

to be sunk in the centre of the floor of the building which will allow four gangs of men to work simultaneously, two gangs at the bottom of the shaft, one working west, the other east; and two gangs, one at either end of the tunnel working centrewards.

**Victoria, B.C.**—Several small forces of men are already engaged on the north-west sewer construction at different points along the ravine which runs from Burnside Road down to the Gorge Road and thence to Selkirk water. Arrangements with the C.N.P. Railway for the right-of-way are expected to be successfully concluded so that no delay or postponement of the work will be occasioned, and so that the whole work may be opened in this section in a short time. The next section of the undertaking to be commenced will be the Esquimalt section; and on this excavation work will be more difficult, owing to the more rocky nature of the district.

**Estevan, Sask.**—The experimental plant at Estevan, which the Saskatchewan Government has just lately finished erecting for the purpose of determining the exact value of lignite coal for power purposes, briquetting, etc., is in operation under the management of Mr. S. M. Darling, a well-known expert, under whose supervision the plant has been erected. Mr. Darling has shipped a car of "carbonized lignite fines" to Cape Breton, where this product will be tested as a powdered fuel in the Bettingen boilers of the Dominion Coal Company's plant. The larger sizes of the carbonized lignite it is the intention to use in gas producers to generate electrical energy, and in chain grate furnaces for steam power. It is expected that the result of these tests will solve the power problem of Saskatchewan.

**Regina, Sask.**—Good progress on the power house under construction at Regina has been reported by Superintendent Bull. The building walls, machine foundations, and a small part of the floor in the boiler-room of the new power house have been completed. Partial equipment of machinery boilers and piping is awaiting installation; and it is hoped to have sufficient equipment to operate the first 1,500 k.w. machine installed and housed under a temporary wood building by Christmas. The output of the plant for the past ten months has been 6,017,610 k.w. hours, while for the corresponding ten months of 1912 it was 3,186,938, which shows an increase of 88.8 per cent. The capital expenditure for the ten months was as follows: on the new power house by-law, \$132,418.71, of which \$18,994 has been in wages; on the by-law for electric light and power extension, \$129,589.71, of which \$16,688.10 has been paid in wages.

**Vancouver, B.C.**—Eight of the nineteen steel bridges on the British Columbia section of the Canadian Northern Pacific Railway have been completed, and are available for traffic. Of the remaining eleven, three are at present well under construction, and another has been commenced near Jackass Mountain, 126 miles east of Port Mann, at the present end of steel. One of the three bridges is at Lytton, where the C.N.P. line crosses the Fraser River a mile below the town. It will be 870 feet long, and will be constructed with four plate girder spans and three deck truss spans. Its foundations have been completed, and its superstructure well advanced. A 250-foot viaduct is being constructed in the Black Canyon, 189 miles east of Port Mann, and will be a 210-foot through truss span with a deck plate girder. At mile 81 on the section of the C.N.P. north of Kamloops, a 600-foot bridge is being erected over the North Thompson River at Birch Island, which will have seven spans. Late reports from the engineers in charge state that four of the spans have been placed, and traffic is being handled over the river to mile 90, the present end of steel, by means of a temporary structure.

**Regina, Sask.**—City Engineer McArthur has furnished a report of the works completed by his department during the

past year. A total area of 140,288.5 square yards of pavement at a total cost of \$481,372.12 have been laid. Of this area, 80,874.8 square yards are bitulithic; 58,922.6 square yards, sheet asphalt; and 421.1 square yards, Westrumite. The length of pavement would be about 8 or 9 miles, though the width for residential streets is 24 feet, and otherwise 32 feet. The total length of sewers laid in the city, including the work done on the contracts of the previous year, was 96,936.3 lineal feet, or approximately 18½ miles; and the total cost, \$553,731.84. The total current expenditure of the department, which includes repairs to pavements, walks and sewers, street grading, street cleaning and salaries, was \$85,174.65, which was about \$7,200 over the estimated expenditure for this department. The total expenditure of all the work carried on under the department during the ten months totalled \$1,226,939.36. The total engineering expenses, including salaries for the entire staff and inspectors and all office expenses and supplies, came to \$23,643.68, being less than two per cent. of the cost of the work.

**Calgary, Alta.**—City Electrician Brown submitted on November 27th to Commissioner Graves a report on the estimated receipts and the expenditures for the municipal electric department. The total estimated revenue is given as \$575,000; the total estimated expenditure, \$545,053.01, leaving an estimated surplus of \$29,946.99. Commissioner Graves proposes to use this surplus to help pay for the placing of wires underground. Electric light and power rates are now very low in Calgary, and placing the wires underground will add both security and an improved appearance to the city. An approximate estimate of the required electric light extensions for 1914 was also furnished to the commissioner by Mr. Brown. Approximate costs for these amounted in all to \$350,000, the money to be secured by the customary by-law.

**Kamloops, B.C.**—Recently the Hon. F. W. Aylmer, Dominion Government engineer at Chase, had a conference with City Engineer Wilson, of Kamloops, concerning the proposed wharf extensions and promenade along the Riverside Park waterfront. It is expected that the government may consider, in addition to what it will be asked by the city to undertake in the work the erection of a permanent concrete wall along the waterfront of Riverside Park and the dredging of the river, leaving the city to complete the decking, etc. This would give Kamloops one of the finest river wharves in the Dominion, besides affording easy and safe navigation to steamers at all stages of the water, as well as providing a park promenade and "embankment" that would be well in keeping with the ornamental plans of Riverside Park, as approved by the city, and a magnificent river frontage that would be second to none in the West.

**Vancouver, B.C.**—Mr. M. Swan, M.I.C.E., M.I.M.E., M.C.S.C.E., at one time engineer for the Montreal Harbor Board, and recently returned from South America, where he has been engaged as a government consulting engineer, has made a personal inspection of Vancouver harbor, and also the sites of harbor projects for Greater Vancouver, and has submitted a report to the Vancouver Harbor Commission. He states that Vancouver has in embryo the finest harbor in the world, and that no expense should be spared in developing it and providing proper facilities. He emphasizes the necessity of securing an elevator site and of erecting at once at least a small elevator. He recommends unhesitatingly the widening of the channel to 1,400 feet with a depth in the main channel at low tide of 40 feet. He says that the harbor lines along False Creek should be sharply defined without further delay, and the channel dredged; but points out very emphatically that the dredging must not endanger the basements of the bridge piers now existing. He urges the government to secure water frontage wherever it may be had on the shores of Burrard Inlet or False Creek; and, in re-