

Memorandum to - the Principal of McGill University,  
Sir Arthur Currie, K.C.M.G.

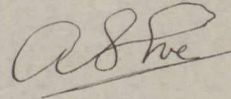
the present building. Before a quarter of a century has passed, the present Physics Building will almost certainly have to be extended as far as University Street. Other science buildings will be erected between the existing science buildings and University Street. An effort should certainly be made to save such desirable sites from noise, vibration and electrical disturbances. The University has no other available sites for such extensions.

(3) Electrical disturbances. In 1909 and again in 1919, Dr. A. N. Shaw proved that fluctuating electric currents amounting to about five amperes disturbed the magnetic instruments in the Macdonald Physics Building, so that a galvanometer could not be used in any part of the basement. Steps were taken to eliminate the trouble to a considerable extent; but a street railway on University Street might greatly aggravate this evil. Dr. Shaw's report is attached.

(4) Magnetic disturbances. In 1919-20, Mr. E.S. Bieler, M.Sc. carried out an investigation under my direction with a coil and galvanometer. He was able to detect and photograph the magnetic fields due to the street railway systems and to measure the effects. The starting and stopping effects amounted to about 50 amperes per second, assuming the nearest street railway to be about 300 yards, perhaps on St. Catherine Street. With a street railway on University Street, these effects would be increased tenfold. away

My colleagues concur in the point of view that, so far as this Physics Building is concerned, it is most undesirable to permit a street railway on University Street.

The report by Mr. Bieler is attached.



Director of Physics.

28/11/22.