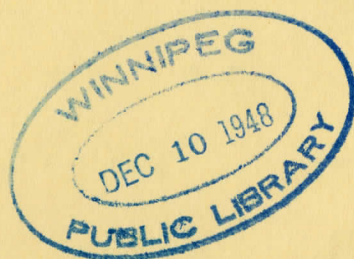


TRANSIT GREATER WINNIPEG



1946

PRELIMINARY REPORT ON

TRANSIT

PART OF METROPOLITAN PLAN
FOR GREATER WINNIPEG

Assiniboia	Brooklands
Charleswood	East Kildonan
Fort Garry	St. Boniface
St. James	St. Vital
Transcona	Tuxedo
West Kildonan	Winnipeg

MANITOBA	CANADA
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NO 4 OF

MASTER PLAN REPORTS

Prepared Jointly By

METROPOLITAN PLANNING COMMITTEE
WINNIPEG TOWN PLANNING COMMISSION

1946

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Foreword

The Transit Report is the fourth in a series of reports outlining the proposals of the Metropolitan Plan Greater Winnipeg.

The Metropolitan Planning Committee (Greater Winnipeg) and the Winnipeg Town Planning Commission established jointly, in 1943, the Metropolitan Plan - Greater Winnipeg for the purpose of preparing a comprehensive plan for the metropolitan area. Reports on Background For Planning, 'Major Thorofares and Transportation have been published. Planning proposals covering such other phases of future development as neighborhood development, including schools, parks, playgrounds and recreation, urban redevelopment and housing, city's appearance and public works programming are in preparation.

The Transit proposals embodied in this report were developed in the Planning Office and were carefully reviewed by the Citizen Advisory Committee on Streets Traffic and Transit. This committee is one of several citizen advisory committees appointed by the Joint Executive Committee from nominations of numerous organizations, for the purpose of reviewing proposals on the various phases of the plan.

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1. RELATION TO URBAN DEVELOPMENT

The service offered by a transit system, whether operated by a private company or by the public through its officers, is generally acknowledged to be essential to the proper functioning of the large urban community. Transit facilities exert a major influence upon urban growth and development in Greater Winnipeg and in most other cities, and properly handled they can be very useful tools in moulding the future form of a city.

Until recent years, transit facilities provided the principal means of mass transportation in urban areas. Urban development had taken place in such a way that cities grew as compact units. The distances which people could travel from their homes to their places of work increased, however, with the use of the automobile, and in some instances with greater use of transit facilities, with the result that urban development tended to spread out over a much larger area. With the further increase in the use of automobiles, population became scattered. The decrease in the use of transit facilities for movement about the city, the difficulty of serving a scattered population, and the rising costs of construction necessary to serve outlying areas, produced problems of considerable magnitude for transit organizations.

An attempt was made to overcome some of these problems in the outlying areas by the use of the motor bus on feeder lines connected with the major transit routes. Wherever speedy inexpensive service was supplied, further urban growth was attracted. The provision of transit facilities in partially developed and sparsely populated areas proved to be a contributing factor in the more complete development of such areas. It is, therefore, logical that adequate transit facilities be used to encourage development in suitable areas thereby producing a more balanced and better related metropolitan urban area.

The automobile has, in the last fifteen years, provided formidable competition to transit systems and the increase in the number of automobiles operating over city streets is creating many difficult problems. As a result of growing street congestion, the movement of goods and persons is becoming slow and expensive. Street and off-street parking spaces are now inadequate and the time required to find parking space and to walk to one's desired destination is increasing.

Decentralization of the central business district, accompanied by a decline in business district property values, will result from traffic congestion, as it has in many other cities. It is necessary, therefore, to make the most efficient possible use of our streets for traffic movement, by the elimination of street parking where necessary; the adoption of more efficient traffic practices, including off-street parking facilities; and the provision of adequate transit service.

Primarily, streets are created to permit the movement of goods and persons. The American Transit Association has stated that the same number of persons can be carried by three street cars, five trolley coaches or large buses, ten small buses, or 120 private automobiles. The booklet *Facts About City Transit*, published by the American Transit Association, states that a single moving lane on a street with grade crossings can carry in a similar period 13,500 passengers in street cars, 9,000 in buses, or 1,575 in automobiles. In addition, transit vehicles do not require street parking space for protracted periods of the day. The above figures indicate the marked superiority of transit vehicles over passenger automobiles in the efficient use of street space, and point to the use of transit vehicles as a logical means of remedying some of our present and future traffic problems.

Development of transit facilities was curtailed during the war years, and very definite proof of the value of these facilities was provided by the performance of the street cars, trolley coaches and motor buses, when called upon to serve vastly expanded passenger volumes. While this volume increase was largely due to the curtailment in passenger car use, caused by gasoline and rubber shortages, the point of particular interest

is that transit facilities, inadequate and often antiquated, were able to meet the situation as well as they did.

The war has, therefore, emphasized the potential value of transit systems, and it would be extremely short-sighted not to make the most of proven means of transportation. New and modern equipment should make it possible to provide more attractive service, which may maintain the extensive and profitable use made of these facilities during wartime.

Trends elsewhere in Canada and in the United States are toward substantial and often costly improvements in transit facilities, including almost complete replacement of cars and buses, and in some cases provision of subways and open cuts through central areas in order to facilitate the rapid, free movement of large passenger volumes. Such extensive and expensive plans are not now envisaged for Greater Winnipeg, but it is felt that existing equipment and facilities do require replacement and modernization, and that considerable expense is fully justified when spread over a period of a number of years.

2. DEVELOPMENT OF TRANSIT FACILITIES

Provision of public transit in Greater Winnipeg dates back to May 27, 1882, when the Winnipeg Street Railway Company was incorporated and first placed horse cars in operation. On January 28, 1891, this company also placed the first electric car in operation, on River Avenue. In April 1892, the Winnipeg Electric Street Railway Company was incorporated under Special Act of the Provincial Legislature, for the purpose of constructing and operating street railways in the City of Winnipeg, the Town of St. Boniface the Rural Municipality of Assiniboia, and the Parishes of St. Boniface St. John, St. James and Kildonan, and providing electric light, heat and power in this area. It was also empowered to acquire the franchises of any other company established to provide similar services anywhere in the area.

This company operated its first electric car on Main Street on July 26 1892, and provided regular service from September 5, 1892. In 1894, it bought out the original horse car company, acquiring some property and equipment in so doing. Horse cars were discontinued at this time, last operating on May 11, 1894. In January 1898 the Winnipeg Electric Street Railway Company bought out the Manitoba Electric and Gas Light Company, which had been incorporated in 1880 and which had been supplying gas and electricity in Winnipeg. In June 1900, the company bought out the North-West Electric Company Limited, which had been incorporated in 1889, and which was supplying electricity in Winnipeg.

The Winnipeg General Power Company was formed in 1902, to build a water power plant on the Pinawa Channel of the Winnipeg River, and on November 26, 1904, this company was amalgamated with the Winnipeg Street Railway Company under the name 'Winnipeg Electric Railway Company. This was one of the first steps taken to bring low cost power to Winnipeg.

In 1905, this new company purchased the outstanding capital stock of the Suburban Rapid Transit Company, which had been incorporated in 1902 for the purpose of supplying street railway service, electric light, heat and power between the western limits of Winnipeg and the Village of Headingley on the north side of the Assiniboine River. These powers had been extended in 1903 to include the area on the south side of the river.

In 1906, the Winnipeg Electric Railway Company purchased the outstanding capital stock of the Winnipeg, Selkirk and Lake Winnipeg Railway Company, which had been incorporated in 1900 to build and operate an electric or steam railway from Winnipeg to the Town of Selkirk. This line operated as a steam railway until 1908, when it was electrified. In 1937, the present company replaced the electric cars with motor buses.

The operation of cars on Sundays was started on July 8, 1906. The first gasoline bus route was placed in operation on Westminster Avenue on May 1, 1918.

By amendment to its Act of Incorporation, the name of the transit company was changed on April 5, 1924, to the Winnipeg Electric Company, under which name it presently operates.

The first trolley coaches in Greater Winnipeg operated on Sargent Avenue, with service starting on November 21, 1938. By 1943, Winnipeg had the largest fleet of such coaches in operation in any one city in Canada.

At the present time, the total number of vehicles operating includes 215 street cars, 30 trolley coaches and 176 motor buses. Present plans include the purchase of an additional 25 trolley coaches and 10 motor buses, all now on order. Tentative plans include the purchase of more trolley coaches, with a view to reducing the number of street cars now in operation, and eliminating obsolete equipment.

Power used in the operation of electric cars and supplied to consumers in Greater Winnipeg is transmitted from three power plants on the Winnipeg River - Pinawa, Great Falls and Seven Sisters Falls - opened in the years 1906, 1925 and 1931, respectively.

3 PRESENT TRANSIT FACILITIES

Street cars, which were the first of present day types of equipment to go into service in Greater Winnipeg, were routed along major travel routes some years ago. Many of the original routes have been abandoned or replaced by trolley coach or motor bus routes but some still exist today. Inauguration dates of trolley coach and motor bus routes appear in Appendix A, and statistics concerning track removal in Appendix B.

One of the original routes still in existence is the Portage Avenue - North Main route, which now forms the backbone of the transit system and carries the largest passenger volume of the various transit routes. Following this route in passenger carrying volumes are the Selkirk - Osborne Street the Academy St. Mary's - St. Anne's and the Corydon Stafford street car routes, and the two trolley coach routes. As shown in Appendix C motor buses, because of their use on more lightly travelled routes or in areas of sparse development, generally carry lower passenger volumes than street cars and trolley coaches, and it is therefore interesting to note that, in 1945, the Wolseley - Ellice motor bus route rated about fourth place in passenger carrying volumes. The route has since been split into two parts, to permit better control of service.

The three street car routes with heaviest passenger volumes, Portage - North Main, Selkirk - Osborne Street and Academy St. Mary's - St. Anne's, operate as through routes passing through the business district rather than looping within it. This is considered to be good practice, since it saves operating time, lessens traffic congestion by curtailing turning movements, and reduces transferring in the central area. The next three routes Corydon - Stafford, Morse Place and East Kildonan, loop through or just outside the business district; and the last route, Mountain Dufferin, which has the lowest passenger volume acts merely as a feeder line at some distance from the business district. Before the war this latter route was served by motor bus but reverted to street cars during the war years in line with government policy in rubber and gasoline conservation.

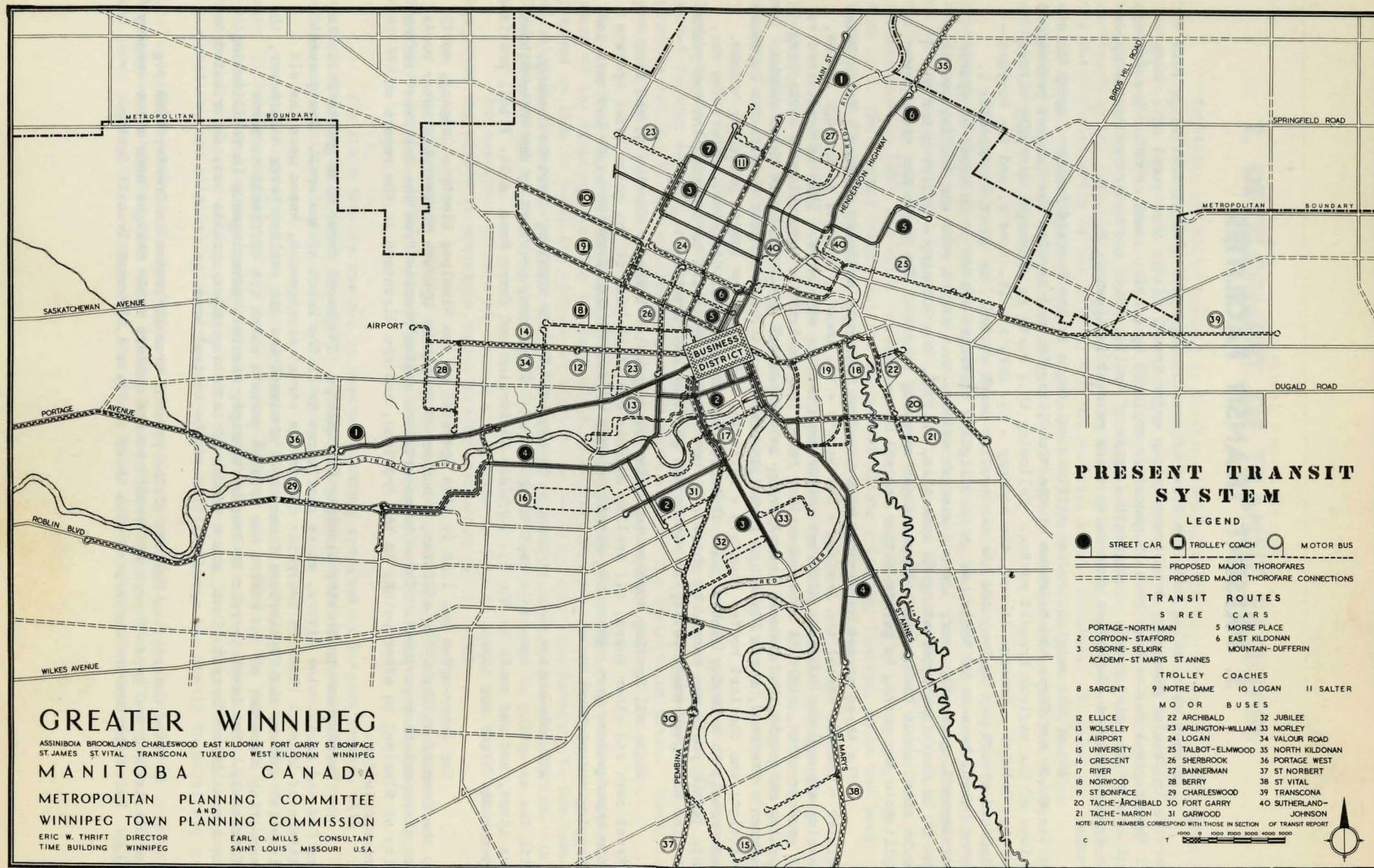
While all trolley coaches and motor buses provide transfer service to and from street cars and other buses, all trolley coaches and about half of the motor buses operate into the downtown area, providing direct, speedy service to and from the major business and shopping districts.

All intra-urban transit service is provided by the Winnipeg Electric Company, with the exception of one route east to the Town of Transcona, provided by the White Ribbon Bus Lines, and one south to the St. Boniface Sanitorium and Ferry Road in St. Vital, provided by the St. Vital Bus Lines.

One inter-urban bus line is also operated by the Winnipeg Electric Company, north to the Town of Selkirk. In addition, a number of companies operate inter-urban motor buses for transportation purposes. These transportation routes operate from the Bus Depot in the City of Winnipeg to other points in the Province and are discussed in the report on Transportation.

Development in Greater Winnipeg has taken a Y'-shaped form, with growth following the Red and Assiniboine Rivers whose confluence is in the heart of the area. The present pattern of transit lines is irregular due to the street arrangement, based upon the old river lot system, and to barriers formed by the rivers and the railway yards. Moreover, the meandering character of the rivers has created pockets which are difficult to serve efficiently. The level terrain in Greater Winnipeg has been advantageous in facilitating the operation of transit lines, and a number of radiating major streets have contributed to the provision of direct and speedy service to the central area.

A brief description follows of the present transit routes in Greater Winnipeg. The discussions and maps of present transit routes exclude route changes made since January 1946. Reference numbers correspond with those on Plate 1, Present Transit System.



Present Transit Routes

Street Cars

- 1 Portage - North Main: A through route extending from the Municipality of St. James through the Winnipeg business district to the Municipality of West Kildonan.
- 2 Corydon - Stafford: A looped route connecting south Winnipeg with the business district
- 3 Osborne Street - Selkirk: A through route operating through the business district and connecting north Winnipeg with the south Winnipeg Fort Rouge and Riverview districts.
4. Academy Road St. Mary's St. Anne s: A through route serving the Town of Tuxedo, south Winnipeg, the City of St. Boniface Norwood district, and the Municipality of St. Vital. This route normally operates only to the Tuxedo-Winnipeg boundary, but in the summer months it operates part-time as far as Assiniboine Park in Tuxedo
- 5 Morse Place: A route looped just outside the business district, and serving the Winnipeg Elmwood district
6. East Kildonan: A route looped just outside the business district, and serving the Municipality of East Kildonan.
7. Mountain - Dufferin: A short feeder route serving the north central Winnipeg area

Trolley Coaches

- 8 Sargent: A looped route connecting west Winnipeg with the business district.
9. Notre Dame - Logan: A looped route connecting north-west Winnipeg and the Village of
- 10 Brooklands with the business district
- 11 Salter: A looped route connecting north Winnipeg with the business district

Motor Buses

- 12 Ellice Wolseley - Airport: A through route connecting west Winnipeg north of Portage
- 13 Avenue, with west Winnipeg south of Portage Avenue. Normally the route operates through
14. the west end of the downtown business district but during rush hours it extends farther downtown. The Airport bus included in this routing in Appendix A connects the airport with the business district. The Wolseley - Ellice route was recently split into two parts with slightly changed routing, to provide better control of service
- 15 University: A feeder route operated as a regular service from Corydon Avenue and Osborne Street to the University, and during week-days as an express service from the business district directly to the University in the Municipality of Fort Garry.
16. Crescent: A looped route operating as an express service from the business district to River and Osborne, and as a regular service in Fort Rouge. Crescentwood and River Heights. This route started as a part-time service but when the River Heights bus was discontinued, the Crescent route was put on a full-time basis, with some route changes
- 17 River: A feeder service connecting the north Fort Rouge area, between the Red and Assiniboine Rivers, with the business district via Main Street
18. Norwood St. Boniface: A feeder route connecting the City of St. Boniface with the
- 19 business district, via Provencher Bridge
20. Tache Archibald and Tache - Marion: Two routes serving the City of St. Boniface the
- 21 Tache - Archibald route operating from the business district to the Swift's Packing plant and the Tache - Marion route operating from the business district to the stockyards and serving the St. Boniface Hospital

- 22 Archibald: A part-time feeder route connecting the eastern part of the City of St. Boniface and the Greater Winnipeg Water District Railway Station with the business district
- 23 Arlington - Aberdeen - William: A feeder route connecting Portage Avenue at Arlington with north-west Winnipeg and the business district. This route operates from Portage, part-time via Arlington Street and Aberdeen Avenue west to McPhillips Street and part-time via Arlington Street and William Avenue east to Main Street
24. Logan: A shuttle service in north central Winnipeg, connecting Main Street with the Notre Dame - Logan trolley coach on Logan Avenue
- 25 Talbot: A feeder service through the Point Douglas district connecting the Winnipeg district of Elmwood with street car service on Main Street
26. Sherbrook: A shuttle service on Sherbrook Street between street cars on Portage Avenue and trolley coaches on Logan Avenue
- 27 Bannerman: A feeder route serving the Winnipeg area near the north city limits
- 28 Berry: A feeder route in the Municipality of St. James connecting the airport with street car service on Portage Avenue
- 29 Charleswood - Wireless School: A feeder route connecting the Municipality of Charleswood and the R.C.A.F. Wireless School in Tuxedo with the Academy Road and Portage Avenue street cars
- 30 Fort Garry: A part-time feeder route connecting the Municipality of Fort Garry with street car service at Corydon Avenue and Osborne Street
- 31 Garwood: A part-time feeder route serving south Winnipeg, operating from Corydon Avenue and Osborne Street along Garwood to Stafford. During certain hours service is carried along Pembina Highway to the city limits at Parker Avenue
- 32 Jubilee: A short shuttle route between Osborne Street and Pembina Highway in the south Winnipeg Fort Rouge district
- 33 Merley: A shuttle route in the south Winnipeg Riverview District providing service from the municipal hospitals to street cars on Osborne Street
- 34 Valour Road: A shuttle service connecting Portage Avenue street car service with the Sargent trolley coach in west Winnipeg
35. North Kildonan: A feeder service connecting the Municipalities of East St. Paul and North Kildonan with street car service in East Kildonan.
36. Portage West: A feeder service connecting the Municipality of Assiniboia with street car service in St. James
- 37 St. Norbert: An intra-urban motor bus service connecting the Village of St. Norbert south of Winnipeg with street car service at Corydon Avenue and Osborne Street
- 38 St. Vital: A feeder route operated by the St. Vital Bus Lines serving the St. Boniface Sanatorium in the Municipality of St. Vital and connecting with the St. Mary's Road street car service
- 39 Transcona: An intra-urban motor bus service operated by the White Ribbon Bus Lines connecting the business district with the Town of Transcona, east of Winnipeg
- 40 Sutherland Johnson: A shuttle service inaugurated in 1946, connecting Main Street street cars with East Kildonan and Morse Place street cars via Louise Bridge

- 41 Notre Dame Logan: An auxiliary motor bus service put in operation during rush hours to augment the Notre Dame Logan trolley coach service
- 42 Sargent: An auxiliary motor bus service put in operation during rush hours to augment the Sargent trolley coach service

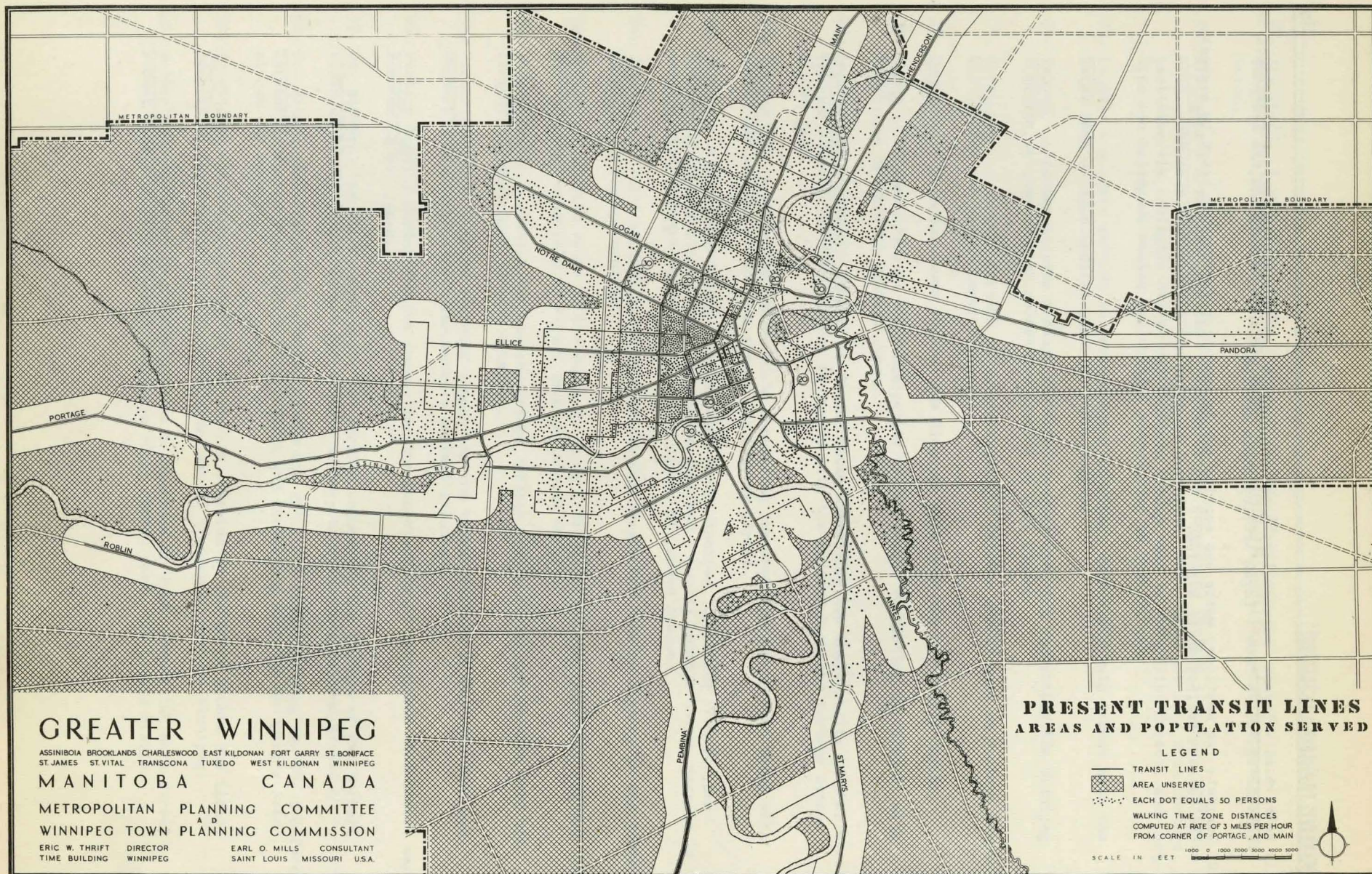


PLATE 2

Present Transit Lines, Population Served and Walking Time Zones

Plate 2 shows the distribution of population in the metropolitan area and the manner in which the present transit lines serve the population of Greater Winnipeg. The boundaries of areas adequately served by transit are located on the map a distance of one-quarter ($\frac{1}{4}$ mile or about five minutes walk, from the transit lines. Population served is indicated by the dots, each representing fifty (50) persons, within the boundaries of the served areas.

It is evident from a study of Plate 2 that the population of Greater Winnipeg is particularly well served by transit, with only a small percentage of the developed area unserved, of which a considerable portion is in parks or is sparsely populated. Plans have already been made for extension of service to some unserved areas which are now being developed for residential use. The most difficult factor in this expansion program lies in the present equipment shortage.

The Walking Time Zones shown on Plate 2 indicate the walking time in minutes from the corner of Portage Avenue and Main Street to any point on the zone boundary. Relating the population distribution to the walking time zones, it is evident that some 97,300 persons live within thirty minutes walking distance of the corner of Portage and Main. This figure taken as a percentage of the metropolitan population, closely approximates the change in passenger volumes which creates a thirty-five (35) percent differential between winter and summer vehicle demand. Some years ago, the heaviest volumes could be expected during the summer months, when the riding public used street car and bus service extensively to travel to and from parks and picnics, for sightseeing, and the like. In recent years this practice has continued, but to a much lesser degree, with many persons now travelling by private automobile. Today the trend is to heavy winter use of transit facilities, and the resulting thirty-five (35) percent differential in vehicle, personnel and equipment requirements can hardly be avoided due to climatic conditions.

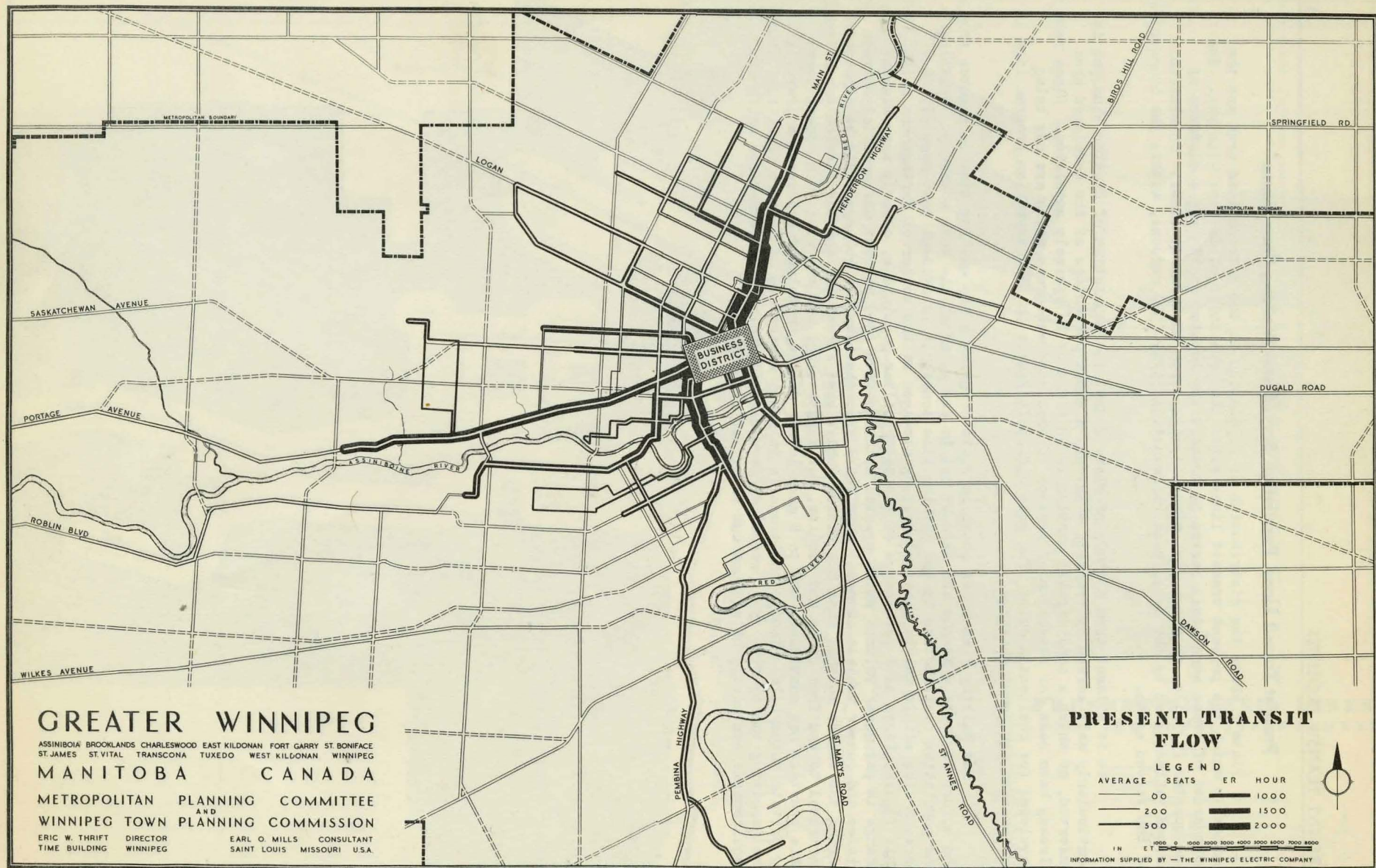


PLATE 3

Present Transit Flow

Plate 3 shows clearly the pattern of present transit volumes throughout the metropolitan area. No data is at present available indicating actual passenger volumes at any one time, so a comparative picture was obtained by using transit vehicle movements, which indicate the comparative demand for service on the various transit lines. Since the number of vehicles required to meet the demand depends upon the capacity of the vehicle used, this factor was also taken into consideration. In other words, seat flow was computed from relating the number of vehicles in operation on each transit line during a given period, to the seating capacity of the vehicle in general use on that particular line, whether street car, trolley coach or motor bus of a specified capacity.

Of particular interest in Plate 3 are the heavy service requirements on such thoroughfares as Main Street, Portage Avenue and Osborne Street. This plate also depicts the elongated urban development along certain thoroughfares and along the rivers, indicating the heavy transit vehicle volumes required to meet the needs of these areas. More equal dispersion of transit service on major thoroughfares should result in faster service, by reducing delays caused by concentrations of passenger volumes on a few routes.

The Business District, in which transit volumes are particularly heavy, does not appear on Plate 3, but is discussed in the Business District section of this chapter, and is shown on Plate 7.

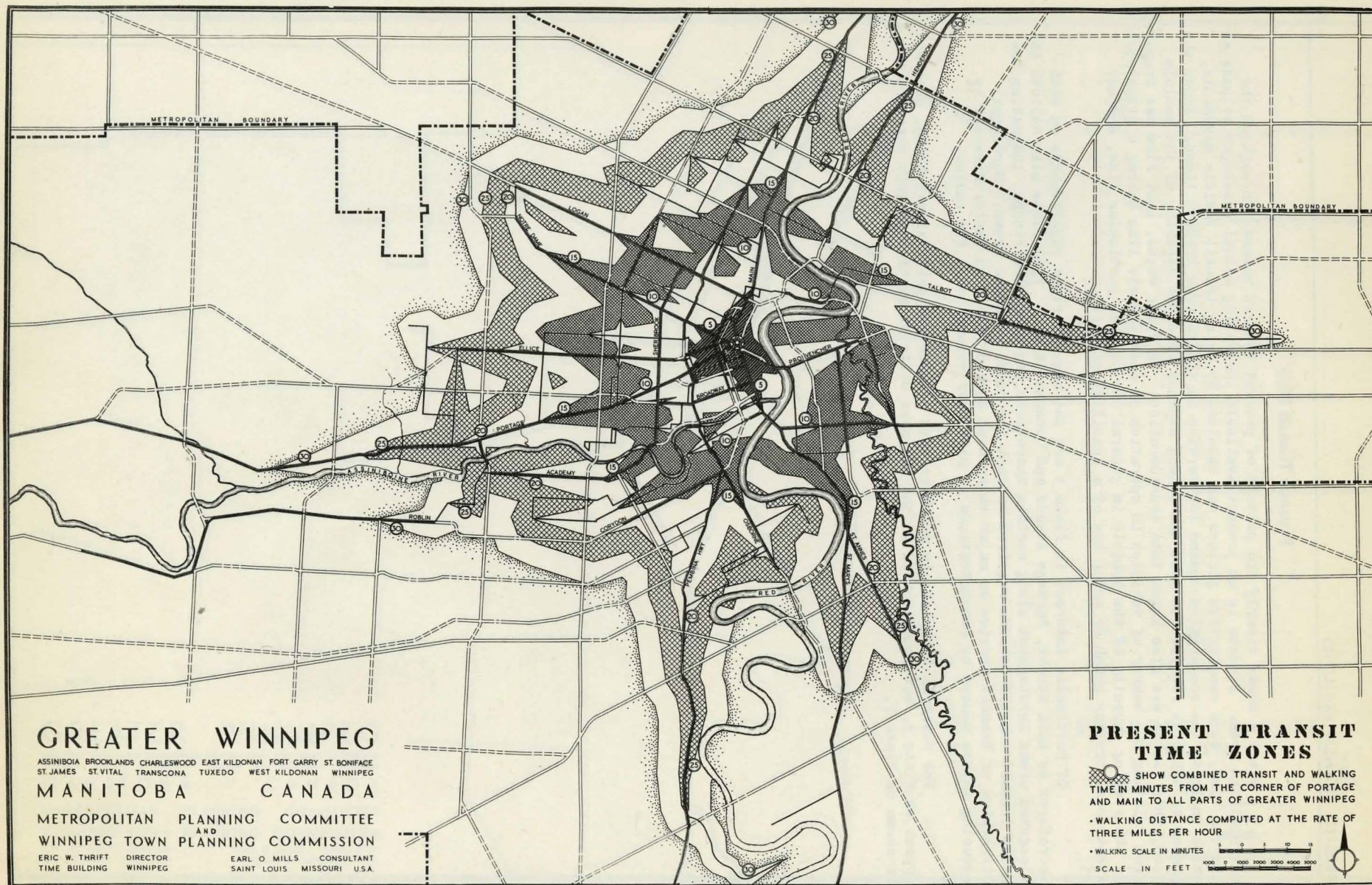
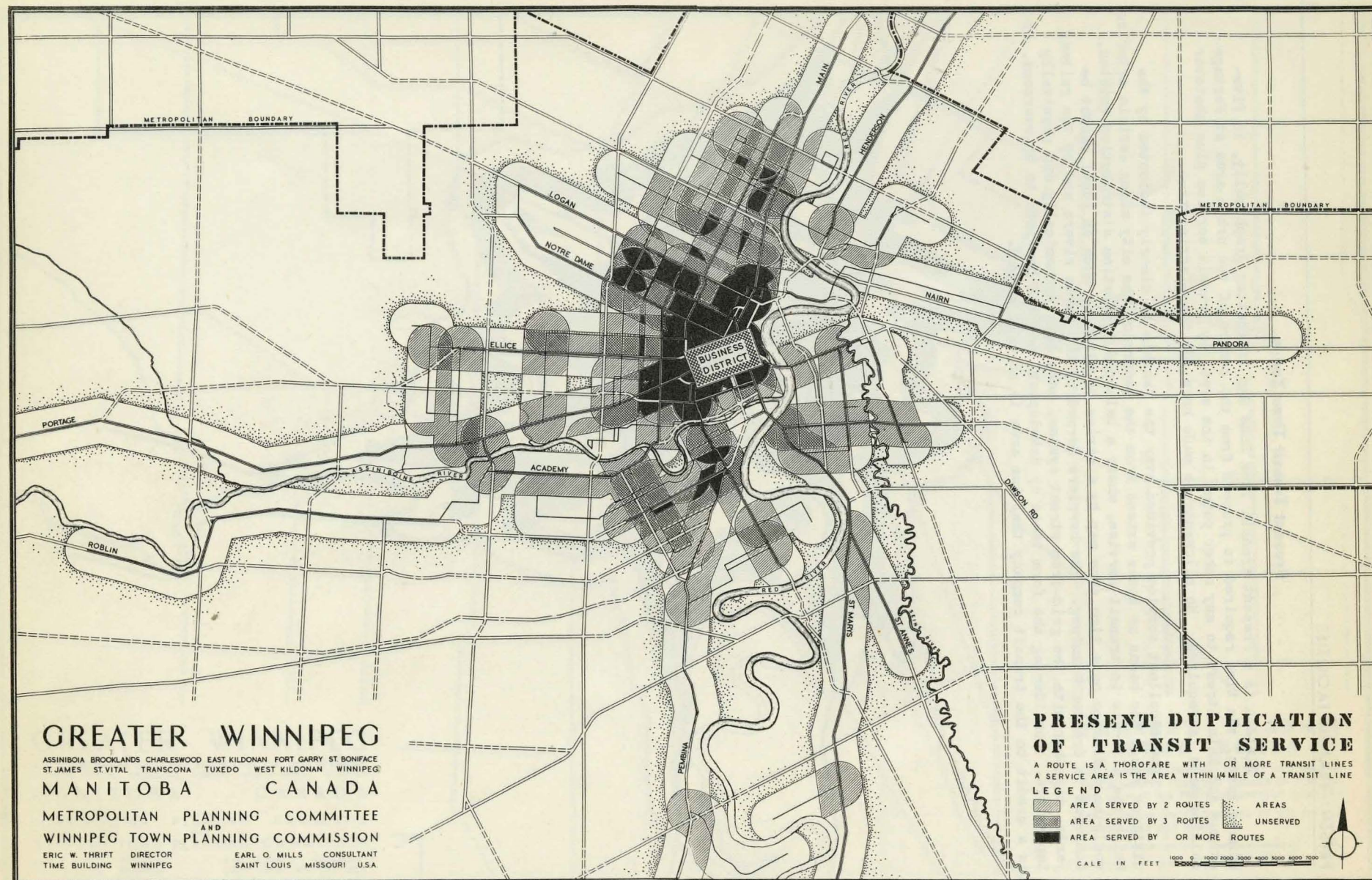


PLATE 4

Present Transit Time Zones

Plate 4 is a Present Transit Time Zone map indicating graphically, in five-minute zones, the time required to proceed from the centre of the urban area at Portage Avenue and Main Street to any other point in the area, by transit service plus whatever walking time is required. No allowance is made here for transferring time

The excellent service provided over the radials is clearly indicated by the distance which the bands or zones extend from the centre of the city along certain arteries. While the ultimate in transit service, where a balanced population distribution existed, would be indicated on a time zone map by a series of circles, such an ideal cannot be achieved in Greater Winnipeg. The barriers formed by the three rivers and by the railway yards, together with the grid-iron street system, make this economically and physically impossible. Considering the form taken by development and the barriers to be overcome, it is a credit to the transit company that the area is so well served.



Present Duplication of Transit Service

When an area is within a quarter mile of two or more transit lines duplication of transit service is considered to exist. When two or more lines operate over the same street however service is considered to be improved rather than duplicated since the headway between vehicles is decreased and the service speeded up.

In Greater Winnipeg, duplication exists in the business district to advantage but also exists in other areas where it prevents maximum efficiency. These areas are indicated on Plate 5. To some extent this is unavoidable, due to the existing street pattern and such barriers as rivers and railways. However, in certain areas outside the business district, where three, four, and even five transit lines provide service, it would seem that this overlapping might be reduced by the elimination or re-routing of some of the lines.

Overlapping of transit service areas is most noticeable in the area immediately north of the business district, along Main Street, where a number of street car, trolley coach and motor bus routes converge. These include the street cars operating on Main Street Logan Avenue, Princess Street, Dufferin Avenue and Selkirk Avenue; trolley coaches operating on Salter Street, Isabel Street and Notre Dame Avenue; and motor buses operating on William, Market, Logan, Higgins, Sutherland and Euclid Avenues. Similar conditions occur in the vicinities of Corydon Avenue - Pembina Highway Osborne Street; Portage Avenue Sherbrook Street; Salter Street - Sherbrook Street - Logan Avenue - Ellice Avenue; and Logan Avenue - Ellice Avenue - Arlington Street. Effectuation of proposals outlined in Chapter 4 should do much to rectify some of the present difficulties arising out of present undesirable duplication of transit service.

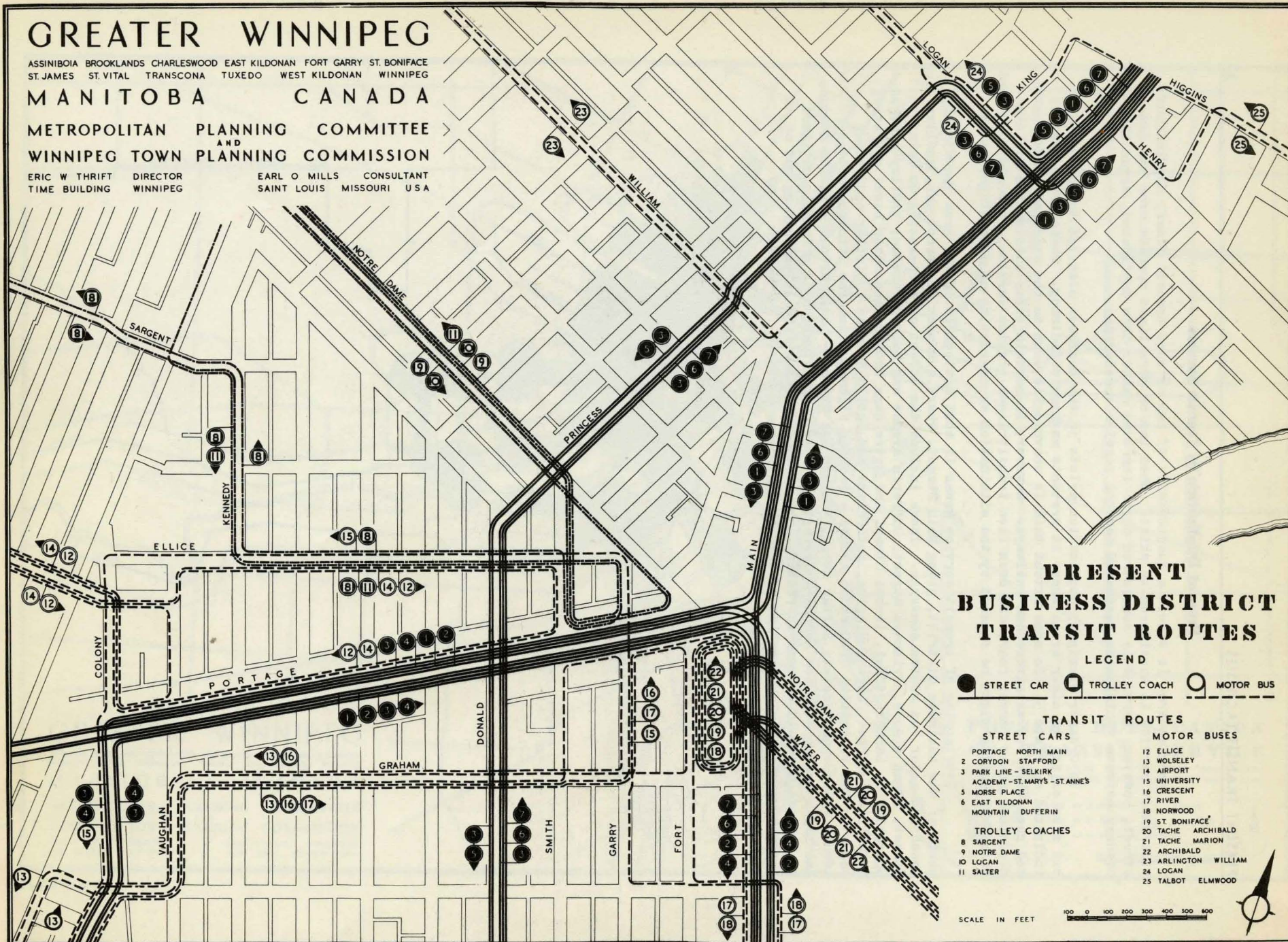
GREATER WINNIPEG

ASSINIBOIA BROOKLANDS CHARLESWOOD EAST KILDONAN FORT GARRY ST. BONIFACE
ST. JAMES ST. VITAL TRANSCONA TUXEDO WEST KILDONAN WINNIPEG

MANITOBA CANADA

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Business District Present Transit Routes and Flow

The Greater Winnipeg business district is concentrated about the two main thoroughfares, Portage Avenue and Main Street, near their intersection. Commercial development extends throughout the business district on both sides of these two streets, which form a 'Y-shaped pattern.

Street car lines carrying the bulk of transit passengers are routed over these two thoroughfares, thus providing the public with direct service to and through the business district. It is of interest to note that all trolley coach routes and all but one street car route either traverse or loop within the business district, and that fourteen of the twenty-eight motor bus routes loop in the area, indicating the highly commendable effort which has been made to provide convenient and direct service with a minimum of transferring. Business District Transit Routes are shown on Plate 6

The Business District Transit Flow map Plate 7 is based upon the factor used in indicating seat flow in the urban area, that is, number of seats per hour. A more desirable condition would be indicated by a pattern showing seat volumes dispersed on major thoroughfares rather than concentrated on Portage Avenue and Main Street.

In rush hours there is congestion on Portage Avenue and on Main Street, with one street car moving in each direction about every twenty-three seconds. This tapers off to about one street car every minute during normal periods. In addition to this street car congestion, which is most apparent along Portage Avenue, between Main Street and Memorial Boulevard, the traffic situation is complicated by trolley coaches and motor buses looping in the business district. Looping occurs particularly on Portage Avenue near Main Street and on Main Street between Portage Avenue and Graham Avenue. Along Graham Avenue congestion also exists, especially near the Bus Depot, due in part to the operation of inter-urban buses. This congestion might be eased by re-routing inter-urban buses, as suggested in the report on Transportation.

Street car congestion has been relieved to some extent by the use of trackage paralleling Main Street on Princess and Donald Streets, but the value of this routing is lessened somewhat by the fact that Princess Street is quite narrow, and does not permit rapid movement.

Left-hand turning movements occur at some points, notably at the intersections of Portage Avenue with Main Street and with Memorial Boulevard. Elimination of some of these turns is highly desirable.

GREATER WINNIPEG

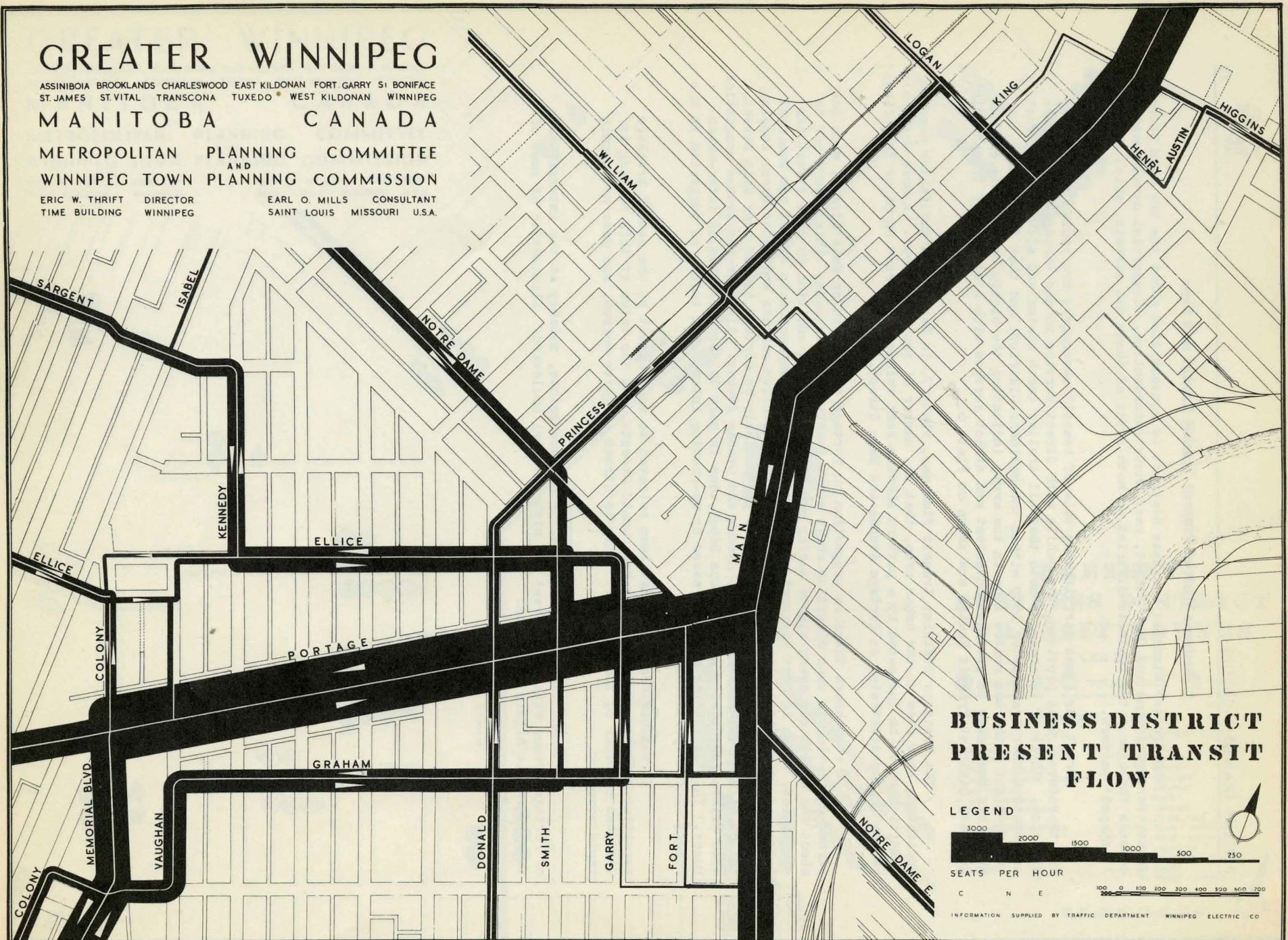
ASSINIBOIA BROOKLANDS CHARLESWOOD EAST KILDONAN FORT GARRY ST. BONIFACE
ST. JAMES ST. VITAL TRANSCONA TUXEDO WEST KILDONAN WINNIPEG

MANITOBA CANADA

METROPOLITAN PLANNING COMMITTEE
AND
WINNIPEG TOWN PLANNING COMMISSION

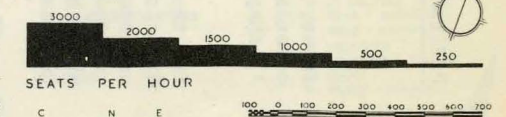
ERIC W. THRIFT DIRECTOR
TIME BUILDING WINNIPEG

EARL O. MILLS CONSULTANT
SAINT LOUIS MISSOURI U.S.A.



BUSINESS DISTRICT PRESENT TRANSIT FLOW

LEGEND



INFORMATION SUPPLIED BY TRAFFIC DEPARTMENT WINNIPEG ELECTRIC CO.

General Transit Facts

Passenger Volumes

Street cars carried the bulk of transit revenue passengers in Greater Winnipeg during 1945 with 60,109,225 (60%) being carried while operating 7,532,905 miles. In comparison, trolley coaches carried 9,657,927 revenue passengers (10%), while travelling 1,127,149 miles; and motor buses carried 29,937,720 revenue passengers (30%), while travelling 6,548,306 miles.

Trackage

Street cars operate over thirty-six odd miles of streets, on which approximately sixty-six miles of single track are laid, excluding special work and storage track, and counting each mile of double trackage as two miles of single track. In other words, street car routes consist almost wholly of double trackage. The few miles of single track routes are distributed over four of the seven routes, and are located at the extremities of these routes, in areas of low population density.

Approximately thirty-nine of the sixty-six miles of track are laid in the street paving. The remaining twenty-seven miles are laid on unpaved strips. On such streets, motor traffic operates on paved roadways, some of which are on one side of the track strip only, while others occur on both sides.

All street railway trackage is of standard gauge $4\frac{1}{2}$ "", laid 12'0" from centre to centre of tracks, to permit adequate clearance between passing street cars, especially on turns.

Route Efficiency

Although street cars as a group carry by far the greatest passenger volumes, individual street car routes are not all more efficient or more economical than trolley coach or motor bus routes. Generally, those routes which operate through densely populated areas, or which operate directly to the central district, tend to be more economical in operation. The passenger per operating mile ratio or index, offers a good measure of efficiency, since it indicates relative operating costs and revenue, and permits a comparison of various routes on a basis of possible revenues available for improvements, modernization and extension of service.

A considerable amount of data pertaining to transit in Greater Winnipeg is outlined in Appendix C, including number of vehicles, distance operated, passengers carried, and service frequency. Based upon revenue passengers carried per mile of operation, the Osborne Street - Selkirk Avenue street car route has the highest efficiency, with an index of 9.8. This route is followed by the Sargent trolley coach with 8.7, the Portage North Main street car with 8.6, the Salter motor bus with 8.2, and the Sherbrook motor bus with 7.9. Other street car routes then follow in order, with the exception of the low index Mountain Dufferin route at 5.3, which was normally a motor bus route, but which during the wartime emergency operated as a street car route.

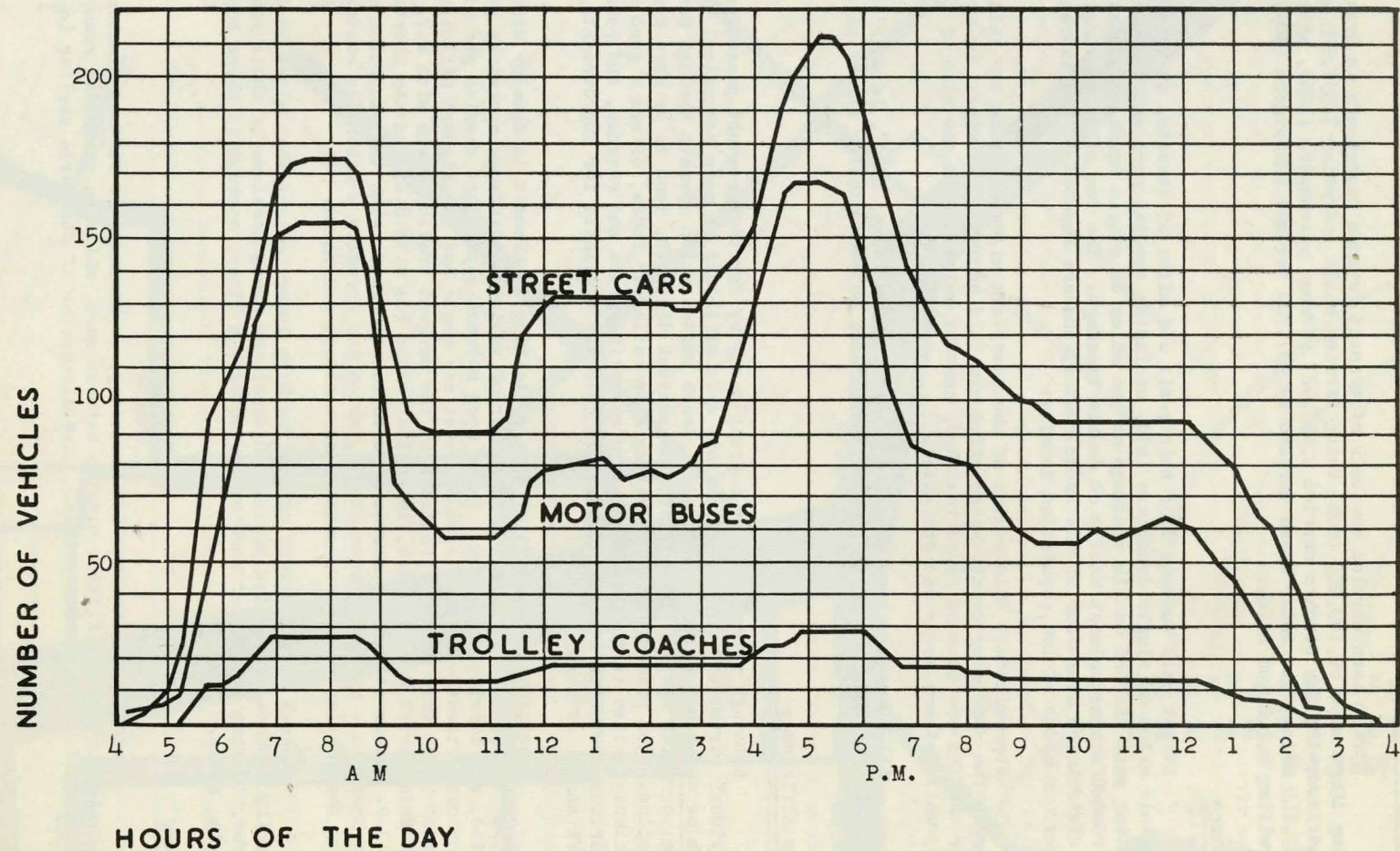
Several of the street car routes have lower indices than might be expected, primarily because of the low population densities along portions of their routes. The same is true, to some extent, of some of the motor bus lines, especially those operating to outlying areas.

Headway

Desirable minimum service frequency, or headway, is fifteen minutes during off-peak periods; that is, fifteen minutes between cars. While in peak load rush hours this figure should be considerably less. See discussion of Standards earlier in this chapter.)

TRANSIT VEHICLES IN SERVICE — GREATER WINNIPEG

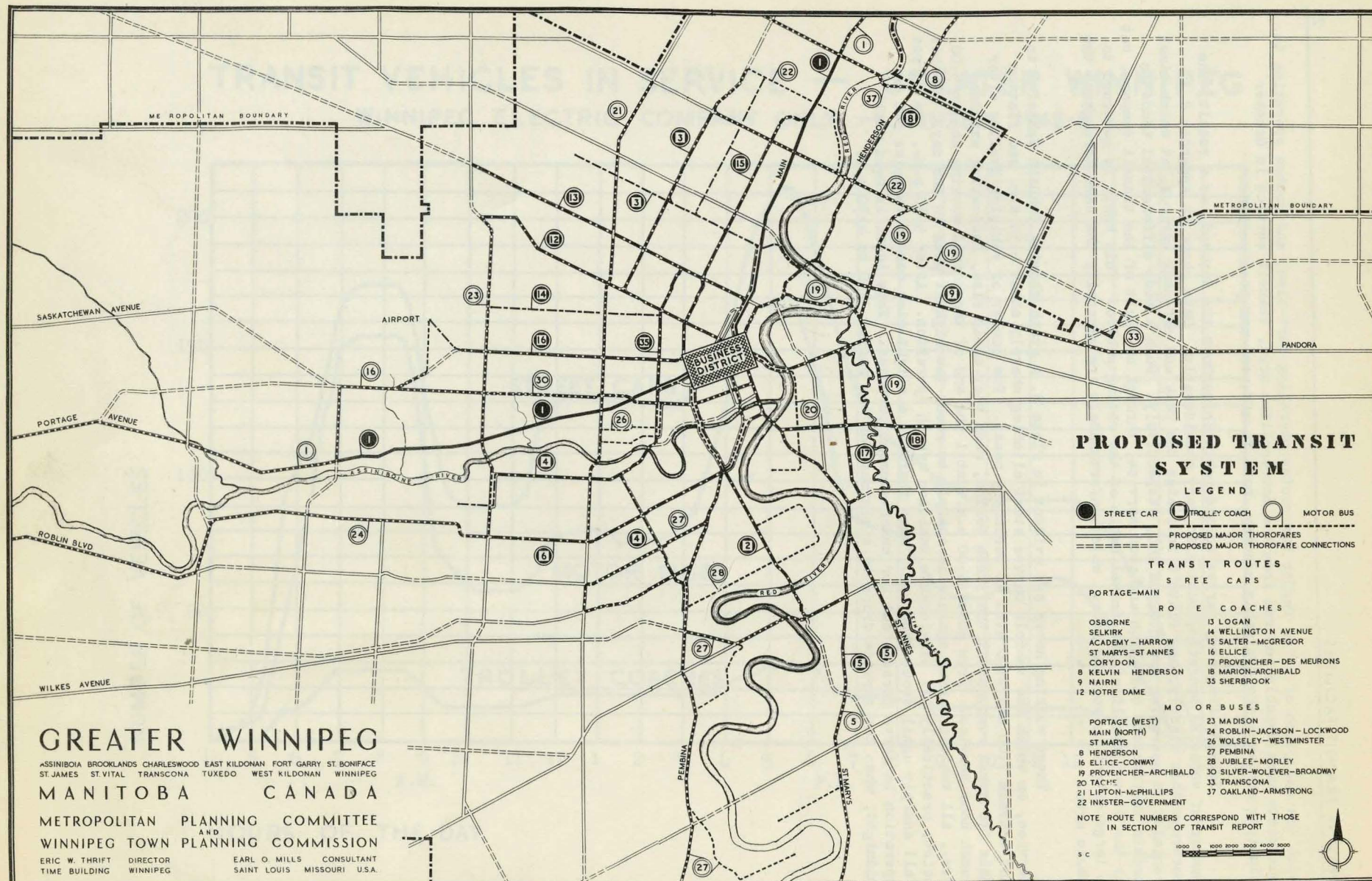
WINNIPEG ELECTRIC COMPANY ONLY — WINTER 1945-6



With the exception of a few feeder bus routes operating part-time, and routes operating to districts considerably removed from the metropolitan area, transit service in Greater Winnipeg achieves the desirable headway, both in off-peak and peak periods

Service frequency varies considerably throughout the day and, as a result, the number of vehicles operating must also vary considerably. Data shown in Appendix C portrays this clearly and Plate 8 indicates the peak and off-peak periods, at which times vehicles in operation are 416 and 164, respectively. Such a wide differential tends to create inefficient operation and poor service, through no fault of the transit company but as the direct result of the travel habit of the riding public. This habit is governed to a large extent by working hours, which unfortunately are generally the same throughout the whole area.

These working hours are evident in Plate 8, a graph showing Transit Vehicles in Service, on which the vehicle curves start climbing sharply about 4:30 a.m. and flatten out between 7:00 and 9:00 a.m. at secondary peaks. The number of vehicles decline after this to work rush, until the lunch period, when they again rise, indicating extended lunch hour service. From about 3:00 p.m. until the end of the normal working day at 5:00 p.m., all vehicle curves again rise sharply to reach the highest peak in the day. At this point, practically all serviceable vehicles are in operation. After 5:30 p.m. the curves fall sharply until about 9:00 p.m. when there is a slight rise due to vehicles put in operation to serve persons out for entertainment purposes. This level is held until midnight, when the service drops to a minimum for the period 3:30 to 4:30 a.m.



4. TRANSIT PROPOSALS

Standards and General Recommendations

The proposals in this report are suggested as a means of improving transit service in the Greater Winnipeg area. In preparing the proposals, published findings of competent transit authorities were studied in relation to possible improvements in this area. Certain transit standards are now accepted by transit authorities and by planners as desirable in guiding development in urban areas. While these standards must be adapted to local conditions, they act as a useful guide in providing adequate service without excess operating costs.

Service Area

The American Transit Association and other authorities, such as the International City Managers Association, accept one-quarter ($\frac{1}{4}$) mile, which is about a five-minute walk at a normal pace, as the maximum desirable walking distance from transit routes. Population density must, of course, be sufficient to pay for the operation of the line, so in sparsely populated areas walking distances must sometimes be extended. Some question may arise as to whether or not one-quarter mile is too great a distance in Greater Winnipeg in the winter. Periods of extreme cold are seldom prolonged, however, and for all practical purposes it is deemed reasonable to use this widely accepted transit service standard.

Headway

During off-peak periods, the desirable minimum service frequency, or headway, is fifteen minutes, while in peak load rush hours this figure should be considerably less. This standard, which is suggested in 'Local Planning Administration' and has been used by many planning authorities, is considered a reasonable figure for use in Greater Winnipeg.*

Vehicle Types

The experience of transit companies in many urban areas has shown that the most efficient service is offered by street cars on routes with very heavy passenger volumes, by trolley coaches on routes with intermediate volumes, and by motor buses on routes with comparatively light volumes. The general field of operation of each of these vehicle types is indicated by figures published by the Canadian Transit Association in the booklet 'The Trolley Coach', showing that most efficient service is usually performed by street cars for headways up to five minutes, by trolley coaches from five to ten minutes, and by motor buses for headways greater than ten minutes. The Winnipeg Electric Company uses these figures as a guide in its operations in Greater Winnipeg.

The character of the route also influences the type of vehicle used. Where routes contain frequent curves and bends, the use of street cars and trolley coaches is often restricted, due to high construction costs and to poor operating performance caused by overhead trolley dewirements. Similarly, on routes having poor road beds, the use of trolley coaches and motor buses is frequently inadvisable. In an area the size of Greater Winnipeg, street car equipment should be used only on the main, most heavily travelled routes. Trolley coaches can handle traffic as efficiently as street cars on most routes in an urban area with a population of less than 400,000. Motor buses should be reserved for feeder lines and for outlying routes which are more likely to require extensions and changes.

Considering these factors affecting the choice of vehicles, it would appear that in Greater Winnipeg, the only existing route in the transit system which must be served by street car for some years to come is the Portage Avenue North Main route. This does not mean that all other street car routes should be changed to trolley coach or motor bus.

* Local Planning Administration. Published by the International City Managers Association, Chicago, 1941.

routes but rather that such changes are feasible insofar as operating efficiency is concerned

Duplication of Service

Wherever possible transit routes should be spaced and arranged to produce the minimum duplication of service, particularly in residential and outlying areas, in order to provide the most economical service. Duplication to any marked degree except in the business district tends to increase operating costs and adversely affects the equitable distribution of operating units. In turn, any increase in operating costs tends either to cause higher fares or to prevent their reduction, as well as to curtail expansion and improvement of service. An attempt has been made in the proposals to reduce duplication of transit service in certain areas where excessive duplication now occurs. Such areas are shown on Plate 5.

In the central district on the basis of a service area of one-quarter mile on either side of a transit line, duplication will unavoidably occur. In this case however it is necessary in order to meet the much more concentrated demands of the business district. Such duplication is desirable in this area since it provides frequent service, as well as permitting and even promoting short trips with frequent turnover. Duplication where transit lines cross or join is also unavoidable if good transfer connections are to be maintained, and is not particularly objectionable if kept to a reasonable minimum.

Through Routes

A large number of transit routes enter the business district, providing excellent direct service to and from this central area. After reaching the business district, however it is desirable to route transit lines through the district rather than to loop them within it since looping often makes transferring necessary, increases the length of route and the operating time, and causes congestion due to turning movements. It must be borne in mind, however that for transit to be most efficient, only those districts with similar characteristics of population volume and density and with similar riding habits can be served by a common route. It is difficult and often inadvisable to reduce looping by having one route serve two or more districts with dissimilar characteristics.

Fast Schedules

Speed of service is of particular importance to transit passengers. A fast schedule is advantageous to both the passenger and operator in any transit system, since it saves time for the passenger and permits the use of fewer operating units. Modern equipment is designed to provide the desirable speed, but to make full use of this equipment every effort should be made to eliminate any unnecessary waste of time.

Time can be saved by reducing the number of turning movements and excess stops and by providing through transit lines routed over wide major streets. It is recommended that stops for loading and unloading be reduced to a minimum, after study of the present system to discover where time might be saved in this way. As future routes develop, stops should be kept as infrequent as possible, commensurate with adequate service.

Relation to Major Thorofare Plan

The Major Thorofare Plan provides a thorofare system in which a number of streets have been set aside for the use of large volume, free flowing traffic. It is highly desirable that transit lines employ these major streets which are laid out at regular intervals bounding quiet neighborhood areas. Use of the major thorofares for heavy traffic and for transit would serve to remove the hazards caused by through traffic operating on minor and residential streets. Moreover since the major streets provide direct access to the business district, their use as transit routes would tend to improve service.

Operating Efficiency

Seasonal and daily variations in passenger volumes cause wide differentials in vehicle and personnel requirements. Total requirements may be reduced with improved

operating efficiency by staggering working hours and encouraging more compact urban development. The former method proved its value during the war years, and in post war years will be just as important. The latter method is obviously the solution to the problem of low revenues in certain areas and can be effective if the tendency toward elongated and scattered development is curbed.

Rapid Transit

The possibility of the future need for underground or elevated rapid transit facilities in Greater Winnipeg has been studied. Such facilities which can be developed only at enormous capital cost need not be used unless the traffic problem is so acute, and the streets so congested that means for circulation on the surface cannot cope adequately with the volume of movement. Such conditions occur only in urban centres with the largest concentrations of population and in medium-sized centres with complicated street systems, narrow streets, congested central areas, heavy business district traffic or combinations of these conditions.

Studies of the Greater Winnipeg area do not indicate any probability of the population increasing to the magnitude of that in cities which have found the installation of rapid transit facilities necessary. Moreover it is anticipated that with an adequate planning program and the proper application of zoning regulations congestion in the central area will not become aggravated to the point of creating such a necessity. With proper development of the proposed major thorofares as they are needed, rapid transit facilities are not an apparent need in the foreseeable future.

Equipment Replacement and Standardization

It is recommended that present equipment which is inadequate or obsolete, be replaced. Obsolescence is particularly apparent in the street car equipment and it is therefore recommended that these vehicles be replaced with modern street cars or trolley coaches where possible and with motor buses where the operation of street cars or trolley coaches is not economically or physically desirable. With the large capital investment involved in such a replacement program, it is acknowledged that the change cannot occur in a year or two, but it could be accomplished over a period of from five to ten years. The Winnipeg Electric Company has already outlined a five-year plan by which it proposes to carry out some of the changes proposed herein. It is desirable that this five-year plan be extended to cover a greater percentage of the present system, and be adapted to the proposed major street system.

In modernizing the transit system, every effort should be made to standardize equipment. Costs of operating and maintaining equipment are much higher when vehicle types vary to any great extent. In the present system, the variation is particularly evident in the motor bus fleet. Unfortunately it was necessary during the war years to purchase whatever vehicles were available and, as a result there are operating in Greater Winnipeg today nine different makes of motor buses, with more than one model in some makes.

Fare Collection

Continuation and extension of the present commendable practice of speeding passenger loading by the use of special fare collectors at busy transit stops in the central area is recommended, especially during rush hours.

Bus Stops

The problem of nearside versus farside stops for buses is one which receives considerable attention wherever there are transit systems. In Greater Winnipeg, the policy has been to load transit passengers before crossing the intersection, rather than to load after the crossing has been made. While there are advantages to both practices, it is recommended that the present one be continued for several reasons all of which are particularly important in the business district.

1 Most traffic accidents occur at street intersections, and transit vehicles moving off

slowly from a stop at the intersection are under better control and in a better position to stop if necessary than would be the case if these vehicles operated directly across the intersection at normal speed before stopping. In addition vehicles following in order to pass the transit vehicles would find it necessary to turn out into other moving traffic after crossing the intersection.

2. Nearside stops provide economical use of street space as the existing twenty-foot parking restriction at street intersections is used as free maneuvering space when leaving the curb. In the case of farside stops buses would require the usual loading space beyond the twenty-foot corner space and, in addition would need sufficient space in front to permit turnout into traffic around parked cars or as an alternative, would have to back up towards the intersection to obtain the necessary clearance. Neither of these farside stop plans is desirable.
3. Nearside stops provide speedier service since many of the downtown street intersections have traffic lights which require nearside stops. If farside loading were instituted, an extra stop would be needed in many cases with a resulting slow-up in transit schedules and, to some extent in the movement of other vehicular traffic.

Origin and Destination Survey

It is strongly recommended that an origin and destination survey be conducted, with a view to determining accurately where people come from, where they are destined and when and how they travel. The advantages of having this information available in detail are evident. Findings of such a survey should form the basis for development of the street system, and, in particular of the major streets upon which operation of transit vehicles is proposed. This information would indicate clearly the action required on such problems as the determination of routes which could be used to form through routes; the type of vehicle that should be used; frequency of service required at different periods of the day; areas where express service to and from compactly developed outlying sections should be developed; and the like.

Proposed Transit Routes

Proposed locations of transit lines are based upon recommended standards for transit service and when put into effect along with general recommendations are designed to provide improved service.

Proposed transit routes have not been traced through the business district since this will require detailed consideration of the probable passenger volumes on the various routes in order to produce balanced through connections. Moreover the most desirable future routing in the downtown district will depend to a great extent upon the order of implementation of the various proposals.

1 Portage Avenue Main Street

The transit routes now operated on Portage Avenue and Main Street should undoubtedly continue as the backbone of the transit system in Greater Winnipeg. There is one possible change which may be considered in the future and that is the use of trolley coach equipment in place of street cars. If such a change was deemed desirable very likely it would be the last route in Greater Winnipeg to change from rail equipment and then only because of economic necessity or to relieve serious traffic problems.

The motor bus routes on Portage Avenue extending west from the present end of the street car line in St. James, and on Main Street running north to the Town of Selkirk should be continued as at present.

2 Osborne Street

Osborne Street which is one of the most heavily patronized routes presently operated with street cars, should continue as a transit route serving the south-east area of Winnipeg. Although it is doubtful whether a change to trolley coaches on this route

could be justified solely on economic grounds, it may eventually be deemed advisable to do so, in order to relieve traffic congestion. The widening of the street which will be necessary in order that it may serve adequately as a major thoroughfare in the future may not be possible before the traffic volume requires relief. A change to trolley coaches, therefore, may be required before it would otherwise be made. Trolley coaches should operate as efficiently as street cars on this route.

The Major Thoroughfare Report proposes that Osborne Street, as a major thoroughfare, be connected to the Municipality of St. Vital by means of a new bridge. It is proposed that when this bridge is built, the Osborne Street transit service be extended into St. Vital via Edinburgh and Glenlawn Avenues, to connect with the St. Mary's Road route.

3 Selkirk Avenue

Selkirk Avenue, while presently used as a major street, is quite narrow, and is not located to serve as a natural link in the overall major thoroughfare system. In view of existing development, however, it is considered unwise to remove the transit service to nearby routes on the major thoroughfare system. It is recommended therefore that transit service be retained on this street, and that street cars be replaced with trolley coaches as soon as possible, to permit more efficient use of existing street space. Trolley coaches could operate on Selkirk Avenue from Main Street to Arlington Street with a split in service at this point. Part of the service could continue along Selkirk Avenue to Shaunessy Street or as far as development in the area required, and the other part could turn north on Arlington and operate to Inkster Boulevard.

4. Academy Road Harrow Street

It is proposed that Academy Road continue to serve as a transit route and that the present street cars be replaced by trolley coaches as proposed by the Winnipeg Electric Company. It is further proposed that the route connect via Sherbrook Street directly to Portage Avenue instead of turning east on Broadway Avenue. In River Heights, where the route turns south from Academy Road near the Winnipeg City Limits it is proposed that it follow the major thoroughfare Lockwood Street and Tuxedo Avenue to the end of the line, probably at Fort Osborne Barracks. The branch line proposed by the Winnipeg Electric Company to operate from Academy Road on Cambridge Street and Haskins Avenue is not recommended, since these are not major thoroughfares. It is proposed, however, that a branch line operate on Harrow Street to Pembina Highway to connect with service on the highway and on Jubilee Avenue.

5 St. Mary's Road St. Anne's Road

The use of St. Mary's Road and St. Anne's Road as transit routes should continue, and the conversion to trolley coaches as proposed by the Winnipeg Electric Company is advocated. The present diversion in the street car route along Provencher Avenue and Tache Avenue should be eliminated, and the route carried on St. Mary's Road from Marion to Tache. This will require the widening of St. Mary's Road as recommended in the Major Thoroughfare Report.

No changes are proposed in the operation of the St. Vital Bus Lines route, on St. Mary's Road beyond the Winnipeg Electric Company route.

6 Corydon Avenue

Corydon Avenue should continue as a transit route and, as proposed by the Winnipeg Electric Company, street cars now in use should be replaced by trolley coaches. It is further proposed that as service is required, the route be extended along Jackson Avenue to connect with the Charleswood bus route at Lockwood Street.

The Major Thoroughfare Report proposes that Pembina Highway be extended in a northerly direction to connect with Main Street at or near River Avenue. It is here proposed that the Corydon Avenue route be operated along this extension to Main Street or to the proposed Smith Street. King Street major thoroughfare whichever is more desirable at

the time of extension. The Pembina Highway extension would greatly facilitate movement in this area by relieving growing congestion, and it has been recommended for high construction priority by the Citizen Advisory Committee on Streets, Traffic and Transit. The Winnipeg Electric Company proposal for connection of the Corydon Avenue route to Main Street is, of course based upon existing streets and necessarily involves a number of right angle turns on a route which follows narrow residential streets.

7 Stafford Street

The use of this street for transit vehicles should be discontinued in favor of the adjacent proposed major thoroughfare, Harrow Street, as soon as conditions of street development on Harrow make this physically possible. The recommended service to be provided is discussed under the Academy Road route.

8 Kelvin Street - Henderson Highway

Kelvin Street and Henderson Highway should continue as a transit route but as proposed by the Winnipeg Electric Company, street cars should be replaced by trolley coaches. The Major Thoroughfare Report recommends that Portage Avenue be connected to Kelvin Street by way of a route on Rorie, Lily, May, Disraeli and a new bridge. It is proposed here that the Kelvin Henderson Highway service follow the new thoroughfare connection to the business district, as soon as it is possible to develop this route, since it will provide much more direct and desirable service. Until this development is possible however the route will have to follow its present indirect course, via Hespeler and Redwood Bridge, to Main Street. No changes are proposed in the operation of the present North Kildonan motor bus route on Henderson Highway.

9 Nairn Avenue

It has been proposed by the Winnipeg Electric Company that the present Morse Place street car service now operating on Kelvin Street, Johnson Avenue, Watt Street and Munroe Avenue be replaced by trolley coaches. Since it is desirable to keep transit vehicles off these minor streets, it is recommended that the Morse Place service be moved to the major thoroughfare Nairn Avenue, crossing the Red River on the proposed new bridge at Kelvin Street. Here again until this development takes place, the route will have to use either Higgins or Sutherland Avenue and Louise Bridge to reach Nairn Avenue. A new motor bus route proposed later as No. 32 would serve the Morse Place area.

10. Mountain Avenue

Although Mountain Avenue is presently used in part as a transit route, it is not a part of the thoroughfare system outlined in the proposed Major Thoroughfare Plan, and for this reason a transit route on Mountain is not recommended. In view of the other routes proposed in this area, transit service on Mountain Avenue would be uneconomical and unnecessary.

11 Dufferin Avenue

The existing street car service on this street should be discontinued since the Selkirk Avenue service should serve the area adequately. Continuation of the Dufferin service would merely provide duplication in the rather narrow strip from Selkirk Avenue to the Canadian Pacific Railroad yards.

12 Notre Dame Avenue

The present trolley coach route on Notre Dame Avenue should be continued and any extension of service in the area should be made along Notre Dame Avenue. The branch line on Arlington might operate off Notre Dame Avenue or off Selkirk Avenue as suggested under No. 3.

13 Logan Avenue

The present trolley coach route on Logan Avenue from Arlington Street west should

be continued. It is further proposed that the present motor bus service east of Arlington Street be replaced by trolley coach, and that the whole of Logan Avenue be combined into one route.

14. Sargent Avenue (Wellington Avenue)

As pointed out in the discussion on Transit Service Areas the most efficient spacing for transit routes to provide adequate service for the whole of any given area is about one-half mile. A similar distance offers the most desirable spacing for major thoroughfares to carry the heavy traffic movement in the future. This allows adequate room between thoroughfares for neighborhood development free from major traffic interference. Sargent Avenue which is presently a transit route is only one-quarter mile from the major thoroughfare Ellice Avenue, and about the same distance from Wellington Avenue. It is, therefore, recommended that the proposed secondary thoroughfare Wellington Avenue, be developed and used as a transit route and that at such time as the necessary connections are developed to make Wellington Avenue continuous the Sargent trolley coach route be moved to Wellington Avenue providing the desirable one-half mile spacing and eliminating the service duplication presently existing.

15 Salter Street McGregor Street

Trolley coaches operate at present on Salter Street and the Winnipeg Electric Company has proposed extending a branch from this route west on Burrows Avenue and north on McGregor Street. This proposed extension is recommended. The proposed Burrows Avenue portion of this route may be carried on Selkirk Avenue if the service on Selkirk Avenue is changed in the near future to trolley coaches.

16 Ellice Avenue

It is proposed that this major thoroughfare continue as a transit route preferably with the use of trolley coaches as proposed by the Winnipeg Electric Company. As the area south of the airport develops, Ellice Avenue will undoubtedly be extended either directly west or southwest to Silver Avenue, skirting the present airport site. It is proposed that as service is required, a motor bus transit route be extended along the continuation of Ellice Avenue, and that it be connected south to Portage Avenue via Sharpe Boulevard until such time as Conway is developed as a major thoroughfare. This route would probably operate into the airport to serve the airport offices and work shops until such time as the trolley coach service on Ellice was extended to the airport terminal.

17 Provencher Avenue Rue Des Meurons

It is proposed that the major thoroughfares, Provencher and Rue Des Meurons continue as transit routes. It is further proposed that when service is required the Rue Des Meurons route be extended to Haig Avenue and St. Mary's Road. This extension might form one branch of a split route with part of the service returning to the business district via Marion Street and Main Street. This route will probably require trolley coach service.

18 Marion Street Archibald Street

It is proposed that the major thoroughfares Marion and Archibald, continue as a transit route providing service to the Union Stockyards and to Swift's Packing Plant. Such routes can be extended if and when required. Some vehicles on this route might return to the business district on reaching Rue Des Meurons by way of Rue Des Meurons and Provencher Avenue. This route will probably also require trolley coach service eventually.

19. Provencher Avenue Archibald Street

It is proposed that if transit service is required on a full or part-time basis in the area about the east end of Provencher and the north portion of Archibald that these major thoroughfares continue to be used by motor bus. At some future time desirable service may also be provided by extending the route northward on Archibald to Nairn Avenue, or beyond via Montcalm Street and Watt Street to the proposed major thoroughfare on Government Avenue and Inkster Boulevard, or via Montcalm Street Watt Street Chalmers Avenue Grey.

Street and Harbison Avenue, to serve the Elmwood district and the Municipality of East Kildonan. It may also be desirable to connect this route to Higgins Avenue by way of the proposed new bridge and major thorofare on Point Douglas Avenue and Higgins Avenue. Any development beyond the Inkster Avenue Government Avenue major thorofare should follow the major thorofare on Watt Street and Golspie Street.

20. Tache Avenue

Tache Avenue should continue to serve as a transit route with motor bus service. It is recommended that the service provided be extended via Highfield Street to serve the Norwood area west of St. Mary's Road. The route may operate to the business district via Provencher Bridge as shown on Plate 9 or alternately it may continue north via Provencher Avenue and Rue St. Joseph across the proposed new bridge at Rue St. Joseph and thence to Logan Avenue or to Higgins Avenue. A possible extension could be made along the proposed major thorofare on Higgins Avenue and Point Douglas Avenue and across the proposed new bridge on Point Douglas Avenue to connect with Archibald Street.

21. Lipton Street - McPhillips Street

It is proposed that the present Arlington Street motor bus service be moved west to the proposed major thorofare on Lipton Street and McPhillips Street, when street and roadway development on Lipton makes this feasible, and that the route extend from Portage Avenue as far north on Lipton Street and on McPhillips Street as development requires. It may also be extended south to Westminster Avenue to meet the Wolseley motor bus and at a later date, farther south to the proposed major thorofare on Waverley Street by way of the proposed new bridge.

22. Inkster Boulevard - Government Avenue

It is recommended that the proposed major thorofare on Inkster Boulevard connected to Government Avenue form part of a motor bus transit route, which would eventually operate from Arlington Street or McPhillips Street, along Inkster Boulevard, and across the proposed new bridge into East Kildonan as far as service may be required. Until such time as this bridge is developed, a motor bus route could operate via Inkster Boulevard, Scotia Street, Hartford Avenue and return to Inkster Boulevard by the proposed Arlington Street extension.

23. Madison Street

It is proposed that the present Berry Street motor bus route be moved to the major thorofare Madison Street, when it is developed, and that this new route operate from Portage Avenue, to Ellice Avenue, Wellington Avenue, or Notre Dame Avenue as required.

24. Roblin Boulevard Jackson Avenue Lockwood Street

It is proposed that the present Charleswood motor bus route on Kenaston Boulevard, Tuxedo Avenue and Van Horne Boulevard, be continued until such time as the proposed major thorofares on Lockwood Street and Jackson Avenue are developed. The eastern portion of the route should then follow these streets. The western portion would remain on Roblin Boulevard as at present.

25. Kingsway Avenue Haskins Avenue

With the introduction of trolley coaches on Academy Road and Jackson Avenue the need for the present Crescent motor bus service on Kingsway and Haskins Avenues would be considerably reduced. However, the area between these latter streets is beyond the desirable service area or walking distance from the proposed trolley coach lines, and it will therefore be necessary to provide the area with some form of local motor bus connection with the trolley coach service which should be worked out at the time of the establishment of the trolley coach lines.

26. Wolseley Avenue - Westminster Avenue

The need for transit service in the area presently served by the route on Wolseley Avenue and Westminster Avenue is apparent, and it is proposed that this service be continued, although the present devious routing of the Wolseley motor bus should be improved. It is proposed therefore that the east portion be re-routed from the corner of Westminster Avenue and Sherbrook Street via the proposed major thorofare Sherbrook Street, Broadway Avenue and Smith Street, and that at the west end of the route, service be provided via Wolseley Avenue Lipton Street and Westminster Avenue rather than via Wolseley Avenue, Sherburn Street, Palmerston Avenue and Garfield Street as at present.

27. Pembina Highway

It is proposed that Pembina Highway continue as a transit route to serve south Winnipeg, the Municipality of Fort Garry and the University with motor bus service.

The present motor bus route on Garwood Avenue should be moved to the proposed major thorofare on Scotland Avenue, when it is properly developed, and could later be extended on Scotland Avenue to Waverley Street, and return on the proposed major thorofare Frederic Avenue. Extension of service beyond Waverley Street should follow the proposed major thorofares, Grant Avenue and Hedley Avenue from Scotland Avenue, and Taylor Avenue from Frederic Avenue.

The Municipality of Fort Garry, now developing, will require some extension in service, and it is proposed that the present Fort Garry motor bus route be extended on Point Road, thence via Manchester Avenue, Buxton Road and Crane Avenue to Pembina Highway. At some time in the future, it may also be desirable to connect this service with the St. Mary's Road service in St. Vital via the proposed new bridge and major thorofare on Glenlawn Avenue.

The present University motor bus, now operating to the business district as an express service, should be re-routed upon development of the proposed Pembina Highway extension, via the extension and its connection to Smith Street. The route should then follow Smith Street to Ellice Avenue and continue on its present route.

No changes are proposed for the present motor bus service to St. Norbert.

28. Jubilee Avenue - Morley Avenue - Eccles Street - Clare Avenue

It is proposed that the Jubilee and Morley motor bus routes now operating in Fort Rouge and Riverview, respectively, be combined to form one route, when development of the area in the future warrants it, with the route operating via Morley Avenue, Eccles Street, Clare Avenue and Jubilee Avenue, in order to provide service to new developments and to reduce transferring.

29. River Avenue

No change is proposed in this route until Pembina Highway is extended to Main Street. When this extension is made, the River Avenue bus route should be moved to this major thorofare, probably forming part of some other route.

30. Silver Avenue - Wolever Avenue - Broadway Avenue

When the proposed major thorofare on Silver Avenue and Wolever Avenue is developed, it should be used for transit purposes. It would form part of an excellent through motor bus route if connected with service on Broadway, also a major thorofare. Transit service on Broadway is not included in the Winnipeg Electric Company proposals.

31. Valour Road

It is proposed that this route be discontinued. Most future traffic will move in an east-west direction on such routes as Ellice Avenue, Wolever Avenue and Portage Avenue,

and it does not seem likely that any north-south routes other than those already discussed for Madison Street and Lipton Street, will be required in this area when the east-west routes have been adequately developed.

32 Talbot Avenue

It is proposed that this route be re-routed from Higgins Avenue by way of the proposed new bridge at Disraeli Street and the proposed major thoroughfare Mairn Avenue or by way of Point Douglas Avenue Archibald Street and Mairn Avenue whichever is first developed. This is referred to under No 9 Mairn Avenue

33 Transcona

It is proposed that the Transcona route operated by the White Ribbon Bus Lines, be re-routed inbound as soon as development permits via the proposed major thoroughfares Mairn Avenue, Disraeli Street Rorie Street and Portage Avenue or via Mairn Avenue Archibald Street Point Douglas Avenue Higgins Avenue Rorie Street and Portage Avenue and outbound via Graham Avenue, Rorie Street, Disraeli Street and Mairn Avenue

34. Sutherland Avenue - Johnson Avenue

It is proposed that the part-time route on Sutherland and Johnson be discontinued, since the service it now performs would be provided by other routes proposed for the district.

35 Sherbrook Street

It is proposed that Sherbrook Street as a major thoroughfare continue to carry a transit route with a possible change to trolley coaches instead of motor buses This route might also be extended to Selkirk Avenue via Logan and Arlington Street

36. Redwood Avenue - Hespeler Avenue

Undoubtedly service on these streets will continue for some time, being dependant upon the life of the Redwood Bridge and upon the construction of a new bridge between Kelvin Street and Disraeli Street. When new routes are set up over this new connection, service on Redwood Avenue and Hespeler Avenue should be discontinued. It would be desirable, however to have transit service on the proposed connection from Burrows Avenue to Rover Avenue and Disraeli Street

37 Oakland Avenue - Armstrong Avenue

It has been proposed in the Major Thoroughfare Report that should the need arise, Oakland Avenue in East Kildonan and Armstrong Avenue in West Kildonan, be developed as major thoroughfares, connected by a new bridge over the Red River While this proposal is admittedly made for the distant future, it is desirable to have whatever transit service is required in the area follow these streets As the two municipalities develop a transit service connection over the Red River will probably be desirable The extremities of this route might well be connected to other transit service such as that on Arlington Street, McGregor Street or McPhillips Street in West Kildonan, and to Golspie Street in East Kildonan

APPENDICES

APPENDIX A SERVICE INAUGURATION DATES OF

TROLLEY COACH AND MOTOR BUS ROUTES

(Winnipeg Electric Company only)

Trolley Coaches		
Notre Dame - Logan	Replaced street cars	1939
Sargent	Replaced street cars	1938
Motor Buses		
Archibald	New service	1925
Arlington	Replaced street cars	1927
Bannerman	Replaced street cars	1925
Berry	New service	1944
Crescent	New service	1937
Ellice-Wolseley-Westminster		
Ellice	New service	1927
Wolseley	New service	1938
Westminster	New service	1918
Fort Garry	Partial bus service	1933
	Replaced 100%	1944
Garwood	New service	1939
Jubilee	New service	1944
Logan	Replaced street cars	1932
Morley	New service	1926
North Kildonan	Replaced street cars	1938
St. Norbert	Replaced street cars	1933
Salter	New service	1933
Sherbrook	Replaced street cars	1933
Tache	Stockyards	1922
	Partial bus service	1922
	Replaced street cars	1939
Talbot	Partial bus service	1925
	Replaced 100%	1939
University	Partial bus service	1937
	Replaced 100%	1944
Valour	New service	1924
Charleswood	Replaced street cars	1935
Portage West	Partial bus service	1933
	Replaced 100%	1940
Selkirk	Replaced street cars	1937

APPENDIX B REMOVAL OF TRACKS

(Winnipeg Electric Company only)

Year	Route	Street	Section	Linear Feet
1920	C P.R. Loop	via Blake, Catherine, Quelch		1,130
1920	River	River	Main to Osborne	6,850
1920	Stockyards	Marion	Des Meurons	3,050
1924	Headingly	Bridge-	Portage to Academy Road	4,775
1927	Academy-	Wolseley	Sherbrook to Maryland)	1,750
	Stafford	Maryland	Wolseley to Bridge)	
1927	Arlington	Arlington	Portage to Notre Dame	6,600
1927	Bannerman	Bannerman	Main to McGregor	3,500
1929	Corydon	Lilac	Corydon to Grosvenor	2,000
1929	Corydon	Grosvenor	Lilac to Stafford	2 200
1931	Headingly	Portage	Rifle Range Spur to	
		Headingly		15,875
1931	Headingly	Country Club Rd.	Portage to Country Club	4,100
1931	Sutherland	Euclid	Main to Sutherland	3,580
1931	Sutherland	Sutherland	Euclid to Gladstone	1,800
1934	Sherbrook	Sherbrook	Portage to Logan	14,890
1935	Charleswood	Roblin	Assiniboine Park to	
		Charleswood		16,763
1937	North Kildonan	Henderson Hwy	Lay Avenue to end	10,488
1937	Pembina	Pembina	College Jct. to St. Norbert	23,852
1939	Notre Dame	McPhillips	Logan to Subway	1,109
1939	Pembina	Pembina	Corydon to Lilac	5,174
1939	Sargent	Sargent	Princess to Dominion	19,650
1939	Selkirk Hwy.		Margaret to Selkirk	147,454
1940	Logan	Logan	Princess to Keewatin	31,235
1940	Notre Dame	Notre Dame	Princess to Maryland	20,874
1940	St. Boniface	Marion	Tache to Des Meurons	6,653
1940	St. Boniface	Des Meurons	Marion to Provencher	6,653
1940	St. Boniface	Provencher	Tache to Des Meurons	5,668
1940	St. Boniface	Tache	Des Meurons to Marion	7,819
1940	Stonewall		Highway to Stonewall	52,161
1941	Elmwood	Higgins	Austin to Sutherland	9,187
1941	Elmwood	Talbot	Stadacona to Roland	5,174
1941	Elmwood	Stadacona	Bridge to Talbot	6,784
1941	Headingly	Portage	Deer Lodge to St. Charles	46,774
1941	Kelvin	Kelvin	Hespeler to Talbot)	
1941	Kelvin	Talbot	Kelvin to Stadacona)	4,678
1941	William	William	Arlington to Princess	12,619
1941	St. Boniface	N Dame & Bridge	Main to Provencher	4,910
1941	Sutherland	Sutherland	Gladstone to Higgins	4,752
1941	Arlington	Arlington	Notre Dame to Logan	6,125
1944	Pembina	Pembina	Parker to College Jct.)	
1944	University	Jubilee	River Park to Pembina)	33,824

APPENDIX C DATA CONCERNING TRANSIT FACILITIES IN GREATER WINNIPEG (1945)

Route	Miles Operated	Revenue Passengers	Route Miles (One Way)	Vehicles in Operation per 24 hrs		Headway (In Minutes)		Revenue Passengers per Mile of Operation
				Max.	Min.	Max.	Min.	
STREET CARS								
Academy St. Mary's								
St. Anne s	1,493,055	10,005,763	10.03	37	19	2.5	6.0	6.7
Corydon Stafford	802,410	5 763,167	6.29	19	12	5.0	7.5	7.2
East Kildonan	446,331	2,855,642	4.94	19	6	3.0	10.5	6.4
Morse Place	369,305	2,575,798	4.63	11	6	5.0	10.5	7.0
Mountain Dufferin	328,470	1,751,728	3.61	11	4	7.0	10.0	5.3
Osborne Selkirk	1,655,498	16,138,247	6.28	50	19	2.0	4.5	9.8
Portage North Main	2,437,836	21,018,880	8.37	65	23	1.0	4.0	8.6
Total Street Cars	7,532,905	60,109,225	44.15	212	89			
TROLLEY COACHES								
Notre Dame Logan	634,065	5,389,480	5.21	15	7	2.5	5.5	8.5
Sargent	493,084	4,268,447	2.35	14	5	2.5	5.5	8.7
Total Trolley Coaches	1,127,149	9,657,927	7.56	29	12			
MOTOR BUSES								
Archibald	36,456	163,091	2.81	1	1	30.0	30.0	4.5
Arlington Aberdeen								
William	485 115	2,638,229	4.83	15	5	5.0	10.0	5.4
Bannerman	124,491	582,937	1.95	4	1	8.0	20.0	4.7
Berry	206,872	447,583	1 76	4	2	5.0	10.0	2.2
Charleswood Wireless								
School	190,770	650,557	6.55	5	1	30.0	60.0	3.4
Crescent	488,219	2,165,845	4.10	19	6	2.0	8.0	4.4
Ellice Wolseley Airport	1,084,752	6,425,693	5.92	37	7	1.5-	6.0	5.9
						2.5		
Fort Garry	46,493	109,175	5.03	2	2	15.0	15.0	2.3
Garwood	47,592	172,040	1 17	1	1	20.0	20.0	3.6
Jubilee	147,218	528,530	1.40	3	1	5.0	15.0	3.6
Logan	133,071	841,298	1.51	4	1	7.0	15.0	6.3
Morley	56,896	187,453	0.85	1	1	12.0	12.0	3.3
North Kildonan	87,226	431,960	4.48	1	1	30.0	30.0	5.0
Notre Dame Logan (2)	68,120	294,623	5.21	3				4.3
Portage West	198,214	962,393	3.97	3	1	20.0	30.0	4.9
River	146,283	796,674	1.97	5	1	4.0	20.0	5.4
Salter (3)	126,202	1,029,951	3.25	5	4	10.0	10.0	8.2
Sargent (2)	8,367	24,119	2.35	1				2.9
Selkirk	446,877	729,473	22.50	8	4	60.0	60.0	1.6
Sherbrook	153 708	1,207,616	1.45	3	2	8.0	10.0	7.9
St. Boniface Norwood	346,387	2,007,649	4.80	8	4	10.0	12.0	5.8
St. Norbert	86,881	416,801	8.08	1	1	60.0	60.0	4.8
St. Vital (4)	83,950	264,000	3.30	2	2	Varies accord-		
						ing to schedule		3 1
Tache (Marion & Archibald)	467,291	2,635,388	3.16	14	3	5.0	15.0	5.6
Talbot	392,535	1,590,425	2 70	9	3	3.0	10.0	4.1
Transcona (5)	365,000	1,000,000	7.50	7	3	Varies accord-		
						ing to schedule		2.7
University	438,173	1,201,404	7.22	7	3	3.0	10.0	2.7
Valour Road	85,147	432,813	1.08	2	2	7.5	7.5	5.1
Total Motor Buses	6,548,306	29,937 720	120.90	175	63			
TOTAL ALL VEHICLES	15,208,360	99,704,872	172.61	416	164			

Notes:- (1) These figures include revenue passengers only. Transfer passengers estimated at 35% of Revenue passengers and monthly and weekly pass passengers are additional
 (2) Supplementary to Winnipeg Electric Company Trolley Coach Operation.
 (3) Trolley Coach service was placed on the Salter Street route in January 1946.
 (4) Operated by St. Vital Bus Lines.
 (5) Operated by White Ribbon Bus Lines

TABLE 1. SUMMARY OF DATA FOR THE 1960-1961 SEASON

Station	Location	Altitude (ft)	Area (sq mi)	Population	Year	Notes
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WINNIPEG - CITY PLANNING

FILE 2