



One of the electric locomotives. Note the double trolley arrangement, two poles on each side

be removed readily by a locomotive crane when it is necessary to shift the track.

In the Whirlpool yards is located a large repair shop containing drills, shapers, planers, lathes, forges, steam-hammers and wood-working machines. The Commission has built about eighty buildings, including bunk houses, freight houses, offices, machine shop, storehouses, substation, etc.; also a number of buildings are used which were on various parcels of purchased property.

Gunite Buildings

Most of the buildings are of frame construction, but are being "gunited" on the outside over tar paper and wire mesh, using 1 to 3 mix of cement and sand. Sharp concrete sand is being used and the "gunite" applied with cement-guns. The substation, machine shop and all of the more important buildings have already been fireproofed in this manner, and it is the intention to "gunite" most of the other buildings. The bunkhouses are comfortably arranged on the cottage plan.

The crushing plant is located on the forebay. It is equipped with three secondary crushers of the gyratory type and one 84 in. x 60 in. Taylor jaw

crusher which will have a minimum capacity of 2,000 cubic yards of crushed stone per day.

The rock excavation at the forebay is loaded into skips which are picked up by a locomotive crane and which dump into a bin. A belt conveyor carries the stone from the bin to the crushers and from thence by another conveyor to the cars.

There are four railway bridges to be constructed over the canal, one for the Niagara, St. Catharines and Toronto Railway (electric), one for the Wabash Railroad, one for the Michigan Central Railroad, and one for the Grand Trunk and Michigan Central Railroads. These will be reinforced concrete arch bridges. There will also have to be constructed a number of highways and foot bridges to carry the various roads across the canal. In the concrete work to date, both Canada and St. Mary's cement have been used.

Several hydraulic models are being prepared at Dufferin Islands, near the Ontario Power Company's intake in the Niagara River. These models are based on designs prepared by the Commission and are for the purpose of studying the design of the intake at Hog Island. The design of the intake works will be based upon the results of these studies.