

## APPENDIX

ments installed on the Canadian side at Niagara Falls. It was commenced in 1902, the initial installation consisting of an intake, outer forebay, screen house, inner forebay, gate house, an 18 foot diameter steel main conduit 6,500 feet long terminating in an overflow, a six unit power house and a distributing station. The intake, forebay, screen and gate houses were completed for the ultimate development, the gate house being arranged to serve three main conduits. The three above mentioned structures are built entirely of concrete reinforced where necessary with steel, the superstructures presenting a massive and handsome appearance. The overflow building has a concrete substructure, the superstructure being of stone and designed to harmonize with the park surroundings. The distributing station is more ornate in character, being built of brick and cut stone. Water for the turbines is diverted from the Niagara River above the Falls into the outer forebay by means of a submerged concrete spill dam, reaching out from the Canadian shore, which also forms a discharge for ice or débris entering the forebay through its intake. The latter is 600 feet long and is constructed both as a wall of submerged arches and also as an ice fender.

Subsequent additions to the plant, prior to 1917, in which year it was taken over and operated by the Hydro-Electric Power Commission, covered the addition of a second main conduit running parallel to and having the same sectional area as No. 1 conduit, but constructed of reinforced concrete with an oblate section, and terminating in a reinforced concrete differential surge tank, the external features of which bear imposing architectural treatment. Eight additional units were installed, together with a central exciter power plant.

The last final extension to the plant, completed early in 1919, was designed and constructed by the engineering staff of the Hydro-Electric Power Commission and consisted of a third main conduit 13 feet 6 inches diameter, running parallel to