For future extensions the plans call for several additional units. During the twelve months ending July 31st, 1916, 29,500,000 bushels of grain passed through this port.

Port McNicoll.—Port McNicoll harbor is also on the most easterly point of the Georgian Bay. The harbor was formerly called Victoria Harbor. The distance from Midland harbor terminals is about 2¾ miles. This is the Canadian Pacific Railway grain terminal on the Georgian Bay, connecting with their railway grain route to Montreal. The company has extensive machine shops and a large round house at this point.

The population of Port McNicoll, together with Victoria Harbor, is about 2,000.

The Canadian Pacific Railway Company has built at this place deep-water wharves for about eleven vessels and also a large freight shed 700 feet long and a flour shed 800 feet long. The type of construction of the wharves varies considerably. The portion in front of the elevator is of solid concrete; another portion is of concrete superstructure on concrete cribs, and a further portion of concrete superstructure on timber cribs.

The scheme proposed by the Canadian Pacific Railway Company for this grain terminal is a very complete and comprehensive one. It is designed as a lake terminal of the most permanent and up-to-date type and every care was taken to plan the work to suit this end and to take every advantage of the natural features of the site.

The important pier, taking in Maple Island, is designed to be 3,000 feet long and 650 feet wide. The northwest face for the whole length has been completed and the first two units of the elevator with two marine legs, power house and tracks, sheds and complete railway terminals built and put into operation.

The scheme includes four additional units of 2,000,000 bushels capacity each, and the completion of the southeast face of the pier.

For an elevator system, economical, quick handling, large storage capacity, splendid railway terminals, permanent, and capacity for future extensions, port authorities would do well to watch this important development.

During the twelve months ending July 31st, 1916, 34,300,000 bushels of grain passed through this port.

Adjoining the grain pier is a basin 600 feet wide and 25 feet deep. The bulkhead wharf on the opposite side of the basin is 3,500 feet long. On this, besides the railway terminals, flour shed and freight shed, there is a passenger station for connecting the upper lake service with the Canadian Pacific Railway.

Midland Bay, on which the harbors of Midland and Port McNicoll are situated, has an excellent reputation as to weather, fogs and ice conditions. They have never known ice shoves in the harbors, and dredging, after excavation has been done, is not required.

These two harbors, situated on the water-front, almost adjoining, are very high-class examples of lake terminals. It is expected that large storage additions will be added to the elevators with the idea of shipping as much of the summer's crop as possible across the lake before the navigation season is closed for the winter. The elevators are the most perfect examples of design and construction for efficient working, cheap insurance and careful handling.

The regular business capacity of the elevators at each of the railway terminals is receiving from vessels, storing, and shipping by railway cars at the rate of from 300,000 to 400,000 bushels per day.

Lake Ports to Ocean Ports.—During the open season of navigation, from 1st May to end of November, the grain is shipped by Canadian Pacific Railway to Montreal and by Grand Trunk Railway, partially to Montreal and partially to Portland.

There is a great advantage in grain storage at Georgian Bay locations. The distance is from 360 to 400 miles from Montreal, so that regular shipments may be made at lake elevators as required at Montreal. The two systems at Montreal and the Georgian Bay regularly take care of each other's business.

The railway routes from Georgian Bay ports to Midland and Port McNicoll to Montreal, are excellent for solid, heavy grain trains. These ports also furnish winter business for the two roads in question for their winter ports at Portland, Maine, and St. John, N.B.

The Grand Trunk Railway also have a grain route via Depot Harbor, Ottawa and Montreal. This route is the shortest of all lake and rail routes. The harbor at Parry Sound is excellent, but as the railway runs over the height of land, the grades are not so favorable for heavy grain loads.

Georgian Bay Ports.—The almost adjoining port terminals on the Georgian Bay, two units giving every known modern type of perfection, are open to the same criticism of port authorities as the twin ports at the Head of the Lakes.

The two large modern elevators in Montreal harbor, Nos. 1 and 2, working as one unit, are showing economic advantages worthy of note, but probably the best features are: the one organization, the one operating railway terminal and the combination of the two stores capable of being drawn upon to complete orders as required. The result is despatch and economy and general satisfaction.

Port authorities may well study the question, with a view of some remedy, for the general non-economic unit system of railway port terminals.

CANADIAN SOCIETY OF CIVIL ENGINEERS.

A meeting of the Society was held on October 5th, when W. G. Chace, M.Can.Soc.C.E., and M. V. Sauer, M.Can.Soc.C.E., read a paper on "The Aqueduct for the Greater Winnipeg Water District." Accompanying the paper was a supplement entitled "Studies Regarding Concrete Mixers Employed in the Work," by W. G. Chace and D. L. McLean, A.M.Can.Soc.C.E.

CANADIAN SOCIETY OF CIVIL ENGINEERS, MANITOBA BRANCH.

The regular monthly meeting of the General Section was held in the University of Manitoba, Broadway, Winnipeg, on Thursday, October 5th, at 8.15 p.m., when Professor R. C. Wallace, of the University of Manitoba, read a paper on "Mining Developments in Manitoba."

A bridge 5.5 miles long and costing $22,000,000 is planned to be built by San Francisco across the bay to Oakland. It will be a double-decker, carrying four railway tracks and three roadways. This will be the most costly bridge in the world.