

cascades occur. These lakes, or lakelike expansions, afford a natural navigation of the highest class over the larger proportion of the route. The concentration of the descent in rapids or cascades in a series of steps with long intervening level stretches, minimizes the amount of canalizing to be done, as in many cases no more than a simple lock is required.

Added to this, over a great portion of the route the banks are bold and rocky, often precipitous, and the conditions every way favourable to the raising of existing water-levels by means of dams and the deepening of the channel thereby without having recourse to excavation.

The existence of alternative channels at most of the large rapids on the Ottawa River will be of service in the execution of works to be constructed, and will be of importance in the regulation of the waters for navigation, and the preservation of structures during flood.

Conditions dependent upon the state of settlement of the country are also most favourable. The present location of railways will permit supplies, material, stone for locks, cement, machinery, plant, etc. to be deposited within a short distance of any point on the whole route, and will not only lessen the cost of transportation, but will permit work to be carried on along the whole route simultaneously. The use of powerful explosives, and the most modern appliances in dredging, excavating, and construction machinery will lead to great savings in cost as compared with the methods in vogue at the time estimates of cost were made some years ago, and will offset to some extent the added cost of the larger scale of navigation.

The need of the Ottawa waterway both as a through route, and for the development of local resources is vastly greater than ever before. The marvellous growth of the Western States and our own Northwest in the last quarter of a century and the consequent increase of commerce on the Great Lakes, have given rise to a freight traffic between the Great Lakes and the sea-board, already of enormous extent and rapidly increasing, such as must in the near future tax all possible means of transportation, and in the conveyance of which the Ottawa River