

In rock excavations, the contracts provide that the slopes shall be three inches to one foot; and the embankments are required to have slopes of one and a half horizontal to one perpendicular, excepting where formed of rock, when they are made one to one.

*Viaducts and Bridges.*—There are a number of important structures of this kind on the road. Of those already completed on the Main line, the Bedford viaduct across the Sackville river has five spans of 50 feet each, and is 52 feet in height. The viaduct over Fletcher's river has three spans, the centre one being 50 feet, and the end ones 30 feet each, at an elevation of 32 feet above the river. The superstructures of both are composed of wrought iron tubular girders. The Bridge across Nine Mile river, is of timber, 635 feet in length, in spans of 30 feet, and is about 20 feet in height. The bridge across Barney's brook has a timber superstructure of three spans of 30 feet, supported on stone piers and abutments at a height of 40 feet above the water. And the Shubenacadie river is crossed by a viaduct composed of wrought iron girders resting on stone piers and abutments in three spans of 40 feet and 22 feet in height.

On the portion of the Main road under construction, there are two large viaducts; one across the Shubenacadie river of three spans of 100 feet each and 35 feet in height, and the other across the Stewiacke river of two spans of 100 feet, 32 feet above the river; the superstructures of both of wrought iron girders.

On the Windsor branch the bridge across the Sackville River has three spans of 30 feet, at a height of 40 feet above the river. Section three viaduct has seven spans of 30 feet, from 25 to 30 feet in height. The Big Bog brook viaduct has five spans of 50 feet and is 95 feet in height. The St. Croix viaduct five spans, one of 70 feet and four of 30 feet each, at a height of 65 feet above the river. The superstructures of Sackville river bridge and Section 3 viaduct are composed of timber, that of the Big Bog brook of wrought iron girders, and the St. Croix viaduct has the centre span of iron and the others of timber.

All the other road and brook bridges, both on the Main line and Windsor branch, have timber superstructures supported on stone piers and abutments.

*Railway Superstructure.*—This is constructed on a plan the same as is in use on a number of railways in Great Britain. The iron rails of 63 pounds per yard are supported at intervals, averaging about 24 feet, by cast iron chairs, weighing 33 pounds each at the rail joints, and twenty-two pounds intermediate. The chairs rest upon wooden cross sleepers 10 feet long, 10 inches wide, and 44 inches thick; wooden side keys are used for securing the rails to the chairs.

Wharves have been constructed at the Halifax and at the Windsor termini of the road. That at Windsor, from the great rise of the tide in the Avon river, is necessarily of great height, and has been quite costly; but these, the station buildings, rolling stock, &c., will be referred to again.

With this brief notice of the leading characteristics of the road, I will now proceed to give the results of the investigations made as to the expenditures, with an estimate of the probable amount required to complete the work, and reserve such remarks as I may wish to make on the plan of construction and present condition of the work, to a subsequent part of this report,—and first as to the expenditures.

The reports heretofore furnished by the Railway Board have contained but little information, as to the details of the expenditures, in an intelligible form; further than that so much money had been paid out. The quarterly balances from the Ledger, and the journal entries of the running expenses, which have been published, give but little insight to those wishing to become acquainted with the cost and financial affairs of the road.