IN THE PRIVY COUNCIL No. 37 of 1934.

CITY OF WINNIPEG and CITY OF ST. BONIFACE

- and -

WINNIPEG ELECTRIC COMPANY

EXHIBIT 29(b)

BUNNELL REPORT.

REPORT

TO

Municipal and Public Utility Board

PROVINCE OF MANITOBA

ON

PUBLIC TRANSPORTATION SERVICES

IN

GREATER WINNIPEG

BY

MESSRS. WILSON, BUNNELL, & BORGSTROM, LIMITED
CONSULTING ENGINEERS,

MARCH 4TH, 1931

VOLUME I

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VOLUME I

NORMAN D. WILSON
MEMBER ENG. INST. CAN.
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MEMBER ENG. INST. CAN.
CARL A. BORGSTROM
LANDSCAPE ARCHITECT
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ONTARIO LAND SURVEYOR
JOHN MACK
ASSOC. MEM. ENG. INST. CAN.

WILSON, BUNNELL & BORGSTROM
LIMITED
CONSULTING ENGINEERS AND URBANISTS
LANDSCAPE ARCHITECTS
57 QUEEN STREET WEST
TORONTO 2

March 4th, 1931.

The Municipal & Public Utility Board,
Province of Manitoba,
Law Courts,
Winnipeg.

Sirs:

Pursuant to Order No. 354 of your Board, issued September 17th, 1930, appointing us to inquire into and report upon various matters affecting the Winnipeg Electric Company, Suburban Rapid Transit Company and the Winnipeg, Selkirk & Lake Winnipeg Railway Company, in respect of their railway utilities, we have now completed our inquiry on the public transportation services in Greater Winnipeg and hand you our report herewith.

Yours truly,

WILSON, BUNNELL & BORGSTROM, LIMITED,

AEKB/C. Per: A. E. K. BUNNELL

Copy of Order No. 354 appended hereto.

[C O P Y]

Order No. 354, 17th September, 1930

MANITOBA:
THE MUNICIPAL AND PUBLIC UTILITY BOARD ACT

File No. 20/30
Order No. 354
Wednesday, the Seventeeth day of September, A.D. 1930

Before:

The Chairman,
D. L. Mellish, Member.
Geo. H. Balls, Member.

Whereas the Board has pending before it an application of Winnipeg Electric Company for an increase in street railway fares in and about the City of Winnipeg, and the Board by its Order No. 320 intimated that for the purpose of disposing of such application it would, pursuant to its statutory powers, appoint competent persons to inquire into and report to it upon various phases of the operation of the traction utilities of said Company and its subsidiaries.

It is Ordered:

That Wilson, Bunnell and Borgstrom, Consulting Engineers, 57 Queen Street West, Toronto, Ontario, be and are hereby appointed to inquire into and report to the Board upon:

(1) The inventories and appraisals of the properties of the Winnipeg Electric Company, Suburban Rapid Transit Company, and the Winnipeg, Selkirk & Lake Winnipeg Railway Company, filed with the Board, and the same as related to other inventories or appraisals heretofore made.

(2) The operations, suitability of rolling stock, track, other plant and equipment and adequacy of service of the said companies.

(3) Revenue, costs of operation and allocation of accounts of or by the said utilities.

(4) Generally, all other matters related to the said inquiry now before the Board which in the opinion of said engineers or the Board should be inquired into and reported upon.

This order shall be effective as from September 10th, 1930.

THE MUNICIPAL & PUBLIC UTILITY BOARD,

(SEAL)

"W. R. COTTINGHAM,"
Chairman.

(Sgd.) MORRIS JACOB,
Secretary.

CONTENTS

***Diagrams, photostats, charts and Vol. II not printed.**

PART ONE

Summary of Findings and Recommendations

General Observation:

(1) According to our instructions the present inquiry was made necessary by the application of the Winnipeg Electric Company for

(a) Relief from paving charges.
(b) Relief from 5% tax.
(c) Increase in the fares of its traction utility

in support of which the Company contends that the revenue derived is insufficient to meet the cost of service, and, at the same time, permit a reasonable return on the investment.

(2) While it is true that the revenues of the utility are almost entirely derived directly from the users of the service and as such are affected by many factors outside the control of the utility, it is equally true that there are many elements which enter into the cost of service, some under the control of the utility, others under the control of the municipal authorities and which may and do adversely affect the cost of service and, hence, are unfair to both the users and the utility, but which if properly adjusted will materially assist in bringing about the desired result, viz., a good and sufficient service rendered at a reasonable fare and, at the same time, earning for the utility a just return on its investment.

(3) We have sought to bring out these facts which are pertinent to the issue and necessary to maintain the solvency and financial stability of the utility and the essential service which it renders to the community; all of which must be recognized under any plan of ownership or operation that may in the future be adopted. Unless relief in some form is granted the public will face an utter demoralization of service and the company virtual confiscation.

(4) Necessarily, our studies have been extended to include the services of the Suburban Rapid Transit Company and the Winnipeg, Selkirk & Lake Winnipeg Railway Company—both almost wholly owned subsidiaries of the Winnipeg Electric Company—and in some small degree of the taxicabs.

(5) We may say that in our investigation we were impressed by the co-operation existing between men and management in the utility and the evident willingness and desire to furnish adequate, reliable and courteous service. In our opinion the Management is capable and honest and is giving the best of its skill and ability with the means at its command to doing this.

Findings—

(1) That although population is increasing, the use of the public transportation services as furnished by the Winnipeg Electric Company, the Suburban Rapid Transit Company and the Winnipeg, Selkirk & Lake Winnipeg Railway Company is decreasing. This may be mainly attributed to increased use of private automobiles and increased use of taxicabs brought about by the increased purchasing power of large sections of the public and consequently a demand for a faster, more personal and more attractive service.

(2) That the frequency and regularity of the service is generally satisfactory and well maintained.

(3) That with minor exceptions all areas capable of supporting a mass transportation service are in receipt of same. However, conditions would be improved in specific areas by some re-arrangement of the facilities, the most necessary and urgent of which are:

(a) A crosstown highway from Portage Avenue to the north side of the C.P.R. tracks, with a transportation service thereon.
(b) Extension of track and service on Pembina Highway to Parker wye in order to serve the University in its new location.

(4) That with wide streets for trunk services, level grades and large amount of open track the conditions for efficient operation in Winnipeg are much superior to those in the average city.

(5) That with the co-operation of municipal authorities in the elimination of unnecessary car stops, co-ordination of traffic signals, abolition of diagonal parking and active co-operation on the part of men and Management, a considerable improvement in the speed and usefulness of the service can be effected.

(6) That on certain lines more service is being given than is warranted by the patronage and in a few instances patronage is so low that service is not justified except possibly to a very limited extent during rush hours.

(7) That the only lines which can be said to consistently earn their full cost of service are:

Portage—North Main.
Ellice Avenue bus.
Westminster bus.

There is a greater density of riding and more overcrowding on these lines than would be necessary if other lines going to make up the system likewise paid their way.

(8) That there are certain routes now served by street cars which could be equally well served by buses or trackless trolley coaches at lower operating costs considering that such operation would eliminate track maintenance, paving charges and fixed charges on roadbed and track.

(9) That in so far as the operating statements of the Companies are concerned no consideration has ever been given to the city fare zone as an operating entity.

(10) That the Winnipeg Electric Company, Suburban Rapid Transit Company and Winnipeg, Selkirk & Lake Winnipeg Railway co-operate in giving a single fare universal transfer in Winnipeg and seven adjacent municipalities with separate and distinct franchise agreements in each, many provisions of which do not meet present day conditions and should be revised.

(11) That in our opinion the Railway is in fair operating condition.

(12) That the values of the traction utilities of the several Companies for the purpose of fixing rates are:

Winnipeg Electric Company	$11,054,752
Suburban Rapid Transit	437,471
Winnipeg, Selkirk & Lake Winnipeg Railway	1,156,704
Total	$12,648,927

or by fare zones:

City fare zone	$11,276,918
Suburban fare zone	1,372,009
Total	$12,648,927

(13) That due to an inadequate fare structure, discriminatory taxes, and, in the suburban fare zones lack of population, with consequent lack of sufficient revenues, the companies have been unable to keep pace with modern improvements in rolling stock, car houses, shops, etc.

(14) That since the adjustment of fares

(a) Within the city fare zone in 1920 and 1921 the railway utility, with the exception of one year, viz., 1921, has failed by a material margin to earn the full cost of service.

(b) In the suburban zones—

(1) The Transcona bus which has been operating for the last three years has just nicely earned a return on the investment.

(2) The W.S. & L.W. Rly. has done little more than meet bare operating costs.

The S.R.T. and suburban lines of the Winnipeg Electric during 1929 and 1930, which are the only two years which we have definitely examined, have fallen far short of meeting their operating expenses. In the case of both the W.S. & L.W. Rly. and S.R.T. Co. the parent Company has been compelled to advance large sums of money to meet taxes, interest on bonds and other charges beyond the ability of these Companies to pay.

(15) That due to depressed economic conditions there will be a further decrease in riding from last year and that while in the city fare zone in 1929 63,654,211 were carried, and in 1930, 56,365,751, we do not expect in 1931 more than 50,000,000.

(16) That our investigation of the services and the routing leads us to believe that with a careful analysis of the demand satisfactory service can be given during 1931 by the operation of 10,200,000 car and bus miles, which is a decrease of but 5% from last year, while the expected decrease in riding is 12%.

(17) That the cost of providing this service based on a continuation of the present taxes and paving charges, and including 3½c. per car and bus mile for renewals and depreciation (which is low, but which in our judgment is all that the present traffic will bear and be fair to both the users and the Company) and so far as power is concerned, treating the Traction Utility on the same basis as any other large customer, and with a rate of return of but 6% on the valuation aforementioned, will be 40c. per car and bus mile or a total of $4,080,000, requiring an average fare of 8.06c., after allowing for miscellaneous revenues from advertising, mail carriers, etc.

(18) That if the City of Winnipeg will agree to the elimination of the 5% tax on gross passenger earnings and bear a reasonable proportion of paving maintenance within the track allowance and the Municipalities of St. James and Tuxedo will likewise eliminate percentage tax, the cost of service will be decreased by an amount of approximately $200,000, which would make possible an average fare of 7.67c.

(19) That one of the factors which is tending to reduce the revenue of the Electric Railway Utility at this time is the large number of automobiles and taxicabs which are operating at the rate of 50c. for five passengers from point to point in the city. These rates are not only lower than the rates set out in the City's Taxicab By-law but also appear to be a contravention of the agreement re jitneys between the City of Winnipeg and the Winnipeg Electric Company and of the By-law passed by the City in pursuance thereof.

(20) That the community needs the service and if under private ownership a true balance cannot be established then in justice to the car rider, the general public and the shareholders of the Company, some 3,000 of whom are residents in Greater Winnipeg, there would seem to be no option but for the municipalities to take over and assume the responsibility for any loss either by direct ownership and operation or some co-partnership method.

Recommendations—

(1) That the 5% tax on gross passenger earnings be eliminated.

(2) That the utility be required to pay towards the initial cost of foundations and paving within the track area that amount which represents the excess over and above the normal cost to the municipality of such paving with no car tracks.

(3) That the contribution of the Utility to maintenance of paving within the track area be limited to 25%.

(4) That subject to (1), (2), and (3) having been adopted, the following schedule of fares be made effective forthwith:

Cash fares:	Adults	10c.
	Children	5c.
Tickets		3 for 25c.
Tickets		14 for $1.00
School Children's Tickets		8 for 25c.
Weekly Pass		$1.25

(5) Our studies show that the bulk of the riding originates at least one mile beyond Portage and the Mall, on the one hand, and Portage and Main on the other; that the bulk of the riders are necessity riders, but because there are approximately 140,000 people living within a mile and half of Portage and Main Street we are of the opinion that many of these people may be walking for reasons of economy, and consequently we are of the opinion that the aforementioned fares having been given effect to, that experiments should be conducted on a limited scale under the supervision of the Board with short haul zones at 5c. per ride without transfer privilege. If these experiments prove successful in inducing new riding and thereby increasing gross revenue, their application should be extended with resulting benefit to the car riders as a whole.

(6) That the changes in routing set out in the body of the report, Part Six, be proceeded with.

(7) That when the above fares are made effective the Utility be required to establish a renewal and depreciation reserve of 3½c. per revenue car and bus mile operated, such reserve to be treated as a trust fund and disbursed only on the approval of the Board.

(8) That the Utility be allowed an initial return of 6% on the value of the property as found by us and on such additional capital as may from time to time be required such return as the Board may consider necessary to attract such capital.

(9) That with respect to the single fare zone the Company be granted a new consolidated franchise approved by the Board with all the municipalities concerned signatories thereto on a service-at-cost basis with provision for flexible fare structure and recapture by the municipalities at any time.

That the suburban lines outside the city fare zones of the Suburban Rapid Transit and Winnipeg Electric Company be abandoned except outside financial assistance be forthcoming.

(10) That when the above recommendations have been made effective the Utility, as soon as in the judgment of the Board its financial condition permits, be required to proceed with the programme of improvements and betterments as outlined in the body of the report in Part Four at an estimated cost of $676,000 from renewal and depreciation reserve and $1,165,000 from new capital.

(11) That legislation be applied for to place taxicabs under the jurisdiction of your Board.

(12) That pending a new franchise arrangement the Companies be required to submit monthly operating statements to the Board in two distinct groupings—

(a) That within the city or single fare zone, and

(b) That outside the city or single fare zone,

and that pending the readjustment of the franchise the Companies furnish the Board each three months with an estimate for the succeeding quarter showing the estimated service required for that quarter and a budget of estimated revenue and expenses in connection therewith.

PART TWO

INTRODUCTION

Types of Transportation in Cities—

Transportation to an ever increasing extent is one of the prime essentials of modern life. In cities but three main types have yet been developed: viz., surface, underground and elevated, their use depending in large measure on the area, population and prosperity of any particular city. Obviously Winnipeg has not reached a size where any type other than that of surface transportation is necessary or can be afforded. Further observations are accordingly directed solely to surface transportation.

Surface transportation may be private as exemplified by the private automobile or public as furnished by the street car, motor bus or taxicab. The taxicab furnishes public transportation of a personal kind, while that furnished by the street car or bus is classed as mass or collective.

Necessarily, and this applies to private as well as public transportation, the facilities offered, the services rendered, and the cost of same will bear a definite relation to the layout, width and location of streets, the density of population and the relative location of residential, retail, financial, industrial and recreational areas, and to such barriers as rivers and steam railroad lines, hence on this count alone the importance of a co-ordinated scheme of civic development.

Growth of Cities—

Unfortunately, most cities on this continent have grown to large proportions (and Winnipeg is no exception) before any concerted action has been taken to guide civic development along sane and rational lines, and today the same cities are paying the piper for past neglect to the tune of millions of dollars annually; for new streets, the widening and extension of others and the building of public services of all kinds across miles and miles of vacant frontage, and the end is not yet. For example, the City of Toronto in the past 15 years has been compelled to spend fully $20,000,000 on the purchase of property acquired for street openings, widenings and extensions, and which would have been largely saved had definite action been taken before she had passed the 300,000 mark; which is just about the population Greater Winnipeg has today.

In fact the time is coming when the cities' technical and financial advisers will be required to co-operate, and put forward to the municipal authority annually a list of projects and services which in their judgment are most essential to the cities' future development and so apportioned that they can be paid for without over-burdening the taxpayers or placing the municipal authority in a position where it will be hampered or embarrassed in its future fiscal operations.

Such a forecast should be for a ten-year term, certainly not less than five—and annually adding a year to it so as to maintain continually the same length of term.

Transportation Conditions Prior to 1900—

Forty years ago the street car, aside from the horse cab and the few equipages of the wealthy, was the sole means of internal transportation, and in the transition from horse to electric cars it was thought the ultimate had been reached. Cities were expanding in population and area, and promoters saw in the demand for service and in the spread between the ever popular nickel and the cost of service a very lucrative profit, and franchises were sought far and wide. In most instances the franchise as granted gave the utility exclusive right for street railway transportation for a definite term of years. The maximum cash fares were fixed at 5c. and ticket fares for as low as 3 1-8c. So valuable did the franchise privilege appear to the promoters that they consented to pay to the municipalities in many cases not only ordinary taxes but in addition percentages of gross receipts and to bear the entire cost of such pavement as might from time to time be ordered by the city as necessary within that portion of the street occupied by the rails.

Transportation Conditions, 1900-1930—

Up until the commencement of the war in 1914 everything was rosy; cities were growing; and the street cars were used not only for business but for pleasure. The railways expanded their services, developed parks to which thousands flocked in the summer evenings and on holidays. Then came the war. Wages and the price of materials sky-rocketted, then in succession and at a startling pace came paved streets, the private automobile, the taxicab, the up-town theatre, the up-town store, and the down-town apartment, and last, but not least, the radio. Together they have played havoc with the traffic and

the revenues of the street railways, and the street railway park has given way to the attractions of the entire countryside.

Due to the faster speed of the automobile people who could so afford were no longer content to be jerked and bumped along the street at a speed of 8 to 9 miles per hour on a public street car making 15 to 20 stops in a journey down-town. The net result has been that whereas in cities the size of Winnipeg as recently as 15 years ago the average riding habit was from 250 to 300, it has today dropped to between 150 and 200. Not that the people are riding less, in fact they are riding more, but the mass transportation vehicle is getting the short end. In addition to the loss in riding the situation was further complicated for the traction utilities by rising price levels, the unwillingness of the car rider to appreciate same, and the further fact that the municipal authority in many instances took advantage of legal loopholes in the franchise to permit wholesale jitney and bus competition.

No city can support two transportation systems. Obviously, if in addition to the services rendered by the bona fide traction utility, there is a service given by jitneys as well, the riders will pay more than for only one kind, as the two services will cost more and there is only one source of revenue. In many cities the utilities failing to negotiate amendments to their franchise to enable them to cope with the situation were forced to curtail services, let the track and equipment run down and eventually went into the hands of receivers. The situation became so involved that, and as your Board is well aware, the municipalities in some instances, notably Toronto, Detroit and Seattle, assumed ownership and operation of the utility, but more generally the cities and the utilities appealed to the legislatures on all manners of questions concerning franchises, capitalization, valuations, accounting, depreciation, standards of service, fares, degree of municipal control, fair return, etc., etc. Many of these questions involved lengthy studies and inquiries of a legal, engineering and acounting nature in order to be properly determined. Realizing their inability to adequately cope with same the legislatures set up administrative bodies in the form of commissions to devote their full time to the handling of this work. Usually such were called Public Utility Commissions and invested with investigatory, advisory and mandatory powers in all matters concerning public utilities.

Struggle of Traction Utilities
for Existence, 1920-1930—

The utilities in an endeavor to attract riding in many instances have extended services by both rail and bus; have with the co-operation of the municipal authority increased speed of operation in some instances to as much as 11 miles an hour; have put on attractive and comfortable cars, de luxe buses, trolley coaches and special long haul express services; and, as a measure of economy two-man operation has, in large measure, been replaced by one-man operation. Maintenance methods have been improved and everything possible done to reduce the cost of operation to the end that the resultant fare necessary to meet the cost of service would be held at the lowest possible figure, and one which the public was willing, ungrudgingly, to pay.

Two other factors entering into the cost of service and the resultant fare are taxes and paving charges. In many cases a feature of the franchise has been that the utility pays a percentage of its receipts as a special tax to the municipality, and in addition pay the entire cost of both constructing and maintaining the pavement within the limits of the track allowance (for double track about eighteen feet).

Under equitable public utility regulation which assures a *fair deal* to both the Utility as represented by the investor and the employee, and the Public as represented by the municipal authority and the car rider, it is being more and more recognized by both the commissions and by the municipal authorities, that the continuance of the tax on earnings and the payment for track allowance paving is an unjust discrimination against the car rider. In fact the whole trend of Public Ownership of Utilities, in this country at least, has been to relieve the user of the service of every possible tax and throw the burden upon the general taxpayer.

Furthermore, despite the increased use of private automobiles and taxicabs, someone in practically every family uses the facilities of the mass transportation utility, if not every day, at least occasionally, and the utility continues to be just as essential to the community as ever it was. However, the utility must adjust itself to the present conditions and proceed to build on that—and it is not made easier by the fact that the present day rider is thinking in terms of the automobile. In many cities there are signs that the saturation point of automobile ownership and use is being reached, in fact in New York and Chicago it has already been reached, same being controlled by lack of street space and the ever-present time factor. And a proper balance between personal and mass transportation will only be possible when the saturation point is reached. Then, presto! Along will come the aeroplane operating on a gyroscope principle and the battle will start all over again.

As showing that the utilities as a whole appreciate the problems to be faced, we quote as follows:

1. From the 1929 report of the committee on equipment of the Transportation and Traffic Division of the American Electric Railway Association, the mouthpiece of the industry:—

"One of the most pressing necessities of our industry today is new equipment—vehicles are required which will stand up in service, which will have higher rates of acceleration and deceleratian, but which will change speeds smoothly, and which will be quiet and comfortable. Acknowledged trends in the transportation industry are:

1. Higher rates of acceleration, deceleration, and free running speed than now in use are needed, and that these recommendations should conform to this principle.
2. Economic necessity indicates a continuing trend toward one-man operation.
3. Greater comfort and convenience both for the passengers and for the operator are necessary.
4. There is need for more than one class of service, as to quality and price."

"The private automobile has changed our concept of what is a suitable travelling speed. The public now requires faster operation and will not continue to ride in surface cars if they are the slowest vehicles on the street."

2. Mr. E. J. McIlwraith, Staff Engineer, Chicago Surface Lines, in a paper before the Canadian Electrical Railway Association at its 1928 convention, said:—

"Most railway managements are working on what is equivalent to a service at cost plan, because of commission rule and commission control. The management is, then, in reality, representing the people as an agent in providing for public use one of the major necessities of a city. It owes a definite obligation to serve in the most complete way the needs of its citizens. Nearly all patrons served use both automobiles and public carriers, and practically all of the citizens of the city are in some way directly benefitted by street railway service, although some use the street railway only occasionally."

3. S. B. Way, President, Milwaukee Electric Railway, in addressing the Transportation and Traffic Division of the American Electric Railway Association in 1929, said:—

"The great mass of street railway riders today are necessity riders. They must be served. The unprofitable routes must be operated. The growth of cities demands extensions. What street railway company will of its own volition invest many thousands of dollars, in many cases millions of dollars, to make extensions in territory which no man today can guarantee will ever bring back a new dollar for an old one? It is this phase of the obligation that is placed upon the street railway industry, and the limitations of their right to pick and choose the profitable business in competition with other agencies, that I wanted to get before this meeting."

4. Two other quotations from the industry are as follows:

"There is no doubt that many people resent the jostling within a street car and are willing to pay a higher fare for specialized express service, the possibilities of which have been very incompletely realized to date, and a special division of the Company's organization might well be established to build up express service which would make possible the elimination of much private automobile use and fill a recognized need as an auxiliary of the public transportation business. Service can be made profitable because it can be rendered only at a price and where the business can be done profitably."

"One double-track line will carry 4 times as many people as an express highway. More than 200 years ago the streets of London were congested because too many people used private transportation vehicles. That was the origin of the first public transportation service. To return now to private vehicles would be a step backwards. Intelligent development of public transportation facilities is the only possible solution of the problem."

PART THREE

Type and Adequacy of the Transportation Facilities

General Observations—

Necessarily, and as mentioned in the "Introduction," the type of public transportation facilities in any urban community is a function of its population and area.

Whether such be adequate in turn depends upon:

The layout of the streets both in and connecting the several divisions or districts into which the community is divided by such barriers as hills, valleys, rivers, steam railroad lines, etc., and by residential, industrial and commercial areas.

Usually in the first stage of a community's development the need for adequate transportation is greatest between the various residential sections and the down-town business centre. However, as the community continues to grow sub-centres develop and the need for adequate crosstown connections becomes continually more urgent, and some day the municipal authorities wake up with a jolt to find that connections between the streets most suitable to serve this crosstown movement have been blocked by buildings and development of all kinds, and there is nothing for it but expensive butchering or surgical operations, which all too surely become more expensive for every year of procrastination and delay.

General Description of Greater Winnipeg and Transportation Facilities—

We would define Greater Winnipeg as all the territory within a radius of 25 miles of Portage and Main Streets, Winnipeg. It contains a present population, based on 1930 returns as filed by the several municipalities with the Provincial Government, of 310,000 persons, of whom approximately 281,000 are dependent, so far as mass transportation is concerned, on the facilities furnished by the Winnipeg Electric Company and its two wholly owned subsidiaries, the Suburban Rapid Transit Company and the Winnipeg, Selkirk & Lake Winnipeg Railway, as follows:

	Miles of Street Operated Over	Population Served	Population Per Mile
City Fare Zone—			
W.E.C., S.R.T., W.,S. & L.W., street car and bus	77.00	263,214	3,418
Suburban or Interurban Zones—			
W.E.C.—			
St. Norbert and Agric. College, street car	6.14	985	160
St. Mary's Road, bus	5.50	735	133
East Kildonan, street car	2.28	970	425
Transcona, bus	7.50	4,926	656
		7,616	
S.R.T.—			
Chareslwood, street car	3.70	670	181
Headingly, street car	7.77	2,992	346
		3,662	
W., S. & L. W.—			
Selkirk, street car	20.63	5,500	266
Stonewall, street car	14.05	1,500	106
		7,000	
Total Suburban Zones	67.57	18,278	270
Total All Zones	144.57	281,492	1,947
Excluding:			
(a) Persons scattered along the suburban or interurban routes and dependent more or less on rural occupations		3,853	
and,			
(b) Transcona		4,926	
Selkirk		3,900	
Stonewall		918	
Total "a" and "b"		12,597	

There remains an urban population either within or closely contiguous to the City of Winnipeg and tributary to the

(a) City Fare Zone	263,214
(b) Suburban Zones	5,681
	268,895

and as to whose public transportation requirements we are chiefly concerned. Of the 263,214 tributary to the City Fare Zone, 209,286 reside in Winnipeg, and fully 140,000, part in Winnipeg and part outside, live within one mile and a half, or thirty minutes' easy walk, from Portage and Main Streets.

With a few exceptions, to which reference will later be made, the location and extent of the transportation facilities as furnished by one or other of the three companies, is, in our judgment, entirely adequate, not only for the present but for some years to come. In fact, certain lines, and to which more detailed reference will later be made, have failed to justify their existence due in part to lack of anticipated population and in part to the extensive use of private automobiles. That the facilities for service, as represented by the miles of street over which service is rendered, have more than kept pace with the increase in population and riding, the following figures will show:

Greater Winnipeg—City Fare Zone

Year	Population Total	Population Index	Miles of Street Operated Over Total	Miles of Street Operated Over Index	Miles of Street Per 10,000 Population Total	Miles of Street Per 10,000 Population Index	Revenue Passengers Total	Revenue Passengers Index	Revenue Passengers Per Mile of Street Total	Revenue Passengers Per Mile of Street Index
1913	207,000	100	54.0	100	2.60	100	59,600,000	100	1,103,700	100
1920	228,000	110	60.5	112	2.65	102	65,200,000	109	1,077,700	97
1924	241,000	116	66.5	123	2.76	106	55,100,000	93	828,600	75
1925	242,000	117	68.5	127	2.83	109	55,100,000	93	804,400	73
1926	246,500	119	71.5	132	2.90	111	58,000,000	97	811,200	73
1927	248,500	120	73.1	135	2.94	113	60,000,000	100	820,800	74
1928	253,500	122	75.0	139	2.96	114	60,200,000	101	802,700	73
1929	258,500	125	77.0	142	2.98	115	61,200,000	102	794,900	72
1930	263,500	127	77.0	142	2.92	112	54,000,000	91	701,300	64

Thus while population increased by 27%, the facilities as represented by the miles of street operated over, both street car and bus, were increased by 42%; and this in face of the fact that revenue passengers—if we neglect the figures for 1930, which show a decrease from 1913 of 9%—at best have remained stationary, and revenue passengers per mile of street operated show a decrease of 28%. This loss is due, in large measure, to increased use of passenger automobiles, and hence, the present opportunities for the extension of mass transportation services are less than formerly and territory which, under the riding standards of yesterday, would have supported a service now has to do without.

Necessarily, if the full costs of service are to be contributed by the car riders, the greater earning power of the heavier traffic routes in the more densely populated sections must be used to support the outlying routes with lighter traffic. Consequently, if reasonable standards of service are to be maintained and overcrowding avoided on the heavier traffic routes, extensions of facilities into outlying districts must not be entered upon in any hasty or arbitrary manner.

It is a condition of the Winnipeg franchise that the City can order extensions into any area when the population reaches 400 persons for each 160 acres, and the inside edge of which is at least one-quarter of a mile removed from another car line.

That may have been all right in 1892 when all the riding sought the railway, but under present conditions the riding would barely meet the operating expenses for a fifteen-minute service. On the half-mile of track within the area itself, certainly nothing would be left for fixed charges or to meet the expense of transporting the passengers to their ultimate destination.

Corresponding figures illustrating the relation of population and passengers to the mileage operated in Toronto and Vancouver, are as follows:

	Population	Miles of Street Operated Over	Miles of Street Operated Per 10,000 Population	Revenue Passengers	Revenue Passengers Per Mile of Street Operated
Toronto—					
1919	537,000—100%	83.40—100%	1.54	215,000,000—100%	2,578,000
1924	614,000—114	98.37—118	1.61	185,200,000— 86	1,883,000
1929	739,000—137	121,11—143	1.63	206,800,000— 96	1,708,000
Vancouver—					
1919	169,000—100%	59.43—100%	3.49	35,000,000—100%	589,000
1924	190,000—112	64.12—107	3.37	49,000,000—140	764,000
1929	240,500—142	65.03—109	2.71	58,300,000—166	897,000

At first glance and using 1929 figures, it might appear that Winnipeg with 2.98 miles of track per 10,000 population and Vancouver with 2.71 miles enjoys better facilities than Toronto. Such is

not the case. But, rather it does show when taken in conjunction with the revenue passengers per annum, per mile of street operated over, namely:—

	Winnipeg	Vancouver	Toronto
1929	794,900	897,000	1,708,000

that the density of population in Toronto is much greater and that because of that fact Toronto can support a closer frequency of service and a greater number of street cars or buses, or both, per 10,000 population than is possible in either Vancouver or Winnipeg.

For Toronto: The other figures quoted show a trend very similar to Winnipeg. For instance, while the population from 1919 to 1929 increased by 37%, and the miles of street operated over by 43%, the total revenue passengers carried remained practically stationary.

For Vancouver: As between 1919 and 1929, while the population increased by 42%, the miles of street operated over only increased by 9%, despite the fact that up till 1924 there has been an increase in the total riding of 66%. While this increase in the total riding is remarkable, and can be only attributed to the great expansion in industrial and building activities, it is to be noted that since 1924 the rides per capita have fallen from 258 to 242, or, in other words, the trend of riding in Vancouver as in other cities is now decreasing.

General: As a general rule, it should further be noted, the larger the population of a city the greater the distances, and hence both the riding habit and the revenue passengers per mile of street operated are higher in the larger cities than in the smaller.

For the purpose of analyzing in greater detail the facilities for mass traansportation in Greater Winnipeg as measured by the location of the several lines over which service is rendered, we herewith divide the territory served into five major areas, as follows:

	POPULATION			
	Suburban Fare Zone		City Fare Zone	
	Total	Per Cent.	Total	Per Cent.
(1) East of Red River and North of C.P.R.	970	5.37	17,625	6.69
(2) East of Red River and South of C.P.R.	5,661	30.94	20,271	7.70
(3) West of Red River and South of Assiniboine	1,655	9.06	47,736	18.13
(4) West of Red River and North of C.P.R.	7,000	38.26	59,513	22.62
(5) North of Assinibine and South of C.P.R.	2,992	16.37	118,069	44.86
Totals	18,278	100.00	263,214	100.00

City Fare Zones:

Area No, 1—East of Red River and North of C.P.R.:

Population	Built-up Area	Miles of Street Operated Over	Population Per Mile	Population Per Acre of Built-up Area	Built-up Area Per Mile of Street
17,625	950 acres	6.58	2,678	18	144 acres

The outlets from this district are the Redwood and Louise bridges and routes operated are East Kildonan, Morse Place and Elmwood car lines and Talbot Avenue bus line. Except in isolated cases the entire population is within three-eights of a mile or 7½ minutes' easy walk of a transportation route. In our judgment, the lines as at present located are satisfactory.

Area No. 2—East of Red River and South of C.P.R.:

Population	Built-up Area	Miles of Street Operated Over	Population Per Mile	Population Per Acre of Built-up Area	Built-up Area Per Mile of Street
20,271	1,586 acres	12.29	1,649	13	129 acres

So far as public transportation is concerned the only existing outlet for street cars or buses is via the Provencher bridge. With the completion of the Norwood and Main Street bridges it is recommended that service be restored via same. Routes operated are: St. Mary's, St. Anne's and St. Boniface car lines and the Rue Archibald and Stockyards bus lines.

In addition the Park car line is made available to residents of Elm Park by the Elm Park bridge and in summer by a pontoon bridge at foot of Osborne Street.

Except in isolated cases the entire population is within three-eighths of a mile, or 7½ minutes easy walk of a transportation route, and, in our judgment, the lines as located are satisfactory.

Areas Nos. 1 and 2—Connection between:

Consideration should be given to a direct connection, during certain hours of the day, with Area No. 1 via Rue Archibald and Montcalm Street, as affording conveniences to employees in St. Boniface industries who may live in Elmwood or East Kildonan.

PART 3—TYPE AND ADEQUACY OF THE TRANSPORTATION FACILITIES.

Area No. 3—West of Red River and South of Assiniboine:

Population	Built-up Area	Miles of Street Operated Over	Population Per Mile	Population Per Acre of Built-up Area	Built-up Area Per Mile of Street
47,736	2,407 acres	14,36	3,324	19	164 acres

The outlets from this district for mass transportation units are the Main, Osborne and Maryland bridges. The routes operated are Park Line, Academy Road, Stafford-Corydon and Pembina car lines and the Morley and River Avenue bus lines. Except in isolated cases the entire population is within three-eighths of a mile, or 7½ minutes' easy walk of a transportation route, and facillties generally are satisfactory.

However, to take advantage of the Pembina Subway, we recommend the following changes and extensions:

(a) That the terminus of the Park Line be at River Park;

(b) That the territory north of River Park between Osborne and the Pembina Highway be served by a bus line on Beresford and Jubilee Avenues; and

(c) That Pembina line be extended through the new subway to a direct connection with the Fort Garry line, thus affording direct connection between the city and the new site of the University.

Also, we recommend that consideration be given to a high-speed-special-fare-coach-route, from Cambridge by Kingsway, Wellington Crescent, Stradbrook, Osborne and Graham to a terminus at the Grain Exchange; this in an endeavor to win back to the transportation utility at least a portion of those residents of the Crescentwood district, who now use their own automobiles or taxicabs almost exclusively.

Area No. 4—West of Red River and North of C.P.R.:

Population	Built-up Area	Miles of Street Operated Over	Population Per Mile	Population Per Acre of Built-up Area	Built-up Area Per Mile of Street
59,513	2,489 acres	11.96	4,976	24	208 acres

The mass transportation outlets from this district are the Main Street subway, and Arlington Street overhead bridge. The routes operated are: Selkirk, McGregor, North Main, Dufferin, Mountain and Sutherland car lines and the Cathedral-Bannerman and Manitoba bus lines.

Additional outlets for free wheel traffic are via May and McPhillips Street subways, and Salter and Arlington Street overhead bridges.

The greater bulk of the population is within a quarter of a mile and except for isolated cases is all within three-eighths of a mile, or 7½ minues' easy walk of a transportation route.

However, having regard to distribution of the population, the further fact that this area lies directly north of the central business district, the C.N.R. Shops in Fort Rouge, and the new site of the University, and the small patronage accruing to certain of the existing facilities, we recommend the following changes in the location of the several lines, viz.:

(a) Extension of Bannerman bus line to Parr Street;

(b) Extension of Arlington bus line from Arlington and Selkirk via Arlington, Alfred to McPhillips;

(c) That the Cathedral bus which is now routed by Cathedral, Scotia, Matheson, St. Cross and Inkster, be routed via Bannerman, Scotia, Matheson, St. Cross and Bannerman as and when paved by the city;

(d) That Sutherland Avenue car line be abandoned and replaced by a bus operation confined to rush hours only;

(e) Crosstown route via Salter Street and Mountain Avenue from Portage Avenue to Sinclair Street.

With respect to that portion of the area west of Main Street, it is to be noted that while there does exist for vehicular traffic an inadequate outlet into the central business district via the present Salter Street bridge, Parr, Isabel and Balmoral Streets, that the only outlets of the traction utility are via Main and Arlington Streets, which are 1.32 miles apart.

The volume and trend of traffic being southerly rather than easterly, the area, accordingly, would be better served by a north and south line to supplement the east and west lines on Selkirk and Mountain.

In this connection a general By-law for the construction of bridges over the C.P.R. at both Salter street and Sherbrook Street was put to the ratepayers at the November election just passed. Both were defeated. Ultimately one, at least, of them must be built and as the greatest movement of both persons and vehicles is and will continue to be towards the central business district, Salter Street most certainly will afford the greatest good to the greatest number, and in addition to forming a link in a great cross-town highway from the standpoint of vehicular traffic will, for mass transportation, intersect Portage Avenue at Osborne Street, making a direct connection with the Portage, Park, Stafford, Ellice and Westminster routes, with a consequent saving of more than 7 minutes over present routing.

In our judgment, service over such a route would best be rendered by trackless trolley coaches.

The Salter Street extension having been completed and service operated thereon via Salter and Mountain, then—

(f) Dufferin Avenue—Service on Dufferin Avenue would then no longer be required and track should be removed therefrom;

(g) Mountain Avenue—Likewise, track on Mountain Avenue from Main to Arlington would no longer serve any useful purpose and should be removed therefrom.

Area No. 5—North of Assiniboine and South of C.P.R.:

Population	Built-up Area	Miles of Street Operated Over	Population Per Mile	Population Per Acre of Built-up Area	Built-up Area Per Mile of Street
118,069	4,092 acres	31.81	3,711	29	128 acres

This area contains the central shopping district, the financial district and the bulk of the wholesale district. Consequently, the services from the other areas naturally converge on same. In addition it is served locally by Portage, Sargent, Notre Dame, William, Logan and Sherbrook car lines and by Westminster, Ellice, Arlington and Valour Road bus lines. Except for scattered population in St. James and some population around Sherburn, Garfield and Dominion Streets, no population within this area is further removed from a transportation route than a quarter of a mile, or 5 minutes' easy walk.

However, in order to bring about a better balance of the facilities and to rid the district of certain worn-out track we would recommend as follows:

(a) That Ellice Avenue bus line, when the city pave the street, be extended westerly three blocks to Ingersoll Street. The present bus operation should be replaced by a trackless trolley operation;

(b) That because the tracks, which have been in place for some 25 years, require complete rehabilitation, the street car line on Sherbrook Street from Portage to Logan be abandoned and replaced by a trackless trolley coach line. Similarly,

(c) That tracks on Logan Avenue from Main to Arlington, which have been in place some 23 years, are practically worn out, be abandoned and a trackless trolley coach line be substituted for the present street car service;

(d) That the easterly terminus of the Westminster bus line be Vaughan and Portage and the present connection at the west end of the route with Portage on Aubrey be abandoned and replaced by a service on Aubrey, Wolseley and Ethelbert. The present bus operation should be replaced by a trackless trolley operation;

(e) That when Salter Street is extended to the Mall a trackless trolley coach line be established on same forthwith.

While the width of Portage and Main Streets, viz., 132 feet, is of great advantage to the transportation facilities, it is not to be expected or desirable that the great bulk of the service in the down-town area be forever confined to these two streets. Consequently, the restricted width and poor arrangement of the other streets in the area offers a problem for the future.

General—

Greater Winnipeg in the past ten years shows a growth of approximately 40,000, and in our opinion the outlook for the near future does not justify a prediction that growth will be at any materially greater rate. Consequently, in our judgment, every effort of the municipal authorities and the realtors should be towards encouraging new-comers to reside in and fill up those areas into which mass transportation services have already been provided. No other one thing would do so much to keep the tax rate, and, incidentally, the car fares within reasonable bounds.

Suburban Zoness

Area No. 1—East of Red River and North of C.P.R.:

A railway service is operated over open track on east side of Henderson Highway:

Zone	From	To	Miles	Population	Population Per Mile
No. 1	John Black Church	Lot 48	1.58	675	427
No. 2	Lot 48	North Boundary of North Kildonan	.70	295	420

Area No. 2—East of Red River and South of C.P.R.:

A bus service is operated on St. Mary's Road.

Zone	From	To	Miles	Population	Population Per Mile
No. 1	Berrydale	Lot 62	1.77	565	319
No. 2	Lot 62	Christie's Farm	1.86	80	43
No. 3	Christie's Farm	Ferry Road	1.87	90	48

Transcona: An interurban bus service is also operated from Bus Station on Hargrave Street via Graham, Main, Higgins, Nairn-Winnipeg, a distance of 7.5 miles to the Town of Transcona, which has a population of 4,926.

Area No. 3—West of Red River and South of Assiniboine:

A street car service is operated over open track on the west side of the Lord Selkirk Highway:

(a) From Municipal Hall to St. Norbert—

Zone	From	To	Miles	Population	Population Per Mile
No. 1	Municipal Hall	College Gate	2.14	155	70
No. 2	College Gate	Lot 105	1.21	95	80
No. 3	Lot 105	St. Norbert	1.37	335	244

(b) From Lord Selkirk Highway to Agricultural College—

No. 1	Municipal Hall	Agricultural College	1.42	400	281

A street car service is operated over open track on the north side of Roblin Boulevard to Charleswood Post Office:

Zone	From	To	Miles	Population	Population Per Mile
No. 1	Park Gate	Lot 43	1.89	335	177
No. 2	Lot 43	Charleswood P.O.	1.81	335	185

Area No. 4—West of Red River and North of C.P.R.:

An interurban car service is operated—

(a) Over open track on the west side of Lord Selkirk Highway, a distance of 20.63 miles to the Town of Selkirk. Total population served is 5,500;

(b) Over open track in part on private right-of-way and part on the side of the public road allowance from Middlechurch, a distance of 14.05 miles to the Town of Stonewall. Total population served is 1,500.

Area No. 5—North of Assiniboine and South of C.P.R.:

A street car service is operated over open track on the south side of Portage West:

Zone	From	To	Miles	Population	Population Per Mile
No. 1	Deer Lodge Wye	Victoria	2.00	1,947	973
No. 2	Victoria	St. Charles	1.99	530	260
No. 3	St. Charles	Memorial Cemetery	2.42	270	110
No. 4	Memorial Cemetery	Stevenson	1.36	245	180
No. 5	Stevenson	Headingly	.....	.....	.....

Excluding W.,S. & L.W. radial to Selkirk and Stonewall, and W.E.C. bus to Transcona, in no other instance is the riding sufficient to pay the operators' wages, to say nothing about other actual and continuous costs that must be met, such as repairs to track, repairs to cars and cost of power. Furthermore, without subscribing to the principle but merely as a measure of ascertaining whether the service is justifiable as a feeder to the City Fare Zone, if we were to add to the zone fares the full revenue which patrons of the respective zones contribute to the City Fare Zone, as detailed later under "Cost of Service," there still is not sufficient money to meet the aforementioned operating cost to say nothing about general office expenses, depreciation and return on investment.

In fact, we can find no basis for justifying continuance of service on these lines except contributions are made thereto:

(a) By the municipalities to make up at least the "out-of-pocket" costs involved as is being done in the Toronto and Montreal suburban districts, or

(b) By the electric utility of the companies in those cases where a transportation service has been provided in part consideration of a power franchise.

General—

The great body of the public have failed to appreciate (or have shut their eyes) to the difficulties under which the transportation utilities have laboured due to increase in wages and cost of materials on the one hand and increased use of personal transportation on the other and go on expecting managements to do the impossible.

Looking to the future there is some possibility that Portage Avenue West in the first two zones, i.e., as far as St. Charles, can be made to pay and the same applies to the Agricultural College line, when the University commences to function in its new location.

TYPES

Having dealt with the facilities as to location of lines, we will now deal with them by types:—

Track—

Mileage by Zones—

Altogether, the three traction utilities operate 182.70 miles of track made up as follows:

	W.E.C.	S.R.T.	W.,S. & L.W.	Total
City Fare Zone—				
Winnipeg	94.41	.....	.33	94.74
Other Municipalities	18.50	5.00	2.54	26.04
Total	112.91	5.00	2.87	120.78
Suburban Fare Zone—				
Pembina Highway and Agriculaural College Line	6.33	.....	.....	6.33
East St. Paul	2.25	.....	.....	2.25
Charleswood	.....	3.72	.....	3.72
Portage West	.....	11.65	.....	11.65
Selkirk	.....	.....	20.40	20.40
Stonewall	.....	.....	17.57	17.57
Total	8.58	15.37	37.97	61.92
Grand Total	121.39	20.37	40.84	182.70

Mileage by Types—

City Fare Zone—

(a) Open ..... 46.96 miles

(b) Paved ..... 73.82 miles

Suburban Fare Zone—

(a) Open ..... 61.92 miles

(b) Paved ..... none

Gauge and Devil Strip—

All track is laid to standard gauge, 4 ft. 8½ in. The present standard width of devil strip is 7 ft. 3½ in., as affording the maximum width of unrestricted pavement for free wheel traffic, and at the same time a clearance between cars on opposite tracks sufficiently wide for pedestrians who might be so unlucky to get caught between same.

Track Standards—

Open Track: The open track is nearly all laid with 60 lb. "T" rail supported on gravel ballast and wood ties, and very similar in all respects to steam railroad practice.

Paved Track: The paved track is confined entirely to the City Fare Zone and almost entirely is laid as double track.

Rail: Earlier construction, as instanced by the track on parts of Sherbrook Street constructed in 1906, Logan Avenue in 1907, Notre Dame in 1908, was laid with the same type of rail as open track, viz., 60 lb. "T" rail, and supported on wood ties, but for the gravel ballast there was substituted six inches of concrete under the tie and carried up to within three or four inches of the rail head. On top of the concrete a wearing surface of asphalt was laid.

It was found in practice that 60 lb. 5-inch "T" rail did not stand up under traffic. Consequently, as a result,

(a) The weight has been gradually increased to 115 lbs. for portions of Portage and Main Street and to 103 lbs. on other streets, and

(b) The type has been changed to a 7-inch grooved girder section to conform with present standards of street railway practice.

Bonds: Whereas, electric contact between the rails was formerly obtained by copper bonds, welded to the head of the rail, the rail ends are now welded together to form a solid mass, which eliminates:

(a) Stray currents and subsequent damage from electrolysis to water mains and gas mains, etc.;

(b) Battering and cupping of the rail ends, this increasing both the life of the rail and comfort and quietness of operation.

Foundations: It has been found that concrete construction, called in street railway practice the "rigid type," has stood the test not only on this but on other properties as being best suited to the gumbo sub-soil conditions existing in Winnipeg.

Drainage: Drainage is supplied by weeping tile under the concrete foundation and connected by laterals to the city's catch basins at frequent intervals.

Wearing Surface: Up until 1927 asphalt was used entirely as a top or wearing surface with granite sets as liners on each side of rail. However, it has never satisfactorily stood the shocks of rail vibration or vehicular traffic, and, is in addition very susceptible to water rot. In the past four years, with the consent of the city, experiments have been made with concrete and to all present appearances with satisfactory results.

Based on the above, it is our judgment that the present standards for paved construction are satisfactory.

Condition of Track—

Open Track: Open track is suffering mostly from need of surfacing and lack of tie renewals. In some instances, largely within the City Fare Zone, there are sections where the rail ends at the joints are badly battered, and this is a condition that can only be remedied by cutting the ends and making up the deficiency in length with new rail; of course, in cases where the rail head over the entire section is badly worn the rail will have to be renewed in toto.

Paved Track: A very considerable portion of the paved track has been in place for over 15 years; some of it as long as 24 years. Most of the older track, due to traffic (both railway and vehicular), or because of soil conditions are due either for a complete renewal or extensive rehabilitation.

Track—Special Work—

With regard to track special work, we find:—

(1) That all double track intersections provide clearance for double truck cars moving on opposite tracks;

(2) That, with the exception of the leads at Main and South Car Houses, stub switches, which are obsolete, have been replaced by modern spit point switches and at all important main line intersections are electrically operated;

(3) That renewals have been fairly well taken care of and that new steel is on order for the intersection at Corydon and Stafford;

(4) That the type being laid conforms to aproved engineering practice.

General—

It should be pointed out that track in open construction and on separated right-of-way makes possible greater speed in that there is a minimum of interference from other forms of traffic, and further, it costs much less to construct than does paved construction, the ratio under present day conditions being approximately one to three.

ROLLING STOCK—

Passenger Equipment—

General: Since the horse car went out of existence forty years ago and until the past ten or twelve years, mass transportation has been furnished by the two-man electric street car.

In an effort to combat increased costs ,developments in the automotive field and the necessity of maintaining the maximum possible measure of public support, great advances have been made in both

the type, comfort, attractiveness and speed of mass transportation vehicles, and there has come into extensive use:—

(1) The two-man car seating approximately 60;
(2) The one-man car seating approximately 50;
(3) The one-man motor bus seating 29 or 40, and more recently
(4) The one-man trackless trolley coach seating 40.

The tendency today in all but the largest cities is for one-man operation of all units reinforced with efficient ground collection at heavy loading points.

That one-man cars are as satisfactory as the two-man type from the standpoint of speed, convenience and safety to the passenger, and the safety of other traffic on the streets has been undoubtedly due to the fact that the control of doors, starting and stopping, etc., is centred entirely in the one operator. Delays caused by interchange of signals under two-man operation have also been eliminated.

Street Cars—W.E.C.: The Winnipeg Electric Company owns and operates a total of 301 motor street cars and 11 trailers. They are a miscellaneous assortment, ranging from open to closed, from double truck to single truck, from high floor to low floor, from front entrance to rear entrance, and, if 25 purchased in 1920 and 1921 and two built in 1928 be excluded, have an age from 26 to 12 years. They may be more particularly described as follows:

Group One—Consisting of 11 trailers;
Built in 1904 and 1905;
Bodies—closed, wood, low floor, single-end P.A.Y.E. type, entrance and exit being through the one single door in the front vestibule;
Seats—longitudinal—40;
Couplers—equipped with Tomlinson couplers in 1928, and jerks in operation thereby eliminated;
Couplers—double, Curtis type, with 26" wheels;
Weight—27,500 lbs;
Car Nos.—501-523.

Remarks: While these cars are as comfortable as any of the other cars on the system, the one single door for both entrance and exit slows time of boarding and alighting.

Group Two—Consisting of 26 motor cars;

Built in 1904 and 1906;
Bodies—closed, wood, high floor, double-end P.A.Y.E. type, single doors front and rear. In 1924 six of the cars had vestibules extended and a double door put in each end. The remainder have single doors both front and rear. In 1924 all cars were equipped with safety control and have since been operated by one man.
Seats—longitudinal—40;
Motors—four G.E. No. 80, 40-H.P.;
Trucks—double, Brill type with 33-inch wheels;
Weight—43,000 lbs.;
Car Nos. 1200—1442.

Remarks: The bodies are decrepit and obsolete. The motors and trucks are good for their type, but viewed by present day standards must also be classed as obsolete.

It is recommended that the 20 cars in the 1400 class be retired herewith and replaced by 20 new cars of the front-entrance, centre-exit type, to approximately the following specifications:

Bodies—steel or aluminum;
Length—overall 43';
Seats—cross 28, longitudinal 22, total 50;
Doors—double, full pneumatic control and automatic exit treadles;
Motors—four 35-H.P. of the new quick accelerating type built and geared for high speed;
Contral and brake equipment—foot operated and with minimum accelerating and braking speeds of 3 and 5 miles per-hour-per-second, respectively;
Trucks—double, light weight equipped with roller bearings;
Weight—maximum 34,000 lbs.

Group Three—Consisting of 5 motor cars;

Purchased from Brill Car Company in 1921;
Bodies—steel throughout, closed, low floor, double-end P.A.Y.E. type and equipped with full safety control and operated by one man, double doors front and rear;
Seats—cross 28;
Motors—two G.E. No. 258, 25-H.P.;
Trucks—single, Brill type, with 26-inch wheels;
Weight—23,500 lbs.;
Car Nos.—1000-1008.

Remarks: These are modern cars; however, their small seating capacity makes them unsuitable for operation on anything but light traffic lines. Further, due to their light weight and limited tractive effort they can only be operated under winter conditions on open track. The bodies, motors and trucks are in good operating condition.

Group Four—Consisting of 8 motor cars;

Built in 1904;
Bodies—open, wood, high floor, single-end, two-man P.A.Y.E. type, entrance by single gate in rear and exit via single gate in front;
Seats—cross 66;
Motors—four G.E. No. 80, 40-H.P.;
Trucks—double, Curtis type, 30-inch wheels;
Weight—40,000 lbs.;
Car Nos.—122-136.

Remarks: Used for auxiliary service in summer months—obsolete.

Group Five—Consisting of 125 motor cars;

Built in 1910-1914.
Bodies—wood, closed, high floor, single-end, two-man P.A.Y.E. type, entrance via single door at rear, exit via single door at rear and in addition 119 have been altered during the last four years by the adition of a single exit door at the front end.
Seats—95 cars longitudinal—44;
30 cars cross and longitudinal—48;
Motors—four G.E. No. 80, 40-H.P.;
Trucks—double, Baldwin or Brill type, 33-inch wheels;
Weight—47,000 lbs.;
Car Nos.—432-692.

Remarks: These cars have been subject to considerable overhaul during recent years and are in fair operating condition. However, in our judgment, they are not to be compared from the standpoint of either quickness of loading or running speed, with the front entrance, centre exit "Pay-As-You-Pass" type as operated in Toronto, Cleveland and other cities. Passengers both boarding and alighting are compelled to negotiate two steps instead of one in low floor cars. Further, the control and braking equipment does not act with the quickness and smoothness of more recent types.

While we personally prefer the front-end-centre-exit, "Pay-As-You-Pass" type as being most efficient, there is a great diversity of opinion amongst street railway operators as to the proper position of entrance and exit doors. Montreal and Chicago still continue with the "Pay-As-You-Enter rear entrance, rear and front exit type. However, it should be noted that Chicago has recently installed a number of the front entrance-centre-exit, "Pay-As-You-Pass" type for demonstration purposes.

Commencing with 1932 a portion of the "Renewal and Depreciation Reserve Fund," elsewhere referred to, should be definitely set aside for the ultimate re-equipping of *1st* the Portage, and *2nd* the Park Line, with new cars, which, when done, will be reflected not only in increased schedule speeds but in the comfort and convenience of riding and in reduced maintenance transportation costs. However, there is no reason why these cars cannot continue to operate for some years to come as "fill-ins" for extra rush hour requirements.

Group Six—Consisting of 15 motor cars;

Purchased from Ottawa Car Company, 1918-1919;
Bodies—closed, steel underframes, steel sheeting on wood frames, low floor, single-end, two-man P.A.Y.E. type, entrance rear via single door, exit both front and rear via single door;
Seats—cross and longitudinal 44;
Motors—four G.E. No. 258, 25-H.P.;
Trucks—double, McGuire-Cummings type, 26-inch wheels;
Weight—38,000 lbs.;
Car Nos.—710-738.

Remarks: These cars are in fair operating condition. It is recommended that during 1931 they be equipped for one-man operation by:

(a) Adding full safety equipment;
(b) Extending front vestibule and building double door in same;
(c) Putting an automatic treadle in the rear platform;
(d) Replacing the 25-H.P. motors with 40-H.P. motors;
(e) Replacing the "K" type controllers with a variable automatic type, as used in Montreal, Chicago and other cities.

Group Seven—Consisting of 95 motor cars;

Built from 1907 to 1912;
Bodies—closed, wood, approximately one-half with steel underframes, and the other half with wood underframes, single end P.A.Y.E. type, originally built for two-man operation, entrance and exit via single doors at rear. In 1918-1919 a single exit door was placed in front vestibule. In 1924-1926 all cars were equipped with full safety control for one-man operation and an automatic treadle placed in the rear exit. Since 1926 double doors have been placed in the front vestibule of 20 of these cars;
Seats—longitudinal 42;
In 1918 and 1919 the original motors and trucks were taken off and replaced by:—
Motors—four G.E. No. 258, 25-H.P.;
Trucks—double, part McGuire-Cummings and part Curtis, 26-inch wheels;
Weight—The changes in the motors and trucks reduced the original weight of the cars;
(a) With steel underframes from 47,000 to 40,000 lbs.;
(b) With wood underframes from 43,000 to 36,000 lbs.;
Car Nos.—210-430.

Remarks: The bodies appear to be in fair condition, but many of the trucks would appear to need a complete overhaul. The motive power, control and braking equipment is insufficient for fast operation. Pending ultimate retirement no change is warranted in this equipment.

Group Eight—Consisting of 27 motor cars;

Purchased—5 in 1918 and 20 in 1920;
Built—2 in 1929;
Bodies—closed, wood, on steel underframing except that 5 purchased in 1918 and the 2 built in 1929 are covered with steel sheeting, all single-end P.A.Y.E. type. The 25 cars as originally purchased were equipped for two-man operation with double doors in rear and single door in front, and in 1924 to 1926 were converted for one-man operation by the addition of full safety control and automatic treadle door in the rear. The 2 cars built have double doors front and rear;
Seats—cross and longitudinal, 25 cars 42; 1 car 50; 1 car 60;
Motors—25 cars, four G.E. No. 258, 25-H.P.; 2 cars, four G.E. No. 247, 40-H.P.;
Trucks—double, 25 cars McGuire-Cummings type, 26-inch wheels; 2 cars Curtis type, 26-ich wheels;
Weight—25 cars, 37,500 lbs.; 1 car, 43,000 lbs.; 1 car, 50,000 lbs.;
Car Nos.—700-708; 800-838; 796-798.

Remarks: The bodies appear to be in fair operating condition, but, from the noise made, many of the trucks would appear to need a complete overhaul, and this despite the fact that twenty-five have been overhauled during the past three years.

It is recommended that during 1931:
(a) The front vestibule be extended in the balance of the cars and double doors added;
(b) That G.E. No. 258, 25-H.P. motors, be removed and replaced by 40-H.P. motors.

General—

It will be noticed that the Company, despite lack of funds, has, over the past twelve years, made considerable improvements in its cars, and while same has been largely from the standpoint of reducing operating costs to the Company, appreciable improvements of benefit to the riding public have also been effected.

On systems where money has been available operators are installing:
Two-man cars, seating 54 to 60 passengers and weighing less than 40,000 lbs.;
One-man cars, seating 45 to 50 passengers, weighing less than 34,000 lbs.
These cars show remarkable improvements with respect to both speed and convenience and comfort of passengers, by the provision of:

(1) Wide entrances and exits, pneumatically-operated doors, more attention to height and arrangement of seats, steps, platforms and stanchions, and which has been reflected in higher speeds due to a reduction in the time of boarding and alighting:

(2) Automatic controller and braking equipment (in some instances of an automotive type and manipulated by the operators' feet), which permits of not only smoother but a faster stopping and starting and in turn is also reflected in higher schedule speeds:

(3) New type of drives, which permit of lighter weight trucks and the use of high speed, spring supported, light weight motors. Further, because of Helical gears, oil lubrication, and the use of anti-friction bearings, the noise so generally associated with street railway operation has been greatly reduced;

(4) Another feature of these new cars is that the entire construction has been designed to reduce maintenance cost to a minimum.

Buses—

Buses are being more and more extensively used as feeders to the rail lines and for high speed express service and special fare routes.

From a point of view of operation a bus has many advantages over a street car, viz.:
(1) Its adaptability to routes where the traffic is relatively light;
(2) Its flexibility in the midst of other traffic, which enables it to obtain a high rate of speed;
(3) It is not subject to delays through breakdowns of other vehicles;
(4) A local and express service can both be operated over the same street;
(5) Detour can readily be made from regular routes in case of fire or other traffic interruptions;
(6) Passengers can be loaded and discharged at the curb.

Its disadvantages are economic:

(1) A 29-passenger bus has a comfortable capacity including standees of about 45.
A 40-passenger bus of the Twin Coach type (Ellice Avenue route),

has a comfortable capaciay including standees of about 75. Whereas a street car seating 50 has a capacity of at least 120, and one seating 60 a capacity of 150. Hence, in rush hours, when a maximum capacity is essential a given number of street cars are capable of handling at least twice as many as the same number of buses;

(2) Its operating and maintenance costs are higher than those of a street car;

(3) The reasonable life of a bus is not over six years, and for the Twin Coaches 8 years, whereas the life of a street car is at least 20 years and can be extended indefinitely if circumstances demand.

Buses—W.E.C.: The W.E.C. commenced to operate buses in 1918 on the Westminster route and are now operating 14 routes with the following equipment:

40-Passenger Twin Coaches	5
33-Passenger Interurban Bus	1
29-Passenger City Bus	2
25-Passenger City Bus	22
21-Passenger City Bus	17
	49

The average age of these buses is 3½ years.

The engines and other miscellaneous equipment are given a complete overhaul on the basis of each 25,000 miles.

In 1930 the bodies of 27 were overhauled and painted.

The Company is planning to standardize on 29-passenger buses, with 40-passenger Twin Coach type to fill in under special rush hour conditions, all of which is in line with approved practice.

Recommendation: It is recommended that as Trackless Trolley coaches replace present bus routes, an equivalent number of buses be retired from service. In any event, fourteen 21-passenger Reos and four 21-passenger Studebakers purchased in 1925 and 1926 should be retired not later than 1932 and 1933.

Trackless Trolley Coach—

During the past few years operators on this continent have begun to realize that the trolley bus, which has been used by transportation systems of British and other European cities for the past 20 years, might with profit be adopted on this continent as an intermediate vehicle between the street car and motor bus. Within the past two years nearly 200 of these vehicles have been put in service on city properties on this continent, notably in Salt Lake City and Chicago, and nearly as many more are on order.

In carrying capacity and body design it is similar to the Twin Coach aforementioned, but derives its power from two trolley wires slung overhead. They are aquipped with two 50-H.P. motors and will accelerate at a rate of better than 3 miles-per-hour-per-second, and brake at a rate of 6 miles-per-hour-per-second, which permits the operator to use the maximum speed of the vehicle with the assurance that he can stop on short notice in the event of an emergency. The direct control eliminates time lost in gasoline buses for shifting gears, while its 18-foot poles afford a flexibility comparable to gasoline operated buses.

These vehicles weigh approximately 18,000 lbs. and seat 40 passengers, with a total capacity of about 75. They have, we believe, a real future in serving those sections of the city where the traffic falls below the economic limit for track maintenance, and that consequently when a utility is otherwise faced with the necessity of track reconstruction, under such a condition a substitution to trackless trolleys may with confidence be made. The life of these vehicles should be at least 15 years, and, in cost of operation and maintenance will be less than that of a one-man street car and track.

Operation in Chicago has demonstrated its ability to make and maintain schedule speeds of 12 miles per hour and better which exceeds by over two miles per hour any street car or bus being operated in Winnipeg today.

In contrast to a street car or a bus these vehicles are practically noiseless in operation.

Recommendation: It is recommended—

(a) That 12 trackless trolley coaches be purchased during 1931 for service as follows:

Sherbrook—Portage to Logan	4
Logan—Arlington to Main	3
Ellice	2 (off-peak only)
Westminster	3 (off-peak only)
	12

(b) That as soon as Salter Street extension has been completed in, say, 1932, that 13 additional trackless trolley coaches be purchased for service thereon.

Service Equipment—

Rail Cars—W.E.C.:

10 sweepers,; 13 miscellaneous work cars; all in fair mechanical condition.

It is recommended to better cope with winter snow conditions that three additional sweepers be purchased in 1931.

Trucks—W.E.C.:

Twenty-seven trucks ranging from ½-ton to 7-ton capacity as listed in McClellan Valuation, pages 83 and 84.

All are in fair mechanical condition and most of these trucks are used jointly with the Electric and Gas Utilities.

Passenger Automobiles—W.E.C.:

Nineteen automobiles ranging from Cadillacs to Fords as listed in the McClellan Inventory, there being

(a) Wholly owned by Traction Utility	8
(b) Jointly owned by Traction Utility	11

These latter cars are used for general purposes of the Company by the executive staff.

Sub-stations—W.E.C.:

There are seven sub-stations supplying D.C. to the City Fare Zone, as follows:

	Motor Generators	
1. Mill Street	1— 800 K.W.	
	1—1,000 "	4,500 K.W.
	1—1,200 "	
	1—1,500 "	
2. Logan Ave. (near McPhillips)	1—1,200 "	1,200 "
3. Ft. Rouge (Osborne and Kylemore)	2—1,000 "	2,000 "
4. North Main (at North Car House)	2—1,000 "	2,000 "
5. Sherbrook (near Portage)	1— 800 "	
	1—1,400 "	2,200 "
6. St. Boniface (Rue des Meurons)	1— 800 "	800 "
7. St. James (Portage and St. James Street, owned by S.R.T.)	1—1,200 "	
	1—1,000 "	2,200 "
		14,900 "

The buildings are all brick and in good condition.

The 800 K.W. generators at both Sherbrook and St. Boniface were moved from the Assiniboine Sub-station at the time same was demolished. The 1,400 K.W. set at Sherbrook Street was moved from Mill Street. These adjustments were made to better balance the supply of current.

While all the machines, with the exception of the 1,500 K.W. set at Mill Street, which was new in 1920, are fairly old, they were given a thorough overhaul during 1922 to 1926 and still have many years of useful life.

In some of the more recent sub-station installations on other properties Mercury Arc Restifier sets with full automatic control are replacing motor generators. They are less costly from the standpoint of both the initial outlay and maintenance.

When the system can afford it, operating conditions will be much improved by the installation of one 500 K.W. Mercury Arc Rectifier:

(a) In the St. Vital section, and
(b) In the Elmwood section.

Should it be desired to heat the cars with electricity there would be required an additional sub-station capacity spread throughout the system of approximately 3,500 kilowatts.

Car Houses and Yards—W.E.C.:

There are three car houses and yards, as follows:

(1) North—On North Main at Inkster Boulevard.

The car house is a one story brick building, originally built in 1904, with additions in 1909 and 1913. Its overall dimension is 175 feet by 177 feet. It has trackage for 45 cars and the yard for 73, a total of 118 cars and is used to capacity. There is suffcient additional yard area to store another 100 cars.

(2) Main—On South Main Street at Assiniboine.

The car house is a one story brick building, originally built in 1901. It was partially destroyed by fire in 1920 and immediately rebuilt. Its overall dimension is 290 feet by 116 ft. The house has trackage for 52 cars and the yard for 62, a total of 114 cars. Another 10 cars can be stored on the available trackage which occupies the entire area of the site.

(3) South—On Osborne Street at Morley Avenue.

The car house is a one story building of sheet metal construction built in 1905 and 1907, and is merely a shell. Its overall dimension is 315 feet by 110 feet. The trackage in the car house has a capacity for 54 cars and the yard for 100, a total of 154 cars. Present use is 115 cars. The yard has sufficient space for another 200 cars.

In 1929 the car houses were all equipped with sprinklers.

Observations: These car houses are all single-end houses and, consequently, entail excessive switching, the last car in at night being the first car out in the morning.

At both North and Main Car Houses when switching between tracks it is necessary to run cars out onto the street.

Car washing in all cases is still done by the old method of a pail of water and a long-handled broom.

None of the car houses contain the type of accommodation which to day is considere essential to either the divisional staff or for the car crews.

To Sum Up: They must all be classed as antiquated and unsatisfactory. When money is available the South Car House should be the first to be replaced. Further, that whereas there will be required convenient housing accommodation for the trackless trolley coaches, that same be provided at Main, and that accommodation for the street cars thereby displaced be provided at South.

Car Shops—W.E.C.:

The Car Body Shop is at Fort Rouge and situated on the same property as the South Car House. It is a one story brick building—overall dimension 270 feet by 75 feet.

The Electrical Shop, Truck Shop, General Machine Shop and Master Mechanic's office are situated in a brick building alongside the Main Car House. While it is true that the shops contain quite a number of modern machine tools, the facilities, as in the case of the car houses, must be classed as antiquated and unsatisfactory. In a modern car shop the facilities are all concentrated at one point, and the equipment includes:

(a) Transfer table which permits a car body to be moved the entire length of the car body shop, and

(b) Crane by which a car can be completely lifted off its trucks.

With a gradual change-over from wood to metal car bodies, the need for new shops will become increasingly apparent. Undoubtedly, in a new shop the men will immediately respond to the influences of the new suroundings and new tools, and the result will be better workmanship and lower maintenance costs. This was and still is the experience in Toronto.

Recommendation: Accordingly, it is recommended that a new car shop be built in 1932 on the Fort Rouge site, the money for same to be provided in part from the "Renewal and Depreciation Reserve Fund," and the balance by way of additional capital to be supplied by the Company. That looking to this, definite studies of the requirements be commenced forthwith.

Garage—W.E.C.:

The W.E.C. Garage is situated on Assiniboine Avenue at Main Street alongside the Main Car House. It is a brick building, 135 feet by 185 feet, and part two-story, with a total storage for 100 buses or trucks. It contains the shops for repair of all the automotive equipment owned by the Company.

With the building of a modern shop all overhauling and body work on automotive equipment should be taken care of there and only running repairs and washing done at garage.

General—S.R.T. and W.,S. & L.W.:

With regard to the transportation facilities as supplied by the Suburban Rapid Transit and the Winnipeg, Selkirk & Lake Winnipeg Railway companies, there is nothing to be gained, in our opinion, by detailed examination of same.

In brief:

S.R.T.—

(a) The mileage and type of track is shown in Part 3 herein;

(b) Cars are rented from W.E.C.;

(c) There is one sub-station at St. James and which is included under W.E.C.;

W.,S. & L.W.—

(a) The mileage and type of track is shown in Part 3 herein;

(b) There are 5 motor cars built in 1908 and 5 trailer cars built in 1911-1914. It is recommended that these cars be altered forthwith to permit of one-man operation and be so used:

(c There are 3 sub-stations, viz., Middlechurch, Lockport and Stony Mountain and all equipped with motor generator sets;

(d) There is a car house at Selkirk;

(e) All repairs to equipment are made at the W.E.C. shops.

Conclusion: Much as further rehabilitations and additions to the property of the Winnipeg Electric Company may be desired by either the Company or the public, or both, the utility to attract new capital, let alone remain solvent, must live within its income.

Accordingly, it is our opinion the recommendations herein made are the maximum that can be afforded for the immediate future, and then only provided reasonable relief is granted by either elimination of special taxes or increased fares, or a combination of both.

PART FOUR

VALUATION

Previous Valuations—

On at least two occasions a valuation has been made of the entire physical properties of the Winnipeg Electric Company, the Suburban Rapid Transit Company and the Winnipeg, Selkirk & Lake Winnipeg Railway Company:

(1) For the companies, by the J. G. White Engineering Corporation of New York at reproduction cost as of December 31st, 1916, for the purpose of more clearly segregating the values of the various items of physical property comprised in the several activities of the companies, and to which effect was given in the books of the Company, and

(2) For the then Public Utility Commissioner, Mr. P. A. Macdonald, by Mr. George Guy, Electrical Engineer of Winnipeg, as of June 30th, 1920, and priced at the average level of prices for the five years, 1909 to 1914, for items in existence in 1914 plus actual cost for additions from that date. Although same was made for the purpose of fixing rates, for at least the Traction Utility, no recognition of same has ever been made on the books of the Company.

In 1930 precedent to the application of the Winnipeg Electric Company to your Board for an increase in the fares of its Traction Utility, and as a basis of value should the City of Winnipeg decide to acquire same at the end of the franchise period, viz., January 31st, 1932, William McClellan & Company, a Canadian subsidiary of Stone & Webster Corporation, Boston, Massachusetts, was engaged to make a valuation of the physical properties of the Traction Utility of all three companies. The valuations thus made were presented to your Board as Exhibits 1, 2, and 3.

Also in 1930, at the request of the City, Price-Waterhouse & Company, Chartered Accountants, made an audit of the Company's transportation accounts to ascertain the value of net additions to physical property between June 30th, 1920, and December 30th, 1929.

Comparison, White and Guy—

With respect to the White and Guy valuations, the pricing of individual items was not far apart as instanced by the following:

Item	Service	Unit	White 1915 Level	Guy 1909—1914 Level
Open Track—Portage	1910	100 ft.	$ 323	$ 333
Paved Track—Sherbrook	1907	100 ft.	759	654
Cars—Type "A"—400 Class	1910	each	6,171	7,043
Logan Ave. Sub-station Building and Equipment	1912		43,787	49,744
South Car House	1907		33,376	27,168
Fort Rouge Shops	1904		35,927	31,909

However, their treatment of the items to be included in the Traction Utility is unfortunately different and accordingly no direct comparison is possible without first a detailed analysis of all the items.

For instance, under "Land" the White valuation includes River Park and excludes the land under which the car houses and shops are situated, while the Guy valuation excludes the park but includes the land in connection with the car houses and shops. The Guy valuation includes a portion of the Pinawa development and the Steam Plant at Mill Street; White does not. White includes interest during construction and organization expenses; Guy does not. Their allowances for engineering and general supervision, etc., are different. The time and labor to make a detailed analysis would be very considerable, nor in our judgment, for the purposes of this present inquiry, would any useful purpose be served thereby. As a matter of record, however, we quote the total values of the physical property as set out in each for the traction utilities of the companies, as follows:

	Reproduction	Depreciation	Present Value
(a) White as of December 31st, 1916:			
W. E. Co.	$ 9,104,770	$1,453,725	$7,651,045
S. R. T. Co.	673,418	114,661	558,757
W., S. & L. W. Rly.	1,419,403	202,708	1,216,695
(b) Guy as of June 30th, 1920:			
W. E. Co.	$11,321,742	$2,122,435	$9,199,307
S. R. T. Co.	464,387	76,036	388,351
W., S. & L. W. Rly.	1,284,034	188,159	1,095,875

McClellan—

It is not until we come to the McClellan valuation that we find any real concerted attempt to segregate from the other activities of the companies those items, and only those, which are applicable to their respective traction utilities.

As determined by Wm. McClellan & Company the values of the respective traction utilities, by municipalities, as of December 31st, 1929, Exhibits 1, 2 and 3 are:—

	Reproduction New	Present Value Amount	Per Cent.
W.E.C.—			
Winnipeg	$18,259,395	$15,892,819	93.38
St. Boniface	642,267	544,233	3.19
St. Vital	217,827	183,798	1.09
Fort Garry	268,467	225,481	1.32
East Kildonan	134,367	112,651	0.66
North Kildonan	74,462	62,546	0.36
St. James	130	130	.....
Total	$19,596,915	$17,021,658	100.00
S.R.T.—			
St. James	$ 418,494	$ 347,102	48.89
Assiniboia	267,698	206,571	29.09
Tuxedo	93,906	82,991	11.69
Charleswood	95,290	73,269	10.33
Total	$ 875,388	$ 709,933	100.00
W.,S. & L.W.—			
Winnipeg	$ 112,313	$ 104,969	5.92
West Kildonan	108,186	87,828	4.97
Old Kildonan	56,555	43,684	2.47
West St. Paul	573,137	456,380	25.81
St. Andrews	450,697	354,728	20.06
Selkirk	461.886	339,307	19.18
Rockwood	376,884	303,510	17.17
Stonewall	105,606	78,175	4.42
Total	*$ 2,245,264	†$ 1,768,581	100.00
Total of all Municipalities	$22,717,567	$19,500,172	

Notes—*This figure is $85,839 more than the figure filed in Exhibit No. 3 due to an error in addition of $11,839 plus $74,000, being value of land of North Main Car Yard left out by appraiser.

†This figure is $74,000 more than the figure filed in Exhibit No. 3, being value of land of North Main Car Yard left out by apprasier.

In Winnipeg—

W.E.C.: Includes all Rolling Stock, Car Houses and Shops, and all sub-stations except St. Boniface.

W.,S. & L.W.: Covers principally North Main Car Yard, Land and Tracks.

Basis of Present Value—

It is to be noted in each of the three aforesaid valuations, that "Present Value" is in effect defined as being:

(a) The cost to reproduce new at the time of the valuation (there are some reservations as to the time in Guy's and to which reference will later be made) those identical items of physical property as were then in existence;

Less,

(b) An allowance for depreciation, and which in the White and Guy valuations was figured on a life basis and as such must have given some recognition to an included factor of obsolescence, whereas in the McClellan it was based upon an examination of the various items, and solely upon the cost of restoring them as far as possible and practicable to a condition as good as new.

Basis of Value for Purchase or Rate Making—

In determining a basis of valuation for either purchase or rate making one necessarily must be governed by:

(a) The instructions as laid down in the franchises;

(b) The instructions as laid down in the Municipal and Public Utility Board Act, and

(c) The decisions of the courts.

Circumstances alter cases and it does not follow that the value having been determined for, say, rate making it must needs be accepted as the value for purchase.

Valuation for Purchase—

(a) Franchises and the Courts:

With regard to a valuation for purchase, the franchises under which the traction utilities of the Winnipeg Electric and its subsidiaries operate contain a clause—to quote from the Winnipeg franchise, and all the others are essentialy similar:

"That the City of Winnipeg may . . . assume the ownership of the railways, and all real and personal property in connection with the working thereof of every kind and description upon payment of the full value of the same, including the value of the pavement made or done by or at the expense of the applicants to be determined by arbitration, and in considering such value the franchise and the rights and privileges granted under this By-law and the revenue, profits and dividends being or likely to be derived from the enterprise, are not to be taken into consideration, but the arbitrators are to consider only the actual value of the actual and tangible property, plants, equipments and works connected with, and necessary to the operation of the railway, including such pavement."

It is to be noted from the Toronto Railway Award, June 30th, 1923, which settled the price, under franchise conditions very similar to those contained in the Winnipeg franchises, which the City of Toronto was to pay the Toronto Railway Company for the street railway and which award was afterwards confirmed by the Privy Council, that the arbitrators:

(1) Determined the price to be paid as being,

(a) The cost of reproduction new, less,

(b) An allowance for depreciation, and defined depreciation both in their own view and on the basis of former decisions in the courts under British jurisdiction, as including obsolescence and deterioration from whatever cause;

(2) And as to those items of overhead expenditure, which might properly be included in estimating the cost of reproduction, and as to whether interest upon capital during construction should be taken into account, said in effect:

(a) As to added value by reason of the property and plant being in running condition with a completely organized staff which immediately entered the service of the city—No, as same does not come within the meaning of the expression "Actual and Tangible Property."

(b) "Engineers' Remuneration"—Yes, but subject to proper depreciation.

(c) "Interest during Construction"—Yes, but subject also to proper depreciation.

(d) Preliminary Expenses of Organizing Company" and "Cost of Raising Capital"—No, as not being legally allowable.

(e) "Administration Organization and Legal Expenses," "Cost of Placing Physical Property in Operation," and like items for "Going Plant Value," etc.—No, and in this regard say—"While items of this character are frequently taken into account for rate making purposes they must be regarded as so-called "Intangibles," and as not capable of being included within the meaning of the words "Actual and Tangible Property" in the Agreement and Statute."

(f) Nor was any allowance included for payments made by the Company towards the cost of subways or bridges for the elimination of dangerous level crossings, it being held that such payments did not constitute "Actual and Tangible Property" within the meaning of the Statute.

(b) Municipal and Public Utility Board Act:

The Municipal and Public Utility Board Act says:

Section 124—No owner of a public utility shall:

(g) Without the approval of the Board, sell, lease, mortgage, or otherwise dispose of or incumber its property, franchises, privileges or rights, or any part thereof.

To sum up: In the event of a purchase under the terms of the franchises it would appear from the above that the items of value have been fairly definitely established.

Valuation for Rate Making—

(a) Franchise:

In the franchises the rates are established as being a fixed amount per passenger and said amount is stipulated therein. Consequently, so far as the rates are concerned, the value of the utilities is of no interest to the municipalities, except as the Legislature may have legislated over the subject matter, by reason of the Municipal and Public Utility Board Act.

(b) Municipal and Public Utility Board Act:

The Municipal and Public Utility Board Act of 1926, under which your Board was created and given jurisdiction over rates, etc., of public utilities, says:

With regard to appraisals,

"In section 117 (b), the Board shall have the power from time to time to appraise and value the property of any public utility whenever, in the judgment of the Board, it shall be necessary to do so, for the purpose of carrying out any provision of this act," and

With regard to rates,

"In section 127 (1),—No change in any existing individual rates . . . shall be made . . . until approved by the Board, and the Board shall have power . . . to hear and determine whether the proposed increases, changes or alterations are just and reasonable."

From the above it is apparent that the Legislature has laid down no definite formulae which must of necessity be followed.

(c) The Courts:

While much learned opinion has been expressed both before and by the Courts in regard to valuation for rate making purposes,

(1) Especially in the United States.

(a) Beginning with Munn vs. Illinois in 1876, when the right of legislatures to regulate rates was first definitely recognized. Then

(b) The celebrated Smyth vs. Ames case in 1898, in which the Supreme Court defined a reasonable rate as being one that allowed a fair return on the fair value of the property, and

(c) The O'Fallon decision in 1929, in which the Supreme Court held that under the 1920 Transportation Act, the Interstate Commerce Commission could not establish a fixed rate base subject to accounting control, but would be compelled to make allowance for reproduction cost or changes in value according to the law of the land as declared in a series of past decisions.

(2) In Canada and the other British Dominions the right of the Legislature to regulate is not open to question and based on the wording of the Act under which you function, we are not aware of any decision in the Canadian Courts or by the Privy Council that would tend to limit your Board in arriving at, in your own way, what may be considered a fair value of the property in question.

General Observation—

Accordingly, to sum up, the avenue of approach to the determination of a fair value for rate making purposes would appear, on all three counts, to be wide open and to permit your Board full freedom of judgment.

McCLELLAN VALUATION

The summaries of the valuations made by McClellan & Company for the companies were filed by Mr. Guy and afterwards confirmed by Mr. Taber of McClellan & Company. The basis of valuation, as before stated, is reproduction cost less observed depreciation or cost to restore without regard to any factor of obsolescence.

In addition to the items of physical property listed under:

(a) Land, and

(b) Labor and Materials,

there have been included:

(c) Under the heading "General Construction Costs"—Engineering, Administration and Legal Expense, Taxes and Interest, and

(d) Which we will group, for want of better name, under the heading "Intangibles," Organization, Working Capital, Cost of Financing, and Going Value.

Evidence as to the general basis of a reproduction cost appraisal was submitted by Mr. Taber, while the arguments advanced in support of the several items listed (a, b, c, and d) above, were filed by him as Exhibits 29 to 35, inclusive.

The values assigned to each of the three properties on the basis as McClellan & Company say, of: Cost to reproduce new, less cost to restore, are for—

W.E.C.	$17,021,658
S.R.T.	709,933
W.,S. & L.W.	1,768,581
	$19,500,172

as detailed below and on following page.

At our request the Appraisal Department of the Winnipeg Electric Company has apportioned same as between:

(a) City Fare Zone	$17,239,461
and	
(b) Suburban or Interurban Zones	2,260,711
	$19,500,172

as tabulated below and on following page.

McCLELLAN VALUATION AS AT DECEMBER 31st, 1929.

Items	W.E.C. Reproduction New	W.E.C. New Less Depreciation	S.R.T. Reproduction New	S.R.T. New Less Depreciation	W.,S. & L.W. Reproduction New	W.,S. & L.W. New Less Depreciation
A. Land	$ 335,690	$ 335,690	$ 1,000	$ 1,000	$ 100,808	$ 100,808
B. Labor and Material—						
Roadway	7,280,162	5,777,440	$557,777	$411,869	$1,122,224	$ 802,805
Bldgs. and Structures	950,186	798,219	26,447	20,404	125,045	86,588
Equipment	6,163,876	5,243,309	77,164	63,660	380,237	261,430
Total	$14,394,224	$11,818,968	$661,388	$495,933	$1,627,506	$1,150,823
C. General Construction Costs—						
Engineering	$ 420,500	$ 420,500	$ 13,500	$ 13,500	$ 33,400	$ 33,400
Administrative and Legal Expense	215,250	215,250	9,500	9,500	24,050	24,050
Taxes	75,250	75,250	4,000	4,000	9,350	9,350
Interest	804,500	804,500	36,000	36,000	88,250	88,250
Total	$ 1,515,500	$ 1,515,500	$ 63,000	$ 63,000	$ 155,050	$ 155,050
D. Other Costs—						
Organization	$ 295,500	$ 295,500	$ 13,500	$ 13,500	$ 33,400	$ 33,400
Working Capital	400,000	400,000	19,500	19,500	47,000	47,000
Cost of Financing	885,500	885,500	39,000	39,000	94,250	94,250
Going Value	1,770,500	1,770,500	78,000	78,000	187,250	187,250
Total	$ 3,351,500	$ 3,351,500	$150,000	$150,000	$ 361,900	$ 361,900
Grand Total	$19,596,914	$17,021,658	$875,388	$709,933	$2,245,264	$1,768,581

City Fare Zone—	Land	Labor and Material	General Construction Costs	Intangibles	Total
Reproduction New—					
W.E.C.	$335,690	$14,163,652	$1,494,000	$3,300,000	$19,293,342
S.R.T.	1,000	246,370	24,500	57,500	329,370
W.S. & L.W.	74,000	110,749	10,500	25,250	220,499
Total	$410,690	$14,520,771	$1,529,000	$3,382,750	$19,843,211
New Less Depreciation—					
W.E.C.	$335,690	$11,637,226	$1,494,000	$3,300,000	$16,766,916
S.R.T.	1,000	196,748	24,500	57,500	279,748
W.S. & L.W.	74,000	83,047	10,500	25,250	192,797
Total	$410,690	$11,917,021	$1,529,000	$3,382,750	$17,239,461

Suburban and Interurban Fare Zones—

Reproduction New—	Land	Labor and Material	General Construction Costs	Intangibles	Total
W.E.C.	.....	$ 230,573	$ 21,500	$ 51,500	$ 303,573
S.R.T.	.....	415,018	38,500	92,500	546,018
W.S. & L.W.	$26,808	1,516,757	144,550	336,650	2,024,765
Total	$26,808	$2,162.348	$204,550	$480,650	$2,874,356
New Less Depreciation—					
W.E.C.	.....	$ 181.742	$ 21,500	$ 51,500	$ 254,742
S.R.T.	.....	299,185	38,500	92,500	430,185
W.S. & L.W.	$26,808	$1,067,776	144,550	336,650	1,575,784
Total	$26,808	$1,548,703	$204,550	$480,650	$2,260,711

Inventory and Prices—

The inventory and unit prices on which the summary is based was put in by Mr. C. H. Dahl as Exhibit No. 40, both sets of figures having been developed by the Appraisal Department of the Winnipeg Electric Company; and accepted by McClellan & Company at face value.

We have already compared the reproduction value before depreciation as determined by White and Guy for certain identical items, and to this we now add McClellan's:

Item	Placed in Service	Unit	White Dec. 31st, 1915, Level	Guy 1909-1914 Level	McClellan Dec. 31st, 1929, Level
Open Track—Portage	1910	100 ft.	$ 323	$ 333	$ 469
Paved Track—Sherbrook	1907	100 ft.	759	654	969
Cars—400 Class	1910	each	6,171	7,043	14,984
Logan Ave. Sub-station—Bldgs. and Equip't	1912	one	43,787	49,744	57,748
South Car House	1907	one	33,376	27,168	68,179
Fort Rouge Shops	1904	one	35,927	31,909	63,112

Depreciation—

The amount of depreciation found was based on a "spot check" by Mr. Taber of the various items of physical property and an estimate made of the cost to restore same to a condition as good as new. The results of his examination with regard to same were filed as Exhibits No. 36, No. 37 and No. 38.

The City's Attitude—

The City, represented by Mr. Jules Preudhomme, Counsel, and Messrs. W. M. Scott, Horace M. Smith and Samuel Woods, as expert witnesses, refrained from putting forward anything of a positive opinion as to what, in its judgment, would be a fair value for determining rates, except

One were to assume, and there was nothing advanced at the inquiry for so doing, that the City was prepared to accept the value:

(a)	As established by the Public Utility Commissioner in 1920, viz.....		$ 9,199,307
	Plus		
(b)	Net additions by Company to December 31st, 1929, being.....	$3,705,957	
	Less		
	Deductions suggested by Price-Waterhouse	667,985	
			3,037,972
			$12,237,278

And confined itself to:

(1) An attack on the reproduction basis of valuation and the method adopted by McClellan of determining depreciation;

(2) The presentation of evidence from Mr. Scott in an endeavor to show that "Original or Historic Cost" was the only equitable basis of valuation, and that same having been determined a further deduction should be made for depreciation with the obsolescence factor included and all calculated on a theoretical life basis.

General Observations–

It will be seen from the above that two entirely different methods of approaching a valuation for rate making purposes have been advanced. The Company, as was to be expected, advancing that method which would yield the most and the City conversely, that which would yield the least.

Our view is that the answer is not to be found in a strict adherence to either method or in any other stereotype fashion, but that some middle-ground must be found by the exercise of reasonable judgment having its basis in a proper consideration of ali relevant facts. However, in order to establish such midde-ground it is essential that something be known as to "Original or Historic Cost," and as neither the City nor the Railway made any attempt to establish what such a figure might be, we have been compelled to do some exploring in this field on our own account and to which reference will later be made.

Reproduction Basis—

Our objection to a strict adherence to the reproduction basis of establishing fair value is:

(1) That, reproduction values are constantly shifting as instanced by the index figures of electric railway construction costs computed monthly and annually by the American Electric Railway Association;

Taking as a base—

1913 =	100.0
1915	97.3
1920	244.7
1922	175.2
1923	200.2
1929	202.4
1930	198.8

Accordingly,

Note: As between December, 1929, the month on which McClellan prices are based, and December, 1930, the index figure dropped from 205.1 to 192.0, a decrease of 6.38%, and as Canadian prices of electric railway materials and equipment parallel those of the United States, this index figure can be accepted without fear of contradiction as representing also the trend in Canada.

(2) That, in times of high or rising price levels, and when applied under conditions, as in the present instance, create values in excess of the investment in the property and which, consequently, by so doing, are unfair to the car rider;

Conversely,

(3) That, in times of low or falling prices the reproduction value is unfair to the owner, and a utility by a strict adherence to the reproduction basis might very easily, under such conditions, be forced into bankruptcy due to failure to meet the interest on its bonds.

However, as will be seen from the index figures quoted above, there has been over the past 17 years, and subsequent to the large majority of street railway installations on this continent, a pronounced increase in the price level. Accordingly, the owners of utilities have found in the reproduction theory a very profitable vehicle for the establishment of values upon which rates should be fixed. Had prices dropped and the reproduction basis made to apply, the companies would be shouting confiscation. Having regard to the present advantages of the reproduction basis it is quite possible, and in some instances probable, that owners of utilities have deliberately studied the trend in prices in order to seek an adjustment in the rate base at a time most favorable to themselves. It may well be asked who gets the benefit of such an unearned value; certainly not the holders of the bonds or preferred stock.

(4) Or take the case of a street car: There are cars operating today in many cities, which, at the time they were purchased in, say, 1910 cost approximately $7,000, but which today, except for the fact that they have wheels, motors and seats cannot in any measure be considered suitable to present day transportation requirements and which under the reproduction basis would be put into an appraisal at a value twice their original cost, an amount which would hardly be exceeded today for a modern and adequate car of like capacity.

From the above we are satisfied that conditions may easily arise where the establishment of a reproduction value would not be fair to the public and under other circumstances where it would be most unfair to the utility.

On the other hand, there are circumstances where the "Original or Historic Cost" should not be accepted as establishing a fair value on which to base a rate.

For instance, many items of property may have from time to time disappeared from use but under circumstances which made it impossible to set up adequate depreciation. The fact that such property did once exist may no longer be apparent.

Again, a company may operate a number of different utilities, and, in the face of risks that would not be taken by outside investors, has from its general funds provided money for extensions and betterments, etc., for the general benefit of the transportation requirements of the community which it serves and on which it has never been able to earn a return, and to which, in our judgment, recognition should be given in the establishing of a fair value for rate making purposes. Or the money may have been subscribed from the general funds of the utility to meet the Traction Utility's proportion of bond interest, and hence given the utility a stability under circumstances which would have driven to the wall a company operating solely as a traction utility.

Items to be Included in Appraisal—

With regard to the items of value to be included in an appraisal of a transportation utility and with particular reference to one for rate making purposes, we are of the opinion that in cases where a company operates an electric utility as well—as is the case of the Winnipeg Electric Company —there should be excluded:

(1) All items of power production and transmission up to the point where alternating current is received by the traction utility for conversion into direct current for the operation of its cars:

(2) All items of Joint Use, such as Land, sub-station Buildings, Poles and Conduits, etc.: This being done

Power would then be sold by the electric utility to the traction utility on the same basis as to any other customer, and the traction utility would be charged a rental for all items of Joint Use.

This segregation having been made, there should be included:

(a) Land—priced according to the particular method to be adopted but without any deduction for depreciation;

(b) All other items of physical property which are usually classed under the heading "Labor and Materials," such as roadbed, buildings and structures, and equipment, same in turn to be priced according to the particular method of valuation which may be adopted.

Depreciation of Physical Property—

If the question of value is to be approached on the reproduction basis which gives the Company the advantage of the increased price level, then in addition to a deduction for conditional or functional depreciation that recognizes only wear and tear there should, in our judgment, be made a further deduction for obsolescence where same is found to exist. On the other hand, if it is to be approached from the "Original or Historic Cost" basis the unit prices to be used will be determined according to the level of prices in existence at the time the particular items were purchased and put into service, and to arrive at the present value depreciation from wear and tear should certainly be deducted, but whether a further deduction should also be made for obsolescence would, in our judgment, depend upon whether or not the rates of fare in effect prior to the application for adjustment in rates had been such as to permit the Company to set up depreciation reserves sufficiently large to include this latter element.

(c) General construction costs:

Recognition should always be given to such items of general construction costs, as Engineering, Organization, Administrative and Legal Expense, Taxes and Interest;

(d) Other costs:

Also to such items as:

(1) Working Capital, but only in so far as this includes stores: In most instances the public supplies the balance of the working capital:

(2) Going Value—If by "Going Value" is meant the cost of establishing cordial public relations, solicitation for business, perfecting of operating organization, etc., (which was McClellan's definition of same as per Exhibit No. 29), it is wholly independent of the cost of the property and as such has no place as an element of Capital Value, but should be written into Operating Expense.

However, there is a very definite item of expense which, in our judgment, may well be included in the value and which would be larger if same were figured on a reproduction method than on the "Original or Historic Cost" method, and that is the remuneration which under normal business practices would be paid to the creators of the utility as compensation for their vision and initiative in conceiving and organizing same and accordingly should be treated as an investment beyond that represented by physical property and general construction costs.

Depreciation, General Construction Costs and Other Items—

In our judgment, depreciation, on whatever basis it may be calculated, should be applied in like ratio to General Construction Costs and the other elements of value just listed. Otherwise, to take an extreme case, all the physical elements of transportation, such as track, sub-stations, rolling stock, etc., might wither away from lack of proper maintenance, and those other items herein referred to would still remain in their entirety.

APPLICATION OF AFOREMENTIONED PRINCIPLES TO W.E.C., S.R.T. AND W.S. & L.W.

W.E.C.—Reproduction Basis—

(1) McClellan in the main has segregated all items of power production and distribution from the Traction Utility up to the point where the alternating current is received by the converting equipment of the railway for conversion into the direct current necessary for the operation of the cars, and we accept his inventory and pricing of these items, viz.:

Land	$ 335,690
Labor and Material	$14,394,224

However, to bring about a complete segregation a further deduction should be made for "Joint Use" items:

Land	$ 6,140
Labor and Material	$177,752

and an addition made for certain automobiles and trucks for which but 60% of ownership was assigned by McClellan ..... $ 25,636

(2) A reproduction basis to be consistent must necessarily follow the rise and fall in the price level. Accordingly, to bring McClellan's valuation to date, i.e., to December 31st, 1930, a deduction should be made for the drop in prices during the year, which we have conservatively taken at 5%, and an addition made for the net additions to physical property account—$218,129.

(3) Depreciation: McClellan's deduction for Labor and Material items, viz.:

Roadway	20.65%
Buildings and Structures	16.00%
Equipment	14.94%
Average	17.90%

was, from our own observation, somewhat optimistic as regard the cost to restore track and cars to 100% condition, and the condition has not been improved upon during 1930. Accordingly, we are using a factor for the element of wear and tear of 20%. In addition there is a very considerable degree of obsolescence in the property, particularly in car shops, car houses and cars, which is reflected not only in the inadequacy of the equipment to meet present conditions but also in added costs of service from both a maintenance and a transportation standpoint. Accordingly, we have deducted, but as applied only to car houses and shops, shop equipment and cars, a further 15%.

For General Construction Costs—	McClellan used	We have used
Engineering	2-3%	3%
Organization, Administrative and Legal Expense, Taxes	4%	2½%
Interest	5%	4½%
	11-12%	10%
Other Items—		
Working Capital—		
Stores	$250,000	$200,000
Cash	$150,000	.....
	$400,000	$200,000
Financing	5½%	2%
Going Value	10%	5%

Taking the foregoing into consideration a figure representing Reproduction Cost New, Less Depreciation, as at December 31st, 1930, is arrived at

For—			
Winnipeg Electric Company:			
Winnipeg	93.38%	$11,714,676	
Other Municipalities	6.62%	830,491	
			$12,545,167
Suburban Rapid Transit Company:			
Winnipeg	0.00%	.....	
Other Municipalities	100.00%	533,665	
			533,665
Winnipeg, Selkirk & Lake Wpg. Rly.:			
Winnipeg	5.92%	86,601	
Other Municipalities	94.08%	1,376,240	
			1,462,841
			$14,541,673

as detailed on pages 43, 44 and 45.

W.E.C.—TRACTION UTILITY

WILSON, BUNNELL & BORGSTROM

REPRODUCTION BASIS—DECEMBER 31ST, 1930

	Land	Labor and Material
McClellan Valuation before Depreciation as at December 31st, 1929	$335,690	$14,394,224
Deductions for Joint Use Properties	6,140	177,752
	$329,550	$14,216,472
Additions during 1930		218,129
	$329,550	$14,434,601
Additions for Trucks		25,636
	$329,550	$14,460,237
Deduct for decline in price level during 1930, 5% of $14,460,237		723,012
	$329,550	$13,737,225
Deduct Depreciation, 20% of $13,737,225		2,747,445
	$329,550	$10,989,780
Deduct for Obsolescene 15% of $5,616,692		842,551
made up as follows:	$329,550	$10,147,229

McClellan—			
Car Houses and Shops	$ 801,109		
Shop Equipment	125,361		
Cars	4,985,837		
As of Dec. 31t, 1929	5,912,307		
Deduct 5% for decline in prices, 1930	295,615		
		$5,616,692	
Total Land, Labor and Material			$10,476,779
Add for:—			
Engineering 3% of $10,476,779		$314,303	
Railway Stores, Dec. 31st, 1930		200,000	
			514,303
			$10,991,082
Add for:— Organization, Administrative and Legal Expense and Taxes, 2½% of $10,476,779			261,919
			$11,253,001
Add for:—Interest 4½% of $10,476,779			471,455
			$11,724,456
Add for:—Cost of Financing, 2% of $11,724,456			234,489
			$11,958,945
Add for:—Going Value, 5% of $11,724,456			586,222
			$12,545,167

Based on a figure supplied by the Appraisal Department of Winnipeg Electric Company this may be subdivided approximately as follows:

City Fare Zone—		
Winnipeg	$11,574,606	
Other Municipalities	820,561	
		$12,395,167
Suburban Fare Zone—		
Winnipeg		
Other Municipalities	$ 150,000	
		150,000
		$12,545,167

S.R.T.—TRACTION UTILITY

WILSON, BUNNELL & BORGSTROM,

REPRODUCTION BASIS—DECEMBER 31ST, 1930

	Land	Labor and Material
McClellan Valuation, before Depreciation, as at December 31st, 1929	$1,000	$661,388
Deduct for Joint Use Properties	1,000	25,021
	.....	$636,367
Additions during 1930	.....	.....
	.....	$636,367
Deduct for decline in price level 5% of $636,367	.....	31,818
	.....	$604,549
Deduct depreciation, 25% of $604,549	.....	151,137
	.....	$453,412
Total Land, Labor and Material		$453,412
Add for:—Engineering 3% of $453,412		13,602
		$467,014
Add for:—Organization, Administrative and Legal Exp., Taxes, 2½% of $453,412		11,335
		$478,349
Add for:—Interest, 4½% of $453,412		20,404
		$498,753
Add for:—Cost of Financing, 2% of $498,753		9,975
		$508,728
Add for:—Going Value, 5% of $498,753		24,937
		$533,665

Apportionment:

City Fare Zone—		
Winnipeg	.....	
Other Municipalities	$220,000	
		$220,000
Suburban Fare Zone—		
Winnipeg	.....	
Other Municipalities	$313,665	
		313,665
		$533,665

W.S. & L.W.—TRACTION UTILITY

WILSON, BUNNELL & BORGSTROM,

REPRODUCTION BASIS—DECEMBER 31ST, 1930

	Land	Labor and Material
McClellan Valuation, before Depreciation, as at December 31st, 1929....	$100,080	$1,626,506
Deductions for Joint Use Properties.....	.....	23,525
	$100,808	$1,602,981
Additions during 1930.....	.....	.....
	$100,808	$1,602,981
Deduct for decline in price level during 1930, 5% of $1,602,981....	.....	80,149
	$100,808	$1,522,732
Depreciation 25%	.....	380,683
	$100,808	$1,142,049
Total Land, Labor and Material.....		$1,242,857
Add for:—Engineering, 3% of $1,242,857.....		37,285
		$1,280,142
Add for Organization, Administrative and Legal Exp., Taxes, 2½% of $1,242,857.....		31,071
		$1,311,213
Add for:—Interest, 4½% of $1,242,857.....		55,929
		$1,367,142
Add for:—Cost of Financing, 2% of $1,367,142.....		27,342
		$1,394,484
Add for:—Going Value, 5% of $1,367,142.....		68,357
		$1,462,841

Apportionment:

City Fare Zone—		
Winnipeg	$ 86,600	
Other Municipalities	52,400	
		$ 139,000
Suburban Fare Zone—		
Winnipeg	.....	
Other Municipalities	$1,323,841	
		1,323,841
		$1,462,841

"Original or Historic Cost" Basis—

From the data at hand how can such a figure be arrived at?

Life of Various Units:

From an analysis of the life of the various items of plant and equipment we find that the property up to 1920 was developed in two periods, viz., *1st,* that prior to 1914, and *2nd,* that from 1918 to 1920, inclusive.

To particularize, at the time of the Guy valuation in 1920 the items of track, sub-stations and equipment, car houses, shops and equipment, were, to all practical purposes, the same items as before the War; in fact, the only items of any consequence that had undergone change were the street cars—an extensive rehabilitation programme having been entered into in 1918 and 1919, entailing an expenditure of approximately $1,000,000.

Guy Prices:

From an examination of the prices used by Mr. Guy we find:

(a) That all items of physical property that had not undergone rehabilitation were priced at the level of prices existing during the five years prior to the War, i.e., 1909 to 1914, and

(b) That for those items which did undergo rehabilitation due allowance was made for cost of same, and

(c) That additions were shown at actual cost.

Average Level of Prices:

Furthermore, as the greater part of the Company's property was built between 1906 and 1913 and because the average level of prices for the five years preceding the War was certainly not lower than the actual levels obtaining throughout the years when the various items of property were put into service, it can be said that the Guy valuation of the physical property before depreciation represents at least the actual dollars invested in physical property up to that time, and the value as thus determined was $11,321,742

Additions from Price-Waterhouse:

From June 30th, 1920, to December 31st, 1929, the additions to physical property account, as taken from the books of the Company by Price-Waterhouse, in their report to the City in 1930, and filed with your Board as Exhibit No. 6, are shown as $3,705,957
and which Price-Waterhouse suggest should be reduced for items charged in error or removed from service, by ..... $ 667,986
making a net addition of $3,037,971

Price-Waterhouse also in their report suggest that there may be other such items but which for lack of technical advice they were unable to pass upon. In this regard we have made an examination, in some instances of the major work orders and in others the engineers' estimates, of items included in both additions and deductions to physical property.

For instance:

(a) In the case of track, the largest item: We examined both work orders and engineers' estimates for each piece of track, reconstruction, extension and removal and arrived at a value for net additions of $1,125,785
or ..... $ 4,127
more than was written into the Company's books.

We would point out in answer to the query raised by Price-Waterhouse in regard to the relatively high cost of reconstructions and additions per unit, as compared with the deduction made for removals per unit, that the new work was carried out on the basis of 1920-1929 prices, while write-offs were at the scale of prices established in the White valuation of 1916; a method which in our judgment was quite proper;

(b) In the case of rolling stock, we have made a further deduction of $55,000 for items removed from cars but not written off;

(c) In the case of sub-stations, the actual charge on the Company's books, as per Price-Waterhouse, was $104,376
This merely covered the expenditures for the Sherbrook Street Sub-station. To this we would add for the completion of the sub-station in St. Boniface and additional 3-wire equipment in other sub-stations $132,528
making a total for additions to sub-stations of $236,904

The summary of our analysis and reconciliation of additions to the physical property accounts is shown below.

To sum up: We are satisfied that the net additions to physical property account with the allowance for deductions suggested by Price-Waterhouse may be accepted as substantially correct, viz ..... $ 3,037,971

With this addition the value of the physical property, including Stores and Engineering is brought to $14,359,714
Giving effect to items excluded from the McClellan inventory, such as Pinawa, Steam Plant at Mill Street, etc., there is a further deduction of ..... $ 2,340,817
leaving a net total to balance with the McClellan inventory of December 31st, 1929 ..... $12,018,897
all as detailed on page 48.

W.E.C.—TRACTION UTILITY

Analysis and Reconciliation, by Wilson, Bunnell & Borgstrom, of Additions to the Physical Property Account, July 1st, 1920, to December 31st, 1929, in Explanation of the Queries Raised by Price-Waterhouse & Company in its report to the City of Winnipeg, June 2nd, 1930.

	Net Additions P.W.C.	Deductions P.W.C.	Further Deductions W.B. & B.	Additions W.B. & B.
Land	$ 13,990	.....	.....	.....
Labor and Material—				
Pinawa—				
Water Rights—L. of W.'s Storage	21,950	.....	.....	.....
Hydro Electric Plant	60,219	$ 18,248	.....	.....
Trans. Line Pinawa-Winnipeg	.....	.....	.....	.....
Buildings and Equipment—				
Terminal Station—Mill St.	.....	.....	.....	.....
Steam Plant	40,397	.....	.....	.....
Railway Sub-stations	104,376	.....	.....	$132,528
Car Houses and Shops	238,640	12,630	.....	.....
Motor Bus Garage	170,340	.....	.....	.....
Misc. Bldgs. and Equip't	30,795	.....	.....	.....
Distribution System—				
Underground Conduits	2,758	.....	.....	.....
Underground Cables	31,907	.....	.....	.....
Overhead Distribution	272,207	12,183	.....	.....
Track and Roadway	1,121,658	.....	.....	4,127
Rolling Stock and Buses—				
Rolling Stock	918,678	68,754	$ 55,000	.....
Motor Cars and Buses	512,395	.....	.....	.....
Office Furniture and Equipment	40,554	.....	20,000	.....
Stores and Materials	.....	113,273	77,112	.....
Other Assets—				
Assiniboine Sub-station	.....	68,010	.....	.....
Assiniboine Steam Plant	.....	188,793	.....	.....
Storage Battery Bldg. & Equip't	.....	175,017	.....	.....
Engineering, Sup't'ce, etc.	125,093	11,079	18,361	.....
Total	$3,705,957	$667,987	$170,473	$136,655

Net Additions as per Price-Waterhouse & Company $3,037,971
Net Additions as per Wilson, Bunnell & Borgstrom $3,004,153

W.E.C.—TRACTION UTILITY

Guy Valuation of 1920 before Depreciation, Plus Net Additions from Price Waterhouse Report of 1930, less Deductions to bring Items included in line with McClellan Inventory of December 31st, 1929.

(By WILSON, BUNNELL & BORGSTROM)

	Guy	Net Additions	Total	Deductions	Total
Land	$ 484,816	$ 13,990	$ 498,806	$ 18,001	$ 480,805
Labor and Material—					
Pinawa—					
Water Rights—Pinawa	104,000	21,950	125,950	125,950	.....
Hydro Electric Plant	1,003,306	41,971	1,045,277	1,045,277	.....
Trans. line, Pinawa-Winnipeg	189,377	.....	189,377	189,377	.....
Buildings and Equipment—					
Terminal Station—Mill St.	281,741	.....	281,741	139,809	141,932
Steam Plant—Mill St.	443,505	40,397	483,902	483,902	.....
Railway Sub-stations	220,204	104,376	324,580	.....	324,580
Car Houses and Shops	224,920	266,011	450,931	.....	450,931
Motor Bus Garage	.....	170,340	170,340	.....	170,340
Misc. Buildings and Equipment	49,101	30,795	79,896	.....	79,896
Distribution System—					
Underground Conduits	60,968	2,758	63,726	.....	63,726
Underground Cables	68,659	31,907	100,566	.....	100,566
Overhead Distribution	425,153	260,025	685,177	.....	685,177
Track and Roadway	3,909,003	1,121,658	5,030,661	.....	5,030,661
Rolling Stock and Buses—					
Rolling Stock	2,675,525	849,924	3,525,449	.....	3,525,449
Motor Cars and Buses	23,061	512,395	535,456	.....	535,456
Office Furniture and Equipment	3,934	40,554	44,488	.....	44,488
Stores and Materials	369,786	*113,273	256,512	.....	256,512
Other Assets—					
Assiniboine Sub-station	114,293	* 68,010	46,283	46,283	.....
Assiniboine Steam Plant	376,371	*188,793	187,578	187,578	.....
Storage Battery B. & E.	261,655	*175,017	86,638	86,638	.....
Mitigation of Electrolysis	32,365	.....	32,365	.....	32,365
Engineering, Superintendence, etc.	.....	114,014	114,014	.....	114,014
Total Labor and Material	$10,836,926	$3,023,982	$13,860,907	$2,322,816	$11,538,092
Grand Total	$11,321,742	$3,037,971	$14,359,714	$2,340,817	$12,018,897

In order to bring about a further segregation and clear the inventory of all property used jointly with the Electric Utility there should be deducted on the Guy basis of prices, the sum of ..... $ 194,349

and added thereto for trucks, which really belong to the Traction Utility, but which are shared with the Electric Utility ..... $ 25,636

or a net deduction of ..... $ 168,713

Further, in order to bring the inventory up to date there should be added for net additions in 1930 ..... $ 218,129

and we arrive at a total of $12,068,313

as representing an amount not less than the accrued actual investment before depreciation in the property of the Winnipeg Electric Company to December 31st, 1930.

Then deducting 20% for depreciation, viz., ... $ 2,317,754

we arrive at a figure as representing the reasonable value of physical property, and, it should be noted that Engineering and Stores are included, of ..... $ 9,750,559

After addition:

(a) General Construction Costs 7% ..... $ 682,539

(b) Cost of Financing 5% on basis of actual bond discount with 32.5% apportioned to Traction Utility ..... $ 521,654

(c) Going Value—Undoubtedly, the creators of the utility in 1892 received remuneration for their enterprise. In our judgment a reasonable allowance for same would be ..... $ 100,000

*Deductions

Taking all the foregoing factors into consideration a figure representing "Original or Historic Cost" less depreciation, as at December 31st, 1930, is arrived at,

For—

W.E.C.		
Winnipeg	$10,322,827	
Other Municipalities	731,825	
		$11,054,752
S.R.T.—		
Winnipeg		
Other Municipalities	$ 437,471	
		$ 437,471
W.S. & L.W.—		
Winnipeg	$ 68,476	
Other Municipalities	1,088,228	
		$ 1,156,704
		$12,648,927

as detailed below and on pages 50 and 51.

W.E.C.—TRACTION UTILITY
WILSON, BUNNELL & BORGSTROM
"ORIGINAL OR HISTORIC COST" BASIS—DECEMBER 31st, 1930

	Land	Labor and Material	Total
Guy, June 30th, 1920	$484,816	$10,836,926	$11,321,742
Add Price-Waterhouse additions to Dec. 31st, 1930	13,990	3,023,982	3,037,972
	$498,806	$13,860,908	$14,359,714
W.B. & B. deductions for Joint Use Properties	18,001	2,322,816	2,340,817
	$480,805	$11,538,092	$12,018,897
Add for Trucks	.....	25,636	25,636
	$480,805	$11,563,728	$12,044,533
Deduct for Land, Bldgs., Conduits, Poles, etc.	262	194,087	194,349
	$480,543	$11,369,641	$11,850,184
Additions to December 31st, 1930	.....	218,129	218,129
	$480,543	$11,587,770	$12,068,313
Depreciation 20% of $11,587,770	.....	2,317,754	2,317,754
	$480,543	$ 9,270,016	$ 9,750,559
Total Land, Labor and Material		$ 9,750,559	
Add for Organization, Administrative and Legal Expense, Taxes and Interest, 7% of $9,750,559		682,539	
		$10,433,098	
Add for cost of financing, 5% of $10,433,098		521,654	
		$10,954,752	
Add for Going Value		100,000	
Apportionment—			
City Fare Zone:		$11,054,752	
Winnipeg	$10,229,547		
Other Municipalities	725,205		
		$10,954,752	
Suburban Fare Zone:			
Winnipeg	.....		
Other Municipalities	100,000		
		100,000	
		$11,054,752	

Note:—Engineering and Stores are included in base price of $14,359,714
Re Cost of Financing, W.E.C., advise bond discount applicable to traction utility as detailed on page 50.

W.E.C.—TRACTION UTILITY

Statement Showing Discount on Bond Issues and Preferred Stock Now Outstanding, Indicating the Approximate Proportion which is Applicable to the Railway Utility.

Nature of Debt	Year Issued	Amount of Debt	Discount
Mortgage Stock	1909	$4,380,000	$ 334,825
First Refunding Mortgage Bonds	1905	5,000,000	101,800
Refunding Mortgage Bonds	1924	6,000,000	
Refunding Mortgage Bonds	1925	1,000,000	862,508
		$16,380,000	$1,299,133
Preferred Stock:			
30,000 Shares	1920-21	$ 3,000,000	$ 584,794
20,000 Shares	1927-28-29	2,000,000	78,111
Total Preferred Stock		$ 5,000,000	$ 662,905
Total Bonds and Preferred Stock		$21,380,000	$1,962,038
Railway Utility's proportion of Discount and Expense based on Company's valuation of Fixed Properties and Investments, as of January 1st, 1930		33.1/3%	$654,000

S.R.T.—TRACTION UTILITY

WILSON, BUNNELL & BORGSTROM

"ORIGINAL OR HISTORIC COST" BASIS—DECEMBER 31st, 1930

	Before Depreciation			
	City Fare Zone		Sub. Fare Zone	
	Land	Labor and Material	Land	Labor and Material
Guy, June 30th, 1930	$995	$167,683	.....	$295,709
Additions to December 31st, 1930	.....	47,352	.....	.....
	$995	$215,035	.....	$295,709
Deduct Joint Use Properties	995	10,731	.....	2,700
	.....	$214,304	.....	$293,009
Depreciation	.....	53,576	.....	73,252
	.....	$160,728	.....	$219,757
Total Land, Labor and Material		$160,728		$219,757
Add for Organization, Administrative and Legal Expense, Taxes and Interest—				
7% of $160,728		11,250		
7% of $219,757				15,382
		$171,978		$235,139
Add for Cost of Financing—				
5% of $171,978		8,598		
5% of $235,139				11,756
		$180,576		$246,895
Add for Going Value		4,000		6,000
		$184,576		$252,895
Apportionment—				
City Fare Zone—				
Winnipeg		.....		.....
Other Municipalities		$184,576		$184,576
Suburban Fare Zone—		.....		.....
Winnipeg				
Other Municipalities		252,895		252,895
				$437,471

Note—Guy Base Price includes Engineering—Stores are nil, requirements being filled by W.E.C.

W.S. & L.W.—TRACTION UTILITY

WILSON, BUNNELL & BORGSTROM

"ORIGINAL OR HISTORIC COST" BASIS—DECEMBER 31st, 1930

	Before Depreciation			
	City Fare Zone		Sub. Fare Zone	
	Land	Labor and Material	Land	Labor and Material
Guy, June 30th, 1920	$74,000	$62,247	$78,755	$1,069,032
Additions to December 31st, 1930	.....	.....	.....	27,102
	$74,000	$62,247	$78,755	$1,096,134
Deduct Joint Use Properties	.....	.....	.....	13,050
	$74,000	$62,247	$78,755	$1,083,084
Depreciation, 25%	.....	15,561	.....	270,771
	$74,000	$46,686	$78,755	$ 812,313
Total Land, Labor and Material		$120,686		$891,068
Add for Oragnization, Administrative and Legal Expense, Taxes and Interest—				
7% of $120,686		8,448		
7% of $891,068				62,374
		$129,134		$953,442
Add for Cost of Financing—				
5% of $129,134		6,456		
5% of $953,442				47,672
		$135,590		$1,001,114
Add for Going Value		2,000		18,000
		$137,590		$1,019,114

Apportionment—

City Fare Zone—		
Winnipeg	$ 85,590	
Other Municipalities	52,000	
		$ 137,590
Suburban Fare Zone—		
Winnipeg	.....	
Other Municipalities	$1,019,114	
		1,019,114
		$1,156,704

Note—Guy Base Price includes Engineering—Stores are nil, requirements being filled by W.E.C.

A comparison of present value for each utility is as follows:

	McClellan Reproduction Basis Dec. 31st, 1929	W.B. & B. Reproduction Basis Dec. 31st, 1930	W.B. & B. "Original or Historic Cost" Basis Dec. 31st, 1930
W.E.C.—			
City Fare Zone:			
Winnipeg	$15,892,819	$11,574,606	$10,229,547
Other Municipalities	874,097	820,561	725,205
Total	$16,766,916	$12,395,167	$10,954,752
Suburban Fare Zone	254,742	150,000	100,000
Total	$17,021,658	$12,545,167	$11,054,752
S.R.T.—			
City Fare Zone	$ 279,748	$ 220,000	$ 184,576
Suburban Fare Zone	430,185	313,665	252,895
Total	$ 709,933	$ 533,665	$ 437,471
W.S. & L.W.—			
City Fare Zone:			
Winnipeg	$ 104,969	$ 86,600	$ 85,590
Other Municipalities	87,828	52,400	52,000
	$ 192,797	$ 139,000	$ 137,590
Suburban Fare Zone	1,575,784	$ 1,323,841	$ 1,019,114
Total	$ 1,768,581	$ 1,462,841	$ 1,156,704
Grand Total	$19,500,172	$14,541,673	$12,648,927
City Fare Zone:			
Winnipeg	$15,997,788	$11,661,206	$10,315,137
Other Municipalities	1,241,673	1,092,961	961,781
Total	$17,239,461	$12,754,167	$11,276,918
Suburban Fare Zone	2,260,711	1,787,506	1,372,009
Grand Total	$19,500,172	$14,541,673	$12,648,927

It is our judgment that our estimate on the basis of Guy plus net additions to December 31st, 1930, when taken in conjunction with the allowances made for "General Construction and Other Costs" incident to the establishment and financing of the utility represents an amount in dollars not less than the actual investment in the utilities, and may be accepted by the Board as "fair value" for rate making purposes.

The values as thus determined for the Traction Utility of each of the three companies, being as before mentioned, viz.:

Winnipeg Electric Company	$11,054,752
Suburban Rapid Transit Company	437,471
Winnipeg, Selkirk & Lake Winnipeg Railway Company	1,156,704
	$12,648,929

Accordingly we would so recommend.

As Prof. E. C. Goddard, of the University of Michigan, in National Municipal Review for May, 1926, page 293, in reviewing a book, "Public Utilities and the Law," by William W. Wherry, Jr., so succinctly puts it:

"Under any theory of valuation a flow of capital is easy in a period of high prices. The difficult task is to secure capital when prices are going down. One may be permitted to believe that

most investors in stocks, and all investors in bonds of public utilities are more strongly attracted by safety than by possible speculative gains. If the public who are now looked to for the capital needed in public utilities, were reasonably sure of a fair return on the number of dollars they invested in public utilities, and had reasonable assurance that they would get back the same number of dollars if they desired to cash in, it is a fair guess there would be little trouble to secure the needed flow of capital."

Conclusion:

A value having been determined upon, effect should be given to same in the books of the Company and be known as the "Initial Capital Value."

The items of inventory, etc., that go to make up such value to be clearly set forth by schedule and filed with the Board.

This "Initial Capital Value" plus all additions thereto, and less all deductions therefrom, as may, from time to time, be approved by the Board, to then constitute the "Capital Value" of the Company's property for the purpose of fixing and adjusting rates.

Based on relief to the Traction Utility either in the form of increased fares or the elimination of discriminatory taxes, or both, it is recommended that the following additions be made to plant and equipment:—

ADDITIONS TO PHYSICAL PROPERTY, 1931-32

CITY FARE ZONE

		How Provided	
	Total	Renewal and Dep'n Reserve	Additional Capital
Additions, 1931—			
Track—			
Pembina Extension to Parker Ave.	$ 50,000	.....	$ 50,000
Arlington and Mountain cross-over	3,000	.....	.....
Dufferin and Main cross-over	3,000	6,000	.....
Trackless Trolley Structure—			
Sherbrook-Logan to Portage	12,000	12,000	.....
Logan-Arlington to Main	13,000	13,000	.....
Westminster	10,000	.....	.....
Ellice Ave.	7,000	.....	.....
Main-Logan to Main Car House	3,000	.....	20,000
Trackless Trolley Coaches—			
12 40-passenger coaches	228,000	.....	228,000
Sub-stations—			
500 K.W. Mercury Rectifiers—			
St. Vital	.....	.....	.....
Elmwood	120,000	.....	120,000
Electric Street Cars—			
10 50-passenger cars, new	180,000	180,000	.....
15 Group Six, rebuilt	120,000	120,000	.....
	$749,000	$331,000	$418,000
Additions, 1932—			
Electric Street Cars—			
10 50-passenger cars, new	$180,000	$180,000	.....
25 Group Eight, rebuilt	165,000	165,000	.....
Car Shops	500,000	.....	500,000
Trackless Trolley—			
Assuming Salter Street opened, 13 40-passenger coaches	247,000	.....	247,000
	$1,092,000	$345,000	$747,000

PART FIVE

Terms Under Which Service Is Rendered

Findings

General—

An intelligent observation of the transportation services in any city is out of the question unless the observer has at least a working knowledge of the terms under which such service is rendered, and while your Board—it goes without saying— is entirely familiar with same we have deemed it proper to include herewith a resume of our understanding of them, in order that we may stand corrected should our interpretation of same at any point be inconsistent with the facts.

Service Rendered by—

As before stated collected transportation services in Greater Winnipeg are furnished by the traction utilities of Winnipeg Electric and Suburban Rapid Transit, and the Winnipeg, Selkirk & Lake Winnipeg Railway companies.

Franchises—

Granted—These companies hold franchises from the various municipalities as follows:

Winnipeg Electric Company

From	Granted	Expires
Winnipeg	1892	31st. Jan. 1932
St. Boniface	1893	31st Dec. 1940
St. Vital	1905	30th June, 1942
Fort Garry	1912	22nd July, 1943
East Kildonan	1904	31st Dec., 1939
North Kildonan	1904	31st Dec., 1939
Transcona	1926	Yearly Agreement.

Suburban Rapid Transit Company

St. James	1902	14th June, 1937
Assiniboia	1902	14th June, 1937
Tuxedo	1902	14th June, 1937
Charleswood	1902	14th June, 1937

Winnipeg, Selkirk & Lake Winnipeg Railway Company

West Kildonan	1903	31st Dec., 1938
Old Kildonan	.....	
St. Paul	1903	31st Dec., 1938
St. Andrews	1903	31st Dec., 1938
Town of Selkirk	1903	31st Dec., 1938
Rockwood	1912	6th March, 1942
Town of Stonewall	1912	6th March, 1942

Terms

An examination of the franchises and supplementary agreements show the terms and conditions to be, in brief, as follows:

Privileges—

In both Winnipeg and St. Boniface the Winnipeg Electric Company has exclusive rights for street railway transportation on all streets. Further, by specific agreements the Company has been granted rights to operate buses on specific streets. In Winnipeg, independent jitneys and buses operating under a fare of less than 25c. have also been barred under By-law No. 9750, passed April, 1918. In the other municipalities the respective companies are granted exclusive rights on the streets as set out in the franchises, and in most instances are given priority rights on the other streets.

Note—These companies also furnish electric power and light throughout the territory served and to some extent in the municipalities outside of Winnipeg the traction franchise is linked up with the electric franchise.

Right of Municipality to Purchase—

Under the franchise granted to the Winnipeg Electric and the Suburban Rapid Transit companies the municipalities upon giving due notice (in case of Winnipeg and St. Boniface one year's notice, and in the case of other municipalities, six months') may take over and assume ownership of the railways, the price to be determined by arbitration and the "arbitrators to consider only the actual value of the actual and tangible property, equipment, etc., connected therewith." Failure to give notice automatically extends the franchises by five-year periods.

In the case of the Winnipeg, Selkirk & Lake Winnipeg Railway Company no provision is made for the acquisition of the railway by the municipalities, and the company has the right and privilege of extension for further 35-year periods, upon such terms and conditions as may be agreed upon between the Company and the municipalities.

Paving—

In the case of Winnipeg, St. Vital, Fort Garry, the Company upon demand of the municipality must (a) move its tracks to the centre of the street; (b) pave and maintain the pavement within the track allowance at its own expense.

In St. Boniface the Company is not required to pay for any paving within the track allowance. In St. Vital the municipality may demand Company to move track to middle of street and provide its own permanent roadway, but the municipality must finish surface of pavement, — (we presume this means provide the wearing surface).

In the case of the other municipalities the Company is free of any obligation either to move its tracks to the centre of the street or to pave within the track allowance.

Service—

The conditions vary in the several municipalities. In the case of Winnipeg cars are required to operate between 6 a.m. and 2 a.m. the following morning or at such intervals as the City Council may demand. In most of the other municipalities a certain minimum of service is prescribed.

Extensions—

In Winnipeg the City may demand extensions in residential areas containing over 400 persons for each half mile of line; where such persons reside therein a quarter of a mile therefrom. In St. Vital in the case of a bridge being built and connecting St. Vital direct with Winnipeg the Company is to make every reasonable endeavor to obtain the free right to cross same with its cars.

In the other municipalities no provision for extensions is made.

Fare Zones and Fares—

City—The Winnipeg Electric Company under its original franchises agreed to carry passengers in and between Winnipeg, St. Boniface and part of East Kildonan:—

Cash fare—5c.
Tickets (good at all hours).
6 for 25c, or 25 for $1.00.
Limited tickets (good only during morning and evening rush hours) 8 for 25c.

Subsequently, in part by order of the Public Utilities Commission, and in part by direct arrangement between the Company and the municipalities, the zones were extended to include further parts of East Kildonan and parts of St. Vital, Fort Garry, Tuxedo, St. James and West Kildonan, the extensions in Tuxedo and St. James being over the Suburban Rapid Transit Company and in West Kildonan over the Winnipeg, Selkirk & Lake Winnipeg Railway, both of which were and are wholly owned subsidiaries of the Winnipeg Electric Company.

We find that the original fares remained substantially in effect until November 1st, 1918. Subsequent changes took place in which both the Public Utilities Commission and the City had a hand in 1919, 1920, and 1921, when the following schedule went into effect:

Cash—Week days, 7c.; Sundays, 5c.
Unlimited tickets—4 for 25c.
Rush-hour tickets—9 for 50c.
Children's tickets—8 for 25c.

No further change took place until 1930 when by arrangement with the City Council, sanctioned by the Municipal & Public Utility Board, by its Order No. 320, the following temporary schedule went into effect as from July 14th:

Cash fare—7c.
Unlimited tickets (good at all times), 5 for 35c.
Rush-hour tickets—8 for 50c.
Children's tickets—8 for 25c.
Under this schedule the Sunday 5c fare was eliminated.

The Company having found that this temporary increase was not providing the additional revenue required, made further application to the Municipal & Public Utility Board, which by its Order No. 368 instituted the following experimental fare schedule, as from October 6th, 1930, pending a complete investigation of the situation:

Cash fare—10c.
Tickets (good at all times)—2 for 15c.
Weekly Coupon tickets (good at all times) from 5 a.m. each Monday morning to 5 a.m. the following Monday morning—12 tickets for 75c and 7 for 50c., allowing the holder of a coupon any additional rides, during the week for which he holds a coupon, at 5c. per ride. As the two classes of weekly coupon tickets are of equal value, the Company is to have the privilege of eliminating one of these if the other proves much the more popular.
Between the hours of 9.30 a.m. and 12 noon, passengers may ride for a 5c. cash fare.
Children's tickets, 8 for 25c; or cash fare of 5c.
The 75c. coupon was eliminated on November 17th, 1930.

Suburban—

Under original franchises and supplementary agreements suburban or extra fare zones are in effect as follows:—

W. E. C

(1) In East Kildonan and North Kildonan on the Henderson Highway from John Black Church to the north limit of North Kildonan, a distance of 2.28 miles—2 zones.
(2) St. Vital—St. Mary's Road from Berrydale Avenue to East St. Norbert, a distance of 5.50 miles—3 zones.
(3) Fort Garry:
  (a) Municipal Hall along Pembina Highway to St. Norbert, a distance of 4.72 miles 3 zones.
  (b) From Municipal Hall on the Pembina Highway and private right-of-way into Agricultural College, a distance of 1.42 miles—1 zone.

S. R. T.

(1) In Tuxedo and Charleswood on the Charleswood Road from Assiniboine Park to Charleswood, a distance of 3.70 miles—2 zones.
(2) In St. James and Assiniboia, on Portage Avenue from Deer Lodge to Headingly a distance of 7.77 miles—5 zones.

The original fares in suburban zones were:
Cash, 5c.; with various reduced rates for both unlimited and rush-hour tickets. The present schedules are:

W. E. C.	S.R.T.
In each zone, Cash 5c.	In each zone, Cash 5c.
Unlimited tickets, 5 for 15c.	Unlimited tickets, 5 for 15c.

Children's, under 16 years of age, 10 tickets for 25c.

Interurban—

Under original franchises an interurban service is operated.

W. S. & L. W. RLY.

(1) On the Selkirk Road through Old Kildonan, West St. Paul, St. Andrews to Selkirk, a distance of 20.63 miles, and
(2) Over private right-of-way from Middlechurch on the Selkirk Line, through West St. Paul and Rockwood to Stonewall, a distance of 14.05 miles.

The existing fares, which are more or less on a mileage basis, are fixed by Order No. 427, 23rd August, 1920, Public Utilities Commission, effective September 1st, 1920:

For example, the fare is:

From	To	Single	Return
Winnipeg	Lockport	60c	75c
Winnipeg	Selkirk	75c	95c
Winnipeg	Stony Mountain	50c	65c
Winnipeg	Stonewall	75c	95c

Snow Removal—

Except in St. Boniface and East and North Kildonan, where no mention is made of same in the franchises, the companies are required to remove snow from tracks at their own expense and in a manner so as not to obstruct traffic on the highway.

TAXES

Realty Tax—

In all municipalities except St. Vital and Fort Garry the companies are assessed for land and buildings, and in some instances tracks and overhead, on the basis of assessment provided in the Municipal Assessment Act, and applied mill rates.

Utility Tax—

In Winnipeg, under Section No. 300, of the City Charter, track, pole lines, rolling stock, etc., is assessed at $1,350,000 for population of 180,000, increasing at the rate of $150,000 for every increase of 20,000 in the population.

Car License Tax—

Winnipeg—$20 per year per street car or bus operated.

Assiniboia, St. James, Charleswood, Tuxedo—$5 per year per street car operated.

Other municipalities exempt.

Gross Earnings Tax—

Winnipeg, Assiniboia, St. James, Tuxedo, Charleswood—5% of gross passenger earnings.

NOTE: *Other Taxes—*

In addition to those municipal taxes the companies pay to:

The Province a mileage tax as follows:

W. E. C.	$60 per mile, single track.
S. R. T.	$40 " " " "
W. S. & L. W.	$50 " " " "

The Dominion — Dominion Income Tax

Free Transportation—

Municipal policemen and firemen are carried free on all lines of each company. In Winnipeg this privilege has been stretched to include certain members of the City's Health and Social Service departments.

The Company also as a matter of courtesy carry the blind and members of the Princess Pat's Band.

In connection with these franchises it is interesting to note that the City of Winnipeg being the centre of the "hub" and the Winnipeg Electric Company having the benefit of an exclusive franchise for mass transportation, as provided for in the original franchise and the supplementary jitney

agreement, it follows that: The Company upon the termination of its franchises in the municipalities on the "rim" can, if driven to it, cease operations in these municipalities and entirely shut their populations off from the mass transportation services within the City of Winnipeg. Truly a ridiculous situation. On this count alone, it shows the necessity of negotiating a new consolidated agreement with all the municipalities within the city and suburban fare zone signatories thereto.

REGULATION BY MUNICIPAL & PUBLIC UTILITY BOARD

General—

Notwithstanding the fact that the franchises as herein outlined have been entered into between the various parties the legislature of the Province has, as we understand it, by the Municipal & Public Utility Board Act of 1926 granted jurisdiction to the Board over these utilities, and it would appear has, in addition, given to the Board a general supervision over them to the extent that such portions of the contracts as relate to matters within the Board's jurisdiction, may be superseded by the Board, if, when acting within the scope of its specified powers, it sees fit to change them.

Powers of Board—

The Municipal & Public Utility Board Act, being Charter 33, Statutes of Manitoba, 1926, creates (Section 2) the Municipal & Public Utility Board, and in the Act, Section 107, which applies to all public utilities owned or operated by or under the control of the Province of Manitoba or any municipality in the Province, defines a public utility, Section 2, as "any system, works, plant, equipment, or service—for the conveyance of persons or goods over a railway, street railway or tramway —and includes all such carried on, by or for the owner or a municipality or the Government of Manitoba.

Jurisdiction—

SECTION 108.

The Board shall have jurisdiction in all questions relating to the transportation of goods or passengers on any part of the lines of any tramway company or street railway company—under the jurisdiction of the Legislature of Manitoba.

Increase or Decrease in Contractual Rate—

SECTION 110.

(1) Whenever by any contract between an owner of a public utility and any municipality, other corporation or person for the supply of any commodity or service by means of the said public utility and rate, toll or charge is agreed upon either as a fixed or variable rate, toll or charge, or a maximum or minimum rate, toll or charge, and whether such rate, toll or charge be agreed upon with respect to a present or future supply of an existing or non-existing commodity or service, then, notwithstanding any other provisions of this Act, and upon the application of such owner, municipality, corporation or person, and if, upon the hearing of such application it be shown that the said rate, toll or charge is insufficient, excessive, unjust or unreasonable, the Board shall have power to change such rate, toll or charge to such other greater or lesser rate, toll or charge, as it may deem fair and reasonable.

When Applicable—

(2) In the case of contracts made before the coming into force of this Act this section shall not apply thereto except by the consent of the parties thereto duly filed with the Board prior to the hearing of the application, and in the absence of a filed consent all statutory provisions applicable prior to the passing of this section to such contracts and to the price to be charged for the supply of a commodity or service thereunder shall be applicable thereto.

Note—Sub-section (2) of this section has been complied with in the present case insofar as rates in the City of Winnipeg are concerned, by a By-law of the City passed on the 25th of June last authorizing the City Solicitor to consent to an interim increase and an inquiry by the Board.

Saving Clause—

(3) Nothing in this section shall be deemed to be or involve any declaration as to the state of the laws in force prior to the coming into force of this section.

General Supervision—

SECTION 115.

The Board shall have a general supervision over all public utilities and shall make such orders regarding equipment appliances, safety devices, extensions of works or systems, reporting and other matters, as are necessary for the safety or convenience of the public or for the proper carrying out of any contract, charter or franchise involving the use of public property or rights.

SECTION 117.—The Board shall have the power:

Investigations—

(a) To investigate upon its own initiative or upon complaint in writing on matters concerning any public utility;

Appraisals—

(b) From time to time to appraise and value property of any public utility whenever in the judgment of the Board it shall be necessary to do so, for the purpose of carrying out any provision of this Act;

Safety Regulations—

(c) To impose and enforce regulations for the safety and protection of employees and the public;

SECTION 119.

The Board shall have the power—to require every owner of a public utility;

Laws and By-laws—

(a) To comply with the laws of this Province and any municipal By-law affecting the public utility or its owner;

Adequate Service—

(b) To furnish safe, adequate and proper service and to keep and maintain its equipment in such condition as to enable it to do so;

Extensions—

(c) To establish, construct, maintain and operate any reasonable extension of its existing facilities;

Books—

(d) To adopt a uniform system of accounting, which system may be prescribed by the Board;

Reports to Board—

(e) To furnish, whenever the Board may require, a detailed report of finances and operation;

Depreciation Accounts—

(f) To carry—a proper and adequate depreciation account — and by order, fix proper and adequate rates of depreciation, which rates shall be sufficient to maintain the amounts required over and above the expense of maintenance, to keep such property in a state of efficiency corresponding to the progress of the industry, and every owner of a public utility—shall set aside the moneys so provided for out of earnings and carry same in a depreciation fund, and the income from investments of moneys in such fund shall likewise be carried in such fund, and this fund shall not be expended otherwise than for depreciation, improvements, new constructions, extensions or additions to the property of such public utility;

SECTION 124.

No owner of a public utility shall;

Issue of Securities.

(e) Issue any stocks, stock certificates, bonds or other evidences of indebtedness payable in more than one year from the date thereof, until it shall have first obtained authority from the Board for such proposed issue.

Sell or Lease—

(g) Without the approval of the Board, sell, lease, mortgage or otherwise dispose of or incumber its property, franchises, privileges or rights or any part thereof;

SECTION 127.

Changes in Rates—

No change in any existing individual rates—shall be made by an owner of a public utility—until such—be approved by the Board, and the Board shall have power, either upon written complaint or upon its own initiative, to hear and determine whether the proposed increases, changes or alterations are just and reasonable.

Note—Apropos of this section we are advised that in 1921 the City of Winnipeg and the Winnipeg Electric Company entered into an agreement which while not binding on the Board (because the Legislature had already legislated over the subject matter) at the same time may serve as a guide for the Board insofar as it provides the basis on which street railway rates are to be computed, in the following words relative to the determination of rates by arbitration: "A just and reasonable schedule of fares, having regard, among other things, to the value of the property devoted to transportation purposes."

SECTION 132.

Franchises—

No privilege or franchise granted to any owner of a public utility by any municipality in this province shall be valid until approved by the Board.

To sum up:—The nature of this legislation is to place in effect, in regard to the transportation utilities along with all others, a service-at-cost arrangement. However, in this connection it would appear to us preferable that the municipalities in which the traction utilities operate and the owners of the utility should get together with the Board and negotiate a consolidated agreement to be ratified by the Legislature covering the whole phase of public transportation in Greater Winnipeg.

RECOMMENDATIONS

In our judgment such a contract would be on the basis of service at cost and one in which:

Exclusive Franchise—

(a) The utility is given an inclusive and exclusive franchise to provide a unified public transportation service; the major portion to be located within the City of Winnipeg and be used mainly for transporting of persons in said city and in adjacent and suburban territory comprised within the Greater Winnipeg area; nothing to interfere with the right of the utility to operate electric street cars, motor buses, trackless trolleys, taxicabs, but the right to operate taxicabs not to be exclusive—or any other type of motive power, steam excepted, when approved by the Public Utility Board. In short, the municipalities would not suffer or permit, or foster competition, to the transportation as furnished by the utility.

Right of Municipalities to Purchase—

(b) The City of Winnipeg with or without the participation of the other municipalities would have the right at any time to purchase and acquire the utility. With the physical property there would be turned over, but not so as to add to the cost thereof, the moneys and securities standing to the credit of the "Renewal & Depreciation Reserve Fund," the "Injuries & Damages Reserve Fund," and which reserves are hereinafter provided for.

Capital Value—

(c) The total value of the utility would be agreed upon between the parties and the Board and made a part of the contract and be known as the "Initial Capital Value"; the items of inventory which go to make up such value to be clearly set forth by schedule. This "Initial Captial Value" plus all aditions thereto and less all deductions therefrom, as may from time to time be approved by the Board, would constitute the "Capital Value" of the Company's property. It would further be agreed as be-

tween the municipalities and the Company that the "Capital Value" as thus ascertained would be deemed and taken as the actual net investment of the Company, and for the value of its property:

(1) In the event of purchase by the municipalities, or
(2) For fixing rates of fare and return to the Company.

Company Financing—

(d) The Company would be permitted to issue and sell its capital stock, or mortgage bonds, on such basis as approved by the Board, or increase its floating indebtedness in such amounts as would be necessary to provide for extensions, betterments or permanent improvements, as approved by the Board.

Elimination of Special Taxes—

(e) (1) Percentage on gross receipts—That, whereas the present 5% tax on gross receipts, amounting annually to approximately $150,000, is an unjust discrimination against the car rider, same should be eliminated;

(2) Paving Tax: That, whereas track allowance paving is used by all vehicles and in fact on 66-foot streets, which normally carry four lanes of traffic, fully 75% of the free-wheel traffic uses same; that the utility be required to pay towards the initial cost and maintenance of the foundations and pavement within the track allowance only such an amount as would represent the increased cost in excess of what the cost would be to the municipalities in foundations and paving in case there were no car tracks.

The Toronto Transportation Commission has a similar arrangement with the City of Toronto and in regard to maintenance pays 25% and the City 75%.

In Winnipeg alone during the last ten years the utility on the above mentioned basis has contributed in excess charges for pavements:

(a) On account of construction.....$470,000
(b) On account of maintenance..... 270,000

(3) In any event, no taxes would be assessed against this utility that are not in a similar manner assessed against the City's own Winnipeg-Hydro-Electric System.

Construction or Reconstruction of Bridges—

(f) (1) That, in the construction of new bridges, viaducts or subways, the utility be required to pay only the actual cost of rails, ties and fastenings, for track, trolley structure, or other works of the utility, and that in nowise should any structural cost pertaining to such bridges, viaducts or subways be made a charge upon the utility;

(2) That, in the case of changes in the grade and alignment of roadways, reconstruction of bridges or subways, which necessitate the removal or alteration of any track, trolley structure or other works of the utility, that same be added to the cost of the improvement and in nowise be made a charge upon the utility.

Fares—

(g) The fares would be adjusted from time to time in such manner as would, in the opinion of the Board, yield sufficient to enable the utility to meet the full cost of service; that in this connection nothing would prevent the Board from setting a rate of fare which gives recognition to:

(1) A reduced rate to the frequent rider;
(2) A zone fare to encourage short-haul riding;
(3) A reduced rate to the "off-peak rider".

Free Transportation—

(h) Free Transportation would be excluded to all persons except employees of the utility and *bona-fide* members of the City Police and Fire Departments, in uniform or on display of badge.

Service–

(i) Excepting in cases covered by special agreements or specially provided for otherwise the utility would not be required to supply service in excess of that which would permit it to earn a return on the "Capital Value." In the event that Company operates a transportation service at a loss because of benefits accruing to its Electric Utility or other services, such loss would not be charged to the Railway but would be assessed to the utility or other operation benefitting thereby.

Annual Statement—

(j) The Company would submit to the municipalities and the Board, not later than January 31st of each year a memorandum embodying:

(1) An operating statement and balance sheet for the preceding year;
(2) An estimate of the service to be rendered for the current year;
(3) An estimate of operating and maintenance expense sufficient in the judgment of the Company to maintain the utility in first-class operating condition;
(4) An estimate of revenue;
(5) Suggestions as to additions to, and retirements of, physical property included in "Capital Value."

Renewal and Depreciation Reserve Fund—

(k) As a further aid in keeping the property in first-class operating condition and to provide a reserve for renewals, depreciation and obsolescence of the utility, there would be set aside monthly out of gross receipts, as an operating expense, a special fund to be designated as the "Renewal and Depreciation Reserve Fund." Initially, and until the Board ordered otherwise, the amount to be paid into such fund would be 3½c. per vehicle mile of the mileage operated during the preceding month. The Board would determine, from time to time, what items of expenditure are to be considered as renewals and those that are to be considered as maintenance and repairs.

Note—In our judgment 3.0c. per vehicle mile is hardly adequate to take care of the renewals and depreciation, but on the other hand is all the traffic will bear under the existing conditions.

The moneys contained in this "Renewal and Depreciation Reserve Fund" may, by the approval of the Board, be invested by the utility:

(1) Temporarily in additions and betterments without inclusion in "Capital Value."
(2) In bonds or equipment certificates of the Company;
(3) In securities permitted for trust funds, and the balance not so invested would be placed on deposit with the Company's bank, but only subject to withdrawal by order of the Board.

All interest accruing from said investments or deposits would be added to, and become a part of, the fund.

In the event of purchase this fund would be turned over to the municipalities without charge or bonus.

Injury and Damage Reserve Fund—

(l) At the end of each month there would be set aside out of gross receipts, as an operating expense, a special fund to be designated as the "Injuries & Damage Reserve Fund," to provide the satisfaction of all suits, claims and judgments for injuries to persons or property. Initially, and until the Board ordered otherwise, the amount to be paid into the fund to be 2½% of the gross receipts for the preceding month; this fund to be invested and the interest therefrom to be treated in a manner similar to that in the "Renewal & Depreciation Reserve Fund."

the "Injuries and Damages Reserve Fund," would be turned over to the municipalities without charge or bonus.

Capital Return Fund—

(m) Any surplus remaining after the payment of operating taxes, the accrual of one-twelfth of the estimated yearly taxes, the requirements of the "Renewal and Depreciation Reserve Fund," and the "Injuries & Damages Reserve Fund," would be monthly set aside as the "Capital Return Fund."

Out of this fund there would be paid a monthly return to the Company at the rate of 6% per annum on the "Initial Capital Value," and at the rate of 7% per annum on all net additions thereto, or such other return as the Board may consider necessary from time to time to enable the utility to obtain new capital.

Note—By and large, investors are not very favorably disposed towards traction securities and consequently a private company must necessarily pay a higher rate for its money than were the utility municipally owned and capital moneys raised by pledging the credit of the entire community. It must also not be forgotten that so long as the utility remains in private hands any loss must be borne by the shareholders, but if it is municipally owned and there be a loss then such loss must be written into the tax rate.

Rates Stabilization Fund—

(n) The aforementioned charges having been met, any excess remaining in the "Capital Return Fund" would be turned into a "Rates Stabilization Fund" until such fund reached the sum of $250,000.

Any surplus remaining in the "Capital Return Fund" beyond that required to bring the "Rates Stabilization Fund" to the sum of $250,000, would be divided into two equal parts; one part to be turned into the "Rates Stabilization Fund," and the other part would be an additional return to the Company on "Capital Value" beyond that otherwise provided for. When the "Rates Stabilization Fund" reached $400,000, the Board would be required to decrease the fares. When the surplus decreased to $200,000 the Board would raise the fares. Further, in the event that there is a deficiency in the amount of return to the utility at the end of the calendar year, then such deficiency would be made good from any net balance in the "Rates Stabilization Fund."

Right of Appeal to Board—

(o) Whenever differences arise between the utility and municipalities in regard to the franchise such differences would be submitted to the Board, but nothing herein to be construed as permitting either the Company or the City to arbitrate with respect to "Initial Capital Values," the inclusion or deduction in "Capital Value," or the amounts to be added or deducted therefrom.

Conclusion—

The fear expressed by some that a service-at-cost management would lose its initiative and make for inefficient operation and increase cost of same is, in our judgment, groundless, and it is more than offset by the practical task of making the service pay, in medium sized cities at least, and in this we include Winnipeg, under any concessions or schedule of fares that may be adopted.

The long and short of it is that if the City wants the service it must be prepared to admit of an adequate return to the Company on the investment in the utility, and on terms which are fair to the car rider, otherwise the service will go from bad to worse and the Company will face virtual confiscation of its property. Truly, a poor advertisement for any city.

TAXICABS, "DRIVE-YOURSELF AUTOMOBILES AND SIGHT-SEEING CARS

FINDINGS

It is self-obvious that personal transportation units such as the taxicab cannot satisfactorily supplant the mass transportation units in cities of 20,000 population and up. Yet in many cities, and Winnipeg is no exception, the traction utility is suffering a very severe decline in patronage due to unrestricted flat rate taxicabs. People are clubbing together to ride for 10c. each and in some instances for as low as 5c.

Consequently, in order to give effect to a contract of the kind herein suggested and particularly with regard to the inclusive and exclusive features, as set out in paragraph "a"—recommended form of contract,—it is necessary that some means be adopted for regulating those other forms of public transportation, particularly the taxicab which by reason of cut rates is now entering into competition with the traction utility.

At the present time taxicabs within the City of Winnipeg are regulated by By-law No. 11703, passed December 14th, 1925.

This By-law, in brief, requires:

Fees—"13. The fees to be paid for licenses issued under this By-law shall be as follows:

(a) For each cab an annual fee of $20.00;

(b) For a cab-driver's license an annual fee of $1.00, provided that no fee shall be charged for a cab-driver's license issued to the owner of a licensed cab;

(c) For a license to keep a "Drive-Yourself" automobile livery, an annual fee of $20.00 in addition to the licence fee required for each cab as hereinbefore provided."

Tariff—

"47. The following shall be the tariff for all cabs with drivers excepting sight-seeing cars:

By Distance

For 1 to 4 persons, first half mile	40c
For each additional ¼ mile	10c
For each additional person for the whole journey	25c
For waiting at the request of the passenger while under engagement, for each 3 minutes	10c

(Provided that there shall be no charge for the first 4 minutes of any wait).

In computing any charge, an error of 3% in the distance charged for shall not be deemed a breach of this By-law.

By the Hour

For 4 persons or less, per hour	$ 3.00
For each additional person over 4, per hour	.50

(Provided that a charge of $4.00 per hour may be made for a licensed cab which to the satisfaction of the Inspector of Licenses is a high-grade seven passenger car and upon permission being endorsed on the license).

From the commencement of the trip fractions of hours shall be charged for pro rata, provided that 75 cents shall be the minimum charge for any trip).

TARIFF FOR SIGHT-SEEING CARS

48. The following is the tariff for sight-seeing cars:

For at least one hour and not exceeding two engaged in conveying each passenger	$ 1.00
For each subsequent hour, per passenger	.50

In addition to the above the By-law provides for cleanliness and proper conduct of the drivers and mechanical fitness of the cab. However, there is no requirement for insurance.

As having further bearing on the tariff the jitney By-law, April 29th, 1918, being No. 9750, provides in Section 3:—

"Taxicabs doing a recognized and regular taxicab business at a rate of fare of Twenty-five (25) cents or more per passenger or complying with the taxicab and automobile tariff provided for by Section 63 of By-law No. 9570 of the City of Winnipeg, or any amendment thereto, are exempted from the operation of this By-law."

Note—That By-laws Nos. 9570, 9639 and 10566 have been repealed by By-law No. 11703 aforementioned.

In addition to the City License fee all taxicabs operating within the Province are subject to the normal provincial automobile license and the same applies to drivers. If taxis operating in the City of Winnipeg desire to do business outside the City boundaries they are subject to a tax in other municipalities.

RECOMMENDATIONS

It is our judgment that taxicabs should be treated as common carriers and made subject to the jurisdiction of your Board, and

(a) Be required to furnish to the Board security for the proper protection of passengers and the public.

(b) Owners required to insert a "Fair Wage" clause and minimum and maximum hours of labor in drivers' contracts, provided practical means can be found for preventing evasion.

(c) The minimum rate per person be such that it can in nowise be construed as offering competition to the mass transportation unit.

Note.—In regard to all the aforesaid, and to show that responsible municipal officials recognize the need of co-ordinated regulation as applied to public transportation in cities, we quote from a recent recommendation of the public utilities committee of the American Society for Municipal Improvements, which urges:

"That city officials should take the initiative in having their city transit systems operate preferably under a service-at-cost franchise, not only the rail system, but also the buses and taxicabs, thus producing a transit system which under public regulation will meet the growth of the city with adequate rail, bus and taxicab service at the least possible cost to the public."

PART SIX

Demand For and Use of, Service

General—

In any particular city, assuming the facilities have been established, the demand for and use of the mass transportation service is affected by:—

Ownership and use of automobiles and taxicabs;
Growth in population and area;
Business and employment conditions;
Time of going to and from work:
Extent and use of neighborhood theatres and shopping centres;
Social habits;
Individual and summer holidays;
Conventions, sporting events, etc.:
Weather conditions, both seasonal and day by day;

All of which are in large measure outside the control of the utility; and by

Routing;
Headways;
Speed;
Fares;

All of which are subject not only as the public generally believe, to control of the utility, but to municipal authorities and Public Utility Boards as well.

Ownership and Use of Automobiles and Taxicabs—

Winnipeg and Adjacent Municipalities

	Automobiles			Taxicabs			
Year	No.	Index	Per 1,000 Population	No.	Index	Per 1,000 Population	Remarks
1913	2,000	100	10.60	168	100	.78	
1915	3,935	196	15.10	701	417	2.69	Jitneys operating
1920	11,988	599	50.40	212	126	.89	
1925	18,880	944	73.90	271	161	1.06	
1930	28,335	1,416	101.92	394	235	1.41	

As showing the extensive use to which these vehicles are put, a count was made of both vehicles and persons riding in same at the outlets to the following areas on a normal midweek day, September 26th to October 10th, 1930, as follows:

Area	Population	No. of Vehicles W.E.C.	Autos	Number of Passengers W.E.C.	Autos	Total
1. Fort Rouge (South of Assiniboine, including Fort Garry and Tuxedo)	45,257	1,535	31,295	35,749	54,764	90,513
2. St. Boniface (including St. Vital)	23,154	537	12,821	12,639	22,436	35,075
3. Elmwood (including East Kildonan and East St. Paul)	23,187	652	7,532	12,364	12,976	25,340
4. North End (North of C.P.R. and West of Red River)	55,163	1,350	19,257	29,927	33,385	63,312

	Persons Riding Percentage		Persons Per Vehicle		Ratio Rides to Population	
	W.E.C.	Autos	W.E.C.	Autos	W.E.C.	Autos
1. Fort Rouge	39	61	23	1.75	0.79 to 1	1.21 to 1
2. St. Boniface	36	64	23	1.75	0.54 to 1	0.97 to 1
3. Elmwood	48	52	19	1.75	0.53 to 1	0.56 to 1
4. North End	47	53	22	1.75	0.54 to 1	0.60 to 1

The figure of 1.75 persons per automobile was established from actual observation of over 10,000 automobiles.

It is to be noted that not only is the ratio of automobile use highest from south of the Assiniboine River but that street car riding is also highest.

It can be conservatively stated that every new automobile on the streets means at least two fares a day less.

As showing the extent to which automobile owners are taking advantage of the mild weather during this winter a comparison of the automobile traffic inbound on Portage Avenue at Vaughan Street on the two following dates is of interest:

	No. of Automobiles	Per Cent.
Monday, October 6th, 1930.....	14,326	100
Friday, January 7th, 1930.....	8,897	62

Neighborhood Theatres and Shopping Centres—

During the past fifteen years some 25 theatres have been established outside the central business district and approximately as many neighborhood shopping centres have sprung up. The advent of the chain store within the last three years has noticeably restricted the amount of shopping in the central business area, which in turn has been reflected in decreased use of the mass transportation vehicles. In fact, within the last two years one well known grocery chain has opened 19 stores outside the central Business district and another has opened 18 stores.

In addition to the up-town theatre the radio has been another factor tending to restrict night life, and, consequently, street car riding to and from the down-town district.

As showing the effect of passenger automobiles and the development of neighborhood theatres, shopping centres and the radio:

	Population	Index	Passengers	Index	Rides Per Capita	Index
1911	163,000	79	40,300,000	68	247	86
1912	183,000	88	51,100,000	86	280	98
1913	207,000	100	59,600,000	100	288	100
1919	214,500	104	58,400,000	98	272	94
1920	228,000	110	65,200,000	109	286	99
1921	233,500	113	61,500,000	103	263	91
1922	240,000	116	60.400,000	101	251	87
1923	244,000	118	58,300,000	98	238	82
1924	241,000	116	55,100,000	93	228	78
1925	242,000	117	55,100,000	93	227	78
1926	246,500	119	58,000,000	97	234	80
1927	248,500	120	60,000,000	100	241	82
1928	253,500	122	60,200,000	101	237	81
1929	258,500	125	61,200,000	102	236	80
1930	263,500	127	54,000,000	91	205	71

While the individual years are affected by business and weather conditions the adverse effect of the automobile and the neighborhood theatre and shopping centre and radio is clearly indicated in the drop of the riding habit from 288 in 1913 to 236 in 1929.

Population, Business and Employment Conditions—

The effect of the growth of population, business, and employment conditions, is clearly indicated from the aforementioned statement.

During 1911, 1912 and 1913 business and employment conditions were good and population increased rapidly. This was in turn reflected by a great increase in riding. In 1914 war broke out; business fell off; and to add to the difficulties of the railway ,unrestricted jitney competition was permitted by the Municipal Authority and the traffic on the railway which had reached a total of 59,600,000 in 1913 dropped to 48,600,000 in 1915. From then on business conditions improved, there were large bodies of men first being mobilized for war and later being demobilized; jitney competition was eliminated and traffic rose until it reached a peak of 65,300,000 in 1920. Then due to a gradual falling off in business and the unusually open winter of 1923-24 traffic slumped to 55,100,000 in 1924.

In 1925 due to an improvement in business conditions and industrial activity the yearly decrease in traffic was checked and a slight increase shown over 1924. Since then due to better times and considerable increase in population, traffic rose to 61,200,000 in 1929. Then business and employment fell off severely in 1930, the same being quickly reflected in a drop in traffic during that year to 54,000,000.

It is interesting to note that while population has increased by 27% since 1913, the total revenue rides, if we ignore the drop in 1930 as being abnormal, have, as before mentioned, at best remained stationary.

As showing the development of Winnipeg as an industrial centre the following figures from the Industrial Development Board of Manitoba are of interest:

	1925	1929	
Manufacturing Plants.....	779	930	
Number of Employees....	20,000	29,000	
Payroll .....$	25,300,000	$ 35,000,000	
Value of Products.....$	124,000,000	$165,000,000	
			1930
Bank Clearings .....$	2,892,000,000	$3,393,000,000	$2,517,000,000

The general trend in the business activity of the community is shown by the bank clearings and number of buildings erected.

Bank clearings show a general upward trend from 1914 to 1928 due both to rise in price level and general prosperity of the country, especially the grain trade. There was a slight decline in 1929 and a pronounced decline in 1930. The index rose from 100 in 1913 to 211 in 1928, dropped to 208 in 1929 and 154 in 1930.

As against 1913 conditions, when practically all of the riding accrued to the railway and the railway riding habit was 288, we would estimate the present riding habit as follows.

Population 1930		Revenue Rides	Riding Habit
263,000	Traction Utility	54,000,000	205— 43.52%
	Taxicabs	3,000,000	11— 2.34%
	Pass. Autos	67,000,000	255— 54.14%
			471—100.00%

As showing that Winnipeg has a high ratio of taxicabs but that the saturation point of automobile ownership has not yet been reached, we quote the following comparisons:

City	Population	Automobiles	Automobiles Per 1,000 Population	Taxicabs Per 1,000 Population
Toronto	738,916	96,588	131	1.45
Minneapolis	458,000	109,230	238	1.19
Seattle	362,424	90,752	250	1.06
Columbus	322,000	72,191	224	2.06
Portland, Oregon	301,000	88,422	294	.71
Greater Winnipeg	273,711	28,396	103	1.54
St. Paul	268,000	61,222	228	.48
Vancouver	240,421	31,672	131	1.26

That the Company has made a real effort to hold the business and increase the usefulness of its service to the community is indicated by the following:

	Revenue Passengers		Vehicle Miles		Vehicle Miles per Revenue Passenger	
Year	Total	Index	Total	Index	Total	Index
1913.....	59,563,757	100.00	8,339,848	100.00	.140	100.00
1920.....	65,248,840	109.54	9,711,161	116.44	.148	105.71
1925.....	55,096,058	92.50	10,548,086	126.47	.181	129.28
1926.....	57,985,144	97.20	10,434,939	125.11	.180	128.57
1927.....	60,045,833	100.80	10,739,830	128.76	.179	127.85
1928.....	60,223,255	101.10	11,087,272	132.94	.184	131.43
1929.....	61,238,734	102.81	10,828,022	129.83	.176	125.71
1930.....	53,997,401	90.65	10,611,252	127.23	.196	140.00

Weather Conditions—

Seasonal—

Statement, page 71, shows the monthly variation in revenue passengers carried by the W.E.C. from January, 1927, to January 1931, inclusive, and indicates that traffic reaches a high mark in December and then drops month by month to the end of August, from which point it rises gradually again, reaching a peak in December. Necessarily, service must be correspondingly adjusted.

(1) It should also be noted that the revenue passengers and service rendered as measured in vehicle miles operated held almost even over 1927, 1928, with a slight increase in 1929.

(2) That, the Company despite a drop in riding of 10,1% in 1930 compared with 1927, permitted a drop of but 1.4% in the number of vehicle miles operated;

(3) That, during January, February, March and April, 1930, the Company continued to render a service in comparison with other years;

(4) That, riding slumped severely in April, 1930, and the Company in self defence was compelled to make some reduction in service. That the decrease in service was not commensurate with the loss in traffic is clearly indicated by the following:

	Average Per Day				Vehicle Miles Per	
	Revenue Passengers		Vehicle Miles		Revenue Passenger	
August, 1927....	137,228	100.0%	28,776	100.0%	0.209	100.0%
August, 1930....	110,091	80.1	28,089	97.5	0.255	122.0
December, 1927..	200,124	100.0	31,662	100.0	0.158	100.0
December, 1930..	147,838	80.2	29,636	97.5	0.179	113.3

That is, while traffic was off 80.1% in August and 80.2% in December, the Company on the basis of vehicle miles per revenue passenger rendered 22.0% and 13.3% more service in 1930 than in the corresponding months of 1927.

From Day to Day—

It is only since August, 1930, that the Winnipeg Electric Company has been counting cash and tickets received each day. During the whole of this period there has not been one single day in which it could be stated that the weather was appreciably different from the day previous or the day following. Consequently, we have been unable to measure the effect of a day to day change in the weather in any concrete manner.

As demonstrating that the Winnipeg Electric Company is furnishing a proportionately greater service than the utilities in many other cities, we quote the following supplied direct by the Utilities themselves:

	Revenue Passenger Per Vehicle Mile				Vehicle Miles Per Revenue Passenger			
	1924	%	1929	%	1924	%	1929	%
Montreal	8.54	153.5	7.60	134.4	.116	64.8	.133	74.0
Toronto	7.03	125.7	7.28	129.1	.142	79.3	.137	77.4
Minneapolis ...	7.57	135.4	5.55	98.4	.132	73.2	.180	101.7
Seattle	5.78	103.4	5.57	97.7	.173	96.6	.179	101.1
St. Paul	6.97	124.7	5.36	95.0	.143	79.9	.186	105.1
Vancouver	5.99	107.1	5.96	105.6	.167	93.3	.167	94.3
Winnipeg	5.59	100.0	5.64	100.0	.179	100.0	.177	100.0

Of the above systems Montreal and Toronto are the only two which earn the full cost of service and if the W.E.C. were to adjust its service in an attempt to derive the same number of revenue passengers per vehicle miles as in Montreal and Toronto,the service would have to be reduced by 26.0% and 22.6% respectively.

In order to ascertain the relation between the traffic offered and the service rendered throughout the week, we tabulated as per statement on page 73 the number of revenue passengers, vehicle miles and revenue pasengers per vehicle mile for an average mid-week day (i.e., Monday to Friday), an average Saturday and an average Sunday by months, August, 1930, to January, 1931, inclusive, from which it will be seen that the revenue passengers per vehicle mile ranged for

Mid-week days .....from 4.04 to 5.69
Saturdays .....from 4.40 to 6.34
Sundays .....from 2.57 to 3.63
Average day .....from 3.91 to 5.57

In fact, as it requires approximately 6.38 revenue passengers per vehicle mile for the Company to break even under the present fare schedule, as will be shown in "Cost of Service" herein, the only days out of the entire 184 that did not show a loss were the 13 Saturdays of December and January.

W.E.C.—TRACTION UTILITY

REVENUE PASSENGERS AND VEHICLE MILES FOR YEARS

1927, 1928, 1929 and 1930

MONTH	1927					1928					1929					1930				
	REVENUE PASSENGERS		VEHICLE MILES		Rev. Pass. Per Vehicle Mile	REVENUE PASSENGERS		VEHICLE MILES		Rev. Pass. Per Vehicle Mile	REVENUE PASSENGERS		VEHICLE MILES		Rev. Pass. Per Vehicle Mile	REVENUE PASSENGERS		VEHICLE MILES		Rev. Pass. Per Vehicle Mile
	Total	Average Per Day	Total	Average Per Day		Total	Average Per Day	Total	Average Per Day		Total	Average Per Day	Total	Average Per Day		Total	Average Per Day	Total	Average Per Day	
January	5,684,309	183,365	925,391	29,851	6.14	5,710,467	184,208	975,667	31,473	5.85	5,920,187	190,974	936,797	30,864	6.18	5,752,030	185,549	961,248	31,008	5.98
February	5,245,349	187,334	846,846	30,245	6.19	5,394,739	186,025	921,914	31,790	5.85	5,531,117	197,540	873,281	31,189	6.33	5,170,450	184,659	871,698	31,132	5.93
March	5,469,614	176,439	928,940	29,966	5.88	5,635,013	181,774	997,977	32,193	5.64	5,746,011	185,355	952,039	30,711	6.03	5,379,487	173,532	936,287	30,203	5.74
April	5,062,225	168,741	866,339	28,877	5.84	5,040,659	168,022	924,708	30,824	5.45	5,048,971	168,299	904,256	30,412	5.58	4,676,921	155,564	875,652	29,188	5.34
May	4,781,007	154,226	893,105	28,810	5.35	4,744,406	153,045	954,973	30,806	4.96	4,886,148	157,618	909,558	29,340	5.37	4,378,493	141,242	880,691	28,409	4.97
June	4,497,692	149,923	884,693	29,940	5.08	4,624,675	154,156	904,908	30,164	5.11	4,659,594	155,320	877,271	29,242	5.32	4,196,361	139,879	852,825	28,428	4.92
July	4,302,089	138,777	909,397	29,335	4.73	4,495,471	145,015	924,589	29,825	4.86	4,373,815	141,091	897,089	28,938	4.87	3,806,227	122,781	880,656	28,408	4.32
August	4,254,081	137,228	892,063	28,776	4.77	4,369,499	140,951	934,335	30,140	4.67	4,378,997	141,258	899,353	29,011	4.87	3,412,813	110,091	870,763	28,089	3.92
September	4,330,857	144,362	853,417	28,447	5.07	4,344,396	144,813	888,411	29,614	4.89	4,523,640	150,788	865,128	28,838	5.23	3,675,152	122,505	853,069	28,436	4.30
October	4,744,162	153,037	871,565	28,115	5.44	4,955,001	159,839	927,941	29,934	5.34	4,785,657	154,376	895,265	28,879	5.34	4,132,033	133,291	873,619	28,181	4.73
November	5,471,397	182,380	886,528	29,551	6.17	5,161,077	172,036	881,341	29,378	5.85	5,336,821	177,894	879,210	29,307	6.07	4,364,441	145,481	836,049	27,868	5.22
December	6,203,851	200,124	981,546	31,662	6.32	5,747,650	185,408	919,967	29,676	6.24	6,046,676	195,054	944,254	30,460	6.40	5,124,421	165,304	918,705	29,636	5.58
ADJUSTMENTS	.....	.....	.....	.....	.....	.....	.....	7,020	.....	.....	.....	.....	†22,397	.....	.....	...71,428	.....	.....	.....	.....
TOTALS	60,045,834	164,509	10,739,830	29,424	5.59	60,223,255	164,544	11,149,711	30,464	5.41	61,238,734	167,777	10,853,898	29,737	5.64	53,997,401	147,938	10,611,262	29,072	5.09

JANUARY, 1931

REVENUE PASSENGERS		VEHICLE MILES		Rev. Pass. Per Vehicle Mile
Total	Average Per Day	Total	Average Per Day	
4,790,382	154,528	893,629	28,826	5.36

W.E.C.—TRACTION UTILITY

MONTHLY VARIATION IN DAILY SERVICE DEMAND

Month		Weekday	Saturday	Sunday	Average Day
REVENUE PASSENGERS					
August	1930	115,894	131,120	64,686	110,091
September	"	128,312	152,414	60,455	122,505
October	"	140,243	163,996	62,614	133,291
November	"	151,856	191,353	74,112	145,481
December	"	174,154	197,057	82,660	165,304
January	1931	160,406	188,088	80,253	154,258
Average Month		145,144	170,671	70,796	138,455
VEHICLE MILES					
August	1930	28,676	29,778	23,942	28,090
September	"	28,942	30,638	23,452	28,436
October	"	28,835	29,749	22,856	28,181
November	"	28,631	30,140	22,547	27,868
December	"	30,570	31,186	22,713	29,636
January	1931	29,670	30,009	22,708	28,826
Average Month		29,220	30,250	23,039	28,506
REVENUE PASSENGERS PER VEHICLE MILE					
August	1930	4.04	4.40	2.70	3.91
September	"	4.43	4.97	2.57	4.30
October	"	4.86	5.51	2.73	4.72
November	"	5.30	6.34	3.28	5.22
December	"	5.69	6.31	3.63	5.57
January	1931	5.40	6.26	3.57	5.36
Average Month		4.95	5.63	3.08	4.85

Statement on page 74 shows the vehicle miles by individual routes, August to December, 1930, inclusive, and the average month, and

Statement on page 75 shows the revenue passengers by routes for the corresponding months, and the average month, also the revenue passengers per vehicle mile.

Three lines only, namely, Portage-North Main, Park Line-Selkirk, and Ellice, carried more than 6.0 revenue passengers per vehicle mile, or, in other words, were paying lines, and, as showing the support that these lines gave to the balance of the system, they carried 46.69% of the revenue passengers, yet received by 33.24% of the service.

W.E.C.—Traction Utility

VEHICLE MILES, BY ROUTES, AUGUST-DECEMBER, 1930

CITY FARE ZONE

(W.E.C.—S.R.T.—W.S. & L.W.)

Route	August	September	October	November	December	Total	Average Month	Percentage
Portage—North Main	155,313	153,083	152,753	143,223	164,817	769,189	153,838	17.59
Park Line—Selkirk	122,332	118,741	122,966	119,089	138,493	621,621	124,324	14.22
St. Mary's—St. Anne's	96,763	94,161	96,729	92,956	99,492	480,101	96,020	10.98
Corydon	66,647	65,281	67,806	65,847	75,497	341,078	68,215	7.80
Broadway—Elmwood	78,295	76,584	80,779	77,457	81,422	394,537	78,906	9.02
Kildonan East	33,432	32,926	33,769	32,469	36,085	168,681	33,734	3.85
Sargent	25,394	27,078	28,647	27,398	28,640	137,157	27,431	3.13
Morse Place	32,817	32,628	33,262	30,939	35,362	165,008	33,001	3.77
Notre Dame	27,476	26,400	27,062	26,319	30,296	137,553	27,510	3.14
Logan	37,790	34,995	34,958	33,500	34,180	175,423	35,084	4.01
Westminster	23,399	22,846	23,821	22,472	24,702	117,240	23,448	2.68
Ellice	12,381	12,250	12,818	12,172	12,934	62,555	12,511	1.43
St. Boniface	24,899	24,088	24,967	23,911	25,103	122,968	24,593	2.81
William	17,035	16,500	17,064	16,204	16,937	83,740	16,745	1.91
Arlington	21,284	21,086	22,418	20,657	22,236	107,681	21,536	2.46
Sherbrook	10,251	9,886	9,944	10,601	10,242	50,924	10,184	1.16
Bannerman	16,602	16,377	17,057	16,101	16,574	82,711	16,542	1.89
River Avenue	13,763	13,413	13,465	12,638	13,132	66,411	13,282	1.51
Sherbrook	5,686	5,868	6,411	5,223	6,166	29,354	5,871	.67
Valour Road	5,894	5,777	5,971	5.620	5,936	29,198	5,839	.66
Fort Garry	6,829	6,621	6,755	6,203	6,668	33,076	6,615	.75
Stockyards	7,598	7,525	7,881	7,331	8,107	38,442	7,688	.87
Pembina	4,618	4,468	4,620	4,386	4,606	22,698	4,539	.51
Morley	4,145	3,996	4,134	4,015	4,162	20,452	4,090	.46
Talbot	6,570	5,032	5,867	5,023	5,315	27,807	5,561	.63
Rue Archibald	6,805	6,573	6,880	6,568	6,870	33,696	6,739	.77
Sutherland	4,657	4,504	4,684	4,486	4,661	22,992	4,598	.52
Kelvin	3,908	4,198	4,336	4,190	4,337	20,969	4,194	.47
Manitoba	1,575	1,586	1,713	1,451	1,643	7,968	1,593	.18
	874,158	854,471	879,537	838,449	924,615	4,371,230	874,246	100.00
Total Monthly Operating Statements—W. E. C.	870,763	853,069	873,619	836,049	918,705			

W.E.C.—TRACTION UTILITY

REVENUE PASSENGERS AND REVENUE PASSENGERS PER VEHICLE MILE, AUGUST-DECEMBER, 1930
CITY FARE ZONE
(W.E.C.—S.R.T.—W.S. & L.W.)

Route	August	September	October	November	December	Total	Average Month	Percentage	Revenue Pass. Per Vehicle Mile—Average Month.
Portage—North Main	964,140	1,013,678	1,132,720	1,167,698	1,384,407	5,662,643	1,132,529	26.08	7.36
Park Line	691,936	712,530	812,613	850,186	1,010,775	4,078,040	815,608	18.78	6.56
St. Mary's—St. Anne's	348,267	361,150	407,743	427,190	469,469	2,013,819	402,763	9.27	4.19
Corydon-Stafford	278,021	324,144	369,976	385,339	452,025	1,809,505	361,901	8.33	5.30
Broadway—Elmwood	272,688	312,521	351,508	363,742	402,988	1,703,447	340,689	7.84	4.43
Kildonan East	128,492	139,335	155,160	156,184	189,292	768,463	153,692	3.53	4.55
Sargent	116,537	129,991	153,618	159,982	192,193	752,321	150,464	3.46	5.48
Morse Place	123,610	130,438	144,047	152,670	170,137	720,902	144,180	3.32	4.39
Notre Dame	110,586	120,550	136,342	143,045	171,867	682,390	136,478	3.14	4.96
Logan	107,306	105,436	121,088	128,727	147,446	610,003	122,001	2.80	3.47
Westminster	71,087	89,791	108,362	111,487	133,108	513,835	102,767	2.36	4.38
Ellice	62,144	66,860	78,916	86,561	104,328	398,809	79,762	1.83	6.37
St. Boniface	58,918	66,417	67,670	74,902	83,670	351,577	70,315	1.61	2.85
William Avenue	51,620	55,342	64,729	68,024	77,979	317,694	63,538	1.46	3.79
Arlington	39,094	47,869	55,689	58,614	62,379	263,645	52,729	1.21	2.44
Sherbrook Bus	28,629	29,667	31,882	38,063	41,490	169,731	33,946	.78	3.31
Bannerman	25,526	29,527	35,184	37,969	41,467	169,673	33,934	.78	2.05
River	25,912	27,601	28,961	31,649	37,560	151,683	30,336	.69	2.28
Sherbrook Street Car	17,972	17,253	20,278	18,555	23,033	97,091	19,418	.44	3.31
Valour Road	13,531	14,106	17,273	18,266	20,908	84,084	16,816	.38	2.88
Fort Garry (*)	15,500	15,000	15,500	15,000	15,500	76,500	15,300	.35	2.31
Stockyards	9,529	9,619	13,160	13,177	17,347	62,832	12,566	.28	1.63
Pembina	9,702	9,125	10,295	10,567	12,416	52,105	10,421	.23	2.29
Morley	9,230	8,990	10,066	10,225	12,218	50,729	10,145	.23	2.48
Talbot	10,758	7,740	10,932	9,311	10,684	49,425	9,885	.22	1.77
Rue Archibald	7,684	6,621	7,341	8.370	9,252	39,268	7,853	.18	1.17
Sutherland	5,583	5,627	7,029	6,621	6,988	31,848	6,369	.14	1.38
Kelvin	2,469	2,987	3,209	3,190	3,985	15,840	3,168	.07	.75
Manitoba	2,441	2,498	2,892	2,686	3,231	13,748	2,759	.06	1.73
Total Monthly Operating Statements—W. E. C.	3,608,912	3,862,413	4,374,183	4,558,000	5,308,142	21,711,650	4,342,330	100.00	4.96
	3,412,813	3,675,152	4,132,033	4,364,441	5,124,421				

(*) Fixed Income $32.00 daily, approximately 500 Revenue Passengers.

Eight lines, namely, St. Mary's-St. Anne's, Corydon-Stafford, Broadway-Elmwood, Kildonan East, Sargent, Morse Place, Notre Dame and Westminster, carried more than four but less than six revenue passengers per vehicle mile. These lines carried 41.25% of the revenue passengers and received 44.37% of the service.

Eleven lines, namely, Logan, St. Boniface, William, Arlington, Sherbrook, Bannerman, River, Valour Road, Fort Garry, Pembina, and Morley, carried more than two but less than four revenue passengers per vehicle mile. The lines carried 10.96% of the revenue passengers and received 18.80% of the service.

Six lines, namely, Stockyards, Talbot, Rue Archibald, Sutherland, Kelvin and Manitoba, carried less than two revenue passengers per vehicle mile. These lines carried .95% of the revenue passengers and received 3.44% of the service.

As showing the extent to which service is balanced the traffic checks taken in October showed an averoge number of passengers per car from specific districts as follows:

Fort Rouge	23
St. Boniface	23
North End	22
Elmwood	19½

In order to determine the sufficiency of the service on individual lines throughout the different intervals of the day under normal week-day conditions and with the further object of ascertaining to what extent service has been reduced because of the fall-off in traffic, we

(a) Obtained from the Company, records of traffic checks at the points of maximum load on each route entering the central business district for an average week-day in January, 1930, and

(b) With our own staff obtained similar checks for October, 1930, on not only the routes entering the central business district but all other routes as well.

The results of these checks by 15-minute periods, as shown in both statement and diagramatic form in Volume II, clearly indicate that as compared with January, 1930, service in October, 1930, was relatively much greater.

Peaks of Traffic—

Morning and Afternoon—In both cases peaks of traffic occurred on all lines as follows:

Morning inbound	7.30 to 9.00
Afternoon outbound	5.15 to 6.15

and during parts of which periods there was an excess of passengers over seats.

Noon—In January, 1930, there were noon peaks on Portage, Park, Corydon and Broadway as follows:

Outbound	12 noon to 12.30 p.m.
Inbound	1.15 p.m. to 1.45 p.m.

during which there was a small excess of passengers over seats supplied. However, in October, except for the odd car, there was an excess of seats to passengers.

Evening—In both cases there were evening peaks between 7.45 and 8.15 p.m., when on the odd car there was a small excess of passengers over seats.

Traffic During Off-peak Periods—

During off-peak periods in both instances the seats supplied exceeded the passengers carried by approximately 50%.

Statement on page 77 shows relation of seats to passengers, maximum half-hour at points of maximum load.

Based, under rush hour conditions, on a standard over half-hour periods of 100 seats to 160 passengers there was overcrowding as follows:

JANUARY, 1930

Inbound—		Outbound—	
Corydon	Selkirk Ave.	Academy Road	E. Kildonan
Academy Road	Park Line	St. Boniface	Park Line
Morse Place	Portage	St. Mary's-St. Anne's	Portage
E. Kildonan		Morse Place	Sargent

OCTOBER, 1930

Inbound—	Outbound—
Portage	None

W.E.C.—TRACTION UTILITY

RELATION OF SEATS TO PASSENGERS MAXIMUM HALF-HOUR AT ASSUMED POINTS OF MAXIMUM LOAD.

Route	Observed at	INBOUND Period	January, 1930 Seats	January, 1930 Pass.	October, 1930 Seats	October, 1930 Pass.	OUTBOUND Period	January, 1930 Seats	January, 1930 Pass.	October, 1930 Seats	October, 1930 Pass.
North Main	Dufferin and Main	7:30—8:00 a.m.	100	141	100	122	5:30—6:00 p.m.	100	151	100	134
Portage	Portage and Sherbrook	8:00—8:30 a.m.	100	182	100	164	5:30—6:00 p.m.	100	164	100	133
Park Line	Broadway and Osborne	8:15—8:45 a.m.	100	178	.....	.....	5:30—6:00 p.m.	100	163	.....	.....
Park Line	Broadway and Osborne	5:00—5:30 p.m.	.....	.....	100	133	7:15—7:45 a.m.	.....	.....	100	153
Selkirk	Dufferin and Main	8:15—8:45 a.m.	100	186	.....	.....	5:30—6:00 p.m.	100	158	.....	.....
Selkirk	Dufferin and Main	7:30—8:00 a.m.	.....	.....	100	156	5:15—5:45 p.m.	.....	.....	100	143
St. Mary's—St. Anne's	Main and Notre Dame E.	8:30—9:00 a.m.	100	131	100	119	5:15—5:45 p.m.	100	180	100	133
Corydon	Broadway and Main	8:30—9:00 a.m.	100	196	100	135	5:30—6:00 p.m.	100	158	100	112
Stafford	Portage and Sherbrook	8:30—9:00 a.m.	100	145	100	116	5:30—6:00 p.m.	100	146	100	135
Academy Road	Broadway and Colony	8:30—9:00 a.m.	100	166	100	87	5:15—5:45 p.m.	100	165	100	135
Elmwood	Logan and Princess	8:00—8:30 a.m.	100	111	.....	.....	5:15—5:45 p.m.	100	143	.....	.....
Elmwood	Logan and Princess	7:30—8:00 a.m.	.....	.....	100	113	.....	.....	.....	100	89
East Kildonan	Dufferin and Main	7:30—8:00 a.m.	100	163	100	121	5:30—6:00 p.m.	100	167	100	109
Sargent	Ellice and Kennedy	7:45—8:15 a.m.	100	143	100	96	5:30—6:00 p.m.	100	176	100	110
Morse Place	Dufferin and Main	7:30—8:00 a.m.	100	163	100	117	5:30—6:00 p.m.	100	167	100	89
Notre Dame	Charlotte and Notre Dame	8:00—8:30 a.m.	100	103	100	100	5:15—5:45 p.m.	100	135	100	137
Logan	Logan and Princess	5:15—5:45 p.m.	100	118	100	51	7:15—7:45 a.m.	100	137	100	61
Westminster	Broadway and Colony	8:30—9:00 a.m.	100	116	.....	.....	5:30—6:00 p.m.	100	123	100	115
Ellice	Ellice and Colony	8:00—8:30 a.m.	100	73	100	49	5:30—6:00 p.m.	100	95	100	67
St. Boniface	Main and Notre Dame E.	7:15—7:45 a.m.	100	115	.....	.....	5:00—5:30 p.m.	100	166	.....	.....
St. Boniface	Main and Notre Dame E.	7:45—8:15 a.m.	.....	.....	100	66	5:30—6:00 p.m.	.....	.....	100	119
William	William and Princess	4:00—4:30 p.m.	.....	.....	100	113	5:30—6:00 p.m.	.....	.....	100	60
Arlington	Arlington and Logan	7:15—7:45 a.m.	.....	.....	100	81	7:30—8:00 a.m.	.....	.....	100	47
Bannerman-Cathedral	Cathedral and Main	7:30—8:00 a.m.	.....	.....	100	48	8:15—8:45 a.m.	.....	.....	100	23
River Avenue	Broadway and Main	8:30—9:00 a.m.	100	116	100	83	5:30—6:00 p.m.	100	153	100	74
Sherbrook Car	Portage and Sherbrook	7:30—8:00 p.m.	.....	.....	100	35	7:15—7:45 a.m.	.....	.....	100	40
Valour Road	Valour and Portage	7:45—8:15 a.m.	.....	.....	100	54	5.45—6:15 p.m.	.....	.....	100	38
Stockyards	Marion and Des Meurons	5:45—6:15 p.m.	.....	.....	100	56	7:15—7:45 a.m.	.....	.....	100	52
Pembina	Corydon and Pembina	7:45—8:15 a.m.	.....	.....	100	41	5:15—5:45 p.m.	.....	.....	100	51
Morley	Morley and Osborne	8:15—8:45 a.m.	.....	.....	100	55	3:45—4:15 p.m.	.....	.....	100	52
Rue Archibald	Marion and Des Meurons	7:00—7:30 p.m.	.....	.....	100	56	5:30—6:00 p.m.	.....	.....	100	47
Sutherland	On car	7:15—7:45 a.m.	.....	.....	100	23	5:15—5:45 p.m.	.....	.....	100	35
Kelvin	On car	7:30—8:00 a.m.	.....	.....	100	8	7:00—7:30 a.m.	.....	.....	100	10
Manitoba	On bus	5:15—5:45 p.m.	.....	.....	100	38	7:15—7:45 a.m.	.....	.....	100	33

Actually there was gross overcrowding on individual cars, but to a greater extent in January, 1930, than in October, 1930, for instance:

Route	Date	Time	Seats	Passengers
Portage	January 6th, 1930	8.00 a.m.	44	105
Portage	January 6th, 1930	5.50 p.m.	44	110
Portage	September 29th, 1930	8.10 a.m.	44	104
Portage	September 29th, 1930	5.50 p.m.	44	100
Park Line	February 6th, 1930	8.10 a.m.	44	100
Park Line	February 6th, 1930	5.45 p.m.	44	110
Park Line	October 31st, 1930	8.05 a.m.	44	98
Park Line	October 31st, 1930	5.55 p.m.	44	100
Sargent	January 23rd, 1930	8.00 a.m.	38	90
Ellice	February 4th, 1930	8.30 a.m.	40	64
Westminster	February 5th, 1930	8.30 a.m.	25	48

We know of no way to prevent it, short of locking the doors.

In this connection the summary on page 79 showing the totals for all routes entering the central business district for both January, 1930, and October, 1930, are of interest. From these it will be seen that during the morning and afternoon rush that the service based on seats to passengers was relatively 25% greater in October, 1930, than in January, 1930.

It is of further interest as is shown by the following:—

	January, 1930		October, 1930	
All day	Passengers	Ratio Passengers to Seats	Passengers	Ratio Passengers to Seats
Inbound	92,809	100-154	65,573	100-200
Outbound	90,993	100-158	68,316	100-192
Total	183,802	100-156	133,889	100-196
Percentage	100%	100%	72.8%	125%
Maximum half-hour				
Inbound	8,676	100- 72	5,270	100-101
Outbound	11,665	100- 65	7,907	100- 81
Total	20,341	100- 68	13,177	100- 89
Percentage	100%	100%	64.8%	130.8%

That whereas:—

(a) The total passengers carried both inbound and outbound throughout the day decreased from 183,802 to 133,889, or 27.2%, yet the service as shown by ratio of passengers to seats increased 25%;

(b) The total passengers carried during the maximum half-hour both inbound and outbound decreased from 20,341 to 13,177, or 33.2%, yet the service as shown by ratio of passengers to seats increased 30.8%.

Car and Bus Flow Diagram—

A car and bus flow diagram for the maximum half-hour outbound under mid-week conditions in December, 1930, is shown as Diagram No. 6, Part Nine.

It indicates very clearly the dependency of the transportation service on Main and Portage, there being:

(a) 47 cars outbound, or one every 38 seconds, on Main Street from Portage to Higgins;
(b) 51 cars outbound, or one every 32 seconds, on Portage from Notre Dame to Garry;
(c) 39 cars outbound, or one every 46 seconds, on Portage Avenue from Garry to the Mall.

A further comparison to show that service as rendered at present compares favorably with the past few years is as follows:

Average Day	Passengers Revenue	%	Vehicle Miles	%	Rev. Pass: Per Vehicle Mile	%	Vehicle Miles per Rev. Pass.	%
January, 1929	190,974	100	30,864	100	6.18	100	.162	100
January, 1930	185,549	97	31,008	101	5.98	97	.167	103
January, 1931	154,258	81	28,826	93	5.36	86	.186	115
February 1-24, 1931	146,667	77	27,625	89	5.30	85	.188	116

Thus while revenue passengers dropped 23% as between January, 1929, and February, 1931, vehicle miles dropped as between the same months only 11%, and service as expressed in terms of vehicle miles per revenue passenger increased 16%.

W.E.C.—TRACTION UTILITY

SUMMARY OF TRAFFIC ENTERING CENTRAL BUSINESS DISTRICT AVERAGE DAY, JANUARY, 1930

Period	Cars	Seats	Passengers	Average Passengers per Car	Ratio Seats to Pass.	Percentage of Total Passengers
FULL PERIOD—INBOUND						
7:00— 7:30	119	4,870	3,999	33	100—782	2.17
7:30— 9:30	556	22,415	27,045	48	100—120	14.72
9:30—12:00	437	17,719	8,312	19	100— 47	4.52
12:00—14:00	419	16,901	11,878	28	100— 70	6.46
14:00—16:30	515	20,813	13,138	25	100— 63	7.09
16:30—18:30	573	23,319	10,825	19	100— 46	5.89
18:30—23:00	892	35,869	17,612	19	100— 49	9.58
TOTALS.....	3,511	141,906	92,809	26	100— 65	50.46
MAXIMUM HALF-HOUR						
8:30— 9:00	154	6,202	8,676	56	100—139	4.72
FULL PERIOD—OUTBOUND						
7:00— 7:30	128	5,169	1,589	12	100— 30	.86
7:30— 9:30	547	22,120	8,197	15	100— 37	4.46
9:30—12:00	431	17,465	5,848	13	100— 33	3.18
12:00—14:00	414	16,692	9,483	23	100— 56	5.16
14:00—16:30	499	20,184	11,545	23	100— 57	6.28
16:30—18:30	620	25,367	32,211	52	100—126	17.53
18:30—23:00	903	36,294	22,120	24	100— 60	12.04
TOTALS.....	3,542	143,291	90,993	25	100— 63	49.52
MAXIMUM HALF-HOUR						
5:30— 6:00 p.m.	183	7,593	11,665	69	100—153	6.34

W.E.C.—TRACTION UTILITY

SUMMARY OF TRAFFIC ENTERING CENTRAL BUSINESS DISTRICT AVERAGE DAY, OCTOBER, 1930

FULL PERIOD—INBOUND						
7:00— 7:30	118	4,698	3,037	25	100— 64	2.26
7:30— 9:30	485	19,066	16,440	34	100— 86	12.28
9:30—12:00	449	17,840	6,755	15	100— 38	5.04
12:00—14:00	386	15,168	7,964	20	100— 52	5.94
14:00—16:30	457	18,193	9,785	21	100— 53	7.30
16:30—18:30	523	21,030	8,818	17	100— 43	6.58
18:30—23:00	854	33,892	12,774	15	100— 37	9.54
TOTALS.....	3,272	129,887	65,573	20	100—50	48.98
MAXIMUM HALF-HOUR						
7:45— 8:15 a.m.	133	5,293	5,270	39	100— 99	3.86
FULL PERIOD—OUTBOUND						
7:00— 7:30	129	5,050	1,586	12	100— 31	1.18
7:30— 9:30	512	19,405	6,434	12	100— 33	4.80
9:30—12:00	455	17,338	5,874	13	100— 33	4.38
12:00—14:00	403	15,352	7,653	19	100— 49	5.71
14:00—16:30	472	17,997	8,868	18	100— 49	6.62
16:30—18:30	501	22,027	22,817	45	100—103	17.04
18:30—23:00	827	33,530	15,084	18	100— 45	11.24
TOTALS.....	3,299	130,699	68,316	20	100— 52	51.01
MAXIMUM HALF-HOUR						
5:15— 5:45 p.m.	145	6,419	7,907	54	100—123	5.90

Many complaints have been made about the extent to which service has been reduced during February of this year. From February 1st to February 24th, 1931, inclusive, the Company operated a total of 663,456 vehicle miles and carried 3,520,007 revenue passengers.

Compared with the months in which our traffic checks were made we find:—

	Revenue Passengers		Vehicle Miles		Revenue Passengers Per Vehicle Mile	
Per Average Day	Total	Percentage	Total	Percentage	Total	Percentage
January, 1930.....	185,549	100	31,008	100	5.98	100
October, 1930.....	133,291	72	28,181	91	4.73	79
January, 1931.....	154,528	83	28,826	93	5.36	89
February, 1931	146,667	79	27,625	89	5.30	88

From which it is evident that taking into consideration the business offered that service in February, 1931, is as good as during January, 1930, although not as good as during October, 1930, when heavier schedules were put into effect in anticipation of patronage that did not materialize.

Routing—

The schedule and service by individual routes as in effect during October (Fall), and November (Winter), together with the actual cars in service on January 12th, 1931, and on February 26th, 1931, are shown on statement, page 81. While the individual streets over which the routes operate are not listed in detail they are clearly indicated on present routing map.

A comparison of the headways between October, 1930, and February, 1931, is as follows:

STREET CAR ROUTES

October, 1930				February, 1931			
Normal		Rush		Normal		Rush	
1 at	3.45	1 at	1.30	1 at	3.30	1 at	2.00
1 "	4.00	1 "	2.30	1 "	5.00	1 "	3.30
1 "	6.00	1 "	4.00	4 "	6.00	1 "	4.30
2 "	6.20	2 "	5.00	2 "	6.30	4 "	5.00
3 "	7.00	1 "	5.15	2 "	7.00	2 "	5.30
1 "	7.30	1 "	5.30	2 "	7.30	2 "	6.00
2 "	10.00	2 "	6.00	1 "	8.00	1 "	8.00
4 "	12.00	1 "	9.30	2 "	10.00	1 "	8.00
2 "	15.00	5 "	10.00	2 "	15.00	1 "	9.30
		2 "	15.00			1 "	10.00
						2 "	15.00
Cars Scheduled—				Cars Scheduled—			
129		191		130		218	
Cars in Service—				Cars in Service—			
128		220		130		215	

W.E.C.—TRACTION UTILITY

SCHEDULES AND SERVICES, BY ROUTES—FALL AND WINTER, 1930

STREET CAR ROUTE	ROUND TRIP Mileage	TIME Including Layover Normal	TIME Including Layover Rush	SPEED Normal	SPEED Rush	HEADWAYS FALL Day Normal	HEADWAYS FALL Even. Rush	HEADWAYS WINTER Day Normal	HEADWAYS WINTER Even. Rush	Number of Stops Round Trip	Average Distance Between Stops, in Feet	Stops Per Mile	CARS SCHEDULED FALL Normal	CARS SCHEDULED FALL Rush	CARS SCHEDULED WINTER Normal	CARS SCHEDULED WINTER Rush	Number of Cars in Service Monday, Jan. 12th, 1931 Normal	Number of Cars in Service Monday, Jan. 12th, 1931 **Wednesday, Feb. 26th, 1931** (Day)	Number of Cars in Service Monday, Jan. 12th, 1931 Rush	Number of Cars in Service Monday, Jan. 12th, 1931 **Wednesday, Feb. 26th, 1931** (Even.)
Portage—North Main	16.75	97	111	10.51	9.15	4:00	1:30	4:00	1:30	155	570	9.26	23	45	23	62	24	**21**	47	**49**
Broadway—Elmwood	14.78	97	102	9.13	8.70	7:30	6:00	7:30	6:00	120	650	8.12	13	17	13	17	13	**13**	17	**17**
Logan	6.40	42	42	9.14	9.14	7:00	6:00	7:00	6:00	52	649	8.13	6	7	6	7	6	**5**	6	**6**
Sutherland	1.86	15	15	7.40	7.40	15:00	15:00	15:00	15:00	22	446	11.83	1	1	1	1	1	**1**	1	**1**
Kelvin	1.25	10	10	7.50	7.50	10:00	10:00	10:00	10:00	10	660	8.00	1	1	1	1	1	**1**	1	**1**
William	3.18	21	21	9.09	9.09	7:00	5:00	7:00	5:00	31	541	9.76	3	4	3	4	3	**3**	4	**4**
Park Line-Selkirk	15.02	97	106	9.12	8.29	3:45	2:30	3:45	2:30	121	655	8.06	23	35	23	39	23	**17**	35	**36**
Corydon—Stafford	12.62	84	97	9.01	7.81	6:20	5:15	5:30	4:00	112	595	8.87	13	20	16	24	13	**12**	20	**17**
Sherbrook	2.88	20	20	8.64	8.64	6:20	5:00	6:20	5:00	26	585	9.02	3	4	3	4	3	**2**	4	**4**
Pembina	2.04	15	15	8.16	8.16	15:00	15:00	15:00	15:00	18	598	8.83	1	1	1	1	1	**1**	1	**1**
Sargent	4.70	35	38	8.06	7.42	6:00	4:00	5:00	4:00	50	496	10.64	5	9	7	10	5	**5**	8	**8**
Notre Dame	6.04	42	49	8.62	7.39	7:00	5:30	6:00	5:30	57	559	9.44	5	8	5	8	5	**4**	8	**7**
St. Boniface	6.50	45	45	8.66	8.66	10:00	9:30	9:00	9:00	54	635	8.03	4	5	5	5	4	**4**	5	**5**
St. Mary's—Dufferin	14.46	90	97	9.64	8.94	12:00	10:00	12:00	10:00	131	582	9.07	9	10	9	10	8	**8**	10	**10**
St. Anne's—Mountain	14.20	90	97	9.64	8.77	12:00	10:00	12:00	10:00	130	576	9.16	9	10	9	10	8	**7**	9	**9**
Kildonan	9.88	60	70	9.88	8.47	12:00	10:00	12:00	10:00	88	592	8.92	5	7	5	7	5	**5**	7	**7**
Morse Place	9.27	60	70	9.27	7.94	12:00	10:00	12:00	10:00	76	644	8.19	5	7	5	7	5	**5**	7	**7**
TOTALS	141.83	920	1005	9.25	8.46					1,253	597	8.83	129	191	135	217	128	**114**	190	**189**
Including Layover		7.5	6	.....	.....															
		912.5	999	9.32	8.52															
BUS ROUTE																				
Morley	1.19	10	10	7.14	7.14	10:00	10:00	10:00	10:00	10	628	8.40	1	1	1	1	1	**1**	1	**1**
Stockyards	2.46	15	20	8.32	6.24	15:00	10:00	15:00	10:00	18	721	7.32	1	2	1	2	1	**1**	2	**3**
Westminster	3.75	24	26	9.37	8.65	8:00	3:30	6:05	3:00	26	761	6.93	3	7	4	8	4	**4**	10	**9**
Rue Archibald	4.00	24	24	10.00	10.00	24:00	12:00	24:00	12:00	22	960	5.50	1	2	1	2	1	**1**	2	**1**
Valour Road	2.08	15	15	8.32	8.32	15:00	7:30	15:00	7:30	20	549	9.45	1	2	1	2	1	**1**	2	**2**
Cathedral—Bannerman	4.60	30	30	9.20	9.20	10:00	5:00	10:00	5:00	42	578	9.13	3	5	3	5	3	**3**	4	**4**
River	2.47	14	14	10.58	10.58	15:00	8:00	7:00	7:00	27	483	10.96	1	2	2	2	2	**2**	3	**3**
Ellice	2.01	15	17	8.04	7.09	7:30	4:00	5:00	3:00	21	505	10.45	2	4	3	5	2	**2**	4	**4**
Arlington	5.13	15	30	10.76	10.26	7:30	4:00	7:30	4:00	37	732	7.21	2	7	2	7	2	**2**	9	**8**
Manitoba	1.02	8	8	7.65	7.65	8:00	8:00	8:00	8:00	10	538	9.81	1	1	1	1	1	**1**	1	**1**
	28.71	170	194	10.13	8.88					233	650	8.12	16	33	19	35	18	**18**	38	**36**

NOTE.—Portage-North Main includes service over S R. T., St. James to Deer Lodge, W. S. & L. W. North Car House to Templeton.

BUS ROUTES

October, 1930				February, 1931			
Normal		Rush		Normal		Rush	
2 at	7.30	1 at	3.30	1 at	6.00	1 at	3.30
2 "	8.00	2 "	4.00	2 "	7.30	1 "	4.00
2 "	10.00	1 "	5.00	4 "	10.00	1 "	5.00
3 "	15.00	1 "	7.30	2 "	15.00	1 "	6.00
1 "	24.00	2 "	8.00	1 "	24.00	1 "	7.00
		2 "	10.00			2 "	7.30
		1 "	12.00			2 "	10.00
						1 "	12.00
Buses Scheduled—				Buses in Service—			
16		33		20		38	
Buses in Service—							
16		37					

In connection with all the above:—

CITY FARE ZONE

	1929	1930	% Decrease from 1929	Estimate 1931	% Decrease from 1930
Revenue Passengers	63,654,211	56,365,751	11.5	50,000,000	11.3
Vehicle Miles	11,149,923	10,850,821	2.7	10,200,000	6.0

Re-routing—

Based on our traffic checks, the adjustments in locations of the individual lines as recommended in Part Three—Type and Adequacy—and to eliminate non-essential mileage, the following changes in routing are recommended:

(a) To be effective forthwith—

(1) St. Anne's Road—Off-peak from Hindley to St. Mary's Road; peak from Hindley to Garry Loop.
(2) St. Mary's-Mountain—From Berrydale to Arlington and return.
(3) Dufferin—From Main via Dufferin and Arlington to Mountain and return.
(4) Bannerman Bus—To operate from McGregor via Bannerman, Scotia, Matheson, St. Cross, Bannerman.
(5) Sutherland and Kelvin—Street car services to be eliminated and be replaced by one bus operating from Main via Sutherland, Louise Bridge, Talbot and Kelvin to Hespeler.
(6) Rue Archibald bus service during morning and evening rush to be extended on Montcalm to a connection with the Elmwood line at Talbot and the Sutherland-Kelvin line at Stadacona.
(7) Westminster Bus to be re-routed as follows: From Portage via Vaughan, St. Mary's, Osborne, Broadway, Balmoral Place, Westminster, Aubrey to Wolseley, returning via Wolseley, Ethelbert, Westminster, Balmoral Place, Broadway, Osborne to Portage and Vaughan.

(b) To be effective on completion of Pembina Subway—

(1) Pembina extended along Pembina through new subway to connect with present Fort Garry line at Parker Avenue.
(2) Park Line to terminate at River Park.
(3) Beresford-Jubilee Bus—New bus route from Osborne via Beresford, Cockburn, Jubilee to Pembina Highway.

(c) To be effective on completion of Norwood and Main Street bridges—

(1) St. Anne's rush hour and St. Mary's-Mountain services to operate via same.
(2) St. Boniface cars to alternate eastbound via Provencher and southbound via Tache.
(3) River Avenue bus to operate from River and Osborne to River and Main.

(d) To be effective upon construction of suitable pavement—

(1) Ellice bus to be extended three blocks to Ingersoll.
(2) Bannerman bus to be extended two blocks to Parr Street.
(3) Arlington bus to be extended via Arlington, Alfred to McPhillips.

(e) To be effective upon the granting of relief in the form of increased fares, elimination of taxes, on both—
  (1) Sherbrook, Portage to Logan—Tracks to be removed therefrom and a trackless trolley coach service inaugurated.
  (2) Logan Avenue, Main to Arlington—Tracks to be removed therefrom and a trackless trolley coach service inaugurated.
  (3) William Avenue—Service to be eliminated.
  (4) Logan-William—New street car route from Keewatin via Logan, Arlington, William, Princess, Ellice, Notre Dame, Princess and return.
  (5) Ellice Bus—Service to be replaced by trackless trolley coach.
  (6) Westminster Bus—Service to be replaced by trackless trolley coach service.

(f) To be effective with the opening of crosstown highway connection from Portage and the Mall via Balmoral, Isabel to Salter and Dufferin and subject to relief having been granted—
  (1) Park Line-Selkirk-McGregor to be eliminated.
  (2) Park Line to operate from River Park to Garry Loop.
  (3) Salter-Mountain—New service via trackless trolley coach from Mountain and Sinclair via Mountain, Salter, Crosstown highway, Ellice, Vaughan, Graham, Hargrave, Portage and return via crosstown highway.
  (4) St. Mary's-Mountain to be eliminated, and
  (5) St. Mary's-Selkirk-McGregor substituted therefor.

In connection with the crosstown highway to construct a double track thereon from Portage to Selkirk, would cost in the neighborhood of $350,000, or $75,000 more than it will cost to equip the entire route with trackless trolleys, coaches and the necessary trolley structure.

Conclusion—

From a service standpoint, the major problem that faces all mass transportation utilities in all cities is that hours of work are constantly being shortened and the public in ever increasing numbers desire to ride at the same time. This holds true to a greater extent for the homeward movement in the late afternoon than for the outward movement in the morning.

How to marshall cars and men to handle the traffic under present conditions during the afternoon rush on the basis of a seat per passenger or anything near it and still keep the price of a ride within the willingness of the public to pay is a dilemma as yet beyond the ability of any human mortal to solve.

Attempts in some cities are being made to induce employers, employees and shoppers to accept a system of staggered hours. For instance, why should the stores religiously open at 8.30 a.m. to 9 o'clock before mother has had time to finish the morning dishes and dad, Mary and John are thinking only of getting to work on time and then close just when dad, Mary and John are leaving work when they would otherwise have some time in which to shop. If a change were to be made it would certainly reduce traffic congestion by stretching the morning and afternoon peak loads over a longer period of time.

DEMAND FOR AND USE OF SERVICE IN SUBURBAN FARE ZONES

Based on traffic checks supplied by the Winnipeg Electric, we have determined the riding and the service given on each of the suburban lines and for the individual zones, and from our own observation the resident population along each of these zones, for both 1929 and 1930, as shown on statements, pages 86 and 87.

It is to be noted that in connection with the suburban lines of the Winnipeg, Selkirk & Lake Winnipeg Railway and Suburban Rapid Transit Company, in only two zones did the passengers approach 2 per car mile, namely, S.R.T. Portage, Victoria Street, and S.R.T. Portage, Wiggle Street.

In other words, in only two zones did the revenue exceed 6 cents per car mile, which was barely sufficient to pay the operator's wages.

For statement of Revenue and Expenses see statement at end of report.

Frankly, we can see no justification for asking the companies to continue service on any of these lines, namely, Portage West, Fort Garry, St. Norbert, St. Mary's Bus, East St. Paul, except assistance in the form of contribution from outside sources be given.

University Service—It is not to be expected that with the opening of the University in its new location that the City Fare Zone be extended thereto, and it is our opinion that if a satisfactory service is to be given that the Winnipeg Electric will have to have some financial assistance from the University.

W.S. & L.W.—No record of the passengers carried on this line is available, the fares being on a mileage basis. However, this line still continues to earn sufficient to pay its operating expenses and leave something over, as is shown for 1929 and 1930 on statement at end of report.

As conditions improve it is to be expected that population along the route from Winnipeg to Selkirk will increase, but it is doubtful that this increase will bring any additional riding to the railway, if experience along similar lines elsewhere is any criterion.

It has been elsewhere recommended that the cars on this route be equipped for one-man operation.

Transcona Bus—

The Transcona Bus is operated as a division of the Winnipeg Electric Company, and while no record of the passengers carried has been kept, there was a decrease in traffic from 1929 to 1930 based on the receipts of 10%. However, the revenue is still sufficient to show a reasonable return on the service.

Notes—

Portage-North Main Service—That with the successful adoption of the trackless trolley advantage be taken of the width of Portage Avenue and North Main Street to consider the placing thereon of a double service—street cars to run express and trackless trolley to handle the local traffic.

Special Fare Route—That consideration be given forthwith to a high speed special fare route to serve the territory south of the Assiniboine River.

Speed—

While it is our judgment that the Company is furnishing a very high standard of frequency in comparison with the use made of the service and the revenue derived therefrom, we are of the opinion that speed is woefully slow.

The average speed of the street cars in Winnipeg for 1930 was but 9.19 miles per hour and for buses 9.11 miles per hour, which, in comparison with other cities, is altogether too slow.

Average Speed Miles per Hour, 1929

San Antonio	10.73
Cleveland	10.50
Denver	10.30
St. Paul, Minn.	10.12
Houston, Texas	10.12
Minneapolis	9.88
Vancouver	9.76
Toronto	9.72

The main contributing factors to slow speed in Winnipeg are:

(1) Excessive number of schedule stops.
(2) Inadequate boarding and alighting facilities on cars.
(3) Inadequate motor power on low floor cars.
(4) Interference from vehicular traffic.
(5) Insufficient leeway at intersections controlled by traffic signals.
(6) Timidity of train crews, due to an overdose of "safety first."

Actually with level grades, wide streets in the downtown section, and the large percentage of open track free of interference from vehicular traffic the opportunities for high scheduled speeds are much greater than in average cities, and rush hour speeds of 10.25 and normal speeds of 11.25 miles per hour should be attainable.

Stops—

In Winnipeg the average number of stops per mile over street car routes is 8.83 and over bus routes 8.12, or an average of 8.71 for the system. See statement, page 81. In Toronto, for instance, on routes where conditions approximate those in Winnipeg the stops have been reduced in one case to 6.05 per mile, in another to 6.42 per mile, and in two others to 7.25 per mile, and speeds during rush hours as high as 10.40 miles per hour are being obtained.

Referring again to Winnipeg, the reduction of stops within the congested loading district and the installation of enclosed loading platforms, has been a great step forward but there is much that can still be done.

For instance, there is no good reason for stops on two sides of one intersection, as for example:

(1) There are two stops at Osborne and Portage for Park Line cars.
(2) There are two stops at Broadway and Donald for Broadway cars.
(3) There are two stops at Osborne and Broadway for Corydon cars.
(4) Eastbound loading platform on Portage between Hargrave and Donald is badly placed. It should be moved so that cars stop not just east of Hargrave, but just west of Donald.

Out of a total of 1,486 scheduled stops on the system we are of the opinion that 293 can be eliminated and the total reduced to 1,193 or an average of 7 per mile.

W.E.C.—S.R.T.—W.S. & L.W.

OPERATING DATA—SUBURBAN ROUTES

1929

CLASSIFICATION	Miles of Streets or 1st Mile Line Oper.	Population Served	Revenue Passengers Carried	Vehicle Miles	Revenue Passengers Per Vehicle Mile	Vehicle Hours	Maximum No. of Vehicles Operated	Headway Peak	Minutes Off-Peak	Number Trips Daily	Population per Mile
SUBURBAN ROUTES:											
W.E.C.—East St. Paul—											
Zone No. 1	1.58	675	87,052	48,366	1.80	5,053	1	30	30	37	427
Zone No. 2	.70	295	29,361	23,229	1.26	2,377	1	30	30	37	420
TOTAL	2.28	970	116,413	71,595	1.63	7,430	1	30	30	37	.....
St. Mary's Road Bus—											
Zone No. 1	1.77	565	.....	.....	.....	.....	....	....	....	....	319
Zone No. 2	1.86	80	.....	.....	.....	.....	....	....	....	....	43
Zone No. 3	1.87	90	.....	.....	.....	.....	....	....	....	....	48
TOTAL	5.50	735	72,311	77,426	.93	7,103	1	20	20—40	40—45	.....
Fort Garry—											
Zone No. 1 Agric. College	1.42	400	79,481	50,525	1.57	4,765	1	45	45	26	281
Zone No. 1	2.14	155	46,754	62,062	.75	5,841	3	15	15	78	70
Zone No. 2	1.21	95	34,716	23,870	1.45	2,306	1	30	45	26	80
Zone No. 3	1.37	335	29,047	26,456	1.10	2,460	1	30	45	26	244
TOTAL	6.14	985	189,998	162,913	1.17	15,372	4	....	....	....	.....
W.E.C. TOTAL	13.92	2,690	378,722	311,934	1.21	29,905	....	....	....	....	.....
S.R.T.—Portage—											
Zone No. 1 Victoria	2.00	2,500	341,686	172,533	1.98	14,692	2	10	10	116	1,250
Zone No. 2 St. Charles	1.99	530	102,406	102,252	1.00	8,783	1	20	20	58	260
Zone No. 3 Wiggle Street	.88	270	21,160	7,532	2.81	666	1	40	40	28	110
Zone No. 4 Stevenson	1.54	.....	19,060	28,998	.65	2,563	1	40	40	28	
Zone No. 5 Headingly	1.36	245	18,898	25,608	.73	2,264	1	40	40	28	180
TOTAL	7.77	3,545	503,210	336,923	1.49	28,968	4	....	....	....	.....
Charleswood—											
Zone No. 1	1.89	335	80,531	51,525	1.56	3,843	1	30	42½	33	177
Zone No. 2	1.81	335	31,317	45,279	.69	3,378	1	30	42½	33	185
TOTAL	3.70	670	111,848	96,804	1.15	7,221	1	30	42½	33	.....
S.R.T. TOTAL	11.47	4,215	615,058	433,727	1.42	36,189	....	....	....	....	.....
TOTAL SUBURBAN ROUTES	60.07	6,905	993,780	745,661	1.33	66,094	....	....	....	....	.....
INTERURBAN ROUTES:											
W.S. & L.W.—Templeton—Selkirk	20.63	5,500	.....	257,596*	.....	13,965	....	60	60–120	13	.....
Middlechurch—Stonewall	14.05	1,500	.....	89,916*	.....	5,645	....	Appr. 180	Appr. 180	4	.....
TOTAL INTERURBAN ROUTES	34.68	7,000	.....	347,512	.....	19,610	....	.....	.....	....	.....
TRANSCONA BUS	7.50	5,019	.....	105,139	.....	7,706	1	60	....	....	.....

(*) Includes both freight and passenger.

W.E.C.—S.R.T.—W.S. & L.W.

OPERATING DATA—SUBURBAN ROUTES

1930

CLASSIFICATION	Miles of Streets or 1st Mile Line Oper.	Population Served	Revenue Passengers Carried	Vehicle Miles	Revenue Passengers Per Vehicle Mile	Vehicle Hours	Maximum No. of Vehicles Operated	Headway Peak	Minutes Off-Peak	Number Trips Daily	Population per Mile
SUBURBAN ROUTES:											
W.E.C.—East St. Paul—											
Zone No. 1	1.58	675	81,400	45,623	1.78	4,812	1	30	30	37	427
Zone No. 2	.70	295	27,450	21,471	1.27	2,264	1	30	30	37	420
TOTAL	2.28	970	108,850	67,094	1.62	7,076	1	30	30	37	.....
St. Mary's Road Bus—											
Zone No. 1	1.77	565	54,290	62,612	.86	5,753	....	....	....	....	319
Zone No. 2	1.86	80	9,200	7,183	1.28	660	....	....	....	....	43
Zone No. 3	1.87	90	4,110	7,583	.54	697	....	....	....	....	48
TOTAL	5.50	735	67,600	77,378	.87	7,110	1	20	20—40	40—50	.....
Fort Garry—											
Zone No. 1 Agric. College	1.42	400	74,320	48,077	1.53	4,296	1	45	45	26	281
Zone No. 1	2.14	155	43,720	59,057	.74	5,278	3	15	15	78	70
Zone No. 2	1.21	95	32,460	22,714	1.42	2,031	1	30	45	26	80
Zone No. 3	1.37	335	27,160	25,175	1.07	2,250	1	30	45	26	244
TOTAL	6.14	985	177,660	155,023	1.14	13,855	4	....	....	....	.....
W.E.C. TOTAL	13.92	2,690	354,110	299,495	1.18	28,041	....	....	....	....	.....
S.R.T.—Portage—											
Zone No. 1 Victoria	2.00	2,500	286,256	147,472	1.94	11,583	2	10	10	116	1,250
Zone No. 2 St. Charles	1.99	530	72,203	96,335	.75	7,535	1	20	20	58	260
Zone No. 2 Wiggle Street	.88	270	13,263	6,088	2.18	468	1	40	40	28	110
Zone No. 4 Stevenson	1.54		12,594	16,358	.77	1,288	1	40	40	28	
Zone No. 5 Headingly	1.36	245	12,594	14,465	.87	1,078	1	40	40	28	180
TOTAL	7.77	3,545	396,910	280,718	1.41	21,952	4	....	....	....	.....
Charleswood—											
Zone No. 1	1.89	335	63,740	49,731	1.28	3,915	1	30	42½	33	177
Zone No. 2	1.81	335	27,360	43,785	.62	3,447	1	30	42½	33	185
TOTAL	3.70	670	91,100	93,516	.97	7,362	1	30	42½	33	.....
S.R.T. TOTAL	11.47	4,215	488,010	374,234	1.30	29,314	....	....	.....	....	.....
TOTAL SUBURBAN ROUTES	60.07	6,905	842,120	673,729	1.25	57,355	....	....	.....	....	.....
INTERURBAN ROUTES:											
W.S. & L.W.—Templeton—Selkirk	20.63	5,500	.....	244,412*	.....	18,613	....	60	60–120	13	.....
Middlechurch—Stonewall	14.05	1,500	.....	76,250*	.....	4,378	....	Appr. 180	Appr. 180	14	.....
TOTAL INTERURBAN ROUTES	34.68	7,000	.....	320,662	.....	22,991	....	....	....	....	.....

(*) Includes both freight and passenger.

TRANSCONA BUS	7.50	4,926	.....	109,917	.....	7,882	1	60	....	....	.....

Boarding and Alighting—

The inadequate boarding and alighting facilities have been discussed under Type and Adequacy of the Equipment, and improvements recommended.

Motive Power—

This has also been discussed under Type and Adequacy of the Equipment, and improvements recommended.

Traffic Regulation—

Signals—It has been the rule in Winnipeg that cars running straight across an intersection would move on the "green" light, which is O.K., but that cars making either a right or left-hand turn would, in some instances, notably at Portage and Main and Portage and the Mall, move only on the "amber" flash, or, in other words, during the change-over from "green" to "red," and vice versa. It is our opinion that street cars should be allowed to make a left-hand turn on the "green" and a right-hand turn on both the "green" and "red." Unless the traffic authorities are willing to concede this point there will always be tie-ups during the rush hours on,

Portage at Main,
Portage at Garry Loop, and
Portage at Osborne.

Recently, there has been installed a flexible progressive system of traffic signals on Main from Higgins to Broadway and on Portage from Main to Osborne. The synchronization of signals appears satisfactory to vehicular traffic but timing, which is on a cycle of approximately 90 seconds, is having serious effect in delays to the street cars. On Portage the "green" or "go" part of the cycle is approximately 60 seconds, and on the cross streets 30 seconds. Portage Avenue has a width of 132 feet and as moderate walking speed is about 4 feet per second, consequently this street can be crossed in 25 seconds, and to expect pedestrians to wait a full minute before crossing is out of the question. Traffic law or no traffic law they will not do it, and it will be more honored in the breach than in the observance thereof.

We realize that the police department are but feeling their way, but having had some experience in the matter we offer this suggestion:

The proper length of the cycle can only be determined by a very careful study of the volume of traffic, street widths, number of turns, and all other circumstances having effect on the movement of traffic at each intersection. In general, a short cycle is found to be preferable. The maximum time given to the "red" signal for any one direction should be the time necessary for leaders of a group of pedestrians to cross the street at moderate walking speed, which is about four feet per second.

A traffic check made on Portage Avenue during October, 1930, during the maximum outbound peak from 5.30 to 6.00 p.m., showed 40 street cars carrying 2,431 passengers and 457 automobiles carrying 800 persons moved westerly thereon. Each street car carried an average of 60.8 passengers and each auto an average of 1.75. Although there were over 12 times as many automobiles as street cars, the latter moved 75% of the passengers and each street car carried as many passengers as 37 automobiles.

Through Streets—In Winnipeg, with few exceptions, the principal street car streets are classed as "through streets," i.e., the vehicles are required to come to a complete stop before crossing or entering same. This is as it should be.

Parking—It has been the experience in other cities, where surveys have been made, that fully 60% of the parked cars belonged to business people employed in the neighborhood, and we have no reason to believe that the situation on Portage Avenue and Main Street in Winnipeg is any exception to the rule.

Further, diagonal parking as permitted on Portage and Main St., consumes more than double the road space required for parallel parking and at best provides space for not over 40% more cars. Vehicles backing out from diagonal parking position cause inconvenience to moving traffic and force same out on to street car tracks

Timidity of Train Crews—

In our judgment the management of the Winnipeg Electric Company has by "Safety First" competitions and stringent penalties dealing with accidents driven operating crews to a point where they are afraid to open out the controller and leave it out.

In this connection we cannot do better than quote from an address by Mr. E. J. McIlraith, Staff Engineer, Chicago Surface Lines, delivered before the Canadian Electric Railway Association at its 1928 Convention:

"Much time is wasted in ordinary street railway operation. Speed is a very essential element of good service. Reckless speeding is not wanted, but faster operation may be attained by reduction of delays to a minimum and by alertness on the part of the train crews."

"Chicago Surface Lines are operating at the rate of 11.26 miles per hour, in spite of the intensity of street use along car lines. No other city system that we know of is operating at so high an average rate. The failure to increase the average speed of operation is one of the major factors in preventing an increase in business in most cities. Our customers are severely critical of service that hints of inefficiency, but respond to an alert crew that hurries without rushing. . . . The street car should compete successfully with any vehicle on the street up to the limit of safe speed. . . . With the faster car the standard of service on a line can be maintained with a smaller number of cars and consequently at a lower cost for housing, and the cost of operation in trainmen's hours also is reduced. We are quite of the opinion that speed has much to do with the growth in business. . . . Convenience of headway is also very important in attracting riders."

"Altogether, too little attention has been paid to getting high speed because most managements have accepted the idea that accident prevention demands slow speed and timidity. In most cities the motormen are actually afraid to move with certainty and as if they had no right to use the streets. They are taught to hold back until all other traffic has gotten out of the way. Street cars need not apologize for being in the streets, and operators should recognize that each street car is as important as from 40 to 60 individual automobiles."

"Trainmen should be encouraged to operate safely at the higher speeds. True, accident prevention should build better operating principles in the minds of the trainmen, but not at the sacrifice of all their rights to move. Trainmen should be ready to avoid accidents but should not let the automobiles assume superior rights. Analysis of accident cases does not show that fast operation properly handled creates accidents."

Fares—

The question of fares will be dealt with in Part Seven under Cost of Service, Revenue and Fares.

Further re Stops and Speed—

The near side stop is preferable in most instances since in general it offers less interference to traffic and eliminates unnecessary delays at traffic signals. The only place where far side stops are situated is where car lines diverge, for these stops enable traffic bound in a direction different from that of the loading car to proceed on its way without delay.

Cleveland with 7.0 stops per mile has an average speed of 10.5 m.p.h., and
Boston with 6.5 stops per mile has an average speed of 10.5 m.p.h.

Schedule Testing Crews—To show the possibilities of increased speed expert trainmen should take over the operation of the route and demonstrate the feasibility of the schedule suggested.

PART SEVEN

Cost of Service; Revenue and Fares

General—

Cost of Service:

The cost of providing a transportation service is made up of four main items:

(a) Operating Expense, which consists of all expense for labor, materials and power in furnishing and maintaining service;

(b) Taxes, which consist of all payment to municipal and provincial authorities;

(c) Renewal and Depreciation Reserve—An arbitrary amount, based on the expected "service life" of the various items of property;

(d) Return on Investment, money for which is usually furnished by public subscriptions in the forms of bonds and preferred and common stock.

Revenue and Fares—

The revenues are derived almost entirely in the form of fares from the patrons of the service. Small additional amounts are usually received from advertising, rentals of equipment, etc.

All items of revenue and expense are usually set up in the books of a utility according to the classification of accounts prescribed for electric railways by the Interstate Commerce Commission of the United States, and which is the classification used in Winnipeg as prescribed by the Manitoba Public Utility Commission. This classification is in minute detail which, consequently, makes for ready comparison of year by year, month by month costs and with other properties.

In the present instance there has been filed with the Board the following exhibits on behalf of the

W.E.C.—

Exhibits:

No. 4 Revenue and Expense, by years, 1920-1929, inclusive.
No. 47 Revenue and Expense for 1930.
No. 4C Comparison General Expense, Montreal, Toronto, Vancouver and Winnipeg, all 1928 and Winnipeg 1929.
No. 4D Summary Revenue Expense, by municipalities, 1929.
No. 16 Detail of Transportation Expenses, 1921-1929.
No. 17 Labor Costs for 1929.
No. 22 Expenses—Bus Division, 1929.
No. 25 Charges to Depreciation Reserve, 1920-1929.
No. 26 Statement of Taxes, 1929-1930.
No. 42 Estimate for 1931.

S.R.T.—

Exhibits:

No. 43 Revenue and Expense by major accounts, 1927-1929, inclusive.
No. 48 Revenue and Expense by major accounts, 1930.
No. 44 Revenue and Expense by municipalities, 1929.

W.S. & L. W.—

Exhibits:

No. 45 Revenue and Expense by major accounts, 1927-1929, inclusive.
No. 49 Revenue and Expense by major accounts, 1930.
No. 46 Revenue and Expense by municipalities, 1929.

W.E.C.—

With respect to the W.E.C., we have been furnished with information, similar to that filed, back to the year 1913 and from which we have developed the statement on page 93.

From which we have developed the following:

(1) That, while revenue increased by 38% and revenue per passenger 52%, the revenue per vehicle mile increased by but 3%, due to a decrease in passengers carried of 9% and an increase in service as represented by vehicle miles operated of 27%;

(2) That, while revenue increased by 38% Operating Expense increased by 85%, and Operating Expense per Passenger 105%;

(3) The ratio of operating expense to revenue increased from 57% to 77%;

(4) The net income available for return on investment decreased by 73%.

Over the same period there were very pronounced increases in the scale of wages and unit cost of materials.

See statements, pages 94 and 95.

For instance:

	Trainmen's Wages Per Hour	Operating Materials. Richey Index
1913.....	33.3c=100%	100
1920.....	58.3c=173%	225
1925.....	56.0c=162%	153
1930.....	60.0c=180%	137

That the increase in operating expense was not greater, was due to most able and careful management and to the gradual substitution of one-man operation for two-man operation. Mr. Dahl, in his statement before the Board, November 21st, 1930, set out many of the economies effected.

For instance—

(1) From 1925 to 1929, trainmen's wages would have been greater by the following amounts had one-man car operation not been introduced, viz.:

1925.....	$ 44,317
1926.....	129,231
1927.....	185,000
1928.....	249,757
1929.....	281,550

(2) Changes in routing to eliminate duplication effected savings of $60,000 per year;

(3) A statistical department was established in 1919 to make comparisons of various costs, month by month, and with other properties. It has more than justified its existence.

Total wages, which in 1924 comprised 81% of operating expense, have today been reduced to 68%. That further economies have not been made is due to lack of funds for new equipment and labor saving devices.

W.E.C.—TRACTION UTILITY

GENERAL STATEMENT OF REVENUE AND EXPENSE, BY YEARS, 1911-1930

Year	Total Revenue	Total Operating Expense	Taxes	Depreciation	Net Income	Revenue Passengers	Vehicle Miles
1911	1,673,614	903,818	110,649	not set up	659,147	40,281,245	6,150,644
1912	2,174,341	1,179,699	139,091	"	855,551	51,106,017	7,220,274
1913	2,489,773	1,415,517	161,227	"	913,029	59,563,757	8,339,848
1914	2,424,172	1,546,952	171,577	"	705,643	58,489,987	9,178,596
1915	1,952,605	1,491,220	148,651	"	312,734	48,566,959	10,012,109
1916	2,188,183	1,418,955	158,759	"	610,469	54,845,739	10,538,458
1917	2,096,282	1,499,425	160,518	182,687	253,652	53,933,532	10,086,134
1918	2,293,606	1,738,628	175,420	182,687	196,871	56,348,716	10,299,934
1919	2,928,545	2,224,172	225,195	182,687	296,491	58,441,007	9,446,158
1920	3,697,299	2,539,799	257,269	182,687	717,543	65,248,840	9,711,161
1921	3,740,717	2,603,658	280,601	193,950	662,508	61,515,325	9,611,351
1922	3,588,979	2,615,487	272,508	203,537	497,446	60,399,419	9,563,898
1923	3,466,705	2,552,298	265,044	199,200	450,162	58,253,356	9,574,070
1924	3,291,732	2,417,802	251,772	208,658	414,500	55,077,901	9,858,104
1925	3,303,273	2,353,768	251,388	213,569	484,547	55,096,058	10,548,086
1926	3,482,444	2,445,395	259,972	211,307	565,769	57,985,144	10,434,939
1927	3,606,120	2,585,926	270,167	233,864	516,163	60,045,833	10,739,830
1928	3,627,702	2,713,196	274,537	248,976	391,002	60,223,255	11,087,272
1929	3,710,791	2,715,768	279,975	269,385	445,662	61,238,734	10,828,022
1930	3,424,908	2,625,343	261,667	292,076	245,822	53,997,401	10,611,252

W.E.C.—TRACTION UTILITY

WAGES' COMPARISON, BY YEARS

CLASSIFICATION	1913	1920	1925	1930
TRACK—				
General Labor	$ .33	$ .47½	$ .44	$ .45
SHOPS—				
Carpenters	.54	.70	.70	.75
Machinists	.60	.75	.77	.75
Painters	.54	.70	.70	.75
General Labor	.33	.44	.44	.44
LINEMEN—				
Linemen	.77	.92½	.89	.92½
Laborers	.46	.60	.46	.46
CLERKS—				
Ticket Sellers	75.00	95.00	105.00	100.00
Cashiers	.....	.....	.....	.....
TRAFFIC—				
Trainmen—1-Man Cars	.....	.....	.61	.65½
2-Man Cars	.39	.58.3	.56	.60
Supervisors	130.00	165.00	158.00	165.00

WINNIPEG

Fares, Wages of Trainmen ..... W. E. R. Traction Utility
Weekly Family Budget ..... Winnipeg
Wholesale Prices, Manufactured Commodities ..... Canada

YEAR	MAXIMUM WAGES TWO-MAN RATE		WEEKLY FAMILY BUDGET WINNIPEG		AVERAGE FARE W. E. R.		Wholesale Prices,
	Actual	Index	Actual	Index	Actual	Index	Manufactured Commodities Canada
1913	33.3c	100.1	$18.34	100.00	4.13c	100.00	100.0
1914	34.0	102.1	17.43	95.04	4.07	98.54	101.0
1915	34.0	102.1	15.73	85.77	3.92	94.91	110.9
1916	34.0	102.1	16.65	90.79	3.96	95.88	130.4
1917	35.3	106.0	20.69	112.81	3.85	93.22	175.4
1918	39.3	117.1	22.65	123.50	4.04	97.82	196.9
1919	51.0	153.1	25.70	140.13	4.85	117.43	204.4
1920	58.3	175.1	30.29	165.15	5.63	138.74	241.9
1921	60.0	180.2	25.58	139.47	5.97	144.79	180.0
1922	57.3	171.8	23.94	130.53	5.86	141.88	155.0
1923	56.0	168.1	24.40	133.04	5.86	141.88	159.1
1924	56.0	168.1	24.02	130.97	5.86	141.88	157.2
1925	56.0	168.1	24.72	134.78	5.86	141.88	160.1
1926	56.6	170.0	24.63	134.24	5.86	141.88	154.3
1927	57.6	172.9	24.60	134.13	5.86	141.88	148.9
1928	58.6	175.9	25.08	136.75	5.86	141.88	146.6
1929	59.6	178.9	25.50	139.04	5.86	141.88	143.5
1930	60.0	180.2	25.28	137.84	6.10	147.70	.....
November, 1929							144.2
November, 1930							128.2

ANNUAL INDEXES OF FARES AND COSTS, 1913-1930

YEAR	Street Railway Fares (Richey)	Electric Railway Operating Materials Costs (Richey)	Electric Railway Wages (Richey)	Electric Railway Construction Costs (Am. Elec. Ry. Assn.)	General Construction Costs (Eng. News Record)	Wholesale Prices, All Commodities (U.S. Bur. Lab. Stat.)
Base	1913	1913	1913	1913	1913	1913
1913	100.0	100.0	100.0	100.0	100.0	100.0
1914	100.0	92.6	104.2	94.0	88.6	97.3
1915	100.1	93.5	106.2	97.3	92.6	99.3
1916	100.1	126.2	111.6	119.8	129.6	122.2
1917	100.5	181.9	120.6	162.7	181.2	168.0
1918	106.2	168.8	140.5	192.5	189.2	187.7
1919	120.7	172.2	174.0	205.1	198.4	198.1
1920	137.2	224.6	217.3	244.7	251.3	220.7
1921	148.9	169.9	222.7	200.7	201.8	139.5
1922	146.0	170.0	210.0	175.2	174.4	138.2
1923	142.9	168.0	212.1	200.2	214.1	143.8
1924	149.2	156.0	219.2	204.6	215.4	140.2
1925	150.2	153.1	222.2	202.4	206.7	148.0
1926	151.9	155.0	225.3	202.6	208.0	143.0
1927	153.4	145.7	227.5	201.1	206.2	136.4
1928	155.5	142.2	229.3	203.1	206.8	139.5
1929	157.1	145.6	230.6	202.4	207.0	137.9
1930	159.9	136.9	231.7	198.8	202.8	.....
Dec., 1929	157.4	144.9	231.1	205.1	209.5	134.7
Dec., 1930	160.4	127.8	231.8	192.0	196.9	114.9*
Increase	3.0	.....	0.7	.....	.....	.....
Decrease	.....	17.1	.....	13.1	12.6	19.8

Above are taken from Article by Albert S. Richey, Electric Railway Journal, January, 1931.
(*) November.

OPERATING STATEMENT, W.E.C., 1926-1930

In order to determine the basis and reasonableness of the various items of Revenue and Expense, under conditions pertaining at the present time and to establish a basis for estimating a budget for 1931 on which to base an equitable fare structure, we have made an analysis of the major accounts contained in the operating statement as filed with your Board.

As a start herewith on page 97 a summary of the operating statement, by years, 1926 to 1930, and taken from Exhibits No. 4 and No. 47.

Revenue—

Passenger Revenue is derived entirely from cash fares and ticket sales, and needs no comment.

Mail Carriers in uniform are carried on the Company's cars under a contract with the Dominion Government, which pays for their transportation.

Chartered Car and Bus Revenue is made up of receipts from the operation of chartered cars and buses at rates which fully cover the costs of service.

Station and Car Privileges is made up of revenue received for the use of advertising space on street cars and buses under a favorable contract to the Company.

Rentals—This item is made up principally of rental charged subsidiaries for use of equipment. The rental charged the Transcona Bus Division is sufficient to cover all costs to the Company. In arriving at the rental charged S.R.T. and W.S. & L W. Railway for equipment, low earnings on these lines was taken into consideration. The rental in this case, therefore, does not cover the costs of maintenance.

Operating Expense—

Maintenance—An examination of the work orders covering items charged to depreciation reserve would indicate that a considerable proportion of these items should more properly have been charged to maintenance accounts. The value of these items for the five years ended December 31st, 1930, amounted to $541,771, an average of $108,354 per year or 1c. per vehicle mile. This amount should be apportioned 40% to Maintenance of Way and Structures, and 60% to Maintenance of Equipment.

Accordingly,

(1) Maintenance of Way and Structures should be adjusted as follows:

	5 Years, 1926-1930		
	Total	Average	Per Vehicle Mile
Total as per Company Books	$1,062,154	$212,431	1.98
Add:—Depreciation Items	216,709	43,342	.40
Total as adjusted	$1,278,863	$255,773	2.38

(2) Maintenance of Equipment should be adjusted as follows:

Total as per Company Books	$1,715,821	$343,164	3.19
Add:—Depreciation Items	325,062	65,012	.60
Total as adjusted	$2,040,883	$408,176	3.79

Note—In our judgment cost for maintenance of Way and Structures as adjusted is in line with costs on other properties and reasonable, except that there is no justification in asking the street railway to finance paving for automobiles which directly interfere with the receipts and physical operations of street cars. In our judgment the utility should be relieved of at least 75% of the cost of pavement maintenance, which would reduce the total charge by approximately $38,000 per year, or .35c. per vehicle mile. The most variable item is snow removal, which varied from $7,000 to $30,000.

The 1929 maintenance costs for other properties per vehicle mile are:

	Way and Structures	Equipment
Toronto Transportation Commission	3.23c	3.33c
Montreal Tramways Company	2.89	3.67
Ottawa Electric Railway Co.	2.49	2.97
Hamilton Street Railway	3.20	3.63
Chicago Surface Lines	2.22	2.93

Winnipeg Way and Structure Costs are lower than the average. Equipment Costs are higher than the average on account of the age of the bulk of the rolling stock.

W.E.C.—TRACTION UTILITY

ANALYSIS OF REVENUES AND EXPENSES AS PER WINNIPEG ELECTRIC COMPANY STATEMENTS 1926-1930, INCLUSIVE

CLASSIFICATION	1926	1927	1928	1929	1930	FOR FIVE YEARS Total	Average	Per Vehicle Mile Cents	Per Passesnger Cents
REVENUE PASSENGERS	57,985,444	60,045,833	60,223,253	61,238,734	53,997,401	293,490,665	58,698,133	.....	.....
VEHICLE MILES	10,548,086	10,739,830	11,087,272	10,828,022	10,611,262	53,814,472	10,762,895	.....	.....
OPERATING REVENUE:									
Passenger Revenue	$3,407,299	$3,531,516	$3,547,648	$3,606,870	$3,307,345	$17,400,678	$3,480,136	32.33	5.92
Mail Carriers	11,808	11,936	12,065	12,065	12,372	60,246	12,049	.11	.02
Chartered Cars and Buses	3,277	4,512	8,503	13,159	15,175	44,626	8,925	.08	.02
Station and Car Privileges	35,200	35,200	35,200	35,200	35,200	176,000	35,200	.33	.06
Rentals, etc	24,860	22,957	24,286	43,497	54,816	170,416	34,083	.32	.06
GROSS REVENUE	$3,483,444	$3,606,121	$3,627,702	$3,710,791	$3,424,908	$17,851,966	$3,570,393	33.17	6.08
OPERATING EXPENSE:									
Maintenance of Way and Structures	169,739	203,243	204,500	248,512	236,160	1,062,154	212,431	1.98	.36
Maintenance of Equipment	285,492	326,516	351,393	383,222	369,198	1,715,821	343,164	3.19	.58
Power	225,663	228,541	216,819	220,114	209,188	1,100,325	220,065	2.04	.37
Conducting Transportation	1,486,720	1,540,336	1,590,922	1,534,350	1,493,838	7,646,166	1,529,233	14.21	2.61
General Expense	277,781	287,289	349,563	329,569	316,960	1,561,162	312,232	2.90	.53
TOTAL EXPENSE	$2,445,395	$2,585,925	$2,713,197	$2,715,767	$2,625,344	$13,085,628	$2,617,125	24.32	2.75
TAXES:									
City Percentage	$ 155,396	$ 160,434	$ 162,708	$ 165,648	$ 150,430	$ 794,616	$ 158,923	1.48	.27
Other Taxes and Car Licenses	104,577	109,734	111,830	114,328	111,236	551,705	110,341	1.02	.19
DEPRECIATION	211,308	233,864	248,976	269,386	292,076	1,255,610	251,122	2.33	.43
TOTAL TAXES AND DEPRECIATION	471,281	504,032	523,514	549,362	553,742	2,601,931	520,386	4.83	.89
TOTAL EXPENSE, TAXES AND DEPRECIATION	$2,916,676	$3,089,957	$3,236,711	$3,265,129	$3,179,086	$15,687,559	$3,137,511	29.15	5.34
NET REVENUE	$ 565,768	$ 516,164	$ 390,991	$ 445,662	$ 245,822	$2,164,407	$ 432,882	4.02c	.74c

Power—

The traction utility has in the past been charged a rate of 4 mills per K.W.H. measured at the sub-station. In addition, a proportion of the cost of transmission of power from the generating stations to the sub-stations was charged to this utility. In our judgment, as before stated, the Traction Utility should not in any sense be treated as a producer of power as at present, but as a purchaser of A.C. power from the Electric Utility, the same as any other commercial customer.

The minimum monthly requirement of the railway is approximately 8,600 K.W., which is sufficient to entitle it to all the discounts under the Company's schedule of rates, which is the same as the City Hydro's Schedule "C." The average rate to the Traction Utility under this schedule would be approximately 6.5 mills per K.W.H. As the present rate is 4 mills, there must be added to the cost of power, to obtain the true cost, 2.5 mills per K.W.H.-A.C., which amounts to:

	5 Years, 1926-1930		
	Total	Average	Per Vehicle Mile
On the other hand there must be deducted all costs of maintaining and operating the Transmission and A.C. Transforming System formerly charged to the Traction Utility, in addition to the charge of 4 mills, amounting to	$ 510,646 53,418	$102,129 10,683	0.95c 0.10
Net Increase in Power Cost	$ 457,228	$ 91,446	0.85
Power Cost as per Company's Books	1,100,325	220,065	2.04
Power Cost as adjusted	$1,557,553	$311.511	2.89c

This rate of 6.5 mills per K.W.H.-A.C. is reasonable when compared with the cost of power to other roads. Montreal pays nearly 1c. and Toronto better than 1c. per K.W.H.-A.C.

Transportation and Traffic Expense—

Transportation expense consists chiefly of:

(a) Wages of car and bus operators, supervisors, car house and garage employees, this being the largest single item going to make up operating expenses, and

(b) Car house and car service expense and bus operation expense, and needs no further comment.

Traffic expense covers advertising chiefly, and is a small item. In our judgment, it should contain all items of traffic promotion; for instance, publication of Public Service News, now included under General Expense, and which in 1929 cost the utility $4,565.

General Expense

This includes injuries and damages, insurance, storeroom, garage, and stable expenses, salaries and expenses of general officers and office clerks, and miscellaneous general expenses, and is not out of line with comparable expenses of other properties for 1929, as shown by the following costs taken from companies' returns made to the Dominion Bureau of Statistics:

Winnipeg	3.04
Winnipeg (1930)	2.98
Toronto	2.55
Montreal	3.20
Ottawa	3.44
Vancouver	3.84

Injuries and Damages is set up as a reserve, 2% of passenger revenue having been credited to this reserve each month for the last few years, and actual costs being charged thereto. From a consideration of the expenses on this account for the last few years, it is evident that the credit to the reserve should be increased to 2½% of passenger revenue.

General expenses which cannot be directly charged to any utility are collected in joint utility accounts and these are charged to each utility in proportion to the gross revenue of the several utilities.

Miscellaneous General Expenses consist of memberships in Board of Trade, etc., directors, auditors and trust companies' fees, donations, payments for special services, miscellaneous expeneses of President's office, accident prevention expense, Public Service News, etc. These average $72,000 per year, or 2% of Gross Revenues.

	Five Years, 1926 to 1930		
	Total	Average	Per Vehicle Mile
Taxes—			
City Percentage Tax	$ 794,616	$158,923	1.48c
Other Taxes and Car Licenses	551,705	110,341	1.02
Total as per Company's Books	$1,346,321	$269,264	2.50
Deduct: Taxes on River Park	82,755	16,551	.15
Taxes on Power Generation, Transmission A.C., Transforming System charged to Traction Utility	33,759	6,752	.06
Taxes, Traction Utility, as adjusted	$1,229,807	$245,961	2.29

The City Percentage Tax on Gross Earnings, under equitable public regulation, must be included in the fares, and, in our judgment, as before stated, is an unjust discrimination against the car rider and as such should be ordered removed forthwith. No such tax is levied against the customers of:

The W.E.C.—Electric Utility.
The Winnipeg Hydro.
The Provincial Telephones.

Depreciation—

The present practice of charging a part of necessary maintenance to depreciation should be discontinued. The depreciation account should include uniform monthly charges representing depreciation and should be based upon the percentage of the reproduction cost determined to be equitable from the experience of the management, which should, in our judgment, amount to at least 3½ cents per vehicle mile. In our opinion the gradual retirement of older, heavier and more obsolete cars, together with an increase in new or improved types of modern light weight equipment will be a potential factor in substantially reducing costs of operation.

ANNUAL DEPRECIATION CHARGE TO RAILWAY UTILITY FOR FIVE YEARS

	1926-1930		
	Total	Average	Per Vehicle Mile
Depreciation set up on Company's Books	$1,255,610	$251,122	2.33c
Less: Amount charged to Depreciation Reserve which should have been charged to maintenance	541,771	108,354	1.00
Depreciation on Power Transmission and A.C. Transforming System deducted from Traction Inventory	182,756	36,551	.33
Net Depreciation of Traction Property set up on Company's Books	$ 531,083	$106,217	1.00
Added by W.B. & B. to bring depreciation charge to 3½c. per vehicle mile	352,424	270,485	2.50
Total Annual Depreciation as recommended by W.B. & B.	$1,883,507	$376,702	3.50

Return on Investment—

Based on our recommended valuation as of December 31st, 1930, of $11,054,752, and giving effect to the additions to property during the last five years the value of traction utility property at the end of each year would be as follows:

1930	$11,054,752
1929	10,836,623
1928	10,490,180
1927	10,012,301
1926	9,438,259

A return to the Company of 6%, as recommended under "Terms and Conditions" herein, would amount to:

1930	$663,285
1929	650,197
1928	629,411
1927	600,738
1926	566,296

General Observations—

(1) Revenue, expense and vehicle miles operated should be segregated as between street car and bus operation;

(2) That, operations within City Fare Zone should be segregated from those in the Suburban Zones;

(3) The Company should submit to the Board for consideration and approval at the beginning of each calendar year a budget of estimated revenues and expenses;

(4) Renewal and Depreciation Reserve—With respect to the allowance made for renewals and depreciation in statement on page 102, viz., 3½ cents per vehicle mile, while it is considerably more than has ever been set up by the Company it is still insufficient to adequately provide for replacement of the various items of physical property at the end of their useful service life, and that it must ultimately be increased to 5 cents per mile before it can be considered adequate. However, it is our opinion that under the present depressed economic conditions such a figure, which would add $150,000 to operating expenses, would be unfair to both the car rider and the Company.

Estimated Costs of Operation, 1931—

CITY FARE ZONE

Based on a further analysis of statement on page 102 and accepting 10,200,000 vehicle miles as the mileage to be operated in 1931 within the City Fare Zone, a depreciation reserve of 3½ cents per vehicle mile and a 6% return on an investment in the City Fare Zone of $11,276,918, we arrive at a total cost of operation for the different types of passenger equipment now in use, as follows:

	Cost of Service Per Vehicle Mile				
	Operating Cost	Taxes	Depreciation	Return on Investment	Total
One-man Cars....	25.75c	2.33c	3.71c	7.91c	39.70c
Two-men Cars....	31.50	2.33	3.71	7.91	45.45
Buses, 25-Pass...	21.50	2.33	2.31	2.50	28.64
Twin Coaches....	27.50	2.33	3.63	4.55	38.01
All Types.....	27.07c	2.33c	3.50c	7.06c	40.00c

or based on the 10,200,000 vehicle miles aforementioned a total of $4,080,000

By the elimination of:

A. 5% on Gross Receipts based on 1930 payments to

Winnipeg	$150,430
St. James	5,960
Tuxedo	310
Total	$156,700

B. 75% of Pavement Maintenance in Track area in the City of Winnipeg, that is 75% of $50,000 37,500

Total ..... $ 194,200

the cost of service would be reduced to $3,885,800

Revenue and Fares—

In these days of higher prices, precipitated by the War, no one thing has caused so much public discussion and dissension as attempts by the traction utilities to obtain a fare commensurate with the cost of service.

The situation has been further complicated by the increased use of passenger automobiles and taxicabs, which has resulted not only in loss of patronage to the utility but has created a demand for a faster, more frequent and more expensive brand of service.

Utilities all over the continent have found it difficult to cope with changed conditions.

The average fare for cities over 50,000 in population has, according to Richey's index, which is accepted by the industry, risen from 4.84c. in 1913 to 7.14c. in 1920 and to 7.77c. in December, 1930. In some cities it has risen as high as 10c. However, experience has shown that a high flat fare is not always a satisfactory answer and that about 8c. is the highest practicable fare for ordinary distances.

In some cities, experiments are now being made with short-haul zones at 5c. to attract new riding at a fare within the willingness of the walker to pay.

In others, strips of tickets are sold at substantial discounts below the cash fare, to favor the frequent rider.

In others, a weekly transferable pass is sold which entitles the holder to an unlimited number of rides throughout the week without further payment—this also to encourage frequent riding.

In others, the so-called nickel permit is sold for, say, 30c. and the holder is entitled on presentation to ride throughout the balance of the week for 5c. per ride.

In others, as for instance in Winnipeg, under the experimental fares evoked by the Board in October last, a weekly coupon ticket is sold, which entitles the holder to a fixed number of rides for a fixed sum and carries with it the privilege of additional riding throughout the week at 5c. per ride.

Again in Winnipeg, and we know of no other city where this is being done, a reduced rate is given to the off-peak rider in an effort to stimulate off-peak riding and hence flatten out the load curve.

In others, for instance in Halifax, there is a limited weekly pass, good only during off-peak hours, to stimulate off-peak riding.

Changes in fare at best are experimental and in Winnipeg during the past twelve months three different schedules of fares have been in effect as follows:

	Distribution Per 100 Passengers	
To July 13th—	Percent Rides	Revenue
Children's tickets, 8 for 25c	8.01	$ 0.25
Unlimited tickets, 4 for 25c	69.35	4.34
Rush hour tickets, 9 for 50c	9.42	.52
Cash, week-days 7c	7.19	.36
Cash, Sundays 5c	6.03	.42
Total	100.00%	$ 5.89
July 14th to October 5th—		
Children's tickets, 8 for 25c	6.72	$ .21
Unlimited tickets, 5 for 35c	39.87	2.79
Unlimited tickets, 15 for $1.00	17.36	1.16
Rush hour tickets, 4 for 25c	11.57	.72
Cash 7c	24.48	1.71
Total	100.00%	$ 6.59
Since October 6th—		
Children's tickets, 8 for 25c	7.06	$ .22
Unlimited tickets, 2 for 15c	36.18	2.71
Permit 7 for 50c	20.97	1.50
Cash, to permit holders and riders in morning off peak 5c	34.89	1.75
Cash, unlimited 10c	.90	.09
Total	100.00%	$ 6.27

W.E.C.—TRACTION UTILITY

ANALYSIS OF REVENUES AND EXPENSES, AS ADJUSTED BY WILSON, BUNNELL & BORGSTROM, YEARS, 1926-1930

CLASSIFICATION	1926	1927	1928	1929	1930		FIVE YEAR PERIOD		
					Amount	Per Vehicle Mile	Total	Average	Per Vehicle Mile
VEHICLE MILES	10,548,086	10,739,830	11,087,272	10,828,022	10,611,262		53,814,472	10,762,895	
GROSS REVENUE	3,482,444	3,606,121	3,627,702	3,710,791	3,424,908	32.27c	$17,851,966	$3,570,393	33.17c
OPERATING EXPENSES:									
Maintenance of Way and Structures	187,265	268,612	261,408	291,949	269,629	2.54	1,278,863	255,773	2.38
Maintenance of Equipment	311,781	424,569	436,754	448,378	419,401	3.95	2,040,883	408,176	3.79
Cost of Power	311,683	316,873	306,538	315,999	306,460	2.89	1,557,553	311,511	2.89
Conducting Transportation	1,486,720	1,540,336	1,590,922	1,534,350	1,493,838	14.08	7,646,166	1,529,233	14.21
General Expense	277,781	287,289	349,563	329,569	316,960	2.99	1,561,162	312,232	2.90
TOTAL OPERATING EXPENSES	2,575,230	2,837,679	2,945,185	2,920,245	2,806,288	26.45	14,084,627	2,816,925	26.17
TAXES:									
City Percentage	$ 155,396	$ 160,434	$ 162,708	$ 165,648	$ 150,430	1.42	$ 794,616	$ 158,923	1.48
Other Taxes and Car Licenses	82,446	86,687	88,792	89,870	87,396	.82	435,191	87,038	.81
RENEWAL AND DEPRECIATION RESERVE	369,183	375,894	388,055	378,981	371,394	3.50	1,883,507	376,702	3.50
TOTAL TAXES AND DEPRECIATION	$ 607,025	$ 623,015	$ 639,555	$ 634,499	$ 609,220	5.74	$3,113,314	$ 622,663	5.79
TOTAL EXPENSES, TAXES & DEPRE'N	$3,182,255	$3,460,694	$3,584,740	$3,554,744	$3,415,508	32.19	$17,197,941	$3,439,588	31.96
TOTAL PER VEHICLE MILE	30.15	32.22	32.33	32.82	32.19	.....	31.96	31.96	.....
NET REVENUE FROM OPERATION	$ 300,189	$ 145,427	$ 42,962	$ 156,047	$ 9,400	.08	$ 654,025	$ 130,805	1.21
RETURN ON INVESTMENT, 6%	$ 566,296	$ 600,738	$ 629,411	$ 650,197	$ 663,285	6.25	$3,109,927	$ 621,985	5.78
NET LOSS	**$ 266,107**	**$ 455,311**	**$ 586,449**	**$ 494,150**	**$ 653,885**	**6.17**	**$2,455,902**	**$ 491,180**	**4.57**

Revenue Passengers Carried	1929	Average Per Day 1930	Percent. Decrease
Month of June	155,320	139,879	9.94
July	141,091	122,781	12.98
August	141,258	110,091	22.06
September	150,788	122,508	18.75
October	154,376	133,291	13.66
November	177,894	145,481	18.22
December	195,054	165,304	15.25
	1930	1931	
January	185,549	154,528	16.72
February	184,659		

Due to depressed business and employment conditions a definite conclusion as to the effect of the different fare schedules is out of the question, but after careful consideration of results we lean to the following opinions:

(1) That upon the introduction of the 7c. fare on July 14th, 1930, and a change in the average fare from 5.89c. to 6.59c., the traffic which at first fell off later recovered to the general level of decrease due to aforementioned depressed business conditions;

(2) That no appreciable increase in traffic has taken place following the introduction of the Board's experimental schedule of fares on October 6th, 1930, despite the fact that the average fare dropped from 6.59c. to 6.27c.;

(3) That the 5c. fare in effect from 9.30 a.m. to 12 o'clock noon apparently caused a slight increase in the percentage of passengers handled during those hours.

Traffic Counts—	Percent. of All Day Riding January, 1930	October, 1930
7.30 to 9.30 a.m.	19.18	17.08
9.30 to 12 noon	7.70	9.43
	26.88	26.51

However, most of the October counts were taken during the first week of the month and before the new schedule went into effect.

General—

In any event this much is certain, namely, that the resulting revenues in all three cases fell far short of meeting the cost of service. If the utility is to maintain and perpetuate its services and equipment it must be permitted to earn a revenue sufficient to meet not only operating costs, but, in addition, taxes, reserves to provide for renewals and a reasonable return on its investment.

Based on the true costs of operation to cover all charges, we have developed the statement on page 104, which shows the profit or loss in 1930 for each of the individual routes within the City Fare Zone.

Routes showing a profit are:		
Portage Car Line	$ 73,960	
Ellice Bus Line	14,968	
Westminster Bus Line	4,262	
Total Profits		$ 93,190
Routes showing a loss are:		
St. Mary's-St. Anne's Car Line	$128,825	
Broadway-Elmwood Car Line	98,092	
Logan Avenue Car Line	67,220	
St. Boniface Car Line	59,295	
Park Line Car Line	20,017	
Remaining 11 Car Lines	248,055	
Arlington Bus Line	29,442	
Bannerman Bus Line	27,873	
Remaining 8 Bus Lines	83,419	
Total Losses		762,238
Net Loss		$669,048

WINNIPEG ELECTRIC COMPANY AND SUBSIDIARIES

GROSS REVENUES AND COST OF SERVICE IN CITY FARE ZONE BY ROUTES, YEAR 1930

Route	Revenue Passengers	Revenue	Vehicle Miles Operated	Cost of Service Per Vehicle Mile	Cost of Service Amount	Profit	Loss
Portage—North Main	14,700,823	906,831	1,909,378	43.62c	$ 832,871	$73,960	
Park Line	10,587,025	653,068	1,543,066	43.62	673,085		20,017
St. Mary's—St. Anne's	5,228,088	322,498	1,191,768	37.87	451,323		128,825
Corydon—Stafford	4,697,667	289,779	846,667	38.83	328,761		38,982
Broadway—Elmwood	4,422,330	272,795	979,370	37.87	370,887		98,092
Kildonan East	1,995,012	123,064	418,721	37.87	158,570		35,506
Sargent	1,953,105	120,479	340,468	37.87	128,935		8,456
Morse Place	1,871,538	115,447	409,604	37.87	155,117		39,670
Notre Dame	1,771,557	109,280	341,451	37.87	129,307		20,027
Logan	1,583,633	97,688	435,457	37.87	164,908		67,220
Westminster	1,333,970	82,287	291,028	26.81	78,025	4,262	
Ellice	1,035,351	63,866	155,282	31.49	48,898	14,968	
St. Boniface	912,731	56,302	305,247	37.87	115,597		59,295
William	824,767	50,876	207,870	37.87	78,720		27,844
Arlington	684,450	42,221	267,299	26.81	71,663		29,442
Sherbrook Bus	440,640	27,181	126,410	26.81	33,891		6,710
Bannerman	440,489	27,172	205,316	26.81	55,045		27,873
River	393,785	24,291	164,854	26.81	44,197		19,906
Sherbrook Street Car	252,059	15,548	72,866	37.87	27,594		12,046
Valour Road	218,291	13,466	72,479	26.81	19,432		5,966
Fort Garry	198,602	12,251	82,105	37.87	31,093		18,842
Stockyards	163,119	10,062	95,426	26.81	25,584		15,522
Pembina	135,270	8,344	56,344	37.87	21,337		12,993
Morley	131,698	8,124	50,769	26.81	13,611		5,487
Talbot	128,313	7,915	69,026	26.81	18,506		10,591
Rue Archibald	101,944	6,289	83,645	26.81	22,425		16,136
Sutherland	82,681	5,100	57,074	37.87	21,614		16,514
Kelvin	41,122	2,537	52,052	37.87	19,712		17,175
Manitoba	35,691	2,202	19,779	26.81	5,303		3,101
Total City Fare Zone, 1930	56,365,751	3,476,963	10,850,821	38.21c	$4,146,001	$93,190	$762,238

Weekly Coupon Ticket vs. Weekly Pass—

The weekly ticket coupon at present in use is favorably looked upon by what might be termed "the regular rider," who uses the street cars a large number of times in any one week, because it gives him a low average fare.

However, from the standpoint of street car service it has many disadvantages, the most outstanding of which are:

(a) That every time it is used it requires a separate transaction and the payment of either one of the attached tickets or, later, a five cent cash fare:

(b) The presentation to and examination of the coupon by the operator;

(c) The issuance of a transfer to complete the ride on a connecting line; and

(d) The multiplicity of these transactions contributes to slowing up the service.

In our effort to find a substitute for this weekly coupon ticket which could be sold at a comparable rate and which would carry the same advantages for the regular rider and at the same time eliminate some of the disadvantages of the former, we considered the weekly pass which is in use in many cities and which—

(1) Can be sold for a fixed sum;

(2) Is transferable and good at all times during the week; and

(3) Has only to be shown to the conductor and identified by him in order to obtain a ride and largely eliminates the disadvantages referred to above;

and have concluded to recommend its use as being an improvement on the weekly coupon ticket.

Furthermore, we are of the opinion that its use will tend to increase riding by persons who are not holders of it because once a man has purchased a weekly pass he does not have to pay anything more to use it during that week and therefore would likely be induced to use the cars more frequently for social purposes after working hours, taking with him the members of his family for whom, of course, he would have to pay ordinary rates. This factor is not present in the weekly coupon ticket.

Average Fare Needed, 1931—

A. With percentage of earnings tax and paving maintenance as is, the total cost of operation from page 102 ..... $4,080,000
and a revenue from mail carriers, advertising, etc., of 50 000
there would be required from 50,000,000 passengers an average fare of 8.06c

B. With percentage of earnings tax and paving maintenance eliminated, the total cost of operation from page 100 ..... $3,885,800
and a revenue from mail carriers, advertising, etc., of 50,000
there would be required from 50,000,000 passengers an average fare of 7.67c

Giving effect to each of the above, we would recommend the adoption of the following schedule of fares to be made effective forthwith:

With Taxes as they are		With Taxes Eliminated as Suggested	
Cash Fares: Adults	10c	Cash Fares: Adults	10c
Children	5c	Children	5c
Tickets	3 for 25c	Tickets	3 for 25c
Tickets	20 for $1.50	Tickets	14 for $1.00
School Children's Tickets	6 for 25c	School Children's Tickets	8 for 25c
Weekly Pass	1 for $1.50	Weekly Pass	1 for $1.25

Our studies show that the bulk of the riding originates at least one mile beyond Portage and the Mall, on the one hand, and Portage and Main on the other; that the bulk of the riders are necessity riders, but because there are approximately 140,000 people living within a mile and a half of Portage and Main Street we are of the opinion that many of these people may be walking for reasons of economy, and consequently we are of the further opinion that the aforementioned fares having been given effect to, that experiments should be conducted on a limited scale under the supervision of the Board with short haul zones at 5c. per ride without transfer privilege. If these experiments prove successful in inducing new riding and thereby increasing gross revenue, their application should be extended with resulting benefit to the car riders as a whole.

Suburban Fare Zones—

On page 108 is a statement showing revenues and expenses of operation on each of the suburban lines and by individual zones for 1929. On page 109 is a similar statement for 1930.

In every instance there has been a decrease in revenue in 1930.

A summary for 1930 is as follows:

Line	Revenue	Operating Cost Before Dep'n or Fixed Charges	Net Revenue	Loss
East St. Paul	6,770	15,589	.....	8,819
St. Mary's Road	4,208	14,088	.....	9,880
Fort Garry	11,051	33,171	.....	22,120
Portage West	24,889	59,149	.....	34,260
Charleswood	5,713	18,647	.....	12,934
Selkirk	92,809	82,279	10,530	.....
Stonewall	32,327	25,324	7,003	.....
Transcona	43,937	40,557	3,380	.....
All Lines	221,704	288,804	20,913	88,013

As stated in Part Six, Demand for and Use of Service, we are of the opinion that no scale of fares can be set to permit any of these lines other than the Selkirk and the Transcona to show even an operating profit, to say nothing of depreciation and return on the investment, except assistance is received from outside sources and even then to be practical it would have to be limited to a bus operation on a very restricted schedule.

Effect of Changes in Routing and Equipment—

If the changes in routing and equipment are carried out as recommended there will be a gradual reduction in cost of operation due to increased use of the trackless trolley, and by 1933 with any reasonable improvement in economic conditions the utility so far as the City Fare Zone is concerned should be able to absorb the full allowance required for "Renewal and Depreciation Reserve," viz., 5.0 cents per vehicle mile, and which is required to maintain and perpetuate the utility.

Giving effect to additions to property and adjustments in service as recommended herein, and which should be in full effect by 1933, we estimate there would be operated approximately the following mileage:

One-man cars	6,050,000
Two-men cars	1,750,000
Bus—25 passengers	1,025,000
Twin Coach	125,000
Trackless Trolley	1,240,000
	10,200,000

At an estimated cost per vehicle mile of:

	Operating Cost	Taxes	Depreciation	Return on Investment	Total
One-man Cars	25.75c	2.58c	5.43c	8.98c	42.74c
Two-men Cars	31.50	2.58	5.43	8.98	48.49
Buses—25 Passenger	21.50	2.58	4.45	3.65	32.18
Twin Coaches	27.50	2.58	4.88	4.90	39.86
Trackless Trolleys	19.00	2.58	2.73	4.95	29.26
All Types	25.29	2.58	5.00	7.88	40.76

or based on the 10,200,000 vehicle miles $4,160,000

By the elimination of:
A. 5% Tax on Gross Receipts..$175,000
B. 75% Pavement Maintenance 40,000
——— $ 215,000

the cost would be reduced to $3,945,000

Average Fare Needed, 1933—

A. With percentage of earnings tax and paving maintenance as is, and making an allowance for miscellaneous revenue of $50,000
there would be required from
50,000,000 passengers an average fare of 8.22c
55,000,000 passengers an average fare of 7.47c

B. With percentage of earnings tax and paving tax eliminated, and making allowance for miscellaneous revenue of $50,000
there would be required from
50,000,000 passengers an average fare of 7.80c
55,000,000 passengers an average fare of 7.07c

Should conditions after 1933 continue to improve and development be restricted to those vacant areas already in receipt of transportation facilities, improved service can be given without adding materially to the cost and some reduction in fare should be possible.

However, it is our firm conviction that the only hope for which might be termed a "low schedule" of fares lies in:

(a) A successful adoption of "staggered hour" of employment to flatten out the load curve, thus making possible

(b) The gradual elimination of track and street cars, as worn out, on all routes with the exception of Portage and North Main and substituting therefor a maximum use of Trackless Trolley coaches and a minimum use of buses, and

(c) Favorable response on the part of the public to the short haul zone experiments herein recommended.

WINNIPEG ELECTRIC COMPANY AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF OPERATIONS IN SUBURBAN ZONES

1930

Classification	Gross Revenue	Operating Expenses before Taxes and Depreciation	Net Operating Loss	TAXES			Net Loss Before Depreciation and Return on Investment
				5% Gross Revenue	Other! Municipal and Provincial Taxes	Total	
SUBURBAN FARE ZONES:							
W. E. C. East St. Paul:							
Zone No. 1	5,063	10,290	5,227	.....	329	329	5,556
Zone No. 2	1,707	4,814	3,107	.....	156	156	3,263
TOTAL	6,770	15,104	8,334	.....	485	485	8,819
St. Mary's Rd. Bus:							
Zone No. 1	3,376	11,735	8,359	.....	.....	.....	8,359
Zone No. 2	575	1,145	570	.....	.....	.....	570
Zone No. 3	257	1,208	951	.....	.....	.....	951
TOTAL	4,208	14,088	9,880	.....	.....	.....	9,880
Fort Garry:							
Zone No. 1, Agric. Coll.	4,624	9,938	5,314	.....	177	177	5,491
Zone No. 1	2,719	12,208	9,489	.....	232	232	9,721
Zone No. 2	2,019	4,879	2,860	.....	112	112	2,972
Zone No. 3	1,689	5,500	3,811	.....	125	125	3,936
TOTAL	11,051	32,525	21,474	.....	646	646	22,120
W. E. C. TOTAL	22,029	61,717	39,688	.....	1,131	1,131	40,819
S. R. T. Portage:							
Zone No. 1, Victoria	17,948	27,489	9,541	877	1,598	2,475	12,016
Zone No. 2, St. Charles	4,526	18,119	13,583	221	1,030	1,251	14,844
Zone No. 3, Wiggle St.	833	1,379	546	41	103	144	690
Zone No. 4, Stevenson	791	3,742	2,951	39	399	438	3,389
Zone No. 5, Headingly	791	3,720	2,929	39	353	392	3,321
TOTAL	24,889	54,449	29,560	1,217	3,483	4,700	34,260
Charleswood:							
Zone No. 1	3,997	9,418	5,421	196	400	596	6,017
Zone No. 2	1,716	8,281	6,565	84	268	352	6,917
TOTAL	5,713	17,699	11,986	280	668	948	12,934
S. R. T. TOTAL	30,602	72,148	41,546	1,497	4,151	5,648	47,194
W. S. & L. W.–Middlechurch							
Middlechurch-Selkirk	92,809	75,658	*17,151	.....	6,621	6,621	*10,530
Middlechurch-Stonewall	32,327	22,236	*10,091	.....	3,088	3,088	* 7,003
W. S. & L. W.—TOTAL	125,136	97,894	*27,242	.....	9,709	9,709	*17,533
TRANSCONA	43,937	40,075	* 3,880	.....	500	500	* 3,380
TOTAL SUBURBAN FARE ZONES	221,704	271,816	50,112	1,497	15,491	16,988	67,100

*Net Revenue.

WINNIPEG ELECTRIC COMPANY AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF OPERATIONS IN SUBURBAN ZONES

1929

Classification	Gross Revenue	Operating Expenses before Taxes and Depreciation	Net Operating Loss	TAXES			Net Loss Before Depreciation and Return on Investment
				5% Gross Revenue	Other Municipal and Provincial Taxes	Total	
W. E. C. East St. Paul:							
Zone No. 1	5,190	9,873	4,683	.....	699	699	5,382
Zone No. 2	1,749	4,742	2,993	.....	313	313	3,306
TOTAL	6,939	14,015	7,676	.....	1,012	1,012	8,688
St. Mary's Rd. Bus:							
Zone No. 1							
Zone No. 2							
Zone No. 3							
TOTAL	4,312	14,130	9,813	.....	.....	.....	9,818
Fort Garry:							
Zone No. 1, Agric. Coll.	4,738	10,343	5,605	.....	295	295	5,900
Zone No. 1	2,786	12,783	9,997	.....	384	384	10,381
Zone No. 2	2,070	5,049	2,979	.....	183	183	3,162
Zone No. 3	1,731	5,596	3,865	.....	282	202	4,067
TOTAL	11,325	33,771	22,446	.....	1,064	1,064	23,510
W. E. C. TOTAL	22,576	62,516	39,940	.....	2,076	2,076	42,018
S. R. T. Portage:							
Zone No. 1, Victoria	20,519	32,282	11,763	1,052	1,556	2,608	14,371
Zone No. 2, St. Charles	6,208	18,672	12,464	314	984	1,298	13,762
Zone No. 3, Wiggle St.	1,286	1,430	144	66	101	167	311
Zone No. 4, Stevenson	1,156	5,506	4,350	59	390	449	4,799
Zone No. 5, Headingly	1,145	4,863	3,718	59	344	403	4,121
TOTAL	30,314	62,753	32,439	1,550	3,375	4,925	37,364
Charleswood:							
Zone No. 1	4,812	9,051	4,239	234	501	735	4,974
Zone No. 2	1,905	7,955	6,050	92	440	532	6,582
TOTAL	6,717	17,006	10,289	326	941	1,267	11,556
S. R. T. TOTAL	37,031	79,759	42,728	1,876	4,316	6,192	48,920
W. S. & L. W. RLY.:							
Templeton-Selkirk	100,753	79,491	*21,262	.....	10,724	10,724	*10,538
Middlechurch-Stonewall	34,434	28,728	* 5,706	.....	2,995	2,995	* 2,711
W. S. & L. W. RLY. TOTAL	135,187	108,219	*26,968	.....	13,719	13,719	*13,249
TRANSCONA	48,542	43,357	* 5,185	.....	500	500	* 4,685
TOTAL SUBURBAN FARE ZONES	243,336	293,851	50,515	1,876	20,611	22,487	*73,002

*Net Revenue.

PART EIGHT

Accounting Methods

At the present time the companies operate three traction utilities in and adjacent to the City of Winnipeg, and separate operating statements are set up for each.

However, from the standpoint of practical operation, the territory served is divided into two parts, viz.:

(a) City, or single fare zone, comprising the City of Winnipeg and seven adjacent municipalities, within which service is given by all three companies;

(b) A series of suburban or interurban zones within 14 municipalities and over which service is also given by the three companies.

There being more or less over-lapping of the operation on certain lines as between companies there is considerable difficulty in segregating the operating expenses as between service supplied inside the City or Single Fare Zone and that supplied outside.

Accordingly, it would appear in the best interests of all concerned, i.e., the municipalities, the utilities and the Board, that the operations be consolidated into two distinct groups:

(a) That within the City or Single Fare Zone, and

(b) That within the Suburban or Interurban Zones.

Each statement to be cleared of any charges performed by one group for the other and all based on a clean-cut segregation of the traction utilities as to both assets and operation from the other activities of the companies.

Such could be brought about either in the form of a consolidated operating statement or by re-organization of the utilities into two separate and distinct companies, and for which legislation, if necessary, could be obtained.

That, whereas the Winnipeg Electric Company owns the entire capital stock of the Suburban Rapid Transit Company and the majority of the stock of the Winnipeg, Selkirk & Lake Winnipeg Railway Company, and has guaranteed the bonds of both companies, that the Board be furnished annually with a balance sheet certified by the company's auditors with respect to the traction utilities.

Note.—Diagrams, photostats, charts and Vol. II not printed.