



Car 4 Brief

Transit Museum Society

Executive Summary

The restoration of Car 4 for use on Vancouver's Downtown Historic Railway has been an ongoing project of the Transit Museum Society (TRAMS) for a number of years. To date, TRAMS has already invested over \$50,000 in Car 4. While the project is nearing completion, further funds are required for the remaining restoration tasks.

Private donations are being solicited to enable the completion of this project; donations are tax deductible.

Background

Car 4 was donated to the Transit Museum Society seven years ago, as a gift from the government of Belgium. Car 4 originally spent its life operating as a Brussels streetcar before being converted to a service vehicle in 1985. The Transit Museum Society paid \$25,000 to have the car shipped to Vancouver.

Upon arrival in Vancouver, members of the Transit Museum Society spent \$17,000 and a considerable amount of time converting this car from its service car (“Depanage”:Fr) configuration back to use for passenger operation. This involved enlarging windows which had been welded over and repainting the body to resemble a BC Electric Railway streetcar similar to those which operated in Vancouver.

Visually, Car 4 is similar to the “streamliner” streetcars that operated in Vancouver. Its design name is a “European PCC.” Most members of the public would have difficulty distinguishing it from an authentic Vancouver “streamliner.” This similarity ensures Car 4 fits the DHR’s historic Vancouver theme.

The most recent project undertaken by the Transit Museum Society is the construction of a new electronic controller for the car. To complete this project TRAMS enlisted the assistance of UBC Professor William Dunford and his Electrical Engineering students.

To complete this project the Transit Museum Society contributed \$10,000. The University of British Columbia matched these funds for a total of \$20,000. The students hope to have a working controller completed by the end of 2007 which can then be installed in the car.

Once the controller is complete, the only major tasks remaining to prepare Car 4 for operation are rebuilding the brake cylinders, reinstalling the passenger seats and adding another trolley pole. (However, TRAMS would prefer to retain the pantograph operation of the car) Once these and some additional minor tasks are complete, the car could be operational by the 2009 season at the latest, hopefully much sooner.

To date, the Transit Museum Society has invested over \$50,000 on Car 4 and is hoping to work in partnership with the City of Vancouver to add this streetcar to the Downtown Historic Railway fleet. A variety of equipment will add to the enjoyment of local residents and tourists on this very popular attraction.

Olympics and Special Events

Vancouver's Downtown Historic Railway provides a vital link between Skytrain and Granville Island. Unfortunately, the interurbans themselves are the largest barrier to operating the line during most special events.

Due to their design, the interurbans are slow to load and unload. Their steep narrow steps are difficult for seniors and children to negotiate. Each interurban requires two crew members at all times. This increases the required volunteer contingent. Also, because of their heavy weight and high power consumption, volunteers must be stationed at Moberly Street to flag the cars across the intersection and to reset the circuit breaker should it trip. This also puts a strain on the pool of volunteers. We could instead be using some of these volunteers to help provide longer operating hours for the DHR.

Car 4, with its single operator design, lower power draw, faster reaction time, and larger windows with increased visibility would reduce the strain on volunteers. A single volunteer could operate the car during extended hours and special events. For such events as the Festival of Lights, New Years Eve, Dragon Boat Festival, and the Olympics, running Car 4 would allow expanded operating possibilities. This would help provide more service until the city is able to purchase modern light rail vehicles.

Accessibility

Interurbans 1207 and 1231 ran in a time when accessibility needs were not on the radar. Their narrow, steep steps make boarding and alighting difficult for children and the elderly. Ingress and egress becomes impossible for those with any mobility challenges.

While Car 4 isn't low floor like Portland's light rail vehicles, it is very close; in fact it is lower than Vancouver's soon to be retired trolley buses. With just two low steps, wide doors, and sturdy hand rails, accessibility no longer becomes an issue. With the addition of a portable ramp, those in wheelchairs could ride Vancouver's Downtown Historic Railway for the first time.

Electricity Costs

The ultra-modern controller currently being designed by University of British Columbia students will be a showcase of Canadian ingenuity. It is being designed with electrical efficiency in mind, and will have unique features not seen in other controllers.

The system will be water cooled with hoses to roof-top radiators and the electronics will be coupled to driver controls via fiber optics. The current interurbans are electricity "hogs". Their design, controls speed by dumping power through resistors. These resistors simply convert this excess energy to wasted heat. This incurs significant power costs for the City.

Car 4, on the other hand, with its modern high power circuitry will use a measurably less amount of power, in turn saving the City on operating costs. In addition, because it is significantly lighter than the interurbans, not as much energy is needed to move the car, thereby further reducing power costs.

Tourism

The Downtown Historic Railway has become a world famous tourist attraction. The DHR can be found written up in popular attraction guides such as the AAA, Formers and the Children's Guide. A number of tour groups have even come to Vancouver specifically to ride on the DHR while visiting other attractions such as the West Coast Rail Museum in Squamish. Other cities across North America are also realizing the advantage of having historic rail lines for tourists, with operations springing up in urban centres across the continent.

Adding Car 4 to the fleet decreases the likelihood visitors to our city will be disappointed. Every day that the DHR isn't operating because of mechanical difficulty is a black mark against Vancouver's reputation.

Film Industry

The film industry is worth over a billion dollars annually to the British Columbia economy. Car 4 offers another opportunity to boost the Vancouver film industry.

Having an operating vintage streetcar available for studios has the potential to bring new film teams to the city which might not have located here before. Interurbans 1207 and 1231, because they are high level cars with the difficult entry and exit, don't lend themselves to most urban movie locations. Car 4 provides the street car design that is more typical of city street operation.

Picture this image, when the Gastown extension is complete and Car 4 is travelling between the heritage buildings. This would become a prime setting for any movie depicting life in the first half of the 20th Century.

Vehicle Age/Breakdowns

Due to the age of Interurbans 1207 and 1231, not a single summer has gone by without one of these cars breaking down for some period of time. This creates disappointments on this popular attraction, longer waits, and unhappy members of the public.

With Car 4 in the fleet, interurban #1207 could be operated less frequently. #1207 is 102 years old, it's historic relevance and fragile condition is not conducive to daily operation. There is the potential for costly repairs being needed should its condition degrade further.

By having a third operating car, a substitute is available should one of these vintage vehicles have mechanical difficulties. As the cars age and continue to be used, these mechanical difficulties will only become more common. Car 4 offers the perfect solution.

Contact

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Or see www.trams.ca