



MUSTEL GROUP  
MARKET RESEARCH

In association with



# Tourist and Recreational Usage of Proposed Downtown Streetcar

November 30, 2004

**Presented to:**

City of Vancouver, Engineering  
Vancouver, BC



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# Executive Overview

## Introduction

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The City of Vancouver has developed preliminary plans for a Downtown Streetcar service to provide public transit to key tourist and recreational destinations, as well as to emerging downtown residential neighbourhoods (i.e., Southeast False Creek). An initial phase of the service would be built to run between Waterfront Station and Granville Island with a Phase 1 extension to Stanley Park and a Phase 2 route from Science World to Granville on Pacific (serving the Yaletown/GM Place/BC Place area), although note that future phases are not dependent on each other. At this time the City has commissioned marketing research to assess the potential interest in the Downtown streetcar concept and to develop some planning level ridership estimates for such a service among tourist and potential resident recreational users. Mustel Group has conducted the market research and TSi Consultants has developed planning level ridership estimates.

Two market research surveys were conducted between July 29 and August 24, 2004. One survey was completed on-site among over 600 tourists visiting six Downtown tourist destinations along the proposed Phase 1 route and the Stanley Park extension destination. The results were weighted by interview location based on annual tourist controls. The second, a random telephone survey, was completed among 1,200 Greater Vancouver residents 16 years of age and over, whereby over 700 qualified as recreational travelers to Downtown Vancouver for non-commuting purposes in the past three months (i.e., for shopping, personal business, entertainment, recreational or social reasons). The resident survey was weighted to match 2001 census on the basis of age within gender and area of residence.

The key findings are summarized in this *Executive Overview* with a more comprehensive, illustrated presentation of the results in the *Detailed Findings* section of this report.

## Key Findings

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### ***Downtown Tourist Travel Characteristics***

- **Length of Vancouver visit:** Majority of tourists visit less than one week
  - Median = 4 days
  - Mean = 6 days
  
- **Local accommodation:** Over half say they are staying in the Downtown area. But note, there is a greater propensity to encounter tourists staying Downtown at these locations, due to greater proximity of the interviewing sites to their accommodation.

- **Downtown trip party size:** Most tourists travel in groups of two or more (84%).
  - Median = 2 people
  - Mean = 2.9 people
- **Main mode** to today's Downtown destination: A number of different modes are used with no single mode predominating – walking, private or rented vehicle are the top two (28-29% each), followed by transit (20%).
  - Those who traveled by private or rented vehicle tended to use off-street parking just slightly more than street parking (51% and 43%, respectively).
- **Destinations visited/plan to visit:** Tourists were asked if they had visited or planned to visit any of a list of specific Downtown tourist destinations.
  - Among tourists, the top destination is Stanley Park (88%).
  - Second most popular are: Robson-Granville Street shopping area, Gastown and Granville Island (69-71% each).
  - Chinatown (54%) and Waterfront/Canada Place (40-45%) appeal to a considerable proportion of tourists.
  - Yaletown and Science World appear to attract a minority of tourists (23% and 21%, respectively) and BC Place or GM Place are the least likely of these destinations for the tourist segment (12%).

### ***Recreational Resident Characteristics***

- **Demographically:** GVRD residents who visit Downtown for recreational purposes in the past three months (not for work/school commuting) are largely similar to the population overall.
  - Just slightly more recreational visitors are residents of the City of Vancouver (37% vs. 30% among residents in total).
  - About one-in-five of these recreational visitors also work or go to school Downtown.
- **Usual mode** to Downtown Vancouver: private vehicle is the most popular mode for shopping, personal business, entertainment or recreational trips Downtown (61%) with most traveling for these purposes in carpools of two or more (46%). Nevertheless, nearly half (46%) say that transit is a usual mode for traveling Downtown.
  - Note that 12% mention both private vehicle and transit as a usual mode for going Downtown (but not necessarily in the same trip).

- In total, 7% use other sustainable modes (mainly walking, but also some cycling). There is minimal mention of rollerblading, skateboarding or wheelchairs.

**Appeal of Proposed Downtown Vancouver Streetcar**

- **Streetcar concept:** The following concept description was presented to respondents.

*Modern, rail-based street cars would run through Downtown Vancouver and around False Creek, as seen on this map ... covering major tourist destinations, such as Canada Place, Gastown, Chinatown, Science World and Granville Island.*

*Streetcars would run approximately every 10 minutes in both directions. Streetcar systems like this are quieter than buses, non-polluting, wheelchair and bike-accessible and offer a very smooth ride.*

*Riders of the streetcar would be able to use their fare to transfer onto the rest of the Greater Vancouver transit system of SeaBus, SkyTrain and transit buses.*

*The service would cost in the range of 2 to 3 dollars.*

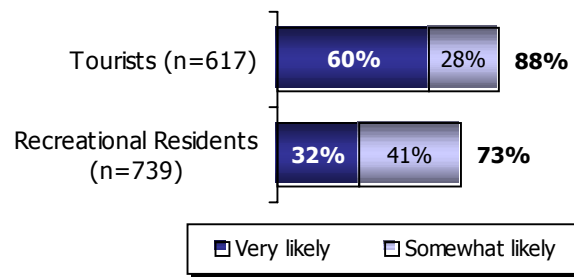


Updated map (full survey materials appended).

Note that in concept testing consumers tend to overstate their future intentions, particularly a service or product that is completely new (in this case new to Vancouver). As a result, ridership forecasts (later in this report) are based on down-weighted survey results verified against independent estimates developed using other techniques (e.g., preliminary EMME/2 estimates, benchmarking of similar systems currently operating worldwide). This multi-staged approach ensures that the ridership estimates are robust as they do not rely solely on one estimation method.

- Reported interest in using streetcar:** The following survey findings on the likelihood of use, though not down-weighted, indicate the level of enthusiasm for the streetcar idea. Tourists in particular are very likely to use the new service. Although these results must be treated with caution in terms of user projections, the findings clearly reveal that the streetcar in concept has broad support among those who visit the Downtown – both tourists and recreational residents.

#### Likelihood of Using Streetcar Service



*Q.8) TOURISTS: If this streetcar service was available, how likely would you be to use it to travel to this particular location?*

*Q.9) RECREATIONAL RESIDENTS: If this streetcar service was available, how likely would you be to use it to travel to the Downtown Vancouver areas we mentioned?*

- Appeal of specific destinations:** Tourists and recreational residents agree on the top two streetcar destinations, but tourists are generally more enthusiastic and committed about using the streetcar. *(These results are not down-weighted)*
  - Stanley Park ranks first:
    - Tourists: 85% “very/somewhat likely”; 64% “very likely”
    - Recreational residents: 69% “very/somewhat likely”; 34% “very likely”
  - Granville Island ranks a close second:
    - Tourists: 81% “very/somewhat likely”; 57% “very likely”
    - Recreational residents: 61% “very/somewhat likely”; 38% “very likely”
  - The next most popular streetcar destinations are:
    - Tourists: Gastown-Waterfront-Chinatown (71-77% total likely with 45-48% “very likely”)

- Recreational residents: the sports arenas: GM Place/BC Place (52% total likely with 23% “very likely”) and then Gastown and Waterfront (45-49% total likely; 21-22% “very likely”)
- **Barriers to using streetcar:**
  - Tourists: Prefer to walk for exercise and prefer or need rented vehicle
  - Recreational residents: Satisfaction with current transit and preference for using own vehicle
- **Main appealing features of streetcar:**
  - Tourists: Easy, convenient access firstly, but also service frequency, good price, environmentally friendly and general convenience
  - Recreational residents: Service frequency and needed destinations/good access to destinations are top encouragements to use the streetcar, but also the non-polluting/environmentally friendly feature is appealing.
- **Expectation to combine with streetcar with other modes:**
  - Tourists: Most (59%) would combine streetcar use with transit, specifically with buses (42%), SkyTrain (33%) and SeaBus (19%)
  - Recreational residents: The vast majority (87%) of potential streetcar users would connect to another mode- divided between the transit system (largely buses and SkyTrain, 41-42% each) and private vehicles (36%) necessitating parking availability. Note that recreational residents say that private vehicles (largely carpools) and public transit (mainly buses) are the main modes that streetcars would replace. About half (48%) of potential streetcar users say that the streetcar would replace transit.
- **Other marketing issues:** Among recreational residents, heaviest use would be on weekends (88% vs. 53% weekdays) and the preferred payment method is cash (64%).
- **Influence of specific factors on streetcar use:** Tourists and recreational residents agree on the top three factors that would have greatest importance in the decision to use the streetcar.
  - **Service frequency**
  - **Destinations served**
  - **Ability to transfer for free to other transit**
  - As well, the availability of day passes is of high importance to tourists.
  - Also of interest, the style of streetcar is not an issue with little differentiation in greater preferences for the modern or historic style.

### ***Planning Level Ridership Forecast***

Downtown Streetcar ridership estimates were calculated for the Phase 1 system (Waterfront to Granville Island), if open today and fully mature (i.e., in operation for 2 to 3 years). Similarly, estimates were prepared for the Phase 1&2 system Stanley Park to Granville Island and Science World to Yaletown.

- If the system were open today and fully mature, Phase 1 (Waterfront to Granville Island) annual boardings for the tourist and recreational markets are estimated at 2.1 to 3.5 million. Adding the preliminary model-based estimate for commuting/education trips produces total annual boards ranging from 3.1 to 4.5 million.
- Phase 1&2 (Stanley Park to Granville Island and Yaletown) annual boardings for the tourist and recreational markets are estimated at 3.8 to 5.9 million. Adding the commuting/education model estimate produces total annual boards ranging from 7.2 to 9.3 million.
- Further details of annual ridership estimates are presented in Section III of the *Detailed Findings* by market segment (including tourist and recreational resident plus a model-based commuter/education estimate) and by summer/winter daily boardings.
- The initial “planning-level” ridership estimates should be verified against independent benchmarking of similar systems currently in operation worldwide.
- When the streetcar design and operational characteristics are refined, more accurate ridership forecasts can be considered for the tourist and recreational markets using structured stated-preference surveys.

### ***Conclusions***

Clearly the potential recreational markets for the proposed Downtown Streetcar support the service concept integrated with the current transit system. There is a high level of interest expressed in the idea and people recognize the benefits such a service would provide.

In sum,

- Significant interest is indicated among both tourists and recreational residents.
- Tourists are the most enthusiastic, suggesting that the streetcar service has potential to enhance greater tourist growth for Vancouver.
- The Phase 1 routing will serve popular destinations with Stanley Park and Granville Island being the most frequented.
- Service frequency should be approximately 10-minute intervals or less.
- Streetcar fares and pricing should be integrated with the whole public transit system.
- The type of streetcar (modern vs. historic styling) is not a key factor.

At this stage, the planning level ridership estimates appear promising. The following next steps are recommended;

- These planning level ridership estimates need to be assessed in terms of fiscal and operational feasibility.
- The estimates should also be assessed for reasonableness against independent benchmarks of similar types of existing services elsewhere.
- To obtain more accurate design level tourist and ridership estimates, specific stated preference surveys should be conducted.

# Foreword

## Background and Objectives

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The City of Vancouver has developed concept plans for a Downtown Streetcar system. Designed to initially connect several key tourist and recreational destinations, as well as emerging downtown residential neighbourhoods (i.e., Southeast False Creek), the Downtown Streetcar service would be built in phases and would introduce a different rail transit experience into Vancouver's array of transportation choices. Use of attractive modern or historic style light rail vehicles could add interest and distinctly identify the new service to recreational and other users. This initiative not only meets City and regional transportation objectives, but also is consistent with Downtown sustainability and tourist enhancement goals. Accordingly, the proposed Downtown Streetcar may have the potential to attract a broader and different type of market than traditional transit services, since streetcars generally draw proportionately more local recreational travelers and tourists and thereby, may be used as heavily on weekends as weekdays.

On behalf of the City, Mustel Group Market Research, in association with TSi Consultants, has conducted two market research surveys and subsequent analysis to serve two main purposes:

- i) To quantitatively assess potential demand for the Downtown Streetcar among key recreational use target groups: local resident recreational travelers and non-resident visitors – by measuring likelihood of use and sensitivity to marketing variables;
- ii) To gauge consumer interest, in terms of perceptions, benefits, deterrents to use, as well as general acceptance of a streetcar system for the City and various other travel characteristics that may have an impact on usage.

## Methodology

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### ***Recreational Residents - Telephone Methodology***

A telephone survey was conducted with a random sample of 1,200 Greater Vancouver residents 16 years of age and over, including regular transit users and non-users who would consider using a Downtown streetcar if the service met their needs. Qualifiers, those who define the potential market for the Downtown streetcar, for the full survey were screened further on having traveled to downtown Vancouver in the past three months for shopping, personal business or entertainment/recreation purposes. Non-qualifiers were asked some basic demographics only, for sample weighting purposes.

The sample included a proportionate random sample of respondents from across the Greater Vancouver Regional District, which was then boosted by an additional oversample of residents of the City of Vancouver. This resulted in a total of 1,200 interviews with qualifying and non-qualifying residents in order to achieve a total of 739 interviews with qualifiers.

At the data processing stage, minor weighting adjustments on the basis of age within gender and area were made to match the sample (including non-qualifiers) to the most recent Statistics Canada 2001 census data for the area. Weighting details are appended.

### ***Sample Selection***

Several steps were taken to ensure the sample was randomly selected allowing the results to be projectable.

First, households contacted were randomly selected using an up-to-date database of published, residential listings. Once contact was made, the individual within the household was also selected at random (using the “next birthday” method). A procedure of alternating male and female interviews was used to ensure a gender-balanced sample.

A minimum of five attempts were made to obtain an interview with the selected household/individual to minimize potential bias due to non-response.

### ***Data Collection***

The questionnaire was designed with input from the City and TransLink, and when finalized, translated into Chinese and programmed into Mustel Group’s CATI software. A total of 109 interviews were completed in Chinese. The survey was pre-tested prior to data collection.

All interviewing was conducted August 6 to August 24, from Mustel Group’s Vancouver-based CATI (computer assisted telephone interviewing) centre, where interviewers are continuously supervised and monitored. Field work was conducted from 4:00 pm to 9:00 pm weekday evenings and from 10:00 am to 4:00 pm on weekends.

### ***Onsite Methodology***

Personal intercept interviews were conducted with non-resident visitors (tourists) to Vancouver at key tourist destinations. This included visitors to Vancouver from other parts of BC and Canada as well as overseas tourists and those in Vancouver just for the day en route to a cruise.

A detailed sampling plan was developed to cover six key locations along the proposed streetcar route and to cover days of the week and day-parts. In total, a target of 600 interviews with 100 per location was planned.

The locations and distribution of actual interviews completed were as follows:

<b>Actual Interview Completed</b>			
	<b>TOTAL WEEKDAY</b>	<b>TOTAL WEEKEND</b>	<b>TOTAL INTERVIEWS</b>
Waterfront Station	62	43	105
Gastown	63	46	109
Chinatown	29	21	50
Science World	61	40	101
Granville Island	111	40	151
Stanley Park	45	56	101
<b>TOTAL</b>	<b>371</b>	<b>246</b>	<b>617</b>

The fieldwork period ran from Thursday July 29 until Friday August 6, 2004. During each day, interviews were conducted primarily from 10:00 am to 6:00 pm with interviews distributed throughout the day such that approximately half are conducted before 2:00 pm and half after 2:00 pm. Interviewing was also extended at certain destinations that attract tourists during the evening hours (e.g. Gastown, Chinatown).

Care was taken to schedule interviewers at locations according to how busy each location was likely to be on any given day. This was important when accounting for weekdays versus weekend and for the civic holiday occurring during the fieldwork period.

It was also necessary to be able to respond to variations in tourist traffic flow. This was particularly apparent in the case of the Chinatown location. Here it was found that tourist traffic was not as dense as expected. When attempts were made to address this by interviewing late into the evening during the night market interviews became skewed towards males.

In response to this it was agreed with the City of Vancouver that efforts be switched from Chinatown to the much heavier traffic area of Granville Island.

Prior to fieldwork commencing a list of contact information was supplied to Mustel Group by the City of Vancouver in order to obtain permission or simply inform out of courtesy relevant individuals or organizations at each of the interview locations.

Interviewers were provided with detailed instructions as to where to conduct their intercept surveys for each location and to take care not to impact on access to stores or attractions to avoid upsetting local business owners. They were further instructed to interview a spread of ages and gender and respondents from a range of party sizes where possible.

**Waterfront Station:** Surveys were conducted on City property (public areas) around Waterfront Station. Interviewers were instructed to avoid venturing towards Canada Place, World Trade centre, Pan Pacific Hotel or the promenades at the sides of these buildings. However, interviewing was conducted on public sidewalks across from these areas where tourists could be encountered.

**Gastown:** The focus here was mainly on Water Street (both sides) including around Storyeum and other attractions and also Cordova Street.

**Chinatown:** The focus here was on Pender and Main Streets, including the Chinese Gardens. Some additional interviewing time was completed in Chinatown during Friday and Saturday evenings to pick up traffic at the evening market.

**Science World:** Interviewing did not start at the Science World location until Saturday 31<sup>st</sup> July as they were conducting their own survey on site until Friday 30<sup>th</sup>. Interviews were conducted around the Science World attraction.

**Granville Island:** Here it was important to avoid a bias to ferry passengers, achieved by moving around to a mix of central traffic areas.

**Stanley Park:** Interviewing was conducted at general areas that included the bus loop and Lost Lagoon, the Totem Poles, Devonian park and particularly the area around the info booth near the aquarium.

Interviewers were supplied with copies of the questionnaire in English and Chinese. They were further supplied with a show-card displaying a map of the proposed streetcar route, approximate travel times of the streetcar and photographs of modern streetcars currently operating in other cities. A letter of authorization was also supplied by the City explaining the purpose of the survey and providing contact details should any respondent have further questions.

At the data processing stage, the tourist sample was weighted by interview location on the basis of annual tourist controls, developed from Tourism Vancouver, BC Tourism and specific site traffic counts as available.

Details of the weighting for both tourists and recreational resident surveys are found in the *Appendices*. Copies of the questionnaires and materials used in both of these studies are also appended.

## Results

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The results are presented in the format of an *Executive Overview* and a more comprehensive, illustrated *Detailed Findings* section.

Base sizes shown in graphs and tables reflect actual (rather than weighted) number of interviews completed. The following notations are used to indicate numerical differences in summary tables of this report (at the 95% level of confidence).

Significantly higher ▲    Directionally higher ▲    Significantly lower ▼    Directionally lower ▼  
*Significantly higher means that there is less than 5% probability of the results occurring by chance.*

***Terms and definitions used:*** Note that throughout this report, the following terms are used with reference to these definitions:

***“Tourist”*** refers to non-residents of the GVRD who were intercepted on-site in six proposed Streetcar destination areas.

***“Recreational Resident”*** refers to those GVRD residents 16 years of age and over who are either current transit users or non-users who would consider using a Downtown streetcar and who traveled to the Downtown areas of interest in the past three months for non-work/school purposes. These respondents qualified for the telephone survey.

# I. Detailed Findings – Tourist Market

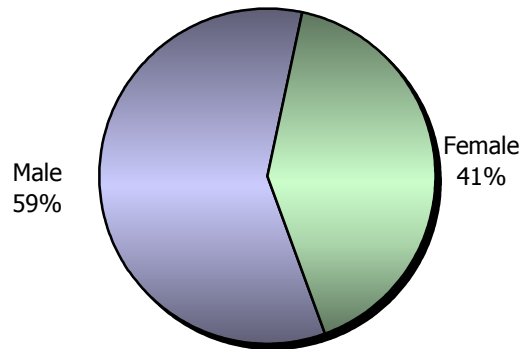
## 1.0 Tourist Demographic Profile

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Tourists (non-resident visitors) were intercepted on-site at or near six proposed streetcar destinations. The demographic characteristics of the tourists interviewed are shown below.

**Gender:** While there was an attempt to alternate interviews with men and women, respondents were skewed to males at most locations (54-62%), but particularly in Chinatown (82%). Persons traveling alone to *any* of these destinations tended to be male (70%), therefore increasing the likelihood of intercepting men, since only one person per trip party was interviewed.

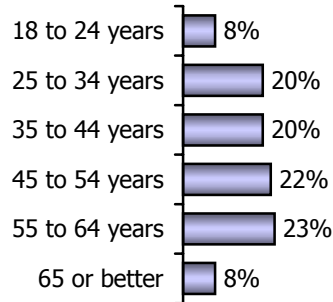
**Gender of Tourist Sample**



*Base: Total tourists (n=617)*

**Age:** The age of tourists interviewed was evenly distributed across ages 25-64, but with fewer in the youngest and oldest categories (8% in each). There are also some differences by destination. The Science World sample had a lower representation of visitors 55 years of age and over (11%) and, to a lesser extent, so did the Stanley Park sample (19%). The Chinatown sample had the largest proportion less than 35 years of age (54%).

**Age Category**

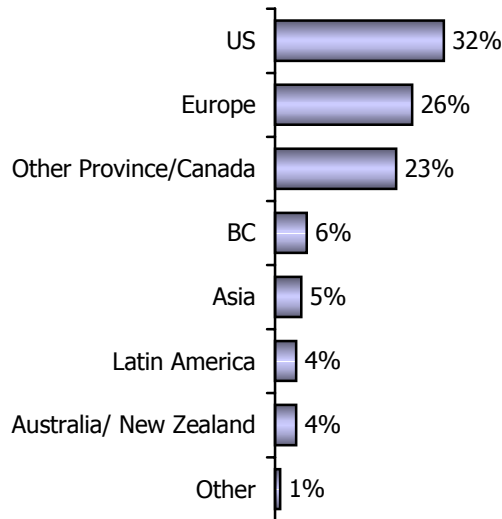


Base: Total tourists (n=617)

Q.14) Into which of the following age categories do you fall?

**Home residence:** Most non-resident visitors were from the US (32%), followed by Europe (26%) and other Canadian provinces (23%). Europeans were encountered more at the Waterfront Station location (42%).

**Area of Home Residence**



Base: Total tourists (n=617)

Q.15) Where is your home residence?

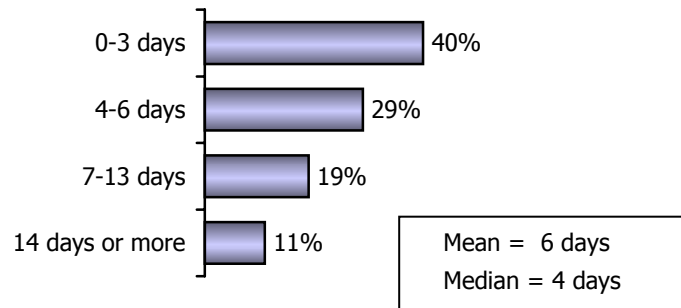
## 2.0 Tourists' Vancouver Stay Profile

### 2.1 Length of Vancouver visit -- Tourists

The majority of these Downtown tourists are visiting the Greater Vancouver area for less than one week (69%) with the median being 4 days and the mean 6 days. Note the following differences:

- Tourists who have come to a streetcar destination by public transit tend to have a longer stay in Greater Vancouver (9 days on average, median 6 days). Perhaps more time is required to become familiar with the transit system, or this is not their first visit. Among those who are here for a shorter visit, there may be a greater urgency to find the quickest means of travel within the City.
- Those who have accommodation outside of the Downtown Vancouver area tend to be staying in the Greater Vancouver region longer (7-8 days average, median of 6 days).

**Length of Visit to Greater Vancouver**



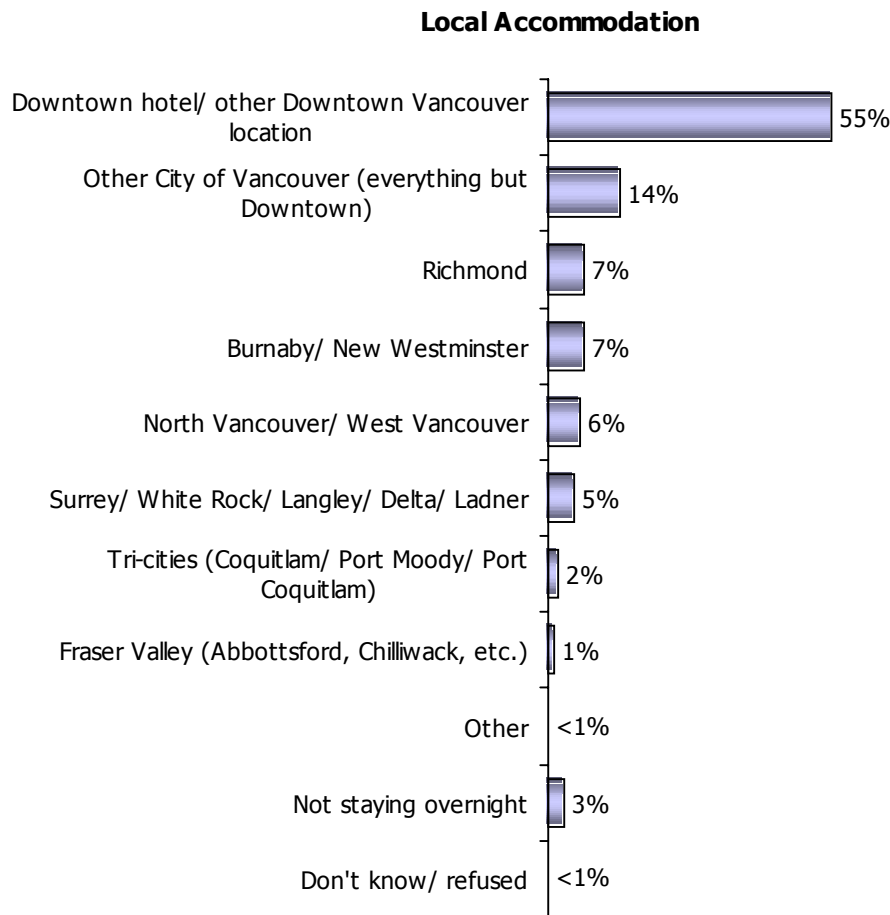
Base: Total tourists (n=617)

Q.4) How many days will you be visiting the Greater Vancouver area on this trip?

## 2.2 Local accommodation -- Tourists

Over half of the tourists interviewed at the proposed streetcar destinations indicated that they are staying in the Downtown area. Since these proposed streetcar destinations are more easily accessible and quicker to get to for people staying Downtown, note that they also have a higher likelihood of being intercepted on-site.

Tourists visiting less than one week are most likely to be staying Downtown (about two-thirds 64%).



Base: Total tourists (n=617)

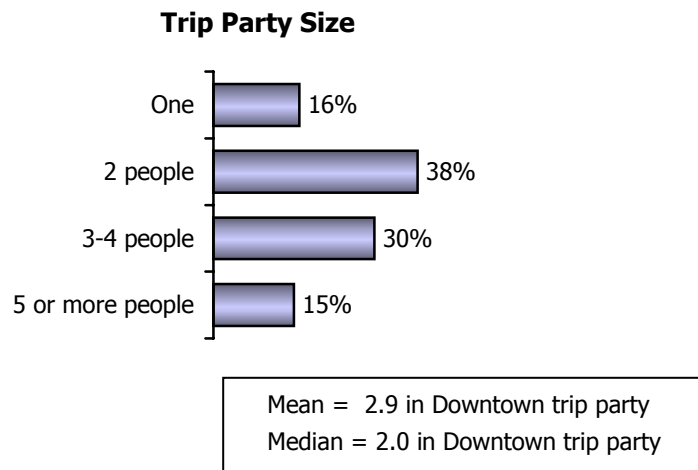
Q.5) Where are you staying while in Vancouver?

### 3.0 Tourists’ Downtown Trip Characteristics

#### 3.1 Downtown trip party size -- Tourists

Most tourists have come Downtown accompanied by others; just 16% are alone. The mean party size is 2.9 people; the median is two.

- Those who have traveled Downtown today by transit are in somewhat smaller trip parties (on average, 2.4).
- Waterfront and Chinatown visitors appear to have slightly smaller trip party sizes (means of 2.4 and 2.1, respectively).



*Base: Total tourists (n=617)*

*Q.2) First of all, including you, how many people are in your trip party today on this visit to this location (i.e., Stanley Park, Waterfront Station, Gastown, Chinatown, Science World, Granville Island)?*

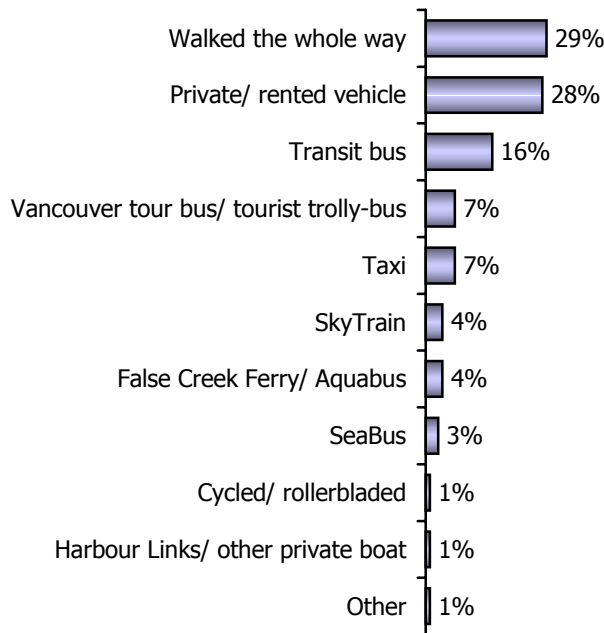
### 3.2 Main mode to this destination -- Tourists

The most popular modes among tourists to travel to these destinations are walking (29%), private or rented vehicle (28%), followed by transit (20%).

There are differences based on where the visitor is staying, party size and destination.

- **Local accommodation:** Those staying in the suburbs are more likely to travel by private/rented vehicle (59%). Those staying downtown are more apt than others to walk (42%), while those in other parts of the City of Vancouver use transit more than other groups (34%).
- **Party size:** Tourists in parties of three or more are more likely to use a private/rented vehicle (42%)
- **Downtown destination:** The most popular modes are:
  - Granville Island: Private or rented vehicle (42%).
  - Gastown and Chinatown: Walking (46% and 50%, respectively).
  - Science World: SkyTrain (32%) or private vehicle (30%).
  - Waterfront: Walking (35%) or transit (bus 22%, SeaBus 8%)
  - Stanley Park: Private/rented vehicle (35%) or walking (22%) or transit bus (22%)

**Main Mode to Destination**

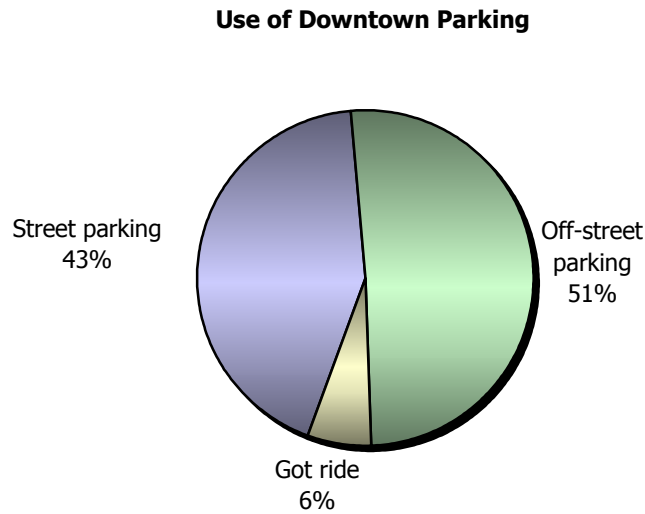


Base: Total tourists (n=617)

Q.3a) What main type of transportation did you use to arrive at this location today?

### 3.3 Use of Downtown parking -- Tourists

Those who used a private or rented vehicle were asked if the vehicle was parked and if so, where. Nearly all tourists who arrived by automobile parked downtown (94%), rather than being dropped off (6%). Those who parked were divided with somewhat more parking off the street (51%) than using street parking (43%).



*Base: Total who drove a private/rented vehicle to this location (n=164)*

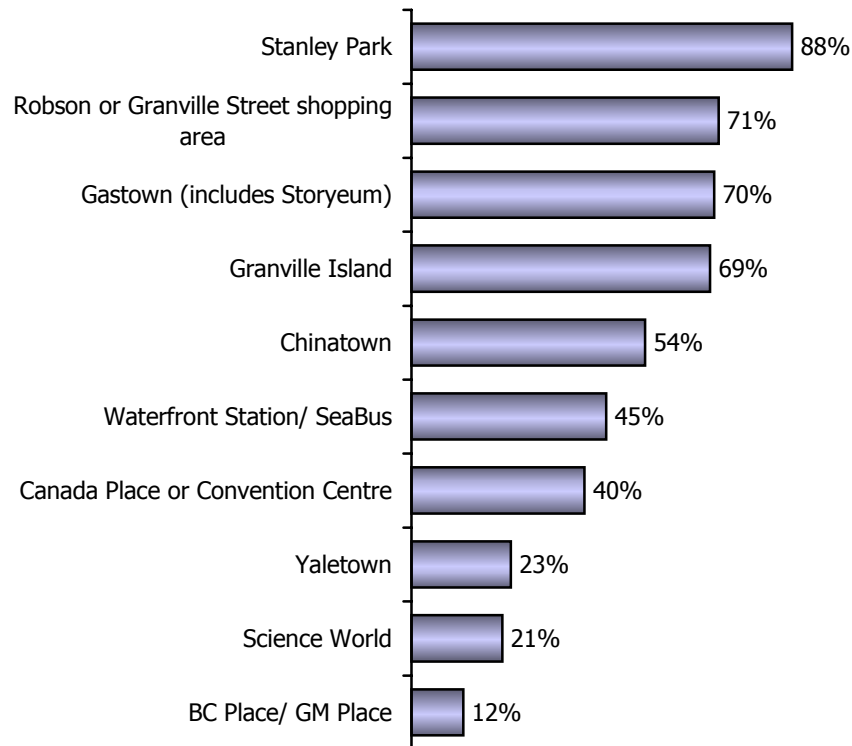
*Q.3b) Did you (or a member of your party) park the car or did you get a ride here?*

### 3.4 Destinations visited/plan to visit -- Tourists

Respondent tourists were asked which of specific Downtown tourist destinations they had already visited or were planning to visit during their stay in Vancouver. Not surprisingly, perhaps, Stanley Park is the top destination (88%). Three destinations vie for second position in the ranking: Robson-Granville Street shopping area (71%), Gastown (70%) and Granville Island (69%). Chinatown is a planned destination for over half (54%) and Waterfront/Canada Place for just under half (40-45%).

The least likely destination for tourists is BC Place/GM Place (12%), followed by Yaletown (23%) and Science World (21%).

**Destinations Visited or Plan to Visit**



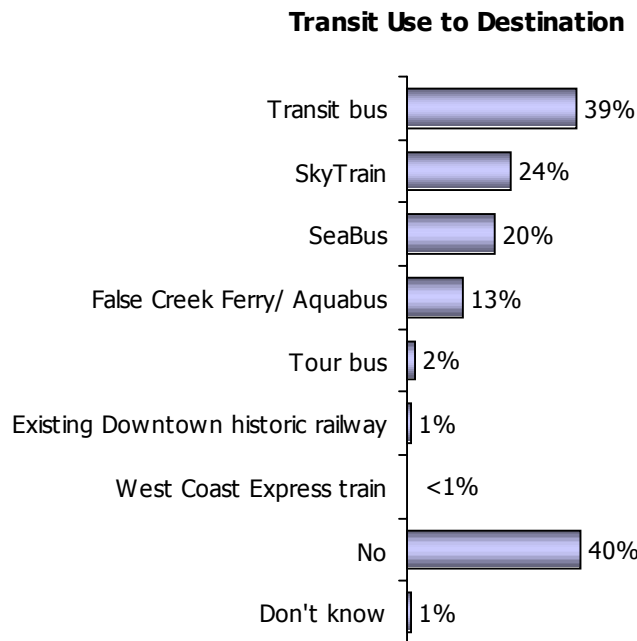
Base: Total tourists (n=617)

Q.6a) Which, if any, of the following destinations have you visited or are you planning to visit during your stay in Greater Vancouver?

### 3.5 Transit use to planned/visited destinations -- Tourists

A majority of tourists have or expect to use transit while visiting Vancouver. Although only one-in-five identified transit as the main mode of transportation to the location where they were interviewed, a majority of tourists (59%) claim that they have or plan to use transit to visit their planned Downtown destinations. Among those who did **not** use transit to this destination, about half (48%) state that they either took or planned to take transit to other destinations Downtown. The most popular (and most available) is transit bus (38%), followed by SkyTrain (24%) and SeaBus (20%).

SkyTrain is somewhat more popular among those who were intercepted at Science World (46%) and Waterfront (38%), compared to the tourist sample in total (24%).



*Base: Total tourists (n=617)*

*Q.6b) Did you take or plan on taking any types of transit to any of the above destinations?*

## 4.0 Appeal of Downtown Streetcar Overall Concept to Tourists

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### 4.1 Interest in using streetcar service concept -- Tourists

**Introduction to concept testing:** Tourists heard a concept description of the proposed Downtown Streetcar service, as follows:

*Modern, rail-based street cars would run through Downtown Vancouver and around False Creek, as seen on this map ... covering major tourist destinations, such as Canada Place, Gastown, Chinatown, Science World and Granville Island.*

*Streetcars would run approximately every 10 minutes in both directions. Streetcar systems like this are quieter than buses, non-polluting, wheelchair and bike-accessible and offer a very smooth ride.*

*Riders of the streetcar would be able to use their fare to transfer onto the rest of the Greater Vancouver transit system of SeaBus, SkyTrain and transit buses.*

*The service would cost in the range of 2 to 3 dollars.*

Respondents on-site also were handed a map showing the main route and extension routes, with the stops identified and photos showing a few examples of possible styles of modern streetcars. The following map is slightly updated (actual survey materials used are appended).



**Approximate Running Times:** Every 10 minutes

**Approximate Journey Times:** Waterfront to Science World – 10 minutes  
 Science World to Granville Island – 8 minutes



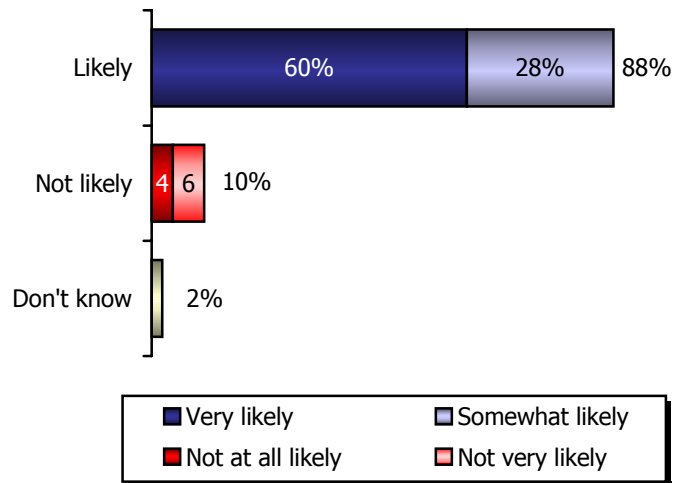
It is important to bear in mind that consumers tend to overstate their future intentions when hearing a concept, particularly a service or product that is completely new (in this case new to Vancouver). Therefore, the ridership forecasts found in Section III of this report are based on down-weighted survey results verified against independent estimates developed using other techniques (e.g., preliminary EMME/2 estimates, benchmarking of similar systems currently operating worldwide). This multi-staged approach ensures that the ridership estimates are robust as they do not rely solely on one estimation method.

**Overall Findings:** Most Downtown tourists say that they are likely to use such a streetcar service (88%). Six-in-ten respondents said they are “**very likely**” to use the proposed streetcar to travel to the location where they were interviewed (60%).

Somewhat more likely to use the proposed service are:

- Those who used transit today to the destination (68% very likely).
- Those who would combine use of the streetcar service with transit (73% very likely).
- Tourists staying anywhere in Vancouver or in the nearest suburbs (North Shore/Burnaby/New Westminster/Richmond (59-64% very likely)

**Likelihood of Using Streetcar Service**



Base: Total tourists (n=617)

Q.8) If this streetcar service was available, how likely would you be to use it to travel to this particular location? Would you say: very likely, somewhat likely, not very likely or not at all likely?

## 4.2 Barriers to Streetcar Use among Tourists

Among those not interested in using the streetcar, reasons focus on two main issues:

- Some tourists prefer to walk (38%), most likely wanting the exercise.
- Another key reason for not using the streetcar is that some tourists prefer or need to have a rented vehicle (31%).

<b>Reasons Unlikely to Use Streetcar</b>	
	<u>Total</u>
	(65)
	%
Prefer to walk	38
Prefer to have/ need vehicle/ rented vehicle	31
Inconvenient (with kids, for today's route, for a large group, too far from streetcar stop, etc.)	17
Close/easy to get to destination from where staying, not far to walk	11
Miscellaneous other	11
<i>Base: Total not very/not at all likely to use the Streetcar service</i>	
<i>Q.9) Why are you not likely to use it?</i>	

### 4.3 *Appealing Features to Tourists*

After hearing the description and rating their likelihood of using the proposed streetcar, those who said they were likely to use the service were asked to describe what specific features they particularly liked or what would most encourage them to use it.

- Easy, convenient access to the main tourist sites (34%) is at the top of the list, particularly among Chinatown tourists (51%).
- Other frequently mentioned features include:
  - The service frequency (21%)
  - The good price (23%)
  - Being environmentally-friendly (22%)
  - Offering general convenience/ease (20%)

<b>Appealing Features that Would Encourage Use of Streetcar</b>	
	<u>Total</u> (543) %
Easy/ convenient access to main tourist sites/ good for visitors	34
Good price	23
Non-polluting/ environmentally friendly	22
Frequency	21
Easier/ more convenient	20
Get on and off anywhere/ easy to access	14
Quick/ saves time	13
Park and Ride available/ don't have to worry about parking	12
Comfortable	10
Easier to sightsee/ see the view	6
Quiet	6
Can reduce/ avoid traffic congestion	5
Connect/ transfers to main transit	4
DayPass	2
Bike friendly	2
Modern	2
Wheelchair accessibility	1
Air conditioned	1
Miscellaneous comments	8
Nothing in particular	1
<i>Base: Total not very/not at all likely to use the Streetcar service</i>	
<i>Q.10) What specific features or characteristics of the streetcar service would most encourage you to use it? What do you particularly like about it?</i>	

## 5.0 Tourist Expectation to Combine Streetcar with Transit

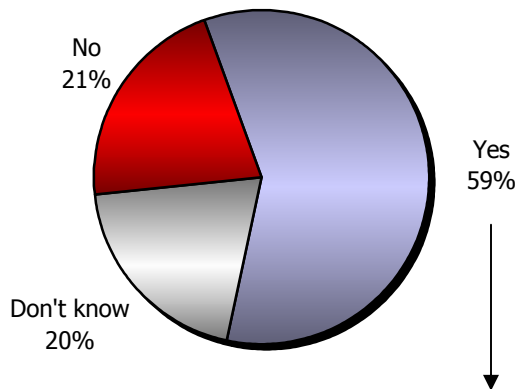
Among tourists claiming that they are likely to use the streetcar, a majority say that they would combine its use with other modes of transit. Bus (the most available form of transit) is named the most (42%), followed by SkyTrain (33%) and then SeaBus (19%).

More likely to say they would transfer to/from other forms of transit include the following:

- Those who used transit to the destination where intercepted (81%)
- Tourists under 35 years of age (69%)
- Those intercepted at Waterfront Station (73% in total with 50% of them saying bus, 47% SkyTrain and 34% SeaBus)
- Those who have a longer stay in the Vancouver area (68%)

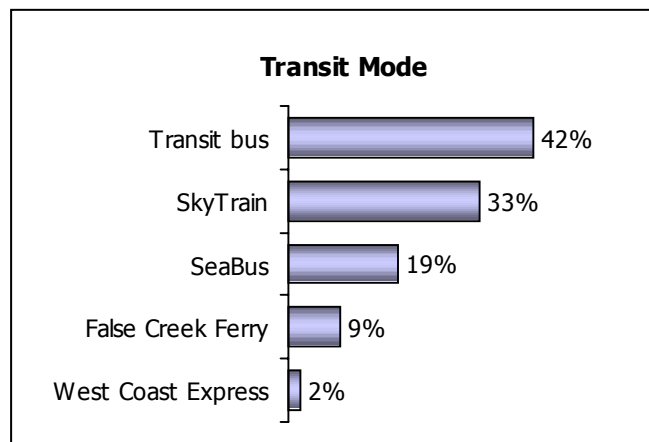
We noted earlier that 59% of all tourists surveyed plan to or already have used transit to one of the selected downtown destinations that would be served by the proposed streetcar line. Two-thirds of this group expects to combine the streetcar with other transit modes (67% of the 59% of tourists).

### Combining Use of Streetcar with Other Transit



Base: Total very/somewhat likely to use Streetcar service (n=543)

Q.11) Would you be combining your use of the Streetcar with any other transit modes?



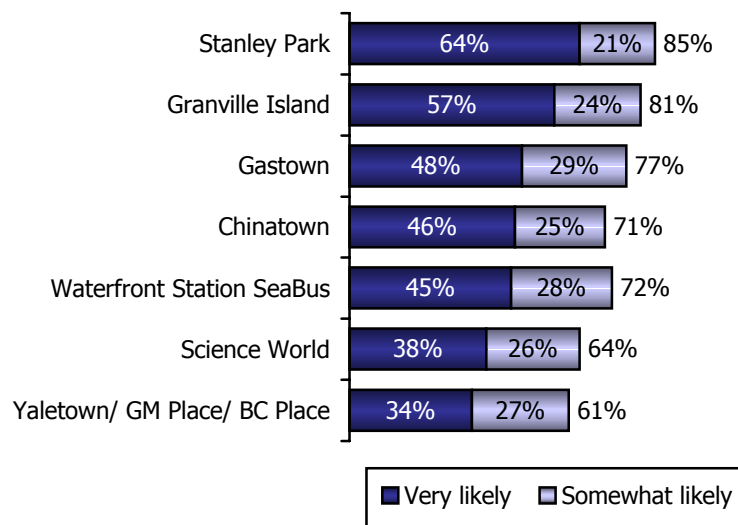
## 6.0 Tourists’ Likelihood of Using Streetcar to Specific Destinations

Tourists interested in the streetcar after hearing the concept description were then asked their likelihood of taking the streetcar to each of the other destinations on the proposed Phase 1 route, as well as the likelihood of using the service to the extended Phase 2 route destinations. These findings (shown here “as reported likelihood” with no down-weighting) are further indicators of the general appeal of using the streetcar to travel to these other destinations. As noted earlier, consumers tend to overstate their intentions; therefore, the survey results are down-weighted in the forecasting exercise and used as one of several sources of input to arrive at planning level ridership estimates (Section III).

**Overall Findings:** Stanley Park, the most popular tourist destination, also appears to be the most popular streetcar destination (85% in total, 64% very likely to use), followed next by Granville Island (81% in total and 57% very likely). The Gastown-Chinatown-Waterfront cluster of destinations ranks as third most popular (about 71-77% interested and 45-48% very likely to use). Science World and the Yaletown/GM Place/BC Place cluster are relatively less powerful in attracting users for the streetcar (61-64% total interested and 34-38% very likely).

There is a high degree of consistency across the survey intercept locations. About 84-91% at each site say “very or somewhat” likely to take the streetcar to that destination and about 61-72% are “very likely” with no statistically significant differences by location. Although most Stanley Park visitors are interested in using the streetcar to that destination (85% in total “very or somewhat likely”), they appear to be *less* enthusiastic than visitors to the other Downtown streetcar destinations (48% “very likely” vs. 61-72% for most other interviewing locations).

**Likelihood of Using Streetcar to Specific Destinations**



Base: Total tourists (n=617)

Q.12) For each of the following please tell me how likely you would be to use the proposed streetcar service to travel to this Downtown Vancouver destination? Would you say: very likely, somewhat likely, not very likely or not at all likely?

## 7.0 Influence of Specific Factors on Streetcar Use – Tourists

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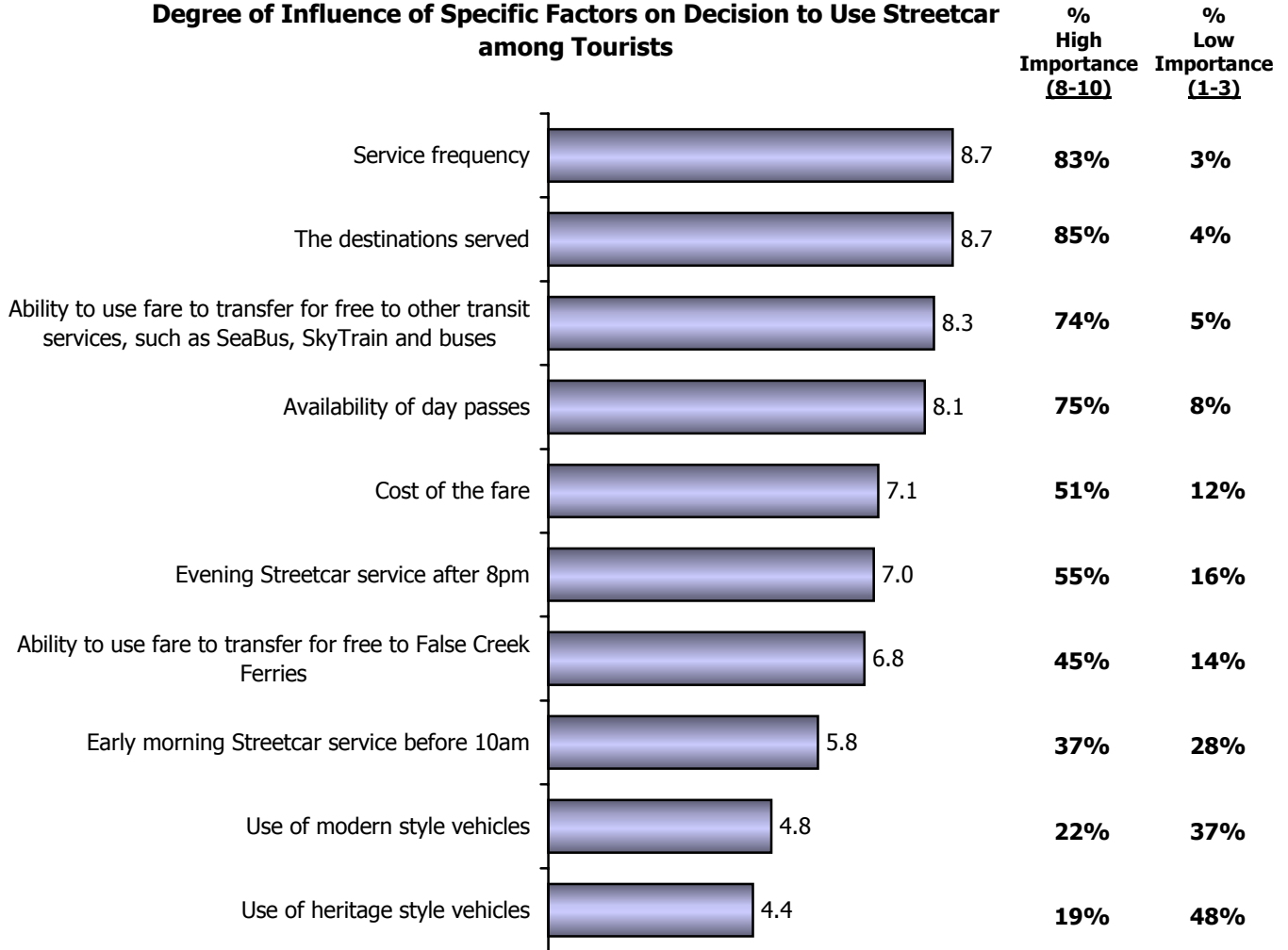
To gain a better understanding of which features have greater influence on the potential use of the streetcar service, all tourists interviewed were asked to rate the importance of a set of features in their decision to use the streetcar. A 10-point rating scale was used where 10 means “of highest importance” and one means “of no importance at all”.

**Greatest influence:** The most important factors to tourists are: the *destinations served* and *service frequency*. A large majority agrees that these are of high importance (averaging 8.7 on the 10-point scale). Also of considerable importance are the *ability to transfer for free to other transit* and the *availability of day passes* (means of 8.3 and 8.1, respectively).

**Moderate influence:** *Cost of the fare, evening service* (after 8pm) and *free transfer to False Creek ferries* have moderate influence; these features receive mean scores in the 6.8 to 7.1 range and are of high importance to about 45-55% of tourists. Of somewhat lesser influence is *early morning service* (before 10am).

**Lowest influence:** Of least importance to tourists is the *type of vehicles used*, with modern style vehicles only marginally ahead of heritage style.

**Degree of Influence of Specific Factors on Decision to Use Streetcar among Tourists**



Base: Total tourists (n=617)

Q.13) Next I'm going to read some factors that may or may not influence your decision to use the streetcar service. Please rate each on a 10-point scale, where "10 means that this is of highest importance" and "1 means of no importance at all" in your decision to use the streetcar

## II. Detailed Findings – Recreational Resident Market

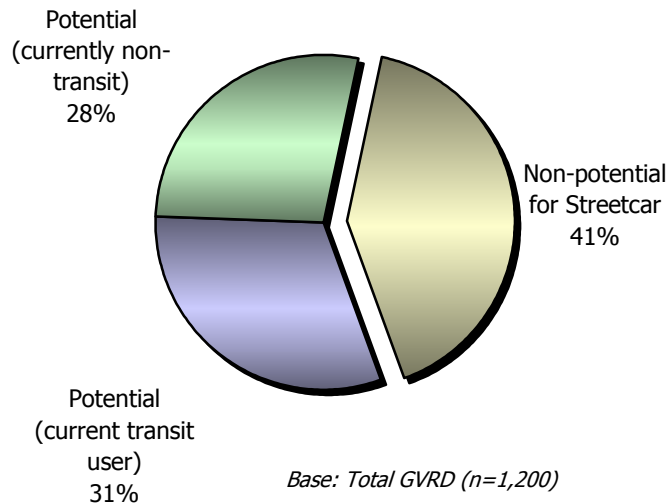
### 8.0 Recreational Resident Potential Market for Streetcar

A cross-section of Greater Vancouver residents were screened on the basis of the following *qualifying criteria* in order to identify the “recreational resident” market for the proposed downtown streetcar service:

- Greater Vancouver Regional District (GVRD) residents 16 years of age and over,
- Who are either current transit users or non-transit users who would be interested in using a Downtown Streetcar,
- Who have traveled to the Downtown Core, including Stanley Park, Gastown, Chinatown, False Creek and Granville Island, during the past three months,
- For the purpose of shopping, personal business, entertainment or recreation.

The screening process revealed that about 59% of residents 16 years and over in the Greater Vancouver Regional District (GVRD) make up the potential recreational resident market for a Downtown Streetcar service. This potential market is divided quite evenly between current transit users and current non-users.

**Downtown Streetcar  
- Potential Recreational Resident Market -**



*Q.4) Do you currently take any of the following at least once a month on a regular basis:*

*Q.5) If new, modern streetcar service was available, would you consider taking it if the service met your needs?*

*Q.6a) Do you travel to any of these areas of Downtown Vancouver at least once every 2-3 months ... for shopping, personal business, entertainment or recreational purposes?*

## 9.0 Recreational Resident Profile

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### 9.1 Demographic profile – Recreational Residents

In terms of the demographic profile, the potential recreational resident market for a streetcar service is largely similar to the population overall. There are, however, some differences – none dramatic, but a few statistically significant (at the 95% confidence level) and some are noted as “directional” differences (only significant at the 90% confidence level). Differences from the current transit user profile are also noted.

- **Area of residence:**
  - As would be expected, the potential streetcar market has a somewhat greater representation of City of Vancouver residents (37%) than found in the GVRD overall (30%), but somewhat less than among current transit users (44%)
  - Somewhat lower representation from the outer suburbs south of the Fraser and from the Tri-Cities (23% and 10%, respectively, versus 28% and 13% respectively in the total GVRD). Current transit users have significantly less representation from south of Fraser suburbs (16%).
  
- **Employment status:**
  - There are slightly fewer retired people in the potential market segment (11% versus 14% in the GVRD overall) and
  - Directionally more students (14% of potential streetcar users) compared to the total GVRD (11%). Among current transit users, students represent a notably larger segment (22%).
  
- **Age:**
  - Compared to the total GVRD, the potential market has directionally more young residents (18% are in the 16-24 year old group) and
  - Directionally fewer seniors 65 years or older (12%).
  - Current transit users, however, include significantly more youth (26% vs 15% in the total GVRD).
  
- **Income:**
  - The potential streetcar market also has directionally more representation from those with household incomes of \$55,000 or more per annum (50% versus 46% for the GVRD in total and 39% among the current transit using market).

<b>Recreational Residents Demographic Profile</b>			
	Total GVRD (1,200) %	Total Recreational Residents (Qualifiers) (739) %	Current Regular Transit Users (475) %
<b>Gender</b>			
Male	49	50	45
Female	52	50	55 ▲
<b>Age</b>			
16 to 24	15	18 ▲	26
25 to 34	19	20	20
35 to 44	22	20	15
45 to 54	19	20	17
55 to 64	11	10	9
65 years and over	15	12 ▼	13
<b>Area of Residents</b>			
City of Vancouver	30	37 ▲	44 ▲
City of Vancouver East of Main Street	15	18	25 ▲
City of Vancouver West of Main Street	11	14	15
Downtown including the West End, Coal Harbour, Yaletown	4	6	5
Surrey/ White Rock/ Langley/ Delta	28	23 ▼	16 ▼
Tri-Cities/ Ridge Meadows	13	10 ▼	11
Burnaby/ New Westminster	11	11	12
Richmond	9	10	9
North Vancouver/ West Vancouver	9	9	7
<b>Number of People in Household</b>			
1	13	14	13
2	31	32	30
3 or more	56	55	57
Mean # of people	3.0	3.0	3.0
<b>Employment Status</b>			
Employed for pay	50	50	49
Retired	18	14 ▼	16
Self-employed/ work from home	15	16	9
Student	11	14 ▲	22 ▲
Homemaker	9	8	7
Unemployed currently	4	5	6

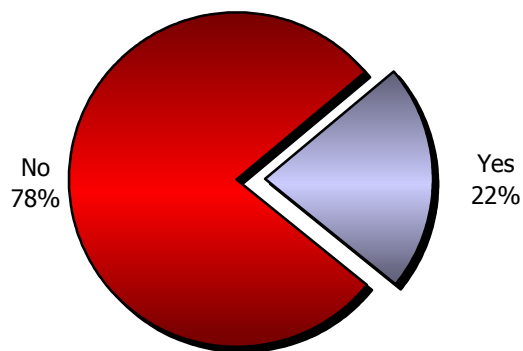
*continued*

<b>Recreational Residents Demographic Profile (cont'd)</b>			
	<u>Total GVRD</u> (1,200) %	<u>Total Recreational Residents (Qualifiers)</u> (739) %	<u>Current Regular Transit Users</u> (475) %
<b>Income</b>			
Less than \$55,000	33	34	43 ▲
Less than \$20,000	7	8	13
\$20,000 to less than \$35,000	13	15	16
\$35,000 to less than \$55,000	11	11	12
\$55,000 or more	46	50 ▲	39 ▼
Less than \$65,000	9	8	10
\$65,000 to less than \$80,000	12	14	9
\$80,000 to less than \$100,000	10	11	8
\$100,000 or more	12	13	10
Refused/ don't know	21	16	18

## 9.2 Work/school downtown -- Recreational Residents

Just over one-in-five recreational residents also work or go to school in the Downtown area. The majority of these commuters currently use transit on a regular basis, that is at least once a month (67%).

**Work or Attend School  
in Selected Downtown Areas**



*Base: Total Recreational Residents (n=739)*

*Q.6b) And do you work or go to school (when school is in session) in these areas of Downtown Vancouver?*

### 9.3 Current regular transit use -- Recreational Residents

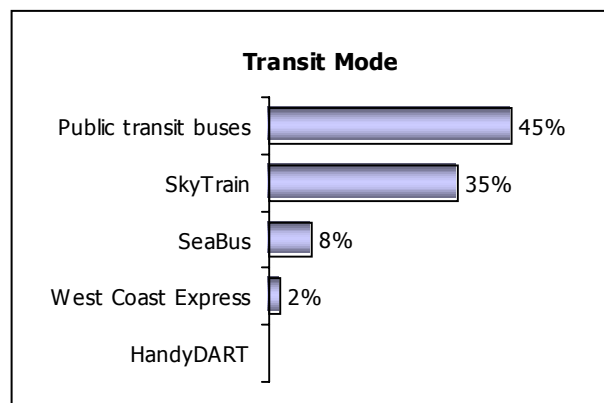
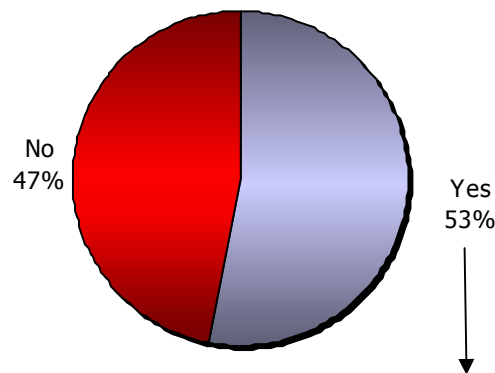
Among recreational resident qualifiers, just over half currently are transit users, that is, taking transit at least once a month on a regular basis (but not necessarily to the Downtown area). This compares to an overall rate of about 37% found in this study among the GVRD population 16 years of age and over. Note that a difference would be expected, as the recreational resident market for the streetcar currently travel to downtown Vancouver for non-work/school purposes and downtown destinations are well-served by transit.

Most users report taking transit buses, the most widely available transit mode. SkyTrain is also used by a significant proportion of current transit users. As a result, the current transit system is already relatively familiar to many recreational residents who are potential users of a streetcar service.

Similar to the typical transit user profile, recreational residents who are more likely to be current users of transit are:

- Those residing in the City of Vancouver, where service levels are higher (67%)
- Those who work or go to school downtown (67%)
- The younger segment under 35 years of age (65%)
- Students (82%) and
- The less affluent with household incomes below \$55,000 (67%).

**Current Regular Transit Users**



Base: Total Recreational Residents (n=739)

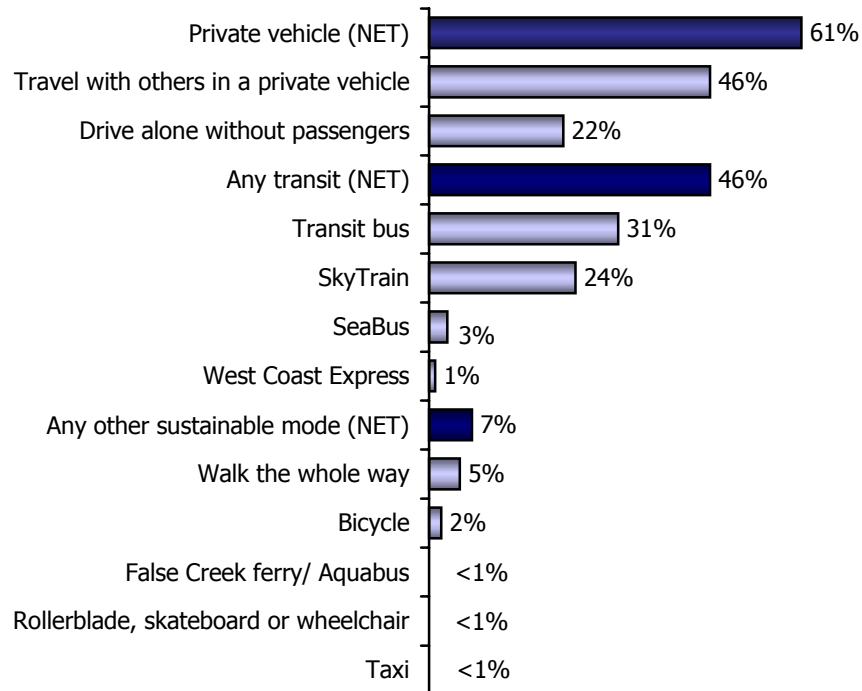
Q.4) Do you currently take any of the following at least once a month on a regular basis:

**9.4 Usual mode to travel downtown for non-work/school purposes -- Recreational Residents**

Private vehicle is currently the most popular mode of transportation to the downtown for shopping, personal business, entertainment or recreation. A majority of recreational residents (61%) travel downtown by private vehicle with nearly half (46%) carpooling and about one-in-five (22%) traveling by Single Occupant Vehicle (SOV). Transit is also a common method of travel to the downtown areas (46% usually use a form of transit). Transit bus and then SkyTrain are the main transit modes used.

- Note that 12% mention both private vehicle and transit as a usual mode for going Downtown (not necessarily in same trip, however).
- In total, 7% use other sustainable modes (mainly walking, but also some cycling). There is minimal mention of the False Creek ferries, rollerblading, skateboarding or wheelchairs.

**Usual Mode to Selected Downtown Areas for Non-work/school Purposes**



Base: Total recreational resident potential for Streetcar (n=739)

Q.7) So ... when you make shopping, personal business, entertainment or recreational trips to these Downtown areas, what main type of transportation do you usually use?

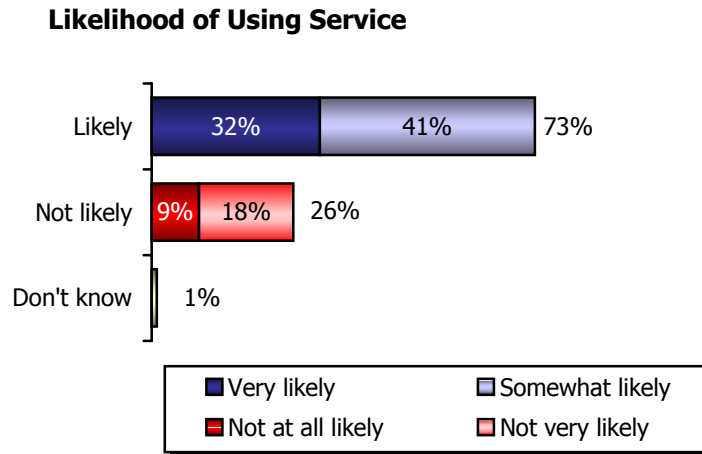
## 10.0 Overall Appeal of Downtown Streetcar to Recreational Residents

### 10.1 Reported interest in using streetcar service – Recreational Residents

When downtown recreational residents are presented with the proposed streetcar concept description and asked how likely they would be to use this service when traveling downtown for non-work/school purposes, we find a high level of interest reported. While the majority (73%) claim to be very or somewhat likely to use the service to travel downtown, the response is not as strongly enthusiastic as found among tourists. Only one-third say they are “very likely” to use the service (compared to six-in-ten tourists saying “very likely”). Nevertheless, keep in mind that people tend to overstate their intentions to use a service and that the results presented here are not down-weighted. The ridership forecasting section of this report provides estimates of usage with appropriate down-weighting of recreational residents’ usage predictions, verified against several other independent estimates and source data.

Both current transit users and non-users of transit express almost identical levels of overall interest in the streetcar service. The ridership estimates detail any differences in projected usage levels (Section III).

Stronger interest (about 40-45% saying “very likely”) is found among those on the North Shore and in the South of the Fraser (Surrey/White Rock/Delta/Langley)



*Base: Total recreational resident potential for Streetcar (n=739)*

*Q.9) If this streetcar service was available, how likely would you be to use it to travel to the Downtown Vancouver areas we mentioned?*

## 10.2 Barriers to Streetcar Use among Recreational Residents

Recreational residents who are *unlikely* to use the streetcar service give a variety of reasons for disinterest. The top two deterrents are:

- Satisfaction with the current transit system (23%)
- Preference for using own vehicle (22%)

<b>Reasons Unlikely to Use Streetcar</b>	
	Total Recreational Residents <u>Unlikely to Use</u> (208) %
Regular transit serves my needs	23
Prefer to have/ need vehicle/ would have to drive downtown to access it anyway	22
Don't travel downtown enough/ dislike traveling to downtown	17
More for tourists/ good if I have visitors	14
Doesn't serve destination(s) I travel to/ don't travel to destinations it serves/ don't change locations once I'm downtown	13
Expensive	10
Prefer to walk	7
Doesn't serve my area/ live too far away/ does not help my commute	6
Travel with too many people/ always more than just me	4
Creates traffic problems	4
Have/ prefer other means of transportation	2
Other	13
No particular reason	1
<i>Base: Total not very/not at all likely to use the Streetcar service to travel to downtown Vancouver</i>	
<i>Q.10) Why are you not likely to use it?</i>	

### 10.3 Appealing Features to Recreational Residents

Those recreational residents who are likely to use the streetcar were asked what features they particularly like and what would encourage them to use the streetcar. While a broad array of features is appreciated, the primary aspects that appeal to recreational residents are:

- Service frequency (33%)
- Destinations they need/good for getting around downtown (31%)
- Non-polluting/environmentally friendly (23%)

<b>Features/Characteristics That Would Encourage Use of Streetcar</b>	
	Total Recreational Residents <u>Likely to Use</u> (520) %
Frequency/ regularity	33
Destinations I like to travel to/ good for traveling around downtown	31
Non-polluting/ environmentally friendly	23
Park and Ride available/ don't have to worry about parking	13
Good price	12
Easier/ more convenient	11
Get on and off anywhere/ easy to access	10
Quick/ saves time/good transfer time/ good for multiple errands	11
Easy/ convenient access to main tourist sites/ good for visitors	9
More spacious	8
Connects/ transfers to main transit	8
Quiet	8
Easier to sightsee/ see the views/ big windows	7
Can reduce/ avoid traffic congestion	6
Unique/ not just a bus/ more fun (incl. mentions of San Francisco)	6
Bike friendly	4
Comfortable/ smooth ride	4
Nostalgia/ heritage aspect	2
Wheelchair/ stroller accessibility	1
Modern/ futuristic	<1
Other	10
No particular reason/ don't know	4
<i>Base: Total very/somewhat likely to use the Streetcar service to travel to downtown Vancouver</i>	
<i>Q.11) What specific features or characteristics of the streetcar service would most encourage you to use it? What do you particularly like about it?</i>	

## 11.0 Recreational Residents' Likelihood of Using Streetcar to Specific Destinations

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Interest in the proposed streetcar destinations was also probed by asking the likelihood of using the downtown streetcar service for shopping, personal business, entertainment or recreational purposes.

This measure reveals that *the top two* destinations are similar to those chosen by tourists.

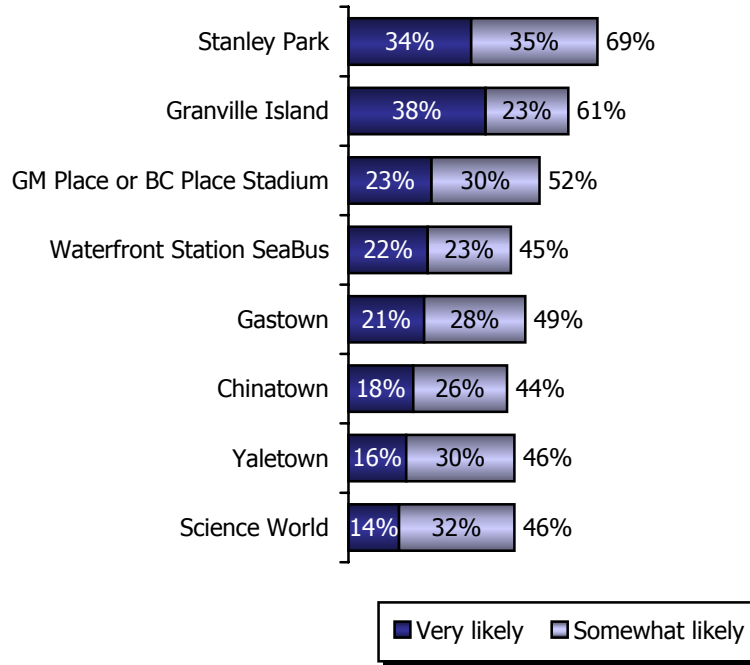
- **Stanley Park** is the favourite destination for a majority of recreational residents bound for downtown (69%).
- **Granville Island** is the second most popular (61% in total).
- Both of the top two streetcar destinations garner similar levels of strong interest (“very likely” ratings of 34% and 38%, respectively).

The *next most* desired locations among recreational residents are:

- the **sports arenas**, GM Place/BC Place Stadium (52% in total, and 23% “very likely”)
- **Gastown** (49% in total, 21% “very likely”)
- **Waterfront** (45% in total, 22% “very likely”)

The remaining destinations (Chinatown, Yaletown and Science World) tend to interest somewhat under half of recreational residents in total (about 44-46% with “very likely” scores ranging from 14-18%).

**Likelihood of Using Streetcar to Specific Destinations**



*Base: Total Recreational Residents - Qualifiers (n=739)*

*Q.12) Please tell me how likely you would be to use the proposed streetcar service to travel to each of the following Downtown Vancouver destinations ... for shopping, personal business, entertainment or recreational trips.*

*Q.14) If the streetcar route were extended, how likely would you be to use the proposed streetcar service to travel to the following destinations:*

## 12.0 Recreational Residents’ Mode Changes Due to Streetcar

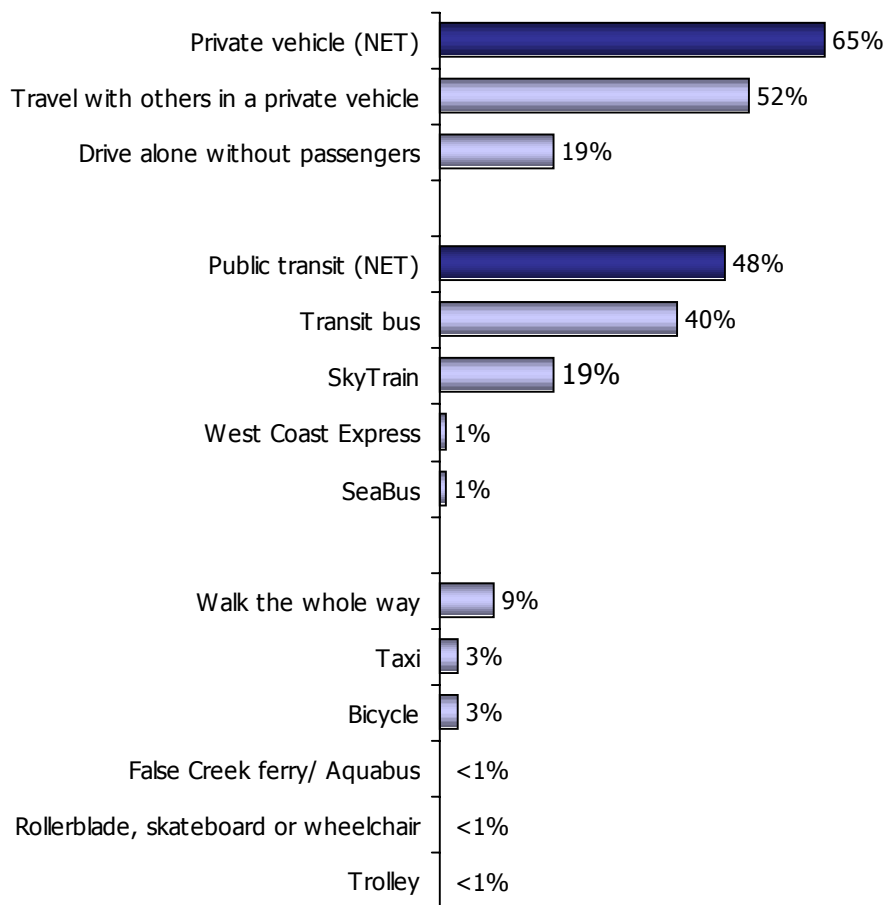
### 12.1 Mode replaced by streetcar – Recreational Residents

The main modes that the streetcar service would replace are:

- private vehicle use (largely those carpooling) and
- public transit (mainly buses)

Given that about half of the potential streetcar market is made up of current transit users, the proportion mentioning that it would replace transit is reasonable.

**Mode Streetcar Would Replace for Recreational Residents**



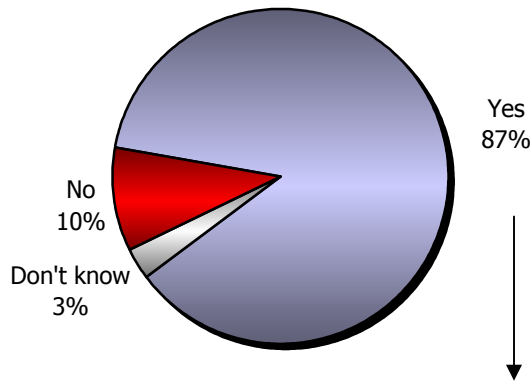
*Base: Total somewhat/very likely to use the proposed Streetcar to any of the listed destinations (including extension) (n=629)*

*Q.16) Next, thinking about your use of the streetcar to any of the possible destinations\* we've been talking about, what mode of transportation would the streetcar trips replace, that is, what mode would you use if the streetcar was not available?*

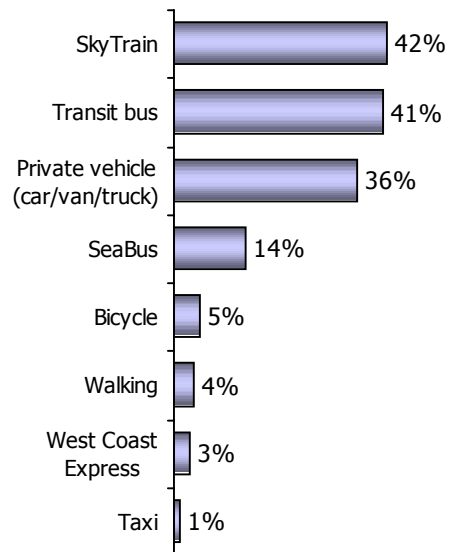
### 12.2 Combining streetcar use with other modes – Recreational Residents

It is clear that recreational residents understand the downtown streetcar concept, as the vast majority who are likely to use the service realize that they would need to combine its use with other modes (e.g., to get downtown). In spite of many saying that transit trips would be replaced by the streetcar trips, the existing transit system is expected to be the main mode-connector (largely transit buses and SkyTrain with 41-42% mentions each), but nearly as many would connect using a private vehicle (36%). This undoubtedly assumes that parking is available for auto users to integrate with the system.

**Expectation to Combine Streetcar Use with Other Modes**



**Other Modes of Transportation**



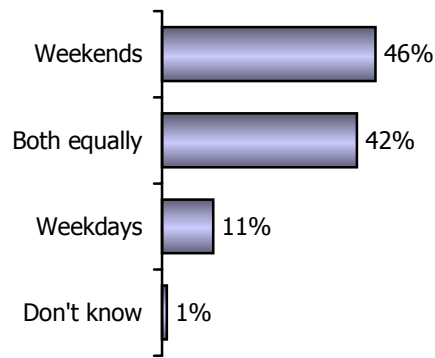
*Base: Total somewhat/very likely to use the proposed Streetcar to any of the listed destinations (including extension) (n=629)*

*Q.17) Would you combine the use of the streetcars with any other modes?*

### 13.0 Recreational Residents’ Days Most Likely to Use Streetcar

As expected, recreational residents likely to use the streetcar say they would be most inclined to use it on **weekends** (88%). But a large proportion of likely streetcar users say that they would use the service on weekdays (53% in total); most of these weekday users would be *both* weekday and weekend users (42% of those likely to use the streetcar).

**Most Likely Days for Use Among Recreational Residents**



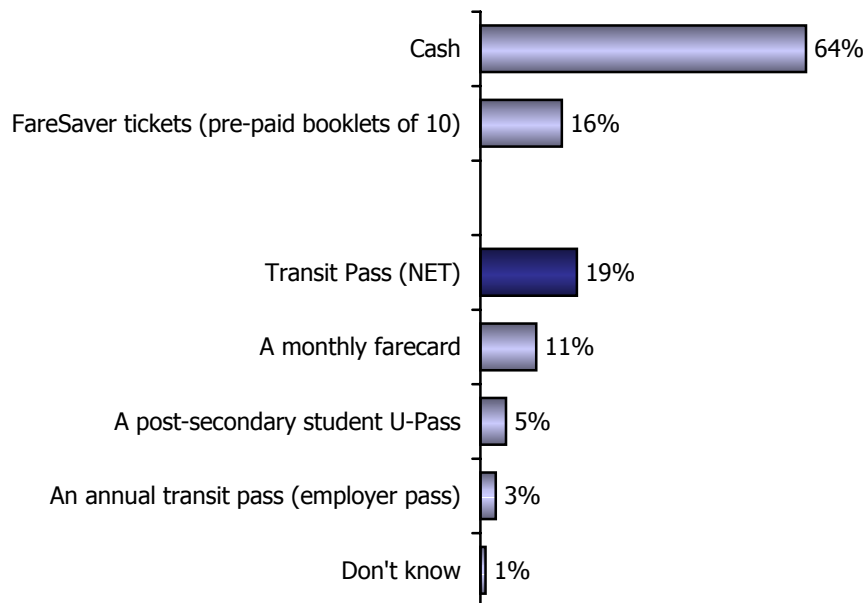
*Base: Total somewhat/very likely to use the proposed Streetcar to any of the listed destinations (including extension) (n=629)*

*Q.18) Would you be most likely to use the streetcar on weekdays or weekends or both equally?*

## 14.0 Recreational Residents’ Method of Payment for Streetcar

Cash would be the preferred method of payment among recreational residents, as 64% choose it as the method they’d be most likely to use. Those who reside outside of the City of Vancouver and non-transit users are the most likely to use cash payment. The stronger preference for paying by cash is not surprising. Among current transit users, 48% pay by cash (Source: TransLink Rider Satisfaction Research, 2004) and furthermore, as the potential streetcar market includes about half who are not regular transit users, one would expect a higher rate of cash fares.

**Method of Payment Most Likely to Use Among Recreational Residents**



*Base: Total somewhat/very likely to use the proposed Streetcar to any of the listed destinations (including extension) (n=629)*

*Q.19) Would you be most likely to pay for the streetcar trip using cash, FareSaver tickets or a transit pass?*

## 15.0 Influence of Specific Factors on Streetcar Use – Recreational Residents

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Recreational residents were presented with the same set of possible decision-making factors as were given to tourists and asked to rate these features/factors in terms of their importance when deciding whether to use the streetcar. One additional factor was added for the recreational residents – this was “*availability of Park & Ride facilities to connect to transit and the streetcar.*” Respondents rated these factors on a ten-point scale where 10 meant “of highest importance” and one mean “of no importance at all”.

Recreational residents have many similar attitudes as tourists regarding the importance of specific service features that would influence their decision to use the streetcar. However, the order of priority is slightly different for a few of the influential factors.

The ***ability to transfer for free to other transit*** receives the number one rating among recreational residents (8.6 out of 10), while it is in third place for tourists (8.3). ***Service frequency*** and ***destinations served*** are the next most important to recreational residents. (These features rank as number one and two most important for tourists.)

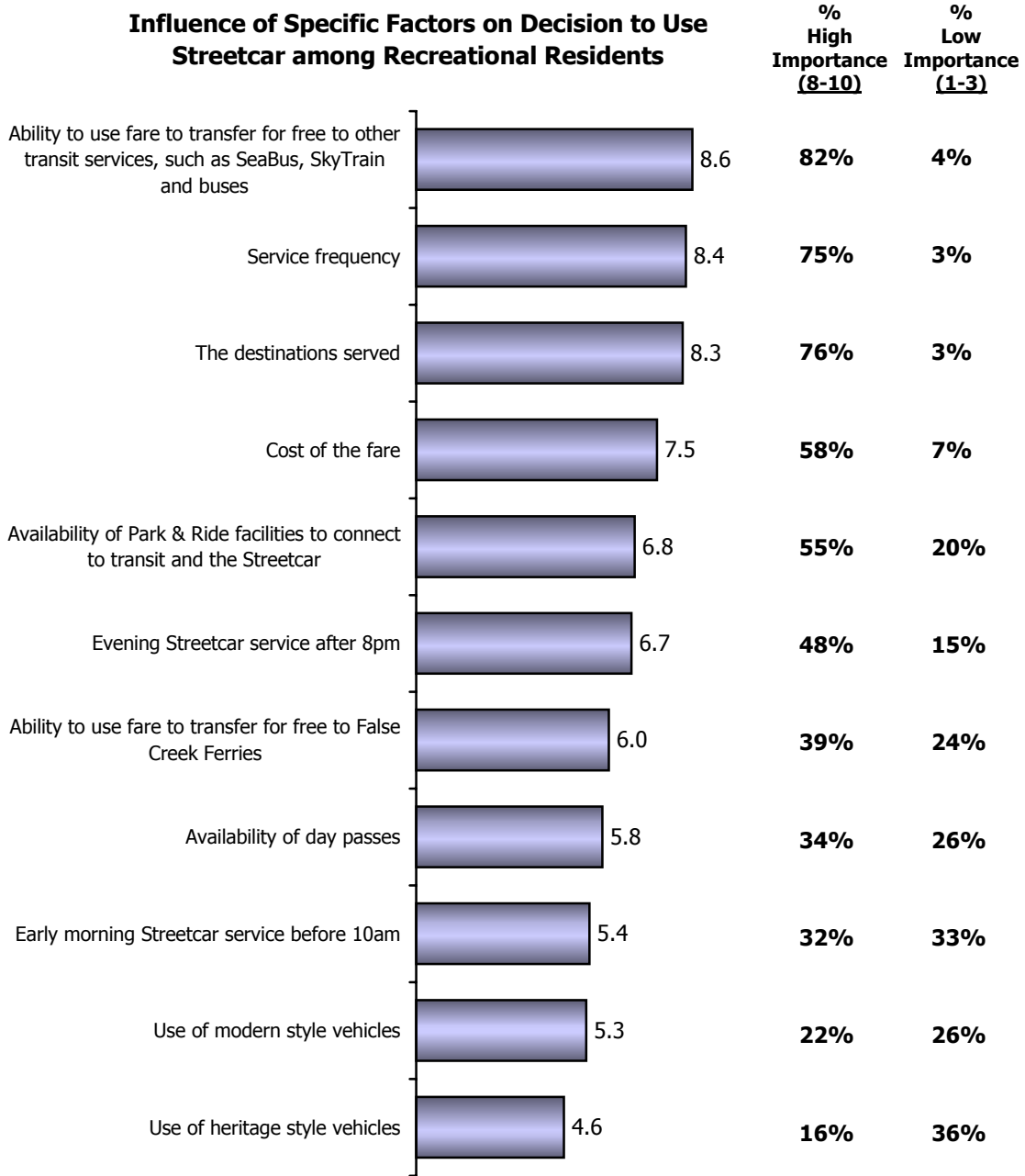
Cost of fare is slightly more important to recreational residents (7.5 vs. 7.1 for tourists).

Availability of Park and Ride facilities is of moderate importance to recreational residents (6.8 out of 10).

As might be expected, the relative importance of day passes is much less important to recreational users (5.8) than to tourists (8.1).

In terms of subgroups:

- Cost is more important to those in households with 3 or more people (7.8) and for students (8.0) and the younger under 35 year old segment (7.9).
- Ability to transfer for free to transit is more important to regular transit users (8.9), of course, those on the North Shore (9.1), students (9.0), larger households (8.8) than their to their counterparts.
- Service frequency is more important to those on the North Shore (8.9) than others.
- Free transfers to the False Creek Ferries (7.3) and evening service (7.4) is more important to those who live downtown than those elsewhere.
- The style of vehicle is of least importance, but the modern style appears to consistently be slightly ahead of the heritage style. Perhaps the idea of comfort is associated with modernity.



*Base: Total somewhat/very likely to use the proposed Streetcar to any of the listed destinations (including extension) (n=629)*

*Q.19) Would you be most likely to pay for the streetcar trip using cash, FareSaver tickets or a transit pass?*

## III. Ridership Forecasts

### 16.0 Introduction

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An important objective of this study was to estimate annual tourist and recreational ridership for the Downtown Vancouver Streetcar. These ridership estimates were developed by TSi Consultants, transportation specialist engineers. Phase 1 of the Streetcar would provide service between Waterfront and Granville Island with numerous stops including Gastown, Chinatown and Science World. An extension of Phase 1 from Waterfront to Stanley Park is under consideration, as is a Phase 2 route from Science World to Granville Street along Pacific Boulevard. For the purpose of this study, ridership estimates have been developed for the following configurations:

- Phase 1 – Waterfront to Granville Island
- Phases 1&2 - Stanley Park to Granville Island and Science World to Granville Street (via Pacific Boulevard)

The service would feature modern low-floor streetcars operating at a 10-minute frequency throughout the day. Fares would be in the 2 to 3 dollar range and would be integrated with the TransLink fare system.

The previous sections provide a discussion of the tourist and recreational survey results without adjustments for overstated intentions to use the proposed Streetcar. The market research surveys simulate 100 percent customer awareness and there is a tendency for respondents to overstate their intentions when presented with new service options. Therefore, it is necessary to down-weight the responses according to the characteristics of the individual and to verify the resulting ridership estimates against other independent estimates.

For this study the primary ridership forecasts are based on the results of the market research surveys. These forecasts have been verified against preliminary modelling estimates and should be reconciled with independent benchmarking of similar systems operating worldwide. It is important to note that these estimates are for the year 2004 and assume the ridership is fully mature. Typically, ridership on a new system can take 2 to 3 years to mature, or “ramp-up”, as new customers gradually adjust their behaviour. As the system will not be operational in 2004, ridership estimates should be factored to account for growth in tourism and local demographics between 2004 and opening day.

## 17.0 Tourist Market

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### 17.1 Forecasting Approach

The tourist market survey obtained responses from more than 600 individuals on their interest and potential use of the Downtown Vancouver Streetcar service. Respondents were surveyed at six tourist destinations in the downtown area (Stanley Park, Waterfront, Gastown, Chinatown, Science World and Granville Island). Following receipt of the survey results, the following steps were undertaken to produce tourist ridership estimates:

1. Established annual tourist controls to each survey site based on Tourism Vancouver, Tourism BC and site statistics.
2. Estimated average number of sites visited per tourist stay.
3. Developed tourist survey expansion factors.
4. Analyzed average Streetcar boarding rates per site and down-weighted likelihood of use information.
5. Prepared annual tourist boarding forecasts.

In 2003, Tourism Vancouver reported approximately 8.0 million overnight visits to Greater Vancouver<sup>1</sup>. Based on the first six months of this year (8 percent increase over 2003), annual visits will likely exceed 8.5 million in 2004. Approximately 65 percent of the visitors stay in paid accommodation of which 55 percent are located in the downtown area<sup>2</sup>. Therefore, visitors staying in downtown paid accommodation are estimated at approximately 3.0 million for 2004.

Annual visitor estimates were only available for three of the six sites (i.e., Granville Island, Science World and Stanley Park). Therefore, information from the tourist survey (e.g., non-qualifier rates and average site visits per stay) was used to construct annual tourist controls and expansion factors for each destination. The following table provides a summary of the total annual tourist visit estimates (all modes) for each location (note that this table does not include visits by GVRD residents).

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<sup>1</sup> *Tourism Vancouver Visitor Volume Model, Grant Thornton LLP.*

<sup>2</sup> *Tourism British Columbia, BC Visitor Study "The Report on Visitors to Greater Vancouver".*

<b>Estimate of 2004 Annual Tourist Visits to Six Sites (all modes)</b>	
Survey Location	Annual Visits by Tourists (M)
Stanley Park	4.00
Waterfront	2.22
Gastown	3.29
Chinatown	2.43
Science World	0.24
Granville Island	5.90

A key feature of the market survey design is that individuals are asked to rate their intended usage according to a four-point scale (i.e., very likely, somewhat likely, not very likely and not at all likely). The stated trip rates are then down-weighted depending on the characteristics of the respondent (e.g., transit user vs. non-transit user). For this study, scale weightings were based on standard weights used in previous transit studies in the Greater Vancouver area. Note that these factors represent a discounting of “stated” trips in the range of 40 to 90 percent.

<b>Down-weighting Factors</b>		
Stated Intent of Use	Transit	Non-Transit
Very likely	0.60 – 0.40	0.25 – 0.15
Somewhat likely	0.30 – 0.20	0.12 - 0.08

Next, average Streetcar boarding rates were developed based on the origin of the tourist and the average number of sites visited. For example, an individual staying in a downtown hotel and visiting Science World and traveling back to the Gastown/Waterfront area would board the Streetcar twice (Waterfront->Science World, Science World -> Gastown). A detailed analysis of the potential boarding combinations was undertaken to arrive at average board rates depending on the tourist’s origin and number of sites visited per day. These values range from 1 to 2 per site, with an average value of 1.25 (assuming a maximum of 3 sites visited per day).

The average board rates and the down-weights were then applied to the survey responses to estimate tourist ridership for Phase 1 and Phases 1&2 of the Downtown Streetcar.

An example calculation for streetcar trips to/from the Waterfront/Gastown area is shown based on the central estimate down-weights, resulting in an estimate of 0.6 million annual rides from a base of 5.5 million annual visits. Part A shows the expanded annual streetcar trips by mode and stated intent prior to down-weighting (1.75 million trips). Part B shows the down-weights and Part C shows the average board factors. The down-weights and average board factors are applied to the un-weighted trips to arrive at an estimate of 0.6 million annual rides. Similar calculations are undertaken for the other sites to arrive at the total streetcar ridership estimate. Note the calculation below has been simplified for presentation purposes.

<b>Annual Streetcar Usage – Waterfront/Gastown Example</b>		
<b>A. Annual streetcar trips by stated intent and current mode (M)</b>	<b>Transit</b>	<b>Non-Transit</b>
Very likely	0.50	0.70
Somewhat likely	0.25	0.30
<b>B. Down-weights (central)</b>		
Very likely	0.50	0.20
Somewhat likely	0.25	0.10
<b>C. Average Board Factors</b>	1.25	1.25
<b>D. Annual Ridership Forecast (M)</b>	0.39	0.21
	<b>0.60</b>	

### 17.2 Tourist Ridership Estimates

Annual tourist ridership estimates were developed for Phase 1 (Waterfront to Granville Island) and Phases 1&2 (Stanley Park to Granville Island and Science World to Granville Street) of the Downtown Streetcar. Estimates are presented as Low, Central and High, based on the down-weighting ranges. In 2004, a fully mature Phase 1 system could attract between 1.3 and 2.1 million tourist boardings per year, with a central forecast of 1.7 million. The extension of the line to Stanley Park and Yaletown could increase ridership levels to 2.2 to 3.5 million annual tourist boardings, with a central forecast of 2.8 million.

Annual Tourist Boarding Estimates (M)		
Annual Boardings	Phase 1	Phases 1&2
Low	1.3	2.2
<b>Central</b>	<b>1.7</b>	<b>2.8</b>
High	2.1	3.5

Note that these estimates represent initial “planning-level” forecasts, as many of the details regarding the Streetcar system have not yet been determined (e.g., station locations, running time, frequency, fare levels and bus integration). Once these details have been finalized, design-level estimates could be developed for the final configuration. Design-level estimates would include details on line and station boarding activity for specific time periods and time horizons.

## 18.0 Recreational Resident Market

### 18.1 Forecasting Approach

The resident market survey obtained responses from 1,200 residents, with more than 700 qualifiers (i.e., individuals that made recreational trips to the Downtown area in the past three months (for purposes, such as shopping, personal business, entertainment, recreation or social reasons)) While respondents were also asked if they worked Downtown, the criteria for qualifying was based on recreational use and the context for streetcar usage was also based on recreation uses only. The survey was expanded by household location according to region, age and gender.

Ridership estimates for the recreational market were developed as follows:

1. Survey records were reviewed for over-reporting and adjusted as required (information from recent trip diary surveys were used to establish maximum annual recreational trip rates for the proposed Streetcar).
2. Analyzed stated usage and applied down-weightings.
3. Prepared annual recreational resident boarding forecasts.

As residents were asked to report the number of one-way trips to/from each site, total annual boardings were derived directly from the survey. Again, as survey respondents tend to over-state their stated usage, the same down-weighting factors were applied as for the tourist market segment. Note that resident recreational trips were analyzed according to mode and place of residence.

### 18.2 Recreational Resident Ridership Estimates

Annual recreational resident ridership estimates were developed for both phases of the Downtown Streetcar. Estimates are presented as Low, Central and High, based on the down-weighting ranges. In 2004, a fully mature Phase 1 system could attract between 0.8 and 1.4 million recreational resident boardings per year, with a central forecast of 1.1 million. The extension of the line to Stanley Park and Yaletown could increase ridership levels to 1.6 to 2.4 million annual recreational resident boardings, with a central forecast of 1.9 million.

<b>Annual Recreational Boarding Estimates (M)</b>		
Annual Boardings	Phase 1	Phases 1&2
Low	0.8	1.6
<b>Central</b>	<b>1.1</b>	<b>1.9</b>
High	1.4	2.4

## 19.0 Preliminary Modelling Analysis

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### 19.1 EMME/2 Modelling Assumptions

The market research analysis produced ridership estimates for tourists and recreational residents. Modelling analysis was undertaken for both phases to provide a crosscheck estimate of the recreational ridership component and provide a basis for generating a preliminary total annual boarding estimate.

For this analysis, existing AM and Midday EMME/2 models were used as a basis for developing daily and annual recreational ridership estimates. The AM model includes four trip purpose: (i) to work; (ii) to grade school; (iii) to post secondary school; and (iv) to other. The Midday model also includes four trip purposes: (i) to/from work; (ii) business; (iii) home-based other; (iv) non-home based other. Each transit trip purpose was assigned separately to distinguish the volume by purpose on the streetcar in each time period. Work and school purposes were combined into a commuting/education purpose. To other (AM), home-based other and non-home based other (Midday) were combined into the recreational/personal purpose. AM and Midday boarding estimates were then factored to annual estimates. Note that the resident telephone survey requested information on shopping, personal business, entertainment and recreational trips. These purposes are consistent with the “other” trip purposes used by the EMME/2 models.

Note that the models were not refined (e.g., traffic zone disaggregation) or recalibrated for the downtown area. Therefore, these modelling estimates should be considered “high-level” and will be superseded when more detailed model forecasts become available from the Downtown Streetcar Design, Layout and Ridership Study.

Key modelling assumptions are outlined below:

- Base year 2003 demographics, road and transit network assumptions.
- Streetcar fare of \$2 (fully transferable with TransLink system).
- Streetcar track alignments and operating assumptions based on BSW Streetcar Study<sup>3</sup>.
- EMME/2 AM and Midday models include commuter, education and recreational/personal trip purposes.
- Tourist ridership is not included in the modelling analysis.

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<sup>3</sup> Baker McGarva Hart - SNC/Lavalin - Ward Consulting, Vancouver Downtown Streetcar Study.

## 19.2 Model-based Ridership Estimates

AM and Midday boarding estimates were developed for the recreational/personal and commuter/education markets and then expanded to annual estimates for 2003. Again, these estimates assume system ridership is fully mature or ramped-up, which usually takes 2 to 3 years.

Annual Model-based Boarding Estimates (M)		
Annual Boardings	Phase 1	Phases 1&2
Commuting/Education	1.0	3.4
<b>Recreational/Personal</b>	<b>0.8</b>	<b>2.1</b>
Total	1.8	5.5

Phase 1 of the Streetcar is estimated to attract approximately 1.8 million annual boardings, with recreational/personal trips accounting for 0.8 million of the total. Phases 1&2 appear to result in a significant increase in ridership, as the line would better serve West End and Coal Harbour residents. Total annual ridership for Phases 1&2 is estimated at approximately 5.5 million, which includes 2.1 million recreational/personal trips.

The model-based recreational estimate for Phase 1 of 0.8 million is at the low end of the range developed from the market research approach (0.8M to 1.4M). The model estimate for Phases 1&2 of 2.1 million falls in the middle of the market research-based range (1.6M to 2.4M). As many of the details regarding the Streetcar system have not yet been determined, the differences between the market research and model estimates are within an acceptable level of tolerance.

## 20.0 Ridership Summary

### 20.1 Annual Ridership Estimates

Annual ridership estimates for the Downtown Streetcar have been developed from the market research survey results for the tourist and recreational resident markets. These estimates have been crosschecked against model-based estimates for recreational trips.

If the system were open today and fully mature (i.e., in operation for 2 to 3 years), Phase 1 (Waterfront to Granville Island) annual boardings for the tourist and recreational markets are estimated at 2.1 to 3.5 million. Adding the preliminary model-based estimate for commuting/education trips produces total annual boards ranging from 3.1 to 4.5 million.

Phases 1&2 (Stanley Park to Granville Island and Yaletown) annual boardings for the tourist and recreational markets are estimated at 3.8 to 5.9 million. Adding the commuting/education model estimate produces total annual boards ranging from 7.2 to 9.3 million.

<b>Total Annual Boarding Estimates (M)</b>			
	<b>Low</b>	<b>Central</b>	<b>High</b>
Tourists	1.3	1.7	2.1
Recreational	0.8	1.1	1.4
Commuter/Education (model-based)	1.0	1.0	1.0
<b>Phase 1 – Total</b>	<b>3.1</b>	<b>3.8</b>	<b>4.5</b>
Tourist	2.2	2.8	3.5
Recreational	1.6	1.9	2.4
Commuter/Education (model-based)	3.4	3.4	3.4
<b>Phases 1&amp;2 – Total</b>	<b>7.2</b>	<b>8.1</b>	<b>9.3</b>

Note that these estimates represent initial “planning-level” forecasts, as many of the details regarding the Streetcar system have not been determined (e.g., station locations, running time, frequency, fare levels and bus integration). While the estimates have been verified against preliminary model results, they should be benchmark against other systems currently in operation worldwide. While many of the characteristics of the Downtown Streetcar may be unique, the benchmarking comparison ensures that market research or model-based forecasts are within an appropriate order-of-magnitude.

## 20.2 Daily Ridership Estimates

Due to the level of tourist patronage, the Downtown Streetcar will be subject to a higher level of seasonal fluctuation than conventional transit services. Preliminary daily ridership estimates have been developed for the average weekday during the summer and winter seasons.

During the winter season, the Phase 1 central forecast is 11,500 daily boards, increasing to 13,500 during the summer months (approximately 17 percent higher). For Phases 1&2 the central forecast for the winter season is 25,500 daily boards, increasing to 28,500 during the summer (approximately 12 percent higher). As Phases 1&2 attract a higher proportion of commuters the seasonal fluctuation is not as pronounced.

<b>Total Daily Boarding Estimates</b>			
	Low	Central	High
<b>Summer Season</b>			
Phase 1	11,000	13,500	16,000
Phases 1&2	25,000	28,500	33,000
<b>Winter Season</b>			
Phase 1	9,500	11,500	13,500
Phases 1&2	23,000	25,500	29,000

# Appendices

1. Questionnaires & Materials Used
  - a) Recreational Resident Questionnaire
  - b) Tourist On-site Questionnaire
  - c) Streetcar Concept: Route map and example photos
  - d) Letter of Authorization
  
2. Report of Calls
  
3. Sample Weighting and Population Statistics

# **1. Questionnaires & Materials Used**



## **Downtown Streetcar Study: Recreational Residents – (A236-2)**

August 9, 2004

Questionnaire – FINAL Version

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### **Introduction**

Hello, I'm \_\_\_ of Mustel Group Market Research, a professional opinion research firm.

We are conducting a short survey among residents of Greater Vancouver on behalf of the City of Vancouver, in partnership with the Greater Vancouver Transportation Authority/TransLink. Please be assured we are not selling or soliciting anything and all responses are kept strictly confidential.

Just to randomize our interviews, may I please to speak to the male/female in this household, who is over 16 and whose birthday comes next? (ALTERNATE ASKING FOR MALE/FEMALE) (ARRANGE CALLBACK/RE-INTRODUCE IF NECESSARY)

### **1. GENDER [OBSERVE & RECORD]**

- MALE
- FEMALE

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### **Persuaders—only if needed:**

- This is strictly an opinion survey; we are not selling or soliciting anything.
- The survey is being conducted for the City of Vancouver, Engineering Services.
- This study is important to help City planners better understand the opinions and needs of people in your area.
- All responses are strictly confidential and anonymous; your identity is never revealed to anyone else, including the client.
- It is extremely important that we include the opinions of all people, regardless of the type of transportation they use (cars, public transit, etc.) or how little they travel around the city.
- Survey length ranges from 3 minutes up to about 8 minutes, depending on your answers.
- CONTACT ONLY IF NECESSARY:  
Dale Bracewell, Transportation Engineer, City of Vancouver, 604-871-6440

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### **Privacy Issues:**

- Mustel Group is committed to protecting your privacy and the confidentiality of your personal information.
- Mustel Group is committed to keeping the personal information you share with us confidential.
- The information you provide will only be used for the purposes of this research. Under no circumstances do we sell contact lists or personal information to others.
- The information you provide will be retained only for the time it is required for the purposes of this research.
- Mustel Group will protect the information you provide with appropriate safeguards and security measures.
- We are fully compliant with the new federal privacy legislation (New act is called PIPEDA: Personal Information Protection and Electronic Documents Act)
- The information you provide will be combined with the responses given by all other survey respondents and reported only in aggregate form. Your answers will remain completely confidential and anonymous.

## Screener

**2. First of all, does anyone in your household work for** a marketing research company, the City of Vancouver, TransLink, Coast Mountain Bus Company, SkyTrain, SeaBus, Albion Ferry, West Coast Express, Metro Shuttle or DW Services? IF YES TO ANY THANK AND TERMINATE AS OCCUPATIONAL NON-QUALIFIER.

**3. a) EVERYONE: To be sure we are including all areas of Greater Vancouver, may I please have your postal code?**

DISPLAY POSTAL CODE FROM SAMPLE \_\_\_\_\_  
(RE-ENTER IF DIFFERENT) \_\_\_\_\_

**b) EVERYONE: In which municipality do you live?**  
(PROBE IF NEEDED.)

- City of Vancouver → PROBE: Is that:
  - Downtown including the West End, Coal Harbour, Yaletown
  - City of Vancouver West of Main Street
  - City of Vancouver East of Main Street
- Burnaby/New Westminster
- Richmond
- North Vancouver/West Vancouver
- Tri-cities (Coquitlam/Pt. Moody/Pt. Coquitlam)
- Surrey/White Rock/Langley/Delta/Ladner/ Tsawwassen/ Pitt Meadows/Maple Ridge

**4. Do you currently take any of the following at least once a month on a regular basis:**

- Public transit buses
- SkyTrain
- SeaBus
- West Coast Express
- HandyDART
- NONE OF THESE → **SKIP TO Q.5**

**IF USE ANY TRANSIT → SKIP TO Q.6**

**5. IF NON-TRANSIT: If new, modern streetcar service was available in Downtown Vancouver, would you consider taking it if the service met your needs?**

- Yes
- No/don't know → **SKIP TO BASIC DATA**

**6. CURRENT AND POTENTIAL TRANSIT/STREETCAR USERS: For this study we are interested in your visits to Downtown Vancouver. By "Downtown Vancouver" we mean your travel to any of the following areas: the Downtown core, including Stanley Park, Gastown and Chinatown, False Creek and Granville Island. (IF ASKED: includes Science World, Yaletown, GM Place and BC Place)**

**6a) Have you visited any of these areas of Downtown Vancouver in the past 3 months ... for shopping, personal business, entertainment or recreational purposes? REPEAT AREA DEFINITION IF NEEDED. DISPLAY DEFINITION.**

- Yes (QUALIFIER)**
- No/don't know (NON-QUALIFIER)

**6b) And do you work or go to school (when school is in session) in these areas of Downtown Vancouver? REPEAT AREA DEFINITION IF NEEDED. DISPLAY DEFINITION OF "Downtown Vancouver"**

- Yes**
- No**

**AFTER Q6b ... RECREATIONAL RESIDENT NON-QUALIFIER:  
IF Q6a = LESS THAN ONCE IN 3 MO. OR DON'T KNOW → SKIP TO BASIC DATA**

**QUALIFIERS:**

**Please note that for the rest of our questions in this study we are only interested in your current and potential visits to these Downtown areas for the following trip purposes: shopping, personal business, entertainment or recreation.**

**7. So ... when you make shopping, personal business, entertainment or recreational trips to these Downtown areas, what main type of transportation do you usually use? ONE ANSWER, IF POSSIBLE. READ IF NECESSARY. REPEAT AREA DEFINITION IF NEEDED.**

- Private vehicle → PROBE: Do you usually:
  - drive alone without passengers?
  - Or travel with others in a private vehicle?
- Walk the whole way (from your origin)
- Rollerblade, skateboard, or wheelchair
- Transit bus
- SkyTrain
- SeaBus
- West Coast Express
- False Creek Ferry / Aquabus
- Taxi
- Other (specify)

**8. Now, I'd like to get your opinion on an alternative transportation service for the Downtown area. Here is a description.**

- Modern, rail-based street cars would run through Downtown Vancouver and around False Creek, covering major tourist destinations. The basic route would include these specific stops: Waterfront Station, Gastown, Chinatown, Science World and Granville Island.
- Streetcars would run approximately every 10 minutes in both directions. Streetcar systems like this are quieter than buses, non-polluting, wheelchair and bike-accessible and offer a very smooth ride. The streetcar has more interior space and larger windows than a bus.
- Riders of the streetcar would be able to use their fare to transfer onto the rest of the Greater Vancouver transit system of SeaBus, SkyTrain and transit buses.
- The service would cost in the range of 2 to 3 dollars for 90 minutes of travel.

**9. If this streetcar service was available, how likely would you be to use it to travel to the Downtown Vancouver areas we mentioned? (REPEAT DEFINITION AS NEEDED) (IF NEEDED: The streetcar service would connect to the rest of the public transit system.)**

**Would you say: very likely, somewhat likely, not very likely or not at all likely?**

- Very likely
- Somewhat likely
- Not very likely
- Not at all likely
- DON'T KNOW

**10. IF Q9=NOT VERY/NOT AT ALL LIKELY: Why are you not likely to use it? (PROBE FULLY FOR DETERRENENTS TO USING STREETCAR)**

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[NOW SKIP TO Q14)

**11. IF Q9=VERY/SOMEWHAT LIKELY TO USE: What specific features or characteristics of the streetcar service would most encourage you to use it? What do you particularly like about it? PROBE FOR SPECIFICS; UP TO 3 PROBES.**

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**12. IF Q9=VERY/SOMEWHAT LIKELY: Please tell me how likely you would be to use the proposed streetcar service to travel to each of the following Downtown Vancouver destinations ... for shopping, personal business, entertainment or recreational trips.**

RANDOMIZE LIST. For [INSERT DESTINATION] ... **would you say: very likely, somewhat likely, not very likely or not at all likely to take the streetcar?**

	Very likely	Somewhat likely	Not very likely	Not at all likely	DON'T KNOW
Waterfront Station/SeaBus?					
Gastown?					
Chinatown?					
Science World?					
Granville Island?					

**13. IF ANY IN Q12=VERY/SOMEWHAT LIKELY:**

**13a) First thinking about the warmer months from May to October ... being as realistic as possible ... about how many one-way trips in an average week or month, if any, do you think you would make by streetcar for shopping, personal business, entertainment and recreational purposes to these destinations? INSERT DESTINATION IF "VERY/SOMEWHAT LIKELY" IN Q12.**

For example, a trip from your home to Gastown, including any transfers, would count as one one-way trip.

(About how many one-way trips in an average week or month) <b>by streetcar to/from</b> → READ DESTINATION ...	Waterfront Station/SeaBus?	Gastown ?	Chinatown?	Science World?	Granville Island?
Per week (CONFIRM # 1-WAY)					
Per month (CONFIRM # 1-WAY)					

ALWAYS CONFIRM NUMBER AND ASK: Including one-way trips coming back?

**13b) And now thinking about the cooler months from November to April ... again please be as realistic as possible. About how many one-way trips in an average week or month, if any, would you make ... (by streetcar for shopping, personal business, entertainment and recreational purposes)?**

(About how many one-way trips in an average week or month) <b>by streetcar to/from</b> → READ DESTINATION	Waterfront Station/SeaBus?	Gastown ?	Chinatown?	Science World?	Granville Island?
Per week (CONFIRM #)					
Per month (CONFIRM #)					

ALWAYS CONFIRM NUMBER AND ASK: Including one-way trips coming back?

**14. EVERYONE: If the streetcar route were extended, how likely would you be to use the proposed streetcar service to travel to the following destinations:** RANDOMIZE AND READ DESTINATIONS; FOR EACH: Would you say: very likely, somewhat likely, not very likely or not at all likely?

	Very likely	Somewhat likely	Not very likely	Not at all likely	DON'T KNOW
Stanley Park?					
Yaletown?					
GM Place or BC Place stadium?					

**15. IF VERY/SOMEWHAT LIKELY TO ANY IN Q14, CONTINUE:**

IF Q9 = "VERY/SOMEWHAT LIKELY", GO DIRECTLY TO Q15a TEXT.

IF Q9 = "NOT VERY/AT ALL LIKELY", READ INTRO: **If the streetcar route were extended to Stanley Park, Yaletown and GM Place/BC Place, we'd like to know approximately how many streetcar trips you would make to these destinations.**

**15a) Thinking only about the warmer season from May to October ...** being as realistic as possible ... about how many one-way trips by streetcar, if any, do you think you would make in an average week or month for shopping, personal business, entertainment and recreational purposes to: INSERT DESTINATION IF "VERY/SOMEWHAT LIKELY" IN Q14.

For example, a trip from your home to Stanley Park, including any transfers, would count as one one-way trip.

(About how many one-way trips in an average week or month) <b>by streetcar to/from</b> → READ	Stanley Park?	Yaletown?	GM Place or BC Place Stadium?
Per week (CONFIRM #)			
Per month (CONFIRM #)			

ALWAYS CONFIRM NUMBER AND ASK: Including one-way trips coming back?

**15b) And now thinking only about the cooler season from November to April ...** again please be as realistic as possible. About how many one-way trips by streetcar, if any, would you make in an average week or month (for shopping, personal business, entertainment and recreational purposes)?

(About how many one-way trips in an average week or month) <b>by streetcar to/from</b> → READ	Stanley Park?	Yaletown?	GM Place or BC Place Stadium?
Per week (CONFIRM #)			
Per month (CONFIRM #)			

ALWAYS CONFIRM NUMBER AND ASK: Including one-way trips coming back?

- 16. IF VERY/SOMEWHAT LIKELY TO Q9 or Q14: Next, thinking about your use of the streetcar to any of the possible destinations\* we've been talking about, what mode of transportation would the streetcar trips replace, that is, what mode would you use if the streetcar was not available? (MULTIPLE ANSWER OK)**

\* DESTINATIONS LIST INCLUDING EXTENSION ROUTE (REPEAT ONLY IF ASKED): Waterfront Station, Gastown, Chinatown, Science World, Granville Island, Stanley Park, Yaletown, GM Place or BC Place Stadium.

- Private vehicle → PROBE: Do you usually:
  - drive alone without passengers,
  - Or travel with others in a private vehicle?
- Walk the whole way (from your origin)
- Rollerblade, skateboard, or wheelchair
- Transit bus
- SkyTrain
- SeaBus
- Taxi
- Other (specify)

- 17. IF VERY/SOMEWHAT LIKELY TO Q9 or Q14: Would you combine the use of the streetcars with any other modes? IF YES: Which ones?**

- YES → PROBE: which ones?
  - Private vehicle (car/van/truck)
  - Transit bus
  - SkyTrain
  - SeaBus
  - West Coast Express
  - Other (specify)
- NO

- 18. IF VERY/SOMEWHAT LIKELY TO Q9 or Q14: Would you be most likely to use the streetcar on weekdays or weekends or both equally?**

- Weekdays (Monday-Friday)
- Weekends (Saturday-Sunday)
- Both equally
- DON'T KNOW/VARIABLE

**19. IF VERY/SOMEWHAT LIKELY TO Q9 or Q14: Would you be most likely to pay for the streetcar trip using cash, FareSaver tickets or a transit pass?**  
 (PROBE IF TRANSIT PASS: Would that be a monthly FareCard, an annual transit pass or a post-secondary student U-Pass)?

- Cash
- FareSaver tickets (pre-paid booklets of 10)
- Transit pass → PROBE: Would that be:
  - A monthly FareCard
  - An annual transit pass (employer pass) or
  - A post-secondary student U-Pass?
- DON'T KNOW

**20. IF VERY/SOMEWHAT LIKELY TO Q9 or Q14**  
**Next I'm going to read some factors that may or may not influence your decision to use the streetcar service.**

**Please rate each on a 10-point scale where "10 means this is of highest importance" and "1 means of no importance at all."**

RANDOMIZE LIST.

**Starting with/next is: READ ITEM. How important would this be in your decision to use the Downtown streetcar?**

	Rating
a) Cost of the fare	
b) Availability of day passes	
c) Service frequency	
d) Ability to use fare to transfer for <b>free</b> to other transit services, such as SeaBus, SkyTrain and buses	
e) Ability to use fare to transfer for <b>free</b> to False Creek ferries	
f) Early morning streetcar service before 10am	
g) Evening streetcar service after 8pm	
h) Use of heritage style vehicles	
i) Use of modern style vehicles	
j) Availability of park & ride facilities to connect to transit and the streetcar	
k) The destinations served	

**Demographics**

**As we near the end, I have just a few more questions to make sure our sample represents all types of residents ...**

**21. Into which of the following age categories do you fall?**

- 16 to 24 years
- 25 to 34 years
- 35 to 44 years
- 45 to 54 years
- 55 to 64 years
- 65 or better
- REFUSED

**22. Including you, how many people are there in your household?**

RECORD NUMBER

**23. And how many are 16 years of age and over?**

RECORD NUMBER

**24. Are you currently:** (READ LIST)

- Employed for pay
- Self employed/work from home
- Homemaker
- Retired
- Student
- Unemployed currently
- REFUSED

**25. Which of the following categories best describes your total annual household income before taxes?**

- Less than \$55,000** → PROBE: **Is that:**
  - Less than \$20,000
  - \$20,000 to less than \$35,000, or
  - \$35,000 to less than \$55,000
- Or \$55,000 or more** → PROBE: **Is that:**
  - less than \$65,000
  - \$65,000 to less than \$80,000
  - \$80,000 to less than \$100,000, or
  - \$100,000 or more
- DON'T KNOW
- REFUSED

Thank you. Finally, in case my supervisor may wish to verify this survey, may I please have your first name or initial? \_\_\_\_\_

Mustel Group and the City of Vancouver thank you very much for your participation! Have a nice day/evening!

**Downtown Streetcar Study: Tourists/Visitors – (A236-1)**

Questionnaire – FINAL

July 28, 2004

**ON-SITE LOCATION:**

<input type="checkbox"/> <sup>1</sup> Stanley Park	<input type="checkbox"/> <sup>2</sup> Waterfront	<input type="checkbox"/> <sup>3</sup> Gastown
<input type="checkbox"/> <sup>4</sup> Chinatown	<input type="checkbox"/> <sup>5</sup> Science World	<input type="checkbox"/> <sup>6</sup> Granville Island

**Intro/Screener**

Hello, I'm \_\_\_ of Mustel Group Market Research, a professional opinion polling firm.

We are conducting a very brief survey on behalf of the City of Vancouver among people who are visiting the Greater Vancouver area.

A. Just to confirm, are you a tourist or non-resident visitor (that is, just visiting and not a resident of Greater Vancouver)?

YES → CONTINUE

NO → THANK AND TERMINATE (AND TALLY N-Q IF RESIDENT OF GVRD)

NON-QUALIFIER TALLY: RESIDENT OF GVRD									
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

Please be assured we are not selling or soliciting anything and all responses are kept strictly confidential.

**Persuaders—only if needed:**

- This is strictly an opinion survey; we are not selling or soliciting anything.
- The survey is being conducted for the City of Vancouver, Engineering Services.
- This study is important to help the City better understand the opinions and needs of visitors.
- All responses are strictly confidential and anonymous; your identity is never revealed to anyone else, including the client.
- The survey averages about 5 minutes.
- CONTACT: Dale Bracewell, Transportation Engineer, City of Vancouver, 604-871-6440
- SHOW LETTER OF AUTHORIZATION from Dale Bracewell, as needed.

**Privacy Issues—only if needed:**

- Mustel Group is committed to protecting your privacy and the confidentiality of your personal information.
- Mustel Group is committed to keeping the personal information you share with us confidential.
- The information you provide will only be used for the purposes of this research. Under no circumstances do we sell contact lists or personal information to others.
- The information you provide will be retained only for the time it is required for the purposes of this research.
- Mustel Group will protect the information you provide with appropriate safeguards and security measures.
- We are fully compliant with the new federal privacy legislation (New act is called PIPEDA: Personal Information Protection and Electronic Documents Act)
- The information you provide will be combined with the responses given by all other survey respondents and reported only in aggregate form. Your answers will remain completely confidential and anonymous.

**1. GENDER [OBSERVE & RECORD]**  
**[IF 2+ IN PARTY, ALTERNATE MALE/FEMALE]**

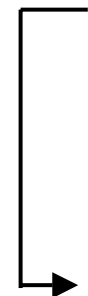
- <sup>1</sup> MALE
- <sup>2</sup> FEMALE

**2. First of all, including you, how many people are in your trip party today on this visit to this location** (i.e., Stanley Park, Waterfront Station, Gastown, Chinatown, Science World, Granville Island)?

WRITE IN # (including yourself)

**3. a) What main type of transportation did you use to arrive at this location today?**  
 ONE ANSWER. DO NOT READ. READ ONLY TO CLARIFY.

- <sup>1</sup> Walked the whole way
- <sup>2</sup> Transit bus
- <sup>3</sup> SkyTrain
- <sup>4</sup> SeaBus
- <sup>5</sup> Private/rented vehicle
- <sup>6</sup> Taxi
- <sup>7</sup> False Creek Ferry/ Aquabus
- <sup>8</sup> Existing Downtown Historic Railway (SAT/SUN ONLY; SERVICE FROM SCIENCE WORLD TO GRANVILLE SLAND ONLY)
- <sup>9</sup> Vancouver Tour bus/ Tourist trolley-bus
- <sup>96</sup> Other (specify) \_\_\_\_\_



**IF PRIVATE RENTED VEHICLE**

**3. b) Did you** (or a member of your party) **park the car or did you get a ride here?**

- <sup>1</sup> Yes
- <sup>2</sup> Got a ride



IF PARKED:

**3. c) Was it street parking?** <sup>1</sup> Yes <sup>2</sup> No

**4. Where are you staying while in Greater Vancouver?** PROMPT IF NEEDED

- <sup>1</sup> Downtown hotel/ other downtown Vancouver location
- <sup>2</sup> Other City of Vancouver (everything but downtown)
- <sup>3</sup> Burnaby/New Westminster
- <sup>4</sup> Richmond
- <sup>5</sup> North Vancouver/West Vancouver
- <sup>6</sup> Tri-cities (Coquitlam/Pt. Moody/Pt. Coquitlam)
- <sup>7</sup> Surrey/White Rock/Langley/Delta/Ladner/ Tsawwassen/ Pitt Meadows/Maple Ridge
- <sup>96</sup> OTHER (SPECIFY) \_\_\_\_\_
- <sup>98</sup> DK/REF

**5. How many days will you be visiting the Greater Vancouver area on this trip?**

- <sup>1</sup> Less than one day **OR** WRITE IN # days:
- <sup>98</sup> DK/REF

**6. a) Which, if any, of the following destinations have you visited or are you planning to visit during your stay in Greater Vancouver? READ, CHECK AT LEAST ONE**

- <sup>1</sup> Stanley Park
- <sup>2</sup> Canada Place or Convention Centre
- <sup>3</sup> Waterfront Station/SeaBus
- <sup>4</sup> Gastown (INCLUDES STORYEUM)
- <sup>5</sup> Chinatown
- <sup>6</sup> Science World
- <sup>7</sup> Granville Island
- <sup>8</sup> Yaletown
- <sup>9</sup> BC Place / GM Place
- <sup>10</sup> Robson or Granville street shopping area

**6. b) Did you take or plan on taking any types of transit to any of the above destinations?**

- <sup>1</sup> Transit bus
- <sup>2</sup> Skytrain
- <sup>3</sup> Seabus
- <sup>4</sup> False Creek Ferry / Aquabus
- <sup>5</sup> Existing Downtown Historic Railway (FOR SCIENCE WORLD AND GRANVILLE ISLAND)
- <sup>6</sup> West Coast Express train
- <sup>96</sup> Other (SPECIFY) \_\_\_\_\_
- <sup>97</sup> No
- <sup>98</sup> DK/REF

**7. Now, I'd like to get your opinion on an alternative transportation service. Here is a description. HAND RESPONDENT PHOTOS AND ROUTE MAP. READ DESCRIPTION THEN POINT OUT GREEN ROUTE AS YOU READ.**

Modern, rail-based street cars would run through Downtown Vancouver and around False Creek, as seen on this map ... covering major tourist destinations, such as Canada Place, Gastown, Chinatown, Science World and Granville Island.

Streetcars would run approximately every 10 minutes in both directions. Streetcar systems like this are quieter than buses, non-polluting, wheelchair and bike-accessible and offer a very smooth ride.

Riders of the streetcar would be able to use their fare to transfer onto the rest of the Greater Vancouver transit system of SeaBus, SkyTrain and transit buses.

The service would cost in the range of 2 to 3 dollars.

**8. If this streetcar service was available, how likely would you be to use it to travel to this particular location? Would you say: very likely, somewhat likely, not very likely or not at all likely?**

- <sup>4</sup> Very likely
- <sup>3</sup> Somewhat likely
- <sup>2</sup> Not very likely
- <sup>1</sup> Not at all likely
- <sup>98</sup> DK/REF

—————▶ **GO TO QUESTION 12**

**9. IF NOT VERY OR NOT AT ALL LIKELY: Why are you not likely to use it? (PROBE FULLY FOR DETERRENTS TO USING STREETCAR)**

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*IF NOT VERY/NOT AT ALL LIKELY → NOW GO TO Q12*

**10. IF VERY/SOMEWHAT LIKELY TO USE: What specific features or characteristics of the streetcar service would most encourage you to use it? What do you particularly like about it? PROBE FOR SPECIFICS.**

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**11. Would you be combining your use of the Streetcar with any other transit modes? If yes, which ones?**

- <sup>1</sup> YES: **PROBE**
- <sup>2</sup> NO
- <sup>9</sup> NOT SURE/DON'T KNOW



**11.a Which ones?**

- <sup>1</sup> Transit bus
- <sup>2</sup> Skytrain
- <sup>3</sup> Seabus
- <sup>4</sup> False Creek Ferry / Aquabus
- <sup>5</sup> West Coast Express train

**12.a-g) EVERYONE: For each of the following please tell me how likely you would be to use the proposed streetcar service to travel to this Downtown Vancouver destination? Would you say: very likely, somewhat likely, not very likely or not at all likely?**

	Very likely	Some what likely	Not very likely	Not at all likely	DON'T KNOW
a. Waterfront Station/SeaBus.....	<input type="checkbox"/> <sup>4</sup>	<input type="checkbox"/> <sup>3</sup>	<input type="checkbox"/> <sup>2</sup>	<input type="checkbox"/> <sup>1</sup>	<input type="checkbox"/> <sup>98</sup>
b. Gastown.....	<input type="checkbox"/> <sup>4</sup>	<input type="checkbox"/> <sup>3</sup>	<input type="checkbox"/> <sup>2</sup>	<input type="checkbox"/> <sup>1</sup>	<input type="checkbox"/> <sup>98</sup>
c. Chinatown .....	<input type="checkbox"/> <sup>4</sup>	<input type="checkbox"/> <sup>3</sup>	<input type="checkbox"/> <sup>2</sup>	<input type="checkbox"/> <sup>1</sup>	<input type="checkbox"/> <sup>98</sup>
d. Science World .....	<input type="checkbox"/> <sup>4</sup>	<input type="checkbox"/> <sup>3</sup>	<input type="checkbox"/> <sup>2</sup>	<input type="checkbox"/> <sup>1</sup>	<input type="checkbox"/> <sup>98</sup>
e. Granville Island .....	<input type="checkbox"/> <sup>4</sup>	<input type="checkbox"/> <sup>3</sup>	<input type="checkbox"/> <sup>2</sup>	<input type="checkbox"/> <sup>1</sup>	<input type="checkbox"/> <sup>98</sup>
f. Stanley Park .....	<input type="checkbox"/> <sup>4</sup>	<input type="checkbox"/> <sup>3</sup>	<input type="checkbox"/> <sup>2</sup>	<input type="checkbox"/> <sup>1</sup>	<input type="checkbox"/> <sup>98</sup>
g. Yaletown, GM Place or BC Place .	<input type="checkbox"/> <sup>4</sup>	<input type="checkbox"/> <sup>3</sup>	<input type="checkbox"/> <sup>2</sup>	<input type="checkbox"/> <sup>1</sup>	<input type="checkbox"/> <sup>98</sup>

**13. Next I'm going to read some factors that may or may not influence your decision to use the streetcar service. Please rate each on a 10-point scale, where "10 means that this is of highest importance" and "1 means of no importance at all" in your decision to use the streetcar. READ. ROTATE ORDER.**

✓ CHECK ROTATION START POINT	Rating										DK
	No Importance									High Importance	
<input type="checkbox"/> <sup>1</sup> Cost of the fare .....	1	2	3	4	5	6	7	8	9	10	98
<input type="checkbox"/> <sup>2</sup> Availability of day passes.....	1	2	3	4	5	6	7	8	9	10	98
<input type="checkbox"/> <sup>3</sup> Service frequency.....	1	2	3	4	5	6	7	8	9	10	98
<input type="checkbox"/> <sup>4</sup> Ability to use fare to transfer for free to other transit services, such as SeaBus, SkyTrain and buses .....	1	2	3	4	5	6	7	8	9	10	98
<input type="checkbox"/> <sup>5</sup> Ability to use fare to transfer for free to False Creek ferries (POINT OUT FALSE CREEK FERRIES ON MAP) .....	1	2	3	4	5	6	7	8	9	10	98
<input type="checkbox"/> <sup>6</sup> Early morning streetcar service (before 10am) .....	1	2	3	4	5	6	7	8	9	10	98
<input type="checkbox"/> <sup>7</sup> Late night streetcar service (after 8pm).....	1	2	3	4	5	6	7	8	9	10	98
<input type="checkbox"/> <sup>8</sup> Use of heritage style vehicles.....	1	2	3	4	5	6	7	8	9	10	98
<input type="checkbox"/> <sup>9</sup> Use of modern style vehicles.....	1	2	3	4	5	6	7	8	9	10	98
<input type="checkbox"/> <sup>10</sup> Tourist Destinations served.....	1	2	3	4	5	6	7	8	9	10	98

**Demographics**

**And, I have just a few more questions for classification purposes ...**

**14. Into which of the following age categories do you fall?**

- <sup>1</sup> 18 to 24 years
- <sup>2</sup> 25 to 34 years
- <sup>3</sup> 35 to 44 years
- <sup>4</sup> 45 to 54 years
- <sup>5</sup> 55 to 64 years
- <sup>6</sup> 65 or better
- <sup>98</sup> REF

**15. Where is your home residence? (Province/State/Country)**

**BC** → PROBE:

- <sup>1</sup> Vancouver Island
- <sup>2</sup> Interior
- <sup>3</sup> Other BC
- <sup>4</sup> Other Province/Canada → RECORD PROVINCE \_\_\_\_\_
- <sup>5</sup> **USA** → RECORD STATE (and city if mentioned) \_\_\_\_\_
- <sup>6</sup> **Europe** → RECORD COUNTRY \_\_\_\_\_
- <sup>7</sup> **Asia** → RECORD COUNTRY \_\_\_\_\_
- <sup>8</sup> Mexico/Central/South America
- <sup>9</sup> Africa/Middle East
- <sup>10</sup> Australia/New Zealand
- <sup>96</sup> **Other** (specify) \_\_\_\_\_
- <sup>98</sup> **REF**

**Thank you. That completes our survey. In case my supervisor may wish to verify this survey, may I please have your first name or initial? \_\_\_\_\_**

**Phone #: \_\_\_\_\_**



**Approximate Running Times:** Every 10 minutes

**Approximate Journey Times:** Waterfront to Science World – 10 minutes  
 Science World to Granville Island – 8 minutes





**CITY OF VANCOUVER**  
ENGINEERING SERVICES  
D.H. Rudberg, P.Eng., General Manager  
T.R. Timm, P.Eng., Deputy City Engineer

July 26<sup>th</sup>, 2004

**RE: Downtown Vancouver - Tourist Travel and Transportation Survey**

The City of Vancouver has commissioned Mustel Group Market Research, a professional polling firm to conduct intercept surveys among tourists to Downtown Vancouver. The purpose of the study is to better understand tourists' needs and preferences regarding transportation options.

We very much appreciate your participation, as your input will assist the City Engineering Services Department in planning transportation services for the Downtown area.

Surveying will be conducted during the period July 29 to August 11, 2004 in the following areas: Stanley Park, Waterfront Station/Canada Place, Gastown, Chinatown, Science World and Granville Island. If you have any questions concerning this study, please contact me directly:

Dale Bracewell  
Downtown Streetcar Project Manager  
City of Vancouver  
Strategic Transportation Planning Branch  
604-871-6440

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Bracewell', written in a cursive style.

Dale Bracewell, M.A.Sc., P.Eng.  
Transportation Engineer

DJB/db

## **2. Report of Calls**

## Report of Call Summary

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Report of Calls Recreational Resident Telephone Survey		
	Main Sample <u>Total</u>	Over-sample <u>Total</u>
<b>Total Attempted</b>	<b>9,076</b>	<b>2,934</b>
<b>Out of Scope</b>	<b>1,747</b>	<b>637</b>
Not in service/number changed/moved	1,350	504
Modem/fax line/business	397	133
<b>Total Potential:</b>	<b>7,329</b>	<b>2,297</b>
<b>Non Contacts</b>	<b>2,952</b>	<b>861</b>
No answer/busy	1,028	361
Answering machine	1,517	368
Respondent not available	407	132
<b>Contacts</b>	<b>4,377</b>	<b>1,436</b>
Refused/terminated partway	3,120	880
Language/communication problem	175	112
<b>Willing participants</b>	<b>1,082</b>	<b>444</b>
Non-qualifier (occupation/ other)	182	144
<b>Total Completions</b>	<b>900</b>	<b>300</b>
Contacts (% of potential)	60%	63%
Willing to participate (% of contacts)	25%	31%

### **3. Population Statistics**

