The PCC Streetcar in Canada - Toronto, Vancouver, Montreal;
Stan's Photo Gallery; Heritage Business Car
Le tramway PCC au Canada, Toronto, Vancouver, Montréal;
Les photos de Stan; Le patrimoine ferroviaire

Canadian Rail

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FRONT COVER: Christmas shoppers board a Toronto Transit Commission PCC streetcar on Queen Street at Yonge, in a snowstorm, on December 20, 1975. CRHA Archives, Fonds Wickson

PAGE COUVERTURE: Des acheteurs du temps de Noël montent à bord d'un tramway PCC de la Toronto Transit Commission sur la rue Queen, près de Yonge, durant une tempête de neige, le 20 décembre 1975. Archives ACHF, Fonds Wickson

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The PCC Streetcar in Canada

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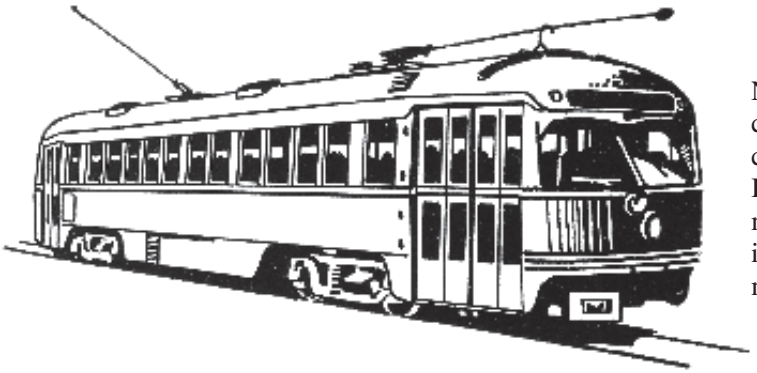


"I've said it before and will say it again - Pound for pound the streetcar is the greatest transit vehicle we ever had and the PCC is the greatest streetcar we ever had"

James Kearns, TTC General Manager 1968-1977

Introduction:

On September 23, 1938 inaugural ceremonies took place on Wychwood Avenue, just below St. Clair Avenue, at 7:30 PM to introduce PCC streetcar service to Torontonians. Six A-1 Class PCC cars were operated for the remainder of the evening providing free rides for the public until 10 PM; regular all PCC service began on the St. Clair route the following day. More than seventy-five years have passed since that event, and in the intervening years three Canadian cities operated a total of 798 PCC streetcars. Regular revenue service by PCCs came to an end in Canada in December 1995 when the Toronto Transit Commission withdrew the last cars from service. What follows is the story of the PCC streetcar in Canada.

Le tramway PCC au Canada

par une équipe de collaborateurs

Édité par Ted Wickson

Version française : Jacques Loiselle

Note du traducteur : Les sigles anglais, mieux connus dans les milieux du transport en commun, seront conservés dans cet article. Les traductions de ce qu'ils représentent n'ont qu'un seul but, celui de transmettre des informations. Pour référence rapide, une nomenclature de ces sigles se trouve à la fin.

«Je l'ai dit et je le redis : toutes proportions de poids gardées, le tramway est le meilleur véhicule de transport en commun que nous n'ayons eu et parmi eux, le PCC est le meilleur de tous»

James Kearns, directeur général de la TTC, 1968-1977

Introduction :

Le 23 septembre 1938 à 19h30 sur l'avenue Wychwood juste au sud de St. Clair, le PCC fut présenté aux torontois de façon officielle. Six tramways PCC de classe A-1 furent mis gratuitement au service du public jusque vers 22h. Le lendemain, un service régulier assuré exclusivement par PCC fut inauguré sur le circuit St. Clair. Plus de soixante-quinze ans se sont écoulés depuis cet événement mais dans l'intervalle, trois villes canadiennes ont utilisé un total de 798 tramways PCC. Leur service régulier a pris fin au Canada en décembre 1995 lors du retrait des derniers par la Toronto Transit Commission (TTC). Voici l'histoire des PCC au Canada.

Mayor Ralph C. Day cuts the ceremonial ribbon at Wychwood and St. Clair Avenues on September 23, 1938 to introduce PCC streetcar service in Toronto. TTC, Ted Wickson collection

M. le maire Ralph C. Day coupe le ruban traditionnel lors d'une cérémonie tenue le 23 septembre 1938 à l'angle des avenues Wychwood et St. Clair pour souligner l'entrée en service des PCC à Toronto. – Archives de la TTC, collection Ted Wickson

Development of the PCC

Compiled by J.R. Thomas Grumley

By 1930, there were well over 85,000 streetcars in operation in North America. Most cities with a population of 50,000 or more could boast a street railway system. However, most of the equipment was 20 to 30 years old at the time. With the automobile becoming a regular part of city life, ridership was falling on most transit systems. Pressure was on the street railway companies to either upgrade their streetcars or to switch to buses, which were being introduced successfully in many of the smaller cities and lightly travelled lines of major cities.

As early as 1921, the American Electric Railway Engineering Association (AEREA) advocated the need to develop a standardized car design. It formed a committee including both representatives of operators and car builders to study the issue. Little progress was made over the next five years, mainly as a result of resistance by the large streetcar operators.

It wasn't until the 1926 American Electric Railway Association (AERA) convention that two prominent people, James McGraw Jr, (Publisher of Street Railway Journal) and Charles Gordon (editor of the McGraw owned Electric Railway Journal) voiced the need to replace obsolete rolling stock. Both were strong advocates of a movement towards standardization and modernization of the streetcar if they were to compete with the automobile, which had been making significant inroads in North America. Both emphasized the potential economies that were possible through the elimination of needless variations in dimension, weight and general design. Again, strong resistance to this proposal was met by both streetcar builders and the larger street railway properties, some of whom built their own cars.

It was not until 1929 that through the ongoing and continued effort by both McGraw and Gordon, the industry began leaning towards the development of a standard electric railway car. Gordon and Thomas Conway Jr., the President of the Cincinnati, Hamilton & Dayton Railway, were mandated by the AERA Advisory Council to prepare a plan for the industry to follow.

From that plan arose the Electric Railway Presidents' Conference Committee comprising of some 25 U.S. streetcar operators. While these companies only represented 5% of the over 500 street railway companies in North America at the time, they nevertheless accounted for 40% of the total streetcars in service. The British Columbia Electric Railway (BCER) declined an invitation to be a member of the Committee. It was not until 1933 that both Montreal and Toronto became members after being invited to join. It was felt that import duties on U.S.A. manufactured finished vehicles and other considerations could skew the Committee results as less useful to the two Canadian cities.

L'évolution du PCC

Par J.R. Thomas Grumley

Vers 1930, plus de 85 000 tramways étaient utilisés en Amérique du nord. La plupart des villes de 50 000 habitants ou plus s'étaient dotées d'un réseau de tramways. Toutefois, la majeure partie des véhicules dataient de 20 à 30 ans; de plus, l'avènement de l'automobile entraîne une baisse de plus en plus marquée de l'achalandage. Les compagnies de tramways réalisent qu'elles se doivent, soit d'améliorer leurs tramways, soit de les remplacer par des autobus dont les mérites ont pu être constatés dans plusieurs petites villes ainsi que sur des circuits moins fréquentés de grandes villes.

Déjà en 1921 l'American Electric Railway Engineering Association (AEREA) soulignait la nécessité de concevoir des tramways standardisés. Elle a donc formé un comité constitué de représentants d'utilisateurs et de constructeurs pour étudier la question. Peu de progrès fut réalisé au cours des cinq années suivantes, principalement à cause de la résistance venant de compagnies propriétaires d'un grand nombre de tramways.

Lors de la convention de 1926 de l'American Electric Railway Association (AERA), deux personnalités affirment la nécessité de remplacer le matériel roulant devenu obsolète. Il s'agit de James McGraw Jr, éditeur du Street Railway Journal et de Charles Gordon, rédacteur en chef du Electric Railway Journal qui appartient à McGraw. Les deux étaient de fervents partisans d'un mouvement vers la normalisation et la modernisation des véhicules si les compagnies voulaient demeurer en mesure de concurrencer la percée de l'automobile en Amérique du Nord. Ils tentèrent de faire réaliser l'ampleur des économies pouvant résulter de l'élimination de variations inutiles de dimension, de poids et de conception générale. Encore une fois, la proposition se heurta à une forte résistance tant de la part des constructeurs que des grandes compagnies de tramway dont certaines construisaient leurs propres véhicules.

Ce n'est qu'en 1929 que les efforts soutenus de McGraw et Gordon commencent à porter fruit. L'industrie admet peu à peu les avantages potentiels d'un tramway standard. Le Conseil consultatif de l'AERA confie à Gordon et Thomas Conway Jr, président du chemin de fer interurbain Cincinnati Hamilton and Dayton, le mandat de préparer un plan de développement.

La première étape de ce plan fut la formation de la Commission de la Conférence des présidents de chemins de fer électriques (Presidents Conference Committee : PCC). Environ 25 présidents des principales compagnies de tramway en firent partie. Plus de 500 compagnies existaient à ce moment-là et ces présidents en représentaient environ 5% du nombre tout au plus. Par

Initially a three-year research program was proposed to look into all aspects of car design. A budget of $500,000 was subscribed for by investing operators and manufacturers. Thomas Conway outlined the development program as "one of co-operative effort with every group interested in any way in the construction of railway cars; to coordinate the effort and bring to a focus the talents of the engineers and technicians in the industry." The committee would stimulate inventive ingenuity, finance worthwhile experiments and try out the experimental products to determine their practical usefulness. One of their main challenges was to 'think outside the box' in a well established, tradition bound industry.

In May 1930 Dr. Clarence F. Hirshfeld, head of the research department of the Detroit Edison Company, was appointed chief engineer of a sub-committee to direct its research program. His initial studies concluded that the new streetcar must attain higher speeds, quieter operation, better riding qualities, passenger comfort and be physically attractive. The car would have to be capable of operating over existing track on member systems, some of which was not in the best condition.

Five years of industry effort between 1930 and 1935 by operators and manufacturers resulted in the design of four prototype model streetcars. Two were built by Pullman, one by Brill and one by Twin Coach. These were exhibited at the 1934 transit industry convention in Cleveland, Ohio. Development work continued, culminating in the familiar design of the Presidents' Conference Car or PCC.

The PCC as we know it evolved from the research and design of five major components:

The body (car-builders): Utilizing a streamlined carbody of welded high-tensile steel it was lighter in weight, integral design (not unlike the automobile industry); standardized frame and body parts which could be employed in longer or shorter, wider or narrower, single or double-end cars. Passenger and operator comfort, padded bucket seats, improved lighting, ventilation and heating. Two body designs were approved, one by the Pullman Company and the other by The St. Louis Car Company.

The Trucks: Noise and vibration reduction were of primary concern, various methods of rubber insulating materials were experimented with to isolate the car body from the wheel treads; gear noise was reduced by the application of right angle drive and hypoid drive gears. Clark Equipment Company (a manufacturer of automotive and industrial equipment) participated in truck development and won the contract to supply most of the PCC trucks, by 1951 they had produced 9,500 trucks. The PCC car represented unparalleled riding qualities.

contre, ces compagnies possédaient 40% des tramways en service en Amérique du Nord. La British Columbia Electric Railway (BCER) a décliné à ce moment l'invitation à faire partie de la Commission. Ce n'est qu'en 1933 que Montréal et Toronto acceptèrent de devenir membres. Les compagnies canadiennes craignaient que les droits divers d'importation de véhicules fabriqués aux États-Unis ne faussent les conclusions de la Commission en ce qui les concernait.

Au départ, on propose un programme de recherche de trois ans dont l'objectif était d'examiner tous les aspects de la conception d'un nouveau tramway; les opérateurs et les constructeurs ont souscrit un budget de 500 000$. Thomas Conway décrivait ce programme de développement comme étant «un effort coopératif de toutes les parties intéressées par la conception d'un véhicule sur rail en vue de coordonner et de mettre en valeur les travaux de recherche et de développement effectués par les ingénieurs et techniciens de l'industrie». Pour atteindre ces objectifs, la Commission essaierait de stimuler la créativité, financerait les expériences jugées utiles et mettrait à l'essai des prototypes pour évaluer leur utilité pratique. On soulignait l'importance de «penser hors des sentiers battus» dans une industrie aux traditions fortement ancrées.

En mai 1930, le Dr Clarence F. Hirshfeld, chef du département de recherche de la Detroit Edison Company, fut nommé ingénieur en chef d'un sous-comité chargé d'orienter le programme de recherche. Ses premières études préconisent la conception d'un tramway apte à des vitesses plus élevées, un fonctionnement plus silencieux, un design plus attrayant, un confort accru pour les passagers ainsi qu'une qualité de roulement améliorée, même sur des réseaux dont l'entretien des voies laisse à désirer.

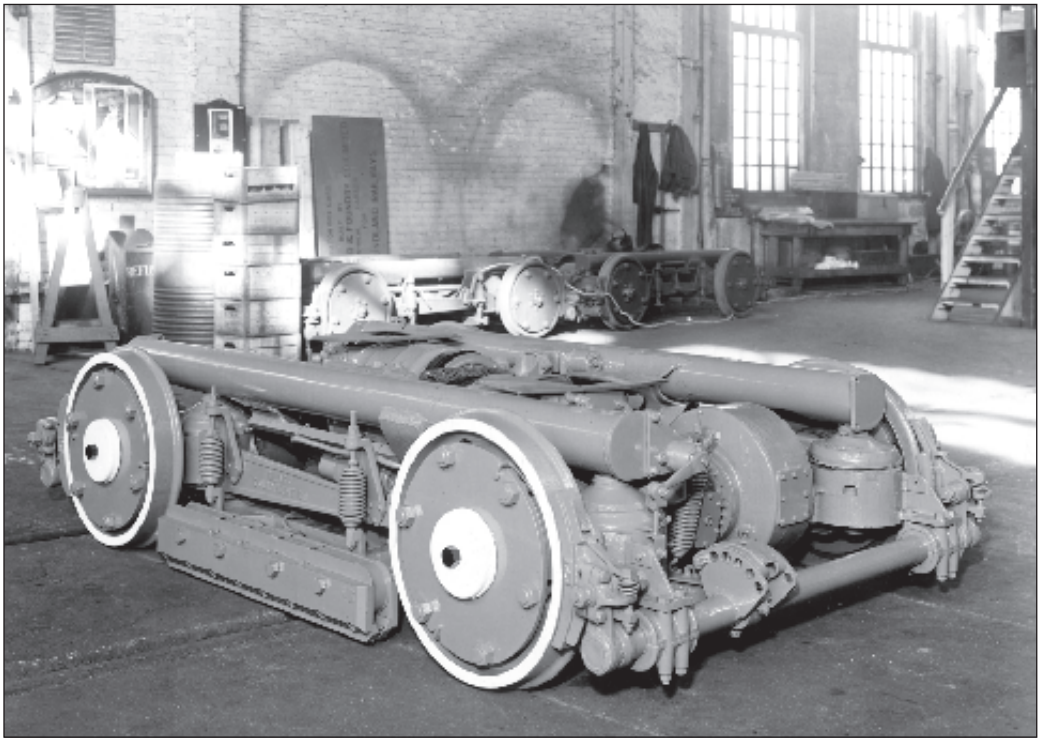
Le travail effectué par le comité conjoint de 1930 à 1935 mène à la construction de quatre prototypes : 2 par Pullman, 1 par Brill et un par Twin Coach. Ils furent exposés lors de la convention de l'industrie du transport en commun de 1934 à Cleveland. Par la suite, le travail de développement s'est poursuivi pour aboutir finalement à ce qu'on a appelé le tramway du Comité de la Conférence des Présidents, le PCC.

Le PCC tel que nous l'avons connu était le fruit de recherche et de développement dans quatre champs principaux :

La caisse (les constructeurs) : Elle est profilée et constituée d'acier à haute résistance soudé. Elle est plus légère et autoportante, technique universellement utilisée maintenant par l'industrie automobile; les éléments constituants sont standardisés, permettant ainsi la construction de véhicules dont la longueur et la largeur peuvent varier, qu'ils soient unidirectionnels ou bidirectionnels. Des sièges baquets rembourrés et des systèmes améliorés d'éclairage, de ventilation et de

The fabrication of PCC bodies is in full swing at the St. Louis Car Company's erecting shop circa 1938. Washington University in St. Louis, Special Collections - St. Louis Car Co.

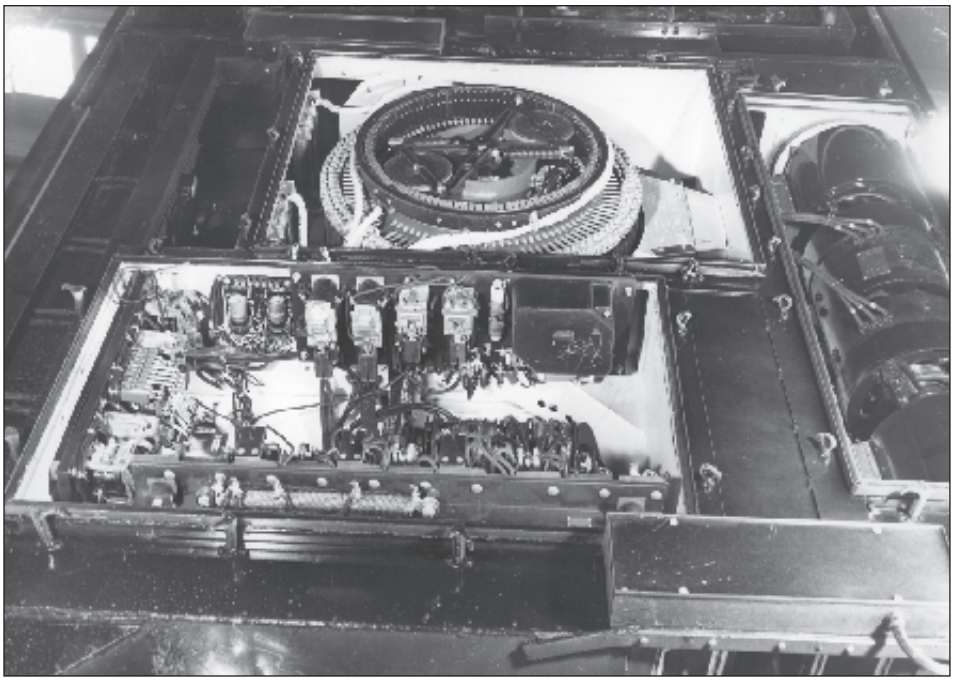
La fabrication des caisses bat son plein vers 1938 à l'usine d'assemblage de la compagnie St. Louis Car. –Washington University in St. Louis, Special Collections –St. Louis Car Co.



PCC truck assembly destined to go under the 1942 batch of PCCs for the Toronto Transportation Commission (TTC), photo taken at Canadian Car & Foundry Company (CC&F) in Montreal. Washington University in St. Louis, Special Collections - St. Louis Car Co.

Un des bogies destinés au groupe de PCC construits en 1942 pour la Toronto Transportation Commission (TTC). La photo fut prise aux ateliers de la Canadian Car and Foundry (CC&F) à Montréal. –Washington University in St. Louis, Special Collections –St. Louis Car Co.

The electric control system: Elimination of the Type K or conventional drum controller because of its high maintenance cost; a jerk-free acceleration rate of 4.75 miles per-hour per second; reliability and maintainability was a factor. General Electric and Westinghouse participated in the development program and were approved suppliers of the control system.



The heart of the PCC propulsion system was the novel accelerator pioneered by the Westinghouse Corporation. It consisted of 99 contact fingers to give the car the smoothest acceleration possible; smooth electric dynamic braking was also provided. All the electrical control apparatus was mounted under the centre of the car and serviced from the shop pit. Wiring channels leading to the control station were provided for in the body construction. Washington University in St. Louis, Special Collections - St. Louis Car Co.

La compagnie Westinghouse a mis au point un système de contrôle novateur pour les PCC. Essentiellement, il s'agit d'un rhéostat de démarrage à 99 points de contact permettant d'une part une accélération dont la progression se distingue par son uniformité et d'autre part le freinage rhéostatique. Tout l'appareillage de contrôle fut localisé sous le centre du véhicule. Des fosses d'atelier permettaient d'y accéder. On a intégré à la caisse des canalisations pour le filage vers le poste de commande. –Washington University in St. Louis, Special Collections –St. Louis Car Co.

The brakes: Braking had to be smooth and safe; dynamic, pneumatic (tread and drum friction type) and track brakes evolved over the years. Both General Electric and Westinghouse provided braking components.

Air handling: Another innovation was the heating and ventilation system that was built into the body design. The system functioned automatically and providing a continuous flow of warm, fresh air and a comfortable temperature during even the coldest weather. Air intake and exhaust was through vents located in the cowling ahead of the trolley base.

chauffage assureront le confort des passagers et de l'opérateur. Deux modèles de caisse furent approuvés, l'un par la compagnie Pullman et l'autre par la St. Louis Car.

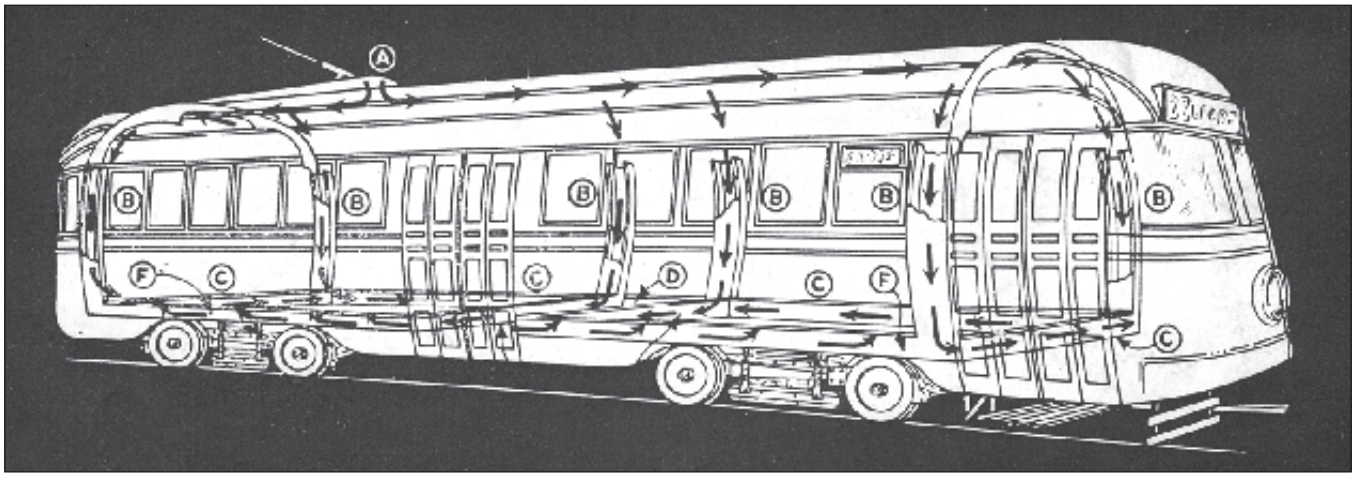
Les bogies : La réduction du bruit et des vibrations était de première importance. Diverses méthodes d'insonorisation furent expérimentées, particulièrement dans la fabrication des roues où on tenta l'intégration de matériaux à base de caoutchouc. Les bruits d'engrenage furent atténués par une installation perpendiculaire aux essieux de moteurs munis d'engrenages hypoïdes. La compagnie Clark Equipment, spécialisée en matériel industriel et automobile, remporte le contrat de fabrication de la plupart des bogies de PCC; elle en a produit plus de 9 500. Les qualités de roulement du PCC étaient devenues incomparables.

Le système de contrôle électrique : On voulait remplacer les contrôleurs à cylindre conventionnels de type K en raison de leur coût d'entretien élevé. On souhaitait un taux d'accélération sans à-coups d'au moins 7,7 km/h/sec, une bonne fiabilité et une facilité d'entretien. Les compagnies General Electric et Westinghouse ont participé au programme de développement et devinrent par la suite les fournisseurs attitrés du système de contrôle.

Les freins : L'objectif se devait d'être un freinage en douceur et sécuritaire. On a perfectionné au fil des ans les systèmes de freins dynamiques et pneumatiques, par sabots sur disques ou sur rails. General Electric et Westinghouse ont fourni les composants des systèmes de freinage.

La ventilation et le chauffage : Autre innovation dans ce domaine, on a conçu un système à circulation d'air réglé automatiquement. De l'air frais venant de l'extérieur pouvait être chauffé suffisamment pour assurer le confort des passagers en n'importe quel temps. Les prises et sorties d'air se trouvaient sous le capot situé sur le toit en avant du trolley.

Le premier véritable PCC fut le Modèle B construit par Pullman en 1934. Il avait été commandé par la Commission de la Conférence des Présidents pour fin



CRHA Archives, Fonds Corley

The first PCC type car was the 'Model B' built by Pullman in 1934 which was ordered by the Presidents' Conference Committee to evaluate their specifications. It featured lightweight welded steel construction in a stylish streamlined body design. The general appearance, although unique, was evolving in the direction to that which the PCC car would adopt. In-service operation of the Model B prototype in Brooklyn in September 1934 led to further refinements and the final specifications were narrowed down. Efforts were made to keep the cars as affordable as possible and builders wanted the flexibility to substitute components provided they met design criteria. Car builders objected to the proposed truck specifications, they wanted to use 'off the shelf trucks', this changed abruptly when Clark Equipment Company came forward and indicated it was prepared to supply the new PCC trucks as designed and within budget!

By 1935, five years of development had passed and over $1-million had been spent on the development of the PCC. The Presidents' Conference Committee passed on its PCC patents to the newly organized Transit Research Corporation, which was controlled by a trust representing the original investors in the ERPCC. Although there would be additional improvements to the PCC, the design for the basic car was now complete and in production.

d'évaluation de leurs spécifications. Il se distinguait par sa caisse légère et profilée constituée d'acier soudé. L'aspect général, bien qu'unique, évoquait déjà celui des PCC à venir. L'expérimentation de ce prototype sur le terrain à Brooklyn en septembre 1934 a entraîné d'autres améliorations. Les spécifications furent alors précisées et finalisées. On a tout tenté pour garder le coût d'achat aussi bas que possible; on a fait preuve de souplesse à l'égard des constructeurs pour leur permettre la substitution de certains composants en autant qu'ils satisfassent aux critères de conception. Les constructeurs se sont opposés aux spécifications concernant les bogies. Ils souhaitaient plutôt pouvoir commander du «prêt à porter». Cette opposition cessa tout d'un coup lorsque la compagnie Clark Equipment fit savoir qu'elle serait en mesure de fournir les nouveaux bogies PCC en respectant les spécifications requises et les prix annoncés.

L'année 1935 est la cinquième consacrée à la mise au point du PCC et les coûts de recherche dépassent le million de dollars. La Commission de la Conférence des présidents transfère la détention des brevets relatifs au PCC à un nouvel organisme, la Transit Research Corporation, contrôlé par une fiducie qui représente les premiers investisseurs de la ERPCC. Bien que d'autres améliorations soient à venir, le développement du PCC était maintenant assez avancé pour permettre le début de la production.

This Pullman Standard 'Model B' was one of the four experimental concepts which evolved into the final PCC streetcar design. Here, the car is on display at Chicago's Navy Pier in August, 1934. Central Electric Railfans Association (CERA)

Le Modèle B de la compagnie Pullman Standard était l'un des quatre prototypes du futur PCC. On le voit ici exposé au Navy Pier de Chicage en août 1934. –Archives CERA

Future developments were paid for by the royalties collected from the PCC patents. These royalties were to be paid every time a PCC car or component was built as outlined in a fee schedule. Although anyone could buy PCC products, ERPCC member companies (as original subscribers) paid a reduced royalty rate as opposed to new non-member customers.

The first PCC car was introduced on October 1, 1936 on the Coney Island route of the Brooklyn and Queens Transit Corporation. This car was one of an order of 100 PCC cars placed with the Saint Louis Car Company. Subsequently, 5,000 PCC streetcars were built for use in the United States and Canada. Another 15,000 cars were built based on PCC patents for service outside North America.

> "Delivery to Brooklyn of the first part of the new PCC-type cars is an epochal event for our industry. It marks the triumph of an old industry over serious economic and engineering handicaps which threatened to render obsolete all local surface railway lines. The superb riding qualities of the new car, its nimbleness in traffic, the remarkable smoothness with which it achieves high rates of acceleration and braking, and above all, its uncanny quietness of operation, will, I am confident, evoke the enthusiastic plaudits of the people wherever it is introduced."
>
> Dr. Thomas Conway Jr.

Only three cities in Canada had PCCs: Toronto, Vancouver, and Montreal.

Toronto - PCC 'Red Rocket' Capital of North America
Compiled by Peter Murphy,

The Toronto Transportation Commission was one of the active participants in the Presidents' Conference Committee. In the late 1920s, the TTC had been giving very serious consideration, to the point of preparing specifications, for the purchase of a large group of improved Peter Witt cars to be equipped with multiple-unit control for operation on the heaviest routes of the system. While the onset of the Depression halted the placing of an order for such cars, it is probable that the promise of a new type of car, soon to be designed, played some part in the abandonment of the Witt plans.

Fifteen years elapsed from the time of the receipt of the last Peter Witt equipment by the TTC (motors 2900 - 3018 and trailers 2701 - 3029) in 1923 until the placing of an order with Canadian Car & Foundry Limited for PCC cars on March 8, 1938. As an active member of the ERPCC since 1933, the TTC was well aware of the benefits of the new PCC cars. The TTC placed their first order for PCC cars with enthusiasm, ordering 140 cars!

This was the largest single order ever placed for

La poursuite du développement serait dorénavant financée par les redevances perçues sur les brevets. Ces redevances étaient tarifées et devaient être payées lors de la production d'un tramway complet ou de l'un de ses composants. N'importe qui pouvait acheter des PCC ou certains de ses composants; les compagnies ayant souscrit initialement au développement bénéficiaient toutefois de tarifs préférentiels.

Le 1er octobre 1936, le premier PCC entre en service régulier sur le circuit Coney Island de la Brooklyn and Queens Transit Corporation; il faisait partie d'un lot de 100 unités commandé à la compagnie St. Louis Car. Au cours des années qui suivirent, environ 5 000 PCC furent construits pour des compagnies américaines ou canadiennes et plus de 15 000 autres sous licence pour l'étranger.

> «L'arrivée à Brooklyn du premier groupe de nouveaux tramways de type PCC est un événement de marque pour notre industrie. Elle marque sa réussite à contrer de graves handicaps économiques et techniques qui menaçaient de rendre obsolète l'ensemble de nos réseaux de tramways. Le confort remarquable dû à ses qualités de roulement, sa maniabilité dans la circulation, des accélérations accrues, des freinages plus efficaces effectués cependant en douceur et surtout son fonctionnement étonnamment silencieux susciteront, j'en suis sûr des éloges du public partout où on les mettra en service».
>
> Dr Thomas Conway Jr.

Trois villes canadiennes seulement achetèrent des PCC : Toronto, Vancouver et Montréal.

Toronto : la capitale des PCC en Amérique du Nord
Par Peter Murphy

La TTC a participé activement à la Commission de la Conférence des présidents. Vers cette époque, elle envisageait sérieusement l'achat d'un nombre important de tramways. On commence même à préparer des devis. On pensait acheter des Peter Witt améliorés et munis de l'appareillage requis pour le fonctionnement en unités-multiples sur les lignes les plus achalandées du réseau. L'arrivée de la dépression a certes été la cause principale de la mise en veilleuse de ce projet. Il est cependant permis de croire que l'avènement d'un nouveau type de tramway dont la conception était sur le point de débuter y a aussi contribué.

Quinze ans séparent la réception des derniers tramways Peter Witt de la TTC (les motrices 2900 à 3018 et les remorques 2701 à 3029) et la commande de PCC chez Canadian Car and Foundry du 8 mars 1938. En tant que membre actif de la ERPCC depuis 1933, la TTC était bien au fait des améliorations technologiques dont bénéficieraient les nouveaux tramways. La confiance de la TTC fut pleinement démontrée par une première

PCC cars at that time. Some say it was this large order that gave the new PCC the boost needed to become commercially viable. The order was placed with Canadian Car & Foundry Limited of Montreal, although in reality it only assembled the cars. The body shells were built by St. Louis Car and the trucks were supplied by Clark. The assembly, including many Canadian parts, took place at CC&F's Turcot works. This approach circumvented most import tariffs that would have been otherwise levied on a completely USA-built transit vehicle.

commande de 140 unités. Ce fut la plus importante commande de l'époque et plusieurs ont prétendu que ce fut le coup de pouce nécessaire pour rentabiliser la production des nouveaux véhicules. En réalité, la CC&F ne faisait que l'assemblage des tramways. Les carrosseries furent construites par la St. Louis Car tandis que Clark Equipment fournissait les bogies. L'assemblage final aux usines Turcot de la CC&F incorporait plusieurs pièces fabriquées au Canada. De cette façon, on évitait l'obligation de s'acquitter de droits d'importation exigibles sur des véhicules entièrement fabriqués aux États-Unis.

Presidents' Conference Committee Cars for Toronto
Canadian Transportation, May 1938 (edited)

The Toronto Transportation Commission has contracted with the Canadian Car and Foundry Company, Montreal, for 140 electric railway cars based upon the PCC specifications. Deliveries are to commence in the late summer of this year. Many Canadian suppliers will furnish materials to be utilized in this equipment.

Following the regular meeting of the Toronto Transportation Commission early in April (1938), Chairman McBrien issued a statement to the effect that the Commission had arranged for the acquisition of 140 streetcars; Mr. McBrien designated his announcement as "the most important made in reference to Toronto's public transportation services since the first electric cars replaced the horse cars 44 years ago." His statement said in part: "The new cars will be modelled to the specifications of a million-dollar foundation that has achieved outstanding success in engineering and merchandising research. This foundation was set up by the leading street railways and manufacturers of streetcars and equipment on this continent. It was eight years ago that the transit industry's leaders formed their Presidents' Conference Committee to administer this research foundation to develop a modern model streetcar that would embody all that science could produce in safety, speed, comfort and rider-appeal, to enable street railways to market a most attractive ride at a popular rate of fare."

"The final model, the result of years of research and of exhaustive testing of preliminary models is a streamlined beauty that performs with speed quietness and smoothness. During the last two years more than eight hundred cars of this model have been produced and have been operating in several large American cities." In actual operation they have proven their performance, and their rider-appeal has been attested by the greatly increased passenger traffic they have won.

"The new cars for Toronto will be made in Canada by the Canadian Car and Foundry Company in Montreal and will make their first appearance on Canadian streets in August, 1938. Then T.T.C. passengers will experience a new and thrilling experience when they ride in a streetcar with rubber insulated wheels. This will result in noise and vibration being reduced to practically zero."

"The exterior streamlining has been so consistently applied that even the lines of rivets on former models have been smoothed away by the extensive use of welding, which together with other factors, has made the new car 6,000 pounds lighter than its predecessors. The car can break away from a standing position with startling speed and with smoothness effected by the new foot controlled accelerator. Three braking systems combine to bring the car under masterful control and to 'cushion' the stops so that passengers are not thrown off balance. There are air brakes, electric motor brakes and rail-grip brakes that will hold in any weather."

"Interior design and equipment have produced results in passenger comfort that resemble and, in some respects excel limousine luxury. The air condition of the car is effected by an entirely new system of heating and ventilating. There is no stove and there are no heating elements in the body of the car. Thermostats control the supply of clean, electrically heated air produced as a by-product from the car's powerful electric motors. The air in the car is constantly changing through the effect of an ingenious

system of no-draught ceiling exhaust ducts."

In making the announcement of the purchase of the new streetcars, Mr. McBrien stated that the Commission and its officials have been constantly in touch with every development and installation of public transit vehicles on this continent and elsewhere. It has been proved conclusively that, for service such as the main T.T.C. system must provide, the modern streetcar is the most efficient and most economical vehicle.

"Toronto's publicly owned transportation system will soon regain the position it held until recently as having the finest rolling stock of any system in America. With the new streetcars as the flagships of its transit fleet, and with the completion of its current modernization of their predecessors, no other large city on this continent will have such a high percentage of its total rolling stock designed and equipped to provide the most efficient and most pleasing public transit service"

Materials and Equipment for 140 P.C.C. Cars, Toronto Transportation Commission, and Suppliers thereof.

Body material	Copper-bearing steel
Body builders	St. Louis Car Co., St. Louis, Mo., and Canadian Car and Foundry Co., Montreal
Seats	P.C.C. type, Ottawa Car Mfg. Co., Ottawa
Seating material	No. 1 machine buffed leather, Lackawanna Leather Co., Toronto
Seat cushion upholstery	Dunlopillo, Dunlop Tire and Rubber Goods Co.
Seat back upholstery	Hairlok, Delaney & Petit, Toronto
Heaters, main	P.C.C. lightweight resistance
Heaters, auxiliary	10 kw., Consolidated Car Heating Co.
Ventilators	P.C.C.—motor-driven fan
Window glass:	
At operator's left and rear	¼ in. safety plate
Doors and rear vestibule	7/32 in. safety sheet
Elsewhere	3/16 in. safety sheet
Window sash and regulator	Stainless steel,—A. & W.—Robert Mitchell Co., Montreal
Floor material	T. & g. yellow pine
Floor covering	Marboleum—Dominion Oilcloth Co., Montreal
Roof material	Plywood St. Louis Car Co.
Headlining	Masonite—Masonite Corp.
Lamp fixtures	Spotray Luminator Railway and Power Engineering Corp.
Step treads	Kass Safety—Lyman Tube and Supply Co.
Headlights	Electric Service Supplies Co. rep. by Lyman Tube and Supply Co.
Marker lights	Electric Service Supplies Co.—rep. by Lyman Tube and Supply Co.
Stop lights	Electric Service Supplies Co.—rep. by Lyman Tube and Supply Co.
Stanchions and rails	Stainless steel veneer Excel Type—Ottawa Car Mfg. Co. and Lyman Tube and Supply Co.
Fareboxes	T.T.C. Type
Destination and route signs	Hunter—Lyman Tube and Supply Co.
Door mechanism	National Pneumatic—Railway and Power Engineering Corp.
Storage battery	Exide
Motors	Canadian Westinghouse Co. no. 1432
Control	Canadian Westinghouse Co.
Brakes, hand	Clark Equipment Co.
Brakes, air, dynamic and magnetic	Canadian Westinghouse Co.
Wheels	P.C.C. resilient—Carnegie Illinois Steel Co.
Trucks	P.C.C.—Clark Equipment Co.
Air compressor, 10 cu. ft., belt driven	Canadian Westinghouse Co.
Gears	P.C.C. hypoid—Clark Equipment Co.
Trolley wheels	Canadian Westinghouse Co.
Trolley base	Canadian Westinghouse Co.
Trolley catcher	Earll streamlined—Railway and Power Engineering Corp.
Trolley pole	Shelby seamless
Life guards	H.B. type—Canadian Car and Foundry Co.
Rubber	B. F. Goodrich Co., Kitchener, Ont., and Akron, Ohio

St. Louis Car Company fabricated body shells were shipped to CC&F on temporary shop trucks. Washington University in St. Louis, Special Collections - St. Louis Car Co.

Les caisses fabriquées par la St. Louis Car sont montées sur des bogies d'usine. Elles sont destinées à la CC&F. – Washington University in St. Louis, Special Collections – St. Louis Car Co.

The first car built, No. 4000, was held back at CC&F in Montreal to act as a building guide for the other cars on the production line. The first cars delivered to Toronto were 4001 and 4002 in August 1938. The cars were received at Hillcrest Shop, then immediately moved to the Canadian National Exhibition in 1938 where they were put on display. They were designated Class A-1 cars and followed in the footsteps of Toronto's first Peter Witt streetcar 2300 (also CC&F-built) that had been put on display at the CNE in 1921 when brand new!

Le premier tramway, le 4000, fut gardé aux usines de la CC&F à Montréal pour servir de modèle pendant la construction des autres de la série. Les premiers à être livrés à Toronto furent les 4001 et 4002 en août 1938. Ils arrivèrent aux ateliers Hillcrest d'où on les achemina immédiatement vers l'Exposition nationale canadienne de 1938. Ils y furent mis en montre comme l'avait été le 2300, le premier Peter Witt construit lui aussi par la CC&F en 1921. On leur attribua la désignation A-1.

Workers prepare to unload brand new 4002 at the TTC's Hillcrest shops on August 20, 1938. TTC Archives, Ted Wickson collection

On prépare le déchargement du 4002 aux ateliers Hillcrest de la TTC le 20 août 1938. – Archives de la TTC, collection Ted Wickson

Interior builders view of the TTC's Class A1 cars which were built in 1938. CRHA Archives, Fonds CC&F

Photographie du constructeur prise en 1938 montrant l'intérieur d'un tramway de la classe A-1 de la TTC. –Archives ACHF, Fonds CC&F

The TTC introduces the all-new PCC streamliner (car 4002) at the 1938 Canadian National Exhibition. TTC Archives, Ted Wickson collection

Présentation par la TTC du tout nouveau PCC à l'Exposition nationale canadienne de 1938. – Archives de la TTC, collection Ted Wickson

As stated in the introduction, PCC service was inaugurated on September 23, 1938 on the St. Clair route. Training continued, more cars were received from CC&F and full PCC service was offered on the Bloor and Dundas routes on December 1st of that year. TTC employees threatened strike action as they feared the loss of jobs with the replacement of two-man Peter Witt trailer-trains with one-man PCC cars. Some PCC cars appeared on the King and Carlton routes in the early weeks of 1939, but some older cars were still being used as well.

Pleased with the operation of the Class A-1 cars, a second order was placed with CC&F for another 50 cars in the fall of 1940; these were designated Class A-2. They were placed into operation on the King and Queen routes as well as the Yonge night car service effective November 1940.

With the increased ridership of wartime, the TTC placed a third order for another 60 cars on March 20, 1941. These were designated Class A-3 and took advantage of the improvements in design, especially the ride quality, over previous PCCs. It took over a year to complete this order; the final cars were delivered in April, 1942.

CRHA Archives

Tel que mentionné précédemment, le 23 septembre 1938, les premiers PCC furent assignés au circuit St. Clair. La formation des garde-moteurs s'est poursuivie au fur et à mesure de l'arrivée des nouveaux tramways de sorte que le 1er décembre de la même année les PCC desservaient aussi les circuits Bloor et Dundas. Une menace de grève plana temporairement : les employés craignaient des pertes d'emploi puisqu'on remplaçait les Peter Witt à bord desquels se trouvaient deux employés par des PCC qui n'en requéraient qu'un. Au cours des premières semaines de 1939, des PCC apparurent sur les circuits King et Carlton; ils y partageaient la tâche avec des tramways plus anciens.

Satisfaite des tramways de la classe A-1, la TTC passe à l'automne 1940 une deuxième commande de 50 PCC à la CC&F. Ce fut la classe A-2. Ils furent attribués aux circuits King et Queen; en novembre 1940, ils assurèrent aussi le service de nuit sur le circuit Yonge.

L'achalandage accru du temps de guerre amena la TTC à effectuer une troisième commande de 60 unités, la classe A-3. Cette classe offrait certaines améliorations par rapport aux précédentes, particulièrement en ce qui avait trait à la qualité de roulement. La construction s'étala

PCC 4031 in service on St. Clair at Russell Hill Road on October 4, 1938

Le PCC 4031 en service sur l'avenue St. Clair à l'angle de Russell Hill Road, le 4 octobre 1938.

Before the delivery of the A-3 Class cars was complete, the TTC ordered 55 more cars in 1942 (at the height of World War II). The American Office of Defense Transportation, which controlled production, had allotted 100 cars to Canada but this was cut back to 50 cars that year due to the war effort and the restrictions on material. The Canadian Transit Controller, in concert with the U.S. Office of Defense Transportation, decided what equipment went where based on need at that time. In February 1944 the TTC took delivery of 15 cars; the remainder went to Montreal (18 cars) and Vancouver (17 cars). These cars were more austere and had horse-hair seat filling instead of foam. The TTC designated these cars as Class A-4.

sur plus d'un an et les derniers furent livrés en avril 1942.

Cette année-là, l'effort de guerre bat son plein. Avant même la livraison des derniers PCC de la classe A-3, la TTC en commande 55 de plus. Le gouvernement américain avait alloué 100 tramways au Canada mais en cours d'année, il diminue ce nombre à 50 en raison des impératifs de guerre et des restrictions sur les matériaux. Le Contrôleur des transports du Canada de concert avec le Département américain des transports de défense décide de la répartition de ces tramways en fonction des besoins du moment. En février 1944, la TTC reçoit 15 de ces tramways, leur classe A-4; 18 vont à Montréal et 17 à Vancouver. Une certaine austérité caractérise ce groupe par rapport aux autres, conséquence des rationnements

TTC Class A3 4230 on Queen St. East at Connaught Ave. on April 10, 1948. CRHA Archives, Fonds Corley

Le 4230 de la classe A-3 sur la rue Queen East à la hauteur de l'avenue Connaught, le 10 avril 1948. –Archives ACHF, Fonds Corley

The TTC received another 25 cars (Class A-4) early in 1945, part of an order of 40 cars allocated to Canada, the other 15 went to Vancouver.

By 1946 the TTC was again in dire need of more streetcars if indeed they would continue with this mode of transport. With the old Toronto Railway Company wooden cars ("TR's") now long past their useful service life due to heavy wartime service, the TTC placed another order for 100 PCCs with CC&F. Development and improvement of the PCC design had continued through the war-years and these new Class A-6 cars were again a big improvement over previous models. The cars were five inches longer, they had an electric braking system, standee windows, improved slope to the front windows to reduce glare as well as mechanical modifications.

de l'époque; par exemple, on rembourre les sièges avec du crin au lieu du caoutchouc mousse.

La TTC reçut au début de 1945 25 tramways supplémentaires, classés A-4 eux aussi, partie d'une commande de 40 allouée au Canada. Vancouver acquit les 15 autres.

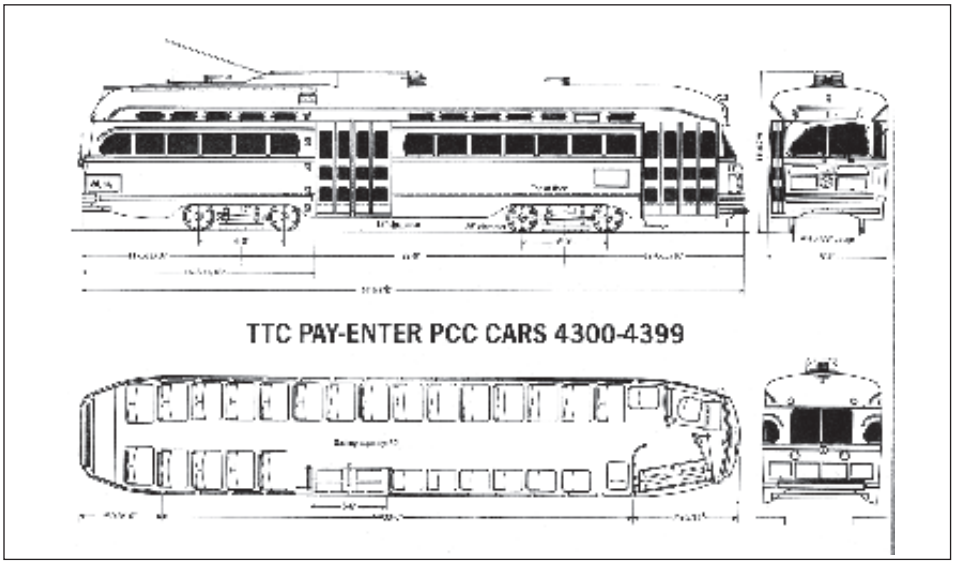
En 1946, la TTC avait toujours un besoin urgent de nouveaux tramways, surtout si on était pour conserver ce mode de transport. Les vieux tramways en bois de la compagnie Toronto Railway avaient dépassé depuis longtemps leur durée de vie utile en raison de leur utilisation accrue pendant la guerre. La TTC place donc une autre commande de PCC chez CC&F. La recherche s'était poursuivie pendant la guerre et ces nouvelles voitures de la classe A-6 offraient de nets avantages par rapport aux modèles précédents. Ils se distinguaient par

Wooden mock-up of the post-war PCC design, this model was slightly longer and had standee windows; the TTC introduced this new design to passengers in 1947. Washington University in St. Louis, Special Collections - St. Louis Car Co.

Une maquette de bois du modèle de PCC d'après-guerre. Le tramway est légèrement plus long et pourvu de fenêtres pour les passagers debout. Ce nouveau modèle fut présenté aux torontois en 1947. – Washington University in St. Louis, Special Collections – St. Louis Car Co.

The first of the post-war improved PCCs were TTC's A6 class (4300 - 4399). Ted Wickson

Les premiers PCC de la nouvelle gamme d'après-guerre furent ceux de la classe A-6 de la TTC, les 4300 à 4399. – Ted Wickson



Railroad Model Craftsman

In July 1948, the TTC placed an order for 100 multiple-unit PCC cars for use on the Bloor line in two-car trains. As before, the shells came from St. Louis Car, but the final assembly was carried out at CC&F's facility in Thunder Bay, Ontario. Once again the Class A-7 cars 4400 and 4401 were displayed at the CNE coupled up.

The TTC's final order for new PCC cars was placed in March of 1950. Originally an order for 150 MU PCCs was anticipated, but post-war inflation caused the order to be reduced to 50 non-MU cars with their interiors stripped of unnecessary frills; they were designated as Class A-8. The PCC building boom was coming to an end, the final PCCs rolled off the St. Louis Car Company's production line for the San Francisco Municipal Railway in 1952.

une longueur accrue de 13 cm, un système de freinage électrique, des fenêtres pour passagers debout et une inclinaison différente des vitres du pare-brise pour réduire l'éblouissement. Ils bénéficièrent aussi de modifications mécaniques.

En juillet 1948, la TTC passe une nouvelle commande de 100 tramways, ceux-ci équipés pour le service en unités multiples. On se proposait de les utiliser en paires sur le circuit Bloor. Comme précédemment, les carrosseries provenaient de la St. Louis Car mais l'assemblage se fit aux usines de la CC&F de Thunder Bay en Ontario. Encore une fois, des tramways de cette nouvelle classe A-7 furent présentés à l'Exposition nationale. Les 4400 et 4401 y furent exposés en mode couplé.

La dernière commande de PCC neufs fut passée en mars 1950. La TTC se proposait d'acheter 150 tramways utilisables en unités multiples. L'inflation d'après-guerre amène toutefois la réduction de la commande à 50 tramways, sans système de contrôle unité-multiple et dont les accessoires intérieurs sont réduits à l'essentiel. L'ère de construction des PCC touche à sa fin. Le dernier exemplaire fut construit par la St. Louis Car et livré au chemin de fer San Francisco Municipal en 1952.

Body shells for TTC's 4500 - 4549 series (Class A8) leave St. Louis Car Co. in 1950. CRHA Archives, Fonds Bailey

Départ des caisses de la classe A-8 des usines de la St. Louis Car en 1950. La TTC les numérota de 4500 à 4549. – Archives ACHF, Fonds Bailey

A two-car train headed by 4465, one of the lot built by CC&F in 1949, photographed on the Queensway private right-of-way. Ted Wickson

Deux unités couplées circulent sur l'emprise en site propre du Queensway. En tête, le 4465 appartenant au groupe construit par la CC&F en 1949. – Ted Wickson

With prices rising because of inflation, and with many of the American properties beginning to abandon streetcars in favour of buses, the TTC turned to the used streetcar market to continue its modernization program. In the mid 1950s, the TTC purchased 52 Cincinnati PCCs which were divided up into two classes. The 25 all-electric cars, which were only three years old, were classified as A-9. The 27 older air electrics (vintage 1939 - 1940) were in good condition and were classified as A-10. With the arrival of these PCCs, the TTC could finally retire the last of the wooden cars inheritied from the Toronto Railway Company.

More PCCs with multiple unit operation capabilities were required for the heavy traffic on the Bloor line and in 1952 the TTC purchased another 75 cars which had been built in 1946 from Cleveland. They were class A-11 (Pullman-built) and A-12 (St. Louis-built).

Another 48 Pullman-built cars became available from the Birmingham Electric Railway. These were 'put through' the TTC's Hillcrest shops for conversion and were out-shopped between late 1952 to August 1953; they were classified as A-13. With the addition of these cars, the TTC could provide an all-PCC base service, Peter Witt cars filling in where necessary during rush hours.

The TTC's final boomer PCC purchase was for 30 Kansas City Public Service cars in 1957. These were out-shopped by Hillcrest during the first half of 1958. Despite being post-war cars, they did not have standee windows. Instead they had taller than normal passenger windows and were classified as Class A-14. When the Kansas City cars arrived, the PCC fleet of the TTC peaked at 744 cars (actually the fleet total reached 745 as car 4063 had been scrapped in 1947 after a serious accident), the most on any system in North America.

L'augmentation des prix due à l'inflation ainsi que l'abandon du tramway en faveur de l'autobus par plusieurs sociétés de transport américaines amènent la TTC à se tourner vers le marché des tramways d'occasion dans la poursuite de son programme de modernisation. Vers le milieu des années 50, la TTC achète 52 PCC de la ville de Cincinnati qu'elle répartit en deux classes : les 25 tramways tout-électriques âgés de seulement trois ans furent classés A-9; les 27 électriques et pneumatiques datant de 1939 et 1940 étaient quand même en bon état et formèrent la classe A-10. L'arrivée de ces tramways permit à la TTC de retirer du service ses derniers tramways en bois hérités de la compagnie Toronto Railway.

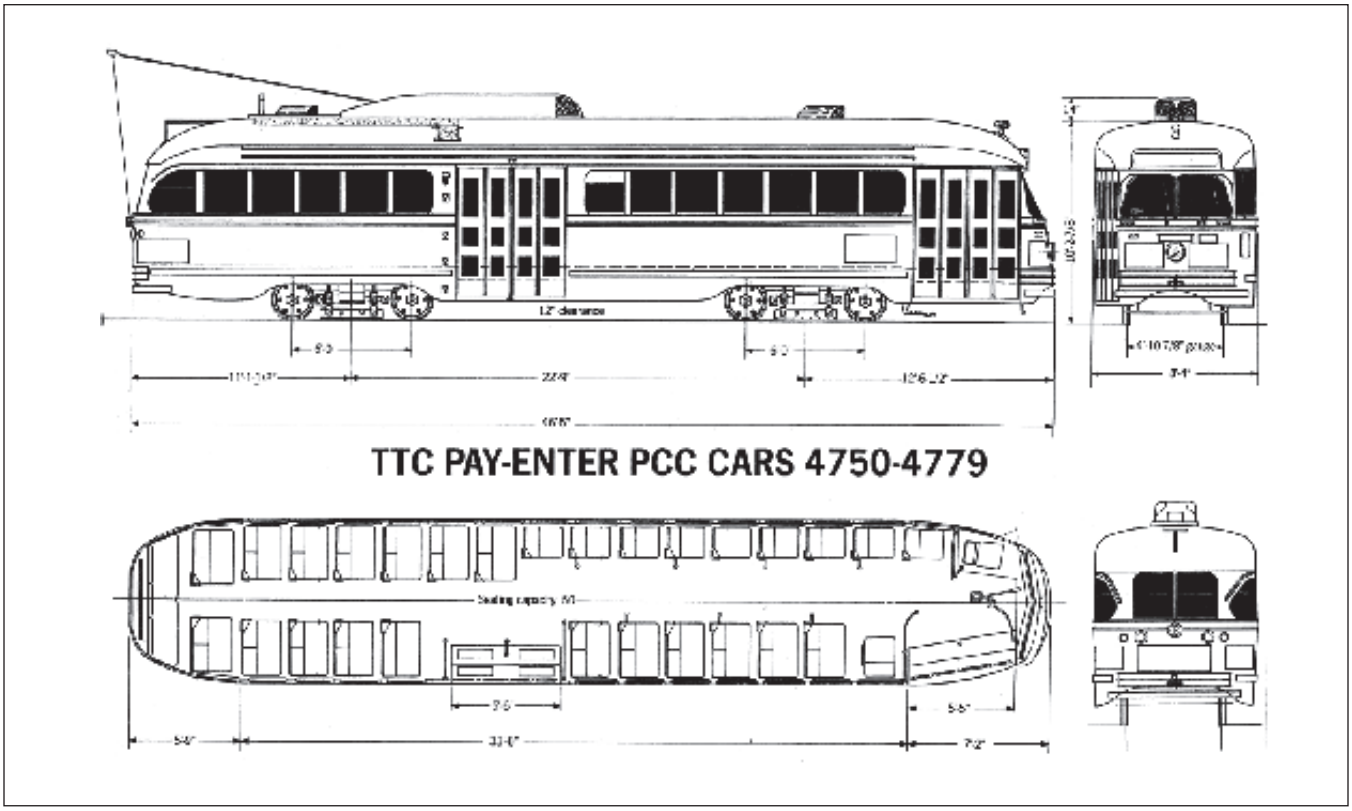
La TTC prévoyait que l'inauguration de la ligne de métro Yonge en 1954 causerait une augmentation de l'achalandage déjà élevé du circuit Bloor. Elle procède donc à un nouvel achat de 75 autres PCC de la ville de Cleveland, équipés ceux-là pour le service en unités multiples. Ils avaient été construits en 1946. Ceux qui provenaient de la compagnie Pullman constituèrent la classe A-11 et ceux de St. Louis Car la classe A-12.

On put également obtenir de la compagnie Birmingham Electric Railway 48 tramways construits par Pullman; ce fut la classe A-13. Ce dernier ajout permit à la TTC de fournir un service de base par PCC exclusivement, les Peter Witt subvenant aux besoins pendant les heures de pointe.

En 1957, la TTC effectue son dernier achat de PCC d'occasion, soit 30 tramways de la Kansas City Public Service, la classe A-14. Bien que ce furent des tramways d'après-guerre, ils étaient pourvus de grandes fenêtres pour passagers assis seulement. Les ateliers Hillcrest réalisèrent leur mise à niveau au cours de la première moitié de 1958. Le parc de PCC de la TTC atteint à ce moment son apogée : 745 tramways dont 744 en état de marche : le 4063 avait été mis au rencart en 1947 suite à un grave accident. Ce nombre est demeuré insurpassé en Amérique du Nord.

CN Switcher 7029 delivers Kansas City Public Service PCCs 776, 782 and 778 to the TTC at Hillcrest on November 27, 1957. J. D. Knowles, CRHA Archives, Fonds Corley

Le 27 novembre 1957, la locomotive de manœuvre 7029 du CN livre aux ateliers Hillcrest les PCC 776, 782 et 778 de la compagnie Kansas City Public Service. –Archives ACHF, Fonds Corley



Railroad Model Craftsman

PCC 4738 (Class A13) an ex. Birmingham, Alabama car was westbound on King St. at Wilson Park Rd. in August 1972. Ted Wickson

Le PCC 4738 de la classe A-13 provient de la ville de Birmingham en Alabama. Il se dirige vers l'ouest sur la rue King, à la hauteur de Wilson Park. La photo fut prise en août 1972. –Ted Wickson

The opening of the Bloor-Danforth subway in 1966 (Keele to Woodbine) resulted in major changes to the TTC streetcar network. Five car lines were abandoned, others became shuttle routes, and suddenly there was a large surplus of PCC cars in the fleet. By 1970 virtually all of the air cars had been retired, many were sold to Alexandria, Egypt, others to Tampico, Mexico and other properties.

L'inauguration de la ligne de métro Bloor-Danforth de Keele à Woodbine en 1966 entraîne des changements majeurs au réseau de voies ferrées de la TTC. Cinq circuits furent abandonnés, d'autres devinrent des circuits de navette. On se retrouve à ce moment avec un excédent important de tramways. En 1970, presque tous les PCC à système pneumatique avaient été retirés du service. Plusieurs furent vendus et se retrouvèrent ailleurs dans le monde. Mentionnons Alexandrie en Égypte et Tampico au Mexique.

continued on page 285

Stan's Photo Gallery

November - December 2015

By Stan Smaill

Translation: Gilles Lazure

Stan Smaill has passed the torch to your Co-Editor, Peter Murphy for this edition of his Photo Gallery. As our late Editor, Fred Angus used to say, "Researching an article is like a cat pulling on a ball of string - there seems to be no end to the information forthcoming." Once again we have proven him to be right.

The PCC streetcar is familiar to most of us. Those of us of a certain age will remember them in service while others would be familiar by viewing or riding them in the many railway and trolley museums in North America. The development of this car is a truly remarkable story. The PCC deferred the inevitable shift to buses in many North American cities. The decision by Toronto's TTC to start modernizing its fleet in 1938 with PCCs ensured that streetcars would remain in that city into the 1970s. By this time the public was very much aware of environmental concerns and the fragility of the oil supply. This, coupled with the established fact that the streetcar was the most efficient and economical transit vehicle for use on heavily used TTC routes, led to the decision to retain streetcars in Toronto permanently on November 7, 1972. Unfortunately, except for 18 PCCs, Montreal never modernized its fleet; Vancouver fared better, but, nevertheless both streetcar systems were gone by 1959.

This month we welcome back Bob Sandusky, a regular contributor, as well as Ted Wickson, Art Peterson, John Bromley, Henry Ewert, Gord McOuat and Daniel Laurendeau all of whom contributed to this tribute to the PCC. Thanks also to Josee Vallerand, CRHA Archivist for all the scanning from the Association's archives.

This Photo Gallery is dedicated to William C. McBrien, Chairman of the Toronto Transportation Commission from 1931-1932 and 1933-1954. It was he who spearheaded the move to acquire Canada's first PCCs, and later the construction of the Yonge Street subway, which was the first in Canada.

All aboard for a smooth PCC ride!

Les photos de Stan

Novembre - décembre 2015

Par Stan Smaill

Traduction : Gilles Lazure

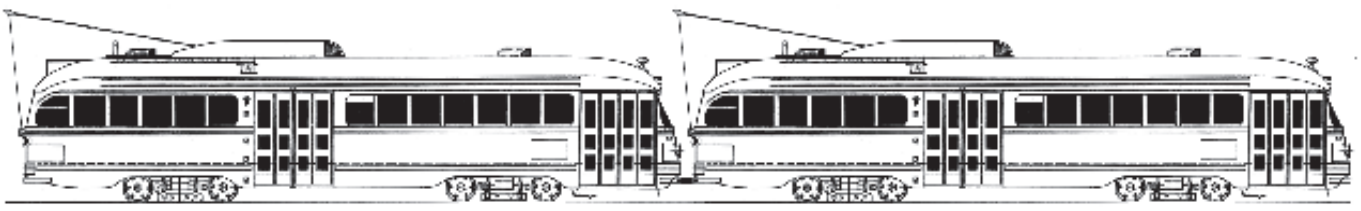
Stan Smaill a passé le flambeau à votre coéditeur Peter Murphy pour cette édition de sa galerie de photos. Fred Angus, notre regretté éditeur, avait l'habitude de dire : « Faire des recherches pour un article fait penser à un chat jouant avec une balle de laine– il semble n'y avoir aucune fin au flot d'information obtenue. » Nous lui avons donné raison une fois de plus.

Le tramway PCC est bien connu de la plupart d'entre nous ; les plus âgés parmi nous les ont vus en service, d'autres le sont pour les avoir vus ou avoir été à leur bord dans nombre de musées ferroviaires d'Amérique du Nord. Le développement de ce véhicule est vraiment une histoire remarquable. Les PCC retardèrent l'inévitable dans nombre de villes nord-américaines. La décision de la Toronto Transportation Commission (TTC) de commencer en 1938 à moderniser sa flotte avec des PCC assura que des tramways demeureraient en service au moins jusqu'aux années 70. Le public était déjà bien conscient des problèmes d'environnement et de la fragilité des approvisionnements en pétrole. Ceci, associé au fait confirmé que le tramway était le véhicule de transport le plus efficace et le plus économique pour les principales lignes de la TTC, mena le 7 novembre 1972 à la décision de garder en permanence les tramways en service à Toronto. Malheureusement, à l'exception de 18 PCC, Montréal ne modernisa jamais sa flotte de tramways ; Vancouver fit mieux, mais tout de même, en 1959, ces deux réseaux de tramways étaient disparus.

Ce mois-ci, nous saluons le retour de Bob Sandusky, un collaborateur régulier, tout comme les Ted Wickson, Art Peterson, John Bromley, Henry Ewert, Gord McOuat et Daniel Laurendeau, qui ont tous contribué à cet hommage au PCC. Nos remerciements vont aussi à Josée Vallerand, archiviste de l'ACHF, qui a fait toute la numérisation des documents tirés des archives de l'Association.

Cette galerie de photos est dédicacée à William C. McBrien, président de la TTC en 1931, 1932 et de 1933 à 1954. C'est grâce à ses efforts que fut prise la décision d'acquérir les premiers PCC mis en service au Canada et plus tard, celle de construire la première ligne de métro du Canada, la ligne de la rue Yonge.

Tous à bord pour une belle randonnée en PCC!



Toronto Transportation Commission Class A1 4030 pauses at the Long Branch loop in May 1950. The 4030 was the 30th out of an eventual fleet of 745 PCCs to operate on the TTC system. CRHA Archives, Fonds Bailey C6-3

Le tramway 4030, de la Classe A1 de la Toronto Transportation Commission est à l'arrêt à la boucle Long Branch, en mai 1950. Ce 4030 est le trentième PCC d'une flotte qui en comptera éventuellement 745 en service sur le réseau de la TTC. Archives ACHF, Fonds Bailey C6-3

Meanwhile, out in Vancouver on September 9, 1950, BCE PCC 422 boards passengers on Hastings Street eastbound at Hamilton St. This car was built in1945 and was part of an order for Toronto that was side-tracked to Montreal and Vancouver in wartime. Note the Toronto style green advance light on the roof. George Krambles, Krambles - Peterson Archive

Par ailleurs, le 9 septembre 1950 à Vancouver, le PCC 422 accueille des passagers sur la rue Hastings en direction est, près de la rue Hamilton. Ce tramway fut construit en 1945 et fit partie d'une commande de Toronto dont certains des tramways furent redirigés vers Montréal et Vancouver durant la Seconde Guerre mondiale. Notez le feu de direction vert sur le toit, du style de Toronto. George Krambles, archives Krambles - Peterson

Car 415, working BCE's route 14 - Hastings East, is turning west onto Hastings Street. The BCER's Carrall St. interurban station is behind the photographer; the Hastings East route was one of the longest streetcar lines in Vancouver at 11.1 miles (18km). John Bromley

Le tramway 415, sur le circuit 14 Hastings East de la compagnie BCER vire en direction ouest sur la rue Hastings. La gare de la rue Carrall pour les interurbains est derrière le photographe; la ligne Hastings East, d'une longueur de 18 km (11,1 mi), était l'une des plus longues de Vancouver. John Bromley

This shot, taken from one of Vancouver's open observation streetcars; car 433 in post-wartime red and cream colours makes its turn at Granville and Hastings Streets on September 7, 1950. George Krambles, Krambles - Peterson Archive

Cette photo fut prise de l'un des tramways observatoires ouverts de Vancouver ; le 433, dans sa livrée rouge et crème d'après-guerre, fait un virage à l'intersection des rues Granville et Hastings, le 7 septembre 1950. George Krambles, archives Krambles - Peterson

PCC 409 working route 14 is on Hastings Street at Raymur Avenue on May 26, 1951. Vic Sharman, Henry Ewert collection

Le PCC 409, en service sur le circuit 14, se trouve sur la rue Hastings, près de l'avenue Raymur, le 26 mai 1951. Vic Sharman, collection Henry Ewert

Vancouver PCC 416 negotiates the reverse curve on Hastings Street at Vernon Drive on November 18, 1951. Mr. Andrews photo, M. Simpson collection

Le 18 novembre 1951, à Vancouver, le PCC 416 roule à travers la contre-courbe sur la rue Hastings, près de Vernon Drive. Photo M. Andrews, collection M. Simpson

Saint Louis built Cincinnati Street Railway car 1114 was one of 52 nearly new PCCs purchased by the TTC from that property in 1950 and 1951. It was photographed at the Hillcrest Shops on November 23, 1950. CRHA Archives, Fonds Bailey C6-113

Le tramway 1114, fabriqué par la compagnie St. Louis Car pour la Cincinnati Street Railway, fut l'un des 52 PCC presque neufs achetés de cette société par la TTC en 1950 et 1951. Il fut photographié aux ateliers Hillcrest, le 23 novembre 1950. Archives ACHF, Fonds Bailey C6-113

The only Pullman Standard built PCCs that operated on the TTC were 98 units purchased second hand from Cleveland, Ohio and Birmingham, Alabama in 1952. Here a cut of Cleveland cars is at CNR's Leaside yard en-route to the TTC's Hillcrest Shops on October 26, 1952. CRHA Archives, Fonds Bailey C6-66

Les seuls PCC fabriqués par Pullman Standard et opérés par la TTC furent les 98 unités achetées d'occasion de Cleveland, Ohio, et Birmingham, Alabama, en 1952. Ces tramways en provenance de Cleveland se trouvent à la cour Leaside du CN, en route vers les ateliers Hillcrest, le 26 octobre 1952. Archives ACHF, Fonds Bailey C6-66

The last 'Boomer' PCCs to arrive in Toronto were 30 units from the Kansas City Public Service in Missouri. Car 780 is at Hillcrest Shops awaiting overhaul and repainting into TTC livery on January 26, 1958. CRHA Archives, Fonds Bailey C6-119

Les derniers des expatriés à atteindre Toronto furent les 30 PCC en provenance de la société Kansas City Public Service, dans le Missouri. Le 26 janvier 1958, le 780 se trouve aux ateliers Hillcrest en attente d'une révision et de l'application de la livrée de la TTC. Archives ACHF, Fonds Bailey C6-119

Over in Montreal, car 3505 on Outremont route 29 is turning southbound from Craig Street to McGill Street at Victoria Square on May 1, 1955. The car will head to its terminal loop on de la Commune St., about a half-mile ahead. Harvey R. Naylor, Robert Sandusky collection

Du côté de Montréal, le tramway 3505, sur le circuit 29 Outremont, vire de la rue Craig vers le sud sur la rue McGill, près du Carré Victoria, le 1er mai 1955. Le tramway roulera vers le sud pour effectuer son changement de direction à la boucle de la rue de la Commune, environ 0,8 km (0,5 mi) plus loin. Harvey R. Naylor, collection Robert Sandusky

Montreal Transportation Commission 3505, one of only 18 PCC cars to operate in Montreal, is southbound on Park Avenue at Jeanne Mance Street on October 5,1957. The 3505 is working the Outremont 29 route; a Brill-built one-man car pokes its nose out from behind the PCC. Conventional cars operated right up to the end of streetcar service in Montreal. Many photographers, including Bob Sandusky, virtually ignored the PCCs as there were so many older cars to photograph. Robert Sandusky

Le tramway 3505 de la Commission de transport de Montréal (CTM), l'un de la petite flotte de 18 PCC de Montréal, roule en direction sud sur l'avenue du Parc près de la rue Jeanne-Mance, le 5 octobre 1957. Il est en service sur le circuit 29 Outremont ; un tramway Brill à opérateur unique apparaît à l'arrière du PCC. Les tramways conventionnels furent utilisés jusqu'à la fin des services de tramway à Montréal. Plusieurs photographes, dont Bob Sandusky, ignorèrent pratiquement les PCC parce qu'il y avait tellement de tramways anciens à photographier. Robert Sandusky

MTC 3502 has looped and is ready to resume its northbound route up McGill Street to the distant Garland terminus on Route 29. This mid-fifties photo was taken looking east from outside the Montreal & Southern Counties interurban station; this heritage building today is an Italian restaurant. Daniel Laurendeau

Le 3502 de la CTM a parcouru la boucle de virage et s'apprête à reprendre sa route en direction nord sur la rue McGill vers le lointain terminus Garland sur le circuit 29 Outremont. Cette photo, du milieu des années 1950, fut prise en regardant vers l'est, de l'extérieur de la gare des interurbains de la compagnie Montreal & Southern Counties; classée bâtiment patrimonial, cette gare abrite de nos jours un restaurant italien. Daniel Laurendeau

Montreal's last PCC pulled into the barn only 14 years after the first one entered service. Car 3517 is preserved at Exporail. The other 17 were held for sale, but in the end they were unceremoniously piled one on another for scrap on Dickson Street at Notre Dame Street in 1963. Daniel Laurendeau

Le dernier PCC de Montréal fut retiré 23 ans seulement après la mise en service du premier PCC sur la ligne de Coney Island, dans la ville de New York. Le tramway 3517 est préservé à Exporail ; on espérait pouvoir revendre les 17 autres, mais ils furent éventuellement empilés sans cérémonie pour la ferraille sur la rue Dickson, près de la rue Notre-Dame, en 1963. Daniel Laurendeau

TTC 4303, a Class A6 (CC&F 1947 - 1948) is heading west on Dundas Street while 4709, a Class A13 (Pullman 1947 ex-Birmingham) turns from Bay onto Dundas on May 28, 1966. CRHA Archives, Fonds Wickson

Le 28 mai 1966, le 4303 de la TTC, un PCC de la classe A6 (CC&F 1947-1948) se dirige vers l'ouest sur la rue Dundas, alors que le 4709 de la classe A13 (Pullman 1947, ex-Birmingham) vire de la rue Bay vers Dundas. Archives ACHF, Fonds Wickson

Not what TTC passengers needed, a downed span-wire! PCC cars are lined up on McCaul Street on a cold January 14, 1968 at 8:30 pm waiting for the 'wire gang' to effect repairs. CRHA Archives, Fonds Wickson

Un désagrément pour des passagers de la TTC : un câble de suspension rompu! À 20h30, par un froid 14 janvier 1968, les PCC sont alignés sur la rue McCaul, en attente de l'arrivée de l'équipe « des fils ». Archives ACHF, Fonds Wickson

The decision to retain streetcars indefinitely in Toronto was taken by the TTC on November 7, 1972. A streetcar advocacy group called 'Friends of the St. Clair Streetcar Line' boarded A8 Class 4536 on February 11, 1973 for a 'solidarity ride'. Toronto Mayor David Crombie is seated two rows back on the right. CRHA Archives, Fonds Wickson

La décision de conserver indéfiniment les tramways à Toronto fut prise par la TTC le 7 novembre 1972. Le 11 février 1973, un groupe de militants en faveur des tramways qui a pour nom « Friends of the St. Clair Streetcar Line », monte à bord du 4536 de la classe A8, pour une « randonnée de solidarité » ; le maire David Crombie est assis à droite, deuxième rangée vers l'arrière. Archives ACHF, Fonds Wickson

No less than nine PCCs are visible in this afternoon rush-hour photo looking east on Queen Street towards Bay Street on July 24, 1973. CRHA Archives, Fonds Wickson

Pas moins de 9 PCC sont visibles sur cette photo prise à l'heure de pointe de l'après-midi du 24 juillet 1973 sur la rue Queen en regardant vers la rue Bay, à l'est. Archives ACHF, Fonds Wickson

Car 4549 was the last PCC purchased new by the Toronto Transportation Commission. It was built by Canadian Car & Foundry Co. in 1951; all subsequent PCC acquisitions would be second (or third) hand 'Boomer' cars from the USA. The 4549 is operating on Mt. Pleasant Road on April 3, 1975. CRHA Archives, Fonds Wickson

Le tramway 4549 fut le dernier PCC acheté neuf par la TTC. Il fut fabriqué par la Canadian Car & Foundry, en 1951 ; tous les PCC suivants furent des «voyageurs» achetés de seconde et même de troisième main aux États-Unis. Le tramway roule sur la rue Mt. Pleasant, le 3 avril 1975. Archives ACHF, Fonds Wickson

An indication of the importance of PCCs in Toronto's transportation network is this shot taken at Exhibition Loop on September 5, 1977. CRHA Archives, Fonds Wickson

Cette photo, prise à la boucle de l'Exposition nationale, le 5 septembre 1977, donne une indication de l'importance des PCC dans le réseau de transport de Toronto. Archives ACHF, Fonds Wickson

Even PCCs can break down: 4428, an A7 Class, is disabled and is being pushed by another car on Roncesvalles Avenue at Grenadier Road on July 22, 1981. CRHA Archives, Fonds Wickson

Même les PCC peuvent tomber en panne! Le 4428, un tramway de la classe A7, est hors d'état et poussé par un autre sur l'avenue Roncesvalles, près de la rue Grenadier, le 22 juillet 1981. Archives ACHF, Fonds Wickson

Toronto's PCCs have been involved in many major celebrations in Toronto since they entered service. Here, car 4545 is colourfully painted up to celebrate Toronto's sesquicentennial. Ted Wickson captured the image on May 31, 1984. CRHA Archives, Fonds Wickson

Les PCC de Toronto ont participé à de nombreuses célébrations majeures depuis leur mise en service. Ici, le tramway 4545 exhibe une livrée très colorée à l'occasion du 150e anniversaire de la ville. Ted Wickson a capturé la scène, le 31 mai 1984.

Life extending treatment! The TTC's Hillcrest shops rebuilt 19 PCCs at a cost of $500,000 each in the late 1980s. The cars would be out-shopped as class A15 and renumbered 4600 to 4618. CRHA Archives, Fonds Wickson

Vers la fin des années 80, la TTC décide de remettre à neuf à ses ateliers Hillcrest dix-neuf de ses PCC au coût de 500 000$ chacun. Ces tramways constitueront la classe A15 et seront numérotés de 4600 à 4618. Archives ACHF, Fonds Wickson

Newly out-shopped and with a new paint scheme to match the newer CLRVs, the 4600 is westbound on Lakeshore Boulevard at Kipling Avenue loading passengers on September 24, 1986. CRHA Archives, Fonds Wickson

Tout juste sorti des ateliers et exhibant une nouvelle livrée similaire à celle des CLRV, le tramway 4600, en direction ouest sur le boulevard Lake Shores est il embarque des passagers au coin de l'avenue Kipling, le 24 septembre 1986. Archives ACHF, Fonds Wickson

One of the first expansions in many years of the TTC streetcar system was the inauguration of PCC service on the Harbourfront line at Queens Quay. Here A15H Class 4549 is rolling by Pier 4 on opening day, June 22, 1990. This car is one of two held operational by the TTC today! CRHA Archives, Fonds Wickson

Un ajout au réseau de tramways de la TTC, le premier depuis plusieurs années, fut l'inauguration, à Queens Quay, du service PCC sur la ligne Harbourfront, le 22 juin 1990. Ici, le tramway 4549, de la Classe A15H, roule près de Pier 4, le jour de l'ouverture de la ligne. De nos jours, ce tramway est l'un des deux gardés en état de marche par la TTC. Archives ACHF, Fonds Wickson

First in the class of Toronto's PCCs! Car 4000, Class A1 built by CC&F in 1938, is preserved in operational condition at Halton County Radial Railway Museum, at Milton, Ontario. Gord McOuat

Le tramway 4000, un PCC construit par la CC&F en 1938 et le premier de la Classe A1, est préservé en état de rouler au Halton County Railway Museum, à Milton, Ontario. Gord McOuat

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In the early 1970s, the TTC considered abandoning its streetcar system in favour of subways, buses and trolley coaches. The last new PCC streetcars had arrived in 1951, the fleet was aging and would soon be worn out. A timetable was drawn up for the abandonment of the Toronto streetcar system. However a small but vocal group of local citizens began a movement in support of streetcars. This advocacy garnered widespread public and municipal support at a time when Torontonians were well aware of the fragility of the global oil supply. The activism paid off and the TTC voted to retain streetcar operation indefinitely on November 7, 1972. A new streetcar for Toronto, to replace the PCC, would soon be needed.

The TTC immediately embarked on a heavy-rebuild program of 125 PCCs (drawn from classes A-6, A-7 and A-8) to extend their life by another ten years. In 1971, car 4362 had been chosen to undergo a trial heavy rebuilding. This proved successful and in the end a total of 173 PCC cars would be rebuilt at Hillcrest shops under the program in 1972-1975.

With the introduction of the Canadian Light Rail Vehicle (CLRV) in late 1979, many PCCs were rendered surplus between 1980 and 1982. The Articulated Light Rail Vehicle (ALRV) was introduced in 1988 furthering the demise of Toronto's un-rebuilt PCC fleet. By 1986 only about 90 PCC cars remained in service.

With the new Harbourfront line being built, and with the new Spadina car line being planned, the TTC decided to rebuild two PCC cars as a trial. Ridership had been increasing steadily during the 1980s and the streetcar fleet was expected to be hard pressed to meet future demands. One car (4512) was rebuilt by the Urban Transit development Corporation (UTDC) in Kingston, Ontario, the other car (4505) was rebuilt by the TTC at a cost of $ 500,000 per car. The trial was successful and a revised number of 19 cars were rebuilt, the last one being out-shopped on March 31, 1992. The cars were numbered into the 4600 series and classified as A-15. The 1990s, however, were a decade of falling ridership and the PCCs' days would be numbered.

Because of noise complaints on the Harbourfront line, the PCCs were withdrawn from service in September 1994. The TTC officially voted to retire the last of the rebuilt PCCs at a meeting on November 28, 1995. A ceremonial last run was held for dignitaries and media on Friday morning December 8, 1995 using cars 4600 and 4601. The actual last PCC car to operate was Carlton route car 4611 which pulled into the Roncesvalles Yard at 9: 30 PM on that same Friday night to end 57 years of PCC service in Toronto.

The TTC retains two PCC cars for special occasions, A15-H class cars 4500 and 4549 (their original

suite de la page 271

Au début des années 1970, la TTC avait envisagé la possibilité d'abandonner son réseau de tramways en faveur du métro, des autobus et des trolleybus. Les dernières unités neuves dataient de 1951 et le parc vieillissait. On établit un échéancier de mise au rancart des tramways. Toutefois, un petit groupe de citoyens commence à proclamer haut et fort son parti pris en faveur des tramways. Il se produit un effet d'entraînement auprès du public et des élus, à un moment où la population commençait à être sensibilisée aux problèmes découlant de l'utilisation du pétrole. Cette propagande porte ses fruits et la TTC finit par voter en faveur du maintien des tramways. Il faut donc planifier le remplacement éventuel des PCC.

La TTC instaure immédiatement un programme de reconstruction majeur de 125 PCC des classes A-6, A-7 et A-8, l'objectif étant de prolonger leur durée utile d'une dizaine d'années. L'expérience s'avère fructueuse de sorte qu'un total de 173 PCC seront reconstruits aux ateliers Hillcrest au cours des années 1972 à 1975.

L'arrivée fin 1979 des véhicules légers sur rail canadiens (CLRV) entraîne des mises en surplus de PCC entre 1980 et 1982. La mise en service en 1988 des tramways articulés entraîne la mise au rencart de tous les PCC n'ayant pas fait l'objet d'une reconstruction. En 1986, il ne restait plus que quelque 90 PCC encore en service.

La ligne Harbourfront est en construction et celle de Spadina en projet. De plus, l'achalandage est en progression constante au cours des années 80 et on craint que la flotte de tramways ne puisse bientôt plus suffire à la tâche. On décide donc de tenter la reconstruction de deux PCC. Le 4512 est confié à la Société de développement du transport urbain (l'UTDC) de Kingston. Le 4505 quant à lui est reconstruit par la TTC elle-même. Le coût est de 500 000$ par tramway. L'expérience est jugée concluante et 19 tramways sont ultimement rénovés; le dernier d'entre eux entre en service le 31 mars 1992. Ils reçurent une nouvelle identification : la classe A-15 et des numéros commençant par le 4600. Les années 90 amènent cependant une baisse de l'achalandage. Les jours du PCC sont comptés.

En raison de plaintes relatives au bruit sur le circuit Harbourfront, on décide d'en retirer les PCC en septembre 1994. Le 28 novembre 1995, le Conseil de la TTC vote le retrait des derniers PCC reconstruits. Des dignitaires et des représentants des médias firent un parcours d'adieu le vendredi matin, 8 décembre 1995, à bord des tramways 4600 et 4601. Le tout dernier PCC en service régulier fut le 4611 sur le circuit Carlton qui rentre au dépôt Roncesvalles à 21h30 le même jour. Ainsi s'achève l'époque des PCC à Toronto; elle aura duré 57 ans.

La TTC conserve deux tramways de la classe A-

numbers). The remaining A-15 PCCs all found new homes at railway museums, including six cars operating today on the Heritage Streetcar line in Kenosha, Wisconsin.

Vancouver's Brief But Brilliant Encounter With the PCC
By Henry Ewert

While the Great Depression was still raging in the 1930's, the British Columbia Electric Railway (BCER) bravely made two extraordinarily forward-looking decisions: to rebuild and thoroughly modernize 154 streetcars, a project completed in 1946, and to purchase a quantity of new, revolutionary PCC streetcars, ultimately numbering 36, a project completed in 1945. These same PCCs would be Vancouver's last operating streetcars in 1955.

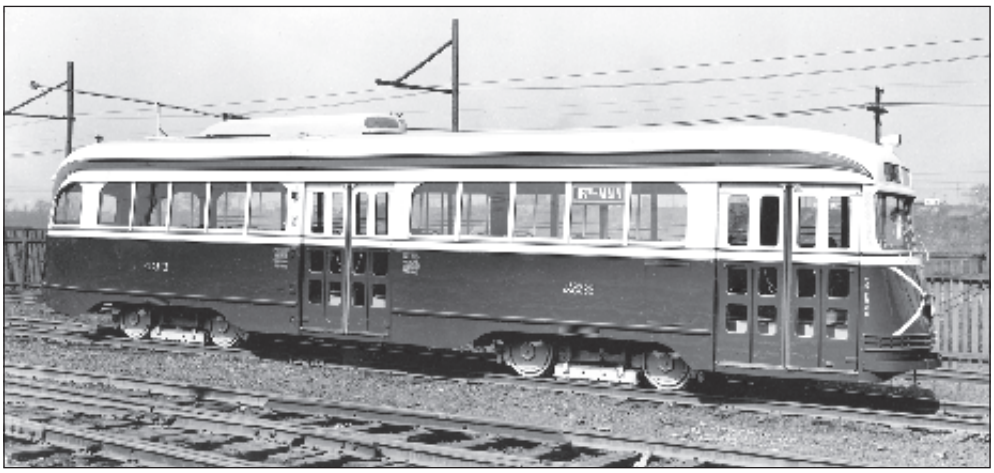
The PCC was radically unlike any streetcar in service in 1935. Though Vancouver's city council had rejected an offer by the BCER in autumn of 1938 to purchase 26 new PCCs because they were one-man, rather than two-man, operated, an announcement was made at a meeting of the Vancouver section of the American Institute of Electrical Engineers (AIEE) that a PCC would arrive shortly after November 22, to perform as a demonstration car. The car had been ordered on May 13th; it arrived on December 17, 1938.

15 pour des événements spéciaux, le 4500 et le 4549. Ce sont leurs numéros originaux. Les autres PCC de la classe A-15 se trouvent tous dans des musées; six d'entre eux assurent du service sur une ligne de patrimoine ferroviaire à Kenosha dans le Wisconsin.

Les PCC à Vancouver : un épisode bref mais remarquable
Par Henry Ewert

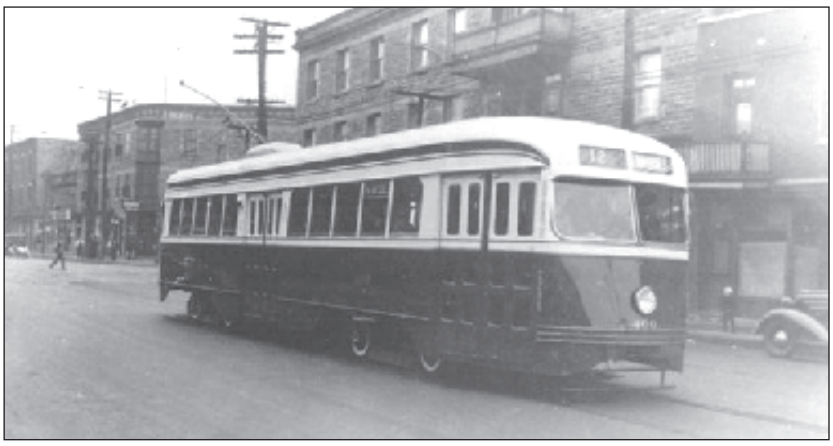
Malgré la dépression des années 30, la compagnie BCER prit deux décisions éclairées à ce moment : la modernisation de 154 de ses tramways, une entreprise achevée en 1946; aussi, l'achat de PCC dont le nombre culminera à 36 en 1945. En 1955, ces PCC seront les derniers tramways en service à Vancouver.

Le PCC différait radicalement des tramways en usage vers 1935. À l'automne 1938, le conseil de ville de Vancouver rejette l'offre de la BCER d'acheter 26 PCC sous prétexte que leur utilisation ne nécessitait la présence à bord que d'un seul employé au lieu de deux. Néanmoins, l'American Institute of Electrical Engineers (AIEE) annonce lors de sa réunion de section de Vancouver qu'un PCC de démonstration arrivera peu après le 22 novembre. Il avait été commandé le 13 mai et parvint à Vancouver le 17 décembre 1938.



Builders photo of British Columbia Electric Railway 433 at CC&F's Turcot works in April 1945. CRHA Archives, Fonds CC&F

Le 433 de la compagnie British Columbia Electric Railway photographié par le constructeur à ses usines Turcot en avril 1945. –Archives ACHF, Fonds CC&F



A rare photo of BCER 400 being tested by CC&F on the Montreal Tramways Company's Lachine line, the car is on Notre Dame St. in Cote St. Paul. Peter Murphy collection

La compagnie CC&F vérifiait le fonctionnement de ses tramways neufs sur le circuit Lachine auquel elle était reliée. Voici le 400 de la BCER sur la rue Notre-Dame non loin du chemin de la Côte-Saint-Paul. – Collection Peter Murphy

It was January 18, 1939 before the PCC streetcar, numbered 400, went on public view at the Prior Street barn. This light-weight, comfortable, modern car was operated by foot pedals rather than by hand controls. The car charmed everyone—even more so when it went into service on the Stanley Park-Victoria Road route on January 27—except the Street Railwaymen's Union, the Trades and Labour Council, and anyone else viewing with alarm the trend in transit generally away from two-man to one-man operation.

Partially built by the St. Louis Car Company, car 400 had been shipped to CC&F in Montreal for completion, the BCER thereby escaping the prevailing high import tariffs on vehicles built completely in the United States. With a length over bumpers of 46 feet, car 400 had a total passenger capacity of 125, 54 of those seated; its car body weighed 17,500 pounds, while its total weight, without passengers and operator was 34,900 pounds (average weight for a conventional steel streetcar was approximately 44,000 pounds).

Three more PCCs, ordered on April 26, 1940, arrived on January 4, 1941 from CC&F in Montreal. The St. Louis - Montreal - Vancouver pattern would apply to each of BCER's PCC orders. The cars cost $ 26,500.00 each; cars 401 to 403 embodied the latest improvements, based on the experiences that other companies were having with the 1,400 PCCs currently in service. No transit vehicle could compare with the PCC for safety, silence, speed, and acceleration!

On January 9, rolling stock inspector William Rines took a party of company officials and guests for a brief excursion on car 401 along the Fourth Avenue line; exactly a week later, all four of the PCCs went to work on the Kitsilano line. What a sight they were, competing with BCER's freights on the 1,565-foot-long Kitsilano trestle. The PCCs proved so popular on the Kitsilano line that a fourth car was placed in regular service throughout the day beginning on July 17, rather than being saved for only the afternoon rush.

In March 1942, the company placed an order for 20 new PCCs for the Grandview-Fourth Avenue line at a cost of $ 31,000 each, an order authorized by the Public Utilities Commission. However, the Greater Vancouver Community Council, representing fourteen communities, offered its full support on April 21 to Vancouver alderman Jack Price in his opposition to the acquisition of more one-man cars.

In late November and early December 1942, the Street Railwaymen's Union was campaigning strongly in the public press against one-man streetcars. The following is an extract from a statement released at that time:

> "The Street Railwaymen realize the need for new equipment, and we recognize the efficiency of the PCC car. However, we need merely to point out that the efficiency of the PCC car must only be

Le 18 janvier, on expose à la remise de la rue Prior ce PCC, numéroté 400. Le tramway moderne, léger, confortable, dont les commandes manuelles sont remplacées par des pédales, suscite l'admiration des foules. Lorsqu'il entre en service le 27 janvier sur le circuit Stanley Park-Victoria Road, tous sont conquis, exception faite de ceux qui voyaient d'un mauvais œil la présence d'un seul employé à bord et en particulier le Conseil des métiers et du travail et le Street Railwaymen's Union.

À l'instar des autres PCC canadiens, la construction du 400 fut commencée par la St. Louis Car et achevée à Montréal par la CC&F pour diminuer les droits d'importation. Il en ira de même pour les autres PCC de Vancouver. Le 400 pouvait accommoder 125 passagers dont 54 assis. Sa longueur était de 14 m, le poids de la caisse d'environ 7 900 kg et son poids total à vide d'environ 15 800 kg comparativement à une moyenne de 20 000 kg pour les tramways conventionnels.

Trois autres PCC, commandés le 26 avril 1940, arrivèrent de Montréal le 4 janvier 1941. Au prix de 26 000$ chacun, les 401, 402 et 403 bénéficiaient des plus récentes innovations découlant de l'évaluation des quelque 1 400 PCC alors en service ailleurs. Aucun autre tramway ne pouvait rivaliser avec le PCC en ce qui concerne la sécurité, le niveau sonore, l'accélération et la vitesse.

Le 9 janvier, M. William Rines, responsable du matériel roulant, organise pour un groupe d'invités et de dignitaires de la compagnie une petite excursion à bord du 401 sur le circuit Fourth Avenue. Une semaine plus tard, les quatre PCC entrent en service sur le circuit Kitsilano; le partage du pont à chevalets de Kitsilano, long de 477 m, entre les PCC et les convois de marchandises, offrait certes un spectacle intéressant. Leur popularité fut telle qu'il fut décidé que l'un d'eux, gardé en réserve pour l'heure de pointe de l'après-midi, serait affecté au service régulier à compter du 17 juillet.

En mars 1942, avec l'assentiment de la Commission des services publics, la compagnie commande 20 PCC de plus au prix de 31 000$ chacun pour le circuit Grandview-Fourth Avenue. Toutefois, le Greater Vancouver Community Council, représentant quatorze municipalités décide d'appuyer les efforts du conseiller municipal Jack Price dans son opposition à l'achat de tramways à la charge d'un seul employé. Fin novembre et début décembre 1942 le Street Railwaymen's Union menait une vigoureuse campagne de presse contre l'utilisation de tels tramways. Voici un extrait d'un de leurs communiqués :

> «Nos membres conviennent de la nécessité de se procurer des tramways neufs et nous reconnaissons la supériorité des tramways PCC. Notre seul but est de souligner que la présence à bord d'un conducteur ne peut que contribuer à augmenter le niveau de sécurité, la rapidité du service et le degré d'attention

increased by the use of a conductor to add to safety, speed and individual attention to the travelling public."

The statement further stressed that one-man cars meant a fifty percent reduction in the number of jobs available and the loss of about $100,000 in wages, should the ordered PCC cars go to work on Grandview-Fourth Avenue.

Federal transit controller George S. Gray announced on December 2, that the 20-car order had been reduced to 17 because the changing priorities of the U.S. Office of Defense Transportation had cut the planned total Canadian order of 100 new PCCs to 50.

One week later, Vancouver's voters voted "no" to one-man cars in a highly-publicized plebiscite. Here was a dilemma indeed: Vancouver needed streetcars, the only ones being built were PCCs, and all 512 built in 1941 had been one-man cars. As expected, Gray's order held.

Four of the 17 new PCCs (404 to 420) arrived on February 17, 1944, three more on the 21st, at the Kitsilano barn, having travelled by CPR from Montreal on flat cars, each streetcar wrapped in ropes of excelsior. After inspection, cleaning, and polishing, the cars were moved to the Prior Street barn for breaking in. The union insisted that they be used on existing one-man car lines, not on Grandview-Fourth Avenue, as had been the company's intention. The cars went to work on the Joyce-Victoria Road-Stanley Park runs, existing one-man car operations. Three more had arrived by February 26, the remaining seven on March 6. Colourful company billboards all around Vancouver proclaimed their arrival.

While waiting for cars 404-420 to arrive, BCER had signed a contract for 15 more PCCs (421-435), on May 15, 1943. The first six of this order arrived in Vancouver on April 18, 1945, the final nine on May 7, the day war in Europe ended. May 8 was declared a Dominion-wide holiday in celebration of the long-awaited end to hostilities there, but still the war dragged on in the Pacific.

personnelle aux passagers.» On évoquait aussi le fait que la mise en service de PCC sur le circuit Grandview-Fourth Avenue entraînerait une réduction de cinquante pour cent des emplois et une perte de salaires de l'ordre de 100 000$.

Le 2 décembre, le contrôleur fédéral des transports, M. George S. Gray, annonçait que le Bureau américain des transports de la défense diminuait l'allocation de PCC au Canada de 100 à 50, ce qui eut pour effet de réduire la commande de Vancouver de 20 à 17. Une semaine plus tard, lors d'un plébiscite hautement médiatisé, les citoyens rejetaient le concept de tramways à un seul homme, précipitant Vancouver au cœur d'un réel dilemme : les seuls tramways neufs disponibles sur le marché étaient des PCC dont 512 exemplaires avaient été produits en 1941. Sans surprise, l'orientation de M. Gray a prévalu.

Sur les 17 nouveaux PCC (qui seront numérotés de 404 à 420), quatre furent livrés à la remise Kitsilano le 17 février 1944 et trois autres le 21. Ils furent expédiés sur wagons-plate-forme du CP à partir de Montréal et furent mis à l'essai. Le syndicat exigeait que ces PCC soient assignés à des circuits déjà desservis par des tramways à un homme et non à la ligne Grandview-North Avenue tel que projeté. La compagnie accède à la demande des employés et les affecte au circuit Joyce-Victoria Road-Stanley Park. Trois autres arrivèrent le 26 février et les sept derniers le 6 mars. La compagnie annonce leur arrivée par de nombreux panneaux-réclames dans tout Vancouver.

Avant même l'arrivée de la série 404 à 420, la BCER avait commandé, le 15 mai 1943, 15 PCC de plus. Les six premiers sont livrés le 18 avril 1945 et les neuf autres le 8 mai, un jour férié partout au Canada pour souligner la fin de la guerre en Europe, malgré la poursuite des hostilités sur le théâtre du Pacifique.

BCER 431 is southbound on Granville Street between Pender and Dunsmuir Streets on April 18, 1955. Stan Styles, GTC Collectibles BCE-431-1

Le 431 de la BCER en direction sud sur la rue Granville , entre Pender et Dunsmuir, le 18 avril 1955. –Stan Styles, GTC Collectibles, BCE-431-1

Kootenay Loop, end of the line! BCER's first P.C.C. 400 carries an 'Exhibition' destination card as it prepares for the return trip downtown along the Hastings East route on October 15, 1954. Stan Styles, GTC Collectibles BCE-400-2

La boucle de virage Kootenay, le 15 octobre 1954. Le 400, premier PCC acquis par la BCER, affiche la destination Exhibition Park. Il entreprendra bientôt son trajet de retour vers le centre-ville sur le circuit Hastings East. –Stan Styles, GTC Collectibles, BCE-431-1

Contentiousness in the matter of the role of PCCs and the company's desire to operate them on the Grandview-Fourth Avenue route achieved focus on May 28-30 in Vancouver with a hearing at which both the union and the company presented evidence to the Public Utilities Commission, the body which in 1942 had authorized the BCER to purchase the PCCs for this very route. The PUC ruled on July 13 that the Grandview-Fourth Avenue line was to get its one-man PCC streetcars. Company President W.G. Murrin stated that the displaced two-man cars from that line would be immediately transferred to two-man routes to alleviate heavy passenger loads when the union insisted that it would not operate the PCCs on Grandview-Fourth Avenue.

The company and the union together were brought to an amicable solution only by the end of the war in the Pacific on August 15. One week later, the company and the union, in a joint application to the PUC, asked it to suspend the ruling regarding Grandview-Fourth Avenue. The reason for the request was predicated on the ending of the war, and the fear of unemployment in the offing. To relieve pressure on the two-man streetcar lines, the BCER announced a plan to convert 15 conventional one-man streetcars to two-man operation, the identical number of PCCs waiting to go into service. On August 27, the PUC agreed to the joint application, ruling that the order in regard to one-man PCCs on Grandview-Fourth Avenue would be suspended until the postwar transition period was past.

By the end of October, 1945, ten—not 15—Vancouver streetcars, 300-309, had been rebuilt as two-man cars, pursuant to the company's agreement with the union vis-à-vis not operating PCCs on the Grandview-Fourth Avenue line. (By July 1949, all rebuilt conventional cars except cars 304 and 305 were in storage, waiting to be scrapped.)

A rich carmine red with cream trim had defined BCER's transit vehicles since 1926, but with the advent of

Le contentieux entre la compagnie et ses employés relatif à la présence de PCC sur le circuit Grandview-Fourth Avenue atteint son point culminant du 28 au 30 mai lors d'une audience de la Commission des services publics. C'est le même organisme qui avait autorisé en 1942 l'achat de PCC pour ce même circuit. Le 13 juillet la Commission se prononce en faveur de l'utilisation des PCC. Le syndicat rétorque que ses membres refuseront de faire circuler des PCC sur le circuit. M. W.G. Murrin, président de la compagnie, annonce alors que les tramways à équipe de deux seront transférés sur d'autres circuits dont l'achalandage justifie l'usage de tels véhicules.

Le 15 août, vers la fin de la guerre du Pacifique, les parties en viennent enfin à une entente à l'amiable. Une semaine plus tard, la compagnie et le syndicat demandent conjointement à la Commission de surseoir à son ordonnance. À l'appui de cette demande, on invoque la fin de la guerre et le chômage qui pourrait en découler. Dans le but de maintenir la qualité de service sur les circuits desservis par des tramways à équipe de deux, la compagnie annonce son intention de modifier 15 tramways de façon à assurer la présence d'un deuxième employé. Ce nombre correspond à celui des PCC en attente d'utilisation sur le circuit Grandview-Forth Avenue. Le 27 avril, la Commission accepte de suspendre son ordonnance jusqu'à la fin de la période de transition d'après-guerre.

À la fin d'octobre 1945, la compagnie a terminé la conversion des tramways 300 à 309, soit 10 au lieu des 15 prévus lors de l'entente avec le syndicat. En juillet 1949, tous, sauf les 304 et 305, étaient retirés du service, en attente d'être envoyés à la casse.

Depuis 1926, les tramways de la compagnie BCER arboraient une livrée rouge carmin agrémentée de couleur crème sur certains éléments de la caisse. Lors de l'arrivée des trolleybus en août 1948, cet agencement de couleur fut modifié, mais pour certains PCC seulement. Cinq d'entre eux, les 400, 404, 426, 427 et 480 furent

its first trolley coach operation in August 1948, these colours were reversed. Though none of the company's conventional streetcars would fall heir to this paint scheme, five PCCs (400, 404, 426, 427 and 428), were repainted in the new all cream colour reversal scheme by the end of November 1949. PCCs 419, 429, 432 and 435 would receive this treatment in February 1950.

With the cessation of streetcar service on the Victoria Road (route 10) and Joyce Road (route 11) lines in the early morning of February 16, 1950, the Grandview and Stanley Park lines were linked, route 4 in the Grandview direction and route 10 in the Stanley Park direction. This combined line was now the domain of the PCCs. (The Fourth Avenue line had shut down on July 16, 1949.) When the Stanley Park line closed down in the early morning of August 25, 1950, scope for the PCCs was widened when they began appearing on the Hastings East (route 14) line as well as on the Grandview, especially since a loop at the end of the route 14 line had been built for them, as well as for buses, on the north side of Hastings Street at Kootenay Street. This loop, replacing a wye one block east at Boundary Road, went into service on the morning of August 25.

By June 18, 1952 only three of Vancouver's streetcar lines remained. The Main (route 3) line looped through downtown in a counter-clockwise direction, with conventional cars, using Hastings, Richards, Robson and Cambie streets. The two PCC lines (really combined lines): both Hastings East runs (route 13) specials to Exhibition Park (Millar) loop, and route 14 to the Kootenay loop. The Grandview line, now route 1, rather than its former route 4, looped counter clockwise via Hastings, Granville, Robson and Richards streets.

When the Main line was abandoned in the early morning of May 8, 1953, an adjustment to the Grandview (route 1) line went into effect: it took over the Main line's downtown routing, Hastings, Richards, Robson and Cambie streets. At this time only 57 streetcars were still available for service: the 36 PCCs (400-435), trippers (310-315 and 364-378).

At 3:53 a.m. on July 16, 1954, the last Grandview streetcar, a PCC, of course, pulled away from its comfortable spot on Findlay Street in Cedar Cottage. It made its way with five passengers on board along the time-honoured pioneering route (this line had been built in 1891) through Grandview to the intersection of Hastings and Main streets, then south to Mount Pleasant barn.

The end of streetcars had been a threat of ten years' duration, and always after the death of one line, there was yet another somehow filled with more life than any of the vanished lines ever seemed to have possessed. But now, it was serious! When retired Joe Briggs, for so many years the depot master at Mount Pleasant barn (the same Joe Briggs who had dispatched the first streetcar out

repeints intégralement en crème en novembre 1949. Les 419, 429, 432 et 435 le furent en février 1950.

Lors du retrait des tramways sur les circuits Victoria Road (10) et Joyce Road (11) tôt le matin du 16 février 1950, les circuits Grandview et Stanley Park furent réunis et devinrent le circuit 4 en direction de Grandview et le 10 en direction de Stanley Park. Puisque le circuit Fourth Avenue avait été supprimé le 16 juillet 1949, la nouvelle ligne devint le domaine des PCC. Lors du retrait des tramways sur la ligne Stanley Park, les PCC firent leur apparition sur les circuits Hastings East (14) et Grandview. On avait d'ailleurs construit au bout du circuit 14 une boucle de virage à leur intention, mais qui devait servir aussi aux autobus. Cette boucle était sise du côté nord de la rue Hastings à la rue Kootenay. Elle servit pour la première fois le matin du 25 août. Elle remplaçait le triangle de virage de Boundary Road, un coin de rue plus loin.

Lors de l'abandon du circuit Main tôt le matin du 8 mai 1952, on modifie celui de Grandview (le 1). On lui fait suivre au centre-ville l'ancien trajet du circuit Main, les rues Hastings, Richards, Robson et Cambie. Il ne restait plus à ce moment que 57 tramways à l'usage des passagers : les 36 PCC (les 400 à 435), les tramways de réserve (les 310 à 315) et enfin les 364 à 378.

Le 18 juin 1953, il ne restait plus que trois lignes de tramway à Vancouver : la ligne Main, dont le circuit 3 effectuait une boucle en sens antihoraire au centre-ville sur les rues nommées plus haut, la ligne Hastings East et ses deux circuits desservis par les PCC (le 13 vers la boucle de virage Millar au parc de l'Exposition et le 14 vers la boucle Kootenay) et enfin la ligne Grandview (le circuit 1) dont la boucle au centre-ville se faisait en sens horaire sur les rues Hastings, Granville, Robson et Richards.

Le matin du 16 juillet 1954 à 3h53, le service des tramways prend fin sur la ligne Grandview. Inaugurée en 1891, elle avait été la première ligne du réseau de Vancouver. Un PCC avec cinq passagers à bord quitte son point d'attente de la rue Findlay à Cedar Cottage et se rend à l'intersection de Hastings et Main puis file vers le sud jusqu'à la remise Mount Pleasant.

Depuis dix ans se profilait à l'horizon la fin de l'ère des tramways. On aimait s'imaginer que l'abandon d'une ligne insufflait aux autres un regain d'énergie. Hélas! Le 21 avril 1955, ce fut la fin des illusions. M. Joe Briggs, employé à la retraite et responsable en chef de la remise Mount Pleasant pendant plusieurs années, donne le signal de départ au dernier tramway à quitter la remise. M. Briggs avait autorisé en 1907 le départ du premier tramway au même endroit. À 16h47, le garde-moteur Doug Kemp commence à diriger son PCC dans le dédale de voies du dépôt, traverse lentement Broadway, se dirige vers Kingsway, descend la côte Mount Pleasant. Cette pente, autrefois un obstacle de taille pour les tramways n'en était plus un pour les PCC dont les capacités étaient depuis longtemps démontrées.

Under a maze of overhead wires for both trolley buses and streetcars, eastbound PCC 432 turns from Robson Street onto Richards Street on April 18, 1955. Stan Styles, GTC Collectibles BCE-432-1

Le 18 avril 1955, le PCC 432 quitte la rue Robson pour s'engager sur Richards. L'alimentation des tramways et des trolleybus nécessitait ce remarquable lacis de fils. –Stan Styles, GTC Collectibles, BCE-431-1

of the same barn in 1907), dispatched the last streetcar ever to leave the barn for its work on Hastings Street, illusions were in tatters. The other necessary cars were already out on the line as operator Doug Kemp nudged his sleek PCC out of the barn at 4:47 p.m. on Thursday, April 21, 1955, heading northward traversing a plethora of trackwork defining the barn, and crept almost imperceptibly across Broadway, against Kingsway. It would be one more time down the steep slope of Mount Pleasant hill, a veritable barrier once, now hugged by a transit vehicle that could go anywhere, anytime, as long as there were rails and wire.

The last streetcar to run from downtown Vancouver on the Hastings East (route 14) line, PCC 424, left Robson and Granville streets at 3:05 a.m. on April 22, 1955 with eighteen passengers and operator Vyv Saundry, following its route, via Robson, Richards, and Hastings streets to Kootenay loop. As it stopped, members of the Pacific Great Eastern (PGE) and Rail Travel Boosters ran ahead of the car, placing signal torpedoes on the track. Their explosive blasts at Robson and Granville, Cambie and Hastings and Main, attracted police from all directions who joined in the festivities with sirens screaming (between 3:00 and 4:00 a.m.!).

Jung Sing, waiting for his streetcar on Hastings at Nanaimo Street, as he had done every morning, was the last paying rider to board a BCER streetcar, doing so appropriately to a camera's flash at 3:30 a.m. Scheduled to leave Kootenay loop for the return trip at 3:34 a.m., PCC car 424, operator Saundry, and rail enthusiasts left late on

Le dernier tramway à quitter le centre-ville sur le circuit 14 de la ligne Hastings East fut le PCC 424. Il part de l'intersection Robson et Granville à 3h05 le 22avril 1955. À son bord, le garde-moteur Vyv Saundry et 18 passagers. Il empruntera les rues Robson, Richards et Hastings jusqu'à la boucle Kootenay. Lors d'arrêts, des membres du Pacific Great Eastern et des Rail Travel Boosters se précipitent pour placer sur les rails des signaux d'avertissement sonores. Les bruits d'explosion angle Robson et Granville, Cambie et Hastings ainsi que sur Main attirent de nombreux policiers qui se joignent aux festivités en activant leurs sirènes et ce, entre 3h00 et 4h00 du matin!

Jung Sing attendait comme à son habitude au coin de Hastings et Nanaimo. Il monta sous les flashs des caméras et fut le dernier passager à payer son passage à bord d'un tramway. Le départ de retour à la boucle Kootenay prévu pour 3h34 eut lieu un peu plus tard, au son d'autres signaux sonores. Le PCC 424 dirigé par M. Saundry et transportant plusieurs amateurs de tramway regagne la remise Mount Pleasant à 4h22, en retard de 5 minutes! Une équipe de tournage les y attendait.

Il y eut toutefois dimanche le 24 avril une autre cérémonie pour souligner la fin du service sur rail. Vingt-neuf PCC circulèrent entre 13h et 17h sur la ligne Hastings East pour donner la chance à tous d'effectuer une balade sans frais. Deux superviseurs à la boucle Kootenay, un à l'intersection Hastings et Main et cinq ouvriers d'entretien à la cour Carral furent mis au service des quelque 13 700 personnes qui participèrent à cet

the return, to the explosions of more torpedoes, arriving at Mount Pleasant barn at 4:22 a.m., five minutes late, welcomed by a film crew.

But there was a one more time "Rails to Rubber Day." On Sunday, April 24, twenty-nine of the PCCs travelled up and down the Hastings East line providing free rides to everyone who wished, between 1:00 and 5:00 p.m. Two extra transit supervisors at Kootenay loop, one at Hastings and Main, five maintenance men at Carrall Street, and one at Kootenay loop. All stood by to assist an estimated 13,700 people, including this writer, who travelled the line, with many congregating at Exhibition Park for a ceremony at 3:00 p.m. in Exhibition Gardens. The Fireman's Band played outside, and inside company and civic officials and old-timers gathered for presentations and speeches. Many of Vancouver's pioneers had boarded three special PCCs at 2:15 p.m. at Victory Square to be brought to the ceremony.

The PCCs still had a little time, scooting along Hastings Street only a few metres away, but by 7:15 p.m. all thirty-six were clustered around the incinerator at Kitsilano shop. They had one by one run through the old Carrall Street interurban station into the yard, there to be coupled, then drawn by a CPR locomotive to the north side of False Creek; under trolley wire again, a BCER locomotive had pulled the PCCs in batches over the Kitsilano trestle to the beginning of a long wait. PCC 415 was the very last streetcar in operation.

As summer came, it seemed increasingly possible that the 36 PCCs, so vigorously sought and fought for, would be unable to find further life elsewhere. Vancouver's British Columbia Brokerage Company Limited having purchased the cars for resale to another transit line, had seen its most recent attempt at a deal, with a Vienna, Austria company, fall through. The PCCs were for sale as a fleet, not piecemeal, and even South America was rumoured as their destination.

événement, dont l'auteur de ces lignes. Plusieurs assistèrent à une cérémonie tenue aux Exhibitions Gardens à 15h. La fanfare des pompiers offrit une prestation en plein air tandis qu'à l'intérieur, employés et retraités de tous âges se rappelaient des souvenirs. Plusieurs des anciens purent s'y rendre à bord de trois PCC, spécialement réservés pour la circonstance, qui les avaient attendus au Victory Square vers 14h15.

Au même moment, des PCC circulaient encore aux alentours sur la rue Hastings. Toutefois, vers 19h15, les trente-six tramways se retrouvèrent près de l'incinérateur des ateliers Kitsilano. Un par un, ils ont traversé l'ancienne gare interurbaine de la rue Carral en direction de la cour de triage où ils furent attelés les uns aux autres. Une locomotive du CP les tira jusqu'à False Creek où une locomotive du BCER put les prendre en charge. Le PCC 415 fut le dernier tramway à avoir roulé par ses propres moyens. Une longue période d'inactivité les attendait.

Au cours de l'été, tout espoir d'une vie nouvelle pour les PCC allait en s'amenuisant. Une firme de courtage, la British Columbia Brokerage Company avait acheté les tramways en espérant pouvoir les revendre. Ses tractations, particulièrement auprès de la ville de Vienne en Autriche sont demeurées vaines. On a même cru à un moment donné pouvoir les envoyer en Amérique du Sud. Il faut souligner qu'on souhaitait conclure une vente de la flotte entière plutôt qu'à l'unité.

Ses efforts demeurés vains, la firme de courtage annonce le 21 août 1956 la vente des 36 tramways à la firme de récupération Active Trading Company. Un à un, ils furent transportés par camion de la cour Kitsilano à un terrain vacant en bordure de l'avenue Gilmore à Burnaby. Ils y furent alignés côte à côte face à la ligne de chemin de fer Great Northern vers Seattle. Les moteurs de traction se retrouvèrent à Toronto, les roues à Philadelphie et Pittsburgh tandis que les mécanismes d'ouverture de

Trolley poles lowered for the last time, BCER's fleet of PCCs is parked at their Kitsilano facility after the end of streetcar service in Vancouver in 1956. Peter Cox collection.

L'époque des tramways à Vancouver a pris fin en 1956. Les PCC de la BCER ont été rassemblés à la cour Kitsilano, et leur trolley abaissé pour la dernière fois. – Collection Peter Cox

Stymied, British Columbia Brokerage announced on August 21, 1956 that the 36 cars had been sold to Active Trading Company Limited for scrap. One by one, they were trucked from the storage tracks at Kitsilano shops to a vacant yard off Gilmore Avenue in Burnaby where they were lined up, side by side, facing north toward the Great Northern Railway's line to Seattle. Early in 1961, all 36 were scrapped. The traction motors had been bought by PCC-rich Toronto, the wheels had gone to Philadelphia and Pittsburgh, and the door motors and dome lights had been removed by the company to replace similar fittings in a batch of trolley coaches it had purchased from Birmingham, Alabama.

Those who rode them, and remember, know only too well that no transit vehicle since even approaches the glamour and glide of the inimitable PCC.

Outremont Route 29 - Montreal's PCCs
By J.R. Thomas Grumley

Because of World War II there were restrictions on material both in Canada and the USA. It was no different for the assembly of the PCCs. Permission to build new transit vehicles was regulated by the American Office of Defense Transportation. As such, allotments of cars to Canada from the St. Louis Car Company's production line were limited. In 1943 Canada ordered 100 PCC cars, but this was subsequently reduced to 50. The Canadian Transit Controller decided that the Montreal Tramways Company would get 18 of these.

There were some initial misgivings as to the car's suitability because of Montreal's harsh winter conditions. Nevertheless, the 18 car bodies were shipped to the Canadian Car & Foundry Company's (CC&F) Turcot Works in Montreal. The trucks were delivered by Clark Equipment Company of Chicago, the largest manufacturer of PCC trucks. The CC&F assembled and finished the cars at its Turcot works. Montreal was unique in that its cars did not have a standard headlight. Instead, a hood covering lights provided indirect dash lighting just below the front window of the car. This had been the standard on Montreal cars since the mid-1930s. The cars were numbered 3500-3517. Given that they were one-man cars they were painted in the cream livery with red borders and striping synonymous with other one-man cars operated by the Montreal Tramways Company (two-man cars were painted olive green with cream striping). The cars were placed into service in March 1944 on the route 29 Outremont line. After the initial introduction, some minor adjustments were made to the cars including discontinuing the use of the track brake. The cars operated on the Outremont line until the end of August 1958.

The line was chosen based on its topography in which there were fairly long stretches where the PCC would not be mixed-in with older types of cars on

portes ainsi que les plafonniers furent récupérés par la BCER pour remplacer ceux de trolleybus qu'elle s'était procurés à Birmingham en Alabama.

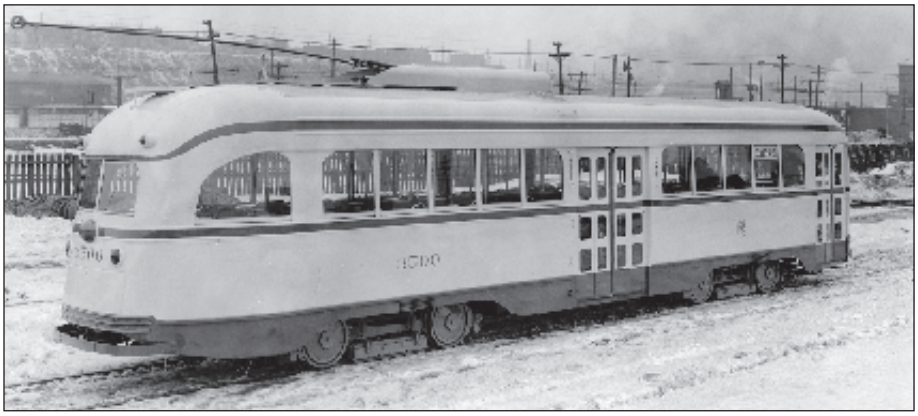
Ceux qui se souviennent des PCC savent qu'ils n'étaient à nuls autres pareils.

Les PCC de Montréal- Le circuit 29 Outremont
Par J.R. Thomas Grumley

Pendant la seconde guerre mondiale, différentes restrictions entrèrent en vigueur. Elles touchèrent l'ensemble de l'activité industrielle du Canada et des États-Unis. La construction des PCC fut touchée et la production de la compagnie St. Louis Car fut contingentée. En conséquence, le Canada qui avait commandé 100 PCC en 1943 vit sa part réduite à 50. Montréal en obtint finalement 18.

On craignait au départ que l'extrême rigueur des hivers montréalais nuise au bon fonctionnement de ces tramways. 18 caisses furent néanmoins expédiées aux usines Turcot de la CC&F à Montréal pour l'assemblage final. Les bogies furent fournis par le fabricant attitré, la compagnie Clark Equipment de Chicago. Les PCC de Montréal se distinguaient des autres par leur absence de phare avant comme c'était la norme à Montréal depuis le milieu des années 30. Ils furent plutôt équipés de lumières recouvertes d'un capot sous le pare-brise projetant ainsi un éclairage indirect tout en illuminant l'avant du véhicule. Ils furent numérotés de 3500 à 3517. Comme les autres tramways à un seul homme de la compagnie Montreal Tramways, ils reçurent la livrée couleur crème agrémentée de garnitures rouges; les tramways à équipe de deux étaient peints vert forêt avec garnitures crème. Ils entrèrent en service en mars 1944 sur le circuit 29 Outremont. Après expérimentation, on leur fit quelques modifications mineures dont la suppression du freinage magnétique sur rail. Leur affectation au circuit Outremont dura jusqu'à la fin d'août 1958.

On leur avait choisi cette ligne pour qu'ils puissent circuler sur d'assez longues distances sans partager les voies avec des tramways plus anciens. En outre, la ligne traversait divers quartiers de la ville ce qui permettait à des usagers de milieux socio-économiques différents d'apprécier les qualités de ce nouveau tramway et d'en bénéficier. L'extrémité sud du circuit se trouvait au pied de la rue McGill à côté du terminus des tramways interurbains de la compagnie Montreal and Southern Counties. Au nord, le circuit se terminait à la boucle de virage de Snowdon, à l'intersection du chemin Queen-Mary et du boulevard Décarie. Toutefois, le 1er mai 1949, le circuit fut prolongé vers le nord jusqu'au terminus Garland inauguré ce jour-là. (Soit dit en passant, c'était le tramway préféré de l'auteur de ces lignes; chaque fois que son père l'emmenait les dimanches après-midi d'été au port de Montréal pour y admirer les navires, il insistait pour prendre «les nouveaux PCC» bien qu'ils dataient



Builders photo of 3500, the first in the series of Montreal's eighteen PCCs. Daniel Laurendeau collection

Le 3500, premier des 18 PCC de Montréal, photographié par le constructeur. –Collection Daniel Laurendeau

CC&F builders view of the motorman's station in car 3501 of the Montreal Tramways Company. CRHA Archives, Fonds CC&F

Le poste de commande du 3501 de la compagnie Montreal Tramways, photographié par la CC&F. –Archives ACHF, Fonds CC&F

overlapping routes. Also, the line traversed diverse sections of the city where a cross section of the population could avail themselves of the increased speed and riding qualities of the new car. The southern point of the route terminated at the foot of McGill street opposite the Montreal & Southern Counties interurban railway's McGill street terminal. The northern portion of the line terminated at Snowdon Junction, a block south of Queen Mary Road at Decarie Boulevard. The route was extended northward to Garland terminus when it opened on Sunday May 1, 1949. (As an aside, this was the author's most favourite streetcar to ride in Montreal and, every time his dad took him on many Sunday summer afternoons to see the ships docked at Montreal's port, he insisted that they take the 'new' PCCs which were by then over 10 years old.)

déjà de plus de dix ans!)

Lorsque des autobus remplacèrent les tramways sur le circuit Outremont à la fin d'août 1958, les PCC furent réaffectés aux circuits 54 Rosemont et 10 Delorimier (tel qu'affiché sur les tramways plutôt que De Lorimier), les deux derniers circuits de Montréal. Ils y demeurèrent jusqu'à la fin de l'ère des tramways, le 30 août 1959. Ce jour-là eut lieu le dernier défilé commémoratif des tramways de Montréal auquel participaient plusieurs véhicules de collection. On a choisi le 3517, le dernier tramway acquis par la ville pour être le dernier à pénétrer dans l'enceinte de la remise Mont-Royal.

Comme ces PCC n'étaient âgés que de 15 ans, on espérait pouvoir les revendre. L'Égypte et le Mexique

One of the very few photos showing a Montreal PCC followed by a Montreal & Southern Counties suburban car, the two companies shared one block of common track on lower McGill St. Parallel trolley wires serviced each operator, Montreal's first electric switch was installed to allow the MTC cars to turn east and the M&SC cars to turn west on Common Street. This was the southern terminus of the Outremont Route 29 line; the photo was taken in 1952. CRHA Archives, Fonds Toohey

Une des rares photographies d'un PCC suivi d'un tramway suburbain de la compagnie Montreal and Southern Counties (M&SC). Les deux compagnies partageaient un segment de voie au pied de la rue McGill bien que l'alimentation en électricité se soit faite par fils distincts. Le premier aiguillage automatique de la ville de Montréal fut installé à cet endroit. Les tramways de la MTC tournaient vers l'est sur la rue de la Commune, ceux de la M&SC vers l'ouest. Cette photo du terminus sud du circuit Outremont 29 fut prise en 1952. – Archives ACHF, Fonds Toohey

This photo was taken on August 23, 1947 shortly after the PCC cars were introduced in Montreal. At that time the northern terminus of the line was at Snowdon Junction, where this photo was taken. Later, the cars would travel further north to Garland Terminus. CRHA Archives, Fonds Corley

Nous sommes le 23 août 1947, un peu plus de trois ans après la mise en service des PCC à Montréal. À ce moment, le terminus nord du circuit se trouvait à la jonction Snowdon que nous apercevons ici. Le circuit fut prolongé vers le nord jusqu'au terminus Garland lorsqu'il fut inauguré en 1949. –Archives ACHF, Fonds Corley

When the Outremont line was replaced by buses at the end of August 1958, the PCCs were reassigned to the Rosemont 54 and Delormier 10 routes where they operated on the last two streetcar lines in the city until the end of service on August 30, 1959. On that afternoon car 3517, the last streetcar purchased by the Montreal Tramways Company, was chosen to be the last car in a parade of historical streetcars. As the parade marked the end of streetcar service in Montreal, PCC 3517 entered its final destination, the Mount Royal car barn, for the last time.

Given that the fleet of PCCs was only 15 years old at the time there was some serious thought that the cars could be sold to Egypt or Mexico. As such, the cars were transferred and stored at the company's Youville shop situated in the north end of the city. Despite all the company's efforts, no acceptable offer was received and as a result, all cars with the exception of 3517 were sold to a local scrap dealer in the spring of 1963. Car 3517, along with the collection of historical streetcars belonging to the company, were donated to Exporail - the Canadian Railway Museum at Delson / St. Constant where they can be seen today.

semblaient des acheteurs potentiels. Ils furent donc entreposés dans la cour des ateliers d'Youville au nord de la ville. Malheureusement, les efforts pour la revente sont demeurés vains. Au printemps 1963, un ferrailleur local fit l'acquisition du lot, sauf le 3517. La Commission des transports de Montréal en fit don à Exporail en même temps que les autres tramways de sa collection. On peut maintenant le voir au Musée ferroviaire de Delson-Saint-Constant.

Rare occurrence! Montreal PCC 3503 is in regular service on the Cartierville 17 line in the summer of 1958, this line was mostly private right-of-way and allowed the cars to get up some speed and 'kick up some dirt'. The 3503 is northbound and is about to come off the PRW and enter Decarie Boulevard just south of the Decarie circle. An equipment shortage in the dying days of streetcars probably pressed the PCC into service on this route. Michel Belhumeur

Fait inusité, voici le PCC 3503 en service régulier sur le circuit 17 Cartierville à l'été 1958. Comme la majeure partie de la ligne se situait en emprise privée, les tramways pouvaient y donner leur pleine mesure; le nuage de poussière en est témoin. Le 3503 se dirige vers le nord et rejoindra bientôt le boulevard Décarie, juste au sud du rond-point Côte-de-Liesse. Il est probable qu'en cette fin de l'ère des tramways on ait dû remplacer un des véhicules réguliers par ce PCC. Michel Belhumeur

Car 3503 again, this time southbound on Park Avenue at Mont Royal Ave. in the spring of 1958, the car is working its usual route 29. You can see from this photo why many photographers focused their lenses on the conventional streetcars, like the two appearing here working the Bleury 80 route. Michel Belhumeur

De nouveau le 3503, cette fois en direction sud sur l'avenue du Parc, angle Mont-Royal, au printemps 58. Cette photo nous aide à comprendre que lorsque les photographes devaient choisir, les tramways conventionnels l'emportaient souvent. Les deux que nous voyons ici étaient affectés au circuit 80 Bleury. Michel Belhumeur

PRESERVED TTC PCC SREEETCARS

(Some PCCs held by museums and private individuals may not be complete or may be used for parts or modified to suit owner's use)

Car Number	*Location*	*Museum / Owner*
4000	Milton, Ontario	Halton County Radial Railway
4351	Primrose, Ontario	Super Burger Restaurant
4349	Edmonton, Alberta	Edmonton Radial Railway Society
4359	Thunder Bay, Ontario	Bombardier Transportation
4367	Edmonton, Ontario	Edmonton Radial Railway Society
4386	Milton, Ontario	Halton County Radial Railway
4404	South Lake Tahoe, Calif.	Airport Generic Railway
4412	Camebridge, Ontario	Fair Havens Bible Camp
4426	Milton, Ontario	Halton County Radial Railway
4427	Morriston, Ontario	Farm property
4434	North Collins, NY	Private owner
4448	Dorset, Ontario	Used as cottage
4456	Thunder Bay, Ontario	Bombardier Transportation
4460	Perris, California	Orange Empire Trolley Museum
4472	South Lake Tahoe, Calif.	Airport Generic Railway
4476	Ida Grove, Iowa	Gomaco Trolley Co.
4478	Colorado Springs, Colo.	Colorado Springs & Interurban Ry. Museum
4500	Toronto, Ontario	Toronto Transit Commission
4504	Nelson, BC	Nelson Electric Tramway Society
4524	Tecumseh, Ontario	Private owner
4529	Kenosha, Wisconsin	Kenosha Transit
4534	Newtonville, Ontario	Elliott Auto Parts
4549	Toronto, Ontario	Toronto Transit Commission
4600	Milton, Ontario	Halton County Radial Railway
4601	Mt. Clemens, Michigan	Michigan Transit Museum
4602	Silver Spring, Maryland	National Capital Trolley Museum
4603	Silver Spring, Maryland	National Capital Trolley Museum
4606	Kenosha, Wisconsin	Kenosha Transit
4607	Chandler, Arizona	Arizona Railway Museum
4608	Tucson, Arizona	Old Pueblo Trolley
4609	Kenosha, Wisconsin	Kenosha Transit
4610	Kenosha, Wisconsin	Kenosha Transit
4611	Milton, Ontario	Halton County Radial Railway
4612	Edmonton, Alberta	Edmonton Radial Railway Society
4613	Dallas, Texas	McKinney Avenue Transit Authority

Compiled by Ted Wickson

Canadian PCC Roster

Fleet Number	*Class*	*Builder*	*Acquired*	*Last Car Operated*	*Cars preserved in the public domaine*
Toronto Transportation Commission					
4000-4139	A1	CC&F 1938	New	1969 car 4055	4000
4150-4199	A2	CC&F 1940	New	1974 car 4198	
4200-4259	A3	CC&F 1942	New	1972 car 4237	
4260-4274	A4	CC&F 1944	New	1971 car 4261	
4275-4299	A5	CC&F 1945	New	1974 car 4275	
4300-4399	A6	CC&F 1947-1948	New	1991 car 4386	4349, 4359, 4367, 4386
4400-4499	A7	CC&F 1949*	New	1991 car 4481	4404, 4426 4456, 4460, 4472, 4476, 4478
4500-4549	A8	CC&F 1951	New	1991 car 4518	4500*, 4504, 4529, 4549*
4550-4574	A9	STL 1947	Cincinnati 1950	1982 car 4558	
4575-4601	A10	STL 1939-1940	Cincinnati 1951	1975 car 4578	4600, 4601
4625-4674	A11	PUL 1946	Cleveland 1952	1982 car 4666	4648, 4655, 4656, 4662, 4663
4675-4699	A12	STL 1946	Cleveland 1952	1982 car 4687	4684,
4700-4747	A13	PUL 1947	Birmingham 1952	1983 car 4704	
4750-4779	A14	STL 1946-1947	Kansas City 1957	1977 car 4766	
4600-4618	A15	CC&F 1951	Rebuilt 1986-92	1995 car 4611	4600, 4601, 4602, 4603, 4606 to 4618,
*4500 and 4549	A15H	CC&F 1951	Rebuilt 1988	in service	2 cars held serviceable by the TTC
British Columbia Electric, Vancouver					
400		CC&F 1938	New		
401-403		CC&F 1940	New		
404-420		CC&F 1944	New		
421-435		CC&F 1945	New	1955 car 424	
Montreal Tramways Company					
3500-3517		CC&F 1944	New	1959 car 3517	3517 is on display at Exporail

*Thunder Bay, Ontario

Compiled by Peter Murphy

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Sigles utilisés :

AERA : Association des chemins de fer électriques américains

AEREA : Association des ingénieurs des chemins de fer électriques américains

AIEE : Institut américain des ingénieurs en électricité

BCER : Chemin de fer électrique British Columbia

CC&F : Compagnie Canadian Car & Foundry

CLRV : Véhicule léger sur rail canadien

ERPCC : Comité de la Conférence des présidents de chemins de fer électriques

PCC : Comité de la Conférence des présidents

TTC : Commission des transports de Toronto

UTDC : Corporation de développement du transport urbain

Heritage Business Car

November - December, 2015

By John Godfrey

Edited by David Gawley

More information on last issue's lower back cover photo

Unit 6516 at the head end of train 70 (lower photo, back cover, issue 568) is painted in the first scheme after VIA was formed. The initial plan by CN for passenger services was to corral all costs and try to convince Ottawa to cover them in a separate subsidy from any other funding coming to CN. This would end complaints from freight shippers about passenger deficits being passed on to them in rate hikes.

To dramatize this strategy, the services were named VIA CN, and the blue and yellow scheme; CN logos in red. It worked as far as relieving CN of the passenger deficit, but Ottawa decided to lump CPR's passenger services into a separate Crown Corporation, to be called VIA Rail Canada. So the VIA CN scheme was short lived but obviously 6516 was so painted. On the plus side the original work on VIA CN was kept mostly intact and the VIA logo is still very much in use 29 years later. (Lorne Perry)

The MV Princess of Acadia Bids the Bay of Fundy Good-bye

Docked on the Dartmouth NS side of Bedford Basin is the MV Princess of Acadia, one of the few remaining remnants of the once great Canadian Pacific Railway shipping fleet that sailed the BC coasts, BC interior lakes, the Great Lakes and the Bay of Fundy. The railway fleet operation was separate from the Canadian Pacific Steamship Company (later CP Ships) fleet which operated ships Trans-Atlantic and Trans-Pacific.

The Princess once sailed across the Bay of Fundy between Saint John, NB and Digby, NS providing a connection for passengers, freight and express between CPR's British Columbia to New Brunswick lines and subsidiary Dominion Atlantic's Nova Scotia lines, continuing CPR and predecessor's service which dated back to the late 1800's.

The Princess of Acadia was launched at Saint John Shipbuilding & Dry Dock in 1971, making its maiden voyage on June 1, 1971; the last crossing from Digby was on July 27, 2015.

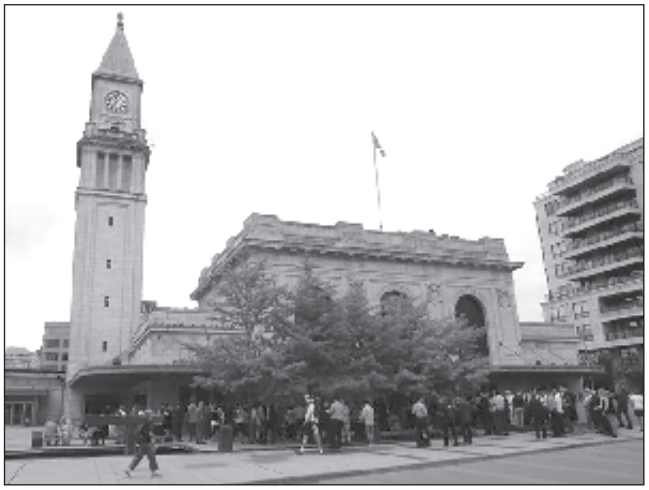
In 1976 CPR transferred ownership of the ship to the Minister of Transport who over the years have contracted management to various companies – CN Marine, Marine Atlantic and recently Bay Ferries. Bay Ferries will operate the Princess's replacement, MV Fundy Rose, a Korean built (1999) former Greek ferry.

The Princess now awaits its fate, either a sale that will permit its continued operation or a trip to a scrapyard. (CBC New Brunswick, Halifax Chronicle Herald)

Governor General's cars 1 and 2 remembered

Mark Perry's 61st instalment of the Peter Cox collection, # 593, was Governor General's car 1. This inspired me to scan the attached shot; this car and 2 used to sit at the Alta Vista station for years and years, and on one occasion someone must have told me they were headed west on VIA Train1 the next day. I got to a location just west of Bank Street / Billings Bridge, and shot it going in B&W, 55 mm lens. For lash-up and consist fans, this was VIA 1, March 3, 1986 1213, with 6765, 6862, 15469, 9300, 117, 515, Eureka, VIA 5, and GG's 1&2. (Fred Clark)

North Toronto Railway Station celebrates 100 years with time capsule opening



A hundred years ago, Toronto councillors were ensconced in Old City Hall, long before it was considered "old." The British Empire had been at war with Germany for more than 400 days. And the price of wheat had just gone up a cent — the same amount newspapers like the Toronto Daily Star were selling for on street corners.

Those kinds of historical tidbits come courtesy of a time capsule, buried since Sept. 9, 1915, in the limestone foundation of the former North Toronto Railway Station.

Recently, hundreds gathered for the 100th anniversary of the building — which now houses the Summerhill LCBO — and got a first look at the contents of the capsule. Around 50 items were discovered, said Eve Lewis, president of Woodcliffe Landmark Properties, which owns the property. They include 10 blueprints, an old map of Toronto, six newspapers from Sept. 9, 1915, century-old coins, and a 1915 City of Toronto municipal handbook. With the exception of some yellowing pages and tarnish on the coins, the items are in mint condition. "It means a lot that this was kept in such beautiful condition, and we found it," added Lewis, whose late husband, developer and former Woodcliffe CEO Paul Oberman, purchased the decrepit Summerhill property in 2002 and brought it back to life before reopening it the following year.

Reg Garner, who manages the Summerhill LCBO, said the unveiling was five years in the works and rife with unexpected challenges. Historic Restorations, the firm hired to find the capsule, wasn't sure where to begin the search — but a clue in the form of an old photo of Toronto's then-mayor Tommy Church laying the 1915 cornerstone got the ball rolling. Garner says the firm recently took x-ray photographs of the stones to try to find the elusive capsule; finally the capsule was unearthed beneath the 1.7 tonne cornerstone, and was opened.

In remarks to the crowd gathered outside the Summerhill LCBO, local Councillor Kristyn Wong-Tam praised the efforts to find the time capsule — and Woodcliffe's earlier restoration of the building. "It's not every single day in the city of Toronto that we get to unveil — or re-unveil, almost — a building that's a hundred years old," Wong-Tam said. "And especially when we actually haven't done a great job of restoring heritage buildings or preserving our heritage and cultural landscape, this is a shining example — an award-winning example — for the rest of the city to follow, in terms of what can happen when you have people with vision who are community-minded."

It's not clear what will happen to the historic contents of the time capsule. Garner speculated they could find a home within the LCBO, while Lewis said they may end up at a local museum.

"I had no clue (the items) would be this quality," Lewis said. "It's museum-quality, and it should be seen by people." (Toronto Star)

Why TTC workers manually switch directions of streetcar tracks

Cosmo Mannella cheerfully waits in a neon-coloured jacket at Bathurst and Fleet Streets for the next streetcar to come along. Normally, he's a TTC driver. But it was his job earlier this week to switch the track with a switch iron, making sure nearing streetcars got set off in the right direction.

It's one of the handful intersections around the city where the TTC requires drivers to manually switch the direction of tracks, despite an electronic switch system that's been in place since the 1980s. At busy intersections — Bathurst and Fleet, Spadina, Queens Quay and sometimes others — there's a streetcar operator, like Mannella, working as a track switcher. At the intersections that see less traffic, streetcar drivers have to stop, get out and do the job themselves.

Stephen Lam, head of the TTC's streetcar program, said the track switchers are required because the electronic track-switching system is breaking down faster than it can be replaced. Part of the problem is the surprisingly difficult job of making new parts. The company that sells the switching system is no longer supplying parts. The system, called SelTrac, changed ownership more than a decade ago and at the same time, the company's headquarters in Don Mills burned in a

huge fire, said Lam. “So, they lost a lot of the design drawings and design information,” he said. “We've been trying to do all those things ourselves, repair the controllers ourselves, until we are running out of hardware that we can repair.”

Meanwhile, the TTC's streetcar system is expanding, putting more pressure on the dwindling number of available parts. The TTC is working on hiring a consultant to reconstruct the missing pieces, but Lam doesn't expect new parts to come online for another year. In the meantime, the poor state of the TTC's signalling system comes with a risk that the track won't be switched correctly. That's why it's policy for the driver to always stop and check the track direction before proceeding. (Toronto Star)

Rare Windsor streetcar to be restored

Number 351, a 97-year-old Windsor streetcar, is finally back home!

What may be the only remaining Sandwich, Windsor and Amherstburg Railway streetcar in good enough shape to restore was moved recently to the historic University Avenue building where it would have been maintained until the late 1930s.

“I got goose bumps right now that I know that it's down there and we can work on it,” Penalty Box restaurant owner Van Niforos said after the vintage vehicle was moved from Lakeshore, where a house had been built around it.

For years, Niforos and George Sofos wanted to capitalize on Windsor's streetcar heritage by developing the University Avenue West site to include another Penalty Box restaurant in the 124-year-old brick car barn, where streetcars were repaired but not made. The first electric streetcars in Canada were running in Windsor in 1886.

“It's incredible,” Niforos said. “Bernie (Drouillard) knew there was one somewhere but to actually find it and bring it back is just incredible.” Drouillard, 72, was on hand as a transport truck backed into the streetcar barn to deposit the 50-foot long, 24,688-pound rarity.

The local transportation historian said the streetcar doesn't have its seats or all its original interior or exterior finishes but it has many of the original windows and interior art deco wood trim. A house built around it preserved the steel structure.

Drouillard and a friend found it eight years ago by chance when they turned around in a driveway during a search for a streetcar they had only heard was in the Belle River area. The distinctive nose of the streetcar could be seen in the car port. Knowing Niforos and Sofos were interested in local streetcar history, Drouillard told them about his find and they were able to buy it, dismantle the house around it and move the car to Windsor.

“When they took the drywall off on the inside, you can see all the old woodwork in it. There's actually the buttons where the seats would be. To let the operator know if you wanted off, you pushed the button,” Drouillard said.

A Sandwich, Windsor and Amherstburg Railway streetcar, No. 366, shown on what is now University Avenue in Windsor. The streetcar that was found in Lakeshore and will be restored for the proposed Penalty Box restaurant on University Avenue would look like this one, local transportation historians say.

The streetcar was built in 1918 in Cincinnati, Ohio, and was used in New Jersey first. In 1926, it was purchased along with 19 others for the Sandwich, Windsor and Amherstburg Railway (SW&A) line. It had a smoking compartment which was common for cars of the day.

The cars were sold for $100 when the city switched to buses in the late 1930s. Some streetcars were converted to cottages, garages and even chicken coops, Drouillard said.

The streetcar will be restored and visible from the inside of the restaurant which could open next spring, Niforos said. There's talk of using the car as a booth or a takeout area. The business partners have spent more than a million dollars renovating the car barn and recently announced the building next door, the former Junction restaurant, will become a medical centre. (Sharon Hill - Windsor Star)

Memories of the driving of the CNoR's Last Spike 100 years ago

I'm enjoying the dialogue about various parts of the Canadian Northern System, on the centenary of the driving of the last spike of that railway. It was driven beside the Yellowhead Highway (Route 16) , just west of the townsite of Lucerne BC (a CNoR Division point). This was the first crossing of the Fraser River by the CNoR, just 30 miles from the source of the river. Mount Robson Provincial Park marks the location with a rustic wooden sign. This is the portion of the CNoR that saw the briefest of service, from line opening in 1915 to removal of rails in favour of the paralell GTP route through Yellowhead Pass in 1918.

West of Jasper AB. through to Moose Lake BC, there are three locations where the concrete abuttments and piers of the CNor are visible from Highway 16, but this is the only location that is marked. The consolidation of the CNoR and GTP lines west of Edmonton AB. to Red Pass BC is complex, with the CNoR usually being the line abandoned, but especially east of Jasper to Hinton, some of the GTP was abandoned. Also, the consolidation took several years to fully take place, notably part of the GTP survived as a branch to the Pocohontas coal mine west of Hinton for several years.

The initial consolidation took place during WW1, when the rails were removed to contribute to the War Effort. This operation was far more complex than the photos taken at the time portray (two passenger trains on parallel tracks along Moose Lake BC, A GTP and CNoR station facing each other across two tracks at Rainbow BC, and Canadian soldiers removing rail along Moose Lake).

In fact, what happened was that the GTP used British 60 lb rail with British pattern joint bars, while the CNoR used Canadian steel of 70 lb or 85 lbs per yard with Canadian joint bars. The GTP rails were removed and shipped to France, and the GTP through the Yellowhead was relaid with the CNoR 85 lb rail. In fact, with the creation of the Canadian Government Railway, and later CN, this was a policy initiated by D. B. Hanna, formerly of the CNoR. Across Canada, similar rail replacement took place, with the lighter rails being moved to branch lines and heavier steel applied to designated portions of the main line.

The CN motive power department designed heavier locomotives to run on 85 lb rail. Bigger locomotives allowed longer and heavier trains, with fewer "train starts" (running one heavy train in the place of two lighter trains). All this is detailed in Hanna's autobiography "Trains of Thought" which includes appendices that are Hanna's proposals to the Canadian Government that detail the how and why of route consolidation leading up to total nationalisation in 1923. Although Thornton gets much of the credit for creating the CNR, Hanna was also deeply involved. Thornton became the CEO in favour of Hanna because he hadn't been a senior officer of any of the former constituents. Hanna had been with CNoR since inception. He was a financial officer and in retrospect, noted that CNoR started to fail financially as early as 1910 (the first quarter report of that year was the last profitable one).

About the bridge abutments west of Lucerne. After the CNoR route west of Jasper was abandoned, a highway was built toward Mount Robson on the CNoR grade, and highway decks were added to the bridges. Although I have not seen pictures of the Fraser Crossing bridge in service with the railway or as a highway bridge, I suspect that the approaches to this bridge were wooden trestles. I don't know if this bridge had through trusses and plate girders.

The best descriptions I have seen are from visitors to Jasper Park in the 1920's or 30's who describe riding open touring cars (Brewsters?) across very narrow "old railroad bridges" to reach Mount Robson.

A legend of the Jasper area involves a very wealthy German film maker (possibly a Nazi) who filmed an adventure movie in the 1930's along the former CNoR right of way west of Jasper. The film was not very good, and suspect politically but involved a scene where some very valuable Mercedes Benz cars were driven off a cliff (and abandoned there by the film crew). Since then, many have searched without success for the wreckage. Those that have seen the film agree they are real cars and not models.

The University of Alberta has an excellent on line Atlas of Alberta, which includes a very accurate and detailed map of Alberta rail lines including a detailed map of the CNoR / GTP line consolidations. (Phil Mason)

Canadian Northern Last Spike Celebration at Kamloops BC

The Kamloops Heritage Railway operated a railway excursion to celebrate the centennial of the Canadian Northern's Last Spike at Basque BC. The ceremony at Basque had happened on January 23, 1915, but the Kamloops celebration was planned for June in the expectation that the excursion would be led by locomotive KHR 2141, built in 1912 by Canadian Locomotive

Company for the Canadian Northern Railway. The unit has been undergoing a major renovation for several years which was expected would be complete in time for the run.

However work was not complete by June 19, so Canadian National Railway provided a diesel, CN 2141, to lead the way. The excursion originated at the former CN Kamloops Lorne Street station and then proceeded to Kamloops Junction on the CN main line and then returned to the Okananan substation for a last-spike enactment.

Among the passengers was Wendy Nelson, whose great-great uncle, Sir William Mackenzie was a cofounder and president of the Canadian Northern.

Although it missed the ceremonies Kamloops Heritage Railway's steam locomotive 2141 is once more operational. Sidelined in 2013 when it failed a Transport Canada inspection, it was restored to service after an expense of about $250,000 and over 6,500 hours of volunteer labour. The funds came from grants from the City of Kamloops and fundraising.

The 2141, was retired in 1957 and then was on display in Kamloops's Riverside Park until restoration was stated in 1993. In 2002, the locomotive once more was fired up and worked for 12 years until the inspection.

The weekend of August 22 saw the restored engine leave the former CN Kamloops station for a 90 minute round trip with a consist of three open coaches, a café car and a caboose. (Kamloops Heritage Railway edited)

Ex CNR 2-8-0 2141 M-3-d (CLC 1912) is back in operation after a major overhaul. Russ Grycan

L'ancienne locomotive 2141 du CN, une 2-8-0 de la classe M-3-d (CLC 1912) est de nouveau en service après une révision majeure. Russ Grycan

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BACK COVER TOP: On a bright September 7, 1950, No. 4 - Grandview PCC car 427, with North Vancouver's Grouse Mountain as its backdrop, swings east onto Venables Street, making its way, soon south along Commercial Drive, to its outer terminus at Cedar Cottage, 18th Avenue and Findlay Street, following the same route the Central Park interurbans followed on their 1891 inaugurated run to New Westminster. Service terminated on the abandoned track in the foreground in 1927. PCC 427 is five years old, resplendent in B.C. Electric's new bus-and-trolley coach paint scheme.

HAUT DE LA PAGE COUVERTURE ARRIÈRE: Par un 7 septembre 1950 magnifique, avec la montagne Grouse de North Vancouver à l'arrière-plan, le tramway PCC 427, de la ligne numéro 4 Grandview, vire à l'est sur la rue Venables et roulera bientôt vers le sud sur Commercial Drive pour atteindre son terminus à Cedar Cottage, à l'intersection de la 18e Avenue et de la rue Findlay. Il parcourt le même trajet que les interurbains passant par Central Park suivirent vers New Westminster à partir de 1891. Une partie dangereuse de ce trajet fut modifiée en 1927; la voie à l'avant-plan fait partie du segment abandonné. Le 427, âgé de cinq ans, est resplendissant dans la nouvelle livrée adoptée pour les autobus et tramways de la B.C. Electric.

BACK COVER BOTTOM: Montreal Transportation Commission brings up the end of the famous parade of historical urban transportation vehicles on August 30, 1959. This marked the end of 98 years of street railways in Montreal. The location is Franchère Street, approaching the Mount Royal carbarn. A previous short but drenching rain ensured that the occasion would be long remembered by the parade's participants. Robert Sandusky

BAS DE LA COUVERTURE ARRIÈRE: Le 30 août 1959, la Commission de transport de Montréal clôt un défilé mémorable de véhicules de transport urbain. Celui-ci marqua la fin des 98 années d'utilisation de tramways à Montréal. L'endroit est la rue Franchère, à côté des remises de la rue Mont-Royal. Une pluie de courte durée mais assez intense fit en sorte que l'occasion serait longtemps présente dans la mémoire des participants. Robert Sandusky