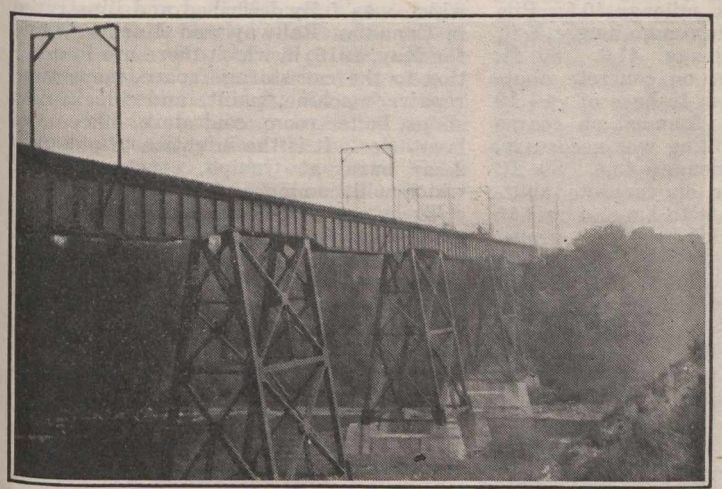
timber trestle, and Water St. is crossed overhead on a steel span. The only level highway crossing in Georgetown is Main St., on which the station is located. West of Georgetown the lines rises along the slopes of the Credit River valley, and at mileage 26.7 crosses under the G.T.R.'s Hamilton and North Western Branch. Thence the line rises almost continuously, passing through the limestone quarries at Limehouse and Dolly Varden to a summit immediately west of the latter point and reaches Acton at mileage 32.7. At that point the line runs through the Beardmore tanneries yards and crosses a G.T.R. spur in the yard at grade. The station is on Main St. West of Acton, the line passes through a somewhat swampy country and reaches its highest summit one mile west, where the track elevation is 755 ft. higher than at Lambton Jct. It then descends into the country tributary to Speed River's Eramosa branch, following Blue Springs Creek to the junction of the latter with the Speed, and then for the most westerly five miles close to the Speed itself. The grade on the last 12 miles is generally slightly undulating, with a total drop of 130 ft. between the summit, west of Acton ,and Guelph. This western part of the line is generally through a limestone country and although there are good farms but a short distance away, the land immediately adjoining the railway is generally barren or covered with scrub brush.

The construction standards of this line are similar to those of the Weston-Woodbridge line, but the location is to a higher standard, there being very much less curvature and it was altogether a more expensive line to build. The principal bridges, which, with the exception of the Humber River bridge, were designed for class 2 loading of the Department of Railways & Canals specifications, are generally of steel and concrete, with a number of frame and pile trestle bridge at the less important streams. The principal bridges are as follows:

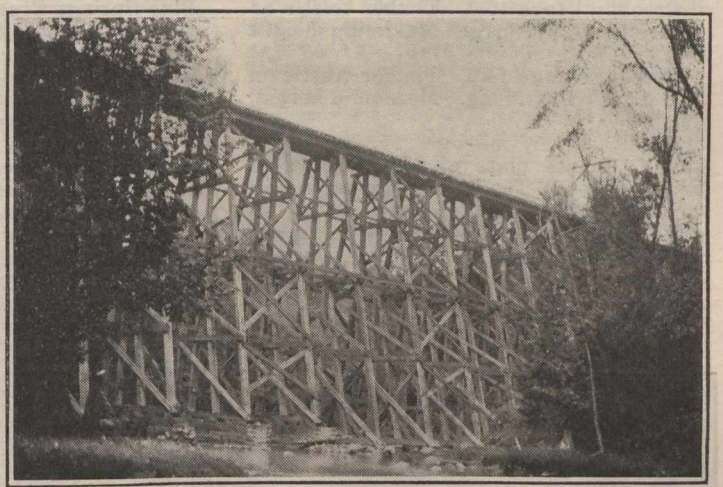
Humber River bridge, mileage 0.6. Total length, 711 ft.; maximum height above bed of stream, 86 ft. Commencing at the east end there is 209 ft. of frame trestle on mud sills, with a maximum height of 55 ft. This trestle ends on a high pier, which also supports the end of the first steel span. The balance of the bridge is of deck plate girder construction on steel trestle towers. The spans, commencing at the east end, are: 95 ft. 2 in., 40 ft. 4 in. tower; 95 ft. 4 in., 40 ft. 4 in. tower; 95 ft. 4 in., 40 ft. 4 in. tower; 85½ ft.

The easterly pier is of somewhat unique construction. It is 55 ft. from the ground to the bridge seat and the bridge seat is 14 ft. x 7½ ft. in plan. End batters are 1 in 24 and side batters 1 in 18. In order to lessen the concrete quantities, an opening 30 ft. high and 5 ft. wide, was left in the pier from front to back, and commencing 7 ft. above the footing. As the slope of the embankment comes against the back of the pier, 35 ft. above the footing, a counterfort was built on each side of this opening. These counterforts are each 3 ft. wide, and commence at the face of the pier, 24 ft. above the footing. They are battered out 1 in 4, giving them a thickness or projection beyond the neat work of 4 ft. 8 in. at the top of footing. The land tower is supported on 4 pedestals of ordinary construction 6 ft. square on top, with side batters of 1 in 6. The river towers each rest on two piers, which are carried full size, 39½ ft. x 6 ft., to above high water, from whence they are carried up an additional 4 ft. in the form of pedestals at each end of the pier. There is a 90 degree cut water on each end of each pier. The west abutment is on the slope of the hill, immediately west of the river, and is of ordinary wing construction. All piers and pedestals are founded on solid rock. The west abutment is on stiff clay foundation, in which no piling was necessary. The steel work of this bridge was designed for class heavy loading of the Department of Railways and Canals specification.

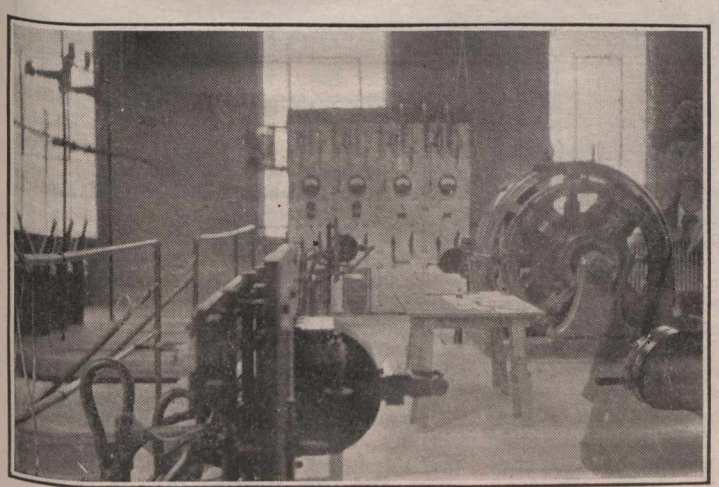
Mimico Creek bridge, mileage 1.8, 80 ft. through plate girder, on concrete piers and abutments, 14 ft. from bed of stream to base of rail. This bridge is in a bad location, owing to the angle at which it crosses the stream, and to the sharp curvature of the track. In order to ease the flow of the stream, the river was widened on the east side, and protected with a sheet pile bulk head for 180 ft. up stream from the bridge. A short bulk head was also built on the down stream side of the east abutment and the banks on both sides were further protected with heavy rip rap. Both abutments are founded on gravel, in which no piling was necessary.



Toronto Suburban Railway, Humber River Bridge.



Toronto Suburban Railway, typical trestle construction, west fork of Credit River.



Toronto Suburban Railway, Georgetown substation, interior.

Toronto Suburban Railway, standard shelter.