

ble streams, as is also the canal at the points of passage.

The low grounds of Manokin river, Wicomico creek, Marshy Hope branch, and Chester river, are extensive where they are crossed by the line.

At most, if not all of the rivers north of Marshy Hope, the opposite banks are of very unequal height—abrupt on one side and sloping gradually from the general level of the country on the other—the abrupt banks of the more northern rivers are very high, and in some cases they are more elevated than the ground near them.

From Marshy Hope to Sassafras the general profile of the ground is very slightly undulating, to the southward of Wicomico and Manokin, it is nearly level, and the formation of the road bed will not be expensive. It is to the great extent of the bridging and embankment as well as to the quantity of extra cutting necessary to reduce the grades to or nearly to the inclination of the angle of repose at the passage of the rivers may be attributed a very considerable portion of the cost of the work, south of Sassafras.

North of Sassafras river the country is more rolling than that which lies south of it, and it is upon this part of the line, therefore, that in proportion to its length, the quantity of excavation and embankment is greatest.

It was intended, in arranging the grades for the preliminary estimates that none of them should exceed twenty feet to the mile; it has subsequently been found on calculating the rate of inclination that this rule has not been in every case rigidly observed: The alterations which it may be found hereafter necessary to make in order to fulfil this condition on the more favorable ground over which the line may be made to pass, will not, I am persuaded, involve any labor beyond that which is given in the estimates, and it is even believed, with good reason, that the maximum grade may be reduced to seventeen or eighteen feet per mile, without much additional expense. In taking as the basis of the estimates of cost the line which I have been describing, it has not been my design to indicate a preference in its favor, over the other routes which have been partially surveyed or examined or which may have been suggested to the Commissioners. This line has