

Provincial Land Use Planning Initiatives in the Town of Kapuskasing

O. W. Saarinen

Volume 10, numéro 1, juin 1981

URI : <https://id.erudit.org/iderudit/1019152ar>

DOI : <https://doi.org/10.7202/1019152ar>

[Aller au sommaire du numéro](#)

Éditeur(s)

Urban History Review / Revue d'histoire urbaine

ISSN

0703-0428 (imprimé)

1918-5138 (numérique)

[Découvrir la revue](#)

Citer cet article

Saarinen, O. W. (1981). Provincial Land Use Planning Initiatives in the Town of Kapuskasing. *Urban History Review / Revue d'histoire urbaine*, 10(1), 1–15.
<https://doi.org/10.7202/1019152ar>

Résumé de l'article

Kapuskasing (Ontario) occupe une place particulière dans l'histoire de la planification de l'utilisation des terrains au Canada. C'est peu après la Première Guerre mondiale que la ville fit parler d'elle pour la première fois, lorsqu'on y établit la première communauté de développement planifiée par un gouvernement provincial au Canada. Le plan initial trahissait à la fois l'influence de l'esthétique de l'école de Chicago et du mouvement des « villes-jardins ». Après 1958, la communauté devint le théâtre d'une expérience importante de réaménagement des banlieues qui se déroula à Brunetville, à l'est du secteur planifié de Kapuskasing. L'auteur est d'avis que l'on a sous-estimé l'importance de l'expérience de Brunetville dans l'orientation du renouvellement urbain vers le réaménagement plutôt que vers le développement.

Provincial Land Use Planning Initiatives in the Town of Kapuskasing*

O. W. Saarinen

Résumé/Abstract

Kapuskasing (Ontario) occupe une place particulière dans l'histoire de la planification de l'utilisation des terrains au Canada. C'est peu après la Première Guerre mondiale que la ville fit parler d'elle pour la première fois, lorsqu'on y établit la première communauté de développement planifiée par un gouvernement provincial au Canada. Le plan initial travaillait à la fois l'influence de l'esthétique de l'école de Chicago et du mouvement des « villes-jardins. » Après 1958, la communauté devint le théâtre d'une expérience importante de réaménagement des banlieues qui se déroula à Brunetville, à l'est du secteur planifié de Kapuskasing. L'auteur est d'avis que l'on a sous-estimé l'importance de l'expérience de Brunetville dans l'orientation du renouvellement urbain vers le réaménagement plutôt que vers le développement.

Kapuskasing, Ontario warrants special mention in the history of Canadian land use planning. The town first acquired special prominence immediately following World War I when it was the site of the first provincially-planned resource community in Canada. The early layout of the settlement reflected the imprints of both the "city beautiful" and "garden city" movements. After 1958, the resource community then became the focus for an important experiment in urban "fringe" rehabilitation at Brunetville, a suburban area situated just east of the planned Kapuskasing townsite. The author suggests that the role of the Brunetville experiment in helping to change the focus of urban renewal in Canada from redevelopment to rehabilitation has not been fully appreciated.

The Town of Kapuskasing (Figure 1) warrants major consideration in the history of land use planning in the Province of Ontario and in Canada. The town initially acquired special status during the Drury administration (1919-1923) when it was selected as the site of the first provincially-planned resource community in Northern Ontario. Along with Iroquois Falls (1915), Smooth Rock Falls (1917), and Espanola (1919), Kapuskasing was representative of the new wave of forest-based communities that spread into the resource frontier after the elimination of the tariff on newspaper and pulp by the United States in 1913. From a design perspective, the early layout of the community reflected many of the features associated with both the "garden city" and "city beautiful" planning movements. The direct involvement of the province occurred again after 1958 when the Ontario Department of Municipal Affairs spearheaded a major experiment in urban rehabilitation at Brunetville, a small residential area located on the eastern fringe of the Kapuskasing municipality. In both instances, the provincial thrusts served as pioneering projects for land use planning.

A. KAPUSKASING AS A PROVINCIALY-PLANNED RESOURCE COMMUNITY

The participation of the Province of Ontario in the planning of the Kapuskasing townsite is noteworthy because it represents the first attempt by a Canadian provincial government to create a model community in the resource hinterland that would not

be simply another traditional closed company town.¹ The basis for this innovative line of action evolved primarily from three considerations: attempts by the senior levels of government after 1914 to promote the Kapuskasing area as a focal point for agriculture in the Clay Belt; the sale of the Kapuskasing Pulp Limit in 1918; and the election of E.C. Drury and other supporters of the United Farmers of Ontario to the provincial government in 1919.

Experimental and Colony Farms

The origin of the Kapuskasing site dates back to 1910 at which time an advance party involved with the survey of the main line of the National Transcontinental (C.N.R.) Railway established a campsite on the bank of the Kapuskasing River.² The site, known as Macpherson Station, was completed by 1912.³ In 1914 the Federal Department of Agriculture requested a grant of land in the Clay Belt from the Province of Ontario for the purpose of creating an agricultural experimental farm. The Government of Canada was subsequently deeded a block of 518 hectares of land situated west of the Kapuskasing River and south of the Transcontinental right-of-way, about 3.22 kilometres (Figure 2).⁴ As the land was heavily forested, it was decided that the work of clearing would be done by prisoners of war and interned enemy aliens. A prisoner of war and interned aliens' camp was thus built, and it continued in existence from December 1914 to May 1920.⁵ During this interval, much of the land for the Dominion Experimental Farm was cleared. While some agricultural activity was undertaken on the farm as early as 1915, it remained until 1917 before agriculture was developed on a significant scale.⁶ In the latter year the name of the Macpherson Station was changed to that of Kapuskasing in order to avoid confusion with another site by the same name in Saskatchewan.

* The author wishes to acknowledge financial support for the publication of this paper from the President's Canada Council Fund (Laurentian University). Appreciation is likewise extended to Ray Labbé of the Department of Geography for his cartographic assistance. Finally, I would like to thank M.K. Rukavina and Pat Butcher for their contributions and helpful comments during the preparation of the paper.

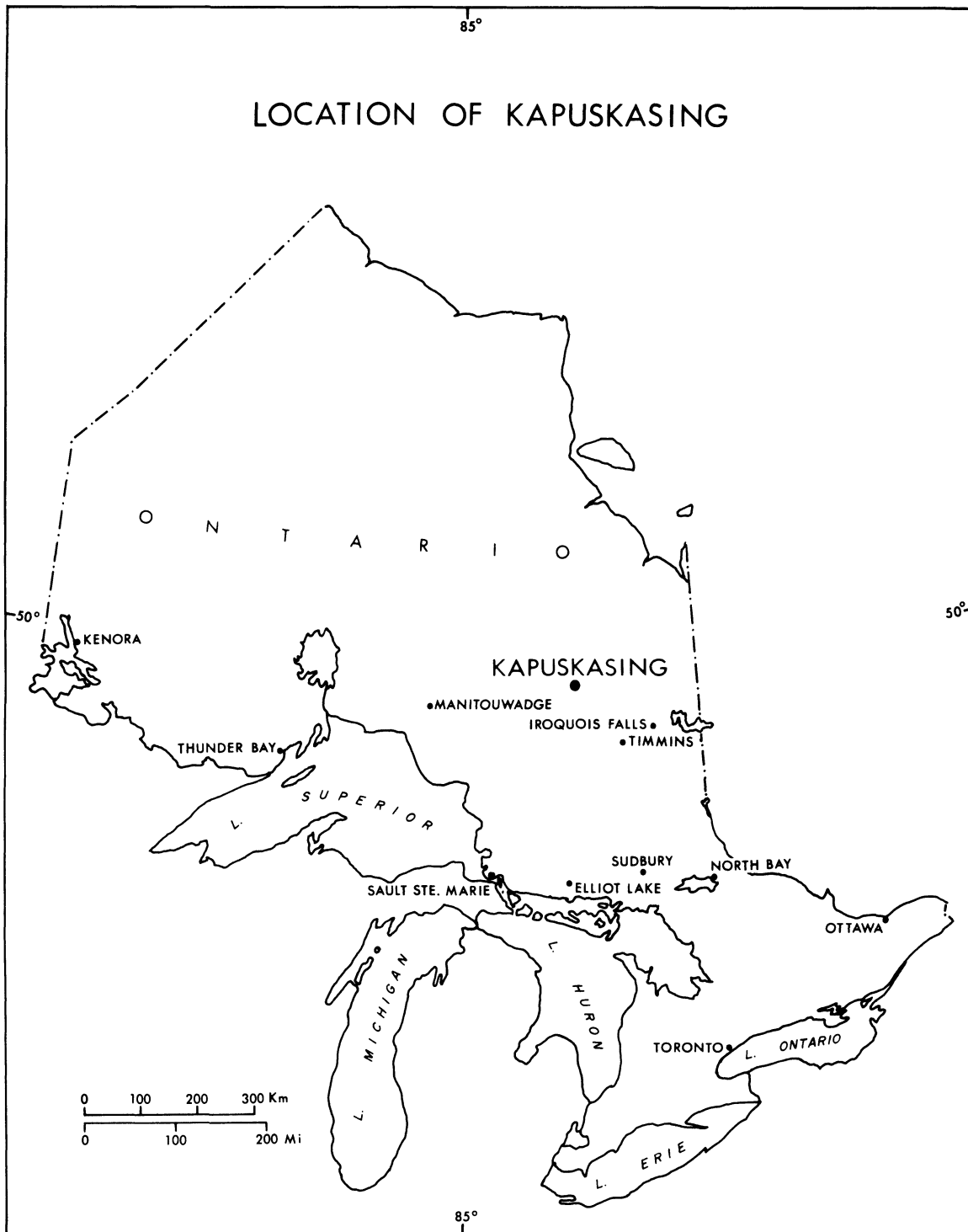


FIGURE 1

Ontario as it was delimited in 1912

In 1917, the Kapuskasing area also became the focal point for a provincial settlement scheme under "Returned Soldiers' and Sailors' Land Settlement Act." The act was intended to place large numbers of veterans on Crown lands in Northern Ontario.⁷ A block of six townships was set aside for use in this connection, namely O'Brien (in which the Kapuskasing site was situated), Owens, Williamson, Idington, Cumming, and Schackleton (Figure 2).⁸ The townships, with the exception of Shackleton, were surveyed into lots containing 40.5 hectares (100 acres) each instead of the ordinary homestead quarter section, thereby providing a potential for more than three thousand settlers. Only one township, however, was actually settled and before long the provincial government began to concentrate its efforts on a more limited project known as the Kapuskasing Colony Farm located on the east bank of the Kapuskasing River.⁹ The attempt was not successful and by 1920 the entire colonization scheme was abandoned in accord with the recommendations of a commission of enquiry.¹⁰ The unsold land was then opened to general settlement with the result that more than twelve thousand acres were acquired by settlers in the four townships of O'Brien, Owens, Williamson, and Nansen. As well, some land was sold to Spruce Falls Company, Limited.¹¹

In retrospect, the federal and provincial schemes were important because they laid the basis for a strong public association between agriculture and resource development in the Kapuskasing area. This link with the regional agricultural economy was an underlying factor which prompted Premier Drury to promote the concept of a diversified resource community at Kapuskasing based upon the processing of forest products and the provision of goods and services for the surrounding rural population.

Kapuskasing River Pulp and Timber Limit

During the latter part of the nineteenth century the practice of issuing "pulpwood limit" or "concession" agreements emerged as an important developmental tool by the Government of Ontario for the stimulation of pulp and paper activity. The adoption of this tool was basically an extension of the "timber limits" principle used by the provincial government from 1849 to promote the growth of the sawmilling industry. As the pulp and paper industry involved heavy capital expenditures and the use of more widely distributed tree species such as spruce and balsam, the government considered it practical to introduce a much larger Crown land grant in the form of a pulpwood limit agreement.¹² Pulpwood agreements were first introduced by the Province of Ontario in 1896.¹³ By the turn of the century pulpwood agreements had been negotiated for the cutting of pulpwood and the erection of wood processing operations at Sault Ste. Marie and along the Nipigon, Spanish, and Mattawa Rivers.¹⁴ Following the elimination of the United States' tariff on newsprint and pulp in 1913, the stage was set for the diffusion of the pulp and paper industry into the peripheral reaches of Ontario.

It was within this setting that the Kapuskasing Pulp Limit agreement evolved. A concession on the Mattagami River was offered for sale in September 1917, and in February 1918 the Kapuskasing River Pulp and Timber Limit comprising 4,507 square kilometres (1,740 square miles) was sold to two speculators. One month later the speculators transferred their interest to Spruce Falls Pulp and Paper Limited. In July 1920 Spruce

Falls Pulp and Paper Limited assigned its rights to Spruce Falls Company Limited.¹⁵ The latter company had been formed one month earlier by the Kimberly-Clark Corporation of Neenah, Wisconsin in order to ensure a supply of pulpwood for its Niagara Falls mill in the United States.¹⁶ The Spruce Falls Company also took over the Kapuskasing Colony Farm consisting of 189 hectares and was granted another addition to the original pulp limit of 101 square kilometres of forested land. As part of the agreement, the company promised to build a sawmill and a pulp mill by 1922 and a paper mill before 1928.¹⁷ The signing of the agreement thus brought into focus the need to create a new community of 2,500 people at Kapuskasing.¹⁸

Initiatives by Premier E.C. Drury

Much of the stimulus for the planning of the Kapuskasing townsite as an independent and diversified model community was derived from personal initiatives undertaken by E.C. Drury, who served as the Premier of Ontario from 1919 to 1923. It appears as though these personal initiatives emerged in response to three factors. First, there was the immediate need to resolve the problems related to the failure of the Kapuskasing Colony Farm. The second factor concerned his attitude regarding the powerful influence of the forest industry in Ontario during the Ross, Whitney, and Hearst administrations. Finally, there was the strong impact of his negative views with respect to the existence of closed or company towns. The cumulative impact of these factors was such that the planning of the Kapuskasing townsite became the "personal charge" of the Premier.¹⁹

The issue of the Kapuskasing Colony Farm was one that was brought to Drury's attention by a soldiers' delegation a few days after he assumed office.²⁰ It quickly became apparent to the Premier that the lack of a wood processing centre had been a contributing factor behind the problems of the Colony Farm because of the reduced market for local pulpwood derived from farmers' lots. This viewpoint was likewise expressed in the report of the commission of enquiry dealing with the Kapuskasing Colony Farm. The report suggested that the existence of a nearby wood processing centre could have removed much of the distress in the Colony Farm.²¹ The attitude of Drury regarding the power of the forest industry undoubtedly evolved from the secretive framework within which pulp limits had been granted to potential developers after the turn of the century, the rumours of maladministration within the Department of Lands, Forests and Mines, and the mockery shown towards the provincial forest regulations by the timber barons.²² It is pertinent to note in this connection that Drury, during the election campaign of 1919, made the promise to Howard Ferguson, the Minister of the Department of Lands, Forests and Mines of the Hearst government, that if the United Farmers of Ontario won the coming election, then "his department would be in for an investigation."²³ Such an investigation did, in fact, occur between 1920 and 1922, and it concluded that Ferguson had followed a number of illegal practices in granting timber and pulp limits to several forest companies.²⁴ The basis for Drury's stand against the establishment of company towns is not entirely clear. It is possible that this viewpoint was rooted in the events which surrounded his first visit to Northern Ontario in December 1919. It was on this occasion that Drury visited the settlements of North Bay, Cochrane, Timmins, Cobalt, Smooth Rock Falls, and the model community of Iroquois Falls erected by the Abitibi Power and Paper Company.²⁵ In the light of his

subsequent behavior, it is apparent that Drury was unimpressed with the "Garden of Eden"²⁶ atmosphere associated with Iroquois Falls and the nature of the relationship between companies and their workers in northern resource communities.²⁷

Early Townsite Planning

The formal involvement of the Province of Ontario in the planning of the Kapuskasing townsite began in August 1920 following the signing of a memorandum of agreement between the government and Spruce Falls Company Limited. The agreement affirmed the intention of the province to plan and to develop a town along "model" lines.²⁸ The area reserved for this purpose included all or parts of twenty-six lots containing 831 hectares found within the Township of O'Brien in the District of Temiskaming. The terms of the agreement also stipulated that the province would undertake to purchase, survey and clear the townsite proper, prepare a registered plan of subdivision, sell lots to the company, the Kapuskasing Housing Commission, or to any private purchaser,²⁹ and would guarantee funds to cover land purchases, the construction of houses, and the installation of municipal services. In turn, the company agreed to furnish electric-power at cost, supply wood to the municipality at wholesale prices, and erect a high level bridge across the Kapuskasing River.³⁰

In his memoirs, Drury outlined some of the variables involved in the location of the Kapuskasing townsite:

During these months [fall 1920] I visited Kapuskasing several times. The paper mill and the power development farther down the river were making good progress. There remained the question of the town site. During the war there had been a detention camp for German prisoners west of the river and north of the tracks, and some of this might form the nucleus of a town. But the land was flat and swampy, the buildings were poor and dilapidated, and if fire occurred in the thick forest to the north and west the town would be exposed to a considerable hazard. In my opinion, the east side of the river provided a much better site. There was a falls just south of the railway bridge which had given the place its Indian name: Kapuskasing.... Below the falls the banks were twenty feet high and the river swept round in a curve which might well be the picturesque site of a town park, and this was protected by the river from the danger of forest fire.³¹

In addition to the above advantages, the elevation of the site minimized the possibility of flooding arising from the legal right of the Spruce Falls Company to construct two hydro-electric plants on the Kapuskasing River.³² Finally, the site avoided any need to utilize land already cleared for use by the Dominion

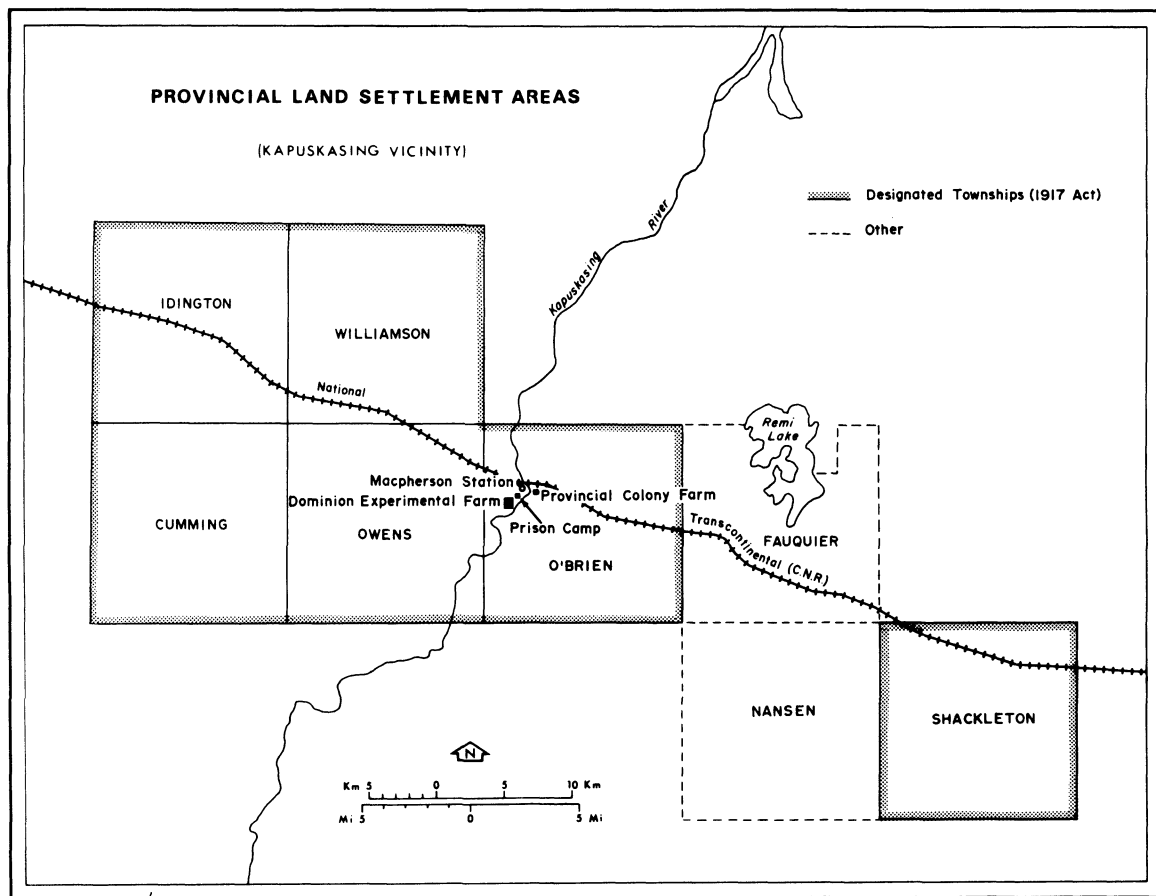


FIGURE 2

Provincial Land Settlement Areas in the Kapuskasing Vicinity

SOURCE: *Statutes of Ontario*, 7, George V, c. 13, 1917; and Department of Forests and Mines, *Annual Report 1918* (Toronto: King's Printer, 1919), p. 160.

The planning process continued in the spring of 1921 with the incorporation of the Town of Kapuskasing and the completion of the subdivision plan for the townsite. The "Act to Incorporate the Town of Kapuskasing" was assented to on April 8. It

the Township of O'Brien.³³ While the latter was intended to ensure the political independence of the community, it was also thought that such a step would facilitate the future economic diversification of the municipality.

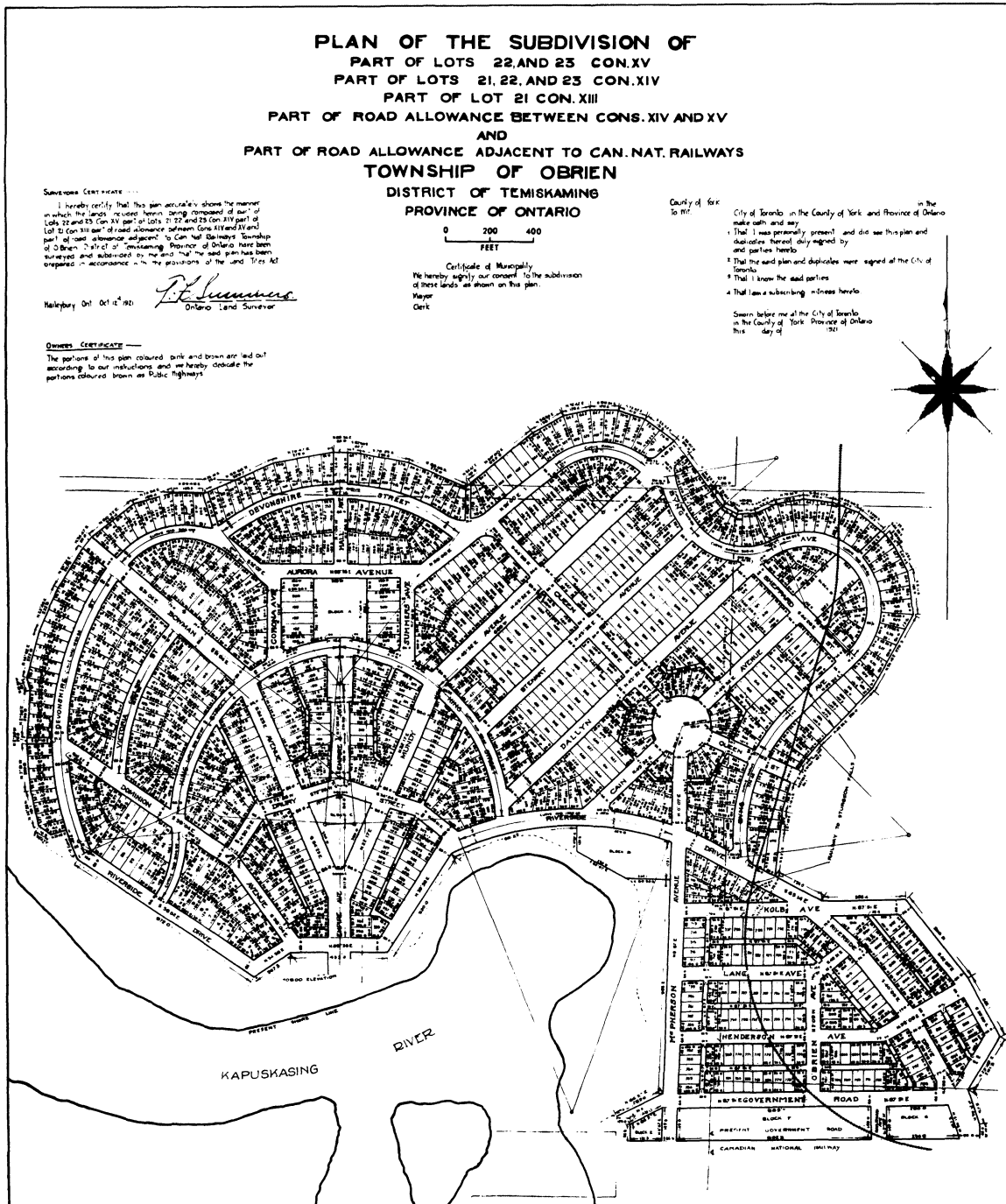


FIGURE 3

Plan of the Kapuskasing Subdivision

SOURCE: Office of Land Titles, District of Temiskaming, Plan M-45, August 8, 1922.

The actual planning of the townsite, which was completed prior to June 20, was done entirely by various officials of the Ontario government under the supervision of J.A. Ellis, Director of the Bureau of Municipal Affairs.³⁴ Of the total area set aside for the municipality (831 hectares), only 89.4 hectares were laid out for townsite purposes. Preliminary sketches were drawn up by the planners, and after a second visit to the site, one was decided upon as being the most suitable by both the province and the company. It was then discovered that to secure the adequate circulation through the townsite a new bridge across the Kapuskasing River had to be built at a different location from the two existing bridges. The company, in lieu of another obligation to raise the two existing structures, undertook to

construct the new bridge.³⁵ The location of the new bridge determined to a considerable extent the spatial organization of the subdivision plan. The completion of the sketch plan was followed by the surveying of lots during the summer and fall months. According to the Ontario Land Surveyor, F.G. Summers, the surveying of the townsite was finished by October 12.³⁶ As required by the "Planning and Development Act," the subdivision plan was registered in the Office of Land Titles of the District of Temiskaming on August 8, 1922 as Plan M-45 Temiskaming (Figure 3).³⁷ The setting of the townsite subdivision in relation to the proposed general plan for the municipality is depicted in Figure 4.

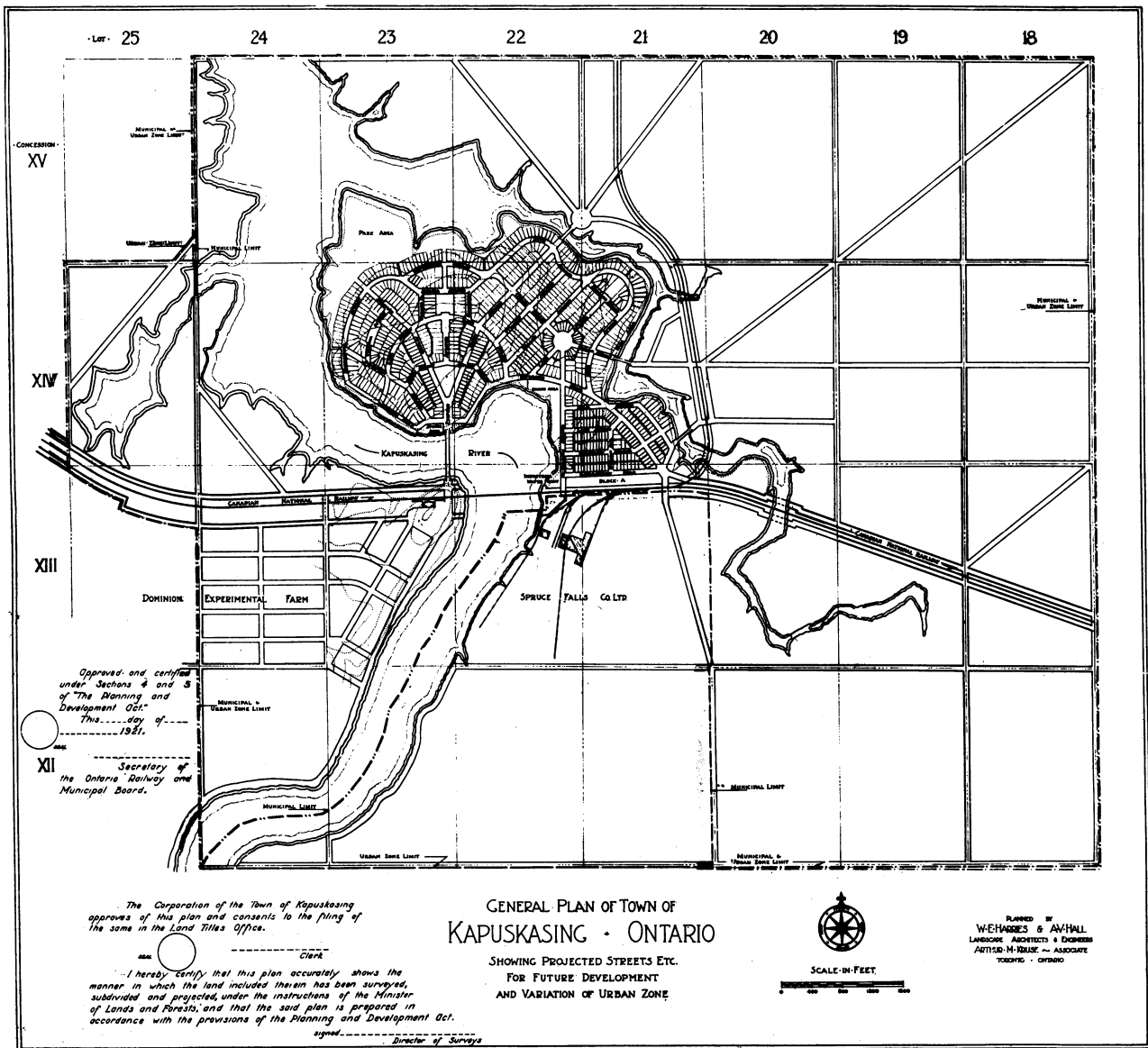


FIGURE 4

Proposed General Plan for the Town of Kapuskasing

SOURCE: Bureau of Municipal Affairs, *Report re Housing for 1921 Including Town Planning of the Town of Kapuskasing*, Toronto, King's Printer, 1922, Plan No. 6. The inclusion of the vista and diagonal streets suggests the imprint of the "city beautiful" movement in the design of the proposed plan. See Walter Van Nus, "The Fate of City Beautiful Thought in Canada, 1893-1930," in *The Canadian City: Essays in Urban History*, edited by G.A. Stelter and A.F.J. Artibise (Toronto, 1977), p. 168. This proposed plan was never officially approved.

Townsite Development

The two plans illustrated a variety of land use considerations related to street patterns, lots, zoning, and the direction of future growth. A summary of the main land use features associated with the townsite subdivision is given in Table 1. The street layout reflected a "city beautiful" variation of rectangular, radial, and curvilinear patterns focused on the main and secondary business areas. The main business area was planned to run northward from the proposed bridge, along what is now Bowman Avenue. It was intended that the business avenue would provide a dignified vista for the visitor approaching the townsite from the station. Lanes were also introduced in the two business areas to promote accessibility and to facilitate future commercial expansion. The layout was given added form through the use of flexible street widths ranging from 20.12 metres to 30.48 metres. The commercial and residential lots in the plan varied from 464.5 to 696.75 square metres in size with standard frontages of 15.24 metres. Along the fringes of the townsite the lots were not allowed to extend to the water's edge. Due to their low elevations the fringe areas were reserved for park and recreational purposes. Within the townsite proper the most prominent sites were set aside for public and semi-public uses such as churches, schools, and a hospital. It should be noted that the townsite plan included no provisions for industrial land use. This anomaly was due to the fact that the industrial operations of the Spruce Falls Company were not included within the original municipal boundaries; it was assumed that new industrial uses would be located on the railway property found to the south of the townsite. As can be observed from the proposed general plan (Figure 4), diagonal streets were strategically placed in the remainder of the municipality to provide a focal point for future growth.

TABLE 1

Land Use Features of the Kapuskasing Subdivision

| Land Use | Hectares | Percent of Subdivision Area |
|--------------------------|----------|-----------------------------|
| Streets and Lanes | 30.15 | 33.7 |
| Lots (852) | 44.72 | 50.0 |
| Parks and Recreational | 10.77 | 12.0 |
| Public and Institutional | 3.72 | 4.3 |
| Total | 89.36 | 100.0 |

SOURCE: Department of Lands, Forests and Mines, *Annual Report 1918*, p. 10.

It is evident from the general plan that only a small part of the municipality was to be subdivided and laid out as a townsite. The size of the subdivision proper was considered sufficient to serve the needs of a northern resource community. The large area of unsubdivided land surrounding the townsite was deliberately included in the municipality to serve as a green belt in the "garden city" tradition and to provide wide scope for the growth of the community. According to J.A. Ellis, Director of the Ontario Bureau of Municipal Affairs, it was also anticipated that the existence of municipal controls in the rural area would prevent the erection of "shack-towns" on the fringe of the townsite.³⁸

Implementation of the subdivision plan began in 1922. One of the first steps taken was the transfer of nineteen residential dwellings from the Colony Farm to various lots owned by the Spruce Falls Company in the southeastern part of the subdivision. The Spruce Falls Housing Corporation then proceeded to erect a number of apartment blocks, five and six-roomed houses, semi-detached and single four-roomed houses. These dwellings were likewise situated in the eastern part of the townsite.³⁹ Aside from the above activity by the company, however, there were no formal arrangements made by the municipality or the province to encourage the purchase of lots and the erection of dwellings by individuals. The situation was thus at some variance from the initial intention of the Drury administration.⁴⁰

The organizational basis for the townsite changed considerably when the Spruce Falls Company abandoned its plan to build a power dam at Sturgeon Falls, located three miles downstream along the Kapuskasing River. The decision was important as it eliminated the need to construct a new bridge across the river linking Empire Avenue and the main station of the National Transcontinental Railway. By this action, the main entry points into the townsite were shifted to the east along Riverside Drive and McPherson Avenue. The changed accessibility pattern, in turn, resulted in the transfer of the main business area from north of Empire Avenue into the "Circle" area found at the intersection of McPherson and Cain Avenues. Consequently, as early as 1924 it was clear that the "Circle" was going to evolve as the main rather than secondary commercial zone for the community.⁴¹ In the meantime, the development of the townsite was spurred by fires in 1923 and 1924 on the west side of the Kapuskasing River which resulted in the relocation of the railway station into the townsite proper and the elimination of a small, fringe, shacktown community known as "Stewartville." According to Premier Drury, the latter was a fortunate occurrence as it ensured that the townsite plan would proceed as planned.⁴²

The pace of development in the townsite was subsequently influenced by the signing of a new pulpwood concession in 1925 and the acquisition by the Spruce Falls Company of all the unsold lots in the subdivision in the following year. On September 10, 1925, the company was awarded another pulpwood concession which more than doubled the corporation's earlier acquisition of 4,507 square kilometres to 11,829 square kilometres.⁴³ A related agreement, signed on January 5, 1926, committed the firm to expanding its operations to include the production of mechanical pulp and newsprint, a generating plant at Smoky Falls north of Kapuskasing, and a sawmill at Fauquier.⁴⁴ It was on the basis of these agreements that the New York Times Company and the Kimberly-Clark Company proceeded in the same year to reorganize the enterprise under the umbrella of the Spruce Falls Power and Paper Company. The reorganization process was significant from an economic perspective as it ensured the wood processing facilities at Kapuskasing of a continuous and reliable market.

The creation of the new company and the plan to expand the industrial base focused attention on the need to provide adequate housing for new employees. To resolve the issue, the Spruce Falls Power and Paper Company managed to gain the option of buying all the unsold lots in the townsite. The granting

of this option was a direct outcome of the personal efforts of Mayor E.J. Yelle and the new premier of Ontario, G. Howard Ferguson. According to one town councillor, the council of the Town of Kapuskasing never gave its approval to the control of townsite lots by the company.⁴⁵ Thus, Drury's objective of keeping the municipality from becoming a "company town" such as Iroquois Falls achieved only limited success.

The above events triggered a spate of building activity in the townsite which lasted from 1926 to 1929. During this interval the company built more than 160 homes, a private hospital, hotel, and recreation club, and serviced the subdivision with sewer and water lines.⁴⁶ In contrast to the first development phase associated with the early 1920s, much of this construction occurred in the area west of the Circle and north of Empire



FIGURE 5

Aerial Photograph of the Kapuskasing Area

SOURCE: Ministry of Natural Resources, Province of Ontario, 1972.

Avenue.⁴⁷ The mechanical pulp and newsprint mill was also completed south of the townsite as planned in 1926.⁴⁸ To enhance the visual quality of the urban environment, the company hired a horticulturalist from the Dominion Experimental Farm as a landscape gardener.⁴⁹ It was under his direction that the townsite began to consolidate its "garden city" atmosphere through the development of such projects as a 2.83 hectare park along the banks of the Kapuskasing River from the power plant to the front of the hotel and recreation club, the provision of shade trees and flower beds, and the grassing of the large triangular block south of the hospital.

Aside from a number of school extensions, the period from the Great Depression to the early 1940s was notable for its lack of construction activity. A new development phase, buoyed by the erection of the Kimberly-Clark creped wading mill, was then initiated in the years 1944-46. This phase, involving the building of some one hundred and twenty dwellings situated along the western periphery of the townsite, essentially completed the infilling of the original subdivision layout.⁵⁰

Since 1947 the townsite has been enlarged through the addition of approximately one thousand lots in various subdivisions located to the northwest and to the northeast beyond Gough's Creek. Again much of the impetus for urban growth was derived from the continued expansion of the Spruce Falls operations including the completion of a magnetite mill in 1964 and a sawmill in 1974.⁵¹ The distribution of the new residential areas in relation to the original townsite can be gleaned through a comparison of Figures 3 and 5.

It should be noted in retrospect that the evolution of the townsite from 1921 until 1948 occurred outside the official planning framework of the Province of Ontario. Through its control over land ownership, therefore, the Spruce Falls Power and Paper Company was able to exert a strong corporate influence on the development pattern.⁵² It remained until 1948 before the municipality finally passed a zoning by-law to regulate legally land use.⁵³ The zoning by-law was subsequently accompanied by subdivision control by-laws enacted in 1962 and 1970 and by the municipality's first official plan approved by the Ministry of Housing on April 4, 1975.⁵⁴

B. BRUNETVILLE REHABILITATION PROJECT

The second example of direct involvement by the province in land use planning in the Kapuskasing area pertains to the largely francophone fringe settlement of Brunetville, an unorganized residential community of about 1,100 persons located along the eastern boundary of the Town of Kapuskasing. The emergence of Brunetville, which had its roots in the immediate post World War I period, was fostered by the population growth of the Town of Kapuskasing and the exclusion of the fringe community from the Town of Kapuskasing from 1928 until 1963. For a variety of legal, health, and safety reasons, the Government of Ontario deemed it necessary to begin a major experiment in neighbourhood rehabilitation at Brunetville after 1958.

Population Growth and Boundary Changes

The population growth of the Town of Kapuskasing from 1921 to 1976 is shown in Table 2. During this interval the pop-

ulation grew from 926 to 12,676. The economic foundation for much of this growth was provided by the expansion of wood-based employment opportunities associated with the Spruce Falls Power and Paper and Kimberly-Clark Companies.⁵⁵

TABLE 2

Population Growth in the Municipality of Kapuskasing (1921-1976)

| Year | Population | Year | Population |
|------|------------|------|------------|
| 1921 | 926 | 1961 | 6 870 |
| 1931 | 3 819 | 1966 | 12 617 |
| 1941 | 3 431 | 1971 | 12 834 |
| 1951 | 4 687 | 1976 | 12 676 |
| 1956 | 5 463 | | |

SOURCE: *Censuses of Canada, 1921-1976.*

The growth of Kapuskasing was accompanied by two major boundary sequences. The first sequence involved the contraction of the municipal boundaries prior to 1933 whereas the second was linked to a series of annexations between 1947 and 1964. The process of boundary change began on April 3, 1928 when lots 18 and 19 in Concessions XII, XIII, XIV, and XV were detached from the Town of Kapuskasing by statute law amendment.⁵⁶ It was through this device that the eastern fringe settlements of Brunetville and Val Albert were legally divorced from the townsite proper (Figure 6). The official intent of the contraction was to reduce the municipality's financial load;⁵⁷ however, it is likely that this process of spatial division was partly motivated by the underlying cultural differences between the Anglo-Saxon and Francophone populations who resided in the urban and rural parts of the municipality respectively.⁵⁸ A parallel process occurred on March 29, 1932 along the western periphery of the town when the following lots were also detached by statute law amendment: lots 23 and 24 in Concession XII; lots 22, 23 and 24 lying west of the Kapuskasing River in Concession XIII; lot 23 south of the Kapuskasing River and lot 25 in Concession XIV; and lot 24 in Concession XV lying west of the Kapuskasing River.⁵⁹ By 1932, therefore, the area of the municipality had been reduced to less than half of its original size.

The sequence of town enlargement began on October 28, 1947 when the Ontario Municipal Board ordered the annexation to the municipality of parts of lots 21 and 22 in Concession XIII and all of lots 21, 22, 23, and 24 east of the Kapuskasing River in Concession XII (Figure 7).⁶⁰ The annexed area was important as it contained the woodworking operations of the Spruce Falls Power and Paper Company. The annexation was motivated by a move on the part of non-residents of Kapuskasing to organize the whole of the Township of O'Brien which would have included the mill property.⁶¹ On April 1, 1956, the Ontario Municipal Board ordered the annexation of lots 20 to 24 east of the Kapuskasing River in Concession XIV to the municipality in order to provide the townsite with space for expansion in a northerly direction.⁶²

TOWN OF KAPUSKASING BOUNDARIES (1921-1932)

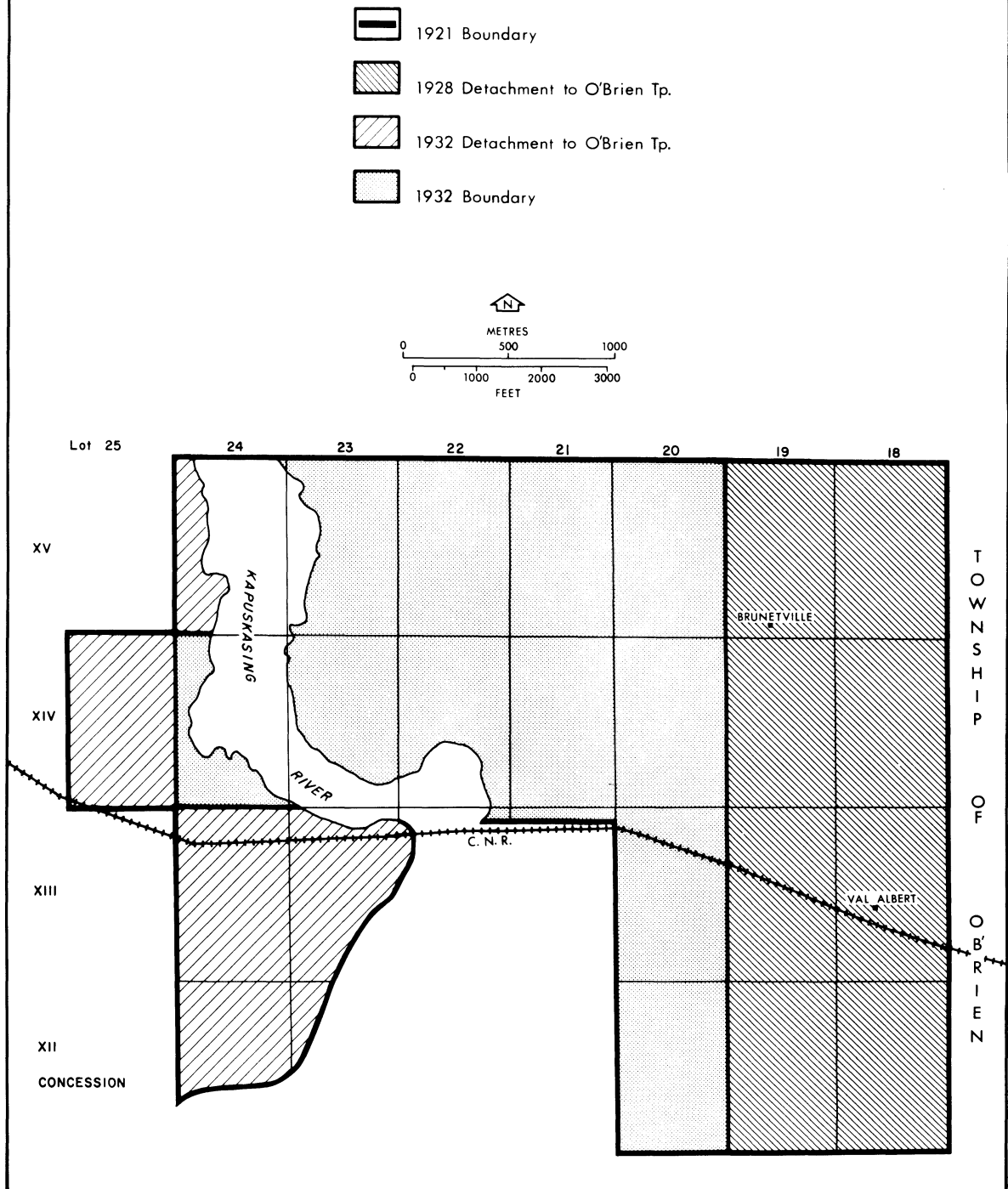








FIGURE 6

Town of Kapuskasing Boundaries (1921-1932)

SOURCE: See footnotes 56 and 59.

TOWN OF KAPUSKASING BOUNDARIES (1933-1979)

-  1933 Boundary
-  1947 Annexation from O'Brien Tp.
-  1956 Annexation from O'Brien Tp.
-  1964 Annexation from Improvement District of Val Albert
-  1964 Annexation from O'Brien Tp.
-  1979 Boundary

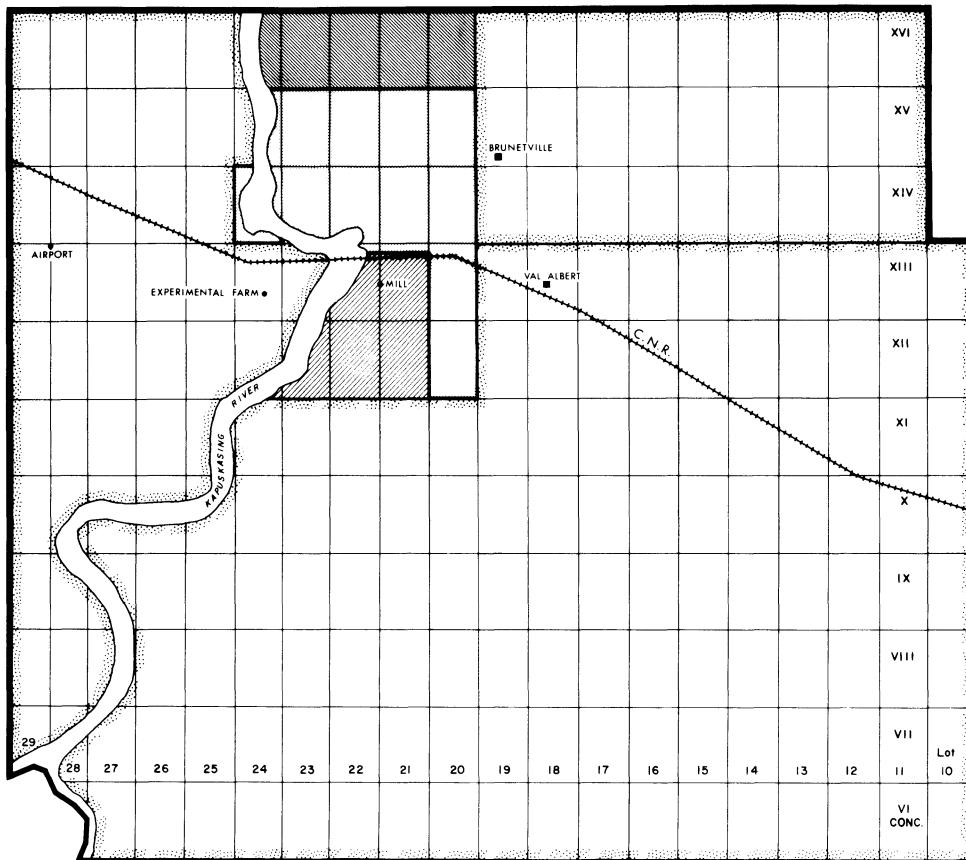
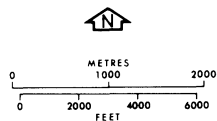


FIGURE 7

Town of Kapuskasing Boundaries (1933-1979)

SOURCE: See footnotes 60-64.

In the meantime, the inhabitants of the Val Albert area of the Township of O'Brien had succeeded on December 31, 1956 in incorporating the Improvement District of Val Albert.⁶³ This event was followed on January 1, 1964 by the annexation to the Town of Kapuskasing of the whole of the Improvement District of Val Albert, the lands of the Dominion Experimental Farm and the airport, and lots 11 to 19 in Concessions XIV, XV, and XVI (Figure 6).⁶⁴ The decision of the Board thus served to reincorporate the suburban areas of Brunetville and Val Albert which had been detached from the Town of Kapuskasing in 1928.

Rehabilitation process

The history of Brunetville extends back to the post World War I period when Mr. M. Brunet settled on a large parcel of land within the Kapuskasing municipal boundaries located east

of the townsite proper. The property was actually Crown land held in trust by the Department of Land and Forests until the obligations under the Squatters Act were carried out. Shortly thereafter, four other lots averaging 40.5 hectares each were also settled in the same general vicinity. In 1926 Brunet made an unsuccessful application to subdivide his property.⁶⁵ As noted previously, the land was then detached from the municipality in 1928. For a variety of reasons including low taxation, the lack of municipal regulations, cheap land, and difficulties in obtaining satisfactory accommodation in the townsite, the demand for lots in the unorganized Brunetville area continued to grow during and after the Great Depression.⁶⁶ The original owners of the 40.5 hectare farms responded to the pressure by selling or leasing their lands for residential purpose on a 99-year basis. Most of the land transactions, however, were completed without any recourse to legal surveying or registration requirements; consequently, the land officially remained the property of the original settlers.⁶⁷

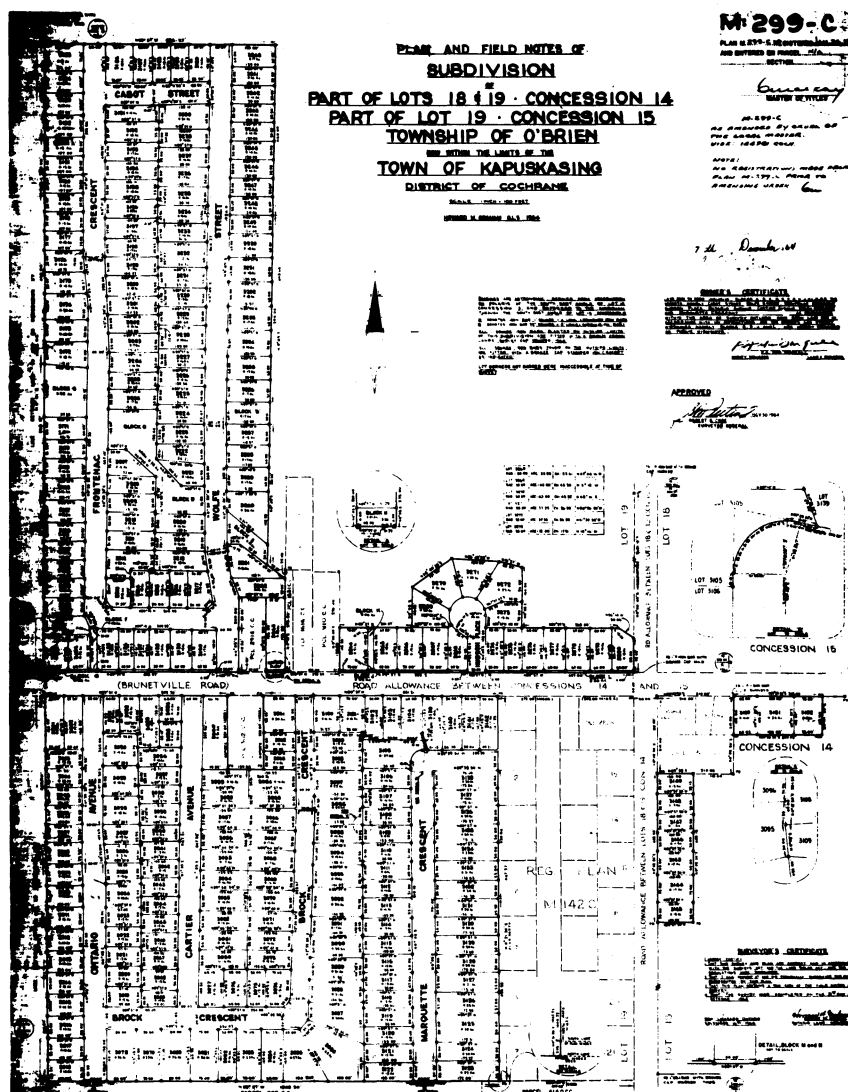


FIGURE 8

Plan of the Brunetville Subdivision

SOURCE: Office of Land Titles, District of Temiskaming, Plan M-299-C, January 26, 1965.

The confused ownership status was accompanied by the existence of a chaotic land use pattern. As one observer noted, houses were "erected haphazardly, wherever it was most convenient and without any pattern, on plots of land defined from 'this house to that tree', along narrow means of access, all with dead-ends. In one case, the actual distance between houses across a 'street' was 23'...in another case the fronts of houses on one side of a street faced the backs of property on the opposite side of the street."⁶⁸ The streets were generally no more than dirt lanes, impassable in winter and bordered with littered yards.⁶⁹ The close knit land use pattern also brought with it an increased concern for pollution problems. The concern was due to the existing reliance on shallow private wells and improper types of septic tanks. It was the lack of proper sanitary conditions that eventually led the residents to seek annexation to the Town of Kapuskasing on July 29, 1958. Due to the ownership situation, the petition for annexation was denied by the Ontario Municipal Board.⁷⁰ The annexation hearing, nevertheless, was important as it made it clear that the situation in Brunetville was too large a problem to be handled solely at the municipal level.

On September 23, 1960, the Ontario Department of Lands and Forests placed a forfeiture order under the Public Lands Act covering the unregistered land in the Brunetville area whose owners had failed to pay the provincial land tax.⁷¹ The action, the first of its kind ever exercised in Ontario, effectively vested most of the land in the affected area in the hands of the province. The provincial government also passed an order-in-council under Section 27 of the Planning Act which took effect September 30, 1960 to restrict further private development.⁷² These events were accompanied by discussions between the Town of Kapuskasing and the Ontario Department of Municipal Affairs regarding the possible annexation of Brunetville to Kapuskasing and the development of a rehabilitation programme for the fringe settlement. Various proposals for future courses of action were subsequently formulated by provincial agencies. The Department of Lands and Forests and the Community Planning Branch of the Department of Municipal Affairs agreed to examine the possibility of re-subdividing the land and proposing alternatives for providing services. The Department of Municipal Affairs likewise undertook to conduct surveys on building conditions, population characteristics, and market valuations. As well, the Department of Health and Welfare was charged with the responsibility of assessing sanitary conditions and recommending solutions.⁷³

The above events were followed on July 23, 1962 by the presentation of a policy memorandum to the Ontario Committee on Townsites.⁷⁴ On the basis of this memorandum the following policy recommendations were approved: the securing of municipal status for Brunetville, the elimination of pollution and water supply problems, reorganization of the street and building lot system, upgrading of substandard housing conditions and the transfer of land ownership back to the occupants from the Crown.⁷⁵ In 1963 an agreement was reached with the Town of Kapuskasing on financing, planning, and rehabilitation with the province acting as a subdivider for the Brunetville area. It was on the basis of this understanding that the Town of Kapuskasing agreed to annex Brunetville on January 1, 1964.

The annexation provided the foundation for the implementation of two programmes between 1964 and 1971. The first consisted of the pre-servicing programme started in 1964, and it

involved the formation of the Brunetville Rehabilitation Liaison Committee comprised of various municipal, provincial, and federal representatives,⁷⁶ the selection of the project manager, the completion of surveys, the holding of public meetings, the establishment of a yard-cleaning campaign, the provision of financial assistance, and the preparation of a plan of subdivision. The latter was quickly acted upon and on January 26, 1965, a plan was formally registered with the province.⁷⁷ The 280-lot plan, illustrated in Figure 8, served to replace the existing haphazard pattern by one which was characterized by standardized lot arrangements and wider streets framed within a grid network. The second programme, undertaken between 1964 and 1971, involved the completion of the internal servicing system. The programme, which really did not get under way until 1966, concerned the process of home improvement. This activity phase was broad in scope, and it dealt with such matters as educational and financial assistance for dwelling rehabilitation, the relocation of certain houses to conform with the plan of subdivision, the demolition of buildings structurally incapable of being improved, the repurchase of land by residents from the Ontario Housing Corporation,⁷⁸ and the construction of senior citizen and low rental housing units. An important aspect of this programme was the high degree of involvement on the part of the citizens affected by the rehabilitation process.⁷⁹ A summary of some of the aspects associated with the Brunetville experiment is given in Table 3. According to the Administrator of the Town of Kapuskasing, the total costs associated with the improvement of the Brunetville settlement were in the order of three million dollars.⁸⁰ A review of the literature dealing with the Brunetville experiment suggests that the project was considered an unqualified success from both the neighbourhood and municipal perspectives.⁸¹

TABLE 3

Aspects of the Brunetville Rehabilitation Programme (1964-1970)

HOME IMPROVEMENTS:

- 140 properties involved with rehabilitation
- 62 substandard buildings demolished
- 22 utility buildings demolished
- 13 residences relocated
- 20 senior citizen units constructed
- 24 rental housing units constructed
- 9 units purchased from pensioners and rehabilitated
- 119 new homes constructed, many on additional lots provided by the plan of subdivision

SERVICE IMPROVEMENTS:

- Water supply system (supply lines, transmission main, water tank, wells and treatment plant)
- Internal services (water distribution, storm sewers, roads, access road, and sanitary sewers)
- Sewage disposal (lagoon, pumping station, force main)

SOURCE: Department of Municipal Affairs, *Brunetville: A Neighbourhood Reborn* (Toronto, 1972).

C. LAND USE IMPLICATIONS

The provincial land use initiatives in the Kapuskasing area have served as major pilot projects for related planning actions in other parts of Canada. With respect to the original planning of the township, the planning process was unique because it firmly introduced the concept of direct public involvement in the planning of Canadian resource communities.⁸² As such, the early steps taken by Ontario provided a historical precedent for provincial intervention in the planning of resource townships after World War II.⁸³ The Kapuskasing project similarly provided a strong land use rationale for the incorporation of large areas beyond resource townships in order to control fringe area developments. The long-term consequences of having unplanned settlements such as Brunetville separate from the planned township proper was undoubtedly a contributing factor prompting the creation of large resource municipalities in Northern Ontario such as the Township of Manitouwadge (50.75 hectares) and the Town of Elliot Lake (118.25 hectares).⁸⁴ Finally, the attempt by the Drury government to diversify property ownership, while not totally successful, was nonetheless sufficient to ensure that the single enterprise community never did become a closed company town. The favourable atmosphere in Kapuskasing brought about by the existence of private home ownership consequently provided substantial encouragement for resource companies to separate their employ-

er and landlord functions after the 1950s.⁸⁵

In contrast, the Brunetville experiment was significant for its role in helping to shift the focus of urban renewal in Canada from redevelopment to rehabilitation. The importance of Brunetville in this respect has yet to be fully appreciated. Following the demise of federal involvement in urban redevelopment after the publication of the *Report of the Federal Task Force on Housing and Urban Development* (Hellyer Report) in 1969,⁸⁶ the Canada Mortgage and Housing Corporation planners began to search for new policy directions. According to C. David Crenna, Strategy Planner in the Policy Division of the corporation, the provincial Brunetville project was examined as a potential model for future renewal planning.⁸⁷ Another official, J.E. Thompson, the C.M.H.C. District Manager, North, for the Province of Ontario, and a participant in the activities of the Brunetville Rehabilitation Liaison Committee, has suggested that the project was especially noteworthy for its high degree of citizen involvement and its minimal impact in terms of family relocation.⁸⁸ A similar view has been expressed by J. Brown, Director of the Community Renewal Branch of the Ontario Ministry of Housing.⁸⁹ On the basis of the above comments, it can be concluded that the suburban Brunetville rehabilitation project should be included along with other major inner-city projects in metropolitan areas as one of the underlying threads leading to the development of a new model for urban renewal in Canada.

NOTES

1. Institute of Local Government, Queen's University, *Single-Enterprise Communities in Canada* (Kingston, 1953), p.83.
2. M.K. Rukavina, "A Historical Sketch," in *The First Fifty Years, Kapuskasing* (The Kapuskasing Golden Jubilee Souvenir Book Committee, 1971).
3. E.Bonner, *History of the Woodlands* (Kapuskasing: Spruce Falls Power and Paper Company, 1965), p.1.
4. Watson Kirkconnell, *Kapuskasing - An Historical Sketch*, Bulletin No. 38, Departments of History and Political Science (Kingston: Queen's University, 1921), pp. 1-15.
5. Margaret Paterson, *Carved From the Forest: A History of Kapuskasing* (Kapuskasing: *The Northern Times*, 1967), p.13.
6. "Experimental Farm Role in Developing North," *The Northern Times*, 23 June 1971.
7. *Statutes of Ontario*, 7, George V, c.13, 1917.
8. Department of Lands, Forests and Mines, *Annual Report 1918* (Toronto: King's Printer, 1919), p.160.
9. Richard Lambert and Paul Pross, *Renewing Nature's Wealth* (Toronto: Queen's Printer, 1967), pp.304-05.
10. Commission of Enquiry, *Kapuskasing Colony, Report* (Toronto: Queen's Printer, 1920).
11. Lambert and Pross, *Nature's Wealth*, p.306.
12. A.R.M. Lower, *Settlement and the Forest Frontier in Eastern Canada* (Toronto: Macmillan, 1936), p.120.
13. George C. Wilkes, "Ground Rent for Provincial Forest Land in Ontario," *Canadian Journal of Economics and Political Science*, Vol. XXII, No. 1 (1956), p.68.
14. Lambert and Pross, *Nature's Wealth*, pp.250-51.
15. Department of Lands and Forests, *Annual Report 1920* (Toronto: King's Printer, 1921), p.11; and *Statutes of Ontario*, 11, George V, c.36, Schedule B, 1921.
16. "Kimberly-Clark's Faith Provided New Horizons," *The Northern Times*, 23 June 1971.
17. Department of Lands and Forest, *Annual Report 1920*, p.11.
18. Alfred V. Hall, "Considerations in the Laying Out of the Town of Kapuskasing," *The Canadian Engineer*, Vol. 43, No. 7 (1922), p.260. See also "An Experiment in Town Building," *Social Welfare*, Vol. V, No. 3 (1922), p.55.
19. E.C. Drury, *Farmer Premier: Memoirs of the Honourable E.C. Drury* (Toronto: McClelland and Stewart, 1966), p.131.
20. *Ibid.*, pp.96-97.
21. Commission of Enquiry-Kapuskasing Colony, *Report*, p.6.
22. Lambert and Pross, *Nature's Wealth*, pp.250-69; and H.V. Nelles, *The Politics of Development: Forest, Mines and Hydro-Electric Power in Ontario, 1842-1941* (Toronto: Macmillan, 1975), pp.113-17 and 382-99.
23. Drury, *Farmer Premier*, p.84; and Peter Oliver, *G. Howard Ferguson: Ontario Tory* (Toronto: University of Toronto Press, 1977), p.88.
24. Timber Commission, *Report* (Toronto: King's Printer, 1922), pp.5-43.
25. Premier Drury and Colleagues Visit Iroquois Falls, "The Book Hustler, 13 December 1919; and Drury, *Farmer Premier*, p.101.
26. *The Book Hustler*, 13 December 1919.
27. Such a view can be gleaned from Drury, *Farmer Premier*, pp.101-02. See also Oiva Saarinen, "The Influence of Thomas Adams and the British New Town Movement in the Planning of Canadian Resource Communities," in Alan F.J. Artibise and Gilbert A. Stelter, eds., *The Usable Urban Past: Politics and Planning in the Modern Canadian City* (Toronto: Macmillan, 1979), p.291 n.54.
28. *Statutes of Ontario*, 11, George V, c.36, 1921.
29. It was the intention of the province to limit sales to individuals in order to avoid speculation. Provincial Archives of Ontario, Drury Papers: General Correspondence re Kapuskasing Township, Letter from Hon. E.C. Drury to W.A. Douglass, January 7, 1921.
30. *Statutes of Ontario*, 11, George V, c.36, 1921.
31. Drury, *Farmer Premier*, pp.131-32. Drury originally intended to purchase 121.4 hectares of land from the Dominion Experimental Farm. Negotiations with the federal government in 1920 were, however, unsuccessful.
32. The possibility of flooding was due to the slightness in the fall of the Kapuskasing River between the township and the location of the northern power station. See Alfred V. Hall, "Considerations in the Layout of the Town of Kapuskasing," *Journal of the Town Planning Institute*, Vol. I, No. 10 (1922), p.6.
33. *Statutes of Ontario*, 11, George V, c.36, 1921.
34. PAO, Drury Papers: General Correspondence re Kapuskasing Township, Memorandum for Hon. E.C. Drury from J.A. Ellis, June 20, 1921.
35. Hall, "Town of Kapuskasing," p.7.
36. Office of Land Titles, District of Temiskaming, Plan M-45, August 8, 1922.
37. *Ibid.*
38. PAO, Bureau of Municipal Affairs: Kapuskasing, Memorandum by J.A.

- Ellis re Town of Kapuskasing Bill.
39. Town of Kapuskasing, *Plan of Subdivision at Townsite of Kapuskasing, Ontario and House Ownership Pattern*.
40. Patrick J. Butcher, "The Establishment of a Pulp and Paper Industry at Kapuskasing," M.A. Thesis (University of Western Ontario, 1978), p.94.
41. See "One of Earliest Views of Kapuskasing's Famous Circle," *The Northern Times*, 23 June 1971.
42. Drury, *Farmer Premier*, p. 132.
43. Butcher, "Kapuskasing," p. 115.
44. Department of Lands and Forest, *Annual Report 1926* (Toronto: King's Printer, 1927), pp.89-95. A summary of the development of the Spruce Falls Power and Paper Company during the 1920s is given in "The Spruce Falls Power and Paper Company Means Much to Northern Ontario," *Pulp and Paper Magazine of Canada*, November 14, 1929, pp.739-48, 755-64.
45. The events surrounding the transfer of lots to the company are traced in Butcher, "Kapuskasing," pp. 127-29.
46. M.K. Rukavina, "Half a Century in Kapuskasing History," *The Northern Times*, 23 June 1971; and Butcher, "Kapuskasing," p. 130.
47. Town of Kapuskasing, *Plan of Subdivision*.
48. Bonner, *History of the Woodlands*, p.4.
49. Paterson, *A History of Kapuskasing*, p.28.
50. The layout and property ownership associated with the townsite around this time are depicted in Spruce Falls Power and Paper Co. Ltd., *Town of Kapuskasing House Lot Nos. Map No. SB9669* (Kapuskasing, 1948).
51. Bonner, *History of Kapuskasing*, p.9; and Town of Kapuskasing, *Kapuskasing: The Model Town of the North* (Kapuskasing, n.d.), p.3.
52. Marshall, Macklin, Monaghan Limited, *Town of Kapuskasing Urban Renewal Study* (Kapuskasing, n.d.), p.3.
53. Town of Kapuskasing, *Zoning By-Law No. 466* (Kapuskasing, 1948). The by-law received the approval of the Ontario Municipal Board on July 28, 1949.
54. Town of Kapuskasing, *Official Plan of Kapuskasing and District Planning Area* (Kapuskasing, 1975); and *Kapuskasing Urban Renewal Study*, p.65.
55. The Kimberly-Clark Company mill at Kapuskasing is a subsidiary of the Kimberly-Clark Corporation.
56. *Statutes of Ontario*, 18, George V, c.21, s.20, 1923.
57. Department of Municipal Affairs, Community Planning Branch, *Brunetville: A Neighbourhood Reborn* (Toronto: Queen's Printer, 1972), p.6.
58. See, for example, S.D. Clark, "The Position of the French-Speaking Population in the Northern Industrial Community," in R.J. Ossenberg, ed., *Canadian Society: Pluralism, Change, and Conflict* (Scarborough: Prentice-Hall, 1971), pp.62-85.
59. *Statutes of Ontario*, 22, George V, c.53, s.34, 1932.
60. Ontario Municipal Board, Order PFB6737, 1947.
61. Rukavina, "Kapuskasing History."
62. Ontario Municipal Board, PFM40725-55, 1955.
63. Ontario Municipal Board, PFM2191, 1954.
64. Ontario Municipal Board, N5511-63 N.3641-62, 1963.
65. Butcher, "Kapuskasing," p.129.
66. M.K. Rukavina, *The Brunetville Story*, (Kapuskasing, 1976), p.1.
67. Department of Municipal Affairs, *Brunetville*, p.7.
68. Rukavina, *Brunetville*, p.1.
69. Linda Gray, "Brunetville, Ontario: An Experiment in Rehabilitation," *Urban Renewal and Low-Income Housing*, Vol. 6, No. 3 (1970), p.2.
70. Department of Municipal Affairs, *Brunetville*, p.11.
71. Rukavina, *Brunetville*, p.2.
72. Department of Municipal Affairs, *Brunetville*, p.28.
73. *Ibid.*, pp.29, 38. See also "The Brunetville Story," *Ontario Planning Newsletter*, March-April, 1966, pp.1-2; and "Brunetville: A Co-operative Venture," *Ontario Housing*, Vol. 11, No. 1 (1965), pp.20-21.
74. The Cabinet Committee on Townsites had originally been formed in 1953 to deal with various aspects of townsite planning in Northern Ontario.
75. The price of a serviced lot ranged from \$1,450 to \$2,200. See Ontario Housing Corporation, *Brunetville Improvement Program* (n.d.).
76. The Liaison Committee met on forty-five occasions between March 13, 1964 and March 24, 1971. See Town of Kapuskasing Archives, Brunetville File, *Minutes of the Brunetville Rehabilitation Committee Meetings (1964-1971)*.
77. Office of Land Titles, District of Temiskaming, Plan M299-6, January 26, 1965.
78. The title of the land was passed from the Department of Lands and Forests to the Ontario Housing Corporation to facilitate financing under the Housing Development Act. See J.F. Brown, "Rehabilitation for Real," *Urban Renewal and Public Housing in Canada*, Vol. 3, No. 2 (1967), p.14.
79. The high degree of interaction from between the project staff and the residents was facilitated by the decision to locate the project office in Brunetville rather than Kapuskasing.
80. Telephone communication with M.K. Rukavina, November 15, 1979.
81. Department of Municipal Affairs, *Brunetville*; Rukavina, *Brunetville*; Kapuskasing District High School Geography Department, *The Brunetville Story* (1968), p.5; Town of Kapuskasing Archives, Brunetville File, Memo to D.F. Taylor, Executive Director, Local Government Services Division, from J.F. Brown, Manager, Project Development Group, October 22, 1973, pp.1-3.
82. Norman Pressman, *Planning New Communities in Canada* (Ottawa, Ministry of State for Urban Affairs, Urban Paper A 75.4, 1975), p.43 n.9. It should be mentioned, however, that there had previously been some federal involvement in resource planning by the Commission on Conservation and its planning advisor, Thomas Adams.
83. F.H.D., "Manitouwadge: A New Ontario Mining Community," *Ontario Planning Supplement*, Vol. 4, No. 2 (1957), p.3; R.N. Percival, "New Towns for Ontario," *Town and Country Planning*, Vol. 25 (February 1957), p.81; and D.F. Taylor, "New Communities in Northern Ontario," *Housing News Letter*, Vol. III, No. 2 (1957), n.p.
84. Province of Ontario, Ministry of Treasury, Economics and Intergovernmental Affairs, *Municipal Directory 1977-78* (Toronto, 1977), pp.80 and 96.
85. This encouragement came about primarily through the recommendations contained in the major study of single-enterprise communities undertaken by the Institute of Local Government at Queen's University in 1953. See Institute of Local Government, *Single Enterprise Communities in Canada*, pp.83-90 and 257-258. According to the study, 58 per cent of the housing stock in Kapuskasing was owned by the Spruce Falls Pulp and Paper Company.
86. Paul T. Hellyer, *Report of the Federal Task Force on Housing and Urban Development* (Ottawa, Queen's Printer, 1969).
87. Telephone communication with C. David Crenna, November 15, 1979.
88. Telephone communication with J.E. Thompson, November 16, 1979.
89. Telephone communication with J. Brown, November 13, 1979.