

## C O N C L U S I O N S

### THE PRESIDENT'S CONFERENCE COMMITTEE CAR AND LICENCE AGREEMENT FOR THE MANUFACTURE OF THE P.C.C. CAR IN AUSTRALIA.

After the many inspections we made of the P.C.C. cars in the various cities of the United States of America and Canada, we are of the opinion that this car is a decided improvement on all other forms of streetcars operating in these cities.

The silent operation, rapid acceleration and comfortable riding qualities are only a few of the many improvements on the older types of streetcars.

It is worthy of note that where this car is in operation, the public's confidence in streetcars has been completely restored, although the rising cost of this car is causing some concern to the operators.

On November 28th., a report was submitted to the Chairman in connection with the proposals as follows:

- (1) The negotiations carried out in U.S.A. for the purchase of the complete P.C.C. car for this Board, to be used for experimental purposes on the Board's system.
- (2) Or, alternatively, for the purchase of a set of bogies and electrical equipment for installation on the Board's S.W.6 car.
- (3) The proposed licence for the Board to manufacture the P.C.C. car or parts thereof, in Australia, as negotiated originally by the Chairman in 1938.

These matters were discussed by the Board on December 12th., and after hearing our views and recommendations, the Board decided to purchase from the St. Louis Car Company, a complete set of P.C.C. car bogies and electrical equipment of the latest type.

It is anticipated that by the introduction of these bogies on the S.W.B. car, the noise associated with the existing bogies will be practically eliminated. The Board also decided to accept the licence agreement for the manufacture of the P.C.C. car in Australia.

This agreement is practically a facsimile of the proposal submitted to the Chairman in 1938. For further details regarding this matter, refer to pages Nos. 10, 11, 12, 22 and 23.

#### MODERN TREND OF TRANSPORT.

There appears to be a considerable diversity of opinion amongst the transport authorities in the United States and Canada regarding the trend of street transports in these countries.

However, it is generally agreed that although the number of street cars is definitely on the decline, most authorities will continue to operate them where the loading exceeds 3,500 passengers per hour. This matter was previously reviewed under the heading of "The Place of the Trolley Coach and Other Vehicles", on page 60.

#### THE OPERATION OF TROLLEY COACHES AND FUEL BUSES.

It is considered that the trolley coaches and fuel buses have a definite place in any transit system depending on the density of the traffic to be carried.

In the United States and Canada, the chief use of the trolley coach is projected on routes now operated by street cars where both the rails and the street car equipment are overdue for replacement.



WORKSHOPS.

The Board's workshops are superior in every respect to those operated by the transit organisations we visited - except in a few instances where improved machinery had been installed.

It must be noted however, that the shops visited were utilised only for maintenance repairs and not used as manufacturing shops. It is their custom to purchase vehicles ready for service and any replacements are obtained direct from the manufacturer.

PERMANENT WAY.

During the war years, the maintenance of the permanent way, both in the United States and Canada, was neglected owing to practically all the labour usually engaged on this work being called up for more essential war services.

The Board has indeed been fortunate during the war years in being able to provide labour although somewhat reduced, to maintain the tracks in a fair condition.

The construction methods and types of construction in use in the countries visited, are considerably below the standard maintained here.

CONSTRUCTION PLANT.

As all reconstruction and construction works are usually carried out under contract, only maintenance plant is required and this was found to be out of date and due for immediate replacement, which was not possible on account of the control on plant replacements during the year.

The construction plant inspected at the Inspectors' works however, proved of much interest. Refer to pages 6, 7 and 8.

## CONCLUSIONS (page 5.)

### HEADWAY RECORDER AND TWO-WAY RADIO 'PHONE.

The headway recorder and two-way 'phone system as installed in Toronto, is considered by us essential for the efficient operation of the Board's system. Refer to full description, pages Nos. 65 and 66.

### PUBLIC RELATIONS.

The principle adopted by tramway operating organisations in the United States and Canada, provides the public with all necessary information regarding the running of the various systems, and according to recently published reports received, the practice is highly appreciated by the patrons. It is suggested that this matter could be improved upon in our system.

### CONDITIONS AND AMENITIES.

The conditions and amenities granted to the Board's employees are far superior to those received by employees of any organisation visited by us.

### RESEARCH DEPARTMENT.

As described on pages 34 and 35, this Department is considered most essential for the efficient operation of any transit organisation and it is suggested that the Board's system could be greatly improved if the Testing Laboratory with its capable staff and present equipment were extended to permit of its activities being used to cover a greater range of investigations.

THE BOARD'S DISTRIBUTION DEPARTMENT.

Whilst inspecting various systems, an opportunity was provided to view the electrical departments of the transit systems.

From our observations, we formed the opinion that the Board's electrical department compares more than favourably with those we visited, especially with regards to the substations and equipment.

SOUNDSCRIBING DICTATING MACHINE.

This equipment is described fully on page 18. It is recommended that consideration be given to the purchase of this machine as it is considered that by its installation, greater efficiency in this respect will be achieved.

INFORMATION AND DATA.

The vast amount of information and data collected both in the United States and Canada cannot be detailed in this report, but it is suggested that for the benefit of the Board's system, the information applicable to each Department be submitted to the Executive Officers for their comments and recommendations.

THE BOARD'S TRAMWAY SYSTEM.

In our opinion, the Board's tramway system compares favourably with any inspected in the United States and Canada, although by comparison, the majority of undertakings are vested with greater powers than this Board, controlling the entire street surface transport in their metropolitan areas.

Further comparison of the financial statistics of the various transit systems visited disclosed that the Board is in an unassailable position in this regard.

CONCLUSIONS (page 7)

We wish to record our warm appreciation of the courtesy, kindness and assistance accorded us by the Executive Officers of all organisations visited. This good will facilitated our investigations, enabling us to return to Australia with information and data which, if incorporated in the Board's system would, we are sure, prove of inestimable value.

*S. M. Richardson*

MANAGER

*H. H. Bell*

PERMANENT WAY ENGINEER

*M. J. Atkinson*

MANAGER, PRESTON WORKSHOPS.  
1947.

We cannot conclude without expressing our indebtedness to the Permanent Way Engineer, Mr. H.H. Bell, for his efforts in drafting this report.

*S. M. R.*

*H. H. Bell*

# I N D E X

---

## Page Numbers.

Accelerometer.	30, 33, 34.
Accidents - Incident of	4, 48.
Air View Map - Boston.	27
American Transit Association.	17
Boston	26
Brisbane	1
Bus - Chassisless.	53
Bus Design - Fageol.	71
Car Washing - Mechanical.	43
Chassis-less Bus.	53
Cleaning Solvent, "Blascoloy"	29
Cleaning - by Suction.	68
Cleveland.	47
"    Organisation Chart.	52
Clocks, Bundy.	18, 19.
Coin Counting Machine.	5
Conduit System.	20
Conclusions.	78, 84.
Duplicators.	46
Fageol Bus Design.	71
Headway Recording Instruments.	19, 65, 66.
Lighting - Temporary.	32
Library, Technical.	70
Motor Car Parks.	36
New York.	10
Painting	31, 42, 69.
Pension Fund Societies.	73
Permanent Way.	5, 25, 30, 69.



	<u>Page Numbers.</u>
P. C. C. Cars.	
Axle Assembly.	24
Brakes.	21
Controllers.	25
Double Ended.	3, 4.
Inspection Mileages.	29
Latest Car, No. 1600.	10, 22, 23.
Lighting System.	24
Maintenance Costs.	24
Manufacturers of Components.	11
Manufacturing Licence.	10, 11.
Wheels.	21, 25, 29 42, 66.
Philadelphia.	28
Pittsburgh.	22
Plan Printing Machine.	46
Radio System, Two-way.	51, 66.
Rail Corrugations.	32
Rail Cutting Machine, "Racine"	7
Research Division.	34
Revenue - Various Types of Vehicles.	3, 48.
Rostering.	44
San Francisco.	3
Seat Covering - "Koroseal".	23
Sick Benefit Association.	73
Sound Scribing Dictating Machine.	18
Special Work.	6, 31, 42.
Springs - New Type, "Duoflex"	37
Stopping Places - Numbering of	1

Page Numbers.

St. Louis.	38
"    Public Service Company.	40
"    Chartered Bus Service.	45
Thermit Welding	15, 31, 42.
Time Recorders.	19
Toronto.	53
Track Lifting Machine.	67
Traffic Density - Types of Vehicles for various	29, 61 to 64.
Traffic Instruction School.	67
Traffic Speed Up.	35
Trolley Coaches.	57, 58, 59, 60.
Union Square Garage.	8, 9.
United Steel Export Company.	16
Vehicular Selection.	62, 63, 64.
Vancouver.	75
Victoria.	75
Washington, D.C.	20
Workshop Equipment.	1, 29, 39, 41, 42, 68.