

CAMP BORDEN
RAILWAYS, CPR
AND GTR.

Railway Accommodation for Camp Borden.

The laying out by the Dominion Government of the new military camp, named after the Premier of the Dominion, in Simcoe County, has necessitated the building into it of two spur lines, one from the C.P.R. and the other from the G.T.R. The camp lies in the section of Simcoe County through which the Pine River runs, north and east of the G.T.R. line from Beeton to Collingwood, south and west of the G.T.R. line from Allandale to Collingwood, and west of the C.P.R. Toronto-Sudbury line. The two last mentioned lines are the most convenient for access to the camp.

The C.P.R. has built its spur line from Ypres, 57.3 miles from Toronto. It runs for 1.75 miles on the company's own right of way, and then for 2 miles on the Government lands, connecting up with the Government tracks. The building of the line was an exceedingly simple piece of work, there being no gradients to amount to anything, and no bridgework of importance. It was done by the company's own forces. A station building and siding accommodation is being provided. From Toronto to the camp there are 4 trains each week day, 3 extra trains on Saturdays, 1 extra train on Tuesdays and Thursdays, and 3 trains on Sundays. From Camp Borden to Toronto there are 4 trains each week day, 2 extra trains on Saturdays, 1 extra train on Mondays and Thursdays, and 4 trains on Sundays. The running time varies from 1 3/4 hr. to 2 hr. 40 min.

The G.T.R. spur line starts from Angus, 10.60 miles from Allandale, and is 4 miles long, the station being 2.6 miles from Angus. Two sidings, each half a mile long, have been laid at the station; there are also 5 spur tracks for the Ordnance and Army Service Corps, each spur being about 1,600 ft. long, and a 1,900 ft. Y at Angus for turning trains. There is a summer station 400 ft. long, with platforms 800 ft. long, nearing completion. Construction work was started May 11, and was reported to be practically completed June 15. A train service was put in operation June 1, consisting of the Camp Special, leaving Toronto at 6.40 a. m., reaching the camp at 9.10 a. m. and returning at 6 p. m., reaching Toronto at 8.30 p. m. Additional service was to be put on during the march. Special trains are being operated between Allandale and the camp and between Collingwood and the camp.

The Government lines include a belt line round the central part of the location, with spur sidings as required, with which both the C.P.R. and the G.T.R. lines are connected.

Done July 1916

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Examinations Among G. T. R. Motive Power Department Apprentices.

The annual examination of apprentices employed in the G. T. R. motive power department has been completed recently, and awards made in the various competitions connected therewith. For the purpose of fair competition, the 26 stations at which instruction is given throughout the year were divided into four groups, according to the number of apprentices employed at each station. Each group competed for class and individual prizes aggregating \$450. The examinations were set in drawing and mathematics, and were based as nearly as possible upon problems likely to arise throughout the shop work. The following questions are taken from each of the five papers, and serve to convey an idea of the work accomplished:

"A $\frac{1}{2}$ in. drill when drilling cast iron should make 608 r.p.m. At what speed should a $1\frac{1}{2}$ in. drill be run to give the same cutting speed?"

"A power plant used 4 tons of coal in one day, 9 lbs. of water being evaporated by 1 lb. of coal. The feed water consumption was 25% greater on this day than on the preceding day. How much water was evaporated during the preceding day?"

"How much weight can an air hoist lift whose efficiency is 79% if the cylinder is 18 in. dia., and the air pressure is 75 lb. per sq. in.?"

"The ratio of 2 pulleys is as 5 to 3. The first makes 106 r.p.m. How many r.p.m. does the second one make? If the second pulley is 27 in. dia. find belt velocity."

"What diameter safety valve is required in order that it acts when a pressure of 200 lb. per sq. in. is reached the total pressure then upon the valve being 1790 lb.?"

Detailed blue prints of parts of a locomotive were given in the drawing competition, and it was required to make a complete assembled drawing from the details.

To the individual in each year who made the highest combined score a special capital prize was awarded, and in one case a score of 196, out of a possible 200, made up of 98 marks in each subject, won the prize. In one or other of the subjects there were scores of 100, but lower points in the other subject prevented these scores capturing the high prize.

The winning stations in the various

everything pertaining to apprentice matters, by the officials of the motive power department, permeates the whole system, and means that an apprentice serving his time with the G. T. R. is insured of a practical as well as a thorough theoretical training.

Canadian Northern Railway Station for Vancouver.

The new station about to be erected by the Canadian Northern Pacific Ry. at False Creek, in the centre of the City of Vancouver, will be fireproof and up to date in every respect. It has been designed along dignified classic lines, with a strong central arched feature and supporting features at the extreme corners. The total frontage will be 321 ft. with a depth of 106 ft. It will contain a basement and three stories above street grade.

The ground floor will contain a large general waiting room and ticket lobby, immediately adjacent to which and entering directly from it, will be waiting rooms for men and women, dining room and lunch counter, barber shop, ticket office for rail and steamship, commercial telegraphs, hand baggage, general baggage, government mail, express and sleeping and dining car departments, etc. The two upper floors will accommodate the company's general offices in Vancouver. There will be elevator service to all floors.

Directly in front of the main entrance, on the opposite or rear side of the station, will be situated doors leading to a covered concourse 50 ft. wide, running along the entire length of the rear of building. From this concourse access to the various train platforms will be had. These platforms will also be covered. In all there will be 16 tracks leading into the station and the average of the platforms will be about 1200 ft.

The building will be amply supplied at all points with natural light and ventilation, the form of the building on the upper floors, permitting of direct light and air to all rooms and corridors. The large waiting room, which will have a lofty ceiling, will be lit not only from the top but also by means of clerestory lights on three sides, which will also afford splendid natural ventilation.

Externally the front and both side walls will be constructed of granite up to base, and above, in stone, both of which materials will be procured locally. The general waiting room will be finished in marble about 6 ft. up, above which Caen stone will be used to ceiling, the latter to be finished in ornamental plaster. The

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