Mass transit systems: how to pay for them

By Mary Rawson in Vancouver

ONE OF the most challenging tasks facing the builders of urban transit systems is how to finance them. And one of the most time-consuming of research jobs is to find reliable evidence for the finance methods proposed. The financing package for Vancouver's ALRT (Advanced Light Rapid Transit) system is fairly typical – and not to be recommended!

The finished price of the ALRT line in 1986 is expected to be $700m.

"It will be paid for by the sale of bonds, that is, future taxpayers will pay for it," said Jack Davis, chairman of the committee charged with overseeing ALRT construction.

He says that capital and operating costs would be paid for as follows: one-third from the farebox; of the remaining costs, two-thirds would be paid by the Province through the sales tax, the income tax, etc. and one-third would be picked up by the local municipality by surcharges on gasoline and on hydro bills.

In the latter connection Mr. Davis mentioned that land values might also be subject to tax. "The public believes that land values arise around stations ... There is a levy somewhat like it, I believe, in Chicago. We're groping along here."

Mr. Davis' remarks were made to a meeting of the Building Owners and Managers Association in January 1982. This was during a brief period of time in British Columbia while William VanderZalm was Minister of Municipal Affairs. The Municipal Act was being opened up to allow governments to designate "Transit Facility Benefit Areas".

This exciting possibility led me to search the reference literature for help, not only on the theoretical side but in aid of the practical need to draw boundaries, to establish measurements of benefit, and so on. I didn't find much.

Mr. VanderZalm had his own experts at work on a "value-capture" study. They apparently didn't do as well because they reported in the negative. It was soón announced that the relevant section of the Act would be dropped. We were, as they say, 'back at square one'.

A MORE intense scouring of rapid transit and/or benefit literature cried out to be done, and the preparation of an annotated bibliography suggested itself as one fruitful outcome. The City of Vancouver could not be persuaded to undertake either.

Eventually, with the grace and assistance of the Centre for Transportation Studies at the University of British Columbia, and the Canadian Research Committee on Taxation in Montreal, these things did get done.* As a result of that work it is now clear to me that a reliable, up-to-date evaluation and review of rapid transit financing methods does not exist.

On the one hand, we are referred to studies carried out in New York in 1922 by G.B.L. Arner, or in 1930 by Spengler. This seems like mining ancient history since there are so many instances of rapid transit lines built more recently in Toronto, Montreal, San Francisco and other North American cities.

TWENTY-ONE-year renewable ground leases were typical in New York in the 19th century. The first lots near Broadway and Fifth Avenue were leased out in 1827. Rents were around $90 a year, jumping to $350 at the first renewal. Just over 50 years later the ground rents were averaging $4,000 to $5,000 a lot.

The Arner and Spengler studies are indeed excellent: students should use them if they are lucky enough to find them in the local library fifty or sixty years after publication.

Unfortunately, if we cannot study the originals – and here we come to "the other hand" – we rely on what can only be called "interpretations" by modern compilers.

It is incredible how misleading these sometimes are. Take the report written by Robert L. Knight and Lisa L. Trygg for the U.S. Department of Transportation, *Land Use Impacts of Rapid Transit: Implications of Recent Experience*, published in 1977.

After describing the early subway experiences of New York, and after giving Arner as the source of the information that land values had "stagnated" at a certain period, these authors assert that the City's use of special assessments had resulted in "stagnation". Discussion in the "Executive Summary" of Knight and Trygg translates that to "stagnation of development".

> **New York's 1908 attempt to tax away speculative profits on land along subway routes resulting in a stagnation of development, is a dramatic example of such a policy. (p.12)**

The average person seeking guidance through the reference literature would go first to the "summary" volume in any report series. After reading Knight and Trygg's Summary one comes away thinking special assessments are *bad* for development.

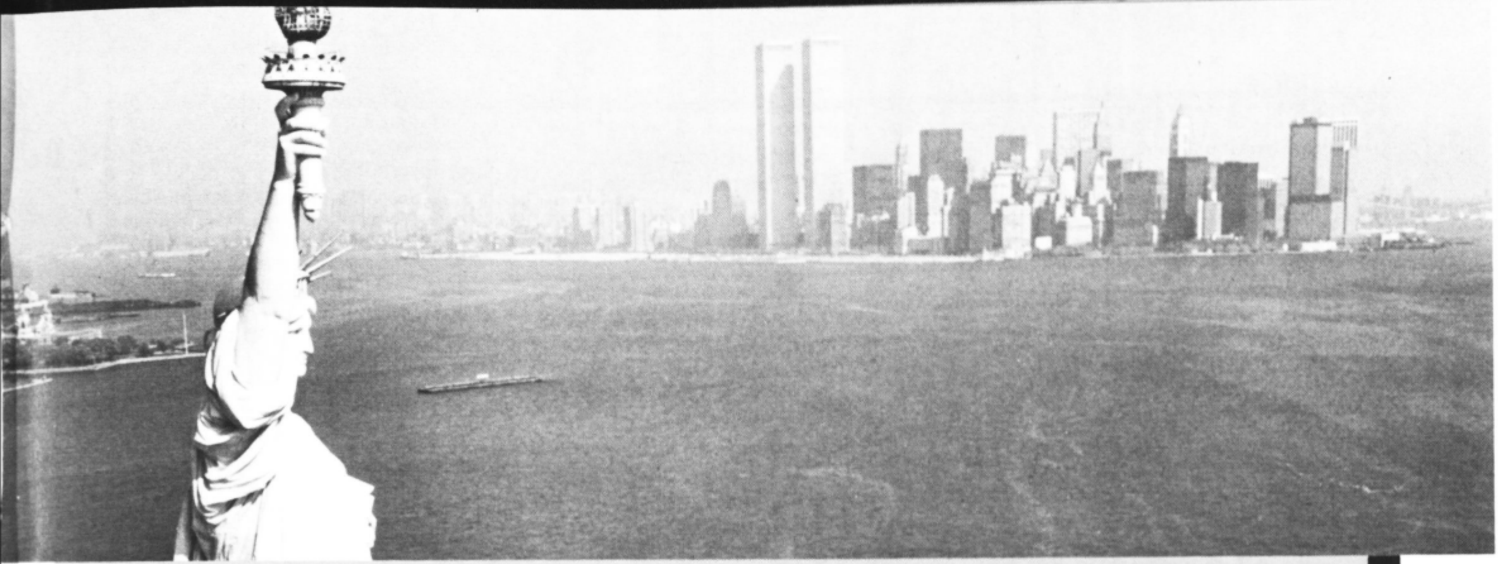
IIt is easy to understand how a belief such as that gains currency. Very few people would take the trouble to read the more extensive discussion in Knight and Trygg's Final Report where it is possible to discern that what is meant is stagnation of land values. And even fewer would see the difference!

A reading of the original paper by Arner is even more disturbing. White in Arner had become grey in Knight and Trygg's Final Report, and downright black in their Executive Summary.

ARNER'S is an importnant piece of work, and it is important that we understand for ourselves what he did say.

Originally delivered in 1922 as a set of lectures about land values in New York City, they were published in mimeographed form with Rostovtzeff *et al* in *Urban Land Economics*.

Lecture one is a general survey of the changes in urban life, and especially the reflections in land value, that were characteristic of the break with pre-industrial society. Arner



Index of land values
Borough of Manhattan

Year	Index price
1904	103
1905	108
1906	105
1907	109
1908	104
1909	104
1910	110
1911	103
1912	101
1913	100
1914	97
1915	98
1916	96
1917	89
1918	88
1919	95
1920	111
1921	112

Booms and slumps in New York

- there was a land boom in the 1830s, a panic in 1837, and then depression
- there was a land boom after the Civil War, a panic in 1873 which cut speculative land values in half
- the 1905 value increase followed the opening of the original subway
- a market panic of 1907 caused the drop in values of 1908; with renewed prosperity values again rose;
- 1911 real estate was assessed, and therefore taxed, at practically full value. Land values fell
- during the war, new building practically stopped; labour and materials were scarce
- immigration to N.Y. practically ceased; between 1910 and 1920 it was only half that of previous decades
- by 1920 it was again profitable to build
- in 1921, the land values were checked but there was no fall

notes, in passing, that the location of railways and transit lines affect profoundly the development of land values.

The second lecture takes up the costs of land ownership from the individual owner's point of view, relying almost entirely on New York sources. This lecture includes a detailed history covering the years 1880-1921 of 9 vacant parcels in Manhattan. Arner's message is: had the owners put their money into bonds – and not bought lots and left them vacant – they would have made a better return on their money.

Lecture three repeats this lesson, and provides additional cases from outlying boroughs. Once again, the conclusion is that those who put money into buying land would have done better to invest in bonds. He adds:

> Aside from the loss to the purchasers resulting from the premature subdivision of land there is also frequently a social loss through the opening and paving of streets, the building of sewers and the extension of water mains far in advance of legitimate need. These improvements are expensive and the interest item on the original cost is material. Then the sidewalks and pavements deteriorate through neglect and when years later they are actually needed the work must be done all over again, this time at the expense of the city. In Morris Park there is even an extension of a street car line which still remains unused.

In lecture four Arner sets out to correct the impression that in outlying areas land values were not increasing. That was not so.

Manhattan land values had remained practically stationary. But in the Bronx and all other boroughs they had increased substantially. Queens was a case in point. This did not mean that vacant land owners had a good return, if they considered the returns on an alternative investment *and* the taxes paid.

Before the Civil War the actual tax rate on land in New York was about ½% ("when J.J. Astor was buying land in advance of the growth of the city") whereas by 1906 it was 1.12% and by 1921 it was about 2.8%. Given the fact of taxes, and special assessments, and interest that bank savings would have yielded, it could be demonstrated that in New York "vacant land does not have real investment value".

In lecture five Arner calculates that the untaxed value of land in Manhattan in 1906 was $4,170,000,000 and in 1921 it was £5,300,000,000, an increase of 27% in 16 years. He calculates further that the value (as taxed) increased less than 2%.

In other words, the taxes on land value in that period of 16 years, including special assessments for various purposes, had been so high as "to absorb practically the whole net increment in value."

If no taxes at all had been imposed, and all other factors had remained the same, land values would have increased 27% instead of 2%. Arner advises land owners against counting on land value increases to cover building depreciation, an unwise practice that was apparently common.

Apart from Arner's unequivocal assertion that transit lines profoundly affect the value of land, and in addition to the painstaking analysis by which he estimates what portion of land rent had been taken by land taxes and therefore had not been capitalized into New York City's land prices, Arner provides a commentary on changing land values in Manhattan (inset).

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Mass Transit

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Arner reported on his findings in a more polished article which appeared in the *Quarterly Journal of Economics* (August 1922). A co-worker, Helena Dickinson, supplied further value data in a 1929 publication (Thos. Adams, NY Regional Plan).

CONTRARY to the assertion of Knight and Trygg, in *none* of these lectures or articles is it said or implied that the tax on land in New York or the special assessments on land in New York had resulted in a stagnation of development.

The facts in these presentations, as well as the entire logic of the case, lead to a directly contrary conclusion.

New York's land would have cost *more* in the absence of a special assessment; Arner tells us how much more.

Secondly, where there is more tax revenue from land in the City (including millions of dollars from owners of vacant land cited by Arner), less must be raised from construction. The outcome of special assessments on land value must be *lower land prices* to the would-be developer as well as *lower carrying costs on actual construction*. Neither outcome could contribute to a "stagnation of development".

It is damaging to the public welfare to allow their naive and artful conclusion to go unchallenged; the sad fact is, however, that Knight and Trygg is one of the better, more recent, and comprehensive U.S. references on the land use impacts of rapid transit. It will continue to be relied on by politicians and their advisors.

The same is true of other compilers. On the matter of special rapid transit levies to capture land value, they are all skittish.

The San Francisco Bay Area Rapid Transit (BART) reports in particular must be read with a great deal of caution. A report summarizing the economic and financial impact of BART expresses "doubts" about a value capture policy (DOT P 30.80.04). A further report (DOT P 30.80.08) repeats these "doubts". Presumably these summaries are based on the Final Report (DOT-BIP-FR- 14-5-78), in which Blayney and Dornbusch state that studies

> provide empirical evidence that gains attributable to BART are small and consequently would not make a major contribution toward meeting capital costs.

They then add a caveat.

> A caveat is in order. Neither the Land Use Project nor the BART Impact Program set out to conduct a cost-benefit analysis, and these market impact studies should not be viewed with that objective in mind. (p.84)

Gladstone too is disappointing on this score. He refers to a study by Solomon which suggests that New York special assessments "may even have inhibited development". (That has a familiar ring!)

Gladstone then says the existing property tax "is already an effective way to capture value". He himself has become sceptical of the idea and says that the Urban Mass Transit Agency is moving to a posture of "apparent indifference on the matter". Having been badly advised, it is little wonder.

If my transit bibliography leads these same advisors to look a little deeper, to search more widely than is commonly done, I will feel the effort was worthwhile.

*Mary Rawson, *Transit: The Nature and Role of Localized Benefits. A Selected Annotated Bibliography*. Centre for Transportation Studies, University of British Columbia, Vancouver, Canada V6T 1W5. 1983.

Labour campaign for land tax

THE ROWNTREE Trust has granted money to a group of socialists who are campaigning for tax reform.

The new group, known as Labour Land Campaign, was formed at a meeting in the House of Commons in February.

The initiative was taken by Mr. David Wetzel, the chairman of the GLC's transport committee, and Mrs. Kay Knight.

Says Mrs. Knight, who is the Campaign's secretary:* "The call for land nationalisation would not be realistic in the present climate, even if it was a good policy.

"But the Labour Movement cannot continue to ignore such a basic economic and social influence as the system of land use."

The Campaign wants to focus its attention on land values.

"The value attached to land is a vast fund of private unearned income which socialists should be concerned to socialise simply because it is created by the growth of activities of society," explains Mrs. Knight.

"Government could recover this fund by collecting the annual rental value of land, commonly called ground rent."

● David Wetzel

The last time Labour made a serious bid to introduce land taxation was in 1931, when the socialist Chancellor of the Exchequer made provision for collecting 8% of annual rental values. Conservative opposition proved strong enough to undermine the policy before it could be implemented.

Since then, interest in land value taxation has declined within the Labour Party, but the new Land Campaign plans to force the issue on to the agenda of Labour MPs.

This will be done through meetings at constituency level, and articles written by Mr. Wetzel for socialist and trade union publications.

Mr. Wetzel's message is blunt: "Private land wealth is a huge injustice for the majority who are landless or who have to mortgage most of their working lives to acquire a small housing freehold".

The Land Campaign wants to mobilise socialists behind an effective programme of reform. Explains Mrs. Knight:

"Our members are reacting to the Labour Party's failure to nationalise land.

"They say that, because the party is only committed to a piecemeal approach to public ownership, and because the public pays huge sums for key sites, the party must have a comprehensive policy on land values, urban and country planning and land registry."

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