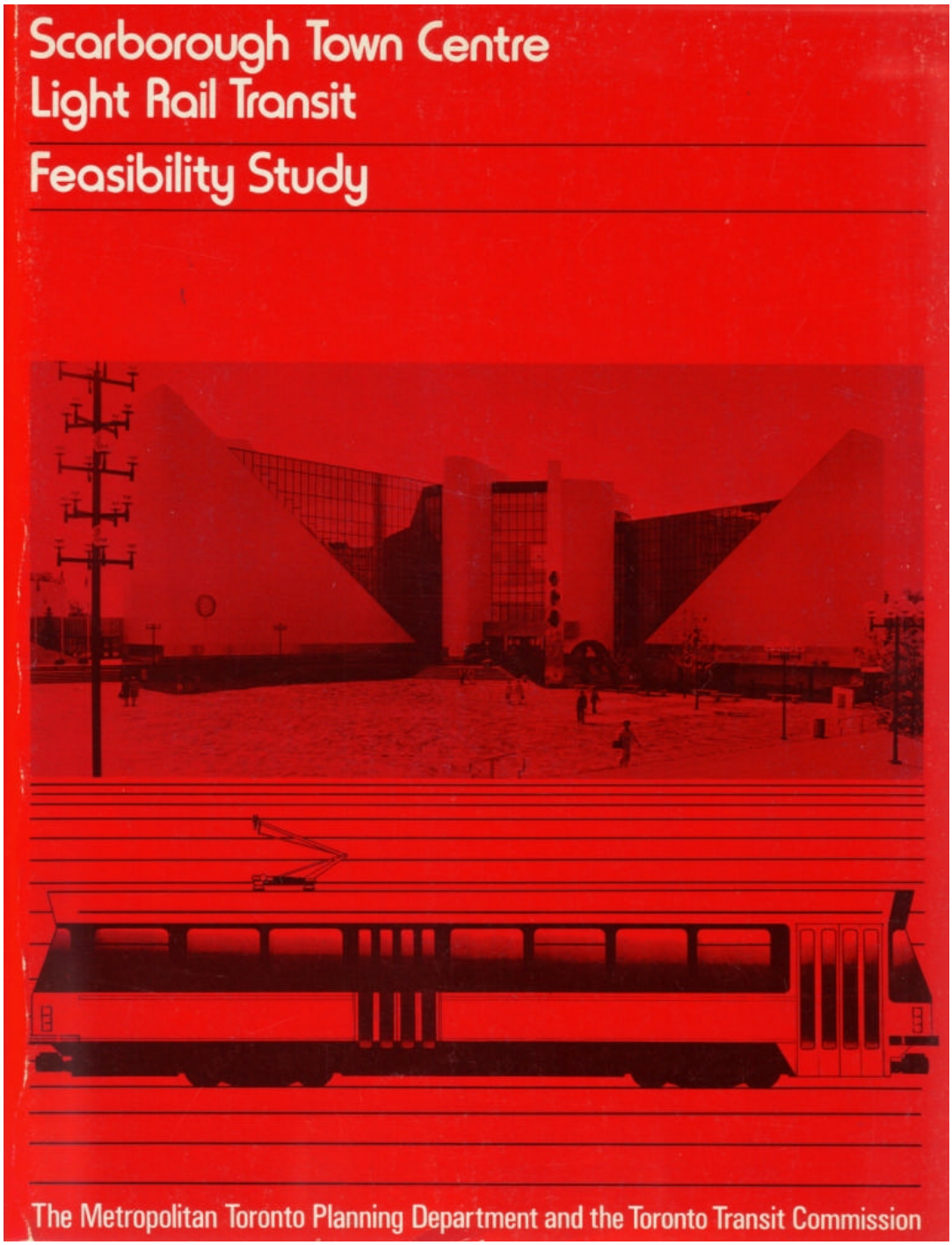


Publication date: April 1977

On the next page, you will see an illustration of how the LRT would cross a street at grade with a traffic signal. Note that level crossings were planned for Lawrence, Ellesmere and Midland. This plan predates the railway grade separations. The line was planned to cross under Brimley in a cut and emerge at grade into the Town Centre.

Note also the cost estimate of $68.2-million (1976). The RT line wound up costing about $230-million in early 1980s dollars with all of its add-ons.

The following page (“Chapter 3”) is a plug for the “new technology” of LRT.

Scheduling

Two car trains operating at about a 3'30" headway during peak hours and at a 5 minute headway in off peak hours will be adequate to meet the estimated initial ridership demand. Round trip time would be about 31'-30" with an average operating speed of 16.5 miles per hour. Maximum speed is 50 miles per hour. Service would operate 20 hours daily from 6 a.m. to 2 a.m.

Speed

Fare Collection

Fare collection would be on board the vehicles except at Eglinton and the Town Centre stations where paid platforms are included.

LRT/Road Crossings

Modified traffic signals would be required to control the at grade road crossings of the LRT at Lawrence, Ellesmere and Midland. Signals provide for pre-emption by LRT and by CN trains at Lawrence and Ellesmere. Safety considerations are very important in designing these crossings and LRT trains would be required to stop before crossing any road. Pedestrians crossing the arterial road will be able to cross with the LRT or activate the signal themselves. Traffic signals would not be required at Lawrence and Ellesmere when road grade separations are built.

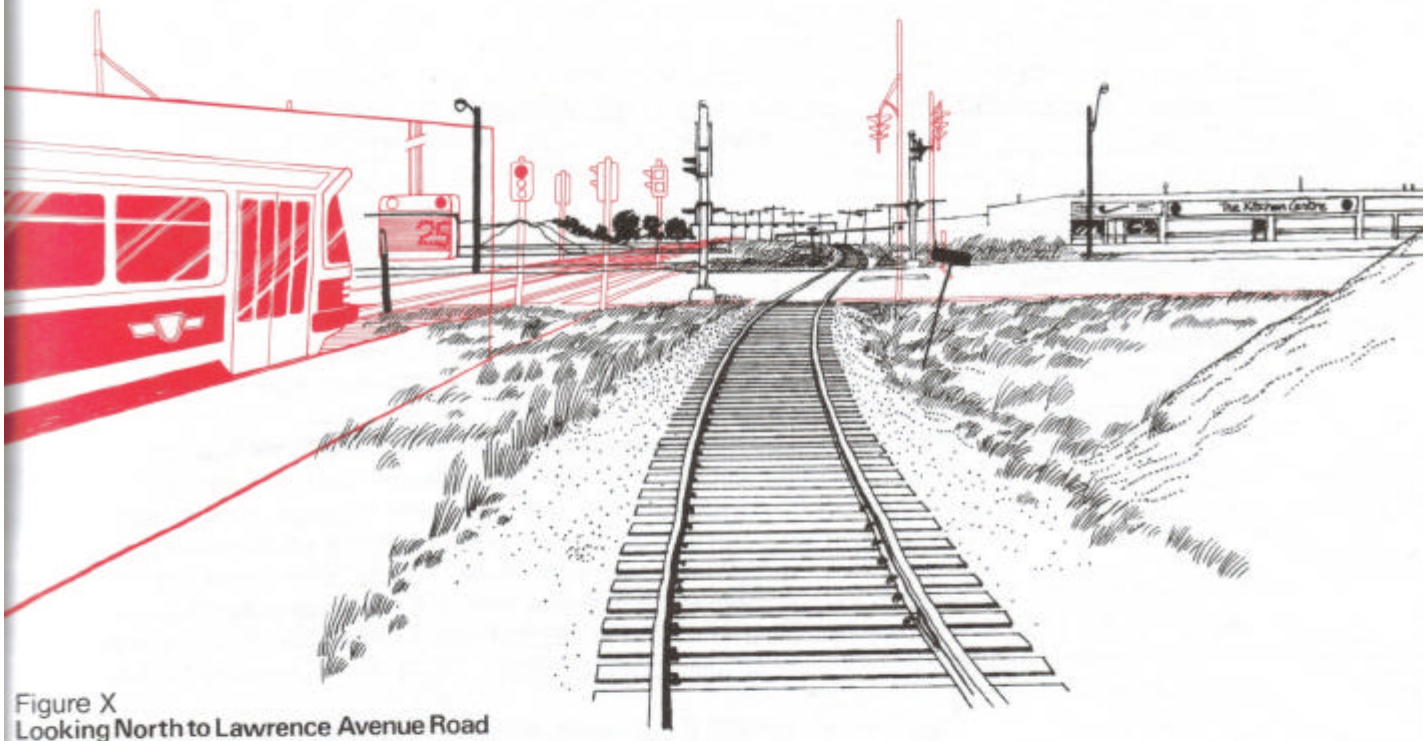


Figure X
Looking North to Lawrence Avenue Road crossing from CN right-of-way

LRT/CN rail

The LRT would be grade separated with CN rail except on two industrial spurs. The use of these spurs would not interfere with LRT service but would require special operation consideration.

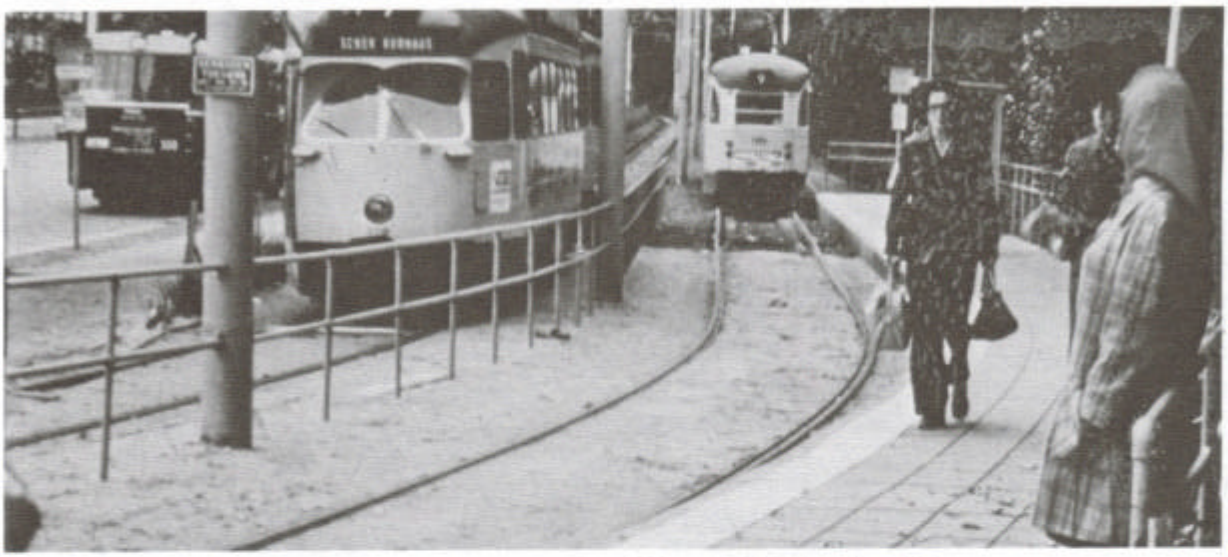
Bus Service

Reorganization of existing bus routes to focus on the Town Centre station and connect with other stations would be required as would adjustments to scheduling and expansion of bus route coverage according to passenger needs.

Capital Cost

The initial capital cost for the preferred Scheme B is about $68.2 million (in 1976 dollars) the equivalent per mile cost is $15.7 million. Estimates for all the major components and their percentages of the total cost is shown in the following table. This initial capital investment with some additional minor investment for more vehicles and station improvements would supply the necessary transit capacity for the next 10 to 15 years of service.

Chapter 3



3.2 A New Technology for Metro

The Scarborough Light Rail Transit project would be the first application of LRT on an exclusive right of way in the Metropolitan Toronto area. Although this type of application is common in European cities, Toronto has certain unique characteristics, and the experience gained in planning, designing, building and operating this Scarborough line will be very useful in future lines of this type in other areas of Metro. In addition, the Canadian designed and built Light Rail Vehicle **CLRV** can be tested under Toronto service conditions. The performance demonstrated by this vehicle can then be utilized to develop and test more advanced transit vehicles.

Light Rail Transit is particularly suitable for the Scarborough project since it can be upgraded from a relatively simple installation, capable of handling relatively light passenger loading, to one with a higher capacity over a period of time. Its design and service characteristics lie between those of the familiar streetcar and a subway. The use of a separate right of way and pre-emptive signals at intersecting roads give Light Rail Transit an initial operational advantage over the streetcar, but open low-level loading platforms, on-board fare collection, and vehicle design give it many similarities to the latter. Improvements to the initial configuration in the form of grade separations at all roads, increases in the size of trains up to six units in length, off-board fare collection and improved station design could bring the Light Rail Transit up to a level of service approaching that of a subway with about half the capacity. The selective upgrading of these features as well as the potential to adjust the supporting bus feeder services afford a versatility appropriate to the requirements of a rapidly developing suburban area.

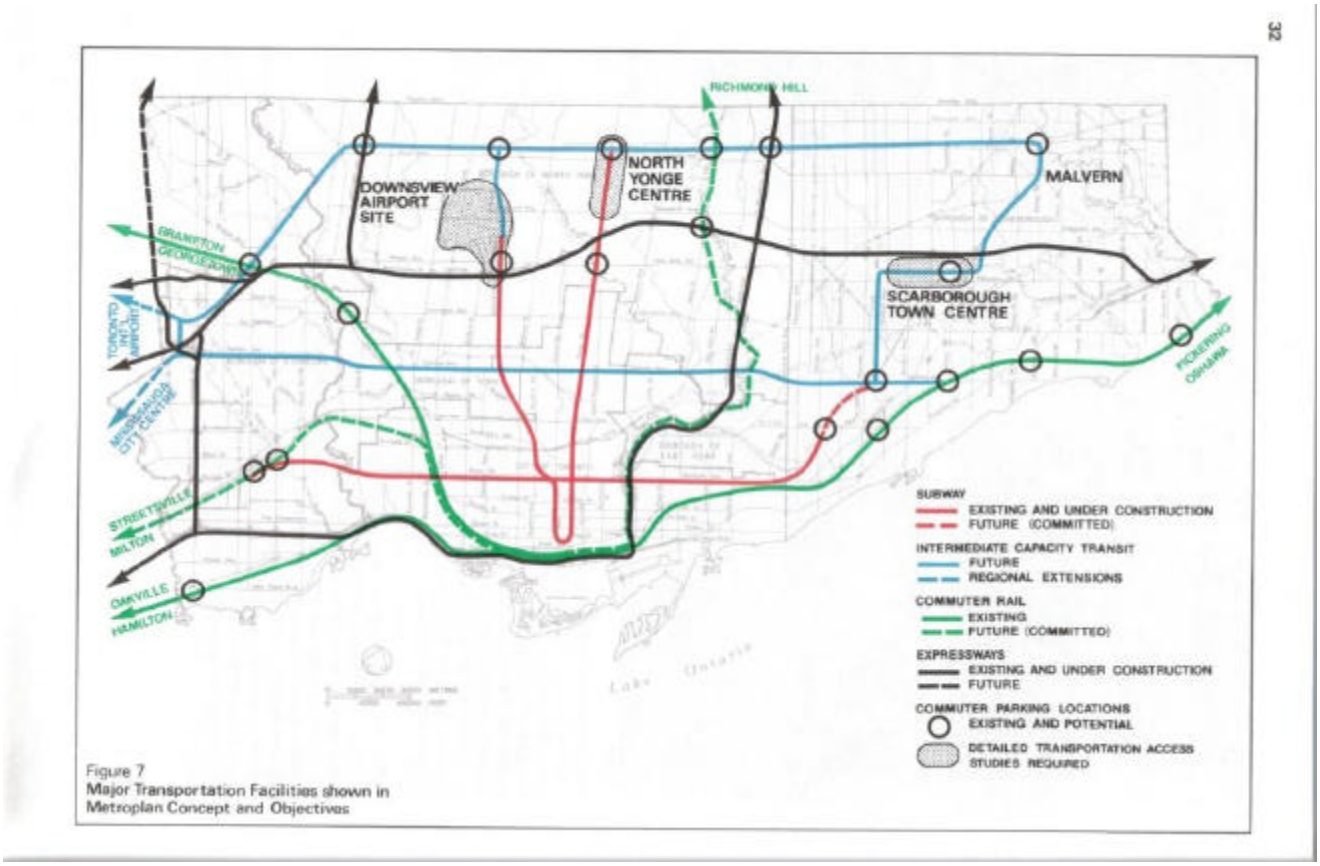


Figure 7
Major Transportation Facilities shown in Metroplan Concept and Objectives

This map shows what an eventual network of LRT lines (generically called Intermediate Capacity Transit) would look like. Everything in blue is LRT including:

- SRT to Markham Road and the Finch Hydro Corridor
- Finch Corridor to Airport
- Eglinton from Kingston Road to the Airport
- Spadina Corridor from Downsview to Finch Corridor (e.g. York University)

Note that several GO Rail services we now have were either not yet operating (Richmond Hill, Milton/Streetsville) or were not even planned (Stouffville, Bradford).

On the next page are two maps:

- Possible LRT extensions many of which are in the middle of streets
- Alignments of the Malvern extension

There is a separate report on the Malvern extension that came out a year after this report. The aerial photos of all the empty space in Scarborough are quite amazing seen from 2006. We could have build transit to Malvern, but instead we built a showcase for Ontario's finest technology.

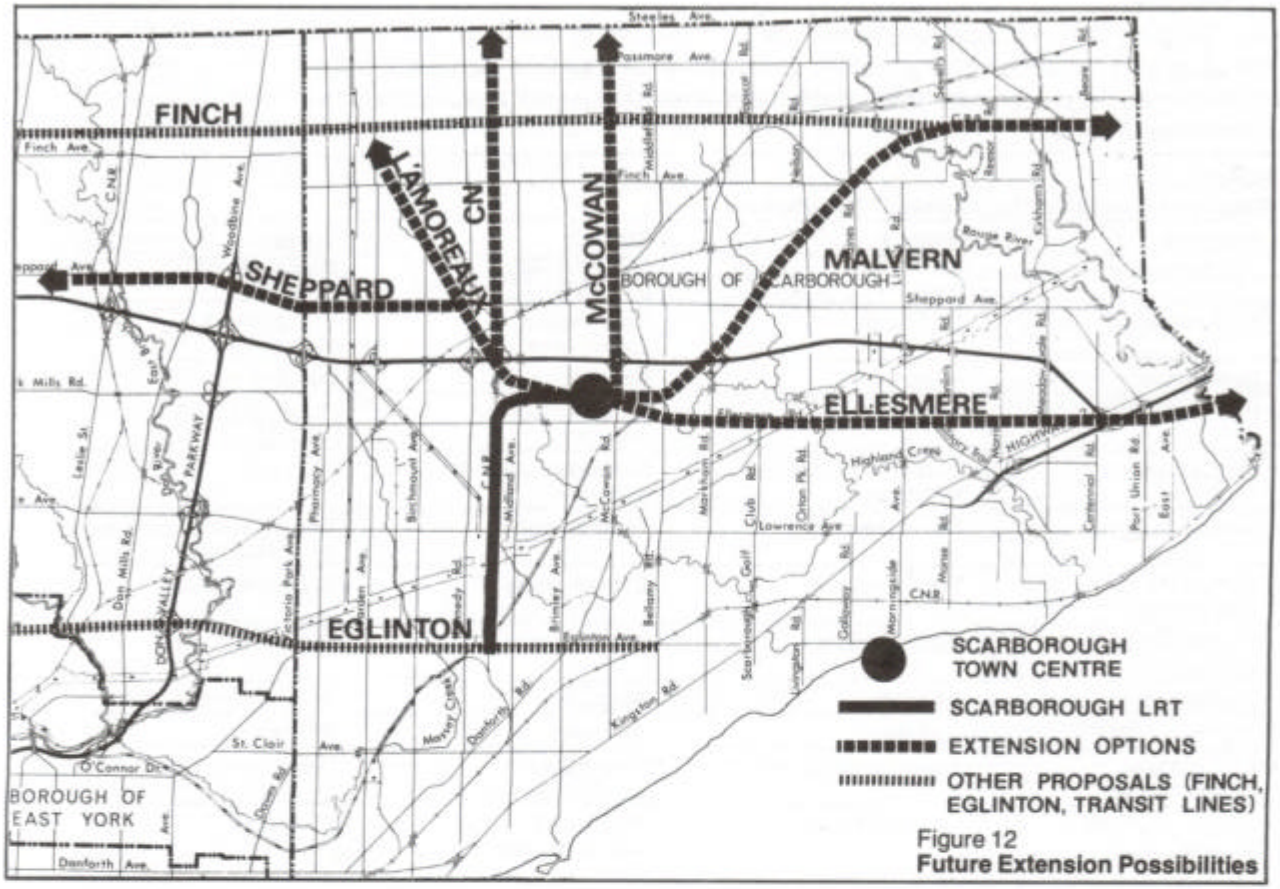


Figure 12
Future Extension Possibilities

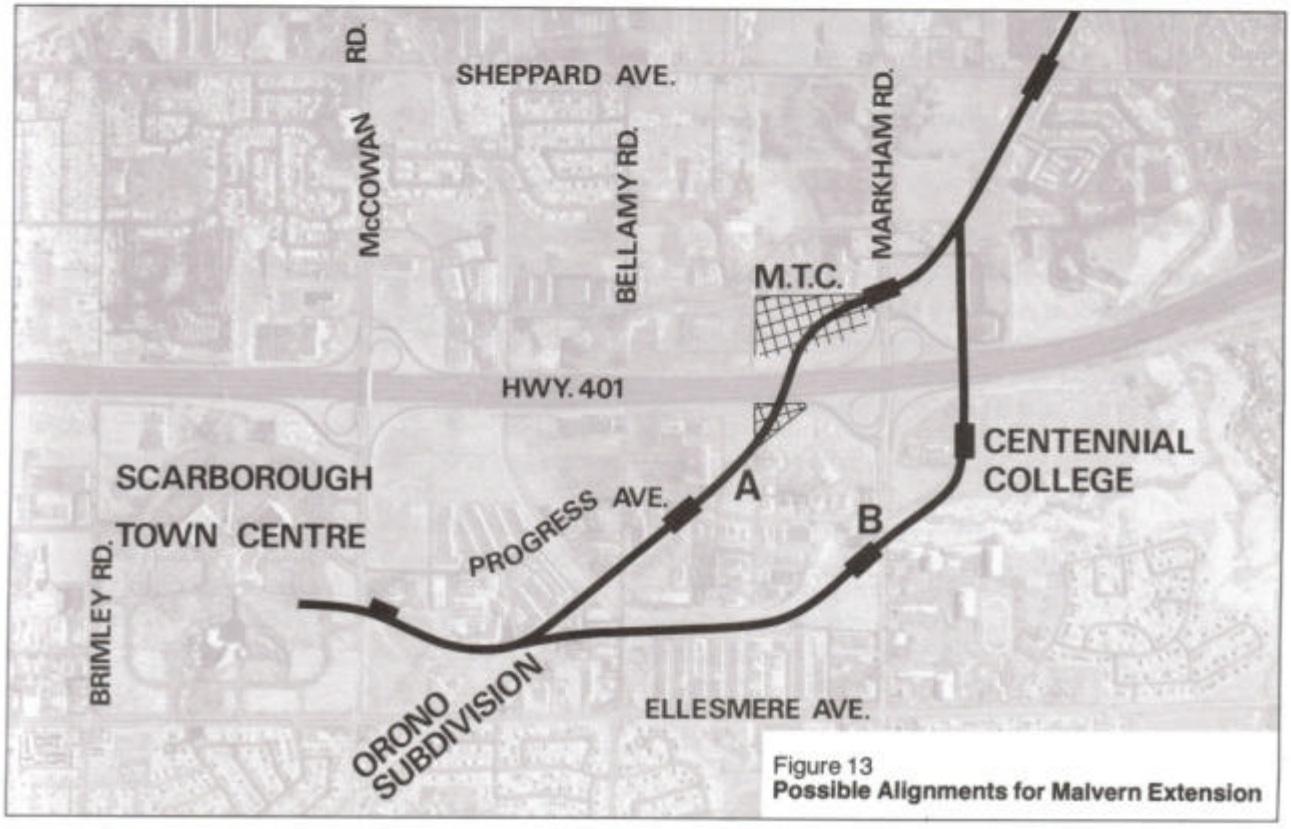


Figure 13
Possible Alignments for Malvern Extension