

The principal engineering works of the controlled single-stage project planned for the International Rapids Section, above Cornwall, Ontario, are the following:

1. A control dam in the vicinity of Iroquois Point.
2. A dam in the Long Sault Rapids at the head of Barnhart Island; and two power houses, one on either side of the international boundary, at the foot of Barnhart Island.
3. A side canal, with one lock on the United States mainland to carry navigation around the control dam; and a side canal, with one guard gate and two locks, on the United States mainland south of Barnhart Island, to carry navigation from above the main Long Sault Dam to the river south of Cornwall Island.
4. Dykes, where necessary, on the United States and Canadian sides of the boundary to retain the pool level above the Long Sault Dam.
5. A channel enlargement from the head of Galop Island to below Lotus Island.
6. A channel enlargement between Lotus Island and the control dam, and from above Point Three Points to below Ogden Island.
7. The necessary railroad and highway modifications on either side of the international boundary.
8. The necessary works to permit the continuance of the 14-foot navigation on the Canadian side around the control dam and from the pool above the Long Sault Dam to connect with the existing Cornwall Canal.

In the Lake St. Francis Section, a distance of 26 miles from the foot of Cornwall Island to the foot of Lake St. Francis, the provision of a 27-foot channel would mean the removal of eight projecting points and the excavation of a channel 2,000 feet in length opposite the village of Lancaster.

In the Soulanges Section, an 18-mile stretch between Lake St. Francis and Lake St. Louis, it would be necessary to dredge an entrance channel from deep water in Lake St. Francis to the entrance of the Beauharnois Power Canal, and to excavate one short side canal, with locks, to pass shipping from the Power Canal to Lake St. Louis. Two fixed bridges over the Power Canal would be replaced by movable bridges, a total of four movable bridges being required in this Section.

The Lachine Section, extending from deep water at the head of Lake St. Louis to Montreal Harbour, is the subject of a report by a Board of Engineers appointed in 1947. The Board's report was released by the Minister of Transport late in 1948, and includes several alternative schemes of development which would provide the necessary navigation improvements, with or without concurrent power development.