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THE RED RIVER BRIDGE FOR THE NATIONAL TRANSCONTINENTAL RAILWAY

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The double track bridge over the Red River for the National Transcontinental Railway, has presented, both in design and construction, many very interesting problems. To such an extent is this true, that there will be room in this paper for only a general description of the more important features. The whole bridge, with its approach spans, comprises a length of almost half a mile. The bridge over Water Street, Winnipeg, shown at the left-hand side of plate No. 1, is the most westerly work of the Transconti-

main bridge over the Red River itself, and first we have four 150 ft. o. in. C. to C. double track through truss spans, the most easterly one having one end supported on the same pier that carries the end of the girder span already mentioned, and the others resting on piers 1, 2, 3 and 4, which are carried down to rock in the bed of the river. Red River is navigable at this point for fairly large steamers, and a clear waterway of about 110 ft. width was required. As the bridge was at no great height above the water it

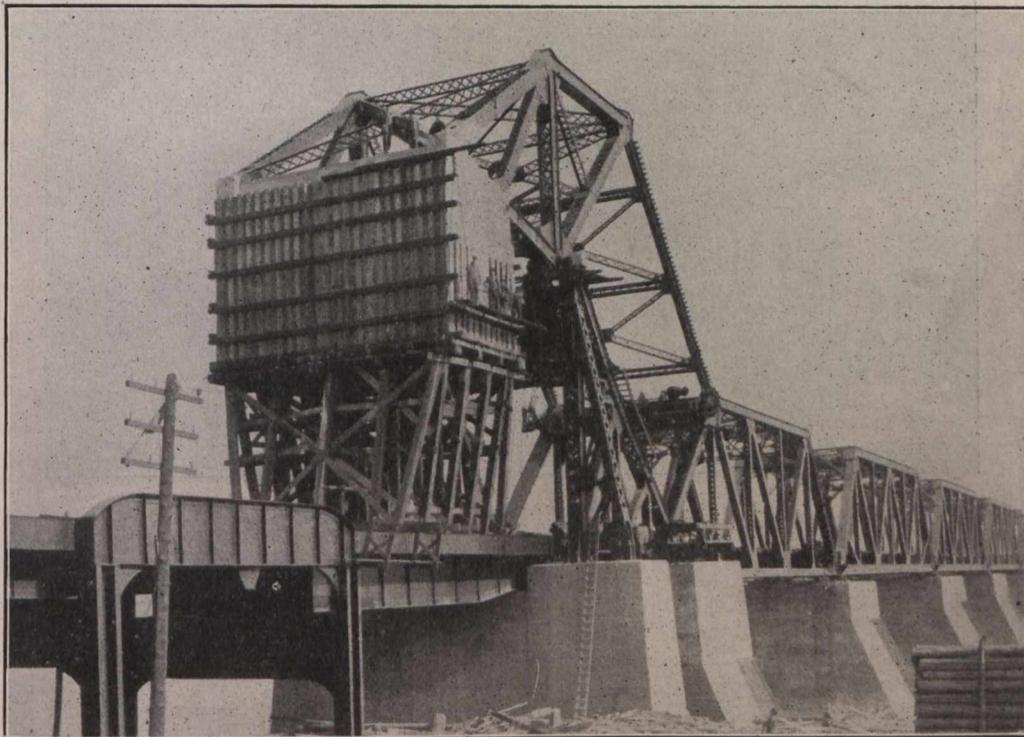


Fig. 1.—View Taken from the South Side Looking East.

ental Commission. Beyond this point the line is being constructed by the Winnipeg Terminal Co., for the Grand Trunk Pacific and Canadian Northern Railways.

Coming from the east, on the St. Boniface side of the river, the double track road is carried on an earth embankment with side slopes of one and one-half horizontal to one vertical, and the first span is a deck plate girder with solid floor, spanning a 67 ft. 2 in. clear opening at Taché Avenue. After another short stretch of earth embankment the road is carried over two spur tracks of the Canadian Northern Railway by a 58 ft. through plate girder span with floor beams, stringers, and wooden ties. This brings us to the

became necessary to provide a span of some movable type. The deepest channel being near the Winnipeg shore where economy of space is ever becoming a more important consideration, it was decided to use a Strauss Trunnion Bascule span. The moving leaf—129 ft. 6 in. long C. to C.—is towards the east, the toe resting when the span is closed on pier No. 4, which also carries the end of one of the one hundred and fifty foot fixed spans. The counterweight tower is forty feet long C. to C., spanning between piers Nos. 5 and 6. Westward from this there is a viaduct crossing over two tracks of the Winnipeg Transfer Co., a spur railroad track, Mill Street, and a lane. As these are all