

this cause, the quantity of masonry on this Division has been more than doubled, and was required to be of a much more expensive character than at first contemplated.

The original specification, in several places, simply requiring box culverts of from three to four feet span, which were found to be insufficient, and this kind of culvert being unsuitable for large sized openings, six feet *arches* had to be substituted in many places; thus requiring not only an increase in the quantity, but also involving the necessity of a more expensive description of masonry.

It would have been more satisfactory, had these facts been known at first; but the additions, which now come under the denomination of "extras," have not increased the *ultimate cost* of the Road beyond what the estimate would have shewn, if these contingencies had been added. If they had been taken into account at the time of the letting, they would have been provided for in the contract. They were, however, determined upon before the work had progressed so far as to involve loss; so that the expense of them is but little greater in the one case than in the other, as there has been little or no change of Line, and no work has been thrown away.

The advantages of these improvements are, that in the parts of the Road where the gradients have been reduced, the Passenger Trains will travel with less risk; the danger from collisions will be greatly lessened, the view being uninterrupted by intervening summits; a Freight Engine will carry over the whole Road a train increased by two additional cars, with but little increase of expense;* the Road will be perfectly safe from the action of floods; the permanency of the structures, and the security of life, will be greatly increased; and the masonry of all important structures is of that permanent description which will last without delapidation or failure.

It is true, these necessary changes were attended with a considerable outlay in the items of grading and masonry; but this work once done, will hereafter have but little contingent expense attending it, and the beneficial effects will last during the continuance of the road. On the other hand, if they had not been made, the heavier gradients would have governed the traffic during all future time. It is therefore believed that the expenditure is judicious.

* See Appendix A. at end of Report.