THE UNIVERSITY OF MANITOBA

TOWARDS AN URBAN DEVELOPMENT POLICY FOR THE WINNIPEG CENTRED REGION

by

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A dissertation submitted to the Faculty of Graduate Studies of the University of Manitoba in partial fulfillment of the requirements of the degree of

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C H A P T E R 1

INTRODUCTION

"Urbanization" and "rural depopulation" have typified the broad shifts in the spatial distribution of the peoples of the industrial nations of Europe, North America and Oceania for more than a century. Initially a result of the labour requirements of the industrial revolution, these trends have continued with the expansion of the tertiary or service sector Western economies.[1]

Lithwick relates some facts about the process of urbanization in Canada in his report to the Federal government. In 1881, less than thirty percent of the population was living in urban areas. By 1961 the figure had risen to more than seventy percent. The projection for the year 2001 is 94.1 percent with seventy-three percent of Canadians living in the twelve largest cities.[2] Up to the present time, the urban population has not only increased but it has tended to concentrate in the larger centres. Over one-half of Canada's population now lives within 150 miles of the three largest cities (Montreal, Toronto and Vancouver). This concentration is likely to continue unless measures are taken to alter the trends.[3]

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1. Emrys Jones, Towns and Cities (London: Oxford University, Press, 1966), pp. 28-38.

2. N.H. Lithwick, Urban Canada: Problems and Prospects (Ottawa, Central Mortgage and Housing Corporation, 1970), pp. 145.

3. T.N. Brewis, Regional Economic Policies in Canada (Toronto: The Macmillan Company of Canada Ltd., 1968),pp. 15.

Coincident with the process of urbanization, there have been changes in the distribution of populations within urban areas. During the early stages of the industrial revolution, the homes of the workers were concentrated around their places of employment and, somewhat later, within short walking distances of streetcar lines to the urban core.[4] Increased decentralization and suburbanization began with the migration of the managerial and professional classes to areas away from the soot and dirt of the factories. Areas with higher levels of natural amenities away from the ills of the inner city became more accessible with the introduction of the automobile. The exclusiveness of the suburbs really only ended, however, when the majority of people could afford cars, when there had been a general increase in the level of prosperity and when the government introduced support for housing.

The major rush to the suburbs has been a post-World War II phenomenon as residential developers have bought up prime farmland on the outer edge of the city and turned it into extensive tracts of single family dwellings.[5] The housing shortage that resulted during the 1930's and 1940's was overcome to a large extent but the costs (municipal, social and environmental) were great.[6] In order to increase their profits, speculators frequently purchased cheaper land further away from the built up area. This action extended the urban sprawl, caused a leap-frogging effect with large acreages of agricultural land falling into a state of disuse and made adequate servicing much more costly.

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4. John Wolforth and Roger Leigh, Urban Prospects (Toronto: McClelland and Stewart Ltd., 1971), pp. 120.

5. During this period there has also been significant decentralization of retailing, wholesaling and industrial activities.

6. Lewis Mumford, The City in History (New York: Harcourt, Brace and World Inc., 1961), pp. 509-513.

A more recent trend in the history of Canadian cities, and of many elsewhere, has been for urbanites to move to rural areas a greater distance from the city. Their new homes are sometimes situated on small parcels of land in the country or are constructed in smaller urban centres located within commuting distance to work areas in the city. This out-migration has been composed generally of young families with a few small children in search of the amenities of life in a rural area and a reduction in the cost of housing.[7] Concern has resulted, however, as significant amounts of the world's best agricultural land have been taken out of food production, prime recreation areas have been lost to the public at large, municipal authorities have been hard pressed to meet the demands for services, the natural environment has been damaged as groundwater tables have been lowered and stream and aquifer pollution have resulted from poorly functioning sewage disposal systems. Development such as this has also been wasteful of energy resources because of the long distances that are travelled to work.

This study is concerned primarily with the more recent trends of unplanned expansion of rural communities and, to a lesser extent, land consuming rural non-farm residential development. City related development of this nature must be rationalized so that the demands and needs are met but in a manner that minimizes the pressure of both natural and man-made resources while utilizing them appropriately.

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7. Government of Saskatchewan, Prince Albert Planning District: Planning Study and Development Policy Proposals (Regina: Department of Municipal Affairs, 1974), pp. 58.

Contemporary Urban Problems and Possible Solutions

The cities of North America are being faced with increasingly pressing problems related to continuing urbanization and urban growth. Some of these problems are unique to the New World, and Canada in particular, while others are universal in character. Some will require immediate action while others will necessitate strategies with a longer time frame. Without being totally inclusive and insuring complete independence, a number of the deficiencies in present day urban patterns of growth and problems of the city are pointed out as follows:

- increasing housing costs
- urban sprawl
- deteriorating core area
- the lack of funds and fiscal capabilities of local governments
- the lack of open space
- pollution
- crime
- the energy crisis
- class disparities
- social, cultural and racial segregation
- the results of the "baby boom"
- diseconomies of transportation
- the control of developable land by a few
- jurisdictional fragmentation and "red tape"
- the lack of a national urban policy
- too much centralization and concentration in too few cities
- pressures on the natural environment and infrastructure of communities within commuting distance

- the loss of prime agricultural, recreational and open space areas near cities

Numerous strategies have been put forward as solutions to these and other problems of the city and proposals for improved patterns of urban development. Some of these strategies are listed below, in brief:

- new towns as satellite and dormitory communities
- new towns-in-town
- regional government and planning
- national urban policies
- infilling
- land banking
- public ownership of land
- the planned expansion of existing communities
- controls on immigration and internal migration
- the introduction of development control and transfer of development rights concepts
- improved public transportation
- citizen participation in planning the urban future
- social planning
- incentives to renovate existing buildings
- the setting aside of more recreation and open space areas
- measures to conserve energy
- improved civic design
- lower mortgage rates
- greater public participation in the production of housing
- innovations in housing supply

- new cities as alternative growth centres
- new communities in the Danish "finger" pattern
- de-emphasizing the automobile
- the preservation of unique natural and historical features
- revenue sharing among levels of government
- greater fiscal capability for local governments

Some of the above strategies could be introduced as short term measures to overcome specific urban problems while others are more general and would be components of plans for the overall improvement of urban areas and the effects of urbanization. The solution for the long term may be quite different from that of the shorter time frame. Whereas a short term strategy may be problem specific, a plan for the long range would be more encompassing. Solutions would also vary with the demographic social, cultural, political, economic and physical setting.

A possible step towards a solution to the problems of unconstrained development beyond the boundaries of many North American cities may be the construction of completely new towns as satellites and dormitories to major urban centres in conjunction with the planned expansion of existing communities.[8] Great Britain, France and Sweden have experimented with this form of urban settlement as public enterprises and the United States has a number of privately sponsored new communities. For a longer term solution, however, the causes of the exodus from the North American city will have to be overcome.

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8. Mumford, loc. cit., pp. 514-524.

Thesis Purpose, Scope and Outline

The purpose of this thesis is to examine some aspects of the out-migration of residents of large urban centres to surrounding rural areas and neighbouring smaller communities. Of special interest are the effects of these trends on the recipient urban centres, some of the problems associated with the influx of commuters and the new town concept as a means of dealing with these problems.

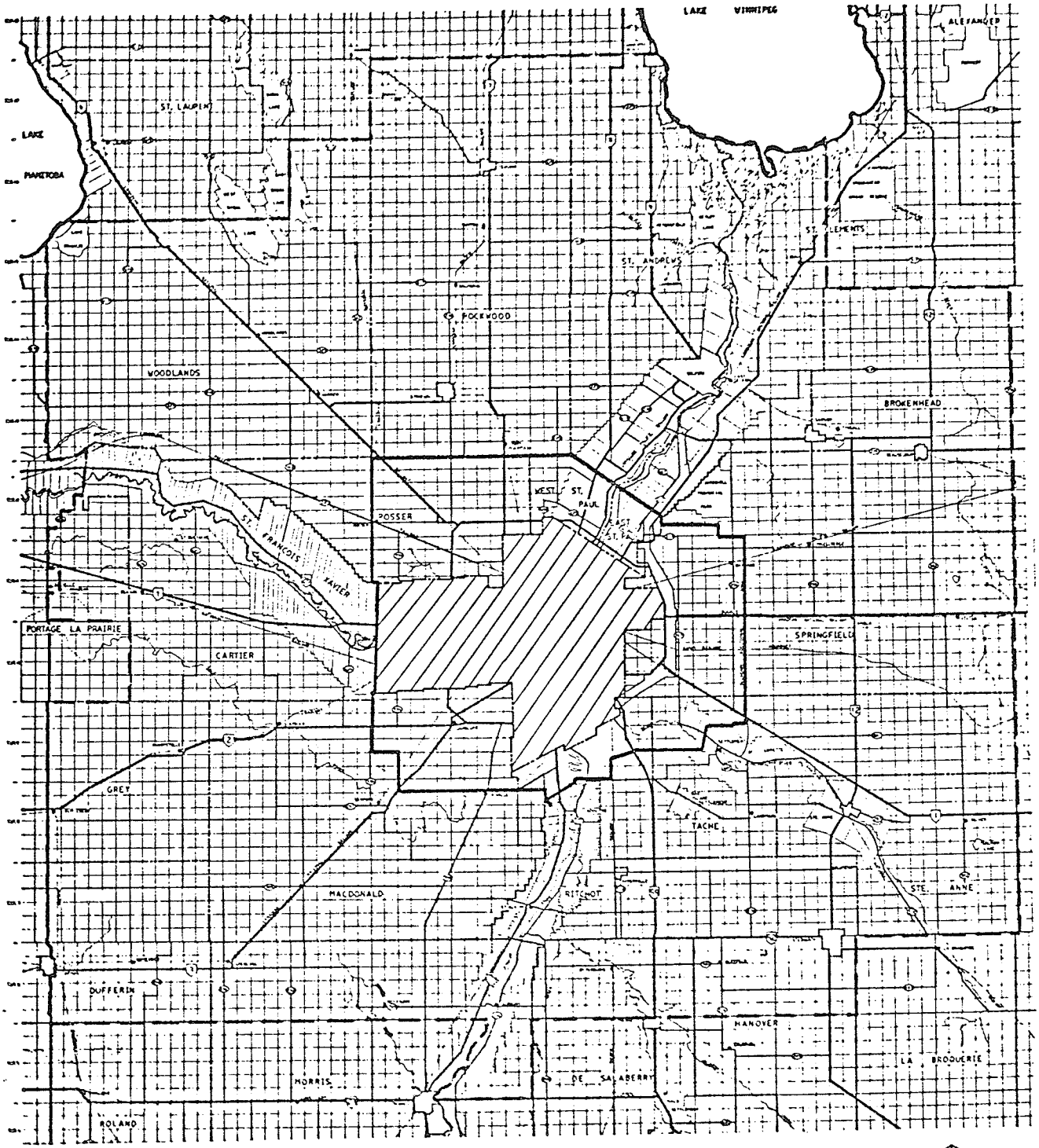
The thesis topic was chosen as a result of research conducted by the author as a summer employee with the Manitoba Department of Municipal Affairs for the Winnipeg Region Study Report on Community Infrastructure and Growth Constraints.[9] The "Infrastructure Report" is essentially an inventory of community services and facilities in selected small centres in the Winnipeg city centred region, a presentation of their respective growth characteristics and a discussion of their constraints to further growth and expansion.[10] Many of the problems associated with present patterns of land use and the growth characteristics of smaller communities in the vicinity of Winnipeg became evident as the field research for the report was carried out. The need for a strategy towards overcoming these problems was also clearly demonstrated.

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9. Manitoba Government, Winnipeg Region Study Report on Community Infrastructure and Growth Constraints (Winnipeg: Municipal Planning Branch, 1975).

10. The Winnipeg Region Study was conceived by the Municipal Planning Branch of the Manitoba Department of Municipal Affairs in 1971 and the resultant reports have aided in providing a framework for planning in the area around the City (Appendix "A"). The Winnipeg Region was defined on the basis of the distance that commuters are willing to travel to work in a city the size of Winnipeg. The boundaries are roughly thirty miles from the City centre and correspond with Census Enumeration Area delimitations (Figure 1). This is the area that will be referred to as the Winnipeg centred region for the purposes of this thesis.

Figure 1



The Winnipeg Centred Region

--- Winnipeg Region Study Area

—— Additional Zone

/// City of Winnipeg

N

4 0 5 10
Miles

On the basis of the results of the "Infrastructure Report" and a discussion of the new town concept as a strategy for improving urban development in city centred regions the pages that follow include an examination of new or expanded communities with respect to the applicability of the concept of the area around Winnipeg. Suggestions are made as to which of the inventories communities would be capable of continued, planned growth and where entirely new communities might be necessary towards a solution. These and other urban centres near Winnipeg are also discussed with regard to their potential roles in reducing pressure on the existing housing supply and in rationalizing regional land use and urban growth patterns, among other functions.

This thesis does not presume to solve all of the problems that are being faced in the area around Winnipeg. It is an attempt, however, to outline and to discuss some of the problems of urban growth as they affect smaller centres near the City and to suggest action that might be taken to alleviate existing pressures, while recognizing that comprehensive system analyses and an overall regional plan are required.[11]

The outline of the remaining chapters is as follows:

Chapter II is a discussion of the "new town" concept, including the planned expansion of existing communities, and its potential as a tool for the rationalization of urban development in city centred regions.

Chapter III relates to the nature and problems of present trends in land use and the growth of urban areas in the Winnipeg centred region.

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11. An "Urban Development Policy" for the Winnipeg centred region refers to those aspects of a regional plan that would relate to the improvement and ordering of urban growth patterns in the area beyond the City.

Chapter IV is an analysis of the growth characteristics, problems and expansion capabilities of selected small urban centres situated within commuting distance of the City.

Chapter V outlines proposals towards the rationalization of urban development in the area around Winnipeg.

Chapter VI is the concluding chapter.

C H A P T E R I I

NEW COMMUNITIES AND THE PLANNING OF URBAN GROWTH AND IMPROVEMENT

Origins

The contemporary "new town" or "new community" has its early beginnings in the concepts of Ebenezer Howard and other champions for the improvement of living conditions in the industrial centres of the past century. The urban areas of England were becomming more and more congested and their inhabitants were choking on the soot and smoke of the factories. Inspired by the insights of the geographer, Peter Kropotkin, and utopian writers such as Thomas Spence and James Buckingham, Howard proposed the "Garden City" where the ills of the large cities would be eliminated and health could prevail, along with industry.[12] Under his direction the Garden Cities of Welwyn and Letchworth came into existence a few miles to the north of London. His concepts have continued to have a major influence on the design of modern residential subdivisions and newly constructed urban settlements, whatever their function and rationale.[13]

Numerous "new towns" have been established in recent years, for many and diverse reasons. Among these new urban areas are political capitals such as Brazilia, suburban communities such as Reston in the United States, Vallingby and Farsta in Sweden to guide Stockholm's growth in a rational manner and Leaf Rapids in Canada for the development

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12. Mumford, loc. cit., pp. 515.

13. Erwin Y. Galanty, New Towns: Antiquity to Present (New York: George Braziller, Inc., 1975), pp. 55-56.

of natural resources in a sparcely settled area. All have been designed to provide better and more humane living conditions while controlling urban development.

Definitions and Terminology

A review of the literature on the subject demonstrates considerable variation in what is meant by "new town" and different terminology for what appears to be much the same thing. Some insist that a "new town" must be "new", while in other instances what is called "new" is actually an "expanded" community. Some writers use the terms "new town" and "new community" interchangeably while others attempt to draw distinctions between the two.

Norman Pressman states that

> ". . . the difference seems to depend upon which side of the Atlantic one is on".[14]

The British term is "new town" while "new community" is used by American planners and legislators.

While Alonso feels that the terms are usually interchangeable but that "new community" has a somewhat broader meaning.[15] While "new town" refers almost exclusively to independent or satellite centres, "new community" can also refer to new subdivisions for an existing larger urban area.

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14. Norman E.P. Pressman, Planning New Communities in Canada (Waterloo: University of Waterloo, 1974), pp. 12-13.

15. William Alonso, "The Mirage of New Towns", The Public Interest, Spring, 1970, pp. 3-18.

According to Eichler and Kaplan the essential difference between a "new town" and a "new community" is in the degree of self-sufficiency or the percentage of the population expected to live and work in the area. A "new town" would have a significant amount of industry or other employment opportunities while a "new community" has a predominantly residential function.[16]

Differentiating between "new" and "expanded" towns in Britain, Ivor Seeley indicates that

> "The distinction . . . is one of machinery and degree rather than type or physical development as some of the new towns had substantial populations prior to designation. New town development is usually undertaken on a much larger scale than expanded town development and the incoming population is much larger than the existing population, which is not always the case with expanding towns".[17]

The terminology varies but the urban developments that are represented are consistent as attempts to improve the existing urban fabric and the sort of settlement pattern that might otherwise result. Actually represented are alternative and often complementary strategies to control urban growth while striving for higher ideals in the design of urban areas. These strategies are affected by particular conditions, problems and goals and the results vary accordingly.

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16. Edward P. Eichler and Marshall Kaplan, The Community Builders (Berkeley: University of California Press, 1967), pp. 24.

17. Ivor H. Seeley, Planned Expansion of Country Towns (London: George Godwin Ltd., 1968), pp. 26.

A factor in the problem of a definition for "new town" or "new community" is the multiplicity of types of this form of urban settlement. Every "new town" has been designed for a specific situation and for particular reasons. Canada has a number of different types of "new towns". Norman Pressman identifies five kinds in his examination of New Communities in Canada[18]:

1. Towns planned in the "Garden City" tradition and subsequently absorbed by the expansion of the larger urban areas with which they are associated. Included among these are Forest Hills in Toronto and the British Properties in Vancouver.
2. Independent (free-standing) communities that were developed for,
   a) nodal strategy or communications reasons,
   b) public or administrative functions,
   c) resource exploitation (single-enterprise).
   This is the most common type of new community in Canada.
3. Satellite towns of limited function and entirely dependent upon the larger urban area such as Mount Pearl near St. John's (Newfoundland) and Pointe-Claire in the Montreal city centred region.
4. Suburban cities which tend to be larger and more independent than satellite towns. Included among these are Bramalea near Toronto and Mill Woods near Edmonton.
5. Expanded new communities or regional growth centres. Such communities are designated for expansion as part of regional

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18. Pressman, loc. cit., pp. 20.

development strategy. The region can be city centred or otherwise. An example of a region with such a strategy is the Toronto centred region with its provincially sponsored plan for urban growth and development.

Authors also vary on what they call a "new town" with essentially the same function. An urban centre that Pressman would name a "satellite" community would be designated a "sector" by Pierre Merlin.[19] Pressman's "suburban city" would be a "satellite" to Merlin.

For the purposes of this discussion, "new town" and "new community" will be used interchangeably. A "new town" can be a totally new development but the term also refers to the planned expansion of existing communities as part of a strategy to order regional urban growth.

A "satellite" community is an urban centre with both residential and employment opportunities functioning to focus development associated with large metropolitan areas while Merlin's "sector" community will be referred to as a "dormitory" town as a node for residential growth.

New Towns as Urban Growth Strategies in City Centred Regions

New communities have been employed in widely separated areas of the globe and under various political systems as strategies for urban growth. The pressures of urbanization have been manifest in different ways and, consequently, new towns, have taken various forms and functions. Some of the ways in which they have been employed in

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19. Pierre Merlin, New Towns: Regional Planning and Development (London: Methuen and Co. Ltd., 1971).

various countries to direct urban development related to large metropolitan areas are as follows:

1. Europe

Great Britain is recognized as the pioneer in the employment of new towns as a government strategy for overcoming the problems associated with the process of urbanization. Though first conceived in the late 1800's, it wasn't until the early 1940's that new towns were proposed in the Barlow Report and the Abercrombie Plan as elements of a regional town planning and national land planning policy.[20] As an urban development strategy, new towns were to be employed along with large housing estates and town extensions. They were intended to be largely self-contained, socially balanced communities combining home and work and would serve to contain urban growth by providing for the surplus populations from conurbations and cities.[21] The New Towns Act of 1946 made them possible by providing for a special system of finance and for development corporations in charge of each new town. Between 1946 and 1950 fourteen new towns were built, eight of which were designed to decentralize the population and work areas of London. Between 1951 and 1961 only one new town was built, but from 1961 to 1970 thirteen were constructed, all but one of which was intended to solve the problems of over concentration in the major conurbations.

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20. Ibid, pp. 3.

21. Marion Clawson and Peter Hall, Planning and Urban Growth: An Anglo-American Comparison (Baltimore: The Johns Hopkins University Press, 1973), pp. 202.

Scandinavian new towns have been designed with much the same goals as those in the city centred regions of Britain. Faced with over concentration, new towns were conceived as elements of overall strategies for the development of large cities such as Stockholm, Helsinki and Copenhagen. Unlike the British model, little attempt has been made to make the new towns self-sufficient in terms of employment, rather, they are situated within fifteen miles of the central city and connected to it by highways and rapid transit systems. The problems of congestion were recognized, but also the problems of decentralization. Scandinavian new towns are noted principally for their "success in quality of architecture landscaping and low cost".[22] While a few have been based on existing urban centres close to metropolitan areas, the majority are entirely new communities.

The new towns of the Netherlands are of two types: those designed to relieve the congestion of the largest cities and those that will service the newly reclaimed polder lands. As with the Scandinavian new towns, those in city centred regions are essentially bedroom communities with the jobs located in the central city. Some of the sites designated for new urban development are already existing small centres while other areas are virgin in nature.[23]

According to Merlin, many of the new urban developments in France would hardly qualify as "new towns", even in the Scandinavian sense,

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22. Merlin, loc. cit., pp. 107.

23. Ibid, pp. 118, 125.

particularly those that are associated with Paris and metropolitan centres in the Provinces. Their design has been almost solely to provide housing while ordering development on the urban fringe.[24]

The communist countries, even more than the western ones, have related town planning policy to that of land development, which is in turn determined by the requirements of the national economy.[25] Most new towns have been associated with the decentralization of industry or the opening up of under-developed regions, though some are related to large urban areas experiencing growth pressures. Those that are located in city centred regions have been designed largely as dormitory communities. This is especially the case in Hungary, where the totally new towns have been viewed as a luxury and the infrastructures of existing urban centres have been used as the base for planned urban development. Moscow has a large number of satellite towns. In many cases these are focused around teaching and research institutes.[26]

2. The New World

Unlike the older cities of Europe, the larger urban areas of the New World have not been faced with the problems of residential congestion; rather, a principal aim of new towns in the city centred regions of North American and Oceania has been to overcome

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24. Ibid., pp. 145.

25. Ibid., pp. 216.

26. Galanty, loc. cit., pp. 67.

the diseconomies of "urban sprawl."

Even New Zealand has a new town. Situated as a satellite to Christchurch, it was designed to prevent "haphazard and uncoordinated growth. Threats to high quality soils, to the airport, to the planning and economic provision of communications, water supply, and sewerage and power supplies are all apparent."[27] This new town is similar to the British new towns with its balance of residential, commercial and industrial areas, but differs in its basic rationale.

Distinct from new towns elsewhere, the development of American new communities has been undertaken largely by the private sector. Though some new communities have had the role of rationalizing urban fringe development, there have been no national or regional policies for urban growth. New communities have been established as profit making ventures. The most notable projects of this type have been Reston near Washington and Columbia near Baltimore. Since 1968 there has been federal assistance for new towns and Title VII of the Housing and Development Act makes provision for the development of a national development policy for revitalizing existing communities and encouraging planned, large-scale urban and new community development.[28] In order to qualify for federal assistance, a new community must fulfill the following criteria:

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27. Hugh Watt, "A New Town for Christchurch", Town Planning Quarterly, Number 34, December 1973, pp. 13.

28. Alan Turner, "New Communities in the United States: 1968-1973", Town Planning Review, Vol. 45, No. 3, 1974, pp. 265.

1. Include most of the basic activities normally associated with a town;
2. Combine these in a well-planned whole;
3. Contribute to the social welfare of the area;
4. Provide employment;
5. Provide an alternative to disorderly growth;
6. Increase housing choice; be open to all regardless of race, and including housing for low income groups.

The results of Title VII are yet to be seen but it is a step toward more rational urban growth in the United States.

New towns designed to direct urban development in city-centred regions in Canada are, so far, very few. The majority of Canadian new towns are natural resource related and it has been only since 1973 that a government policy was established to accomodate urban growth other than by urban sprawl. Under Section 45 of the National Housing Act, assistance is available through the Central Mortgage and Housing Corporation for participation in the acquisition of lands for new communities.

Canadian new towns in urban centred regions have seldom been self-contained as are the British new towns; rather, they have been designed to provide ordered growth and expansion of the housing stock, objectives that continue to be highly relevent in Canada's metropolitan regions.[29] Examples of new communities now in existence include Don Mills in Toronto, Kanata near Ottawa, Pointe Claire in the Montreal region and Mount Pearl in the St.

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29. Pressman, loc. cit., pp. 33.

John's conurbation. Others are planned to order development in the areas around Edmonton, Toronto and Ottawa. The only city centred regions with comprehensive urban development policies, however, are the Toronto centred region and the National Capital region.

Lessons for Future New Town Development

While the new town concept has shown promise towards overcoming some of the problems of urbanization and urban growth, there has been some evidence of drawbacks in its application. As with the arguments in favour of the concept, many of the problems with new towns come from the British experience.[30] Recommendations for improvements are from other sources as well.[31] Some of the lessons that should be considered in planning further applications of the concept are outlined as follows:

1. New towns have sometimes been developed in isolation of a total perspective on regional or national systems and government policies. This has been most frequently the case in the United States where new towns are usually private undertakings and laissez-faire prevails. Unless they are developed in harmony with other system elements and government policy, new towns can result in more problems than they are designed to solve.

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30. H.W. Eldredge, "Lessons Learned from the British New Towns Program", in Taming Metropolis, Vol. II. Edited by H.W. Eldredge (Garden City, N.Y.: Anchor Books, 1967), pp. 823-828.

31. Marshall Kaplan, Urban Planning: A Design for Irrelevancy (Cambridge, Mass.: The M.I.T. Press, 1973). pp. 94-95.

2. Totally new towns have been constructed when existing communities could have been used as foci for planned urban growth, thus overlooking opportunities for improving smaller centres in the shadow of the city and reducing the "front end" costs that are so great with virgin sites.
3. Even though social and cultural diversity is frequently established as an objective in new towns, this is very often not the final result. While the upper class and high income groups have avoided the British new towns, American new communities have tended to be designed for and inhabited by the rich.
4. Where the planned expansion of existing communities has occurred, there has sometimes been a conflict between the "new" and the "old" residents. This clash may be a consequence of failure in a number of areas, including the involvement of community residents in planning the future of their town and visible differences between long time citizens and the "new comers".
5. When private developers are the prime movers behind a new town, land assembly is frequently a major problem in North America. A solution might be to give developers rights of condemnation though the public ownership of land for a new or expanded community would probably be best in the long run.
6. Contemporary new towns are often developed over a short time span. More gradual growth would tend to foster a better socio-economic-political-cultural community.
7. New communities should be well linked with the central city and other smaller centres in the metropolitan region. Some

of the immediately post-War British new towns failed in this respect.

8. New town designs should be flexible so as to adapt readily to technological change and possible over- or under-estimation of ultimate population size.
9. Strict zoning is required in order to keep new towns from being absorbed by the spread of the suburbs of the central city and for the maintenance of greenbelt and open space areas.
10. New town development corporations, whether they are public or private, need to be free to "get on with the job" within a firm government policy or plan. They should be able to borrow on reasonable terms and their success should not be measured solely on their rate of financial return.[32]
11. While the physical designs of new communities have usually been successful, there is a need for greater emphasis on social planning.

Conclusions

Consistent definitions and terminology for "new towns" or "new community" are elusive. The need for the ordered urban development represented by the concept is,however, highly evident in city centred regions the world over. The new town experience varies greatly and the resultant urban fabrics reflect the respective problems for which they were designed.

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32. Eldredge, loc. cit., pp. 826.

Canada's experience with new towns in city centred regions has been relatively short. As yet, most Canadian metropolitan regions are without urban development policies, but it is likely that new communities will be employed to order urban growth in the future. New towns hold promise for improvement over present urban growth patterns, and, according to Lithwick, for a solution of the urban problem in Canada.[33] Perhaps the new town concept holds promise towards the ordering of urban development in the Winnipeg centred region. The application of the concept to the Winnipeg situation would also enable the implementation of some of the lessons learned elsewhere.

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33. Lithwick, loc. cit., pp. 232.

C H A P T E R I I I

URBAN DEVELOPMENT IN THE WINNIPEG CENTRED REGION

The City of Winnipeg began as a fur trading post at the junction of the Red and the Assiniboine Rivers during the 1700's. It was only after the Canadian Pacific Railway had been routed toward the "Forks" in 1881, however,that there was a "take off" in its growth and development. The rapid expansion of the City was a result of its new role as Canada's "Gateway to the West" and Western Canada's commercial, industrial, financial and transportation focus (Table 1).

Winnipeg maintained this dominant position until 1914 when the Panama Canal was opened and Vancouver took over much of the City's function as a distribution, collection and transhipment centre.[34] The rate of growth declined somewhat during the 1920's and fell off drastically during the Depression of the 1930's. Improvements in national and world economies after World War II, coupled with significant rural-urban migration, resulted in the renewed growth of the City in the late 1940's, but its importance with respect to other Western Canadian cities has never been regained. Winnipeg is still the largest metropolitan centre in the prairie region, the capital of Manitoba and the Province's major financial, industrial, commercial and cultural centre

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34. Roger Newman, "The Construction Industry in Winnipeg" in Winnipeg 1874-1974. Edited by Tony J. Kuz (Winnipeg: Manitoba Department of Industry and Commerce, 1974), pp. 158.

TABLE 1

THE DECIMAL PROPORTION OF THE POPULATION OF COMPETITIVE CITIES

TO THE POPULATION OF WINNIPEG 1891-1971[1]

YEAR	WINNIPEG POPULATION	CALGARY	EDMONTON	REGINA	SASKATOON
1891	25,639	0.0	0.0	0.0	0.0
1901	44,359	.099	.094	.051	.003
1911	136,035	.328	.217	.211	.084
1921	191,908	.331	.306	.179	.121
1931	235,090	.355	.337	.227	.184
1941	240,117	.368	.388	.241	.178
1951[2]	356,813	.399	.494	.200	.149
1961[2]	475,989	.585	.709	.236	.201
1971[2]	540,262	.746	.916	.259	.233

1. The table shows the relative growth of competitive prairie cities from 1891 to 1971. The decimal proportions are calculated by dividing Winnipeg's population into the population of each prairie city. A decimal value of 1.0 would indicate a competitive city the size of Winnipeg.

2. The figures for 1951, 1961 and 1971 for Winnipeg, Calgary and Edmonton are for the entire metropolitan areas whereas for Regina and Saskatoon only city limits population are listed. This explains the drop in ratio values between 1941 and 1951.

SOURCE: Tony J. Kuz (ed.), Winnipeg 1874-1974: Progress and Prospects, (Winnipeg: Manitoba Department of Industry and Commerce, 1974), pp. 12.

but rather than being pictured as a "boisterous boom town", it is now felt to be a "mature and sophisticated city".[35]

The Areal Expansion of the City

Winnipeg's early commercial and residential development was concentrated near the confluence of the Red and the Assiniboine with a small nucleus of settlement in St. Boniface. The rapid expansion that took place with the coming of the railway occurred toward the north and west. Commercial outlets were arranged parallel to the major roadways while residential areas extended along the rivers and in association with the City's work areas. Small nodes of settlement occurred in the municipalities adjacent to the larger urban area and only experienced significant population increases with the extension of the public transportation network.

By the late 1920's most of the land available for residential development in Winnipeg had been used up and any additional expansion of the urban area would have to occur beyond the City's boundaries. Retarded by the Depression and World War II, expansion beyond the central city became evident during the late 1940's and 1950's with the wider availability of the automobile, increased affluence and government assistance for housing (Table 2). Most of the construction of new dwelling units occurred in the municipalities adjacent to the old City, but within the boundaries of the new "Metro" and, later, "Unicity" areas.[36]

35. Tony J. Kuz, "Metropolitan Winnipeg: Inter-Urban Relationships" in Winnipeg 1874-1974. Edited by Tony J. Kuz (Winnipeg: Manitoba Department of Industry and Commerce, 1974), pp. 12.

36. L. Talbot, "A Study of the Development of Winnipeg's Planned Shopping Centres" (unpublished Master's Thesis, Department of Geography, University of Manitoba, 1974).

TABLE 2

PERCENTAGE OF TOTAL METROPOLITAN WINNIPEG CENSUS AREA POPULATION IN EACH MUNICIPALITY: 1901-1971

MUNICIPALITY	1901	1911	1921	1931	1941	1951	1961	1966	1971
Assiniboia	.74	.43	.45	.67	.65	.74	1.28	3.81	
Brooklands				.89	.74	.82	.92	.82	13.22
St. James	.53	3.40	5.12	4.84	4.60	5.48	7.14	7.02	
Charleswood	.93	.45	.38	.42	.64	1.03	1.31	1.45	2.25
East Kildonan	1.16	.95	2.78	3.07	2.76	3.68	5.74	5.66	5.58
Fort Garry	1.50	.72	1.07	1.33	1.48	2.30	3.68	4.16	4.84
North Kildonan				.46	.64	.90	1.86	2.35	3.28
Old Kildonan				.22	.23	.24	.28	.27	.37
St. Boniface	4.16	4.77	5.59	5.53	6.01	7.38	7.90	8.50	8.65
St. Vital	1.21	.98	1.65	3.53	3.97	5.23	5.73	5.80	6.10
Transcona			1.83	1.94	1.82	1.89	3.00	3.88	4.16
Tuxedo			.46	.40	.24	.46	.33	.49	.60
West Kildonan	1.38	1.13	2.03	2.07	2.03	3.02	4.22	4.37	4.43
Winnipeg	87.31	86.67	78.13	74.19	73.49	66.06	55.76	50.52	45.58
East St. Paul	.59	.30	.29	.28	.36	.37	.42	.45	.48
West St. Paul	.49	.20	.22	.26	.34	.40	.43	.45	.45
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

SOURCE: Government of Manitoba, Manitoba to 1980: Report of the Commission on Targets for Economic Development, Volume III (Winnipeg: Department of Industry and Commerce, 1969).

Urban Development During the 1960's and Early 1970's

Large quantities of new housing continued to be constructed well into the 1960's but there was a significant shift from the production of single family homes to that of apartment units.[37] The demand for single family housing was not being met, however, as was reflected in the escalation of house prices, though a portion of this increase was a result of higher land and construction costs.

Housing costs have continued to rise in the present decade as mortgage rates and construction costs have increased, competition between developers has decreased, inflation has taken its toll and land use and planning regulations have become more stringent. As a result, in their search for lower priced housing, reduced taxes and increased access to the amenities of rural areas, significant numbers of home buyers have decided to built on parcels of land beyond the boundaries of the metropolitan area but within commuting distance of urban work areas.

Urban Development Beyond the City's Boundaries

There has long been at least a small amount of fringe area, non-farm residential development associated with most urban centres. People who made their homes in the "eclipse" area usually worked in the city and commuted to the outskirts. Services in the urban fringe were lacking but this was compensated by fresh air, open space, larger lot sizes and lower taxes. Many of the inhabitants of areas like these

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37. Mario E. Carvalho, Krishna Sahay, Derek Hum and Donald Falconer, Housing in Winnipeg (Ottawa: Canadian Ministry of State for Urban Affairs, 1975), pp. 22.

had formerly lived and worked in the country but did not wish to make the complete move to the city while taking advantage of its opportunities. Winnipeg has been no exception with respect to this sort of settlement.

Rural non-farm development increased dramatically around Winnipeg during the 1960's, particularly from 1966 to 1971, and the trend continues. While the City grew by 6.2 percent during the five year period, there was a 37.2 percent increase in the rural non-farm population around the urban area.[38] Recent surveys have shown that the people moving out of the City are generally young families in search of the amenities of life in a rural area and lower cost housing.[39] Higher income "exurbanites" have tended to leave the City for primarily non-economic reasons while economic considerations are more prevalent among those earning lower levels of income . A serviced residential lot in the City can cost in excess of $14,000 while a much larger lot can be purchased in a rural area, well within commuting distance, for less than half this price.[40] The costs of such a move may be less initially but it is highly debatable whether or not the decision to move to the country is less expensive in the long run.

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38. Manitoba Government, Winnipeg Region Study Demand Analysis (Winnipeg: Department of Municipal Affairs, 1974), pp. 5.

39. Manitoba Government, The Nature of Demand for Exurbia Living: The Winnipeg Region Study (Winnipeg: University of Manitoba, Department of City Planning, 1974), pp. 41.

40. Personal interviews with various Winnipeg real estate agency (July, 1975).

Urban non-farm development around Winnipeg has been taking place in a few definable zones. These zones include highly scenic strips along the Red, Assiniboine and Sale Rivers, especially to the north of the City; treed areas near Stonewall, Anola and to the east of Bird's Hill Park; and along major highways to Winnipeg.

Concurrent with the rural non-farm residential development there has been significant growth in many of the smaller urban centres within commuting distance of the City. Population increases between 1961 and 1971 were in excess of 200 percent in some cases. Other communities have continued to experience declines, however, as the new commuter population has not replaced the losses from rural-urban migration (Table 3).

Future Urban Development in the Winnipeg Centred Region

The pressure for residential development beyond the boundary of the City of Winnipeg but within commuting distance of work areas in the City is great and is likely to continue as developable land close to the larger urban area is used up, housing costs increase, open space is lost, the population grows, transportation systems are improved, and government guaranteed loans are made available for homes in areas not serviced by central sewage systems (Figure 2).

Major problems are now being encountered, however, as prime agricultural land and recreation areas are lost, septic fields fail to function properly, transportation routes to the City become congested, ground water supplies are polluted, costs of servicing increase and community services and facilities become overloaded. In view of

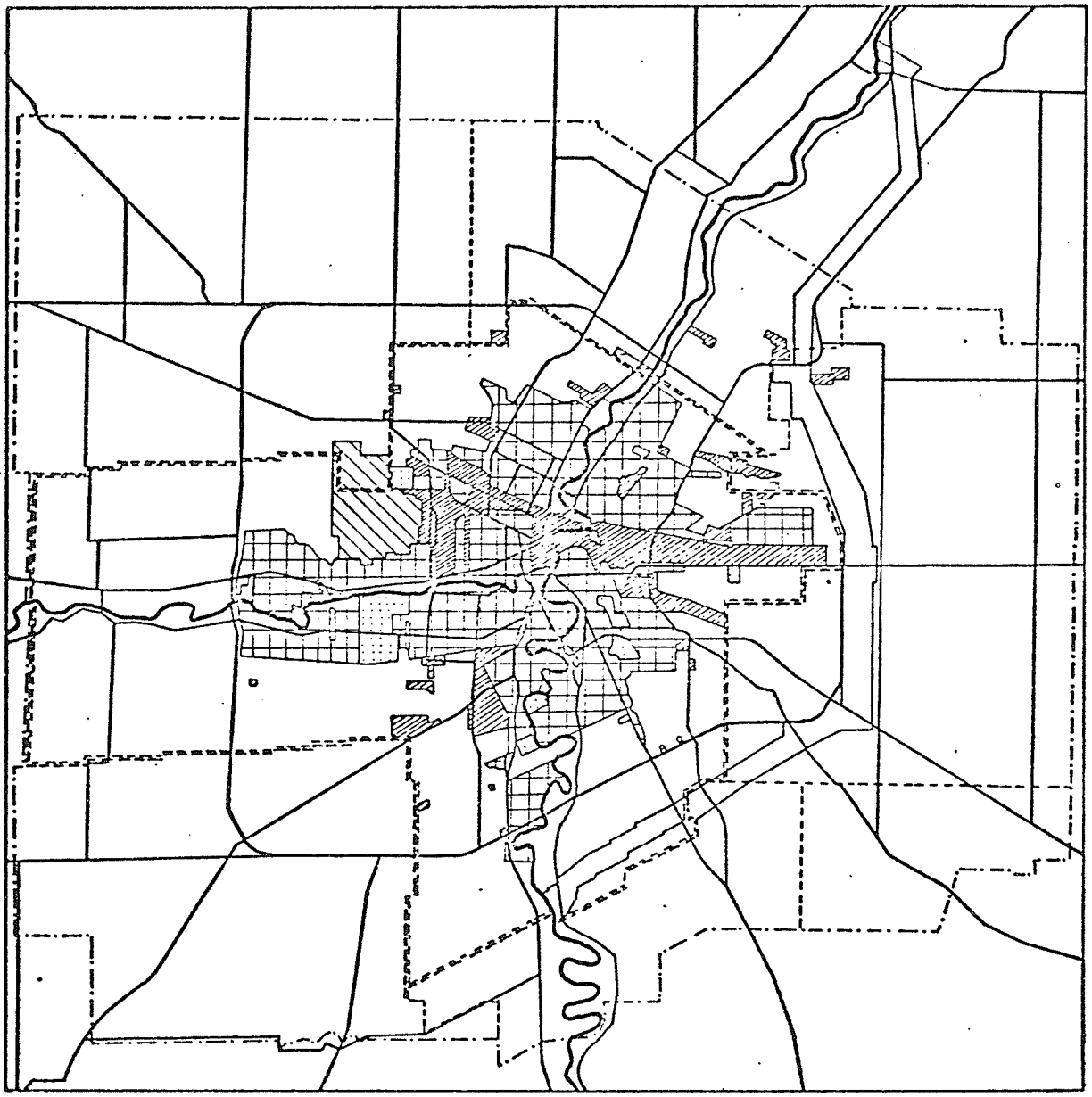
TABLE 3

POPULATION CHANGE IN SELECTED WINNIPEG CENTRED REGION COMMUNITIES: 1961-1971

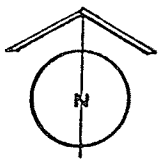
	1961	1966	1971	Percentage Change 1961-1971
Anola	100	107	147	47
Beausejour	1770	2214	2236	26
Carman	1930	1922	2030	5
Fannystelle	153	132	106	- 30
Garson	330	347	301	- 8
Grosse Isle	45	20	121	268
Hazelridge	70	52	51	- 27
Morris	1370	1339	1399	2
Niverville	474	684	938	97
Ste. Anne	653	923	1062	62
Steinbach	3739	4648	5161	37
Stonewall	1420	1577	1583	11
Teulon	749	817	828	10
Tyndall	241	392	400	65
Vivian	61	47	-	-
Warren	241	237	267	10
Woodlands	124	126	123	0

SOURCE: Census Canada

Figure 2



City of Winnipeg
Land Use Areas



Open Space
Airport
Work Areas
Residential Areas

Municipal Boundaries
Winnipeg "Unicity"
Additional Zone

4 0 5 10
Miles

the present and projected demand for residential development within the City and in its vicinity, there is an "urgent need for extensive ... planning to facilitate this growth and to ensure that it is orderly and cohesive, best serving the interests of ... " all concerned.[41]

Various recommendations have been made as means to overcome the increasingly evident problems related to the growth of Winnipeg and the sprawl that typifies areas in its vicinity. The Manitoba Government Minister of Municipal Affairs has recommended that Winnipeg's growth should be accomodated in nearby communities.[42] The Commission on Targets for Economic Development also suggested that some of the projected population pressure on Winnipeg could be directed to towns surrounding the City, coupled with employment opportunities.[43] Totally new communities have been discussed as well.[44]

To date, however, no overall policy for future land use and urban development outside the City of Winnipeg has been established. If continued growth is to occur in the smaller urban centres surrounding Winnipeg, their growth must be rationalized and their prospective regional roles specified.

There are major constraints to the further expansion of some of the communities that have been recipients of commuters to the City. On the other hand, some centres are capable of accomodating further growth and development quite readily, at relatively low cost. It

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41. Manitoba Government, Manitoba to 1980, Report of the Commission on Targets for Economic Development (Winnipeg, 1969), pp. 475.

42. Winnipeg Tribune, April 23, 1975.

43. Manitoba to 1980, loc. cit., pp. 21.

44. Winnipeg Tribune, April 23, 1975.

follows logically that the demand should be directed to those centres where the costs and negative impacts are least. A region wide urban development policy is needed, however, that would designate those communities capable of continued expansion, while leaving open the option of developing totally new communities, towards achieving more balanced, economical and cohesive growth than presently prevails.

The chapter that follows is an examination of a number of small centres within commuting distance of Winnipeg that have experienced significant growth, or are likely to do so, in the near future. Presented here are the results of an inventory of their respective infrastructures and an analysis to determine the constraints and feasibility of their future growth and development within the context of a regional land use and urban development policy.

CHAPTER IV

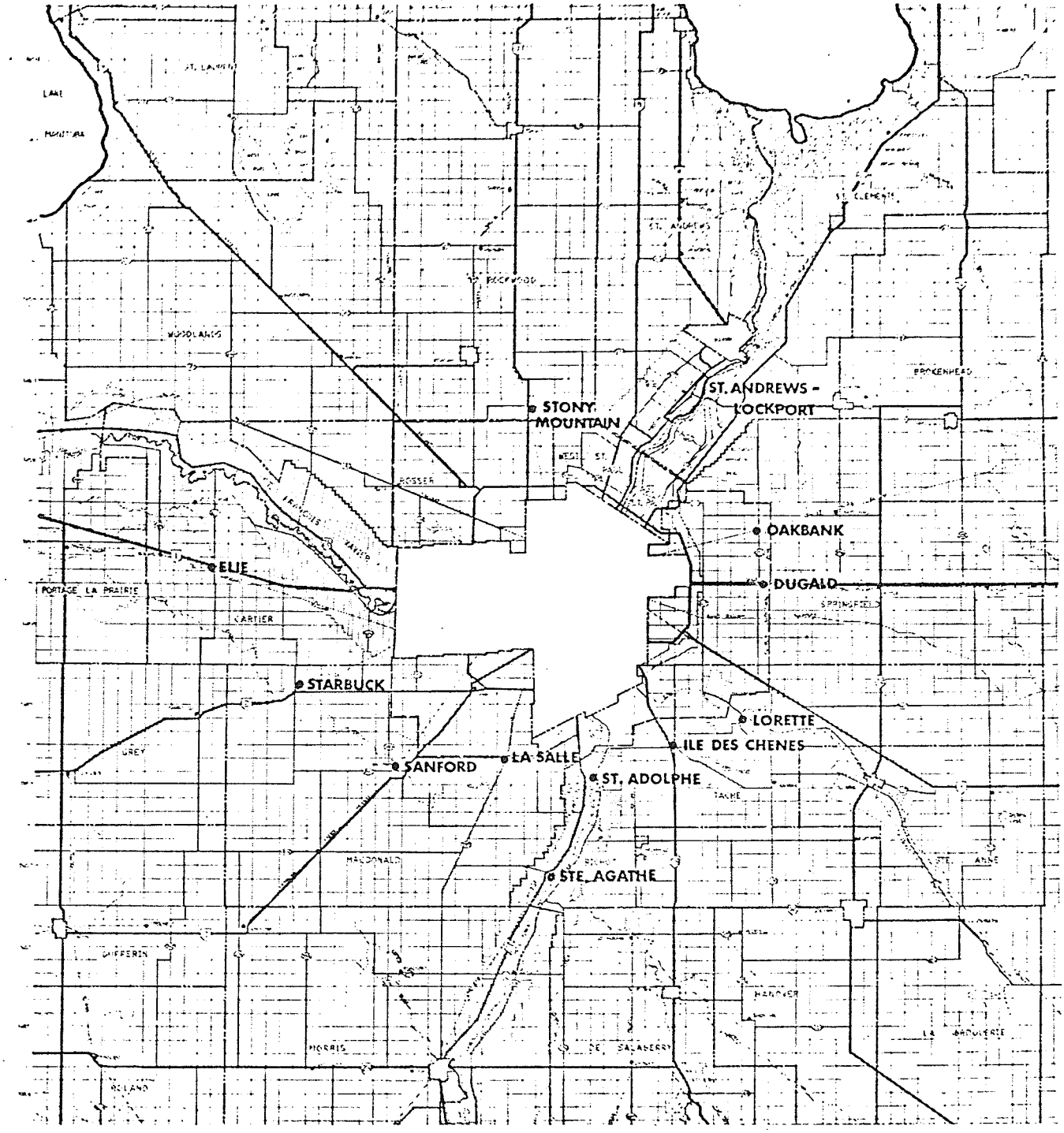
CONSTRAINTS TO THE GROWTH OF EXISTING COMMUNITIES NEAR WINNIPEG

Winnipeg has had a major influence on the changes that have occurred in the smaller urban centres situated within its "commuter shed". While population increases in the municipalities within the forty-five minute travel time zone from the City centre have been in the order of seven percent, from 1961 to 1971, the overall growth in neighbouring towns and villages was 21.7 percent. There have been increases in excess of 200 percent in some cases though declines in population are also evident.

The significant growth of many of the communities in the Winnipeg centred region has resulted in pressure on existing municipal services and facilities and on the natural environment. The adequacy of the various components of community infrastructure must be maintained or improved in order to ensure resident satisfaction and a good quality of life. The facility with which the pressures can be overcome and the capacity to act as a node for future urban development vary greatly, however, among the communities concerned.

In order to demonstrate the effects of the influx of Winnipeg commuters on smaller neighbouring urban centres and their capabilities to accomodate further growth as regional urban development nodes, twelve communities were selected for analysis (see Figure 3 and Table 4).

Figure 3



Locations of Study Communities

TABLE 4

STUDY COMMUNITY DISTANCE & TRAVEL TIME TO WINNIPEG

COMMUNITY	DISTANCE[1]	TRAVEL TIME[2]
Dugald	13	25
Elie	29	35
Ile des Chenes	14	25
La Salle	15	30
Lorette	15	30
Oakbank	13	30
St. Adolphe	15	30
St. Andrews-Lockport	16	25
Ste. Agathe	22	35
Sanford	20	30
Starbuck	24	35
Stony Mountain	15	25

1. Straight line distance from Portage and Donald, Winnipeg, in miles.

2. Measured from Portage and Donald, in minutes.

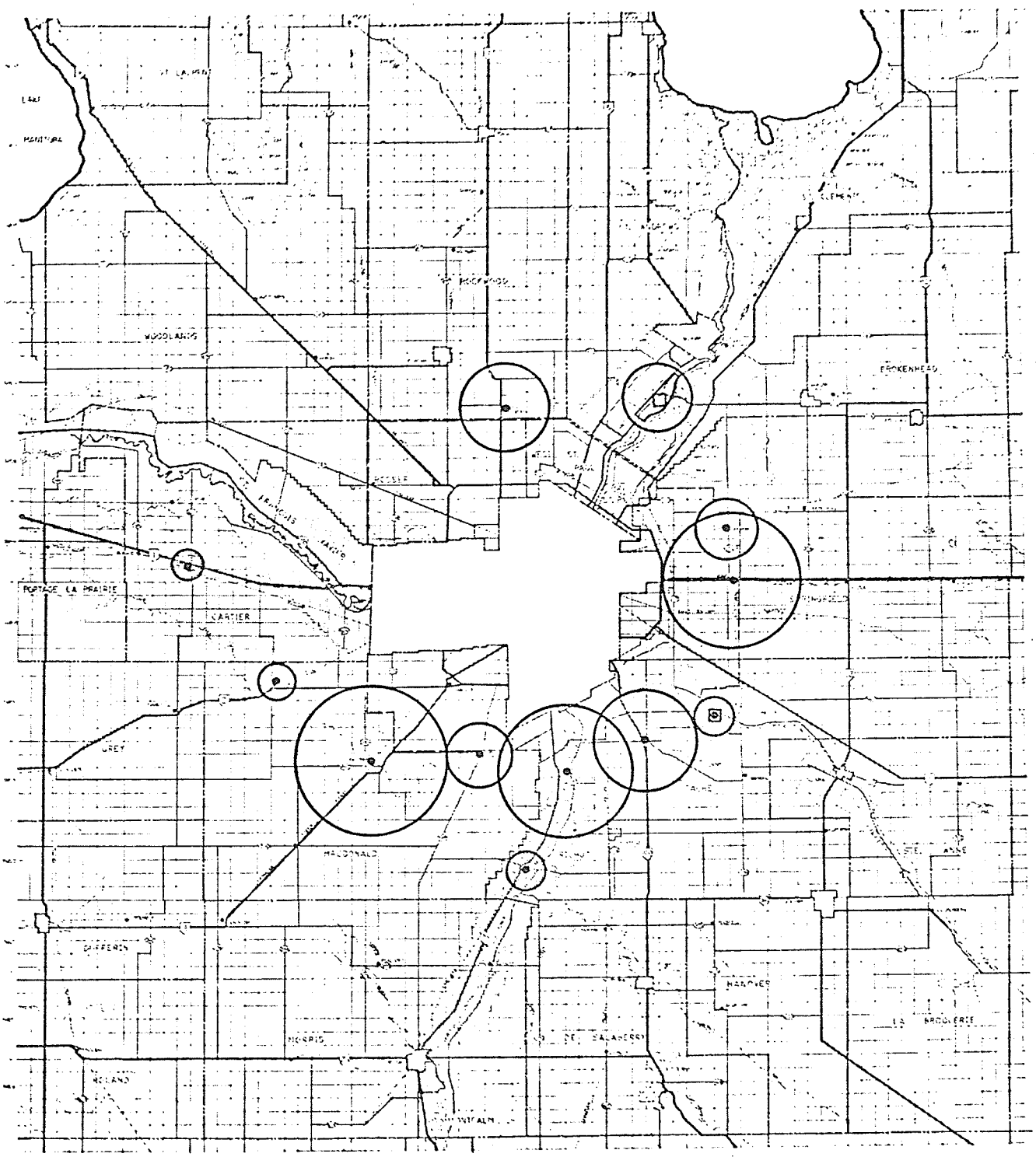
These centres are widely dispersed in the area around the City, are situated in a range of physical settings and have experienced varying degrees of demand (see Figure 4 and Table 5). The study towns along with their respective municipalities are listed below:

Oakbank	-	R.M. of Springfield
Dugald	-	R.M. of Springfield
Lorette	-	R.M. of Tache
Ile des Chenes	-	R.M. of Ritchot
St. Adolphe	-	R.M. of Ritchot
Ste. Agathe	-	R.M. of Ritchot
La Salle	-	R.M. of Macdonald
Sanford	-	R.M. of Macdonald
Starbuck	-	R.M. of Macdonald
Elie	-	R.M. of Cartier
Stony Mountain	-	R.M. of Rockwood
St. Andrews-Lockport	-	R.M. of St. Andrews

The analysis involved an inventory of community services and facilities in each of the centres and an assessment of the capability of the various components of their infrastructures to handle additional residents. The following elements of community infrastructure were included in the inventory:

- sewer systems
- water supply
- solid waste management

Figure 4



Population Change

Percentage

150
100
50
25
10

- Increase 1961-1971
- Increase 1966-1971
- Decline 1961-1971

N

4 0 5 10

Miles

TABLE 5

STUDY COMMUNITY POPULATION DISTRIBUTION & CHANGES: 1961-1971

COMMUNITY	1961	1966	1971	1974	CHANGE 1961-1971 ACTUAL	CHANGE 1961-1971 PERCENTAGE
Dugald	149	236	323	350	184	116.8
Elie	370	364	349	350	- 21	- 5.7
Ile des Chenes	311	239	365	NA	154	68.2
La Salle	128	146	164	300	36	28,1
Lorette	NA	510	578	650	68[2]	11.4[2]
Oakbank	277	292	352	418	75	27.1
St. Adolphe	217	320	460	519	243	112.0
St. Andrews-Lockport	NA	992	1330	1600	338[2]	34.1[2]
Ste. Agathe	298	311	259	275	- 39	- 13.1
Sanford	103	145	250	375	147	142.7
Starbuck	240	216	263	300	23	9.6
Stony Mountain	598	808	810[4]	900	212	52.2

1. The population figures for 1974 are estimates made by municipal Secretary-Treasurers.
2. Population change, 1966-1971.
3. NA - Population figures not available or not estimated.
4. Census Canada, 1961, 1966, 1971.

- surface drainage
- transportation facilities
- police and fire protection
- education facilities
- cultural facilities
- recreation facilities
- health services
- general housing
- housing for the elderly and infirmed
- retail and service outlets
- communications infrastructure

Information was also gathered about community taxation and debt levels and the amount of public and private capital investment in each of the study towns.

The data were collected by way of interviews with community officials, municipal planners and consulting engineers and from the Provincial Assessment Rolls and are presented in the Report on Community Infrastructure and Growth Constraints as compiled by the author of this thesis. A summary of the results of the survey emphasizing the changes that have been a consequence of the demand for residential development and the constraints to the further community growth and areal expansion of each of the study towns is presented as follows:

Oakbank. Situated only seventeen miles from downtown Winnipeg, and even closer to work areas in Transcona and St. Boniface, this community has

experienced significant growth during the past ten years and land around the town has been purchased for further residential expansion. Among the communities included in this analysis, Oakbank has a relatively high level of municipal services and facilities and is well endowed with natural amenities. Recent additions to the community infrastructure have been required in order to accomodate the residential development in and around the town, including new school, recreation and sewer facilities. The schools and sewerage system are now at capacity and will require expansion if continued growth is to occur. Negative reactions from community residents to the population increases to date may be an additional factor in future development.

Dugald. This community is located about four miles closer to work areas in Winnipeg than Oakbank. Its growth since1961 has been dramatic in spite of the relatively low level of services and facilities in the town. The demand for more residential lots is likely to continue in view of its proximity to the City, the new centralized sewer system,the recently constructed elementary school and the rebuilding of Highway 15. Limited additional growth can be accomodated within the community without expanding existing facilities though the pressures on the already overcrowded schools in Oakbank and the congested highway to Winnipeg would be increased as a consequence.

Lorette. This community is situated about fifteen miles to the south and east of Winnipeg in the R.M. of Tache. Officials of this community have

encouraged its continued growth and development. Lorette is an attractive town with comparatively high levels of community infrastructure and natural amenities. Major investments have been made recently in order to upgrade the existing community services and facilities. New schools, recreation and sewer facilities have been constructed within the past five years and, generally, continued population increases can be adequately accomodated. Constraints to further development include the relatively poor condition of the community's street system, the occasional flooding of the Seine River and the fact that the sewage system is now being used to capacity. Demand could be deterred by the relatively high rates of taxation and by cultural considerations.

Ile des Chenes. Situated within 25 minutes of downtown Winnipeg, this community has experienced recent major residential growth and development as a result of an influx of commuters. New school and sewage treatment facilities have been constructed but these are now near capacity, which tend to restrict further expansion. In addition, Ile des Chenes is "hemmed in" on three sides with P.T.H. 59 to the west, the town's sewage lagoon and the Seine River diversion channel to the south and the Trans-Canada Pipeline compressor plant to the north. The boundary of the R.M. of Tache is immediately to the east of the community but this factor should not permanently restrict expansion in an easterly direction. Ile des Chenes is generally lacking in natural and man-made amenities, and faced with its present constraints, may not be capable of major additional growth.

St. Adolphe. This community is now one of the fastest growing urban centres within the Winnipeg commuter shed. Situated in a highly attractive treed area on the east side of the Red River, the 15 mile drive to work areas in Winnipeg is pleasant and the level of community services and facilities is at a relatively good level. As such, the present level of demand for residential development is likely to continue and may be increased with the construction of the new bridge to P.T.H. 75. Problems that will have to be overcome and deterrents to further growth include the poor condition of garbage disposal facilities, the dyke surrounding the town, the potential deterioration of the groundwater supply, the pipeline bordering the southern extremity of the community and, as with other areas in the Seine River School Division, the relatively high mill rates.

Ste. Agathe. In spite of the good level of municipal infrastructure components such as sewer, water and education facilities, Ste. Agathe has experienced very little growth, if any, over the past ten years. This may be attributable to a number of factors including the distance to Winnipeg, the distance from senior grade schools and cultural considerations. Major expansion of this community would be restricted physically by the Red River on the east and P.T.H. 75 on the west.

La Salle. This is the smallest of the study communities and despite the acceptibility of new residential development to members of the community, little growth has occurred. La Salle is lacking in many of

the facilities that would be required to encourage residential development, including centralized sewage treatment and water distribution, and the mill rates are the highest in the R.M. of Macdonald. There is also a possibility that the only school in the community will soon be closed as a consequence of the age of the facility and the lack of students. In the light of these constraints, La Salle is not likely to experience significant growth.

Sanford. As the fastest growing of the study communities, Sanford has been faced with the problems of a typical small urban centre situated in the shadow of a large metropolitan area. Growth and development as a dormitory town have been encouraged but the inadequacies of a number of the infrastructure components of this community will have to be overcome if it is to continue to be a desirable place to live. Further residential expansion will necessitate centralized sewer and water facilities, an addition to the high school and alternative solid waste disposal facilities. A new bridge across the Sale River may also be required to overcome the problems of spring flooding. Significant expenditures, requiring outside assistance, will be necessary if Sanford is to continue to grow at its present rate.

Starbuck. Relatively little new residential development has occurred in this community in spite of the good highway to the City and adequate levels of commercial and cultural facilities. Among the study towns, Starbuck has the lowest proportion of homes constructed since 1950 and

almost seventy-five percent of the dwelling units are in fair to poor condition, making the community a less desirable place in which to invest. Sewer and water facilities are lacking and areas of Starbuck are subject to spring flooding. These constraints and the fact that owners of land adjacent to the community have demonstrated little desire to subdivide their property will tend to deter the growth of this town.

Elie. The level of community services in Elie is close to that of Oakbank which ranks the highest among the study towns. In spite of these amenities, the community has grown little over the past 15 years, a fact which may be related to the distance from Winnipeg in comparison to alternative urban centres within commuting distance of the City. With the completion of an addition to the high school and a centralized sewerage system, there are now few constraints to the growth of Elie as a Winnipeg dormitory town. Potential new residents have expressed a desire to build in the community but, as yet, few new residential lots have been made available.

Stony Mountain. Significant new residential development has occurred in this community over the past ten years despite the absence of centralized sewer and water systems. It has been necessary, however, to construct new school and recreation facilities. Problems are now occurring with the septic systems in use in the "flats" area of the town and groundwater pollution is imminent with the dumping of sewage

from the holding tanks used in the older area of Stony Mountain into a nearby abandonned quarry. The costs of installing an adequate sewer system would be prohibitive in view of the proximity of the underlying bedrock to the surface and the expansion of the community is restricted on three sides by quarries and the federal penitentiary. Demand for further residential development in Stony Mountain is significant as a result of its proximity to work areas in north Winnipeg but there are major constraints to its continued growth.

St. Andrews-Lockport. This area of major urban sprawl has had the largest amount of new residential development among the study communities over the past number of years. Growth has been generally encouraged by the Rural Municipality of St. Andrews but problems have become increasingly evident. Further development at its present rate will result in additional problems and may reduce the desirability of the area as a place to live. Overcrowding is now evident in the St. Andrews school, P.T.H. 9 is becoming increasingly congested, an effort is being made to reduce the number of new bedrock punctures for groundwater and many of the highly concentrated septic fields are not functioning adequately. These problems and other potential difficulties can only be overcome through costly installations and additions to existing infrastructure components if growth in this area is to continue at its present rate.

In summary, the study communities of Oakbank, Lorette and Elie are now relatively free of constraints to further growth and

expansion. St. Adolphe, Ile des Chenes, Dugald and Ste. Agathe are restricted to a somewhat greater degree. La Salle, Sanford, Starbuck, Stony Mountain and St. Andrews-Lockport have severe drawbacks to additional residential development that can be overcome only with large amounts of capital investment.

C H A P T E R V

TOWARDS PLANNED URBAN GROWTH IN THE WINNIPEG CENTRED REGION

Significant growth has occurred in areas beyond the boundaries of the City of Winnipeg over the past fifteen years. This trend away from the City proper may well continue in view of the increasing costs of housing in the City, the demand for new housing and the desire to experience the amenities of life in rural areas.

Many problems have resulted from the exurban development that has taken place to date and are related generally to the overloading of existing community and regional infrastructure components and to environmental considerations. Further difficulties can be prevented only by the rationalization of growth in the City centred region. Existing pressures will have to be overcome, future growth must be planned and the interests of society as a whole must be served.

Strategies for Ordering Winnipeg's Urban Development

A number of strategies could be put forward as means toward the ordering of the growth of Winnipeg and the Winnipeg centred region, including the following:

1. Future urban development could be limited to areas within the bounds of the City of Winnipeg. Vast areas of developable land remain within the Perimeter Highway, the core area is in need of renewal and there are opportunities for the preservation

of areas of high natural amenities. The concepts of infilling, land banking, down grading the automobile and new towns-in-town could be used to control urban sprawl.

2. A satellite community could be established, as a totally new town or a major extension of an existing urban area, with enough new housing to meet the demand that is not or cannot be met in the City. Work areas would be developed, as well, in order to reduce the degree of commuting to Winnipeg.
3. A regional urban development and land use policy could be derived, outlining means toward balanced and cohesive growth in the area around Winnipeg, unlike that which presently prevails. Existing urban centres would be designated, where feasible, as nodes for additional urban development. Where expansion is not feasible, the demand could be directed to other centres or to totally new communities. Some of the communities would serve a primarily dormitory function while others would act as satellite communities with both residential and employment opportunities.

From a regional perspective and in the shorter time frame, there is a clear choice between the above strategies. The proposals to limit growth to the City or to develop a single satellite community have a number of drawbacks. Some of these are listed as follows:

1. The first two strategies would fail to cope with the nature of the demand and the problems that are presently occurring beyond the boundaries of Winnipeg.

2. The implied moratorium on urban development except in areas immediately adjacent to and within the built-up areas of the City or in a satellite community, would be too restrictive and politically unacceptable if implemented too quickly.
3. The desire for life in a smaller, rural community would not be met.
4. Community participation in the planning of future urban development would be difficult to foster with too much new growth occurring too rapidly in one area rather than in a more gradual, balanced way at designated sites throughout the region.
5. The present shortages of new housing and adequate servicing would not be overcome with new development restricted to areas in the City, nor would the lack of competition between developers.

The third strategy takes into account the nature of demand for development outside Winnipeg, recognizing that there are major problems associated with present patterns of urban growth in this area. By considering environmental constraints and the relative costs of providing services, among other factors, existing centres can be designated as growth nodes, development can be directed only to those centres capable of growth and locations for totally new towns can be determined. Such an urban development policy would enable a wider range of choice between communities in terms of cultural and social considerations and experimentation in urban design. Growth would be based primarily on existing infrastructures taking advantage of capital investments already made.

The population would be distributed more widely throughout the region enabling a more balanced pattern of growth. Urban development would be on a smaller scale, enabling greater opportunities for participatory planning on the part of community residents. Services would be provided at a better level throughout the total area; and demand for rural non-farm development would probably decline as alternative forms of urban development are made possible, overcoming some of the reasons for this extremely wasteful form of land use. New housing could be distributed throughout the region and more readily phased in order to reduce the impacts on existing residents and community and regional infrastructure components.

Regional Roles for Existing Communities Outside Winnipeg

The third alternative emphasizes the need for an urban growth and land use policy for the area around Winnipeg, recognizing that long term changes are also necessary in present patterns of growth in the City. If, as a more immediate solution, existing communities outside Winnipeg are to be designated as foci for planned urban development, however, recommendations must be made as to which among them can accomodate growth at the lowest overall cost and what their respective roles might be in the regional context. Among the urban centres that have been examined as an aspect of this discussion, some have greater potential and fewer constraints to continued growth than others.

In examining the capabilities of the respective communities as growth nodes within a framework for balanced urban development outside

Winnipeg, a number of broad system elements and goals must be considered. These include the availability of natural amenities and open space, the optimization of the transportation network, the improvement of regional community services and facilities, the provision of lower cost and more diversified housing and good access to work areas. The sample communities are discussed as follows with regard to their respective capabilities and roles as growth nodes in the Winnipeg centred region, within specified general areas:

A. Northeast Sector

1. Oakbank would be ideal as a focus for urban development in the area to the north and east of Winnipeg and would function as a dormitory community for work areas in eastern Winnipeg and Transcona. The community is well endowed with community services and facilities and natural amenities. In planning its future growth, however, consideration must be given to maintaining the rural, small town atmosphere that presently prevails. Areas must be designated for open space and commercial development along with housing and recreation, education and cultural facilities. Residents of the community must be involved in all phases of planning for the future growth of Oakbank. The expansion of the community will add to the congestion already evident on highways to the City but this could be alleviated with scheduled bus service or by introducing commuter rail service when feasible.

2. Dugald is capable of handling limited additional residential development without major inputs of capital investment but extensive development would interrupt P.T.H. 15 as a regional transportation route and detract from nearby Oakbank as a focus for urban development in the area east of Winnipeg.

B. Southeast Sector

Lorette features many of the amenities (natural, social and man-made) that are sought by people moving to areas beyond the boundaries of the City. The community is situated well within commuting distance of work areas in south-east Winnipeg and would be an ideal focus for continued urban development. With good land use management and community planning, Lorette should not lose its attractive features, rather, thay should be enhanced.

C. Southern Sector

1. Ile des Chenes is attractive to commuters in view of the community's good access to work areas in the southern and eastern portions of the City. The site of the community has a number of constraints, however, to continued growth and development. Ile des Chenes is lacking in natural amenities and expansion would be restricted by physical barriers such as the community sewage lagoon, the highway, pipelines and the natural gas compressor plant. A jurisdictional boundary may hinder growth in an easterly direction. Ile des Chenes is capable of a limited

amount of new development but in the light of the constraints that are initially evident, the community could not be designated as a focus for major urban development.

2. St. Adolphe is an attractive community and maintains much of the atmosphere of a rural community in spite of its significant growth as a dormitory community. The expansion of the boundaries of the community would be inhibited, however, by the ring dyke that surrounds St. Adolphe for protection against spring flooding. Some new housing can still be accomodated within the dyke but significant expenditures for its expansion and increasing the capacity of the sewage treatment plant would be necessary for major growth. The constraints of St. Adolphe's physical setting would be difficult to overcome and as such the community should not be designated for major expansion. The features that make St. Adolphe so attractive should be incorporated into other centres where the costs of servicing would not be so great.
3. Ste. Agathe has not grown to the extent of some of the other study communities but this may change in the near future if more residential lots are made available. The community is within commuting distance of work areas, shopping centres and the University in Fort Garry and has school, sewer and water facilities that can accomodate twice the present population. Major expansion of Ste. Agathe will be inhibited, however, by the river and highway that are on either side of the town. The proximity to the river makes the community susceptible to riverbank erosion

and expansion across the highway would tend to disrupt its primary function.

None of the three study towns south of Winnipeg could function reasonably as a focus for major residential development. Each can accomodate some additional growth though the majority of the demand might be directed towards Niverville as a focus for urban development in the area.

D. Southwestern Sector

1. La Salle has major constraints to being designated as a focus for urban development. The town has little of the infrastructure necessary to ensure a viable community and could well be less viable in the near future as the closing of its elementary school is a distinct possibility.
2. Sanford has attracted many new residents and some additional commercial enterprises in spite of its lack of key infrastructure components such as adequate solid waste disposal, sewage treatment and water supply systems. The community's attractive features include its location on a major highway to work areas in Fort Whyte, Fort Garry and other parts of Winnipeg, the regional high school and the general impression of viability as there are many new homes in Sanford. The expansion of the community should be predicated on the installation of centralized sewer and water facilities but this will require greater expenditure than Sanford or the R.M. of Macdonald are likely to be able to handle. The nearest potable water source is twenty miles away.

Significant outside assistance will be necessary if the community is to be designated as a focus for urban development in this sector of the Winnipeg centred region.

3. Starbuck has experienced little new development in recent years and there appears to be little likelihood that it will in the near future. The community's role as a service centre in the R.M. of Macdonald is declining to the advantage of Sanford.

The communities in the southwestern sector of the reginn face major constraints to growth, based primarily on the absence of adequate water supplies and centralized sewer systems. If a focus for urban development is to be recognized, Sanford would be the best choice among the existing communities. The threat of flooding might make it necessary, however, to designate a better location, such as an area between La Salle and Sanford, as the site of a totally new community. Regardless of the location of the development focus, major expenditures will be necessary for community facilities. It is conceivable that a water pipeline would have to be constructed from the City of Winnipeg.

E. Western Sector

Elie could well be designated as a focus for urban development west of the City. The community is well endowed with natural amenities and has a good level of infrastructure already in place. Few new subdivisions have been requested but it is likely that demand will be such that Elie will experience significant new development in the near future. Detracting from

the community as a growth centre is the distance that must be travelled to work areas in the City.

F. Northwestern Sector

Stony Mountain has been a major growth centre in recent years and continues to experience demand for new development in view of the community's proximity to work areas in north Winnipeg. Continued expansion will be costly, however, due to the physical constraints with which the town is faced. It might be better to direct the demand to nearby Stonewall, reinforcing its potential satellite function, or to a totally new community sited so as to reduce servicing costs.

G. Northern Sector

St. Andrews-Lockport has accomodated much of the demand for residential development outside of the City. Continued growth in its present manner will be extremely costly to the environment, however, and ultimately to society as a whole. A possible focus for continued development north of the City is the Town of Selkirk where work areas and residential development could be combined in such a manner that the amenities for which people leaving the City are searching are provided.

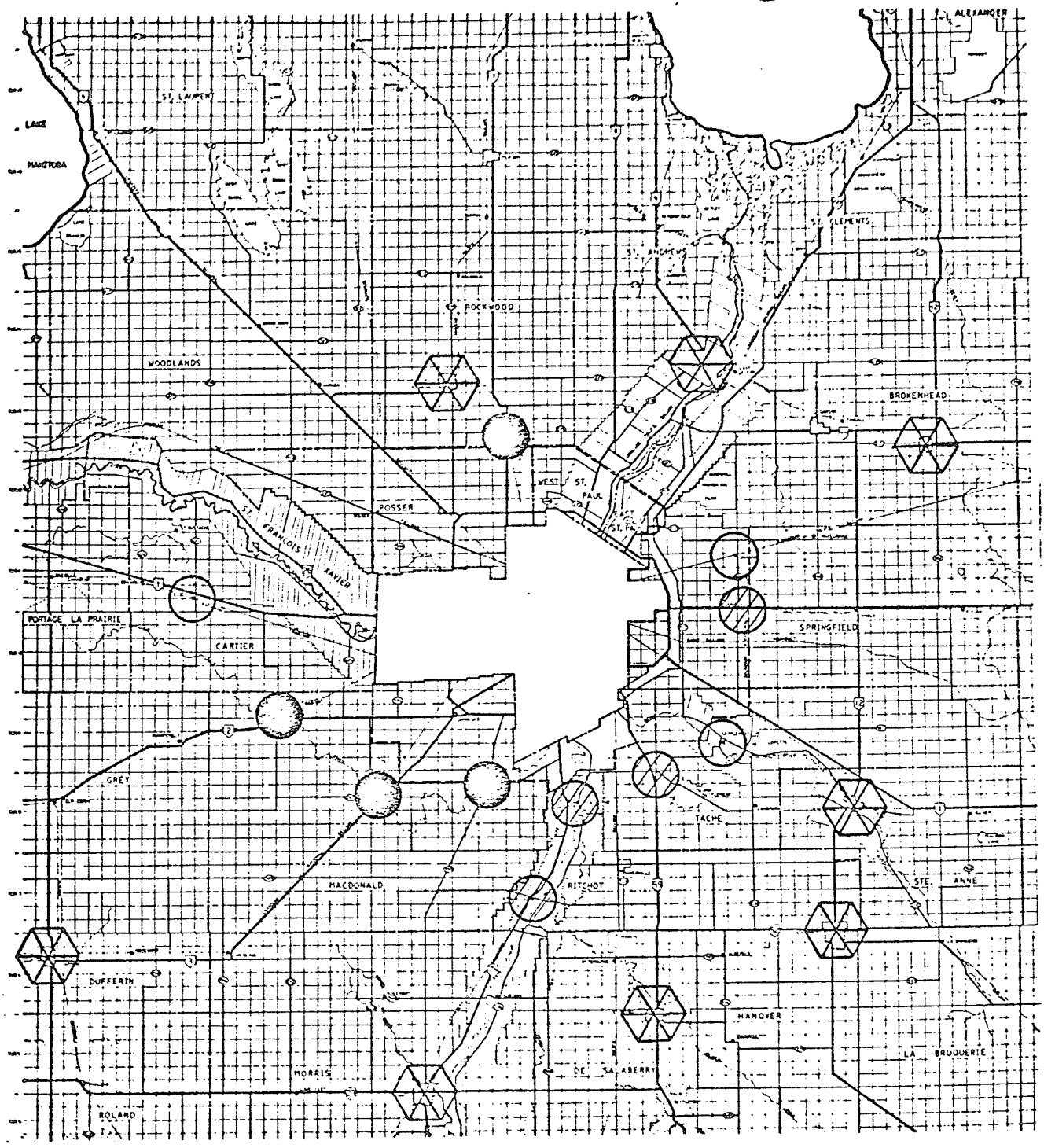
In summary, the costs of the growth and expansion of some of the study communities will be greater than in others. In order to

achieve balanced urban development, however, the constraints that are faced in some of the cases will have to be overcome. Oakbank, Lorette and Elie are capable of continued residential development with relatively little upgrading of existing infrastructure and at lower cost. Some additional development can be accomodated in Ile des Chenes, Dugald, St. Adolphe and Ste. Agathe but major growth in these communities would be costly in a number of respects. The continued development of La Salle, Sanford, Starbuck, Stony Mountain and St. Andrews-Lockport will have to be weighed against designating alternative nodes for urban expansion in view of the significant expenditures that may be necessary to overcome the constraints that are evident in each case.

A Regional Scenario

Future urban development in the Winnipeg centred region should be such that costs to society as a whole and the natural environment are reduced, compared to the unconstrained and unplanned growth that is occurring at present, while maximizing the benefits. For the long term, urban growth in the total region must be rationalized, particularly in the City of Winnipeg. For the short term, however, and as part of an overall strategy to rationalize urban development in the area around the City, a system of dormitory and satellite communities could be established in the vicinity of Winnipeg (Figure 5). The foci of urban development would be established on existing communities, where feasible, or could be entirely new towns where warranted. Incorporated into these centres would be generally lower cost housing designed to serve the

Figure 5



Potential Regional Community Roles

- Satellite Towns
- Sample Dormitories

Growth Constraints.

- Minimal
- Significant
- Severe

N

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various needs of community residents, recreation facilities and open space areas, good levels of community facilities and, in the cases of satellite towns, opportunities for employment. Some areas in the region would be set aside for rural non-farm development where infrastructure, environmental and economic considerations make it desirable.

For an overview, emphasizing the study communities, much of the demand for residential development to the east of the City can be met adequately in Oakbank and Lorette as dormitory communities close to work areas in Winnipeg. Industrial development would be directed to more distant, larger centres such as Beausejour, Ste. Anne and Steinbach where additional residential development could occur as well. Some of the demand for residential growth to the south of the City can be accomodated in each of Ile des Chenes, St. Adolphe and Ste. Agathe though Niverville would be required to handle any major requirements. Morris would continue its role as a satellite community and location for industrial development. The expansion of the communities in the R.M. of Macdonald will require financial input that cannot be met without outside assistance. It may be necessary to concentrate development in a single area based on an existing community such as Sanford, or an entirely new site if overall costs are found to be less. To the west, Elie's expansion as a dormitory community is likely to present few problems. North and west of the City, however, there are severe constraints to the continued expansion of Stony Mountain as a dormitory town. Future urban development would be best focused on a totally virgin site where servicing costs would be reduced or on the satellite

town of Stonewall. Residential development in the St. Andrews-Lockport area must be curtailed before there are disastrous results. The lower cost housing and natural amenities that are sought by ex-Winnipeggers could be made available through the planned expansion of Selkirk.

The Implementation of a Regional Urban Development Strategy

One of the first requirements in bringing about a strategy for the rationalization of urban development and land use in a city-centred region is the establishment of a regional planning authority such as that in the Ottawa-Hull area, and elsewhere. A wide range of interests must be represented, however, in order to bring about an adequate balance between sometimes competing groups and goals and a total understanding of the regional system must be accomplished before recommendations to overcome system inadequacies can be finalized and implemented. The costs of correcting system imbalances and deficiencies should be born by society as a whole for the benefit of all.

In the case of the Winnipeg centred region, no regional government authority exists other than the Provincial Legislature. The Winnipeg Region Study was established by the Province to provide a framework within which policy decisions could be made. There are still some gaps in the information, however, including an understanding of the regional transportation network, population trends and housing needs in the City of Winnipeg and environs, and regional industrial development requirements. As yet no lower level regional planning authority has been established to integrate the numerous local governments and other

interests and for sharing the costs of implementing a region wide urban development strategy that should be borne by the full range of governments (Municipal, Provincial and Federal), as well as the private sector. At present, however, the costs of coping with the unconstrained growth that now prevails will continue to be borne largely by local jurisdictions with their general lack of resources.

Summary

The urban development strategy proposals that have been presented in this chapter are intended to be preliminary and complimentary to an overall plan for the Winnipeg centred region and a step toward improving the present situation. There would be many more steps, however, before the implementation of the proposals for the various communities, including the involvement of community residents in planning the future of where they make their homes and carrying out detailed analyses of the impacts of designating areas for urban development. It is hoped that this study of communities facing pressure from uncontrolled growth in the Winnipeg centred region and the discussion of their respective roles and potentials as growth nodes, along with totally "new towns", in the context of a region wide urban development strategy, will contribute toward the long term improvement of the City and its surrounding area.

CHAPTER VI

SUMMARY AND CONCLUSIONS

The process of urbanization continues as the population of developed countries concentrate more and more in the largest urban centres. These trends are becoming increasingly difficult to handle and solutions to the growing problems continue to be sought. Within many of the larger cities themselves, there have been significant changes in the urban fabric over the past 100 years. Initial urban development was largely concentrated around work areas at the urban core but the automobile and increased affluence made possible the spread to the suburbs. A more recent trend has been for development to occur beyond the bounds of the city, either in smaller centres within commuting distance or in the open country side. Exurban development has been generally unplanned and has resulted in pressure on existing community and regional infrastructure components and the natural environment and the loss of large amounts or prime agricultural land. A frequently proposed solution to what has been called "the urban problem" is the development of "new towns", as dormitory or satellite communities, based on existing communities or on totally virgin sites.

The City of Winnipeg has grown and developed in a manner similar to that of many other North American cities. As a major financial, commercial, industrial, transportation, political and cultural centre in Western Canada, Winnipeg has experienced the pressures of the urbanization phenomenon. Urban development was initially concentrated at the

confluence of the Red and the Assiniboine Rivers, but as the population grew and modes of transportation changed, there were modifications in the urban fabric. Major suburbanization occurred after World War II but the tight housing supply, increased land costs, and the desire for the amenities of life in a rural area, have resulted in significant population shifts to smaller urban centres and zones of rich natural environment within commuting distance of work areas in the City. Major problems have resulted with the continuation of this trend as much of the development has been unplanned; prime open space, recreation and agricultural areas have been lost; and pressure has been placed on the natural environment, community and regional services and facilities and on municipal fiscal capabilities.

The problems of urbanization and exurban development, in the case of the City of Winnipeg and the Winnipeg centred region, can only be overcome through a complete analysis of the nature and consequences of present trends and the implementation of a strategy designed to improve and rationalize urban growth. The Winnipeg Region Study of the Manitoba Department of Municipal Affairs was initiated in order to provide a framework for the establishment of policies regarding future land use in the area around the City. The analysis is nearing completion, though there are still some notable gaps in the information and Provincial policy is in the formulation stage. Policies must be established for the City of Winnipeg as well.

Satellite and dormitory communities as new and expanded existing towns have been proposed as part of the solution to the "urban

problem" in the Winnipeg centred region. Questions have remained unanswered, however, as to whether or not totally new towns should be constructed, which of the existing communities around Winnipeg are capable of expansion as foci for planned urban development, and what the function of each of the growth centres should be in the context of a region-wide land use and urban development strategy.

Towards such a strategy, twelve urban centres near Winnipeg were selected for analysis as to their present problems and roles in the area around the City and their respective capabilities for continued growth. As a result of the analysis and on the basis of a review of experience elsewhere in accomodating and directing urban growth, proposals have been made as to which of the study communities would be appropriate as growth centres, their respective regional functions and those cases where demand may have to be met in other foci or urban development, including totally new communities.

It is not likely that any of the towns discussed in this thesis should be more than dormitory communities serving work areas in Winnipeg. Satellite roles would go to centres more distant from the City. Regarding growth capabilities, Oakbank, Lorette and Elie have few constraints to continued growth, while Ile des Chenes, St. Adolphe and Ste. Agathe would be faced with significant thresholds to overcome if major new development is to occur. La Salle, Sanford, Starbuck, Stony Mountain and St. Andrews-Lockport are facing major problems with the urban development that has taken place to date and conditions will only worsen if unconstrained growth continues in these areas.

In the regional context, Oakbank is capable of accomodating much of the demand in the area north-east of the City with Lorette serving as a focus for urban growth south and east of Winnipeg. To the south, Ile des Chenes, St. Adolphe and Ste. Agathe can expand to a limited degree but additional demand may have to be directed to Niverville, or elsewhere. South and west of the City, it may be feasible to adequately service one of La Salle, Sanford and Starbuck, with Sanford being the most likely focus for demand. Otherwise, new development may have to be directed to a totally new town in the area. Elie can expand with few difficulties to the west of the City but, to the north and the north-west, demand should be focused on Selkirk and Stonewall, unless it is more feasible to develop entirely new communities in order to redirect the growth of St. Andrews-Lockport and Stony Mountain.

The implementation of recommendations such as these must occur in the context of a plan for the entire Winnipeg centred region designed to rationalize and improve the effects of continuing urbanization on the City of Winnipeg and the surrounding area. The plan and its composite policies should be established by a regional planning commission composed of representatives of all three levels of government (Municipal, Provincial and Federal) and their various agencies, along with citizens at large. The realization of the plan should be the responsibility of society as a whole and not only the local governments that have born much of the cost to date.

In conclusion, continuing urbanization and the growth of large urban areas are among the major challenges of the contemporary world.

Extensive planning will be required if the problems associated with present patterns of urban development in city centred regions are to be overcome. The new town concept, including the planned expansion of existing centres, may well be a part of the answer for Winnipeg and the surrounding area, particularly for the short run. Further research must be carried out, however, with regard to alternative forms of urban development and means of correcting the problems faced by Winnipeg and other large urban areas.

A P P E N D I C E S

APPENDIX A

WINNIPEG REGION STUDY REPORTS

The following is a list of reports prepared for the Winnipeg Region Study of the Manitoba Department of Municipal Affairs and their status of completion:

Report	Status	Completion Date
Winnipeg Region Study Interim Report (Nov. 73)	Published	
Lifestyle Preferences of Rural Non-Farm Residences - R.M. of Springfield -- An Analysis	Published	
Granular Material and Bedrock Prospects in the Vicinity of Winnipeg	Published	
The Nature of Demand for Exurbia Living	Published	
Construction Criteria for Septic Tank Systems in Manitoba	Published	
Cost/Revenue Analysis and Study of Residential Development in Selected Rural Municipalities of Manitoba	Published	
Winnipeg Region Study - Demand Analysis and Map Folio	Published	
Water Resources of the Winnipeg Region	Published	
Wildlife and Wildlife Habitat of the Winnipeg Region	Published	

Detailed Analysis of Non-Farm Questionnaire	Completed, not published	
General Comments about Groundwater Development and Pollution Prevention in the Winnipeg Region	Published	
Rural Farm Residential Survey	In Progress	October, 1975
Soil Suitability for Urban Development	Completed, not published	
Subdivision in Manitoba	Completed, not published	
Infrastructure Study of Communities Within the Winnipeg Region	At printer	September, 1975
Land Use Mapping and Open Space Inventory	At printer	September, 1975
Capital Investment in Livestock Enterprises	Ready to start	March, 1976

APPENDIX B

INFRASTRUCTURE STUDY CHECKLIST AND DATA SHEET

The following guide was designed to aid in the selection and collection of data for the "Infrastructure Report" and, subsequently, this thesis. Much of the information was derived through interviews with municipal officials. Census sources and government documents were also utilized. Where possible, data were collected from primary sources such as consulting engineers and School Division representatives. Field surveys were conducted in some cases.

Inventory of Municipal Services and Infrastructure

PLACE:

I Introduction:

Population	1961 -	Change
	1966 -	
	1971 -	
	1974 -	

Basemap provided -
Land Use map drawn -
Built-up area extent shown -
Travel time from Winnipeg -
Topographic map provided -
Show housing quality and quantity -
Mill rate - Industrial & Commercial -
Residential -
Percentage of dept. ceiling attained -
Debt. ceiling -
Debt.

II Basic Infrastructure:

(1) Municipal Services

(a) Sewer Facilities

i) Sanitary Sewer System

Map - location and distribution of collector system
- location and distribution of trunk sewers
- location and distribution of lift stations and force mains
- outfall lines to lagoons (size and location)
- treatment facilities (nature of treatment; lagoons by type - aerobic etc.; and capacity)
- disposal of treated sewage

Indicate - areas where difficulties are being experienced or are likely to be encountered (eg. low-lying areas requiring lift station or larger size pipe, unsatisfactory grades cover, lines subject to freezing) - if septic facilities used for disposal - check septic - water sources condition.

- lines which are at or near capacity
- any additions required in treatment
- for new residential, industrial, commercial etc. areas which must be serviced show alignment of trunk sewers

ii) Storm Sewer

Map - storm sewer system
- show sizes of sewer lines
- discharge points

iii) Surface Run-Off

Map - open ditches and creeks
- low areas which normally become surface run-off drainage courses during wet periods (history of areas that have been filled in often necessary)
- areas subject to flooding and high water table

(b) Solid Waste Management

i) Domestic

- collection methods
- measures to control quantities, eg. sorting, recycling, etc.
- disposal system - sanitary land fill (partial/complete)
  - burning/incinerator
  - map location and land area
- adequacy of system and land requirements

ii) Industrial Wastes (eg. scraps of lumber/metal used by plant).

- methods of collection
- use of private/municipal facilities for disposal

iii) Agricultural Wastes (eg. dead animals)

- disposal and treatment

NB. Brief review of Public Health Standards and provisions as they affect the Municipality.

(c) Water Supplies

i) Sources of Supply - Groundwater

ii) Collection and treatment techniques in use

iii) Water quality and potability based on chemical analysis

iv) Distribution system (to be mapped) - show problem areas

v) Capability of system to meet present and future needs in respect of any likely developments, fire fighting requirements, etc.

vi) Proposals re correction of any deficiencies in system

(d) Electric Power and Natural Gas

i) Sources

ii) Sufficiency of supplies

iii) Availability of additional supplies

iv) Control (municipal or private)

(e) Fire and Police Protection (Brief Summary Only)

i) Fire protection capability - kind of force (voluntary/regular)
- kind of equipment (suitable for apartment block)
- delivery system (hydrants/other)

(2) Transportation and Communications

(a) Transportation System

i) Municipal Internal Street System

1. Determine and classify streets into
(a) major arterials
(b) minor arterials
(c) collectors
Based on street width, traffic flow and volumes, obvious physical relationship to other streets.

2. Examine generative elements, namely population within district/neighbourhood, land use, work centres (O-D if the means are available to conduct)

3. Parking facilities
- on- and off-street parking areas
- location and distribution in industrial and commercial areas as well as for institutional uses
- distribution of metered parking
- actual survey of parking needs and requirements
- proposals

4. Paving - map extent and location of all paved, oiled graded streets (paving program over last 5 years significant).

5. Traffic Control - traffic signals; medians, rotaries, etc. as part of system

6. Review
(a) area problems - bottlenecks
- difficult alignments
- inadequate capacity
- drainage
- other situations needing correction

(b) location where there is a high incidence of accidents

7. Future or proposed additions to the street system

ii) External Roadway Linkages

Indicate (map) major roads connecting with outside.
Classify - Provincial
- Local/Distribution main road

iii) Rail
- railway connection to other centres
- volume of freight brought in by rail
- rail service - lines to local businesses
- impact of rail on local centre
  -divides centre/well integrated
  -problems at level crossings
  -relocation warranted
  -grade separation warranted
  -generator of income and employment locally

iv) Air
- type of facility
  -private, municipal, national
  -length of runway and quality (paved)
  -ILS
- impact on local area
  -land use compatibility
  -nuisances (eg. noise)
- us age and advantages
  -provides passenger services
  -employment
  -provides training facility
  -whether primarily for pleasure craft
- future expansion needs
  -land
  -services (sewer, water, etc.)
  -zoning restrictions on adjacent properties

v) Water Transport
- if any type, frequency and reliability, function
- public useage

(b) Communication Services

Indicate availability of
- telephone, teletype facilities
- radio and TV
- newspaper circulation (weekly, etc.)
- mail system
- trucking facilities and truck terminals

(3) Public Works

General Maintenance Program

- street paving
- landscaping and tree planting
- other works

III Community Facilities:

(1) Parks and Playground Facilities

(a) Existing park system and other open space

(b) Hierarchy of parks and playgrounds
- tot lots
- play fields
- community parks
- neighbourhood parks
- district regional parks
- special parks and buffers (eg. ornamental, etc.)

(c) Needs and requirements based on accepted standards

(d) Examination of programs
- in consultation with Recreation Director get indication of high use facilities
  -hockey
  -swimming pools
  -playfields (ball diamonds, etc.)
  -etc.
- identify high demand vs. slack in use of facilities

(e) Specify land and building program needs

(f) Estimate of capital costs

(g) Staging of programs and budgeting

(2) School Facilities

(a) Elementary Schools

- location and distribution
- catchment area of each school
- plot location where each child lives
- enrollment by grades and total enrollment
- no. of teachers
- obtain information on School capacity in terms of
  (a) number of pupils considered desirable/classroom
  (b) no. of classrooms in total

(b) High Schools and Vocational Schools

- location and distribution
- catchment area of each school
- plot location where each child lives
- enrollment by grades and total enrollment
- no. of teachers
- obtain information on School capacity in terms of
  (a) number of pupils considered desirable/classroom
  (b) no. of classrooms in total

NB. This is basic information for establishing saturation point of catchment area, neighbourhood etc. and is indicative of whether more schools/classrooms needed. Average number of children generated per d.u.

(3) Movie Theatres
- distance to nearest
- location and distribution

(4) Health and Social Services

(5) Library Services

(6) Churches

IV Physical Resource Data (check study now being undertaken)

(1) Soil Survey and Analysis

(2) Other Physical Features eg. Flood Hazards and Vegetation Cover

V The Economy

(1) Influence of Winnipeg
  (a) distance to Winnipeg

  (b) travel time to Winnipeg

  (c) quality of highway

  (d) bus service

(2) Number of Retail Outlets and Type
  (a) total employment

  (b) check distance to sub-regional type shopping facilities

  (c) check distance to regional type shopping facilities

(3) Industries - number and type
  (a) total employment

(4) Finance and Insurance Institutions
(a) number of agencies

(b) total employment

(5) Liquor outlets
(a) number (Liquor Commission and beverage rooms or lounges)

(6) Dominant Role of Centre in Regional System
- see Regional Analysis Program

(7) Federal and Provincial Government Impact

VI Site Environment - any adverse conditions such as poor view, industrial smoke, proximity to airport flight patterns, fire or explosion hazards:

Persons Contacted

Name	Position	Phone	Date

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