

course, though not as a part of the Seaway project itself, the channels in the upper stretches of the waterway are to be deepened under an extensive programme of river improvements to be undertaken by the United States Government.

Just a word now as to the cost. The capital budget of the Seaway Authority, which I recently tabled in Parliament, provides for expenditures of nearly \$285,000,000 for the works it is to carry out, while the works in the International Rapids section being undertaken by the United States are likely to cost about \$125,000,000, making, in round figures, a total of, say, \$400,000,000. If we add to this the cost of the power development in the International Rapids section, the grand total for the seaway and power project will, in round figures, be close to \$1,000,000,000.

Time does not permit me to discuss very fully the effects which the Seaway is likely to have upon the pattern of transportation on the North American continent. The subject is much too vast and far too complex to be covered in a few simple phrases, but a few comments may be made.

The first point, which is of obvious importance, is that in place of the 22 locks of the present St. Lawrence canal system, the Seaway will have only 7. This, of course, will reduce materially the time which is now occupied in passing through the locks, and savings in time will reduce costs of operation for shipping.

The deepening of the waterway between Montreal and Prescott will enable the deep-draught vessels now operating in the Great Lakes to move bulk cargoes from one end of the waterway to the other. This is of particular importance because of the efficiency of the lakers, and of the desirability of using them for the carriage of grain from the Lakehead to the Lower St. Lawrence ports. At present, because of the limiting depth of the St. Lawrence canals, only the so-called "canallers" can operate over the whole length of the waterway. The canallers, however, can carry only 2,000 to 3,000 tons of cargo, or 70,000 to 80,000 bushels of grain, and need a crew of 22 to 25 for their operation. The lakers, on the other hand, are capable of carrying 20,000 to 25,000 tons of cargo, or 700,000 to 800,000 bushels of grain; but need a crew of only 32 to 35. The laker is obviously a much more efficient carrier, and its use in place of the smaller vessels should reduce the cost of carrying grain from the Lakehead to ports on the St. Lawrence from which it will be carried overseas. The use of the larger vessel for the whole distance - instead of just to some intermediate point, as at present - will also have the advantage of eliminating the costs of trans-shipment at the intermediate point.