76 miles of sidings and a special spur of 0.25 miles on Allen's avenue. The work, therefore, includes 84.71 miles of main line and 45.45 miles of sidings and spurs, or 130.16 miles in all. The most extensive switch yards and terminals will, of course, be situated at Providence.

As soon as authority for construction had been obtained and the line definitely located, the work of obtaining right-of-way began. This was a much more difficult task than it is in less thickly settled portions of the country, and many perplexing obstacles had to be surmounted. The Massachusetts law limits the width of the