Subject: Fwd: A Feb. 3, 2003 News Release from the Light Rail Committee
Date: Mon, 3 Feb 2003 18:13:31 +0000 (GMT)
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FORWARDED FOR YOUR INFORMATION AND INTEREST.....

Subject: A Feb. 3, 2003 News Release from the Light Rail Committee
Date: Mon, 3 Feb 2003 07:14:36 -0800

Light Rail Committee

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NEWS RELEASE

February 3, 2003

Common Sense in Urban Transport Planning: Light Rail or Metro!

Two useful definitions:

The European Conference of Ministers of Transport Organisations for Economic Co-operation and Development defines Light Rail transit as:

"A rail-borne form of transportation which can be developed in stages from modern tramway to a rapid transit system operating on its own right-of-way, underground, at ground, or elevated. Each stage of development can be the final stage, but it should also permit development to the next higher stage."

The ECMTO's defines Rapid Rail (subway, metro, and/or rapid transit) as:

"Transit service using rail cars with moveable capability, driven by electric motors usually from a third rail, configured for passenger traffic and usually operated on exclusive rights-of-way, service generally utilises longer trains and station spacing than light rail"

For the past quarter of a century, BC's politicians, regional and provincial, have allocated huge sums of money towards public transport in Greater Vancouver, yet little has been achieved in providing a viable public transport alternative that would attract the motorist from the car. To date, except for peak hours, public transport is used mainly by the poor, the elderly and students, which is a major symptom of a downward spiral of public acceptance. There is one major reason for this: SkyTrain and the failure of local transit planners to understand modern public transport philosophy!

Since SkyTrain was first forced upon the region by the provincial government in 1980, it has been claimed that it's a different technology than its rival Light Rail Transit, thus creating the image that SkyTrain was somehow superior to modern LRT. Those who championed LRT were seen as *"Luddites'* who refused to acknowledge the *'state of the art', "high tech.'*, and *'world class'* Advanced Light Rail Transit (the second of SkyTrain's many names). This myth, with nearly $3 billion in direct investment and almost $2 billion in debt serving charges, has lasted almost twenty-five years!

Both Light Rail and SkyTrain (now marketed as *Advanced* or *Automated Rapid Transit or ART*) are railways; steel wheels on steel rail, because of SkyTrain's need for expensive segregated rights-of-ways it's considered a member of the metro family. Because SkyTrain doesn't have the capacity of *heavy-rail* metro, it's considered a ***light metro*** (Jane's Urban Transportation System's)**. This singular fact is lost on civic, regional, and provincial politicians and planners.** SkyTrain is also an unconventional railway, because it uses Linear Induction Motors (LIM's) instead of the much more common *'squirrel cage'* motors, to power the train. Because LIMs need a reaction rail to operate, SkyTrain can not operate on other railways, unlike LRT, which can**. Using LIMs dramatically increases the cost of construction and operation of SkyTrain as compared to LRT because of its need of a reaction rail**.

SkyTrain is sometimes called a proprietary railway because it uses a proprietary (owned by Bombardier Inc.) steerable axle truck. Most light rail vehicles use a generic *radial axle*, or self steering truck which is much cheaper to maintain than its proprietary cousin. Being automated and driverless (many automatic railways still retain drivers) only means that the most expensive and complicated signalling system must be used. Any railway can be driverless, the penalty is the huge construction costs for the totally segregated rights-of-ways needed! **Driverless operation has been found not to be cost effective unless ridership exceeds 20,000 to 25,000 persons per hour per direction on a transit route!**

Bus, LRT, or metro is planned for according to ridership patterns on a route. Routes with an average ridership less than 3,000 pphpd generally use buses, routes with ridership between 2,000 to 20,000 pphpd generally use light rail, and routes over 15,000 pphpd light to heavy rail metro is planned for. Of course there is overlap as there is no firm rule as what mode is to be used. Buses can carry upwards of 7,500 pphpd (theoretical maximum for the Ottawa Busway) and LRT can carry over 25,000 pphpd (Tuen Mun LRT, Hong Kong), as well modern LRT can be used as a classic streetcar and a metro on the same route. Unless there is very high ridership on a metro route, huge

annual subsidises must be paid, for operation, maintenance and debt servicing. **This must be considered when comparing LRT to SkyTrain. Since SkyTrain was first marketed in the 1970's only six systems have been built or are under construction; during the same period over 90** (not including heritage and tourist lines, or LRT projects in the planning stage) **new light rail operations have been built or are under construction!**

A rule of thumb for construction costs for a transit system is that *subway* or *underground* construction is twice as much as *elevated* construction and *elevated* construction can cost as much as ten times as *at grade construction*. Also transit systems that are elevated or underground do not attract as many new riders as surface operating transit systems because the public doesn't like subterranean or elevated stations. It has been found that it's not just speed that attracts people to new transit systems, but rather the *seamless* or no-transfer journey. customers want as direct a service as possible and **one can lose upwards of 70% of potential ridership per transfer!** It's more important to build a large network, servicing many destinations, rather than a few hugely expensive express *rapid-transit* lines!

Modern Light Rail Transit is a different transportation **mode** than SkyTrain and it's built to suit a different public transportation philosophy, where economic construction, operation and customer satisfaction are prime. Metro is built solely to cater to high ridership demands. Trying to build a metro (SkyTrain) on routes that will not sustain it will mean huge annual subsidies to pay for the large debt servicing charges, resulting from high construction costs; like trying to fit a square peg into a round hole!

Seven questions to ask GVRD and TransLink planners:

1. Why are we still planning for hugely expensive *rapid-transit* (metro or SkyTrain) solutions, including subways, for public transit in Greater Vancouver, when it offers no operational or financial benefit?
2. Why is SkyTrain planning still taking place even though it has proven much more expensive to build and operate than modern LRT?
3. Why has modern LRT planning been ignored, especially with the experience of **over 90 new light rail systems having been built around the world in the past 25 years?**
4. Why has the former interurban route, the Arbutus Corridor, been ignored for a rail link to Richmond?
5. Why have experts who have modern expertise in LRT construction not been hired as consultants?
6. Why do planners refuse to recommend pre-tendering, where companies and consortia with real expertise, bid to build the most cost effective transit solution for regional rail transit construction?
7. Do TransLink and GVRD transit planners have the expertise to plan for light rail or metro? [Former Chair of TransLink and GVRD, George Puil, said not. Liz James Moreover, newly-installed CEO, shortly after arriving in Vancouver, said at a Public Meeting in North Vancouver's Centennial Theatre, "There never was a business case for SkyTrain in this Region. We agree! Liz James]

It is to the benefit of regional politicians to understand the difference between LRT and Metro (SkyTrain), even though high-salaried planning bureaucrats may not!

Sources: Jane's Urban Transportation systems; Light Rail Review, Vol. 1 - 8; Tramways & Urban Transit 1998 to date;

Light Rail Transit and Modern Tramway 1986 -1997; Future of Urban Transport; Bus or Light Rail: Making the right Choice.
