

Owing to the difficulty of obtaining right-of-way on certain property, the line is somewhat sinuous but it is practically a surface line and was constructed cheaply.

The pit consists of a bank some 40 feet high above the

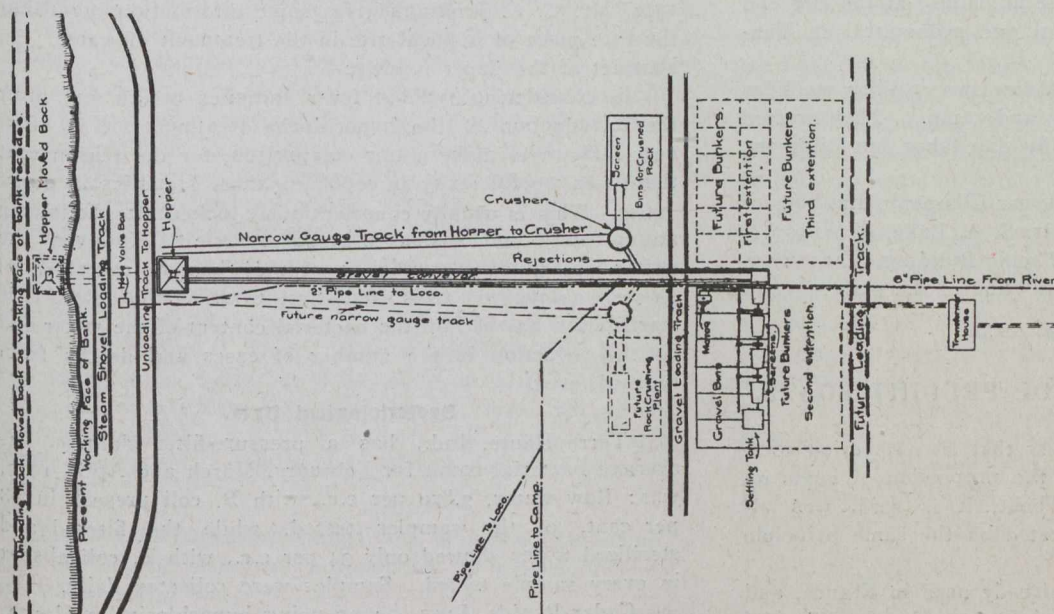


Fig. 2.—General Arrangement of the Gravel Washing and Screening Plant.

general level which gives an ideal steam shovel working face, the deposit extending over some 160 acres.

The method of operation is obvious from the layout. The steam shovel loads a 6-yard side dump car which is

The bunkers are arranged to discharge into the cars on the loading track alongside, the cars being pushed in by the larger loop.

As will be seen from the plan, extensions may be made to any desired capacity and the machinery duplicated without alteration or interference with the present layout. The capacity is 500 yards of gravel and 200 yards of crushed rock per 10-hour day. On the plan is shown the order of extension up to 2,000 yards of gravel and 400 yards of crushed rock.

The water used by the plant for the boilers, camp, etc., is supplied by a three stage, 4-in. centrifugal pump, located in the pump house at the Coquitlam River, a distance of 3,300 feet, and is driven by a 35-h.p. motor. The wiring is arranged so that the motor must be started from the pump-house, but may be shut down from the camp if necessary. The pipe line is a 6-in.

wood pipe. Power is supplied by the B.C.E. Railway Company, at 2,200 volts, to the transformer house, where it is stepped down and fed through the switchboard to the several motors and lighting circuit at 220 volts.

The distributing branch is located exceptionally well for local deliveries, it being right in the heart of the city of Vancouver. The trestle, as shown in Fig. 3, has a grade of 2.5 per cent. on the approach to obtain headroom for the scows underneath bridge and for discharging hopper. The cars of graded gravel are placed over the hopper and discharged, the hopper having the capacity of one car. While the car is being moved and the next one spotted, the gravel has passed out of the hopper to a 24-in. belt conveyer which conveys it to the bunkers and discharges by tripper into the respective bins. The cars are placed by the C.P.R. switching engine at the top of the approach trestle, from which point they are spotted by a motor-driven car haul. Trackage is provided along one side of the bins so that gravel may be shipped from the bunkers by street railway or other cars if required.

The bin storage capacity is 1,200 yards and is arranged for team delivery. Here, again, the capacity may be increased without much alteration to the present layout, the only change being an extension to the belt conveyer and moving the conveyer head drive as bunkers extend.

Although in two branches the plant easily competes with the scow delivery usual in Vancouver, it being greatly favored by the non-

liability of being held up by fogs or storms. An interesting feature at both branches of the plant is the crib type of construction for the bins, which, though not reducing the B.M. of lumber in the structure, yet allows a cheaper class of labor to be employed and requires less time for construction.

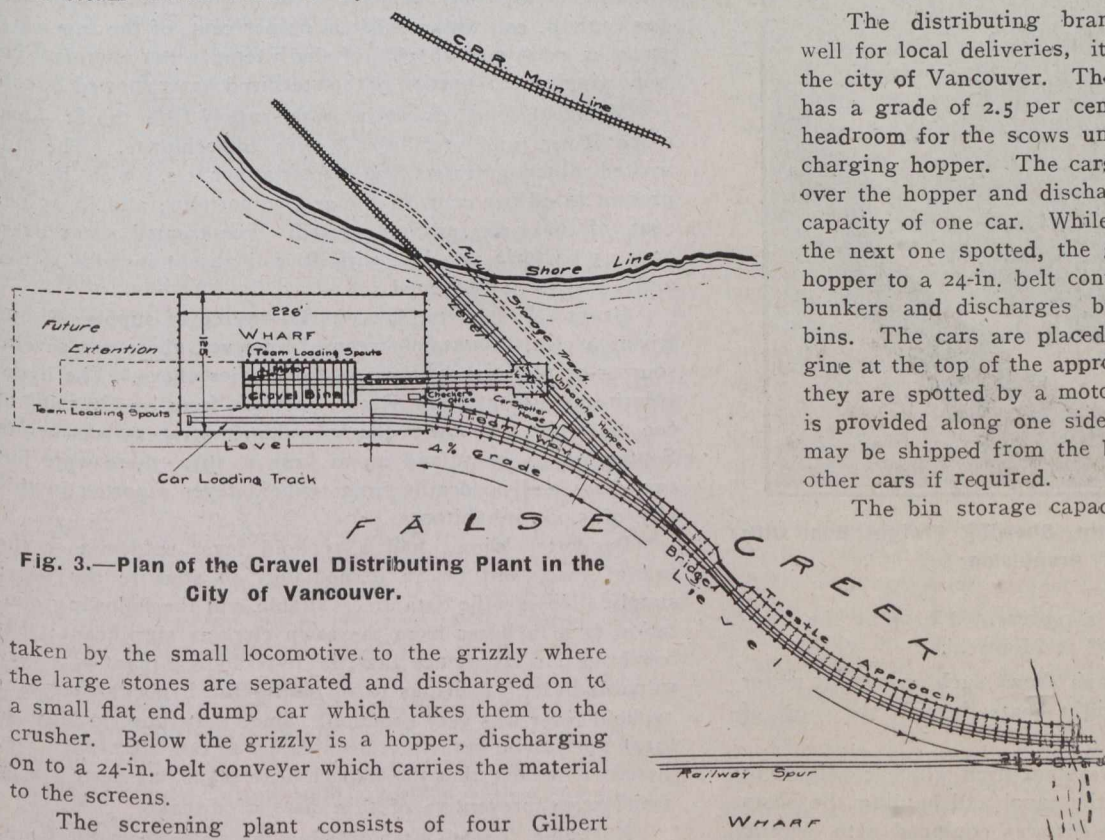


Fig. 3.—Plan of the Gravel Distributing Plant in the City of Vancouver.

taken by the small locomotive to the grizzly where the large stones are separated and discharged on to a small flat end dump car which takes them to the crusher. Below the grizzly is a hopper, discharging on to a 24-in. belt conveyer which carries the material to the screens.

The screening plant consists of four Gilbert screens, 36 in. x 54 in. x 6 ft. 0 in. (driven by a 15 h.p. motor), giving four separations 2 in., 1 in., $\frac{1}{2}$ in., and sand. The sand passes through a gravity settling tank to remove the water. The rejections from the first screen pass by chute to the crusher. After being crushed they are elevated by a chain bucket elevator to the revolving rock screen which separates into three sizes, the rejections being passed back to the crusher for re-crushing.