

**Scarborough's RT:  
Let's not perpetuate bad decisions**

A brief prepared by Dr. Richard Soberman, Professor Emeritus, University of Toronto

For anyone who has followed the rollercoaster history of the Scarborough RT – Toronto's one-of-a-kind technology between Kennedy Station and the Scarborough City Centre – it's obviously a product of a unique, only in Ontario, blend of bad planning and irresponsible political intervention. And now, it appears that more than \$4 billion might be wasted on replacing it with a completely unjustified subway in an entirely different location.

It would be far more sensible to simply replace and possibly increase the fleet of RT vehicles, a solution that can be completed many years sooner and at much lower investment than any of the subway or LRT proposals for this corridor. Since the potential ridership gains come nowhere near justifying the \$4-billion investment, it would clearly be irresponsible not to consider the refurbishment option. The potential savings of a few billion dollars could then be redirected to higher priority transit projects such as the downtown relief line (which would benefit many suburban commuters).

Unfortunately, city staff grossly overstated ridership estimates that formed the basis of Toronto Council's 2013 decision to support a subway instead of the previous provincially approved LRT. Parallel discussions about a nearby Regional Express Rail on the existing Stouffville GO route, as well as vague explanations of SmartTrack, are part of the curious political calculus to shift the current RT alignment further east.

**A brief history:** In 1977, Metropolitan Toronto's Planning Department and the TTC jointly endorsed a seven-kilometre light rail service between the terminal of the Bloor-Danforth subway and the Scarborough Town Centre.<sup>1</sup> Trains comprised of a two-car variant of what was then the TTC's brand new Canadian Light Rail Vehicle were recommended using TTC design standards for curves, grades and track that would facilitate conversion to a subway, if needed, at some future date. (The original streetcar loop can still be seen at the Kennedy Station.)

Shortly after construction began, however, the provincial government browbeat Metropolitan Toronto into abandoning the LRT in favour of the RT linear induction motor technology that its transit agency (UTDC) was developing. Changing the design during construction extended the completion date from 1983 to 1985 and increased the estimated cost of \$103 million to \$196 million, a 90-per cent rise.

The original Scarborough RT vehicles have exceeded their economic service lives and are clearly in need of replacement. It is unfortunate that decision-makers have so far not seriously considered the option of vehicle replacement, a practice common to every form of transportation, rather than building entirely new facilities on an entirely different route.

In September 2013, for example, the Ontario government announced funding to replace the RT with a subway extension to the Scarborough Centre, partially in response to the frenzy created by former Mayor Rob Ford and his "subways, subways, subways" mantra. Although the former mayor made these pronouncements based on his world view that streetcars and LRTs impeded car traffic, he did not seem to know that the RT ran in its own right-of-way. Thus, the reason for tearing down the existing RT facility was based on faulty logic. Replacing only the vehicles has

---

<sup>1</sup> *Scarborough Town Centre Light Rail Transit Feasibility Study*, April 1977.

simply not been considered either by the minority of professionals who ought to know better or the majority of politicians who evidently do not.

To be clear, selection of the current RT technology was an unfortunate decision from the start.<sup>2</sup> Unlike Vancouver’s largely elevated system, a substantial segment of the Scarborough RT is at grade. LRT would have provided similar speed, capacity and reliability at far less than the RT’s capital investment made in the 1980s.

Moreover, although RT technology is capable of automated operation (as in Vancouver), the Commission caved into union demands for an on-board attendant per train, thereby ensuring that the RT would provide few, if any, performance advantages compared to LRT.

Forcing RT technology on what was to have been the Scarborough LRT was essentially a bad decision by uninformed provincial politicians based on irresponsible advice from outside advisors and the acquiescence of their own transit professionals who knew better. In simple terms:

- Performance was overstated;
- Costs were understated;
- The Scarborough route was a bad and unnecessarily costly application of the technology; and
- It left Toronto with a seven-kilometre rail transit anomaly best described as an “orphan.”

The TTC Rail Transit Network

Technology	RT	Subway	Streetcar
Route Length (km)	7	62	305
No. of Vehicles	24	247	704
Track Gauge (m)	1.435	1.495	1.495

Faced with the need for modernization, there is a better and far less expensive solution than building either LRT or subway on an entirely new route. As the service is already in place:

- It can be modernized through the acquisition of new vehicles and modest capital improvements in facilities without costly and time-consuming environmental assessments and approvals;
- Investment would be less than for any of the alternatives that have been put forward by City Hall or Queen’s Park; and
- Improved service could be delivered within a short and measureable timeframe as compared to the meaningless timelines that now characterize just about every other major TTC project.

Re-equipping and refurbishing the existing facility can be completed at much lower capital investment than for any of the confusing array of LRT or subway proposals presently being contemplated for this transit corridor. In addition to being more cost effective, revitalizing the existing route will also take far less time to implement than any completely new facility.

---

<sup>2</sup> In fairness, it should be noted that in addition to Vancouver, Bombardier successfully exported the technology to Detroit, Ankara, Kuala Lumpur, Kennedy Airport, and Yongin , South Korea.

The Spadina subway extension to York Region attests to the TTC's inability to actually deliver any new transit projects, either on time or on budget. And the delivery of replacement streetcars provides further evidence of how seriously our major supplier of rail vehicles actually treats contractual delivery schedules.

Because acquiring vehicles that are dimensionally the same as existing RT vehicles will be difficult, but certainly not impossible, it is important to know whether the longer Vancouver SkyTrain vehicles that might be available are actually compatible with the existing 150-metre tunnel alignment. As the first step in assessing realistic alternatives for replacement vehicles, therefore, "as built" drawings of the existing tunnel are needed, a task that should take professional surveyors a very short time to produce.

Beyond the Scarborough City Centre, an extension to Sheppard Avenue is more problematic. RT technology requires a fully protected right-of-way, adding to the difficulty of finding a suitable surface route. If built, of course, a branch of the Sheppard LRT could be routed to connect with the RT terminal at the Scarborough City Centre.

Acquiring replacement vehicles is not a new idea. In 2006, the TTC itself concluded that upgrading the Scarborough RT to accommodate larger, new-generation RT vehicles:<sup>3</sup>

- is the lowest-cost option to accommodate projected demand, and to encourage increased transit ridership in the corridor;
- minimizes service disruptions that are unavoidable with any improvements to this corridor;
- offers the greatest ability to quickly increase capacity of the line; and
- provides an opportunity to improve the transfer between the subway and the RT at Kennedy Station.

The Commission also emphasized that "it would *not* be cost-effective or justifiable to replace the existing Scarborough RT with an extension of the Bloor-Danforth subway," and that moreover, "there are opportunities to extend the Scarborough RT and to expand and introduce new rapid transit service elsewhere in Scarborough."

At that time, upgrading the line and acquiring new vehicles was estimated to cost \$360 million and involve a service disruption of up to eight months.

Clearly, there is a long history of bad decision-making with respect to the Scarborough RT beginning with the poor choice of technology imposed by the provincial government. Given other transportation needs in the city and, given today's funding limitations, these bad decisions should not be aggravated by replacing the RT with either a subway or LRT, on an entirely different route.

**In conclusion:** the best option is to modernize the current RT service by acquiring new vehicles. Abandoning the current RT route in its entirety is completely unjustifiable. In fact, abandoning a 30-year old capital investment in rail rapid transit would probably make Toronto unique, among major cities in the world, and probably in the universe.

---

<sup>3</sup> Toronto Transit Commission Report, 30 August 2006

**Note: this brief was commissioned by the Residential and Civil Construction Alliance of Ontario and was a result of ongoing conversations between the RCCAO's Chair and Executive Director and Dr. Soberman concerning his frustrations with expensive and unfounded solutions being put forward for the Scarborough RT.**