will have a width of 44 feet at track level and a total of 120 feet right-of-way at the top. Reinforced concrete bridges will carry the traffic on cross streets.

The multifarious problems which confront engineers on a project such as this would quail less hardy or less ingenious persons. For example, how to divert an underground river; build across quicksand; build past a telephone exchange and under three theatres in such a manner that no vibration from construction or subsequent train traffic would be felt in or affect those structures. These are but a few of the questions which have been answered.

One of the most interesting problems from a casual observer's point of view, although in all probability it was considered to be one of a very minor nature —if not completely routine—cropped up at Front and Yonge Sts. At this location it was necessary to take the subway under a building on the north-west corner of the intersection, because of the need for a gradual curve rather than a sharp turn. At the point in question the subway roof is only 11 feet below ground level; it was necessary therefore to go through the basement of the building in question. In order to maintain the heating system, the entire furnace had to be suspended from steel beams at main floor level. Construction then proceeded, removing all dirt and support from immediately under the furnace as well as from the remainder of the basement. There were no breakages in the steam pipes during this operation and no loss of heat in the building. A catwalk had to be built to enable the janitor to tend the furnace and to transport the coal to the fire-box in a wheelbarrow. During these operations he was able to look over the side of the catwalk and watch a steam shovel at work immediately under his furnace!

Questions uppermost in the mind of the layman, and which—now that construction is well under way—are receiving a great deal of time and thought at the T.T.C. offices are "How safe will it be?" and "What about accidents caused by the human element?" It would appear from plans already formulated that when the first train moves along the system's lines and through the tunnel, to the term "Canada's First Subway" may be added the words "The World's Safest Subway".

A supervisory control system of modern design will be installed and all operations controlled by a dispatcher who will be located in a central strategical position. The system incorporates a chain of emergency alarm boxes spaced 500 to 800 feet apart throughout the subway. If an emergency occurs which necessitates passengers leaving the train, the "pulling" of any one of these boxes will automatically cut off the power to the third rail in that division and send in an alarm to the load dispatcher. A telephone will be located adjacent to each alarm box for the communication of details of the emergency.