



CITY OF RICHMOND

REPORT TO COUNCIL

TO: Richmond City Council
FROM: Jane Bird, Project Director
Richmond/Airport-Vancouver Rapid Transit Study
DATE: April 18, 2001
FILE: 0154-03
RE: RICHMOND/AIRPORT-VANCOUVER RAPID TRANSIT STUDY – PHASE 2 FINAL REPORT

STAFF RECOMMENDATION

1. That Council endorse the overall conclusions and recommendations of Phase 2 of the Richmond/Airport-Vancouver Rapid Transit Project and that Council formally acknowledge the contributions of the Richmond Rapid Transit Public Advisory Committee on this phase of the study.
2. That Council support the extension of Phase 2 to conduct additional analysis on a continued multi-agency basis and that this analysis would include further work by Macquarie Bank North America and the Project Director on the potential for a private-public partnership, including investigation of market and technical issues related to a possible Airport service, to be funded by TransLink and the Vancouver International Airport Authority.
3. That City staff and the Project Director provide further updates to Council, specifically as to Macquarie's findings at the conclusion of the extension of Phase 2.
4. That City staff continue to support the Project through participation on the Steering Committee and providing advice generally on any issues which may have an impact on Richmond.
5. That the Richmond Rapid Transit Public Advisory Committee be retained to continue to provide input following the Phase 2 extension.
6. That the above recommendations be conveyed to the TransLink Board of Directors and the other agencies participating in the study.

Jane Bird
Project Director
Richmond/Airport-Vancouver Rapid Transit Study

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CONCURRENCE OF GENERAL MANAGER

STAFF REPORT

ORIGIN

1. Management Plan

At its regular meeting on September 25, 2000, Council approved the Management Plan for the Richmond/Airport-Vancouver Rapid Transit Project and the City's participation as one of eight agencies in the preliminary planning for a rapid transit connection between Richmond, the Airport, and Vancouver.

The Management Plan provides:

- the study is a joint planning process involving the following participants (the "participating Agencies"):
 - TransLink (as lead agency)
 - Transport Canada
 - Vancouver International Airport Authority (YVR)
 - Province of British Columbia
 - City of Richmond
 - City of Vancouver
 - Greater Vancouver Regional District (GVRD)
 - Vancouver Port Authority

- the study has three independent Phases; at the conclusion of each Phase the agencies will agree, by executing a memorandum of understanding¹, to participate in the next phase;
- Phase 1 consists of the preparation of the Management Plan, and an agreement to participate in Phase 2;
- Phase 2 takes place over six months, from October 2000 until March 2001;
- the budget estimate for Phase 2 is \$500,000, jointly funded by Transport Canada and YVR, with contributions in kind from other participating Agencies;
- a Project Team carries out the work plan for Phase 2, on behalf of all of the participating Agencies;
- a Steering Committee comprised of senior staff representatives from the participating Agencies and two independent advisors oversees the work; and
- a Technical Committee, comprised of representatives from the participating agencies advises the Steering Committee and is available to the Project Team for advice, or on issues of particular significance to the agency or discipline they represent.

In accordance with the Management Plan, Phase 2 began October 1, 2000. It had three objectives:

- (a) An evaluation to compare the costs and benefits of building the line by 2010 versus a later date; communicating the conclusions of that analysis and consulting with decision makers, key stakeholders and the community.

¹ each participating Agency executed a memorandum of understanding, except the Province of BC; the Province agreed to participate in RAV, and nominated a senior staff member to the Steering Committee, but has not executed a memorandum of understanding.

- (b) Exploring the potential for public sector funding to develop the line, if approved, in particular from the Federal Government, but also from other agencies, as potential in principle funding partners.
- (c) Exploring the potential for private sector involvement.

2. Public Private Partnership

Early in Phase 2, the Project Team and TransLink staff considered how to approach the third objective. At the same time, TransLink staff were evaluating the proposed Fraser River Crossing east of the Port Mann Bridge, which they also thought might be suitable candidate for private sector involvement. They held a workshop involving senior staff from various agencies and the private sector to consider both projects. As a result of the workshop, staff and the Project Team concluded that both projects had potential, and that there may be some efficiency in retaining an advisor to consider both projects. As a result, as described below, TransLink retained Macquarie North America ("Macquarie") as an advisor on the potential for private sector involvement in both projects. While the results of the public/private partnership ("PPP") work are part of the Phase 2 Richmond/Airport-Vancouver Project, the work was done for TransLink, and is reported separately in this report.

3. Purpose of this Report

During Phase 2, staff and the Project Team presented two progress reports (December 11, 2000 and March 26, 2001). In addition, on January 30, 2001 Council participated in a workshop with the Project Team and Macquarie.

This report is the final report of the Richmond/Airport Rapid Transit Project team for Phase 2 of this Project. It presents:

- (a) the results of the first two objectives of Phase 2 of the Richmond/Airport to Vancouver Project:
 - the findings of the cost/benefit analysis and the public consultation; and
 - the potential for public sector funding; and
- (b) an outline of the preliminary results from the Macquarie study.

4. Summary

Cost Benefit Analysis

As part of Phase 2 the Richmond/Airport to Vancouver Rapid Transit Project undertook a cost benefit analysis of the connection using a "multiple account" methodology. They used a series of possible transit line configurations, representing lower and higher capacity alternatives as illustrations for this purpose. Given long standing regional policy, and an extensive history of technical consulting reports, this analysis was directed to the question of timing: should the line be constructed earlier (consistent with regional policy) or later? The report concludes that the quantitative measures – costs and benefits – associated with construction of the line do not provide a clear answer within the limits of the analysis. However, when qualitative benefits – more appropriate urban development (smart growth) and the advantages for the environment, the economy, and liveability of the region – are considered, these lead to a conclusion to build rail transit from Richmond and the Airport sooner rather than later. A summary of the Project is attached as Attachment 1.

Public Consultation

The Project Team conducted a public consultation program to engage the public in a discussion of the issues, determine overall support for the Project as a transportation priority, and to assess the public's response to the results of the cost/benefit analysis. The results of the public consultation program indicate significant public support for the Project.

Initial Findings re: Private Sector Involvement

Macquarie conducted the Phase 2 exploration of the potential of this Project as a public-private partnership for TransLink. Macquarie conducted its work concurrently with the cost/benefit analysis. They provided comments throughout the study, which helped to clarify cost and revenue assumptions. They note that the assumptions of the cost/benefit account analysis are very conservative, and suggest that appropriate participation by the private sector could provide a project for a lower cost, with significant financial participation by the private sector. However, the Macquarie preliminary conclusions would require that government adopt a different approach to project development, with a focus on commercial considerations. These include the development of a premium service to the Airport, possible revisions to fare structures, the incorporation of innovative revenue generating uses in stations, the application of transportation demand management measures, and the incorporation of existing elements of the transportation system into a private-public partnership, as well as developing an approval process to balance certainty for the private sector with participation by agencies and the community.

Given the potential for significant benefits from private sector, the Project Director and the Chief Executive Officer of TransLink are recommending to the Board of directors of TransLink at its meeting of April 20, 2001 that the Board approve a three month extension of the PPP review, extending the analysis of PPP opportunities in the context of this region, and addressing market and technical issues related to an Airport premium service. With this timing, the report back to the TransLink Board on PPP opportunities would take place in July.

The Macquarie analysis noted significant concerns related to at grade construction in Vancouver. They noted the greater benefits from a grade separated system, and significant community concerns related to an at grade system. At the April 20 meeting, the Chief Executive Officer of TransLink will recommend to the Board of Directors that further analysis of a rail transit connection through Vancouver be restricted to underground (tunnelled or cut and cover) options.

The Project Director recommends in this report that Council affirm the recommendations of the Project Team, and that City staff continue to participate on the Steering Committee during the three month extension and provide advice where appropriate to the Project Director, who will be co-ordinating the review.

ANALYSIS

1. History

A Richmond–Vancouver rapid transit link has been part of regional planning policy since 1980. It is an element of *Transport 2021*, the long range transportation plan for greater Vancouver, which in turn serves as the transportation component of the GVRD's District *Livable Region Strategic Plan* (LRSP). *Transport 2021* anticipated completion of three intermediate capacity rapid transit lines by 2006 (medium range plan) and before 2021 (long range plan):

- Coquitlam - New Westminster;
- Broadway – Lougheed; and
- Richmond – Vancouver.

In 1998 the Province announced a SkyTrain extension to cover *a portion* of the Coquitlam – New Westminster line and *a portion* of the Broadway-Lougheed line. That extension is now under construction.

Since the adoption of the LRSP in 1996, planners have monitored growth in Vancouver, Richmond and at the Airport. The rate of growth is faster than initially anticipated, particularly at the Airport, where current employment levels have already surpassed 2021 predictions. In addition, in downtown Vancouver the rate of residential development is strong, and the rate of job and residential growth in Richmond City Centre is exceeding expectations.

Planners discussed these growth trends during the consultation program for the TransLink *Strategic Transportation Plan*. Several regional agencies expressed renewed interest in a rapid transit link to connect Richmond and Vancouver, with a link to serve both the growing employment base at the Airport, and the terminal itself. TransLink advanced the Richmond/Vancouver corridor for study in 2000/2001, and, in light of the growth at the Airport, included an Airport connection.²

In addition, noting the capital constraints facing government, TransLink and the Project Team expressed early interest in involving the private sector, and possibly pursuing a public private partnership. TransLink appointed Macquarie as TransLink's PPP advisor to provide advice on both the Richmond/Airport–Vancouver Project and the Fraser River crossing to replace the Albion Ferry. Macquarie is a subsidiary of Macquarie Bank, an Australian Bank specializing in advising and funding governments and the private sector to develop transportation infrastructure through private public partnerships.

TransLink and Macquarie representatives agreed on a project program and schedule that would provide separate reports on TransLink's two projects. The first report was scheduled to present preliminary conclusions on a timeline that would permit the Board to evaluate them with the conclusions of the Richmond/Airport to Vancouver study.

The parallel work of the two consulting teams has been very productive, testing the broad evaluation of the Richmond/Airport consulting team against the commercially focussed approach of the Macquarie team.

2. The Richmond/Vancouver Corridor

This corridor connects downtown Vancouver, Central Broadway, Richmond City Centre and the Airport.

Downtown Vancouver and Central Broadway

- Including the west end, the downtown part of the corridor is home to 77,000 residents and 130,000 jobs.

² *TransLink Strategic Transportation Plan 2000 - 2005*, April 2000, p. 21

- The downtown peninsula has experienced significant residential and employment growth in recent years; by 2021, jobs on the peninsula could reach as high as 180,000, 50,000 more than today.
- The Central Broadway area (bounded by False Creek, 12th Avenue, Main Street and Burrard Street) is the second largest employment centre in the region, second only to downtown Vancouver.
- By 2021, one third of peak period trips going downtown will terminate at Central Broadway.

Richmond Town Centre

- The Town Centre has experienced rapid growth in the past decade.
- The Town Centre has a residential population of 33,000 and an employment base of 38,000, and a proportionately large amount of commercial floor space (4.5 million square feet, the second highest among regional town centres).
- The City of Richmond is concentrating development in the Town Centre, which is expected to double in population by 2021.

The Airport

- Since 1992 when the Airport Authority assumed responsibility for the airport, passenger traffic has increased by 61% and air cargo has increased by 74%.
- In 2000 YVR handled 16 million passengers and 252,000 metric tonnes of cargo.
- YVR estimates that by 2021, passenger numbers will roughly double, to 30 million passengers per year; and it will handle 700,000 tonnes of air cargo annually.
- As a result of this growth, employment growth on Sea Island is very strong, exceeding predictions: over the past nine years, airport related employment has doubled – over 26,000 people currently work on Sea Island.
- By 2021 YVR expects that number will have increased to 40,000 (in terms of jobs, a city the size of Prince George).
- 48% of employees live within the Vancouver/Richmond corridor.

Downtown Vancouver and downtown Richmond represent approximately 5% of the region's population, and 15% of the region's jobs. Almost 1.1 million people travel in the corridor daily. Of those, approximately 65% drive, 25% take transit, and 10% walk/bike.

Of the four major regional corridors identified for improvement, this corridor has the greatest traffic density³.

3. The #98 B-Line

TransLink is about to introduce the “#98 B-Line” bus service to connect Richmond City Centre and downtown Vancouver. The #98 B-Line is intended to provide frequent, limited stop service, using advanced bus technology and, along a 2km stretch in Richmond, a dedicated right-of-way.

A limited service has been in operation between the Airport Station and downtown Vancouver since 2000. Full #98 B-Line service will commence in the spring 2001 although full service levels may not be reached until 2002, depending on available funding.

³ As measured in passenger-kilometers per peak hour, per route kilometre and as compared to similar statistics for other corridors published in *Transport 2021, Medium Range Transportation Plan for Greater Vancouver*

The #98 B-line will provide:

- service every 4 to 5 minutes during the peak hours, every 7 to 8 minutes during the daytime and every 10 to 15 minutes in the evenings;
- travel times from the Richmond City Centre terminal to Waterfront Station in downtown Vancouver of 35 to 40 minutes;
- limited bus only lanes constructed in Richmond in the centre of No. 3 Road between Sea Island Way and Ackroyd Road (just north of Westminster Highway);
- some signal priority at 66 traffic signals along the route; and
- digital notification to riders of bus arrival.

The #98 B-Line service will provide 1,500 passenger spaces per hour per direction during peak periods. Additional express buses will bring overall system capacity to approximately 2,400 passenger spaces per hour, although this will not be reached until 2002. The #98 B-Line ridership is projected at 22,000 per day after one year of full service.

4. Policy Context

Analysis in Phase 2 was predicated on the policies of participating agencies. As described above, the primary policy governing this corridor is the GVRD LRSP, which calls for rapid transit in the Richmond/Vancouver corridor. Rapid transit in this corridor is also TransLink policy (the Strategic Plan, 2000), City of Vancouver policy (the City of Vancouver Transportation Plan, 1997) and Richmond policy (Richmond City Centre Transportation Plan, 1997, Richmond Official Community Plan 1995).

Following is a list of the studies and policy documents that have considered rapid transit in this corridor.

1970	Report on the Greater Vancouver Area Rapid Transit Study
1972	Kelly Report
1975	Livable Region: 1976/1986
1979-1980	GVRD's Light Rail Transit Studies
1980	GVRD's Official Regional Plan
1981	Hickling Report examines Cambie and Arbutus
1989	GVRD's Freedom to Move Study
1991	BC Transit's Vancouver-Richmond Rapid Transit Project: Vancouver International Airport
1992	BC Transit's Vancouver-Richmond Rapid Transit Project
1993	GVRD's Transport 2021: A Long Range Transportation Plan for Greater Vancouver
1993	GVRD's Transport 2021: A Medium Range Transportation Plan for Greater Vancouver
1993	Vancouver International Airport: Rapid Transit Concept Study
1994	BC Transit's Review of Intermediate Capacity Transit Systems: Richmond – Vancouver Corridor
1995	BC Transit's Summary of Intermediate Capacity Transit System Studies in Greater Vancouver
1995	BC Transit's Multiple Account Evaluation of Rapid Transit Options in Greater Vancouver
1996	GVRD's Livable Region Strategic Plan
1997	City of Vancouver Transportation Plan

1999	Vancouver International Airport's Rail Access to the Vancouver International Airport
2000	City of Richmond Transportation Plan
2000	TransLink's Strategic Transportation Plan

Most of these policy documents refer to "intermediate capacity rapid transit" for this corridor. That term has been defined to mean higher capacity transit, with a capacity of 10,000 people per hour. The term can include busways (buses on dedicated rights of way) and rail. A number of earlier studies concluded that intermediate busways would not provide the required capacity to serve the corridor over the long term, and that busways developed to capacity would have potentially large community impacts.⁴

As a result, the Project Team, in consultation with the Steering Committee, concluded that in light of the earlier work, dedicated busways would not be evaluated in as part of this Project, and that an analysis of rapid transit would assume intermediate capacity rail.

5. Cost Benefit Analysis

Given the policy context, the Project Team, in consultation with the Steering Committee, concluded that the question was not *if* there should be rail transit in this corridor, but *when*?

Given the question was one of timing, the issue in terms of a cost/benefit analysis became: what are the costs and benefits of building rail transit to connect Richmond, the Airport and Vancouver by 2010 vs. 2021 or later?

The Project Team, with assistance from Marvin Shaffer, a consultant with expertise in cost/benefit analysis, developed the terms of reference for a multi-disciplinary team of consultants retained by the Project Team to perform the work. The terms of reference were based on a methodology originally developed by the Provincial Crown Corporations Secretariat for evaluating major capital projects. The methodology uses a "multiple account evaluation" or MAE approach. TransLink recently refined this approach for application to transportation projects.

In this approach the costs and benefits are not combined into one measure of net benefit. Rather, the costs and benefits are "bundled" into individual accounts, so that they can be analyzed separately.

The accounts used for this study were:

- Financial
- Transportation User
- Economic
- Urban Development
- Social
- Environment

⁴ *Baseline Bus Option*, ND Lea, April 1992; *Review of Baseline Bus Option Study*, Urban Systems Ltd., July 1992

The consultants were asked to develop:

- a “base case” scenario, with no rail transit, but high quality bus service (local, #98 B-Line [described above] and express services), improved over time as demand warrants; and
- alternative rail rapid transit scenarios, with in service dates of 2010 and 2021.

The costs and benefits of the rail development scenarios were compared to the base case, and analyzed using the above accounts.

For the purpose of calculating the costs and benefits, the consultants used a series of alignments and design alternatives to identify a “range” of illustrative concepts, from a lower cost, lower service concept, to a more expensive concept, providing a higher level of transit service. The alternatives included “at grade” or street level rail on Cambie and Arbutus Streets in Vancouver, to No. 3 Road and the Airport and “grade separated” rail, below/above street level on the same corridors. In the case of the below/above ground illustrations, in Vancouver the illustrations presumed bermed or tunnel options; in Richmond and Sea Island, where tunnelling is difficult, the illustrations assumed above grade options. This range was intended to “bound” the analysis, not to select a corridor or preferred technology.

The analysis concludes that rail is a considerable investment, but offers significant benefits. Generally, the net benefits of rail are a function of increased capacity and higher ridership. Increased ridership is in turn due to reduced travel time, reliability and increased attractiveness of rail.

The following table notes the difference:

	#98 B – Line 2002	#98 B – Line 2010	Rail 2010	Rail 2021
Capacity (per peak hour)	2400	2800	15000+	15000+
Daily Ridership	22,000	32,500	107,500	137,000
Travel times	35-40 min.	42-50*	22**	22**

* given the congestion trends in the past decade, this is a conservative estimate

** exclusive right of way

These benefits in turn affect our ability to achieve transportation, land use, economic, and environmental policy objectives:

- provide transportation choice;
- provide capacity, particularly in the region's primary corridors;
- manage congestion;
- concentrate population and employment growth in regional town centres and provide high quality transit between them;
- foster a strong regional economy; and
- improve local air quality and control greenhouse gas emissions.

6. Initial Findings

In addition to the study results with respect to the timing of a rapid transit link between Richmond, the airport and Vancouver, the study produced three related findings.

Quantifiable Benefits Outweigh Quantifiable Costs

The estimated overall quantifiable benefits of a rapid transit line in this corridor (whether built soon or later) outweigh the overall quantifiable costs; further, the non-quantifiable items are unlikely to change this finding. This conclusion remains valid for a street level rapid transit system sharing road space (e.g., having to negotiate cross-traffic, running in a "non exclusive" right of way) *only* if the tracks avoid (by going over, under or around) the worst congestion in enough locations to save two or three minutes of travel time. The finding supports the long-standing policy of the GVRD LRSP, which states that this corridor should be served by rapid transit.

Line Cannot Recover Costs from Fare Box

Depending on the design, the line would cost between \$1 and \$2 Billion to build and approximately \$34 Million per year to operate. Based on financial estimates, revenues will cover operating costs and a small portion of capital. However, as is the case with most rapid transit systems, the line cannot cover its capital costs from the fare box, irrespective of start up date. In other words, at current fares, transit users cannot pay the full cost of building this line. In quantifying benefits, the study identified that transit users *and* car and truck drivers would benefit from this investment. The capital shortfall could be met by government or by other beneficiaries. While the study identifies these beneficiaries, it does not address mechanisms to recover these benefits.

Airport Branch is Justifiable

An airport branch of the line, serving mainly Sea Island businesses and workers, could be a justifiable addition to the Vancouver-Richmond trunk. Forecast airport boardings in 2010, averaged for exclusive and non-exclusive right-of-way (RoW), comprise 11 percent of overall boardings, with the percentage of airport to total boardings increasing in 2021. The study assumed air passengers would pay higher fares (e.g., \$10 to downtown Vancouver). At this fare, air passengers would comprise approximately 4 percent of the passenger load but pay 15 percent of total farebox revenue. As part of its work, Macquarie analyzed the potential for an Airport premium service. Their preliminary findings are discussed below.

7. Results on Timing Question

Based on Quantifiable Measures Alone

Given the estimated quantifiable benefits and costs, the answer to the timing question is neutral within the accuracy of the analysis. The quantifiable measures alone give no preference to delay or proceed with a rapid transit link by 2010. Quantifiable benefits are greater than costs at both start dates but this balance does not change appreciably over the 2010 to 2021 period.

Thus, it is beneficial to have rapid transit start operating in 2010 as there are substantial benefits to be received early, but its cost is substantial. Conversely, it is equally beneficial to have rapid transit start in 2021 since deferring the costs is valuable, and this deferral compensates for the benefits missed between 2010 and 2021.

Based on Quantifiable and Non-Quantifiable Measures

However, when non-quantifiable factors such as land use, economic, social and environmental impacts are considered, the results favour an earlier start-up as:

- the social and community impacts of rapid transit in service sooner versus later appear to balance out, with no net effect on the timing question;
- the environmental benefits of a rapid transit system favour an earlier rather than later in-service date; and
- there are desirable land use, urban development and overall economic development benefits attributable to rapid transit that are better received sooner than later.

Therefore, on balance, the advantages for the environment, the economy and the liveability of the region appear to outweigh the disadvantages. These overall results point to a conclusion to build a rapid transit system in this corridor sooner rather than later.

8. Supplementary Finding

A supplementary finding of the study is that the performance of a rapid transit system (i.e., increased benefits, notably in speed and therefore ridership) could be improved by fine-tuning the design of the system with only modest corresponding increases in cost.

Starting with the shared-right-of way system, engineers could selectively eliminate traffic signal delays in several possible ways, e.g. some extra construction to create a separate section of right-of-way, or more sophisticated control of traffic in the vicinity of intersections. Other refinements, though perhaps not of the same proportion, are also available for the exclusive right-of-way system. While the study states that this could clearly be done, actually designing the system at such a level of detail goes beyond this study.

The prospect of better-performing rapid transit after these refinements adds weight to the central conclusion that it is better to have rapid transit sooner rather than later in the Richmond-Airport-Vancouver corridor.

9. The Public Consultation Program

The public consultation program consisted of five elements.

Information Postcard

The Project Team developed a postcard that shows a map of the existing and proposed rapid transit routes in the Lower Mainland on one side and summarizes the purpose and stages of the current Study on the reverse side. The Project Team has distributed these postcards at various meetings with interest groups and stakeholders.

Web Site

The Project has a web site at www.yourcity2010.com. The web site has a number of pages that provide information on the Project, its status and the participants. The web site is accessible in both English and Chinese and includes links to the web sites of participating agencies. The web site included an on line survey, and the ability to comment by email. 225 people completed the on-line survey.

Quantitative/Qualitative Research

The Project Team retained a research firm to conduct a two-stage research program. The first stage consisted of 7 focus group discussions with residents and businesses in the Lower

Mainland. The second stage involved telephone interviews with 887 residents and 100 businesses in the Lower Mainland.

Public Open Houses

The Project held six open houses to present the top line results of the cost/benefit analysis and gather public feedback. The sixth open house was held at the specific request of Arbutus corridor residents, who indicated concern that corridor residents had not attended the earlier open houses. Project Team members and consultants were in attendance at all open houses. Richmond staff also attended all Richmond open houses. Over 800 people attended the open houses, and of those 375 completed feedback forms.

Advisory Groups/Stakeholders

The Project Team made presentations to a variety of stakeholders and interested parties including Richmond Chambers of Commerce Transportation Task Force, Vancouver Board of Trade Urban Transportation Task Force and Regional Transportation Task Force, Richmond Asia Pacific Business Association, "Better Environmentally Sound Transportation" ("BEST")/David Suzuki Foundation, and UBC and SFU transportation planning groups.

In addition, the Project Team met regularly with the Richmond Rapid Transit Public Advisory Committee, an advisory committee constituted by Richmond City Council. In Vancouver, the Project Team initiated meetings and met monthly with an informal group of concerned citizens from the Cambie Heritage Boulevard Society, the Arbutus Legacy Corridor Committee and the Granville rapid bus citizens group.

10. Public Consultation Results

The results of the public consultation are set out in Attachment 2. Overall, there is significant public support for the Project, within Vancouver, Richmond and the region as a whole. The quantitative work indicates that more than 75% of all residents and businesses support the project, in concept. In Vancouver and Richmond 83% of residents surveyed see this Project as a positive thing for their community; 62% of GVRD residents see this Project as a positive thing for their community. Questions were restricted to a rail project connecting the Airport, Richmond and Vancouver; they did not address technology or corridor preference.

These findings were consistent with the on line survey, and the feedback at most of the open houses. The one exception was the open house requested by Arbutus residents, where the feedback forms indicated a notable lack of support for the Project. Residents at that open house also expressed grave concern with the ultimate alignment: particularly that it not be above grade⁵ or at grade. The citizens groups from Arbutus and Cambie that met with the Project Team do not support building a line sooner. Several question the regional policy that supports intermediate capacity rapid transit for this corridor. These views were inconsistent with the quantitative results of interviews with corridor residents. Of the 150 interviews within three blocks of the Arbutus and Cambie corridors, 83% of respondents see this as a positive thing for their community.

Generally, in terms of transportation priorities, residents place first priority on increasing bus service in the region, followed by a Richmond/Airport–Vancouver rapid transit connection. Businesses placed equal importance on a number of road and transit projects.

⁵ The City of Vancouver Arbutus Corridor Official Development Plan (July, 2000) precludes any grade separated rapid transit system elevated, in whole or in part, above the surface of the ground

11. Potential for Public Sector Funding

The Federal government has made commitments to urban transit infrastructure in the recent Throne Speech and has provided funding support for this Project. The Throne Speech broadly reaffirmed the commitment in the Liberal election platform to dialogue with urban centres and improve public transit. Specifically, the speech included a pledge that the national government "will co-operate with provincial and municipal partners to help improve public transit infrastructure."

In terms of other levels of government, though it referred to a rapid transit line in this corridor in the context of Olympic discussions, the Province appears to be concentrating its efforts on the Millennium Line construction and the Coquitlam/Port Moody and Vancouver West extensions. As regards TransLink, without significant additional funding (over and above that to allow it to fund the bus improvements and other initiatives contemplated in the Strategic Plan, and its commitments to the T-Line) a capital contribution seems unlikely. The Project Team recognized, and assumed in the context of its work, that these commitments are TransLink's first priority.

Generally, however, while the cost benefit analysis suggests that there may be economic and social justification for government capital contributions to this Project, given the size of the project, the capital constraints facing governments, and the number and size of competing priorities, a direct contribution large enough to build the project seems unlikely. The objective of the PPP review was to explore the commercial opportunities of the Project, and the potential to involve the private sector, and thereby reduce the level of government contribution that would be required. As described below, the initial findings of the PPP advisor suggest there is significant potential for a viable PPP project. The preliminary findings are under discussion with the participating agencies.

12. Macquarie Bank PPP Review of Richmond/Airport to Vancouver Rapid Transit

In contrast to the Richmond/Airport to Vancouver Rapid Transit work, which looks at overall costs and benefits, hard and soft, in structured way, the Macquarie review focused on commercial considerations and opportunities associated with the transit system. Their perspective and experience has proven very valuable in reviewing the rapid transit evaluation, in particular the cost and revenue assessments.

In undertaking their analysis, Macquarie staff have consulted with all stakeholders and regional and provincial officials. They have provided commentaries on construction costs and timetables, operating costs, revenue estimates, and revenue sharing anomalies in the Richmond/Airport analysis, and identified commercial opportunities that require further exploration. They have conducted financial modelling under the Richmond/Airport to Vancouver Rapid Transit Project assumptions, and under more commercially appropriate assumptions, identified the potential for private sector involvement, and outlined a possible process to pursue a private-public partnership. A substantial draft report has been presented, which is now being reviewed by stakeholders.

Private-Public Partnerships in Transportation

Public-private partnerships in transportation are relatively recent. Traditionally, governments have invested directly in roads and transit systems, and operated them as part of government. More recently, as part of a general trend toward government specifying requirements and obtaining services from the private sector, many governments have adopted models where the private sector funds, designs, builds, and operates roadways and transit systems. This practice

is widespread in England, Australia, and New Zealand, and Asia, and is becoming more common in North America.

These models may take many forms. At one end, the private sector may provide all or most of the funding, and absorb major risks associated with the project – construction costs, delays, lower than projected revenue, higher than expected operating costs. At the other, the private sector's role may be limited to designing and building a facility within broadly specified parameters. In the middle, a private contractor may take the risks of design, construction, and schedule, but be guaranteed revenues sufficient to cover the bid cost of the project and subsequent operations.

All such projects have some common characteristics. To at least some degree, and frequently to a large degree, the government relinquishes its traditional practice of detailed specifications and project control, and allows the private sector greater flexibility in design and project management. Construction specifications are based on general requirements and performance standards – the private sector is left to determine the best way to meet these requirements. This may even extend to alternatives as diverse as a bridge or tunnel, or choice of rapid transit right of way. Operations too are based on performance specifications, usually governed by bonuses and penalties to ensure good performance.

The rationale for a public-private partnership may result from:

- a shortage of government funds;
- a desire to obtain the benefits of private sector project management;
- the transfer of risks to private companies; and
- the greater flexibility in management and operations enjoyed by the private sector.

All of these objectives are relevant to this project.

PPP Review – Preliminary Conclusions

Macquarie's work suggests that the Richmond/Airport to Vancouver Project has many characteristics that may make it suitable for a private-public partnership approach. These include:

- the ability to meet operating costs from the farebox, and potential capital cost recovery through the farebox and associated commercial benefits arising from the project;
- the potential for a premium airport service, requiring additional capital costs but commanding a premium fare, to subsidize other elements of the project;
- potential innovations in route selection, technology, and implementation, resulting in costs below the (appropriately) conservative estimates in the Richmond/Airport to Vancouver analysis;
- local experiences of Design-Build contracting techniques;
- potential for significant transfer of construction, maintenance, operating and financial risk to the private sector;
- a clear economic and social justification for government capital or operating contributions to the project, as demonstrated in the Richmond/Airport to Vancouver analysis; and
- few pre-existing major government constraints on private sector involvement.

Macquarie's work notes that under the very conservative assumptions used in the Richmond/Airport to Vancouver Rapid Transit Project analysis, and given the scale of the project, there is limited possibility of significant private sector financing of project capital costs. However, their report suggests that the private sector could substantially improve the commercial viability of the project through range of innovations.

The Macquarie work presents directions that would require a significant shift in government thinking. These include the development of a premium service to the Airport, possible revisions to fare structures, the incorporation of innovative revenue generating uses in stations, the application of transportation demand management measures, and the incorporation of existing elements of the transportation system into a private-public partnership. Further, and perhaps most important, Macquarie notes that the current fragmented and open-ended approval processes in the region are insufficiently certain to attract early private investment. Development of such a process would be required. These issues require further consideration with participating agencies.

Macquarie reviewed the results of the MAE work and considered the relative benefits of at and below grade alternatives from a private sector perspective. They noted that below grade construction provided technical, commercial, and community benefits, albeit at higher cost, while at grade alternatives presented travel time and insurability issues, and raised community concerns. The Richmond/Airport to Vancouver Project was not intended to reach technical conclusions related to alignment or technology in this phase. However, the Chief Executive Officer of TransLink, noting Macquarie's comments and the substantially greater benefits identified for high speed grade separated options, believes that for this project the TransLink Board should preclude at grade options in Vancouver in future work, to avoid both unnecessary analysis and continuing community issues related to surface options. The report for the TransLink Board of Directors (see "Next Steps" below) includes the CEO's recommendation to place this limitation on further analysis.

13. Conclusions of the Project Team

The Project Team reviewed:

- the multiple account analysis;
- the results of the public consultation plan; and
- the preliminary findings of the Macquarie work.

The Team discussed these findings with the Steering Committee and the independent advisors.

On the basis of its review and discussions, the Project Team made the following recommendations to the Steering Committee for consideration by the Participating Agencies:

- (a) That the Participating Agencies confirm the following findings of the MAE report and public consultation:
- that the report conclusions confirm long standing regional policy that the Richmond/Vancouver corridor should be served by rapid transit in the medium term;
 - that an Airport branch could be a justifiable addition to the main Richmond/Vancouver trunk;
 - on the question of sooner vs. later, on the basis of both quantifiable and non quantifiable costs and benefits, an in service date of 2010 is worth pursuing; and
 - that there is significant public support for this Project.

- (b) That on the basis of the early findings of Macquarie Bank North America, more work is needed to further explore the potential of this Project as a public/private partnership, including further review of some of the commercial aspects of a rapid transit connection in this corridor.
- (c) That the further exploration of the public/private partnership potential represent an extension of Phase 2, to take place on a multi agency basis over the next three months, with a further report in late July.
- (d) That any further work following Phase 2 include development of a process that recognizes multi-agency participation and the participation of the community, noting that on the assumption the Project involves a public/private partnership, the process must contemplate some certainty that the Project will proceed.

Each Agency is considering these recommendations. **Recommendation 1** of this report contains an endorsement by Council of the overall conclusions and recommendations of Phase 2.

14. Next Steps

The TransLink Board of Directors is considering this matter at its meeting on April 20, 2001. Staff are recommending that the TransLink Board receive the information contained in the multiple account evaluation for information, and reaffirm the development of the Richmond/Airport to Vancouver rapid transit link as a medium term policy objective.

In addition TransLink staff note the private sector issues require further development and discussion with participating Agencies. The report notes that the Airport has requested that TransLink join with the Airport in a further review of issues of interest to both agencies:

- further development of the PPP concepts;
- further market analysis to coincide with a planned update of the Airport's ground transportation plan (with data collection scheduled for June 2001); and
- technical considerations related to the Airport service.

Modest funding from each of TransLink and the Airport would provide the necessary resources to complete the work by July, 2001. On this basis, TransLink staff are recommending to the TransLink Board of Directors that further investigation of PPP methodology, and issues related to market analysis and technical considerations related to the Airport premium service would provide all of the agencies, but the TransLink Board in particular, with useful additional information. This work would take place from May to July. Following that work, should TransLink and other agencies conclude they wish to proceed further, the TransLink report notes that staff have been advised that Airport and Ministry of Transport staff would likely provide financial support for additional work.

Recommendations 2 through 4 of this report suggest that Council's support this extension, endorse the continued participation of senior staff on the Steering Committee, continue to retain the Richmond Rapid Transit Public Advisory Committee for further advice following the Phase 2 extension, and receive further updates.

FINANCIAL IMPACT

Staff representatives sit on the Steering and Technical Committees. The City provided staff resources to assist with the production of the informational postcard and to attend the open houses in Richmond. The City provided office space at the interim Richmond City Hall and furniture for the Project Team.


For the three-month extension of Phase 2, senior staff will continue as members of the Steering Committee. Due to renovations at the interim Richmond City Hall, the office space will not be available after April 30, 2001. The site office will be closed and the Project Director and her assistant will relocate to TransLink offices for the three-month extension.

TransLink and YVR staff are recommending that the funding for the extension be shared equally by TransLink and YVR.

CONCLUSION

The Richmond/Airport to Vancouver Rapid Transit study has demonstrated that even a conservative evaluation of a rapid transit system from Richmond and the Airport shows significant positive benefits to the community, and that such a system should be constructed earlier rather than later. The Macquarie North America work suggests that significant benefits may be achievable through utilization of private sector expertise in the design, development, and approval of the Project. An extension of Phase 2 to explore PPP techniques more fully, and examine market and technical issues related to the Airport service, is recommended.

Completion of this work would provide the TransLink Board with the necessary basis for an evaluation of the potential for use of a public-private partnership approach. With this further development, Macquarie suggests that the requirement for government funding for major capital projects such as the Richmond/Airport line may be reduced significantly. Further, they believe that a properly structured competitive process, involving the private sector at an early stage, could utilize private sector expertise and risk dollars in more detailed planning.


Jane Bird, Project Manager
Richmond/Airport-Vancouver Rapid Transit Study

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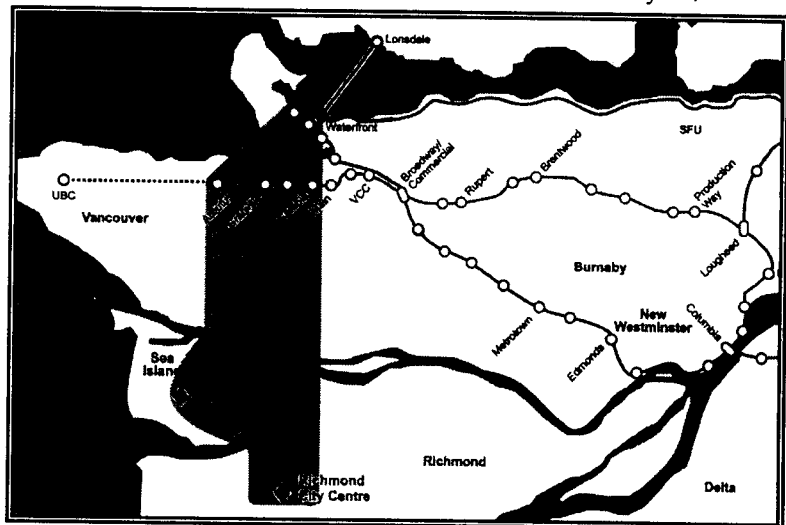
Study Summary

The Vancouver-Richmond Corridor

Population Served

The cities of Vancouver and Richmond, separated by the north arm of the Fraser River, contain two of Greater Vancouver's busiest town centres. In the river's mouth lies Sea Island, site of **Vancouver International Airport** one of the region's fastest growing job centers.

The two downtowns are home to about 65,000 and 38,000 people respectively (totaling over 5% of Greater Vancouver's population) and sites of 130,000 and 35,000 jobs (15% of total jobs in the region). They anchor an almost-straight 16-km north-south transportation corridor which touches Sea Island enroute, where today 26,000



people are employed, many of them in airport gateway-related industries.

The Corridor

Crossing the Burrard peninsula, the corridor broadens to some 25 blocks wide, roughly bounded by the through-streets of Macdonald and Main with Arbutus Granville Oak and Cambie between them. More than 250,000 people live within the corridor today, a figure expected to grow about 15% per decade to over 330,000 by 2021.

The corridor crosses two main water bodies: Burrard Inlet and the Fraser River estuary, spanned by six road bridges.

These multiple parallel north-south roads and bridges provide variable road capacity, ranging upwards from four traffic lanes each way across the Fraser River to over ten effective lanes on through-

routes in most of the City of Vancouver and eight lanes across the Burrard Inlet.

There are **no freeways** in the corridor except at the very southern end, where the Oak Street bridge becomes the Highway 99 freeway, heading towards the U.S. As a result, traffic along most of the corridor is slowed by cross-traffic at numerous intersections, many controlled by traffic lights.

Travel Characteristics

On a typical day, approximately 1.1 million people make north-south journeys along part or all of the corridor. Of these, roughly 65% travel by car, 25% by bus and 10% by bicycle and on foot. Forecasts suggest traffic (in people per day) will grow 16% per decade to total 1.5 million trips by 2021.

The corridor is **unique in Greater Vancouver** for two reasons:

- its two-way **balance**, being almost equally busy in both directions during rush hours and
- of the 4 major transit corridors identified for improvement in the region, it has the greatest **traffic density**¹.

Today, a car trip between downtown Richmond and Vancouver at uncongested times takes 30 minutes. During rush hours, aside from the busy downtowns, the main choke points are at the Fraser River bridges, South Granville and Marpole. At peak times, journeys for all road users, bus riders included, take longer and become more unpredictable.

Transport Services Today

Transit riders can take local bus services or a high performance bus system, the 98B-Line, now in the final stages of installation. This will offer transit service between the two downtowns in 42 minutes.

The airport is served mainly by private car (for employees and air passengers) plus private buses and taxis. Currently the bus service to Vancouver Airport is awkward, typically involving transfers and long journey times making it quite un-competitive with cars and taxis.

Rapid Transit in the Vancouver-Richmond Corridor

Plans and Policies for Rapid Transit

In light of all these features, the corridor has long been a strong candidate for a rapid transit line². Most recently, in 1996 the Greater Vancouver Regional District adopted the **Livable Region Strategic Plan (LRSP)** which incorporates Transport 2021, the transportation component of the Plan. *Transport 2021* anticipated completion of rapid transit in this corridor by 2006 (medium range plan) and before 2021 (long range plan).

¹ As measured in passenger-kilometres per peak hour, per route kilometre and as compared to similar statistics for other corridors published in the Transport 2021 medium range plan.

² The Region defines this as an 'Intermediate Capacity Rapid Transit System' with a capacity of 10,000 passengers per hour in one direction at peak times.

Policy to install rapid transit already in place

Other public agencies have accepted and adopted the LRSP. TransLink's Strategic Plan (2000), Vancouver's Transportation Plan (1997) and Richmond's City Centre Transportation Plan (1997) all include rapid transit in this corridor. Accordingly, the question of **whether** rapid transit is to be built in the corridor has already been answered with a "yes".

But when?

The LRSP, however, as a broad plan, does not specify just **when** rapid transit will be built³ – nor precisely **what** will be built (i.e. location within the corridor, its technology and engineering detail), nor **who** will pay for it.

About this Study

This study only addresses the first of these questions – **when** – formulating the question in "sooner versus later" terms, as follows:

Central question in this study "sooner versus later"

Should we decide to:

- (a) *build rapid transit as soon as possible (i.e. to be operating in 2010) or*
- (b) *postpone building for a decade or more⁴?*

Study Organization

A group of eight agencies undertook this study jointly – TransLink as lead agency, with three local government agencies, one provincial and three federal. All are vitally interested in its central question of timing; and among the partners are all key decision-making public agencies.

Airport connection included

The federal agency partners specially wanted to look at rapid transit branch to Vancouver International Airport. This would serve the growing number of Sea Island employees (at present numbers exceed predictions for 20 years from now) and air passengers. Accordingly, the eight agencies agreed to examine a Richmond-Airport-Vancouver rapid transit system in this study.

Rail-based focus

Further, the agency partners concurred that they would focus on rail-based technology on the grounds that:

- the expected ridership of 100,000 people per day warrants the capacity and performance of a rail-based system; and
- the combined capacity of current roads and an improved intermediate bus system would not meet trip demand expectations; and
- improved bus measures would have marginal ability to achieve City and Regional Plan objectives.

³ Transport 2021 Long-Range Plan, which has been adopted as the LRSP's transportation plan, recommends the line be in place by 2021; the medium range plan recommends it be in place by 2006.

⁴ I.e. to 2021, a convenient planning horizon already used in related studies

In October 2000 the agencies formed a senior staff **Steering Committee**. It engaged a **Project Team** dedicated to managing the six-month, \$0.5 million effort. This Team worked with the professional staff of the agencies through a **Technical Committee**. It also hired **external consultants** and ran a public outreach and consultation programme.

Study Approach

The Steering Committee wanted the study to lay out a full range of considerations affecting the timing question, to be weighed up by each decision-maker in its own, individual way.

Economic, social, environmental considerations

Accordingly, the completed study offers a body of research on the advantages and disadvantages of the two start-up dates for a Richmond-Airport-Vancouver rapid transit line. It looks at economic, financial and social considerations from different agency viewpoints⁵.

Quantified estimates and qualitative descriptions

Some measures (e.g. construction cost) are readily quantified. Others (e.g. some implications for corridor communities, and the region as a whole) are not readily quantified and are described qualitatively.

Different types of rapid transit and cost in this corridor

There is a broad family of possible rapid transit systems, with alternative routes, capacity, vehicle designs, speed, acceleration, and other features.

However, the project seeks to answer the central question of timing without presuming a specific rapid transit design. By bracketing the of alternative rapid transit systems, the study team investigates a “generic” rapid transit, expressing results as ranges. These ranges convey reasonable lower and upper bounds for a generic system.

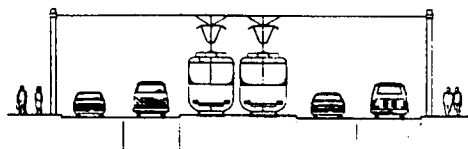
The generic system:

- connects the Waterfront Station in Vancouver with Central Richmond, is 15.2 km to 17.4 km long depending on exact route⁶, with 13 stations
- features a 3.8 km branch which connects to Vancouver International Airport and has 3 stations.

⁵ The study used three main analytical tools: a costing procedure for capital and operating costs of transportation systems based on local experience and, where necessary, from elsewhere in Canada; a traffic simulation model; and a purpose-built economic and financial model

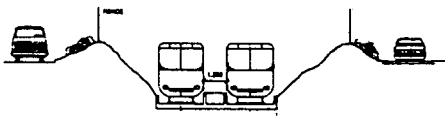
⁶ For study purposes two possible routes were used as models: from Vancouver CBD to No. 3 Road by way of either Cambie or Arbutus.

Shared RoW - In Street Profile



Exclusive RoW - Bermed Profile

Arterial at Grade



Wide Right of Way, Trench Construction

Doesn't select route or technology

Other Limitations of study

Sensitivity to underlying assumptions

- assumes an eventual westward extension of rapid transit on Broadway in Vancouver, and allows easy exchange of transit passengers with that extension.

One important “bracketing” variable is the type of guideway provided for rapid transit. For example:

- some (e.g. tram-type) rapid transit lines share existing road space which slows down both the transit system and road traffic. Travel time from downtown Vancouver to Richmond is estimated at 34 to 37 minutes. The study puts the capital cost as \$0.90 to \$1.0 billion⁷
- other types of rapid transit avoid road traffic by running on exclusive track, e.g. in tunnel or elevated guideway⁸. They have the advantage of greater speed (travel time: 22 minutes Vancouver-Richmond) and capacity as required, but their cost is higher, at \$1.58 billion.

The study does not recommend a specific route within the corridor, nor the best technology (e.g. shared right-of-way or exclusive guideway). If the agency partners want to proceed further, these will be among the next questions to be examined.

Questions about affordability of expenditures and the importance of competing social priorities are beyond the study's scope.

Examples of questions not addressed by this study are:

- is it better to deploy transit funds elsewhere, e.g. in another corridor, or to upgrade local bus services? and
- is it better to spend public money in health care rather than rapid transit?

The study pinpoints key underlying variables and assumptions which, if incorrectly set, could produce wrong answers. One output is a **sensitivity analysis**, confirming the stability of the findings when underlying assumptions such as the following are changed in reasonable ranges:

- interest rates and inflation (or “real” interest rates)
- value of travellers' time (\$ per minute saved)
- changes in demographics in the corridor (numbers of people, age structure, family sizes, job opportunities)
- shifts in travel habits and preferences

⁷ All dollar figures are in year 2001 dollars and do not include GST or interest during construction. Inflation is included in the discounted cash flow model.

⁸ In Vancouver tunneled or trenched profiles were considered for exclusive track options; in Richmond / Sea Island elevated profiles were considered due to groundwater difficulties.

Three Initial Findings of the Study

- changes in the surrounding **transportation system**,
- changes in gas prices or other vehicle operating costs, and
- changes in **level of traffic interaction** for street level routes.

Before looking at the study’s answer to its central timing question, it is worthwhile to review three initial findings produced as bi-products:

The first finding is a comforting one:

Rapid transit is indeed worthwhile...

- the estimated overall *quantifiable benefits* of a rapid transit line in this corridor (whether built soon or later) do indeed outweigh⁹ the overall *quantifiable costs*; further, the *non-quantifiable items* are unlikely to change this.

This finding supports the long-standing policy of the GVRD’s Livable Region Strategic Plan, that this corridor should be served by rapid transit.

However, the second initial result indicates that all benefits are not typically captured:

...but there is a substantial funding gap

- In spite of the fact that fare revenue exceeds operating costs and an operating surplus is generated each year, the line cannot recover all its capital costs from the fare box, irrespective of start-up date. For instance, if built to start in 2010 there is a funding gap¹⁰ equivalent to an up-front lump sum of \$190 to \$780 million, assuming normal transit fares are charged¹¹. A funding gap of some size is a common feature of many transit lines around the world

Beneficiaries identified – but not funding mechanism

The study identifies the direct beneficiaries of the rapid transit line as transit riders (including connecting air travellers) who receive 58% of benefits, car users (39%) and truckers (3%); but it does not suggest how funds to cover the gap might be raised from them, from taxpayers (federal, provincial or local) or anyone else.

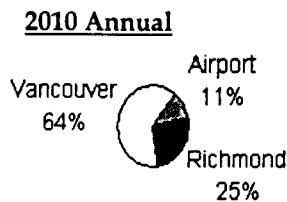
The third initial finding concerns service to Sea Island and the airport:

⁹ Qualification: for a (tram-type) rapid transit system sharing road space (e.g. having to negotiate cross-traffic), this conclusion remains solid only if the tracks avoid (e.g. by going over, under or around) the worst congestion, in enough locations to save two or three minutes of travel time.

¹⁰ The funding gap noted is the lump sum required to reduce the project NPV to zero at a 5% real discount rate. A subsidy could alternatively be described that would increase the project internal rate of return to a level that would make the project financeable.

¹¹ Air travellers on transit would pay more as discussed in following paragraphs.

Airport branch could be justifiable



Result on the “Sooner versus Later” Question

“Sooner” and “Later” are equally attractive, on quantifiable measures

- an airport branch of the line could be a justifiable addition to the Vancouver-Richmond trunk, serving mainly Sea Island businesses and workers.
- both employees and passengers will ride the airport branch and forecasted 2010 airport boardings make up 11 percent of overall boardings.¹²

Air passengers would have premium transit service (e.g. with special baggage handling) and pay higher fares (e.g. \$10 to downtown Vancouver). At this rate¹³ they would approximately comprise 4% of the passenger load, but would pay 15% of total farebox revenue.

These above three initial findings are not unexpected. However, on the central “sooner versus later” question, the agency partners had looked for a strong quantified indication, one way or the other – and they were surprised at the actual finding.

On the timing question (see summary table attached) the study finds:

- for the *quantifiable benefits and costs*, where the study put most effort and rigour, the answer to the timing question is neutral within the accuracy of the analysis. The quantifiable measures alone give no reason to delay nor proceed with rapid transit for 2010. This is because the balance between the quantifiable benefits and costs (in favour of benefits at both start dates) does not change appreciably over the 2010 to 2021 period.

In other words, based on the quantifiable measures, it is a *good thing to have rapid transit start operating in 2010* – its cost is substantial, but there are also substantial benefits received early. But it is an *equally good thing to have rapid transit start in 2021* – deferring the costs is valuable¹⁴, and this compensates for the benefits missed between 2010 and 2021.

¹² 2010 annual forecasted boardings averaged for exclusive and non exclusive RoW. The percentage of Airport to total boardings increases in 2021.

¹³ Rate used assumed \$6 net revenue to project developer, which is net of costs of luggage handling and other special services.

¹⁴ The analysis includes Conference Board of Canada forecasts of construction costs that increase at a greater rate than other costs but does not include the difficulties associated with later construction in an increasingly built environment.

But non-quantifiables tip the balance in favour of building sooner

The study goes on to alert the reader, however, that this statement does not recognize the non-quantifiable considerations. It finds:

- overall, non-quantifiable considerations favour the earlier start-up.

This is mainly because:

- the social and community impacts of rapid transit, sooner versus later, appear to balance out, with no net effect on the timing question;
- the environmental benefits of rapid transit are desirable to have earlier rather than later; and
- there are desirable land use, urban development and overall economic development benefits attributable to rapid transit; these too are better received sooner than later.

On balance therefore, the advantages for the environment, the economy and the livability of the region outweigh the disadvantages; this points to a conclusion to build rapid transit sooner rather than later.

Supplementary Finding

The study also supplies one supplementary finding:

- By fine-tuning the design the system, greater performance (i.e. benefits, notably in speed and therefore ridership) could be squeezed from it with only modest increases in cost.

Starting with the shared-right-of way system, engineers would selectively eliminate traffic signal delays in several possible ways, e.g. some extra construction to create a separate section of right-of-way, or more sophisticated control of traffic in the vicinity of intersections. Other refinements, though perhaps not of the same proportion, are also available for the exclusive right-of-way system.

While the study states that this could clearly be done, actually designing the system at such a level of detail goes beyond this study.

The prospect of better-performing rapid transit after these refinements adds weight to the central conclusion that it is better to have rapid transit sooner rather than later in the Richmond-Airport-Vancouver corridor.

Summary Table: reasons for early or late construction are listed for easy comparison.

WHY BUILD SOONER?	WHY BUILD LATER?
Reasons to start-up in 2010 <i>advancing the benefits (over and above a bus system)</i>	Reasons to start-up in 2021 <i>postponing the costs (over and above a bus system)</i>
<ul style="list-style-type: none"> • Building rapid transit sooner secures faster, safer travel at an earlier date, with less road congestion, plus savings from less car use: benefiting mainly existing and new transit users, people continuing to travel in cars and goods movement, this is worth...\$140 to \$430 million, (depending on just what system is built) <p>Recognized in the above are estimated dollar values of :</p> <ul style="list-style-type: none"> • Higher overall tax revenues (from income, property and fuel taxes, GST) at...\$40 to \$70 million • Lower tailpipe emissions from 2010 to 2021: \$2 to \$4.5 million 	<ul style="list-style-type: none"> • Building later saves money for the transit system and, (since subsidy is required), for the taxpayer. Deferring the cost¹⁵ of building and running rapid transit until 2021, this is worth...200 to \$410 million, (depending on just what system is built), <p><i>balancing benefits shown left, within the limits of accuracy of this study</i></p>
<ul style="list-style-type: none"> • BUT the above balance could be tilted in favour of building sooner by: (1) fine-tuning the design and performance of the system as to route, tunnel/bridge details and rail/vehicle technology (beyond our study scope) while (2) adopting bolder transport policies (e.g. more user-pay for automobiles) to favour higher transit ridership. 	
<ul style="list-style-type: none"> • Undesirable construction impacts shown (right) will be suffered by fewer people if start-up is earlier (e.g. the corridor population exposed to them and experiencing any unwelcome changes will grow by 6000 or 14% in period 2010 to 2021). 	<ul style="list-style-type: none"> • Some people will suffer the effects of construction (e.g. disruption of traffic; noise): better later than sooner. • Some permanent changes (e.g. in street appearance, ambience, aesthetics) unwelcomed by corridor communities (despite expenditures to mitigate them by good design) are better postponed.
<ul style="list-style-type: none"> • Established regional goals for Greater Vancouver will be achieved sooner. • Rapid transit should help (a) foster compact communities, with pedestrian and bicycle-friendly local urban design and (b) reinforce the concept of the regional town centre concept, by connecting centres with a "backbone" network of rapid transit links; • Other regional goals (e.g. to constrain the growth of automobile use) will be achieved sooner. 	
<ul style="list-style-type: none"> • Earlier rapid transit will accelerate the expected rise in corridor land values. This mainly benefits property owners; higher values might be partly captured to help fund rapid transit, e.g. by a public body participating in land development around stations 	

¹⁵ Cost means the Net Present Value at the year 2001 of capital and operating costs of rapid transit, less transit and other revenues, relative to a base case of express bus, in the given year. All figures in year 2001 dollars.

- | | |
|--|--|
| <ul style="list-style-type: none">• Related “gateway” economic development: the sooner the better.
Airport and sea port authorities see rapid transit boosting business and land development for the Greater Vancouver trade gateway. Rapid transit will help the regional economy and could help specific projects e.g., an Olympic bid, waterfront convention centre. | |
|--|--|

Richmond/Airport-Vancouver Rapid Transit Project Project Team Report

Summary of Public Consultation

Summary of Public Consultation

1.0 Introduction

The Richmond/Airport – Vancouver Rapid Transit Project (the Project) completed the technical analysis (i.e. Multiple Account Evaluation) of rail-based rapid transit in the Richmond-Airport-Vancouver corridor in March 2001. Recently, the Project team completed the final stages of its public consultation/communication program. This program consisted of several elements, including:

- Preparation and distribution of written materials (e.g. 'Information' flyers / postcards);
- Project website (www.yourcity2010.com), with on-line survey, direct email inquiry links, and access to project reports (e.g. Management Plan and Open House Summary Report / Presentation Boards);
- Consultation with identified advisory groups, such as the Richmond Rapid Transit Public Advisory Committee and citizen groups from the Arbutus/Granville/Cambie corridors;
- Meetings with key stakeholder groups;
- Quantitative (focus groups) and qualitative research (telephone survey);
- 6 open houses/public input events, at which feedback/comment forms were available; and
- Discussions in the media.

The highlights of this multi-layered consultation program are described below, starting in Section 1.3.

The public consultation/communication program is set out in the Richmond/Airport – Vancouver Rapid Transit Project Communication/Consultation Plan, developed by the Project Team and Tandem Consulting (Barbara Lindsay), a planning and consultation consultant, early in Phase 2.

1.1 Purpose and Objectives of Public Consultation / Communication Program

The purpose of the communication and consultation plan is to provide a process that allows for community involvement and feedback regarding the Project, and to assist with development of the communications that will allow for effective consultation.

The communication and consultation program builds on the consultative experiences of the eight agencies that are participants in the RAVP, input from the Steering and Technical Committees, and preliminary discussions with representatives of advisory/interest groups. The program provides an approach for interaction between the eight agencies, the Project Team, the Steering and Technical Committees, the technical consultants, the communication and consultation consultant, community interest groups and the public regarding the findings of the study.

The following outlines the nature and scope of the public process associated with this project. The public consultation plan has three primary objectives:

1. Communicate information to the public about the results of the analysis, in order to raise awareness and increase the level of understanding regarding the Project and the issues;
2. Engage the public in the Project by seeking their input on the issues and findings; and
3. Assess the level of support for a rapid transit line connecting Richmond and the Airport to Vancouver, and determine where it ranks as a transportation priority in the region.

1.2 Framework for Consultation: Roles and Responsibilities

A Multiple Account Evaluation (MAE) / technical needs assessment was undertaken by a team of consultants led by IBI Group and PricewaterhouseCoopers Inc. The seven-stage public consultation/communication program described herein communicated the results of that work and involved many different participants. Table 1 below describes the elements of this program that involved external expertise and summarizes their associated responsibilities.

Table 1 Summary of Roles and Responsibilities

Work Program	Responsibility Of	Roles
1.0 Development of Communication Plan	Tandem Consulting (Barbara Lindsay)	General assistance with the development of public consultation/communication program, particularly with respect to the needs of the two municipalities.
1.1 Information Postcard	City of Richmond Graphics Department	Designed and printed Project's first public information piece.
1.2 Project website (www.yourcity2010.com)	eSeeNet.com Ltd.	Designed and maintained project website, in both English and Chinese.
1.3 Qualitative (focus groups) Quantitative (telephone surveys) Research	MarkTrend Research	Conducted focus groups and telephone surveys. Reported on the results of these events.
1.4 Open House / Public Input	Context Research & IBI Group	Summarized the technical work, prepared written communication/consultation material (i.e. information 'flyer'), conducted open houses, compiled public feedback, and reported on the results of the open houses.

The technical work is used as a tool to portray a picture of 2010 and later – with and without rail rapid transit in this corridor. To that end, the conclusions of the technical study were presented in a way that allows a broad audience to compare these potential outcomes, as well as the relative costs and benefits for different stakeholders.

The technical consultants worked closely with the communication/public consultation consultant to prepare the summaries of the technical study. Using this information, they developed one written piece (i.e. "Information" flyer) and a series of display boards for the open houses and meetings with partner agencies.

1.3 Informational Materials: 'Postcards' and 'Flyers'

The Project Team developed a postcard (refer to 2.1 in Table 1) that shows a map of the existing and proposed rapid transit routes in the Lower Mainland on one side, highlighting the Richmond/Airport – Vancouver Rapid Transit corridor – and summarizes the purpose and stages of the current Rapid Transit Study on the reverse side. These postcards were completed in late-January and distributed at all open house events as well as meetings with interest groups and stakeholders. Readers were directed to the Project website for further information and were encouraged to attend upcoming public open houses and to complete the on-line web survey. The Project Team distributed over 1,000 postcards at various meetings with interest groups and stakeholders, as well as at all open house events. See Appendix A for a copy of the postcard.

The Project Team developed an 'Informational Flyer' that summarizes the key findings from the Multiple Account Evaluation. These flyers were completed in mid-March and distributed at all open house events as well as meetings with interest groups and stakeholders. See Appendix B for a copy of the flyer.

1.4 Project Website

The Project's website (www.yourcity2010.com) was designed by eSeeNet.com Ltd. (refer to 2.2 in Table 1), given their experience in designing both English- and Chinese-language websites. Chinese was selected as a second-language option, as approximately 20% of residents that live along the corridor use Chinese as a first language (based on City of Vancouver and Richmond demographic surveys).

The website was launched on February 5 (English) and February 9, 2001 (Chinese) and includes links to the websites of participating agencies. This website includes the following 'pages' of information:

- 'About Us,' which includes 'Who We Are,' 'Participants,' and 'Contact Info';
- 'Fast FAQs' (Frequently Asked Questions);
- 'What's New,' which includes 'Project Status,' 'Open Houses,' and 'Media Clips';
- 'Project,' which includes 'Description,' 'Project Reports,' 'Study Findings,' and 'Comments'; and
- 'Survey.'

The website has been advertised on all Project publications and has received much attention. For example, there were 4,584 visits in February, 4,542 visits in March, and 693 in April (as of April 8, 2001), totalling close to 10,000 visits to date. Average daily website visits is approximately 150 and the maximum visits in any one day totalled 359 (February 7th). According to eSeeNet.com, this response rate (measured in 'visits') is fairly large for 'informational' or government-based websites.

The website survey, which was launched on March 22, has received 225 responses up to April 8, 2001 (cut off date for all surveys). The results are as follows¹:

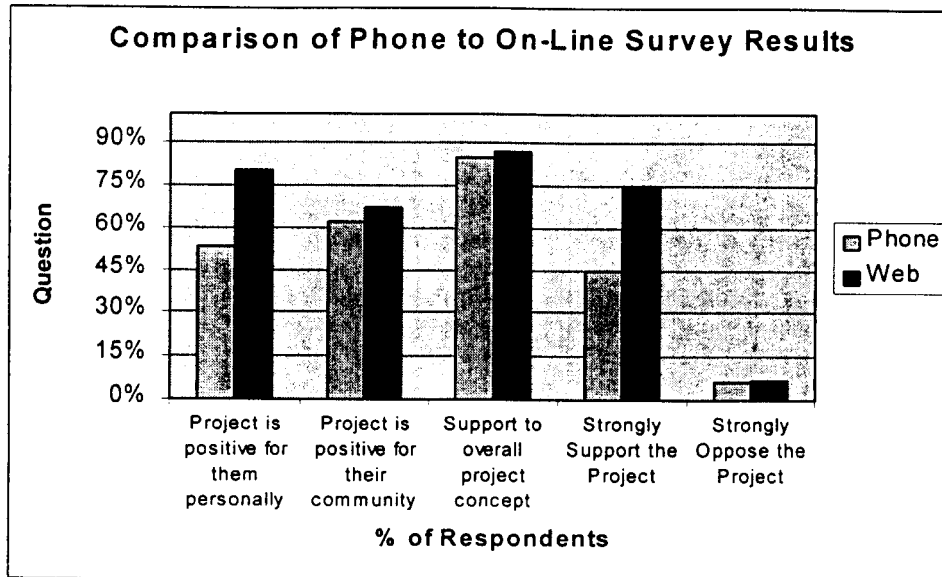
- 80% of respondents indicated that this project is a positive thing for them personally.
- 67% of respondents indicated that this project is a positive thing for their community.
- 87% of respondents support the concept of this project (71% strongly support) whereas only 11.5% oppose the concept of this project (7% strongly oppose).
- 87.5% of respondents indicated that this line should be in operation by 2010.
- 84% of respondents indicated that they would use the line once in service, with the most respondents using rapid transit to access the Airport (37%) and for commuting to/from work (20%).
- Transportation, Economic, and Environmental impacts/accounts were most important to respondents, receiving 93%, 92%, and 86% support respectively.
- The majority of respondents (73%) reside in the Richmond-Vancouver corridor, with 49% from Vancouver and 24% from Richmond. A further 10% of survey respondents were from Burnaby.

The detailed summary of the online response is included in the Open House/On-Line Survey Final Report by Context Research (refer to Appendix 6 of full Project Report).

These results track slightly higher, but relatively closely with, those from MarkTrend's quantitative survey (results shown below in Section 1.7). For example, 53% of respondents (MarkTrend) as compared to 80% (website survey) indicated that this project is a positive thing for them personally and 62% of respondents (MarkTrend) as compared to 67% (website survey) indicated that this project is a positive thing for their community. Overall, 85% of respondents in MarkTrend's survey support the concept of this project, tracking very closely with the website

¹ Though extensive on-line survey security measures were applied to this site, these survey results are not statistically significant. As well, the demographic characteristics of internet-users is very different from that of the population as a whole, which may be particularly significant for the corridor neighbourhoods which have high proportions of seniors. But while the web survey results are not in any way statistically-based, they can— like the open house results —provide an interesting snapshot of some individuals' views.

survey at 87%. However, as compared to the MarkTrend's survey results, the website survey indicates that a much larger percentage 'strongly support' the concept of this project, showing 71% versus 45%. On the other hand, the results are nearly identical for those who 'strongly oppose' the concept of this project, showing 6% (MarkTrend) and 7% (website survey) respectively.



The on-line (web) survey is not strictly representative as it samples only population with computer access however on-line results are relatively close to the phone survey results. Besides the on-line survey, the Project website invited email responses from interested parties. Over 60 email messages were sent to the Project's email address (info@yourcity2010.com). Many emails were merely general queries. About 30 cited support for the project, while fewer than ten were opposed to it. While the majority of comments were in favour of building the rapid transit link between downtown Vancouver, the Airport, and the City of Richmond, some questioned the need for more studies and urged the project team to begin building the link as soon as possible. Others pointed out that the bus connections in this area do not allow for fast commuter travel and consequently many do not use public transportation. They point out that if a rapid transit link were in place, they would park their cars and use public transportation.

Most respondents who were not in favour of building a rapid transit link between downtown Vancouver, the Airport, and Richmond cited potentially high project costs as an important factor. Translink's current funding difficulties and higher taxes were mentioned often in these un-supportive emails.

1.5 Consultation with Identified Advisory Groups: Richmond Rapid Transit Public Advisory Committee and citizen groups from the Arbutus/Granville/Cambie corridors

The Project Team met regularly (approximately monthly) with the newly formed 'Richmond Rapid Transit Public Advisory Committee.' This committee is an extension of the Richmond Rapid Bus Public Advisory Committee, which was originally constituted by Richmond City Council. It includes representatives from the City of Richmond, the Vancouver International Airport Authority, community and business associations, the Chamber of Commerce, several shopping centres/malls, senior and disability/accessibility committees, and transit users. This committee's 'transit expertise' proved invaluable, particularly with respect to communicating key study messages and organizing effective Richmond open house events.

Recently, the Richmond Rapid Transit Public Advisory Committee reached consensus on the following key Project issues:

- the RAVP should continue to Phase 3;
- rapid transit in the RAV corridor should be built to be in-service by 2010;
- the RAVP Team should develop a longer, more comprehensive community consultation program in any future phases; and
- the Committee would continue to work with the RAVP Team in any future phases.

In Vancouver, the Project Team responded to meeting requests from a group of citizens from the Cambie Boulevard Heritage Society, the Arbutus Legacy Corridor Committee and the Granville rapid bus citizens group. An informal advisory committee was jointly formed with members of these groups, which have been active in the past with respect to transportation and land use issues within these corridors, in particular between False Creek and SW Marine Drive. It is important to note that the group formed was not official and did not claim to be representative. The members initiated interest in the project because of potential impacts on their neighbourhoods. The Project team met approximately monthly with this group since mid-December, 2000. This group expressed some concerns about the process and expressed a desire to be represented on the Steering Committee, which was not possible due to both the nature of the Steering Committee; and the fact that other communities were not represented. However, the working relationship with this group has been open and relatively positive.

The results of the public consultation plan, including specific comments from the Richmond Rapid Transit Public Advisory Committee and the citizen groups from the Arbutus/Granville/Cambie corridors are summarized in Appendix C.

1.6 Meetings with key stakeholder groups

Throughout this phase the Project team made presentations about the work to a variety of stakeholders and interested parties, from the national to regional level. These groups and meeting dates are summarized in Appendix D.

1.7 Qualitative/Focus Group and Quantitative/Telephone Survey Research Results

The Project Team retained MarkTrend Research to conduct a two-stage public opinion research program (refer to 2.3 in Table 1 above). The first stage consisted of seven focus group discussions with residents and businesses in the Lower Mainland. The summary results of the focus groups are found in the full Project Report as Appendix 7.

The second stage involved a telephone survey of 887 residents and 100 businesses in the Lower Mainland. The summary results of the survey are found in the full Project Report as Appendix 8.

1.7.1 Qualitative/Focus Group Research Results

The focus groups were undertaken to understand the range of motivations, and perceptions regarding the project and how these may impact the marketing and communication requirements. Furthermore, the focus groups were developed to understand what priority the public assigns to the Richmond/Airport – Vancouver Rapid Transit project. The groups were assembled according to a sampling plan developed in conjunction with the GVRD. The details of these focus groups are as follows:

- Focus Group #1 was held with business managers from around the GVRD who are responsible for transportation issues for their company.
- Focus Groups #2 and #3 were held with Richmond residents – one in Cantonese and one in English.
- Focus Groups #4 and #5 were held with residents of the City of Vancouver. One of the Vancouver groups consisted of residents who live within three blocks either side of Cambie or Arbutus and one with residents from other areas of Vancouver.
- Focus Group #6 was held with residents from municipalities 'South of the Fraser River,' such as Surrey, White Rock, Langley, and Delta.
- Focus Group #7 was held with residents from municipalities 'North of the Fraser River,' such as the North/West Vancouver, Burnaby, Coquitlam, and Port Moody.

From this work, the following regional perceptions were noted as significant:

- Transit and transportation appear to be rapidly growing problems.
- There is a sense that the region is "unsophisticated," especially in terms of meeting transportation options.
- There is a sense that no 'plan' or solution exists but the Millennium line feels like a start in the right direction – although it establishes higher expectations and evokes both negative and positive emotions.
- There is confusion over who the agency players are and their roles.
- The Airport has positive perceptions but there is no sense of how important it really is as a job centre.

Furthermore, the following perceptions regarding the RAVP were noted as significant:

- "Awareness" of transportation projects is limited to high profile and well-publicized projects, such as the Lions Gate Bridge and Millennium Line.
- There is some awareness of a potential rapid transit rail link between the Airport, Richmond, and Vancouver.
- A wide range of attitudes and perceptions exist regarding the RAVP.
- "Priorities" tend to be localized but 'improved buses services' appear to be a priority (among six TransLink / Gateway Council actual and proposed road and transit projects) and a common requirement for the transportation system, as buses are perceived to be a relatively low cost, environmentally-friendly option to automobile travel.
- After 'more buses,' RAV appears to be the second most important priority, particularly for Vancouver and Richmond respondents.
- It was clear; however, that Richmond respondents felt it was 'their turn' for a rapid transit link.
- Vancouver respondents, including those along the Arbutus and Cambie corridors, equated the project with efforts aimed at reducing traffic congestion and serving the north-south link.

- Local projects are easiest to support but there are respondents with a rational and 'big picture' view of transportation projects.
- The private sector does have a place in the RAVP but a clear definition of roles and controls over operation and fares is required for public comfort.
- The analysis identified three quite different segments in terms of attitudes to transportation needs, personal worldview and attitudes to the Lower Mainland. Accordingly, there are likely to be distinct communication requirements for each of the segments. The typology developed indicated there are those unlikely to respond positively to the RAVP unless it is a direct benefit to themselves (referred to as the "Me's" in the Open House presentation boards). There are others who require reasoned, utilitarian information through which they can judge its merits for the whole (referred to as the "Maybe's" in the Open House presentation boards). The third group is more visionary and is able to see the 'bigger picture,' and thus support the project as they understand its role in the region's larger transportation network (referred to as the "We's" in the Open House presentation boards).

Overall, respondents indicated there is an 'appetite' for a rapid transit link connecting the Airport, Richmond, and downtown Vancouver. However, there is also strong demand for 'local projects' whose immediate benefits are easily recognized. Furthermore, there is not always a clear understanding, or immediate recognition, of this project's potential or even need. These 'information gaps' should thus form the basis of any future community consultation/public outreach program.

1.7.2 Quantitative/Telephone Survey Research Results

MarkTrend also completed quantitative research in the form of telephone surveys on behalf of the project. The primary objectives of the quantitative research were:

- To determine what priority residents place on the RAVP in relation to other transportation projects and other issues facing Lower mainland residents;
- To determine if the project is perceived positively or negatively, on both a personal level and community level;
- To determine reasons for supporting or opposing the project;
- To evaluate the impact the estimated cost has on public support;
- To gain an understanding of how residents and businesses feel the project should be paid for;
- To measure the degree to which residents and businesses want to know about various types of costs and benefits associated with this project; and
- To measure the impact of specific costs and benefits associated with the project.

During this work, a number of questions were asked of 987 randomly sampled respondents across the region (887 residents and 100 businesses). This survey was carried out between March 3rd and March 9th, 2001. Over sampling was done in the corridor to obtain a larger sample size for the area. All results were then weighted to reflect regional distributions. Questions were restricted to the project in concept, and did not include questions as to technology or corridor.

Overall, the results of the quantitative research show significant support for the Richmond/Airport – Vancouver rapid transit project, particularly amongst Vancouver and Richmond residents. The key results of the quantitative/telephone survey were generally as follows:

- Transportation/traffic congestion is the most important issue facing Lower Mainland residents, whereas the economy and taxes are the most important issues facing Lower Mainland businesses.
- 75% of Vancouver and 66% of Richmond residents see this project as a positive thing for them personally, with 8% (Vancouver) and 15% (Richmond) seeing it as negative.
- 53% of GVRD residents see this project as a positive thing for them personally, with 18% seeing it as negative.
- 83% of Vancouver and Richmond residents see this project as a positive thing for their community, with 8% seeing it as negative.
- 62% of GVRD residents see this project as a positive thing for their community, with 14% seeing it as negative.
- 91% of Vancouver residents, 88% of Richmond residents, 85% of GVRD residents, and 83% of Lower Mainland businesses strongly support or support this project in concept, whereas 9% (Vancouver), 10% (Richmond), 14% (GVRD), and 16% (business) oppose the project in concept.
- 87% (Arbutus, 3-blocks from corridor) and 84% (Arbutus, 1-block from corridor) of residents support the concept of this project, with over half them strongly supporting it. 12% of respondents oppose the concept of this project.²
- 88% (Cambie, 3-blocks from corridor) and 90% (Cambie, 1-block from corridor) of respondents support the concept of this project, with nearly half of them strongly supporting it. Between 9% (Cambie, 1-block) and 12% (Cambie, 3-block) of respondents oppose the concept of this project.³
- Of the 150 interviews conducted within 3 blocks of the Arbutus and Cambie corridors, 83% of respondents indicated that this project is a positive thing for their community. This was also true within one block of the corridor.
- Cost is a barrier for some residents, as when discovering that this project may cost each resident approximately \$750 (i.e. project cost of \$1.5 billion divided by 2 million GVRD residents), 23% of respondents indicate that this would have a negative impact on their support for such a line. However, the majority of respondents (62%) continue to support the proposed line with this estimated cost. When including cost information, 80% of Vancouver residents, 79% of Richmond residents, 67% of GVRD residents, and 68% of Lower Mainland businesses support the concept of this project.
- Of the 6 transportation priorities suggested to residents (based on TransLink / Gateway Council actual and proposed road and transit projects), increased bus service received the highest priority from Lower Mainland residents (54% of residents indicated it was a 'high' priority). The Richmond/Airport – Vancouver rapid transit link was ranked second highest in priority, according to residents, with 46% of respondents indicating it is a 'high' priority.
- Four types of information are important to the majority of residents – impact on the environment, financial impacts, impact on the overall economy, and transportation impacts.
- Businesses rate each of the types of information almost equally important, except for community/neighbourhood impacts.
- The vast majority of residents and businesses feel that the RAVP should be paid for by all three levels of government – municipal, provincial, and federal.

² The maximum margin of error in the residents sample within 3-blocks of the Arbutus or Cambie corridor is +/- 7.6% at the 95% level of confidence (sample size = 75). The maximum margin of error in the residents sample within 1-block of the Arbutus or Cambie corridor is +/- 12.5% at the 95% level of confidence (sample size = 32).

³ Same.

1.8 Open House / Public Input Results

The Project held six open houses to present the results of the MAE analysis and to gather public feedback. Project Team members, Technical Committee members, and consultants were in attendance at all events. In addition, RAV staffed the Airport and Downtown Vancouver open houses for 3-4 hours after the official open house events with a scaled-down presentation. The City of Richmond staffed the full open house boards from March 28th to March 30th between 11:00 a.m. and 2:00 p.m. (full day on March 30th), leaving the scaled-down presentation up (un-staffed) for the duration of those days. Starting March 9th, 2001, open houses were advertised in 'SkyTalk' (Vancouver International Airport's newsletter), the 'Buzzer' (TransLink's on-board newsletter), the Vancouver Courier (Westside, Eastside, and Downtown editions), the Georgia Strait, the Richmond Review and News, Fairchild Television (Cantonese/Mandarin stations), and the Project website.

The open house dates and locations are outlined in the table below.

Table 2 Richmond/Airport – Vancouver Rapid Transit Project Open House Schedule

Open House	Date / Time / Location
#1 - Vancouver International Airport	Spirit of Haida Gwaii "Jade Canoe" sculpture International Terminal, departures level Thursday, March 22, 9:00 AM to 1:00 PM
#2 - Vancouver Uptown	Room 112, Vancouver School Board 1580 West Broadway + Granville Friday, March 23, 4:00 to 7:00 PM
#3 - Downtown Vancouver	Pacific Centre Mall rotunda Georgia + Howe Tuesday, March 27, 11:00 AM to 2:00 PM
#4 - Richmond Centre	Richmond Centre Mall Galleria Friday, March 30, 5:00 AM to 9:00 PM
#5 - Richmond North	Aberdeen Centre, North Hallway Saturday, March 31, 12:00 to 4:00 PM
#6 - Vancouver Central	Jewish Community Centre Room 103 – 950 West 41 st Avenue Thursday, April 5, 4:00 PM to 8:00 PM

The sixth open house was held at the specific request of Arbutus corridor residents, who indicated concern that corridor residents had not attended the earlier open houses. The Project Team posted notice of the open house on the Project website and on Fairchild Television, and the Project Team understand that corridor organizations, including the Arbutus Legacy Corridor Committee, notified people by word of mouth and circulated flyers in the neighbourhood to advertise this event.

A set of fourteen storyboards outlining the study purpose and findings were on display and the RAVP team members were available to answer questions and elicit feedback from attendees. Two handouts (the Project postcard a one-page double-sided fact sheet/flyer', with more detailed information about the study findings) were distributed to open house attendees.

The open houses were generally well attended and produced valuable feedback. Though some feedback was critical and resistant to the concept of rapid transit, most of the response, given verbally, through questionnaires, and via posting of sticky tabs was positive. A report produced by the firm retained to manage the open house process (Context Research Ltd. – refer 2.4 in Table 1 above) contains the detailed summary of feedback (refer to Appendices 6 and 6A in the full Project Report), of which the key findings are summarized below⁴:

⁴ As with the website survey results, the open houses results are not statistically significant given that they are based on feedback forms that do not represent a cross-section of public opinion.

- Over 700 people, mostly from Vancouver and Richmond, attended this series of open houses, and of those, 375 took the time to complete the project feedback forms.
- The overall response to the proposed rapid transit line has been positive:
- Approximately 65% of all feedback form respondents felt that the proposed rail-based rapid transit line connecting the Airport, Richmond City Centre and downtown Vancouver would be a positive thing for themselves personally. About 60% of feedback form respondents expect the link to be a positive development for their neighbourhoods and community.
- Approximately 70% of feedback form respondents strongly or slightly supported the concept of the project. Just over 60% of feedback form respondents would like to see the proposed link built by 2010.
- There is strong support for the RAVP in downtown Vancouver, at the airport, and in Richmond. People in these areas would like to see the line built by 2010 or earlier.
- However, there was significant opposition to the RAVP concept at the open house organized at the request of the corridor residents (i.e. open house #6 at the Jewish Community Centre). If that expressed opposition were representative of the views of the residents of the Arbutus and Cambie corridors, it could be argued that while there is support from residents and the business community at either end of the line, there may be significantly less support for the proposed link from the people who live in-between and/or adjacent to the potential route.
- The most important factors in shaping people's views regarding development of the rapid transit link were transportation impacts (travel time between Richmond, the Airport and Vancouver for all users of the transportation system), economic impacts (jobs, business opportunities, and overall health of the economy) and environmental impacts (local and global air pollution). However, for the final open house in Vancouver – where there was little support for the project – the most highly rated factors were financial impacts (e.g. cost to build and operate the system; fair revenues), social and community impacts (e.g. effects on the communities the new line would connect), and land use impacts (e.g. effects on property values).
- Over 65% of all respondents indicated that they would use the proposed link once it were built and one third of all respondents stated that they would use the system to commute to/from work.

These results track relatively close with those from MarkTrend's quantitative survey and the Project's on-line survey as noted earlier.

Overall – with one exception – support was very strong for the project. However, active groups within Vancouver corridor neighbourhoods (particularly Arbutus) think the project should be constructed either "later," "never," or on "Cambie" - particularly if the project is at-grade. Furthermore, the corridor neighbourhoods are concerned about the process by which a rapid transit system would be designed and implemented, and in particular how that process would involve the community. These concerns should be considered in future project phases.

Appendix E displays some images from recent open houses.

1.9 Discussions in the Media

The RAVP Team, as well as members from the Project's Technical Committee, were interviewed by members of the media during the open house events. At the Vancouver International Airport, the Project Director was interviewed by CBC-French Television and at the Richmond-Aberdeen Mall open house, a City of Richmond planning staff was interviewed by Fairchild Television (Chinese-language Television).

2.0 Conclusions

Public consultation during Phase 2 began in December 2000 and concluded in early April 2001. Individual reports of the results of the open houses/web site, qualitative research and quantitative research programs are attached as Appendices 6, 7 and 8 respectively.

The public consultation/communication program is contained in the *Richmond/Airport – Vancouver Rapid Transit Communication/Consultation Plan*, developed by the Project Team. The goals of the program were:

1. To communicate Project information to the public, to raise awareness and increase understanding of the issues;
2. To engage the public by seeking their input on Project issues and their feedback on Project findings; and
3. To assess the level of support for 'when' a rapid transit line connecting Richmond, the Airport, and downtown Vancouver should be built.

In addition to the overall level of support for a Richmond/Airport - Vancouver connection, and a sense of the public's view of the timing, the Project Team wanted to understand:

4. Whether this project was a priority in the context of other transportation projects; and
5. What importance the public placed on each of the MAE accounts (e.g. financial, economic, environmental, urban development etc.)

Most of the consultation program took place during intense media attention regard transit and transportation in the region. At the beginning of the Phase, TransLink had passed its Strategic Transportation Plan and staff was confident that funding through various means, including a vehicle levy, would be forthcoming.

However during the project's Phase 2 term:

- the proposed vehicle levy was approved by the region but the necessary order in council was not passed by the Province, with the result that the Strategic Transportation Plan could not be fully implemented;
- there were cuts to transit service due to the funding gap;
- there were ongoing labour issues, culminating in a strike (strike action began April 1), which terminated most bus services;
- the relationship between the Province and TransLink was frequently reported in the media as un-cooperative.

The predominance of these issues meant that the Project received less attention generally than likely would have been the case if implementation of the Strategic Plan had proceeded.

Open houses and online surveys rely on qualitative components, and as such do not provide statistically significant results. Generally, however, it is important to note that the qualitative research generally tracks with the statistically accurate quantitative research⁵.

Despite the challenging environment, the Project Team believes the consultation program has achieved its stated goals.

⁵ With the exception of one open house held at the request of Arbutus residents which was not consistent with the telephone survey of residents close to the study routes.

Specifically, **the first goal**, “communicating project information to raise awareness and increase understanding about the project,” was achieved. The scope of RAVP’s public consultation/communication program is shown in the following statistics:

- The project web page was available for three months (average 160 visits per day, or over 4500 per month with over 10,000 visitors to the Project’s website);
- in total, nine meetings with both the Richmond Rapid Transit Public Advisory Committee and the Vancouver citizens groups;
- over 40 stakeholder/interest group meetings/presentations;
- 7 focus group sessions;
- a telephone survey reaching nearly 1,000 people region-wide (887 residents, 100 businesses);
- 6 open houses with over 700 attendees.

Similarly **the second goal**, “engaging the public” was achieved as indicated by the following statistics of those who were engaged to the point of response or activity.

- 375 open house feedback forms submitted.
- over 60 email inquiries;
- 225 on-line survey respondents;

An additional open house, initiated by the community, also indicates that the consultation program was effective in engaging the public.

The **third goal** was “to assess the level of support for when a rapid transit line should be built.”

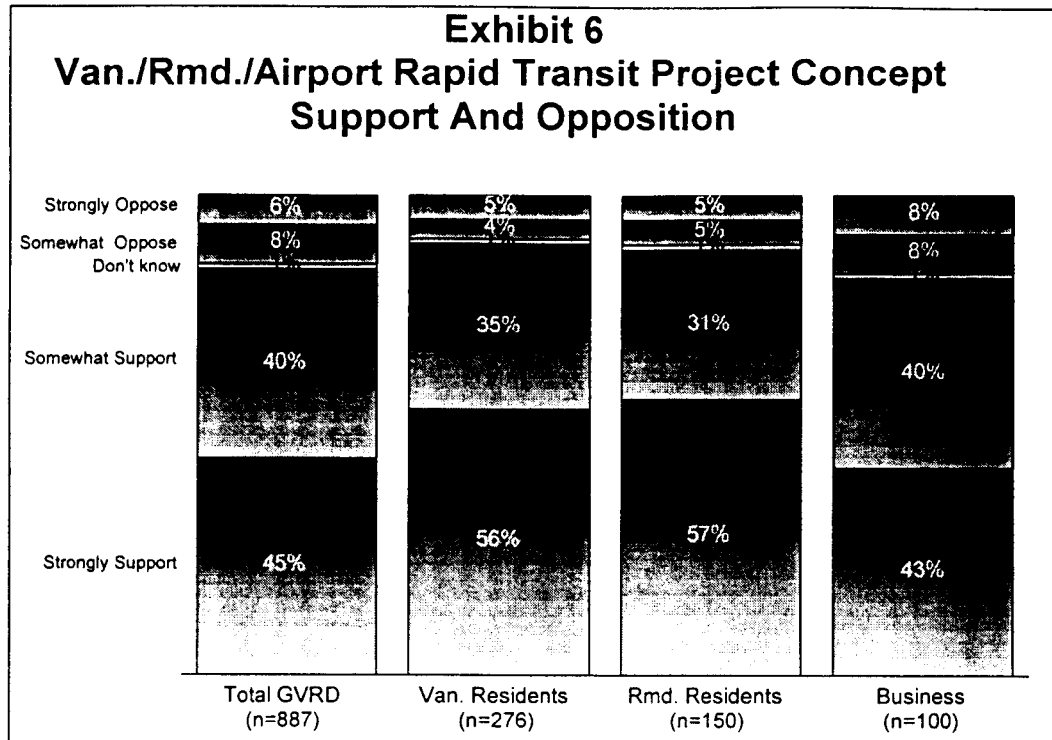
General comments at the open houses suggested the public would want the project to be constructed sooner rather than later. From 77% to 100% of respondents were in favour of early development at the 5 regularly scheduled open houses.

A final open house, held at the Jewish Community Centre, was held at the specific request of a group of Arbutus residents, and advertised by that group through delivering flyers and by word of mouth. It should be noted that the negative response at the open house was inconsistent with the quantitative research, which showed significant support within 3 blocks of the Arbutus and Cambie corridors. At this open house the timing question received responses like “never,” or on “the other corridor” - particularly if the project is at-grade. Apart from the obvious meaning of these responses they seemed to reflect concern amongst corridor neighbourhoods regarding the process by which a rapid transit system would be designed and implemented, and in particular how that process would involve the community.

The **fourth goal** was to “determine whether this project was a priority in the context of other transportation projects.” Both the qualitative/focus group findings and the quantitative/telephone survey findings indicated that the number one priority in the region was ‘improving the existing bus system.’ In both cases, however, the RAVP placed a close second.

The public consultation/communication program identified that there is significant support for the Richmond/Airport – Vancouver Rapid Transit Project, as summarized below:

- 53% (phone survey), 80% (website survey), and 65% (open house feedback forms) of respondents indicated that this project is a positive thing for them personally.
- 75% of Vancouver and 66% of Richmond residents see this project as a positive thing for them personally (phone survey).
- 62% (phone survey), 67% (website survey), and 60% (open house feedback forms) of respondents indicated that this project is a positive thing for their community.
- 83% of Vancouver and Richmond residents see this project as a positive thing for their community (phone survey).



- The chart above shows responses to the phone survey. Residents and businesses were given a brief description of the proposed Vancouver Richmond Airport Rapid Transit Project. The description did not include the specific train technology, the exact route or any cost considerations. The purpose of the question was to determine resident and business support for the project in concept (i.e. do they feel there is a need for a line that connects Vancouver, Richmond and the Airport). Overall, 85% (phone survey), 87% (website survey), and 70% (open house feedback forms) of respondents support the concept of this project. 91% of Vancouver residents, 88% of Richmond residents, and 83% of Lower Mainland businesses support this project in concept (phone survey).
- Also interesting is that 87% (Arbutus, 3-blocks from corridor) and 84% (Arbutus, 1-block from corridor) of residents support the concept of this project, with over half them strongly supporting it (phone survey).⁶
- 88% (Cambie, 3-blocks from corridor) and 90% (Cambie, 1-block from corridor) of respondents support the concept of this project, with nearly half of them strongly supporting it (phone survey).⁷
- Over 65% of all respondents indicated that they would use the proposed link once it were built and one third of all respondents stated that they would use the system to commute to/from work (open house feedback forms).
- Though support for the project falls by 9-18 percentage points when respondents are introduced to the estimated project cost of \$750 per person, overall support still remains above 65% (phone survey)

⁶ The maximum margin of error in the residents sample within 3-blocks of the Arbutus or Cambie corridor is +/- 7.6% at the 95% level of confidence (sample size = 75). The maximum margin of error in the residents sample within 1-block of the Arbutus or Cambie corridor is +/- 12.5% at the 95% level of confidence (sample size = 32).

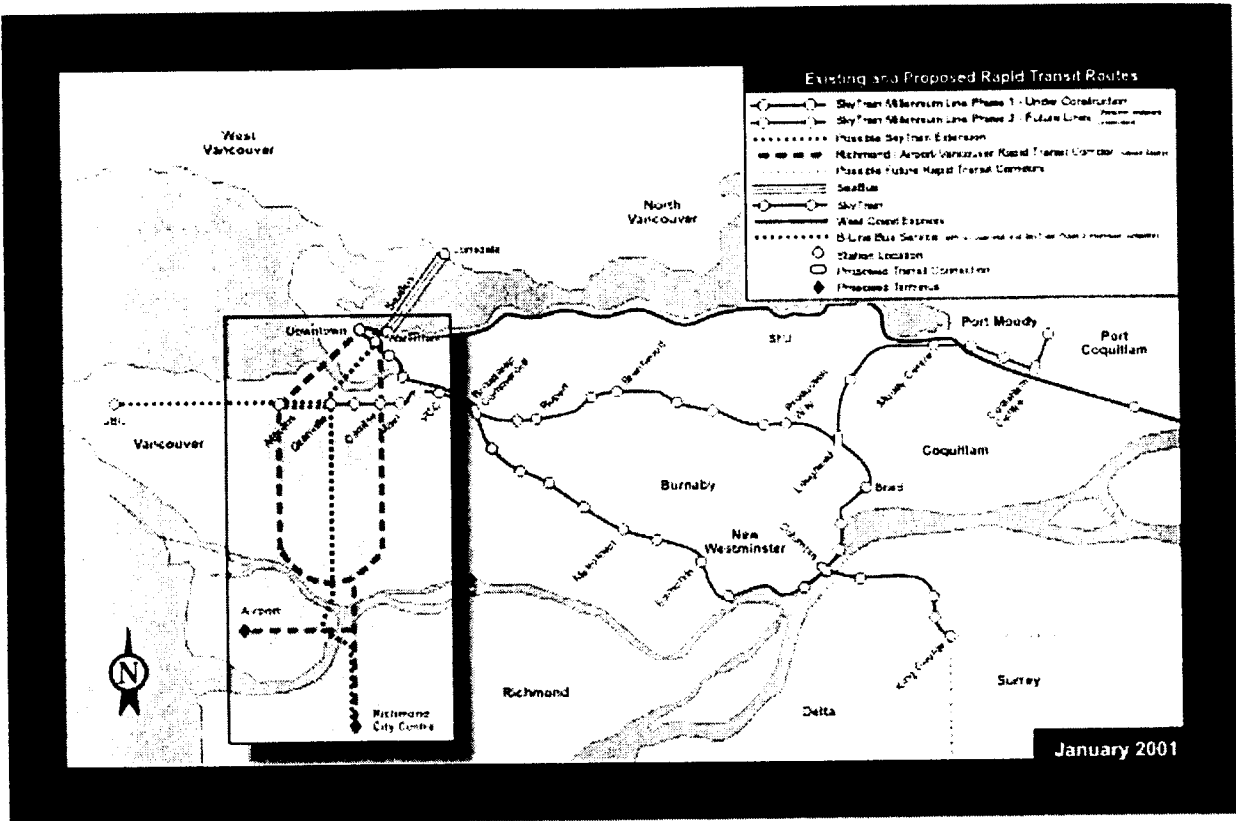
⁷ Same.

The **fifth goal** was to determine the importance the public placed on each MAE account

- Overall, the most important factors in shaping people's views regarding development of the rapid transit link were transportation impacts (travel time between Richmond, the Airport and Vancouver for all users of the transportation system), economic impacts (jobs, business opportunities, and overall health of the economy) and environmental impacts (local and global air pollution).
- However, at the final open house at the JCC, where there was little support for the project, the most highly rated factors were financial impacts (e.g. cost to build and operate the system, fare revenues), social and community impacts (e.g. effects on the communities the new line would connect), and land use impacts (e.g. effects on property values in areas not near stations.)

The focus groups also indicated that the private sector could play a role in this project, if that role is well defined and understood by the public and appropriate conditions were developed for their participation.

Appendix A Information Postcard – Front & Back



January 2001

Rapid Transit in the Richmond / Airport - Vancouver Corridor

What is the Richmond/Airport - Vancouver Rapid Transit Study?

Governments have expressed interest in a rail-based rapid transit line connecting Richmond to downtown Vancouver. In addition, the Airport and others are interested in connecting rapid transit to the Airport. This Study will assess whether there is a need to build a rapid transit line that connects Richmond, Vancouver and the Airport in the next 10 years. To make that decision, the Study will compare the costs and benefits of building a rapid transit line (including environmental, social, financial, land use and transportation costs and benefits) by 2010 versus waiting until 2021 or later.

Who's responsible for this work?

The Study has 8 participants: TransLink (lead agency), Transport Canada, the Airport, the Province of BC, GVRD, the Cities of Richmond and Vancouver, and the Vancouver Port. These agencies direct a Study Team, which consists of a Director, Technical Manager, an Environmental and Transportation Planner, and support staff. The Study Team hires additional planners, engineers and financial advisors to provide expertise in specific areas.

Why are we doing this now?

- A Richmond-Vancouver rapid transit link has been part of regional planning policy since 1980; it is an important component of the *Living Region Strategic Plan* and TransLink's *Strategic Transportation Plan*.

- Employment centres in Richmond, Vancouver and the Airport are expanding quickly.
- Congestion along the Richmond/Airport - Vancouver corridor is getting worse.
- Transportation is the single largest source of greenhouse gas emissions in Canada. Passenger cars and light trucks account for nearly half of that total. Improving transportation choices is a key element of Canada's long-term strategy to reduce climate changing greenhouse gas emissions and local air pollution.
- Over the long term, an efficient road and transit system will play a critical role in Greater Vancouver's success as *Canada's Pacific Gateway*.

Will this Study choose a 'route' and 'technology'?

No. This Study will only investigate the 'range' of costs and benefits of building a rapid transit line in 2010 versus 2021 or later. As illustrations to describe the costs and benefits, the Study will consider two approximate routes through the corridor (generally along Arbutus and Cambie) and two rail-based technologies (street-level Light Rail Transit and above/below ground SkyTrain).

Who decides ... and when?

The initial evaluation work will be complete in February. During the spring, the Study Team will be asking the community what it thinks of the evaluation and the role rapid transit may

play in the future of the corridor and region. At the end of the public consultation, the eight participants, with input from the public, will consider whether to continue to pursue a rapid transit line by 2010. This decision is expected to be made by late Spring 2001.

How do I find out more?

- Visit our website at: www.yourcity2010.com
- Participate in our open houses and other public events... coming to a neighbourhood near you in Spring 2001 (stay tuned for advertisements in local newspapers or visit our website).

How do I give my opinion?

- Complete our on-line survey: www.yourcity2010.com
- Email us at: info@yourcity2010.com
- Come to an open house or other public event.
- Mail your comments to:



Richmond/Airport - Vancouver Rapid Transit Project
 #150-5840 Cedarbridge Way
 Richmond, BC V6X 2A7
 Phone: (604) 232-9400
 Fax: (604) 232-9419



City of Richmond



City of Vancouver



Appendix B Information Flyer/Fact Sheet – Front



Richmond/Airport - Vancouver Rapid Transit Project Update - March 2001

A question of timing...

A rapid transit link between Richmond and Vancouver has been part of the region's planning policy since 1980, and eventually will become reality.

But with the greater-than-expected growth in Richmond, in downtown Vancouver and at the Vancouver International Airport, the question is whether a rail-based rapid transit connection between these regional destinations should be built sooner (i.e. over the next 10 years) or later (in 20 years or more).

To help decide that question, the Richmond/Airport-Vancouver Rapid Transit Project has completed a set of studies comparing the relative costs and benefits of building a rail-based rapid transit line to be in-service by 2010, versus waiting until 2021 or later. The studies look at the future of transportation in the Richmond/Airport-Vancouver corridor, and the role rapid transit may play in shaping the future of that corridor and of the broader region. The specific studies include evaluations of the environmental, social/community, financial, land use and urban development, transportation and economic development issues related to the development of such a rapid transit link.

Who is sponsoring these studies?

These studies are sponsored by eight agencies with interests in the region's transportation future: TransLink, Transport Canada, Vancouver International Airport Authority, the Province of BC, the GVRD, the cities of Richmond and Vancouver, and the Vancouver Port Authority.

Why are these studies happening now?

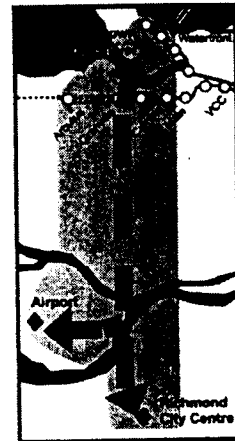
- A Richmond-Vancouver rapid transit link has been part of regional planning policy since 1980; it is an important component of the Livable Region Strategic Plan and TransLink's Strategic Transportation Plan.
- The rates of growth in Richmond, in Vancouver and especially at the Airport are greater than expected. The Airport has already reached employment levels originally predicted for 2021.
- Congestion along the Richmond/Airport-Vancouver corridor is getting worse (since 1985, traffic volumes on the Arthurs Lang and Oak Street bridges have increased by over 50%).
- Transportation is the largest single source of air pollution in Greater Vancouver, accounting for 75% of local air pollution and 40% of climate-changing greenhouse gas emissions.

Are these studies selecting the route?

The studies are not examining which specific route the rapid transit link would eventually take, or what type of technology would be used. All possible routes to connect the three regional destinations remain open for consideration. For study purposes, two possible routes have been used as illustrations:

- Downtown/No. 3 Rd. & Airport, by way of Cambie or Arbutus:
 - at street level; or
 - below/above street level:
 - in Vancouver, below street level (i.e. in a tunnel or trench);
 - in Richmond/Sea Island, above street level, because it is difficult to tunnel.

But these were examples used only for the purposes of the study, and do not represent where such a line would necessarily be built. If there is a decision to pursue a line sooner rather than later, those "where" and "what" questions will be answered in subsequent work.



What is meant by "rapid transit"?

"Rapid transit" is defined as a rail-based transportation system that is separated from the traffic around it. For these studies, we looked at two general types of systems:

- A system that is completely separated from traffic (i.e. in a tunnel or trench, or on an elevated guideway), such as SkyTrain, or Seattle's proposed LRT.
- A system that is partially separated from traffic (i.e. at street level, but in its own lane), as seen in Calgary, Portland and many European cities.



Appendix B Information Flyer/Fact Sheet – Back

What have the studies found?

The studies try to answer the question of “now-vs.-later” from a series of perspective or “accounts.” Here is what was found for each account:

ACCOUNT	
<p>Economic ... the overall impact on the economy of the region, both during construction of the line and once it's in operation. This includes economic growth from:</p> <ul style="list-style-type: none"> • taxes • new jobs • improved productivity in the region 	<p>This rapid transit line would provide substantial economic benefits, both during construction and operations.</p> <ul style="list-style-type: none"> • 2010 is more beneficial in terms of tax revenue. • there is no difference between 2010 and 2021 in terms of job creation. • 2010 is more beneficial in terms of improved regional productivity.
<p>Environmental ... how this rapid transit link would affect the environment in terms of local air pollutants and greenhouse gas emissions.</p>	<p>This line would result in up to 5,000 fewer car trips per day in the corridor, saving up to 31,000 tanks of gas per year. Building the line by 2010 would result in:</p> <ul style="list-style-type: none"> • up to 600 fewer tonnes of local air pollutants per year. • up to 6,800 fewer tonnes of greenhouse gas emissions per year (that's the equivalent of taking 1,300 cars off the road).
<p>Land Use and Urban Development ... how such a transit line would affect land uses, describing the effects qualitatively and measuring them in terms of changes to property values, assuming no change in current density and land uses.</p>	<p>The rapid transit line would result in:</p> <ul style="list-style-type: none"> • some increased values for residential properties near stations, as more development is encouraged within walking distance of the stations. • some increased values for commercial properties near stations. • slightly decreased values for residential properties immediately adjacent to elevated sections (if any) of a rapid transit line.
<p>Transportation Users ... how the operation of this line would affect:</p> <ul style="list-style-type: none"> • truck and automobile users in the corridor • users of the new rapid transit system • bus users 	<p>The rapid transit line would benefit all these transportation user groups:</p> <ul style="list-style-type: none"> • saving each driver in the corridor about 10 hours per year in commuting time. • saving each transit user in the corridor about 40 hours per year in commuting time. • saving the trucking industry up to \$1.6 million per year in operating costs. <p>These advantages could be enjoyed by transportation users that much sooner if the line were built by 2010.</p>
<p>Financial ... how much such a rapid transit link would cost to build and to operate, and how much fare revenue would be generated.</p>	<p>Strictly speaking, transit systems (including buses) rarely “make money” - that is, they cost more to build and operate than they generate in fare revenue.</p> <p>The study concludes that, depending on the design, this line would cost between \$1 billion and \$2 billion to build. The fare revenue would be enough to cover operating costs and a small portion of capital.</p> <p>Because the line doesn't pay for itself, from a strictly financial point of view “later” is better than “sooner.”</p>
<p>Social and Community ... how the development of the new rapid transit system might affect the communities it connects. Rapid transit systems generally mean some change for the neighbourhoods they pass through.</p>	<p>Each neighbourhood and each resident will have individual opinions on whether the benefits of a nearby rapid transit system will outweigh the costs associated with it.</p> <p>Depending on the design, potential community impacts include:</p> <ul style="list-style-type: none"> • living within walking distance of a station, shops, and services • neighbourhood disruption during construction • visual impacts and operational noise <p><i>It's not really the place of experts to determine what a rapid transit line may mean for you, your family and your community. We want to hear your views on the matter – tell us what you think!</i></p>

Conclusions...

Each account is calculated individually. Looking at the accounts together, we think there are reasons to proceed with building a line by 2010. Your conclusion will depend on how you value each account. For example, if you value only the cost of building a line (i.e. the Financial account), you would postpone this expensive investment. If, however, you think that the benefits to the environment and the transportation network are important, you would favour proceeding in the short term.

Next steps...

The eight participating agencies will review the technical studies and consider the public input before making a decision on whether to pursue developing a rapid transit link by 2010.

How to Stay in Touch

Fax: 604.232.9419
 Email: info@yourcity2010.com
 Vancouver Rapid Transit
 150-5840 Coquitlam Way, Richmond, BC V6X 2A7

Appendix C Consultation with Identified Advisory / Citizen Groups: Summary

Advisory / Citizen Group	Date	Groups Represented	Meeting Summary
Richmond Rapid Transit Advisory Committee	January 16, 2001	City of Richmond, Fairchild Developments Inc., Vancouver International Airport Authority, City Centre Community Association, Richmond Centre Mall, Lansdowne Park Shopping Centre, Richmond Chamber of Commerce, Richmond Committee on Disabilities, Richmond Seniors Advisory Committee, Richmond Asian Pacific Business Association, and transit users.	<ul style="list-style-type: none"> • Review of Richmond/Airport – Vancouver Rapid Transit Project. • Discussion regarding key challenges, such as funding for Phase 3, alignment in the City of Vancouver, and general communications, given the state of transportation in the region. • Review of public consultation and discussion regarding the organization of Richmond open houses.
	February 27, 2001	Same	<ul style="list-style-type: none"> • Review of public consultation plan. • Review of Multiple Account Evaluation and discussion regarding challenges, such as appropriate 'language' for communicating study findings. • Request for a joint meeting with the citizen groups from the Arbutus/Granville/Cambie corridors, extending the invitation to business stakeholders along the Vancouver corridor. The purpose being to explore and discuss issues, drawing on the experience and concerns of advisory both groups.
	March 27, 2001	Same	<ul style="list-style-type: none"> • General Project review and update, particularly discussing general observations from the completed open houses, focus groups, and phone surveys. • Distribution of Draft MAE Report and discussion regarding the findings of the Public-Private Partnership study. • Discussion regarding the joint development of a Committee Report to Richmond City Council. Agreed that Committee report would be developed. • Committee Chair elected.
	April 5, 2001	Same	<ul style="list-style-type: none"> • General Project review and update. • Further discussion regarding the Committee Report. • Committee opinion regarding project issues presented, with key conclusions being: <ul style="list-style-type: none"> • Continuation of Committee if project proceeds; • 'sooner' versus 'later' is preferred; • economic and environmental accounts are the most important; • support for the continuation of the RAVP; • longer consultation period with more interactive presentations/information; and • importance of securing consensus between Richmond and Vancouver regarding early implementation and line optimization.
Citizen groups from the Arbutus / Granville / Cambie corridors	December 12, 2000	Cambie Boulevard Heritage Society, the Arbutus Legacy Corridor Committee, the Granville rapid bus citizens group, other concerned corridor residents.	<ul style="list-style-type: none"> • Review of Richmond/Airport – Vancouver Rapid Transit Project. • Discussion regarding key areas of concern. • Discussion regarding how the Project team and this group could work together.
	January 24, 2001	Same	<ul style="list-style-type: none"> • Project update, both technical studies and communication plan. • Copy of Project Terms of Reference for technical work provided and opportunity to comment in the same fashion as the Technical Committee. • Discussion regarding how the group will provide feedback to the Project team; agreed to ongoing meetings and invitation by some to assist with communicating project information. • Request for individual to speak for group to be represented on Steering Committee (individual identified informally) , which was not possible due to both the nature of the Steering Committee, senior staff of government, and of the Port and Airport Authority; and the fact that other communities were not represented.

Appendix C Consultation with Identified Advisory / Citizen Groups: Summary

Advisory / Citizen Group	Date	Groups Represented	Meeting Summary
Citizen groups from the Arbutus / Granville / Cambie corridors	February 23, 2001	Same	<ul style="list-style-type: none"> • General Project review and update. • Discussion regarding more detailed concerns, such as neighbourhood impacts associated with rail rapid transit (e.g. noise, intrusion, and crime), particularly above-grade SkyTrain. • Discussion regarding travel time savings and its methodology, with concerns regarding the 'summing' of saved minutes. • Requests for improved 'language' when communicating the technical results and more time to review Project materials. • Offer by member of group to help with 'translation' of technical results. • Discussion regarding key elements of a next phase, if the project is to proceed.
	March 16, 2001	Same	<ul style="list-style-type: none"> • Reviewed results of each account. • Advised on dates, locations, and content of upcoming open houses and provided open house info sheets with these details. • Discussion of possible next steps.
	March 24, 2001	Group of residents invited to the Kerrisdale Community Centre, predominantly Arbutus residents. The meeting was chaired by Bruce Anderson (resident) and attended by the Project Director and CEO of TransLink (Ken Dobell).	<ul style="list-style-type: none"> • Discussion regarding the background of Project. • Discussion regarding meetings with informal group of residents from the Arbutus/Granville/Cambie corridors. • Discussion regarding the results of the technical work. • Request by residents for additional open house. Request agreed to by Project Director and subsequently organized for April 5, 2001 at the Jewish Community Centre.

Appendix D Consultation with Identified Stakeholder Groups: Summary

Category	INDIVIDUALS/GROUPS	Meeting Dates
Federal	- The Honourable Minister Paul Martin (Minister of Finance)	November 8, 2000
	- The Honourable Minister David Anderson (Minister of Environment)	January 16, 2001
	- The Honourable Minister David Collenette (Minister of Transport)	April 11, 2001
	- The Honourable Raymond Chan, Secretary of State (Asia – Pacific)	November 8, 2000
	- MP Stephen Owen	
	- Meeting	October 30, 2000
	- Meeting	January 23, 2001
	- MP Joe Peschisolido	March 7, 2001
	- Sukhy Bhoi – Assistant to Minister Dhaliwal	March 5, 2001
	- Chaviva Hosek, Director Policy and Research	
	- Meeting	September 12, 2000
	- Conference Call	November 21, 2000
	- Paul Genest – Director Policy & Research (replaced Chaviva Hosek December 2000)	March 8, 2001
	- Marjorie Loveys – Senior Policy Advisory, Economic Development	
	- Pamela McDonald, Special Assistant, Office of the Prime Minister	July 2000
	- Deputy Minister of Transport – Margaret Bloodworth	February 6, 2001
	- Assistant Deputy Minister of Transport - Policy – Louis Ranger	
	- Meeting	
	- Conference Call (also with David McGovern, Executive Director Rail Policy	
	- Meeting (also with David McGovern)	September 13, 2000
	- Assistant Deputy Minister of Transport – Ron Sully	January 25, 2001
		March 8, 2001
		September 13, 2000
- Deputy Minister of Intergovernmental Affairs – George Anderson	March 8, 2001	
- Andrew Marsland – Assistant Director, Department of Finance	September 12, 2000	
- Lee MacDonald and Marc Trepanier – representatives from Public Works and Government Services, Supply Program Management Sector	September 12, 2000	
- Roy Brook – Senior Policy Advisor Ministry of Environment and Elizabeth Cooper – Special Assistant, Environment Canada	September 12, 2000	
- Amelia Shaw – Manager Public Affairs CUTA	March 8, 2001	
- Rick Laureys – Manager Finance Canada/Economic Development Policy Division	March 8, 2001	
- Robert Hilton – Senior Program Advisor, Infrastructure Program Treasury Board	March 9, 2001	
- Jean Boutet – Special Assistant, Environment Canada and Elizabeth Cooper – Special Assistant, Environment Canada	March 9, 2001	
- Lou McGuire – Senior Policy Advisor, Fisheries and Oceans	March 9, 2001	
Provincial	- MLA Gordon Campbell	
	- Meeting	July 10, 2000
	- Meeting	February 15, 2000
	- Briefing Note	April 4, 2001
	- Associate of Provincial Engineers – Municipal Engineers Division	May 11, 2001
Business	- Board of Trade:	
	- Presentation	February 14, 2001
	- Regional Transportation Task Force	February 16, 2001
	- Urban Transportation Task Force	March 13, 2001
	- Richmond Chamber of Commerce - Transportation Task Force	November 22, 2001
		March 21, 2001
	- Urban Development Institute - Richmond Liaison Committee	January 31, 2001
	- Downtown Vancouver Association	January 9, 2001
	- Asia Pacific Business Association	March 01, 2001
Institutions	- SFU – Transportation and Regional Development Committee	March 5, 2001
	- UBC – Transportation Advisory Committee	March 7, 2001
Environmental / Transportation / Community Groups	- Vancouver/Arbutus/Granville/Cambie informal community group	December 12, 2000
		January 24, 2001
		February 23, 2001
		March 16, 2001
		March 24, 2001
	- Better Environmentally Sound Transportation (BEST)	March 23, 2001
	- Independent Transportation Consultant – Ron Stromberg	
	- Vancouver Area Cycling Coalition	
	- David Suzuki Foundation	
	- Society Promoting Environmental Conservation (SPEC)	
	- Richmond Rapid Transit Advisory Committee	January 16, 2001
		February 27, 2001
		March 27, 2001
		April 5, 2001