

the 195-ft. trestle, goes over the Old Fort Road to the exhibition. The total distance from the north end of the bridge to the end of the loop is 4,475 lin. ft.

The most interesting part of the work from the engineering point of view is the layout of the work at both ends of the steel bridge. The work from the south end of the steel span is intended as temporary work only, the final plan calling for Bathurst Street to be produced straight

is built to act as a pier for the east truss, and the pier to support the north end of the west truss was so designed that it will become part of the wing wall of the abutment as finally built. A temporary back-wall was built. This wall bears on the abutment of the old bridge and cantilevers out over the northwest pier. When the bridge is to be swung around into its final position, steel beams resting on the northwest pier and on the new abutment (to be built) will provide a sliding surface. At the south end concrete piers were built to carry the truss in its temporary position. These, of course, will be of no use in the future arrangement. All concrete piers and abutments bear on bed rock, which is about 14 to 20 feet below base of rail.

The layout of the special trackwork at the corner of Front and Bathurst Streets required special study. It is so designed that a minimum of new special work will be required when the bridge is swung to its final position. All curves are laid out to permit of two cars passing on any part of the curve when going in opposite directions.

At the south end, access had to be provided to Queen's Wharf, to the Mathews-Blackwell plant and to the railway yard. On account of the increased length of the new bridge over the old bridge and also the increase in headroom over the Grand Trunk Railway

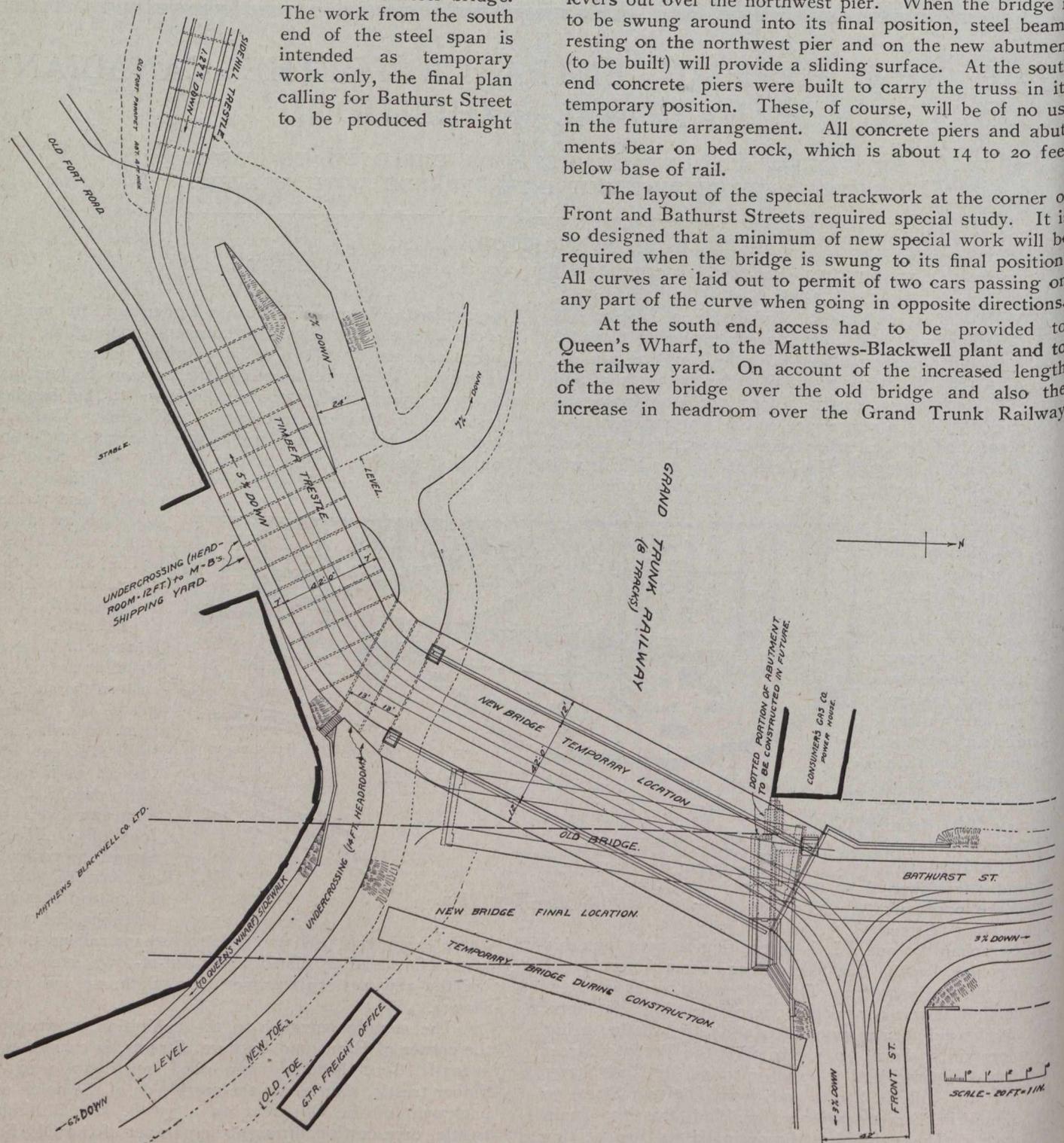


Fig. 2.—Plan of New Bathurst Street Bridge, Showing South Approaches.

south and the car line to travel on the new area to be created by the harbor commissioners. To do this, it will be necessary to demolish the large building of the Mathews-Blackwell Company, shown in Fig. 5.

The steelwork, concrete abutments and everything else had to be designed with this future arrangement in mind. Part of the east end of the final north abutment

called for by the Railway Board, the grade of the road in front of Mathews-Blackwell's had to be raised 7 feet. Also, on account of the length of the new bridge and the steep grade of 6 per cent. existing on the Queen's Wharf Road, it was necessary to bring Queen's Wharf Road under the timber trestle in front of Mathews-Blackwell's and then rise up to the south end of the trestle