

P E M B R O K E ,

A

S T U D Y O F T H E T O W N  
A N D I T S I N D U S T R I E S

By

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*L. S. Reeds.*

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## PREFACE

This is a study of a town and its industries. The town under scrutiny is Pembroke, Ontario, a town which has been described as a frontier town and as Canada's next city.

The procedure which was followed in compiling this thesis was one of collecting information through personal interviews with various industrial and civic officials, research in the historical collection of the Pembroke Public Library, and the McMaster University Library, and from statistics contained in the 1951 Canadian Census. Besides information gathered in this manner many of the data used in this study have come from personal observation.

The information so gathered has been analyzed and an attempt has been made to relate the various factors to each other. These factors fall into two categories, the physical geography of the town's location and man. The relationship of these two interests has resulted in the development of an urban community which has a character and a personality of its own.

February 17, 1956,  
Edwards Hall,  
McMaster University.

  
W. A. M.

## INTRODUCTION

Every community is shaped by two main factors and these are reflected in the very nature of the community. These factors are the warp and woof of the town. They are the physical setting, and man.

The physical setting is the foundation upon which a town is built. This foundation, as in the construction of a building, determines the possibilities of the superstructure. Upon this foundation is laid the arrangements of streets, the location of industry, shops and residences, the recreational sites, and most important, the way man earns his livelihood. Topography is the main control of this physical structure of human settlement, but the whole physical geography of a location determines the very reason for the settlement of human beings at a particular point in space and time. The physical geographic centre is therefore the first given quantity in our equation, but this is not the whole story.

The second quantity is man. Man is a rational animal and must always have a reason for his action. In life certain requirements must be met. They include security, shelter, food, a livelihood, and

other numerous necessities of life. Only certain places on the earth, or as we shall call it, in space, provide these needs and all through history, or time, these needs have remained constant. Needless to say, the individual requirements have changed their characteristics through the application of other forces, such as the change in political theory, climate, tastes, or physiography, but the basic needs still remain.

We now have a geographic equation, physical setting plus man and his needs equal, what we shall call for the moment, the unknown quantity.

We, of course, cannot leave this quantity unknown or our equation will mean nothing to us. So, like a true mathematician we shall attempt to solve the equation and find the unknown. No doubt, it is obviously quite clear what the unknown quantity is. The physical setting, or land, plus man is going to result in some type of community being formed. How this community appears to the observer depends of course upon that most important factor, man's needs. Not only will the community show his present needs, but it will also reflect the change in these needs from the time the geographic equation

could be first applied to a given space. Also, the observer will see reflected man's attempts to meet the changing needs brought about by the application of the outside forces mentioned above without changing his position in space.

Space never remains constant. Obviously time is always changing, but time has a direct effect on space. The forces of nature and man applied through time cause space to be inconstant also. As a result, with an inconstant quantity in the equation, we find that the answer is inconstant also. Because of this we find that man, being a sedentary being (especially in the western world), is always attempting to reconcile space with time in order that his desire for the necessities of life might be satisfied. A change of space is only a last resort.

The observer of a community should always keep this in mind and should never consider any settlement of people as a static organization. No one should attempt to stop time.

Our geographic equation has now changed its character. It is now a theorem ready to be applied to a community. By substituting into the theorem



what we learn about a community, be it rural or urban, we should arrive at a fairly complete picture of ~~that~~ community. It is this that we intend to do with the urban agglomeration known as Pembroke.

Following the theorem, land plus man equals the community, we shall show what the physical foundation of Pembroke is. Then we shall trace the development of the town in time and space from the moment the first permanent settler established his habitation in the space that was to become Pembroke to the present, but always remembering that the present is not static, but is either looking to the past or advancing to the future. We shall try to show how, from the first settler and his reason for choosing this point for his home, the succeeding generations have attempted to adapt themselves to the changing conditions imposed upon them by time.

For many years the original reason for settlement dominated the scene, but we find that this reason is losing its importance, and we see now a town that is going through a transition period. Whether this transition will be successful, only time can tell, but we can try to be critical, both

constructively and destructively, of the way in which this transition is progressing.

It is therefore, the purpose of this thesis to objectively look at the town of Pembroke with three things in mind; physical space, man and his necessities, and the end result, the community.

## CHAPTER I

THE PHYSICAL GEOGRAPHY OF THE PEMBROKE AREAIntroduction

In order that this study of a town and its industries may proceed in a logical sequence it will be necessary to discuss those things which remain, for the most part, constant factors in the geography of the town. These things are those features of the physical geography such as the geology, the climate, the soils, drainage, and the natural vegetation, or forest resources.

The physical geographer will object to calling these features constant. However, the changes in physical geography are so subtle, that where it is being used as a foundation it is better to regard it as constant. And so this chapter is intended to establish the environment of the town, an environment, devoid of the human element, and based on the forces of nature.

The chapter in itself has another purpose. This purpose is to show how geology, climate, soils, and drainage have developed the basic resource of the town, the forest, for as we shall see most

LOCATION  
OF THE  
TOWN OF PEMBROKE

SCALE - 1 : 3,000,000

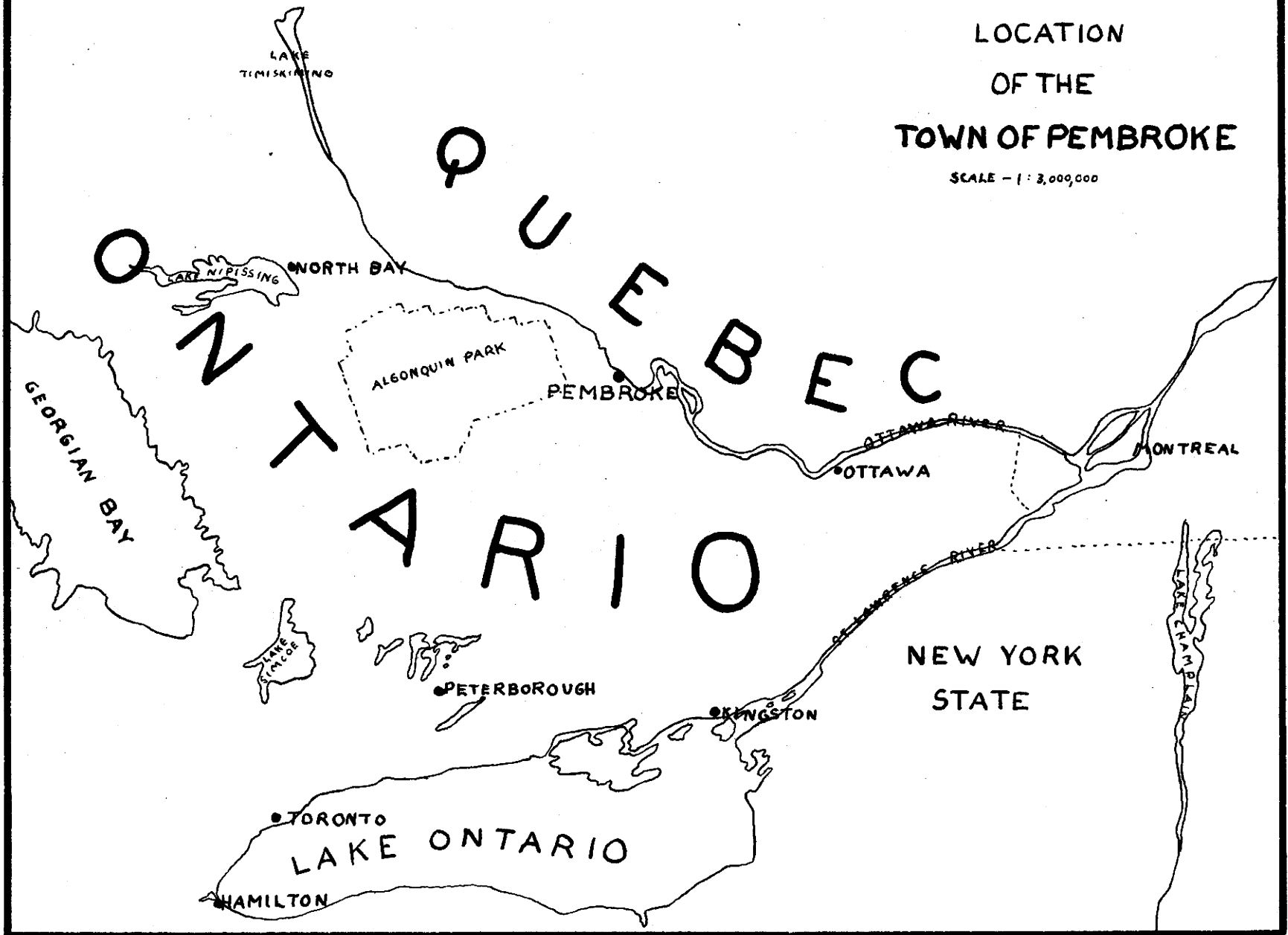


FIG 1 - 1

forcibly later on, that, were it not for the forest resources of the hinterland, the town of Pembroke, in all probability, would not exist today.

### Location

Located in the township of Pembroke, the county of Renfrew, and the Province of Ontario, the town of Pembroke is found in the northern part of the region known as the Ottawa Valley. It is located at approximately 77°1' west and 45°49' north on the border between the provinces of Ontario and Quebec where the Ottawa River widens to form Allumette Lake. (Fig. 1 - 1)

### Structure and Physiography

The bed rock of the county of Renfrew is, except for a number of outliers of Paleozoic rock in the eastern part, of Pre-Cambrian age. The Paleozoic sediments lie as unfaulted outliers within a structurally depressed and topographically low belt, about 35 miles wide, between the Colonge fault-line scarp on the Quebec side and the St. Patrick scarp south of Calabogie lake. <sup>(1)</sup>

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(1) Kay, G.M., Ottawa-Bonnechere Craben and Lake Ontario Homocline, Pp. 585 - 646.

# PHYSIOGRAPHIC MAP

SCALE: 1 INCH = 4 MILES

PRE-CAMBRIAN	
SAND PLAINS	
CLAY PLAINS	
TILL PLAINS	
KAME MORIANES	
BOGS OR MARSHES	
LIMESTONE PLAINS	

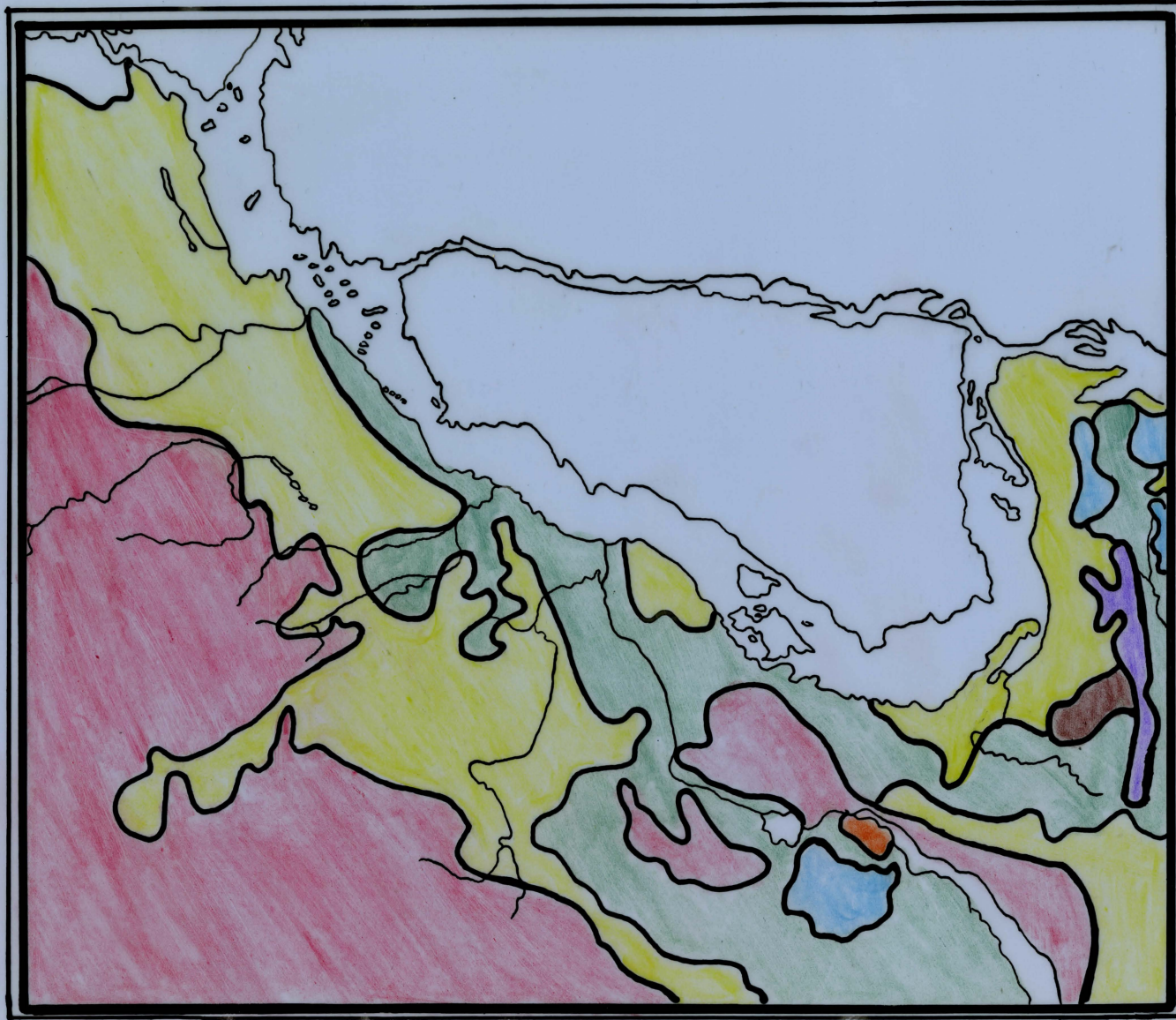
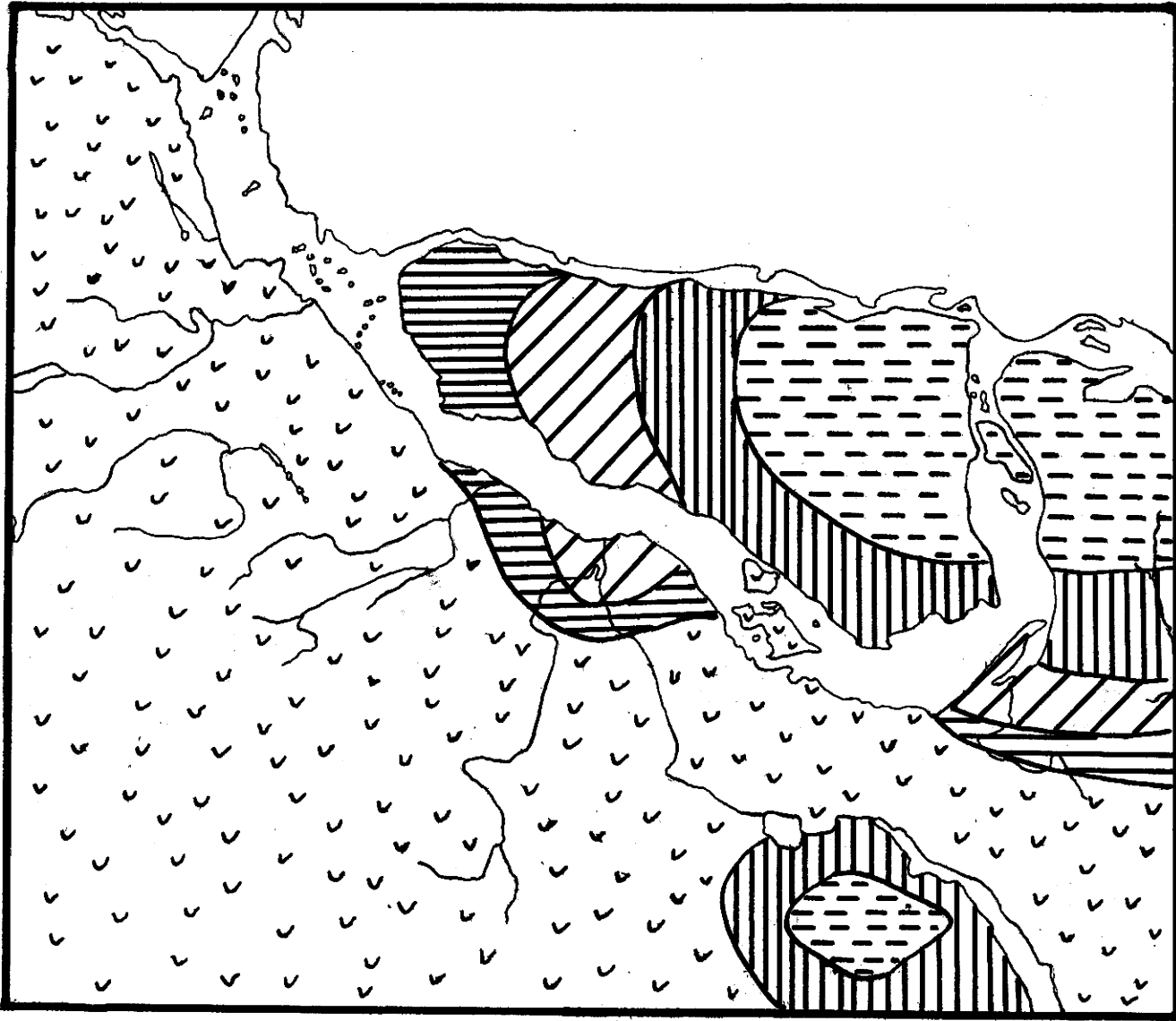


FIG. 1-2





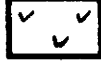
CHAPMAN & PUTNAM

Fig. 1 - 3



# GEOLOGIC MAP

SCALE  
1 INCH = 1 MILE

-  BEEKMANTOWN  
FORMATION, LIMESTONE (DOLOMITIC)
-  CHAZY  
FORMATION, LIMESTONE
-  CHAZY  
FORMATION, (SHALE & SANDSTONE)
-  BLACK RIVER  
FORMATION, (LIMESTONE)
-  PRE-CAMBRIAN

# PHYSIOGRAPHIC MAP

SCALE: 1 INCH = 4 MILES

## GEOLOGIC MAP

PRE-CAMBRIAN SCALE

1 INCH = 1 MILE

SAND PLAINS

CLAY PLAINS

TILL PLAINS

KAME MORIANES

BECKMANTOWN FORMATION, LIMESTONE (DOLOMITIC)

CHAZY LIME PLAINS FORMATION, LIMESTONE

CHAZY FORMATION, (SHALE & SANDSTONE)

BLACK RIVER FORMATION, (LIMESTONE)

PRE-CAMBRIAN



Fig. 1 - 3  
FIG. 1 - 2



The town of Pembroke is located on one of these Paleozoic outliers. (Fig. 1 - 2, - 3)

These paleozoic outliers are made up of various types of limestone of Ordovician age. Those underlying Pembroke are Beekmantown and Chazy. The Beekmantown limestones are of sandy and otherwise impure dolomitic limestone, while the Chazy limestones (mostly shale) are fine grained to dense and contain considerable pyrite. All the Paleozoic rocks in the county are in flat-lying beds and are all marine sediments of Ordovician age. (2)

During the Quaternary period two types of uncemented surface materials were laid down. The first were glacial deposits consisting of unsorted sand and gravel forming boulder clay and bouldery sand and gravel, and roughly sorted sand and gravel carried by water from the melting glacier front. In the lowlands this material is covered by the materials deposited from the waters of the Champlain Sea, a large gulf of the ocean which inundated the eastern part of Canada. These Champlain Sea deposits consist of mud deposits forming a mantle of clay and coarser

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(2) Goudge, M.F., Limestones of Canada, Part IV, Pp. 162 - 170.



Fig. 1 - 4; A view looking south from Pembroke Street showing the second and highest terrace of the Ottawa River.

materials deposited nearer the shore to form extensive sand plains.

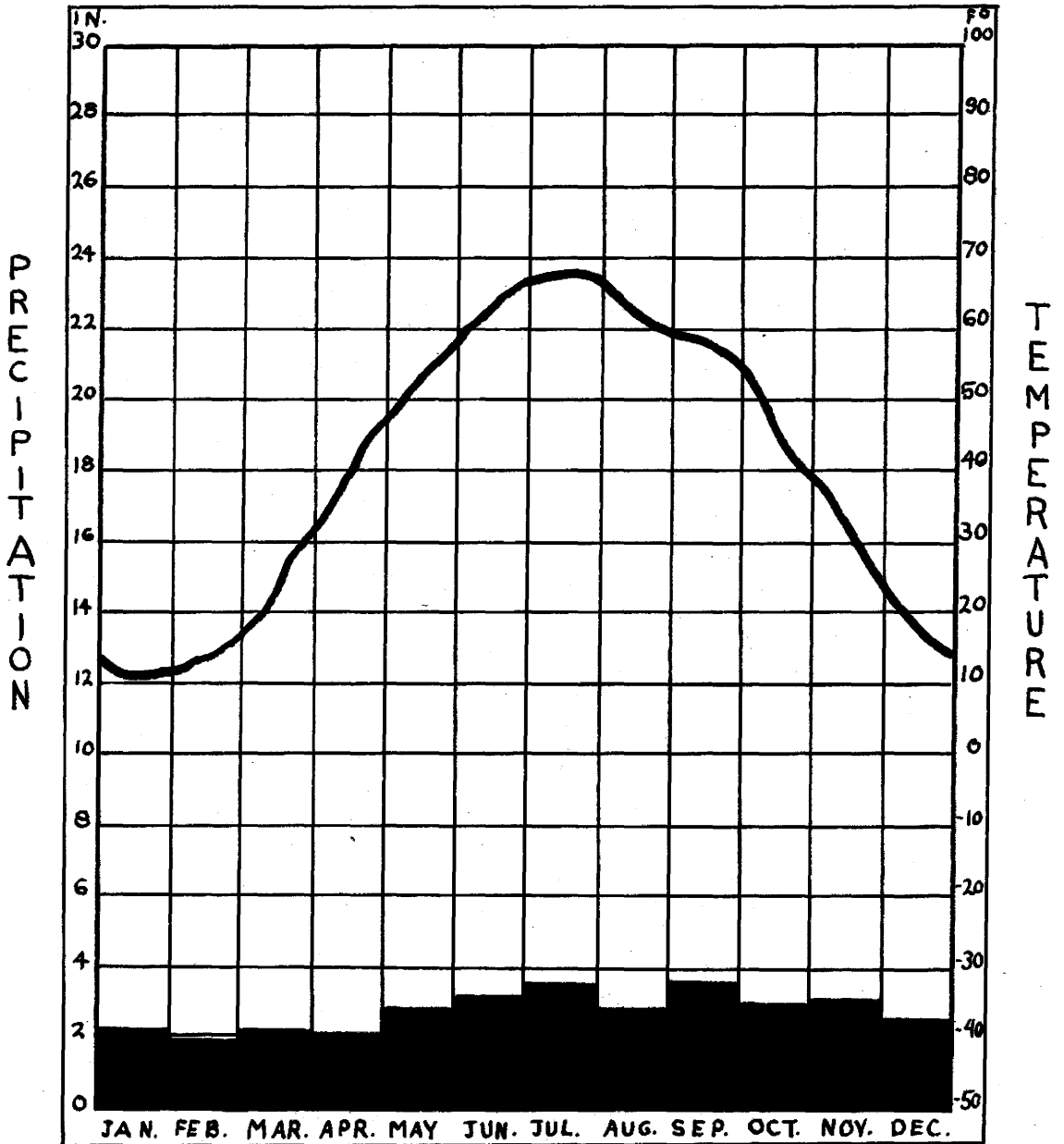
As the sea receded and the land rose as a result of elastic rebound as the ice retreated, a series of terraces were formed, two of which are clearly seen in Pembroke. (Fig. 1 - 4)

In conclusion we may say that the town of Pembroke is situated on a pocket of Paleozoic sediments underlain by a basement of Pre-Cambrian rocks. On top of the Paleozoic sediments there has been deposited a layer of sand and clay.

### Climate

In general, Pembroke lies in a cool inland region having moderate rainfall which is suitable for general farming, but not for specialized crops which require less extremity of climate.

The mean annual temperatures of the region in which Pembroke is situated varies from 39°F. to 41°F. Winters are cold with an average temperature of 13°F. (Fig. 1 - 5) Spring temperatures average 39°F. to 40°F., summer 64°F. to 66°F., and fall 44°F. to 45°F. The extremes of temperature range from - 40°F. to 103°F., and daily temperatures range as much as 26°F.



# CLIMATIC CHART FOR PEMBROKE

(TAKEN OVER A 44 YEAR PERIOD)

Fig. 1 - 5

Frost is a great hazard and only July has been actually recorded as being frost free. The growing season has a length of 185 to 190 days.

Precipitation ranges between 26.3 inches and 35.7 inches annually. Snow fall ranges between 68 inches and 90 inches.

These data refer to the plain sections of the region only. the Canadian Shield area has slightly different records.

Winter Temperatures		11 <sup>o</sup> F. to 15 <sup>o</sup> F.
Spring	"	37 <sup>o</sup> F. to 39 <sup>o</sup> F.
Summer	"	62 <sup>o</sup> F. to 65 <sup>o</sup> F.
Fall	"	42 <sup>o</sup> F. to 44 <sup>o</sup> F.

This marks this region as one of the coldest in Southern Ontario, and Pembroke lies almost on the boundary between the two regions, meaning that the town itself has climatic averages somewhere between the two extremes, but here I have attempted to show not only the climate of Pembroke, but also of its region. (3)

### Soils

The soils in the area surrounding Pembroke may

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(3) Chapman, L.F. and Putnam, D.F., The Physiography of Eastern Ontario,

be divided into three groups, clays, sands, and residuals.

The clay soils are developed on the marine deposited clays mentioned above, and although they are grey in colour, suggesting development from the limestones which underlie them, they are only mildly calcareous and are likely derived from the more acidic rocks of the Canadian Shield.<sup>(4)</sup> In many places the clay soil is shallow and limestone is uncovered sporadically throughout the area. The clay for the most part is highly leached and is deficient in humus and ranges between grey-brown and brown forest soils. Around Pembroke these soils support pasture for the grazing of beef cattle and some milch cows.

The town of Pembroke almost sits astride the line dividing the clay and sand plains. The Petawawa Sand Plain begins just west of Pembroke and covers an area of nearly 130 square miles.<sup>(5)</sup>

This sand plain is a descendant of a large

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(4) Chapman, L.F. and Putnam D.F., The Physiography of Southern Ontario, P. 253.

(5) Ibid, Pp. 262 - 263.

delta built into the Champlain Sea by an earlier Ottawa River with the help of the Petawawa and Indian rivers. The soils formed are typical podzols, strongly leached, acid, and low in organic matter and fertility.

The remaining area is underlain by Pre-Cambrian rock and the soils are for the most part podzols formed from residual and glacial materials.

### Drainage

The main drainage channel of the area, is of course, the Ottawa river. This river with its source at the head of Lake Temiskaming, runs almost 360 miles to its mouth on the St. Lawrence River at Montreal. Into this river almost all the rivers east of the Frontenac axis empty. Like nearly all rivers in glaciated territory it consists of a series of lakes connected by sections of steeper gradient plunging over rapids and cataracts. (The effect of this on Pembroke will be seen later in the discussion of the historical development of the town.)

Three main rivers drain the hinterland of Pembroke on the Ontario side of the Ottawa River; the Muskrat and Indian Rivers, and the Petawawa

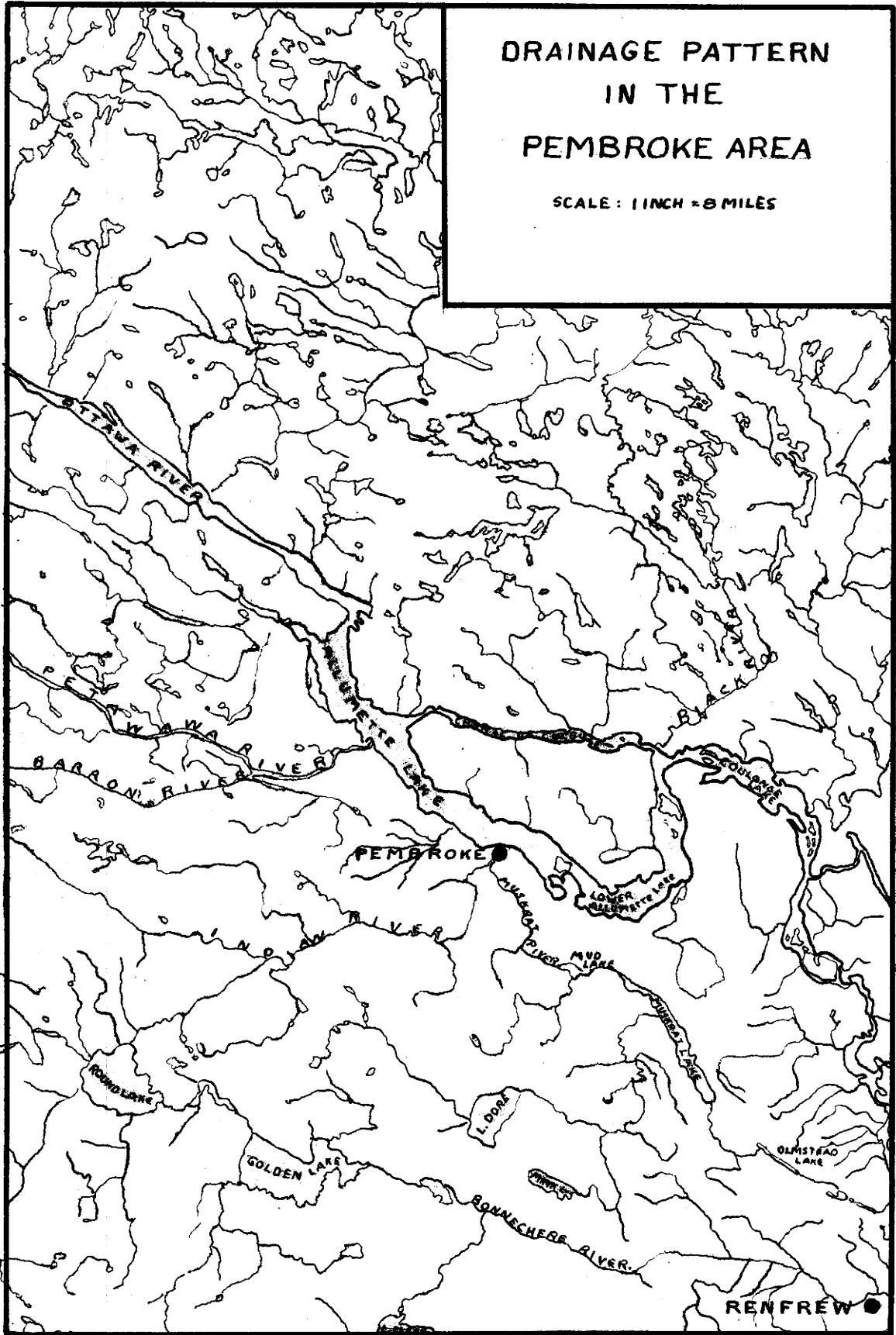


FIG. 1-6



River.

To quote Chapman and Putnam, "The Muskrat and Indian Rivers, which join to make one entrance to the Ottawa at Pembroke, are small, but interesting rivers. The Muskrat is closely aligned with the Muskrat fault and drains Muskrat Lake"....."Other smaller lakes are found in this chain also. The Snake River, a tortuous tributary falling into Muskrat Lake, drains Mink Lake and Lake Dore. All of these lakes are in the down-dropped block and are associated with limestone outliers. The Indian River, on the other hand, issues from the block mountain uplands by way of the deep valley of the Gardez-Pieds fault."<sup>(6)</sup>

The Petawawa River and its tributaries flow almost entirely within the upland area of the Shield and drains an area of 1,572 square miles.<sup>(6)</sup>  
(Fig. 1 - 5)

### The Forest Resources of the Pembroke Hinterland

Due to certain soil and climatic conditions the town of Pembroke is surrounded by an area supporting

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(6) Chapman, L.J., and Putnam D.F., op cit, p. 129

(7) Ibid Pp. 120 - 130

a distinctive type of forest growth. This area is located in the Ottawa-Huron division of the Algonquin-Laurentide section of the Canadian forest classification. This is an area of podzol, grey-brown, and brown forest soils.

Here the white pine reached its maximum, but much has been removed by extensive cutting and fire. Red pine is a prominent feature especially on the Algonquin Highlands. The overall picture of the area is one of mixed forest with a dominant association of sugar maple, yellow birch, hemlock, and white pine with varying amounts of basswood, white spruce, balsam fir, northern beech, red oak, elm, white ash, red maple, ironwood, white birch, and large-toothed aspen.

In addition to the above associations a characteristic feature is areas of pure hardwoods with a dominance of sugar maple; common occurrences of white and bar oak, and iron wood, often as scrub growth; and extensive red maple, black ash, or eastern white cedar swamps. (8)

### Conclusion

From the preceding we can conclude that the

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(8) Halliday, W.E.D., A forest Classification for Canada, P. 31.

forces of nature developed an area ideal for the establishment of a lumber industry. Geology, climate, and soils lead to the growth of excellent stands of timber ready for the axe. An excellent drainage pattern gave access to the hinterland and provided a means of transportation for the raw materials, and an ideal site was prepared on the banks of the Ottawa to receive the town.

## CHAPTER II

THE HISTORICAL DEVELOPMENTIntroduction

The geographer and the historian have always been at odds regarding the methods to be used in approaching the study of a town, region, or country from a geographic point of view. The historian prefers to approach the study with an evolutionary method, studying the place, be it what it may, through a long period of time. Time, to the historian, cannot be stopped. The geographer, on the other hand, prefers to isolate an area in time. In other words, he stops time and studies the geography of his chosen area at a given time. In spite of the fear of being branded a heretic, I prefer the historian's method.

Some say that time is of no importance. We say that geography is the study of the relationship of man to his environment. But, here we neglect time. Time has always, and always will change both man and the environment.

With this thought in mind, this chapter will

attempt to trace the development of the town of Pembroke from the time settlement began to move up the Ottawa river to the present, and since this thesis is laying particular emphasis on industry I shall show the beginnings of industry in Pembroke, and how it has evolved into its present form.

### The Settlement of the Ottawa River Valley

Before embarking upon a discussion of the historical development of Pembroke, it would be best to look, in a general way, at the history of the settlement of the Ottawa River Valley.

The first settlement in the valley came in a period when young men by the thousands were pouring over the Alleghenies to the territories of the middle west. Philemon Wright, of Woburn Massachusetts, not wishing to follow the crowd, resolved to found a settlement on the Ottawa above the Long Sault. In 1800, with twenty-five men and five families he established a settlement on the north shore of the Ottawa at the site of present-day Hull Quebec. It was here that Philemon Wright laid the foundations of the timber trade to come and in 1806 he took the first raft of squared timber from Hull

to Quebec City.

From this time onward settlement proceeded rapidly throughout the valley. (Fig. 2 - 1)

### The Site of Pembroke Previous to the First Settler

Here at the junction of the Muskrat and Ottawa rivers was located one of those fine stands of virgin timber that laid the foundation for the prosperity of the newly settled region that was to become Upper Canada. Not only were these timber stands located here, but stretching hundreds of miles back into the hinterland there were vast reaches of untouched forest waiting for the sounds of shouting men and rasping saws.

It was not until 1826 that the Lieutenant-Governor, Sir Peregrine Maitland, issued at York on May 3rd the following proclamation which I quote not only for its significance in the present case, but also for the light it casts upon the general conditions of the lumber industry of that time.

"Whereas for the more effectually preventing the recurrence of such abuses as have heretofore prevailed in the prosecution of the trade in timber in the parts of this Province bordering on the River Ottawa, and to the end that the public interest may be the more certainly advanced, the commerce in that important

# SETTLEMENT OF THE OTTAWA VALLEY

SCALE - 1: 2,000,000

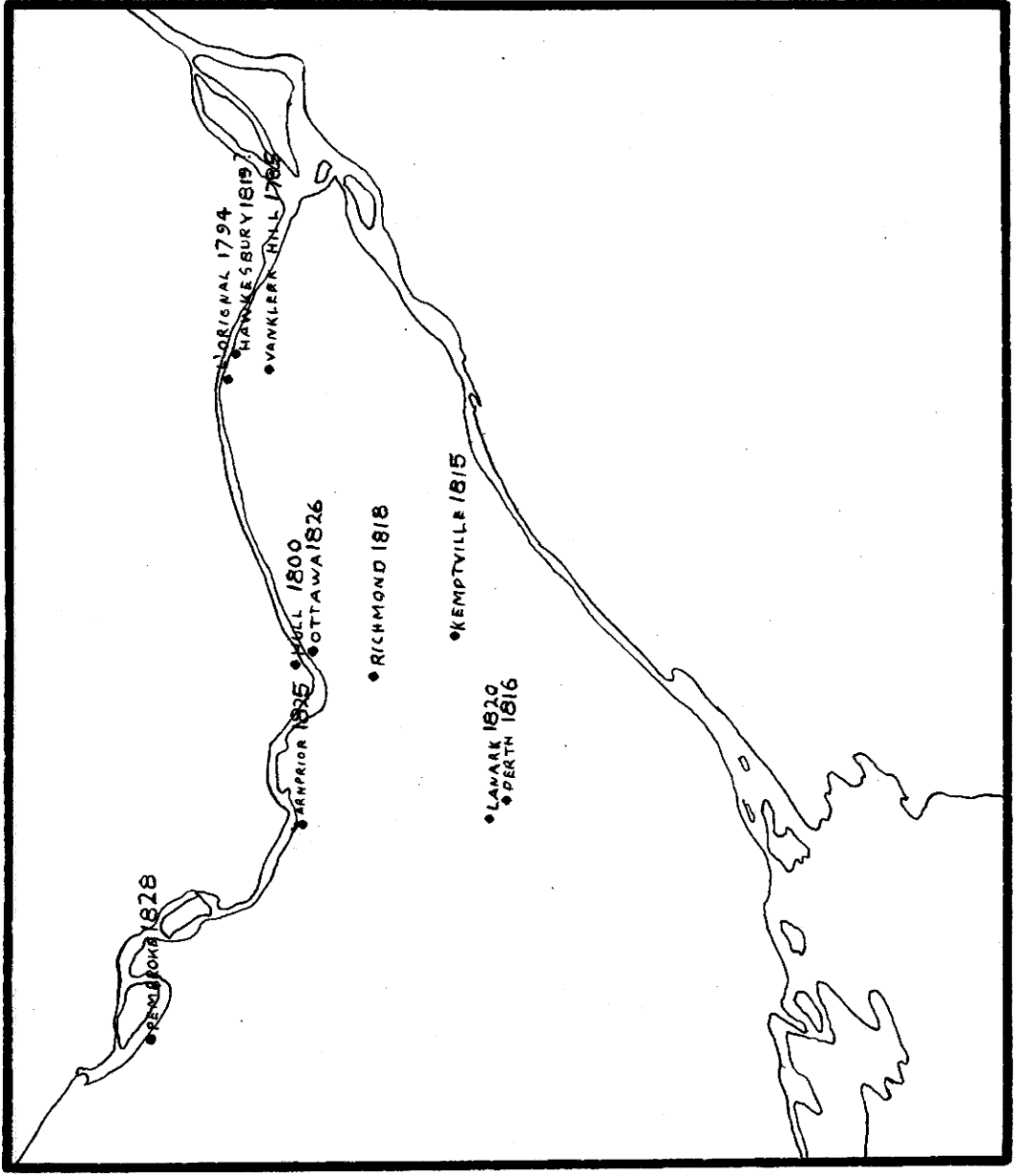


FIG. 2 - 1

article of exportation the better regulated, and more equal justice observed with regard to all our subjects desirous of participating in the said trade, we have thought fit to order and direct that until our Pleasure herein be further made known it shall and may be lawful for all our subjects inhabiting our Provinces of Upper and Lower Canada, freely to enter into our woods and forests in such parts of our said Province of Upper Canada, situated along the banks of the River Ottawa, or upon the banks of the waters running into the said river, and a convenient distance from the same as shall not have been surveyed and divided into concessions and lots, and to cut and carry away such oak and pine timber as may be fit for the purpose of exportation. Provided always, nevertheless, that in the consideration of the authority and permission hereby given the several rates and duties hereinafter specified shall be paid to us, our Heirs, and Successors, that is to say, upon every thousand feet of oak timber the sum of £6 5s, being at the rate of 1½d per foot; upon every thousand feet of red pine timber £4 3s 4d, being at the rate of 1d per foot; upon every thousand feet of yellow pine timber, £2 1s 8d, being at the rate of ½d per foot, upon sawlogs of the proper length to be cut into deals, 2d upon each log, upon every thousand of standard staves, £4 1s 8d, which duties are to be paid in lawful money of our said Province of Upper Canada, and to be levied and received by such persons as we shall for that purpose appoint by Commission under the great seal of our said Province, and at such place or places on the said River Ottawa, as we shall declare through our officer to be appointed as aforesaid to be most fitting and convenient.

Provided always that for the better preventing the said timber being cut before it has attained a suitable growth, double the amount of duty herein specified shall be charged upon all such timber as shall not square more than eight inches. And it is further Our Will and Pleasure that all such timber or wood which shall have been cut as aforesaid upon our unconceded lands in Upper Canada, upon which the duties



shall not be paid, when exacted by our Officer ~~so~~ to be appointed as aforesaid, shall be seized and detained to our use as forfeited.

Provide always, nevertheless, that all persons properly authorized by or under our license granted in manner heretofore used to cut timber in our said Province shall be permitted to carry away and export the same, to such extent as their license may specify, without the exaction of any rate hereby imposed, and that all such timber as may have been heretofore cut upon our unconceded lands as aforesaid without Our express license may upon payment of the duties hereby specified be suffered to pass through Our Province of Upper Canada. (2)

It is to this date that Pembroke traces its origins.

To the lumber trade and the nature of the Ottawa River Pembroke owes its importance.

As mentioned before the Ottawa River consists of a series of quiet lakes and plunging falls and rapids. An example of this occurs in the vicinity of Pembroke. Between Allumette Lake and Lac des Chats the Ottawa river drops a total of 127 feet in a series of swift rapids. This drop seriously impeded the practical traverse of the Ottawa River at this point and an alternate route for the transportation of people and supplies was required.

The route that was finally used was one beginning at the present site of Portage du Fort. This consisted of a portage road to the southern tip of

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(2) Middleton, J.E., and Landon, F., The Province of Ontario, A History, V. I.,

Olmstead Lake, from where it was easy to reach the Ottawa river through Olmstead Lake to Muskrat Lake and via the Muskrat River to the Ottawa. This portage route ended at the present site of the Pembroke post office. This water way attained even greater importance when a steamboat was operated on the Muskrat river and Muskrat Lake between Cobden and Pembroke.

Following the opening of the Ottawa watershed to lumbering the junction of the Muskrat and the Ottawa rivers became the crossroads of the early lumber trade. In this part of the country, as elsewhere, the cutting of timber forged ahead while the wandering lumbermen were followed by permanent settlers. This settlement did not develop at any regular, steadily increasing rate. In many cases settlement and farming were just pretexts for obtaining cutting rights. As soon as the timber resources on the lot were "mined" and the ground left bare, the lots were abandoned and the "settlers" moved ahead leaving waste and desolation behind.

#### The First Settler and Subsequent Growth of the Town

The first man to settle down at the river

junction was a Mr. Peter White. "Peter White was among the naval officers, who were sent across the sea in 1813 to serve on Lake Ontario under Sir James Yeo. After the war he was discharged and then taking unto himself a wife, Cecilia Thompson, of Nepean, he tried the life of a settler. In 1821, he determined to take up a homestead on the Upper Ottawa. He and his family went from Bytown to the present site of Pembroke by canoe, a journey of two weeks and here they took up land, their nearest white neighbour being sixty miles away. Mr. White was familiar with the lumbering trade and like most of the residents of the Ottawa Valley saw a better prospect in shanty and raft work than in the ill-requited toil of farming. They founded the town of Pembroke in 1828, and his sons, Hon. Peter and A. T. White developed the lumber business into the towns chief industry."<sup>(2)</sup>

In 1836 the first general store was established by Alexander and William Powell followed by a grist mill in 1841 established by Alexander Moffat, and a post office was built in 1846. The first school was built by Peter White in 1836.

By 1856 the settlement was already a police

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(2) Middleton, J.E., and Landon, F., op. cit. P. 930.

village and covered an area bounded by present day Henry and Hincks streets on the south, John street on the east and the Ottawa river on the north. The old portage road now occupied by Pembroke street was becoming the commercial centre of the town, now with a population of approximately 800.

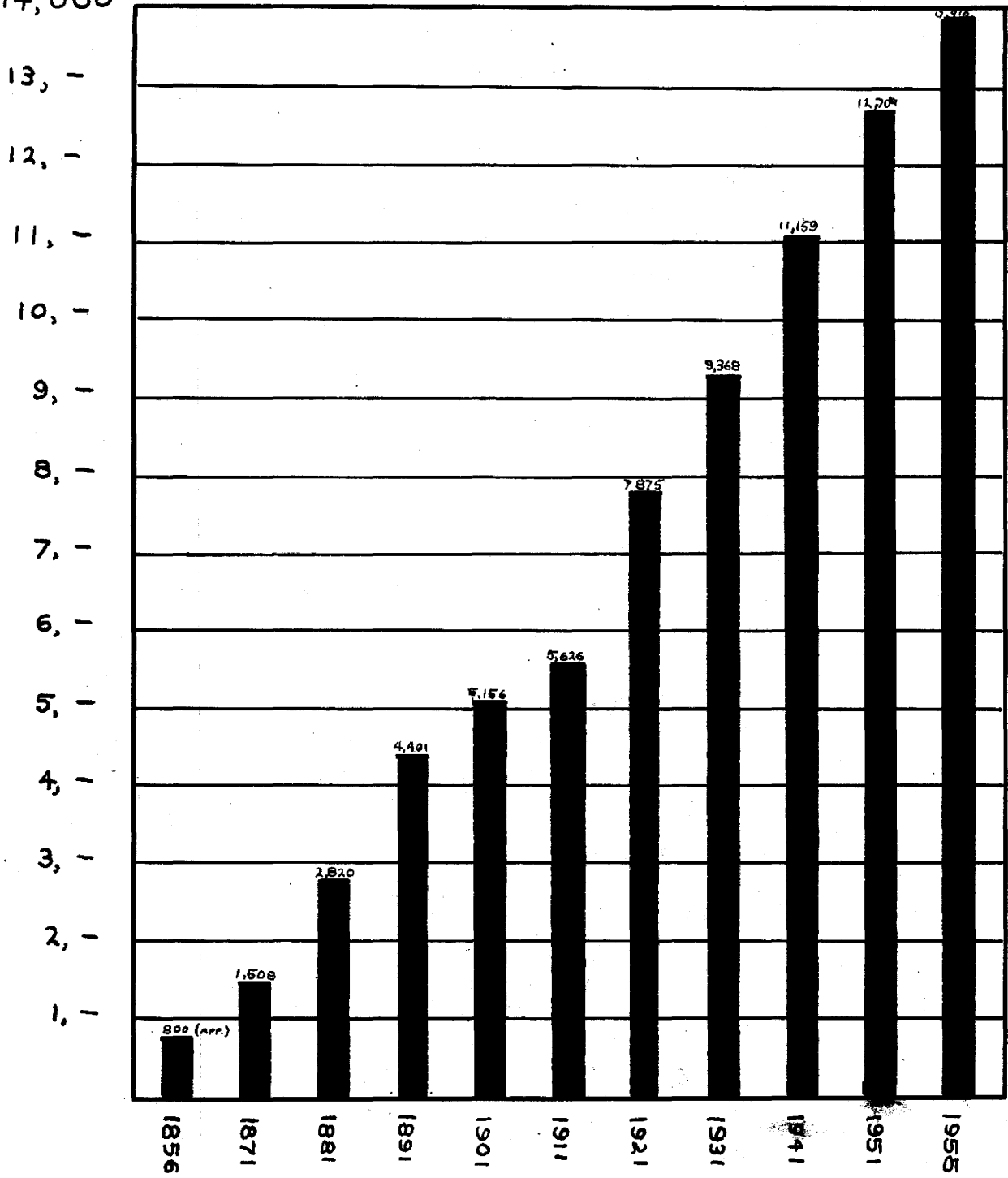
In 1864 Lord Monck proclaimed Pembroke as the county seat and by 1871, carried on a wave of prospering lumber trade, the population reach 1, 508 (Fig. 2 - 2). In 1877 Pembroke was proclaimed a town. A year earlier the Canada Central Railway was extended to Pembroke.

By 1887 the town had reached a population of 4,500 and had become the major town of the area, having 70 stores doing an extensive wholesale and retail trade, seven churches, two banks, two telegraph offices, several insurance agencies, a grist mill, a flour mill, a woollen mill, two foundries, several saw mills, and a few wood-working factories.

In 1884 the Pembroke Electric Light Company had been established, becoming the first commercial power company in Canada, providing light for the streets of the town and most of the stores.

Fig. 2 - 2

POPULATION  
14,000



GROWTH OF POPULATION

### Industry and the Hinterland

The town of Pembroke, since its inception, has been, almost up to the present, dependant upon lumbering for its livelihood. This has resulted in an integral correlation between the town and its hinterland. To quote the Ottawa Journal of May 30th, 1955, "for years in the early days of Pembroke, the town was almost solely dependent on the lumber industry and probably would never have survived had it not been for the almost limitless natural forest resources practically on the doorstep."

Thus it is that the hinterland provided only one basic necessity for Pembroke's existence; the raw materials to keep her saw mills and wood-working plants active. No substantial market was found in the hinterland nor is a market found there today. What agriculture there is in the hinterland provides no industry of any great importance and only a small percentage of the retail trade. The wholesale trade, as will be seen later, depends a great deal on the hinterland for its customers, but in doing so requires a much larger area than is generally necessary for a business of this type.

### Changing Patterns of Industry

In the past, Pembroke has produced only a semi-manufactured product. Logs were floated down the Ottawa River to the mills at Pembroke, where they were sawn into lumber, and then sent elsewhere to be used in construction, and to make various manufactured items which use lumber as a raw material.

At this time, the town's economy is still centred largely in lumber since the raw material from which this is produced is still locally grown. Only one plant, however, is still in production of lumber for export and home markets, while all the other wood industries produce a finished wood product ready for the market.

All, but one of the plants, operate on a year-round basis. This large sawmill still operates on a seasonal basis both for logging and sawing. The innovation of year-round operation has helped to stabilize the local labour pool, which otherwise sought employment in the town during the summer and migrated to the lumber camps in the winter.

Not only have the timber products changed, but so too have the methods of logging. Logging has undergone a drastic change which has revolutionized

the industry and now requires fewer men in the woods for shorter periods to produce the same output. Power saws and mobile "jammers" have taken away a lot of the thrill and skill of the old-time lumberjack, to say nothing of the numerous trucks which are now used on the "sleigh-hauls" in the place of horses.

Another great change which has taken place is the coming of the portable mill. These have sprung up throughout the district to decentralize the manufacture of the lumber product which until twenty-five years ago was almost totally centred in Pembroke. Each portable mill with an output of up to one million board feet would add up to approximately the annual production of one large-sized mill in the town.

The roots of Pembroke are too deeply embedded in the forest to have such a major industry replaced by another. There are still plenty of merchantable stands of timber within reach of the local plants to ensure survival of the industry indefinitely. Coupled with the virgin stands is the conservation programme being carried out by both the Ontario Department of Lands and Forests and the companies



themselves. Not only are governments concerned with conserving the timber resources, but so too are the lumber industries. The time is past when the cry of "rape of the forest" can be levied against the vested lumber industries. To survive they must conserve. This conservation programme, plus planned reforestation programmes will ensure an exhaustible source under the guidance of trained conservationists of the department and forestry engineers of all the major companies. From all this one would gather that the annual production of 50 million board feet produced in Pembroke and the surrounding district can be maintained indefinitely. This opinion is one held by an institution responsible for the preservation of the forest resources and is therefore subject to speculation as to its authenticity.

The seasonal unemployment problem (2,000 in the winter of 1954-55) is still a concern to the town. Solutions to this problem are being sought, amongst which is the cutting down of the period between logging and sawing operations, but how this can be done is still the crux of the matter. Not only is this seasonality a problem to labour, but, because

of the increasing costs of operating on a seasonal basis, the companies are finding it necessary to discover some way of operating on a year-round basis.

Another remedy put forth by some has been a plea for greater diversification of industry. These express the opinion that, in order to reach the zenith of success as an industrial town, they must find other industries to replace the lumber trade as a major industry. These spokesmen are opposed by those who maintain that "once a sawdust town, always a sawdust town". They agree that diversification is a good thing, but lumbering must remain an integral part of the industrial scene.

It must, however, be understood that lumbering is not the only industry in Pembroke. Not only has the pattern changed within the lumber industry, but it has also changed in the overall industrial picture. Through the efforts of one man, namely A. E. Dunlop, at least two industries were begun which had no association with the natural resources of the area outside of power. These industries were started by Mr. Dunlop to provide industrial diversification and to provide employment for those with skills not connected with the lumber industry.

So much did Mr. Dunlop control the town that it is said that Pembroke in the 1920's and early thirties was almost a one man town.

### Conclusion

This concludes the historical development of Pembroke and its industries in the space set aside for this purpose. This does not mean that I have definitely concluded referring to this development. In the chapters which follow I shall refer back where necessary and desirable to the history of the town and try to correlate the functions, industry, and townscape to the historical development of the town.

But, the town of Pembroke began as a lumbering town, has remained a lumbering town, and unless there is a great change in the population and trade patterns in the Provinces of Ontario and Quebec, must, by necessity, remain a lumbering town.

## CHAPTER III

THE FUNCTIONS OF THE TOWNIntroduction

A town has certain obvious reasons for its existence. In most cases there is one primary function and the remainder are merely secondary. This is true for Pembroke.

The primary function of Pembroke has been industry, although at its beginning it served as a supply town for the flourishing lumber trade in its hinterland. This function was very soon overshadowed by the upsurge of industry in the town in the form of sawmills and has remained in the forefront to this day. All the other functions are complementary to industry and are dependent on it for their existence.

Without industry, which is true for most towns in this day and age, the secondary functions such as wholesale and retail trade, service, recreational, and dormitory functions could not exist. Especially is this true of Pembroke, for here there is no rich agricultural hinterland to serve as a

market for its retail and wholesale goods, nor without industry would Pembroke even exist.

This chapter will deal primarily with the secondary functions. The industrial function is important enough to warrant a chapter of its own.

### The Commercial Function

Being an agglomeration of people the town of Pembroke and its surrounding district requires a supply of certain goods and services which are found necessary for the day to day survival of its population. These goods and services include the provision of food, clothing, and other so-called necessities of life, along with various services (not including civic services) which have also become necessary in our modern culture. These all come under the heading of a commercial function.

Food, clothing, and other articles which are not basically essential to living are sold to the public through retail and wholesale outlets.

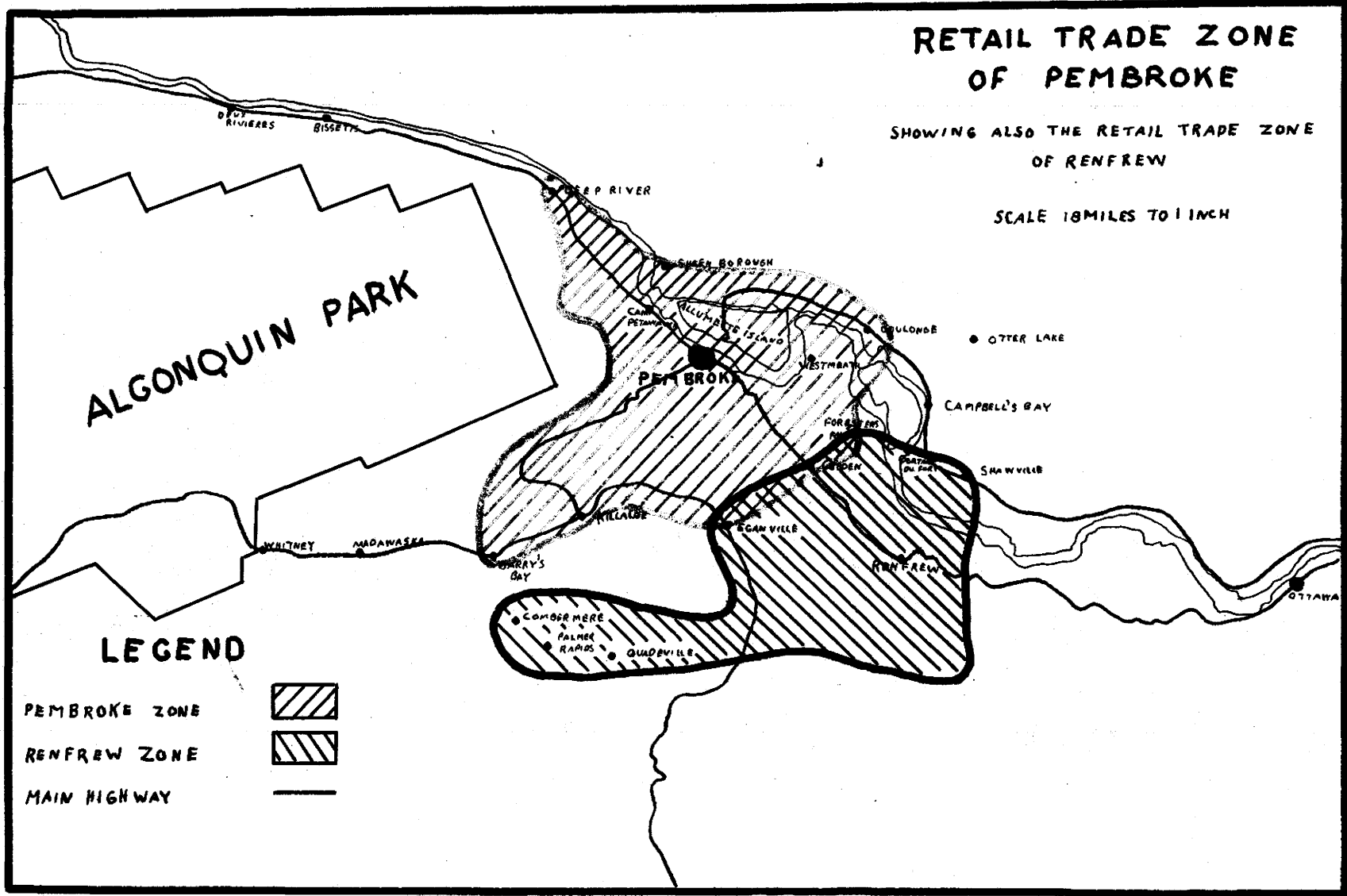
The retail function of Pembroke might be said to be fully developed, that is, there is nothing that the retail stores of Pembroke do not provide to the inhabitants of the town and the retail trade

# RETAIL TRADE ZONE OF PEMBROKE

SHOWING ALSO THE RETAIL TRADE ZONE  
OF RENFREW

SCALE 18 MILES TO 1 INCH

FIG. 3 - 1



## LEGEND

- PEMBROKE ZONE
- RENFREW ZONE
- MAIN HIGHWAY



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area. (Fig. 3 - 1)

RETAIL MERCHANDISE TRADE, 1951

<u>Classification</u>	<u>No.</u>	<u>Sales</u>
1. All stores total	152	15,740,400
2. Food and beverages group		
(a) Total	59	4,775,400
(b) Grocery and Combination	40	2,984,600
3. General merchandise group	6	1,472,300
4. Automotive group		
(a) Motor vehicle dealers	7	2,556,900
(b) Garages	3	137,600
(c) Filling stations	7	387,600
(d) Total	24	4,613,800
5. Apparel and accessories group	20	1,717,300
6. Building materials and hardware group	6	639,800
7. Furniture, appliances, radio and home furnishings	9	997,400
8. Drug and health appliances		
(a) Total	6	425,300
(b) Drug stores	6	425,300
9. Second hand group	--	--
10. Other retail stores group	22	1,099,100

Fig. 3 - 2

The reason for this is obvious when a map is consulted.

Pembroke is located nearly 100 miles from the nearest city, Ottawa, and since this is a greater distance than is normally travelled by a buyer of

goods, plus the fact that it serves a trading area population of over 28,000, it is profitable for the merchants to carry a line of goods and a quality of goods which is abnormal for a town of this size located near a large centre. A glance at the 1951 Dominion Bureau of Statistics figures (Fig. 3 - 2) will show the extent of the retail importance of the town.

The variety and class of goods offered for sale on the main street of Pembroke ~~compare~~ almost equally with any goods (excluding luxury goods) sold on Sparks street in the city of Ottawa. The comparison is even more vivid if one merely walks down the main street of Arnprior, a town only 42 miles from Ottawa. Here the shopper finds nothing of the variety and quality of goods that is found in Pembroke. The same holds true for the town of Renfrew which is within convenient travelling distance of Ottawa.

This trading area as mentioned before is exceedingly large as can be seen from the accompanying map (Fig. 3 - 1). The size of the area is due to the fact that Pembroke is the largest town in the area; the other towns such as Barry's Bay,



Petawawa, Eganville, etc. supplying only day to day needs, and is also due to the fact that the population of north Renfrew County is spread sparsely over a wide area.

The map also shows another peculiar thing about the Pembroke trade area. Its shape is far from being the standard text book shape of a trade area. Here again we have reflected the distribution of population, which is in turn effected by the topography of the area. The townships immediately adjacent to Pembroke, Westmeath, Stafford, Wilberforce, and Alice, are relatively well-populated and have, due to their clay and sand plain physiography, fairly good accessibility. As you move west you enter the Canadian Shield which has poor communications and is populated only in pockets. Up the Ottawa River the trade area extends a long finger as far as Rolphton and also takes in Allumette Island and a small piece of the Quebec shoreline. What would have been a circular trade area has been elongated by two physical features.

The south-western side has been squeezed by the boundaries of Algonquin Park, boundaries which

nearly correspond to the limits of the Shield, and the north-western side is flattened by the Laurentian mountains which leave only a narrow strip of land along the river. Few towns show a trade area so clearly delineated by topographic features. The southern boundary is established by competition with the Renfrew trade area.

The wholesale trade area of Pembroke is almost the same shape as its retail trade zone, but is somewhat enlarged as can be seen from the map. (Fig. 3 - 3) It is rather unusual, that a town of Pembroke's size should have a wholesale trade, but here again the distance from Ottawa is the reason.

This wholesale trade is not as well developed as the retail trade. Goods distributed wholesale throughout the area from Pembroke include food stuffs from National Grocers, petroleum products from various distributors, and sundries and drugs from Loeb Wholesalers, a branch of an Ottawa firm.

National grocers serve an area west to Deux Rivieres, south to Whitney, Combermere, Palmer Rapids, and Quadeville, east to Renfrew, and Shawville to Sheenborough on the Quebec side of the

# WHOLESALE TRADE ZONE OF PEMBROKE

SCALE 18 MILES TO 1 INCH

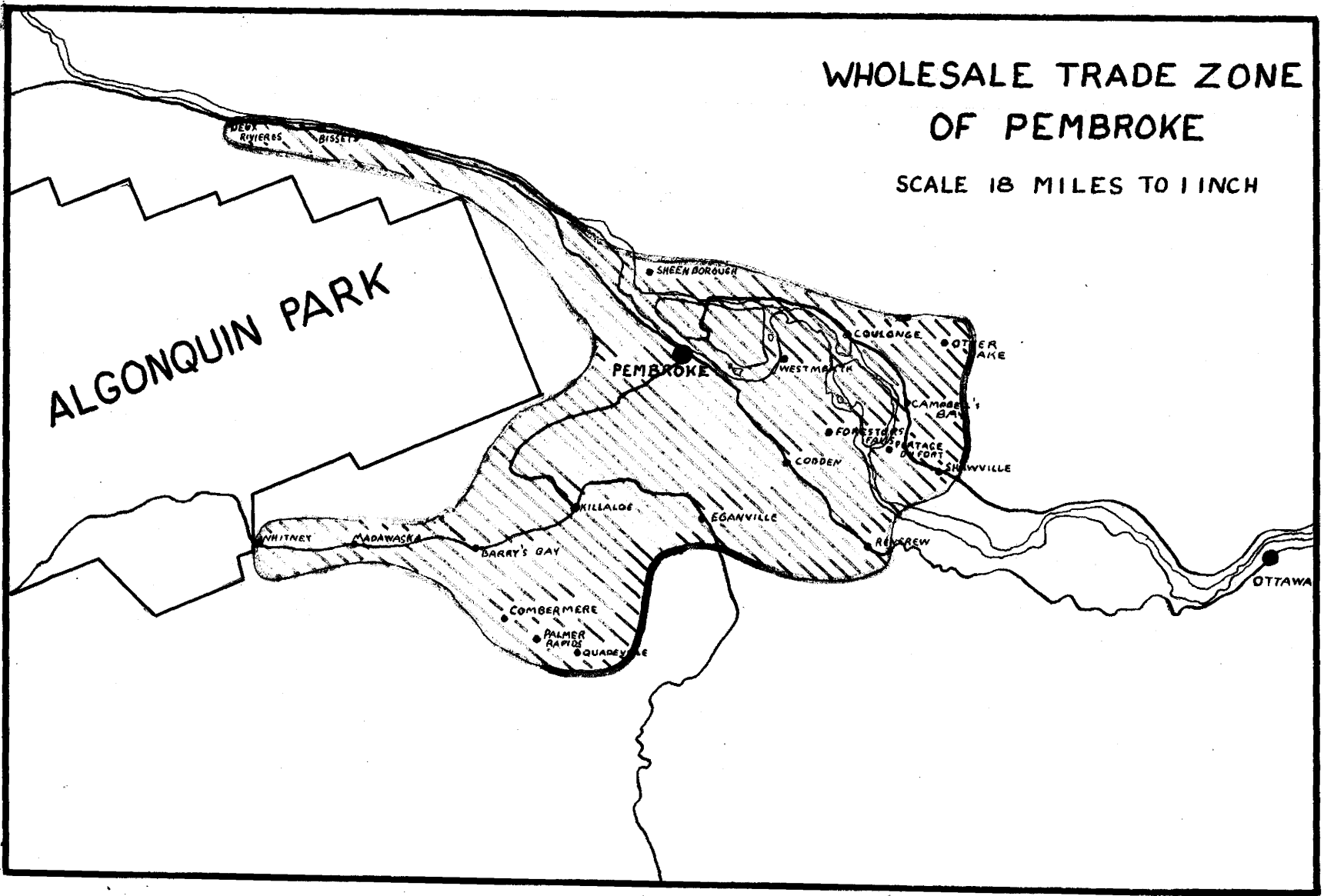


Fig. 3 - 3

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Fig. 3 - 4; Wholesale trade,  
Petroleum bulk stations on  
River Road.



Fig. 3 - 6; Service Function,  
Copeland Hotel (82 rooms)

river.

The petroleum distributors (Fig. 3 - 4), which include Imperial Esso, McColl-Frontenac, British-American, White Rose, and Shell, serve the largest wholesale area and it is the boundary of their area that is shown on the accompanying map. These oil companies receive their goods from various terminal points, Sarnia, Ottawa, Clarkson, Montreal, and Toronto. Gasolene is received by the majority by rail and lubricating oil by transport.

Loeb Wholesalers serve a very large area due to the type of goods they handle. This area extends as far west as Mattawa, Bancroft, and Whitney, and east to Renfrew. This area is not plotted on the map since it would give a false impression of the wholesale area.

This reflects a fairly accurate picture of the wholesale function of Pembroke. The town is of secondary importance as far as this function is concerned and is dominated in the wholesale field by the large major wholesale distribution points of Ottawa, Montreal, and Toronto.

The last remaining commercial function is service. (Fig. 3 - 5, - 6) As Figure 3 - 5 shows the service function too is well developed to serve

the town and its trade area.

Service	No.	Value
1. Total	85	1,417,600
2. Amusements and recreation	5	239,200
3. Business Service	4	--
4. Personal "	32	219,000
5. Repair "	21	197,500
6. Undertaking and funeral service	2	--
7. Photography	4	27,200
8. Hotels and tourist camps	8	612,800
9. Miscellaneous	9	54,800

Fig. 3 - 5

Two secondary functions remain; they are the dormitory and the recreational functions.

#### The Dormitory Function

The dormitory function is that function which provides shelter for the inhabitants of the town. At this point it is only necessary to point out that the town does carry out this function. A more detailed description of the housing will be found in Chapter V under land use. It is however, pertinent to point out at this place the fact that the town serves not only as a place of domicile for those people gaining their livelihood from the industries of Pembroke, but also from the two large industries up the Ottawa river, Camp Petawawa and Atomic

Energy of Canada Limited. This fact raises serious problems in the taxation balance in the town. It is generally accepted that the balance of taxation between industrial land and residential land should be even. In Pembroke, with two major industries outside the town limits, it is hard to achieve this balance.

#### The Recreational Function

The last function to be discussed in this chapter is recreational. This, too, will be discussed later under land use. The town employs a full-time recreational director and has facilities for basketball, badminton, curling, bowling, boxing, hockey, and skiing in the winter, and senior and junior baseball, softball, swimming, golf, and tennis in the summer. Besides these active sports various classes are given in theatre, art, singing, music, and drama. A well equipped Memorial Centre is the pride and joy of the town and provides facilities for hockey, dancing, roller skating, ice skating, wrestling, and boxing. Various fraternal and service groups hold regular meetings and include the I.O.O.F., Knights of Columbus, Masons, Orange Lodge, Canadian

Legion, Kinsmen, Kiwanis, and Rotary clubs.

Besides the public recreation facilities there are various commercial enterprises such as theatres (2), billiard academies, and bowling alleys.

This concludes the chapter on secondary functions of the town of Pembroke. The following chapter will concern itself with the primary function of Pembroke, Industry.



## CHAPTER IV

THE INDUSTRIAL FUNCTIONIntroduction

Having discussed the secondary function of the town in the previous chapter, we come now to a study of the most important aspect of the town, namely the industrial function.

In order to study the industries in the greatest detail possible I shall take each industry separately and in turn discuss their history, products, raw materials, transportation, labour, power, markets, and the relationship between their location and these five major industrial criteria.

The information presented here was acquired through interviews with the managers of the various plants, or where this was not possible with some other executive who had the required information. The questionnaire used may be found in the appendix.

The Pembroke Electric Light Company (Fig. 4 - 1)

It might, perhaps, seem strange to include an

hydro electric company in this discussion, but the Pembroke Electric Light Company is a strange phenomenon in this day of Ontario Hydro.

The Pembroke Electric Light Company is one of the few remaining privately owned power companies in the province. It was providing light to the town of Pembroke as early as 1884, from a generator on the Muskrat River. With increased demand the company constructed a generating station on the Black River in Quebec at Waltham. Between 1948 and 1950 they doubled their capacity and increased their auxiliary source of supply by 2,000 horse power.

With five generators fed by three penstocks from a 125 foot head of water, the company can generate 12,550 horse power at its Waltham plant, and if necessary, in emergency or for any other reason, can produce another 3,000 horse power with diesel power at the Pembroke sub-station.

The company supplies the town of Pembroke, Camp Petawawa (not the village), Chapeau, Waltham, Fort Coulonge, and Allumette Island. The town of Pembroke receives 5,000 to 6,000 horse power.

Normally the company is independent of out-

side sources of power, but they do have an arrangement with the Hydro Electric Power Commission of Ontario whereby they will be provided with power in case of emergency. There is a potential of another 18 - 20,000 horse power on the Black River.

Rates are as follows:

1.8¢ first 50 kilowatt hours

1.2¢ second 50 kilowatt hours

0.3¢ remainder

Service charge - \$1.50 per kilowatt demand per month corrected to 90% power factor.

Barrymore Cloth Co., Ltd.

This Pembroke plant is a branch of the Barrymore Cloth Co., Ltd. with head offices in Toronto. It was established in Pembroke in 1942 as a result of the war-time boom in textiles. The choice of Pembroke was due to the presence here of a building which had formerly housed a textile industry and was suitable for the type of operation to be carried on. No structural expansion has taken place, but more floor space in the building has gradually been occupied.

The products of the plant are ladies cloaking,

skirting, overcoating, and sports coating, although at one time the plant was devoted entirely to the production of automobile fabrics, but with the coming of synthetic fibres this production ceased. The products of the company are only partially manufactured in that the plant only blends, cards, spins, weaves, and mends. The cloth is dyed and finished in Toronto where sales and distribution are also handled.

The raw materials are wools and oils. The finer cloths are woven from Australian and New Zealand wools while coarser cloths are made from Canadian wool. Oils and machinery are purchased mainly in the United States and the United Kingdom.

The transportation of both products and raw materials is done by road transport.

The company employs fifty employees of which 60 percent are female. This figure usually drops slightly in September between the manufacturing of spring and winter weight cloths. All are from Pembroke. A high proportion of the employees are skilled and are unionized under the C.I.O., but labour difficulties have not been experienced.

The company is a fairly heavy user of electric

power supplied by the Pembroke Electric Light Company, but uses no other methods of power. Water is important for washing, but is in good supply and requires no special treatment.

The plant is thought to be well-located in relation to the five major factors. The labour force is steady, 75% having been with the firm over five years. Road transportation is excellent with an overnight service to Toronto, while the railways might take a week to deliver a shipment to a consignee. A close location to the source of raw materials is not possible and so is not important, and lower labour costs compensate for the cost of transportation to Toronto.

#### The Wright Glove Company

The Wright Glove Company is a small firm manufacturing industrial gloves. It was incorporated in 1945 after having been in business for many years. Their product is completely manufactured and is sold directly to paper mills and lumber camps in the Ottawa Valley, Sault Ste. Marie, Hearst, and various other lumbering communities in Northern Ontario.

Leather and yarn which serve as raw materials are purchased from various points in Ontario, Leather coming particularly from Kitchener. The raw materials are received by freight and express and the finished products are shipped in much the same way.

The company employs about 15, of which half are female. They are highly skilled as a result of a difficult and costly training programme.

Consolidated Paper Corp., Ltd. (Fig. 4 - 2)

The Pembroke plant of Consolidated Paper Corp., Ltd, is a division of the Consolidated Paper Corp., Ltd., Montreal. The company was formed in 1928 by combining several lumber companies. Pembroke was to have been the site of a pulp and paper mill, but the depression and the ensuing financial difficulties of the corporation prevented this plan from being fulfilled.

At present the Pembroke mill is producing rough and dressed pine lumber, white pine picket squares (1" by 1" lengths used in the manufacture of window shade rollers), fuel wood, box boards, and pulp wood. These products will be considered semi-manufactured items since they require further pro-

cessing before they become articles ready for the consumer market.

The lumber produced by Consolidated Paper is for the most part exported; 30% to the United Kingdom through export and import firms, 15% to 20% to the West Indies, and 10% to 15% to the United States. The remainder is sold in Ontario and Quebec. The picket squares are marketed in the United States (New York State and Illinois), and the pulp wood, the production of which, since 1946, has reached 15,000 to 20,000 cords per year, is sold to Quebec paper mills.

The raw materials are obtained from the company's own reserves. They cut in a 1,450 square mile reserve in Quebec and in 250 square miles in Mattawa township in Ontario. In addition to this they hold rights in the Pembroke Forest District. The annual cut amounts to 25,000,000 board feet.

The company is served by a Canadian Pacific siding and also operates its own fleet of trucks in the forest. These trucks are also available to the mill thirty-five weeks of the year. The "Finished" products are shipped by rail and transport. The

pulp wood is shipped at the present time entirely by rail, while the other products are shipped both ways. Road transport is becoming increasingly more important, especially on the short haul between the saw mill and the planing mill (Forest Valley Lumber). Due to an increase in rail rates the company now finds it more profitable to use their own trucks to make this transfer. As far as raw materials are concerned, the Ottawa River and its side streams still carry about 95% of this company's timber.

The company employs from 160 to 170 male workers, although this drops to about 40 between November and April. During this time, however, they employ up to 500 in their camps. Only the cutters in the camps are considered skilled, while the rest are mainly semi-skilled or labourers. This plant is not unionized and has suffered no labour disagreements. Most of the employees are local, although many come from the Quebec side of the river, commuting each day by boat.

Power for the saws in the mill is electrical, but the drying kilns are heated by steam produced from boilers fired by waste products such as saw-



dust and chips. It should be noted, however, that the company anticipates that within a year much of the waste will be chipped and used to make pulp.

This is a characteristic of the new lumber industry where nothing is waste. Even worm-eaten wood is being made into lumber and sold as antique panelling.

Superior Electrics Ltd. (Fig. 4 - 3)

Superior Electrics Ltd. was established 38 years ago by local capital. It has expanded since then and reached a peak operating period between the years 1946 and 1950.

They are producing for a coast to coast market completely manufactured items in the form of heating and cooking appliances, table appliances, i.e. irons, toasters, hot plates etc., and commercial heating appliances. They export to the British and Dutch West Indies, but a formerly very large export trade has been seriously diminished by currency restrictions. Distribution is handled by salesmen and manufacturers' agents.

Raw materials include steel from Algoma Steel in Sault Ste. Marie and the Steel Company of Canada

in Hamilton, and various manufactured items such as switches, porcelain ware, resistant wire, rivets, screws, nuts etc. obtained for the most part (95%) directly from the manufacturers.

Transportation of raw materials and finished products is split evenly between rail and road.

The company has 50 local employees of whom 70% are male. Most of these employees are semi-skilled and are unionized under the C.I.O. Steel Workers union.

The company is finding it extremely difficult to meet competition. They believe that the distance from the sources of raw materials and from the market is a serious detriment for which reduced labour costs do not compensate.

#### Canada Veneer Ltd.

Operations in this plant commenced in Pembroke in the fall of 1952. Previously it had operated for 15 years in Saint John, New Brunswick where it had enjoyed an abundant supply of raw materials until the standing Birch timber was attacked by a disease which resulted in virtually all of it being killed in the short space of four to five

years.

Some attempts at securing raw materials from distant points in Quebec and Ontario soon proved prohibitive by reason of the high freight on logs. Operations in Saint John were closed and the decision was made to re-locate the veneer plant near the source of raw materials.

The company acquired extensive lease rights in Algonquin Park, Ontario, and the search for a plant site led to Pembroke.

The company manufactures birch veneer and recently started producing birch plywood. 90% of the veneer is exported to the United States. It is exported in this form and not as plywood because of lower duties on veneer, although much of the plywood they are now producing is being sold in the U.S. The remainder of their production is sold to Ontario and Quebec furniture factories.

Raw materials in the form of Birch logs are obtained from a 240 square mile reserve in Algonquin Park and from North Bay, Sault Ste. Marie, and various locations in Quebec. Other wood which is used as filler in plywood is imported from the Belgian Congo or purchased locally.

The company has its own siding and uses both rail and road transportation.

Employment figures total 200 of which 40%<sup>\*</sup> a female. A high proportion are semi-skilled. The employees, who are local as far as possible, are members of the A.F. of L. Carpenters and Joiners union.

Machinery in the plant is powered by electricity, and steam, which is an important part of the veneering process, is produced in boilers fired by refuse. Water is an important factor and reflected in the plant's location on the Indian River. During the summer months, to ensure correct conditions, the logs must be kept immersed in water, and this water has been provided by damming the Indian River.

Eddy Match Company, Limited.

The Eddy Match Company, Limited, as it now exists, is the successor in Pembroke to the Canadian Match Co., Ltd., which commenced operations at the present factory site and made the first matches

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\* Where the term semi-skilled is used, it implies that the labourer has been trained by the company to do a certain job. It does not mean that he has a partial trade.

in Pembroke on Christmas Eve of the year 1921. Credit for bringing the industry to Pembroke is given to the late Honorable A. E. Dunlop.

In 1928 several match companies amalgamated to form the Eddy Match Company Limited and the company, with its head office in Pembroke, has branches in Pembroke, Mission B. C., Hull Quebec, and Berthierville Quebec.

The Pembroke plant produces only wooden matches, although the company also manufactures paper matches. They are distributed on a national market through various wholesalers.

The raw materials are splints from Canadian Splint and Lumber, Pembroke, and chemicals from various Ontario and Quebec sources.

The company ships the bulk of its product by rail and in turn receives most of the raw chemicals by rail. The splints arrive by conveyor belt, both the Eddy Match Company and Canadian Splint and Lumber occupying the same building.

The company employs a force of 51 males and 21 females in the plant and an office staff of thirty. Most in the plant are labourers from local sources and are members of the A.F. of L.

Carpenters and Joiners.

The power for the machinery is electricity and steam for heating is purchased from Canadian Splint.

Pembroke Shook Mills Ltd.

The Pembroke Shook Mills Ltd. is a wholly owned subsidiary of Canadian Cannery Ltd. It was established in Pembroke, close to the source of raw materials, in 1914 and has remained basically the same plant since then, except for the construction of a corrugated box section.

In its wood converting operations, Pembroke Shook Mills manufactures wood shook, and boxes for butter, ammunition, soft drinks, carboys, and many other products. At the mills, lumber, pulp wood, poles, railroad ties, and other forest products are processed and sold.

Shook is a complete set or number of boards ready to be assembled to make some object, such as a box or piece of furniture.

The products are marketed throughout Ontario and Quebec to various primary industries such as creameries and canneries, and to soft drink companies. The company handles its own distribution.

The raw materials include logs, paper, nails, and staples. The logs are cut on crown lands in Guthrie and Niven townships and average approximately 5 million board feet per year.

The plant is served by two sidings, and also operates its own fleet of trucks. Its logs are received by truck while the paper comes by rail. Shook containers are shipped for the most part by rail and the transportation of corrugated boxes is split evenly between rail and road.

The company employs approximately 360 of which 30% are female. All are local and are members of the C.I.O. International Woodworkers union.

Eighty-five percent of the power and process steam is generated by the plant from waste products. Hydro electricity is purchased for lighting purposes only.

The company officials confess that raw materials are their chief locative factor. Labour they say is poor. A pool of labour is practically non-existent, i.e. there are too many men with too little education which makes it difficult to get good labour.

The Steel Equipment Company Limited

Under the presidency of A. E. Dunlop, the Steel Equipment Company Limited was incorporated in Pembroke. Its incorporation came about primarily to use local power and labour and has expanded from its original 40,000 square feet to 96,760 square feet and occupies a site of five acres.

The company, through various agents, markets coast to coast and particularly in the Toronto-Hamilton area a complete line of steel office furniture. This furniture is manufactured from raw materials which include steel from the Steel Company of Canada, Hamilton, special steel prepared by Stanley Steel, Hamilton, and hardware drawn from various Canadian manufacturers. The transportation of both raw materials and the finished product is split almost evenly between rail and road.

The company employs a labour force of 215 of which only 10% are female. All are local citizens and are considered to be mostly semi-skilled. The workers are unionized under the C.I.O. steelworkers union and the only labour trouble occurred in a wildcat strike in 1953.



The company finds that transportation costs are a detriment which makes it exceedingly difficult to compete with companies which have recently begun manufacturing in locations closer to the source of raw materials and to the market.

Canadian Splint and Lumber Corporation Limited

(Fig. 4 - 4)

On October 13, 1920, the Splint company was incorporated under the name of Maguire, Paterson, and Palmer (Canada) Limited. A. E. Dunlop, one of the original directors was instrumental in bringing the firm to Pembroke.

Over the years the company engaged in the production of match splints, match blocks, box shooks, wood cleaks, and commercial lumber. It is now primarily producing match splints from Poplar timber hauled 60 to 70 miles from Maria, Head, and Clara townships. The annual cut amounts to about five million board feet per year. This large cutting seems to indicate that commercial lumber is still of some importance to this company and is further shown by Fig. 4 - 4.

The company is located on a Canadian Pacific

siding and does all its shipping by rail, although it receives its logs by truck.

A labour force of 175 (20% female) is employed. Very few are skilled and they are members of the A.F. of L. Carpenters and Joiners union.

The plant is powered by electricity while steam for heating and drying is generated by waste.

Up to 90% of the splints manufactured are exported to England, Australia, and New Zealand, while the remainder is supplied directly to the Eddy Match Company with which the Splint company is associated.

The remaining two industries are not located in the town, but nevertheless they have a definite bearing on the economy of Pembroke. They are Camp Petawawa and Atomic Energy of Canada Limited.

#### Camp Petawawa

Located just 10 miles west of Pembroke is the sprawling 100 square mile military establishment, Camp Petawawa. For nearly 50 years Pembroke has lived with the army on its doorstep and this has been of both economic and social

significance.

The camp at the present time has a population of about 751 married couples. However, there are nearly 550 couples living in Pembroke awaiting quarters in the camp. This is military personnel only and does not include a civilian labour force of between 550 and 700 which again does not include the employees of the construction companies working at the camp. These figures reflect employment comparable to a major industry which is economically speaking, of great importance to the welfare of Pembroke. Especially do the merchants benefit from the camp. The shopping facilities at Petawawa are very limited which makes it necessary for the camp inhabitants to do nearly all their shopping in Pembroke. This, coupled with the pay envelopes of the civilian labour force means a large amount of money pouring into Pembroke daily.

The social problems created by the camp are not as great as supposed by many people, especially those who are not residents of the town. For a town which has been used to wild lumberjacks invading the streets of the town every spring for generations, the presence of a few soldiers on the streets

having a good time hardly causes a head to turn. It should also be noted that as far as peace time is concerned, the camp for the most part is populated by married couples. They are as respectable, if not more so, as the great majority of the local population. What many fail to realize is that the military personnel have no reason to come to town for entertainment since this is all provided at the camp, and at a much cheaper rate.

#### Atomic Energy of Canada Limited

Atomic Energy of Canada Limited is a Crown company of the Dominion of Canada. It is located nearly 25 miles west of Pembroke on the Ottawa River close to the village of Chalk River. The plant was started in 1944. The deciding factor for its location here has never been revealed. All the other sites under consideration had ample water supply which was necessary, and were as isolated. The reason for such isolation goes back to the early days of atomic energy when it was not known what the radiation effects might be. Were a site being chosen today, now that it is known that radiation is of little worry, the plant would probably be



Fig. 4 - 1; Pembroke Electric Light Company, Head office and sub-station..



Fig. 4 - 2; Consolidated Paper Corp., Ltd., plant located on the Ottawa R.



Fig. 4 - 3; Superior Electric Ltd., located on Pembroke street.



Fig. 4 - 4; Canadian Splint and Lumber, lumber storage.

located on the outskirts of some large city to facilitate the obtaining of labour. Naturally the investment in plant and equipment makes the present location permanent, and this location does make the maintenance of security measures an easy task.

The products, raw materials, and transportation facilities of the plant are not important to this discussion so we will therefore pass on to labour.

It is the labour relationship between the plant and the town of Pembroke which interest us here. A.E.C.L. employs a total of 2,100, made up of 350 professionals who live at Deep River, 375 technical staff who live in Pembroke and vicinity, 375 administrative staff, who also live in Pembroke and vicinity, and 950 prevailing hourly rated employees who live for the most part in Pembroke and along highway #13 between Pembroke and Deep River.

The company with a fleet of 60 buses transports nearly 400 workers daily from Pembroke while others commute in private cars. Much of the payroll of this plant finds its way to Pembroke through local labourers and through the purchases of the working force living in Deep River or in the vicinity

### Conclusion

Several factors effect the location of an industry in a certain town or region. Industries for the most part tend to locate at a point which provides optimum access to its component elements. These component elements for nearly all industries are transportation, raw materials, market, power, and labour supply. For most cases one of these elements dominates an industry, but in the long run there is a balance reached between the elements. When this balance is attained the industry is on a firm footing; when it is not attained the industry is sick. Companies are in business for one reason only, to show a profit. When an industry does not show a profit, it is a result of two factors; it is either being operated inefficiently or its location is not favourable. We are here concerned with the geographic location of industry, and an attempt will be made to show what the determining factors were to cause the location of industries in Pembroke and to show the advantages and disadvantages of locating industry in this town.

Industries in the town of Pembroke have been located here for one of two reasons, either because

of proximity to the raw materials or because of persuasion by an individual.

The industries which have located in Pembroke because of the raw material component are the lumber industries. Due to the fact that the transportation costs on cut timber are high or to the fact that the Ottawa River provides a cheap highway, the lumber industries have located here, some even on the banks of the river, although only one company is still using the river as a transportation means. In locating in Pembroke these industries have reduced their production costs to an extent that the distance from the market is compensated. This distance and the resulting high cost of transportation is balanced not only by reduced costs of transporting the raw materials, but also by reduced labour costs. On the whole the lumber industries are in the happy position of having a perpetual supply of raw materials and a balance between the costs of the components, resulting in a healthy economic picture. In other words, these industries are ideally geographically located.

In the case of two industries that do not draw their raw materials from the surrounding forests



the picture is not as wholesome. Both these industries were established by local capital to use local power and labour. Unfortunately these two component elements do not compensate for the disadvantage of being far from both the source of raw materials and the market. Only through efficient production of a high quality product can such industries survive. One of these two, through efficient methods, and high quality, does appear to be economically sound. The other which is producing in a highly competitive field, a field which is dominated by two or three large companies who produce the same type of product and who can afford to allow these to be loss-leaders, appears to be finding it exceedingly difficult to continue operating economically. These two industries are from a geographic and economic point of view, not well located and should be located, if not close to their raw materials, at least close to their markets.

Two other industries not using local raw materials remain. The glove factory has a close alliance with the lumber industry. Although its market has expanded, it was located here because its customers were found in the lumber mills and

and camps of the district. The textile industry on the other hand was located in Pembroke because of unusual circumstances. A war-time boom and a desperate need for a building caused the location of this industry in Pembroke. These reasons for location no longer exist and the company continues its operations here through inertia.

We are now able to conclude that Pembroke offers advantages only to one type of industry at the present time. To the lumber industry the town offers a good supply of raw materials which can be transported relatively cheaply because of the short distance, fairly good transportation facilities to the consumer market, especially by truck, a good labour supply (although there is a shortage of skilled workers) at less cost than elsewhere, and a good supply of power at reasonable rates. The distance from the market is a detriment, but is fully compensated by the proximity to the raw materials, and by lower labour costs.

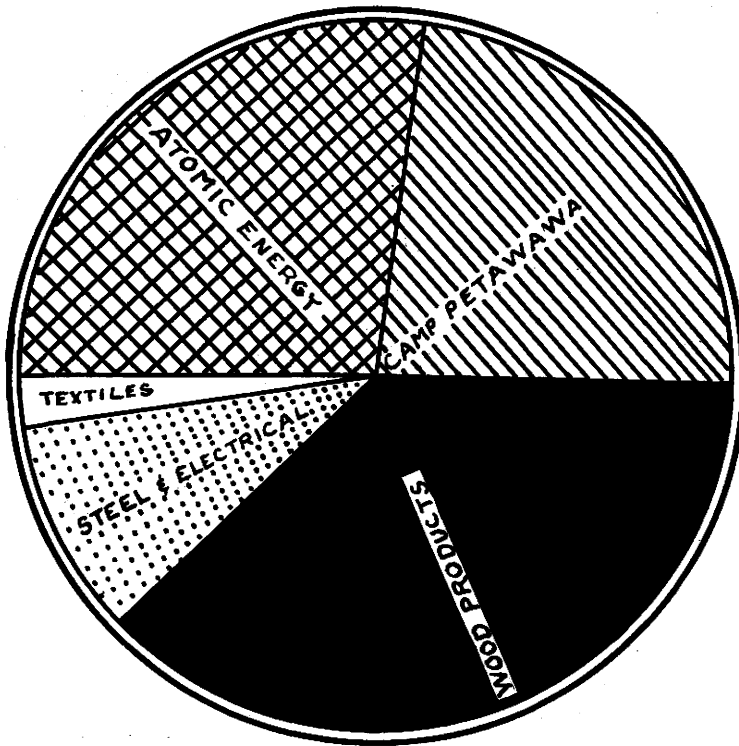
To industries not processing timber the town can offer only power, transportation, and labour. These advantages do not balance the disadvantages of distance from both the raw materials and the large

urban markets. Only a firm drawing raw materials from very far sources and selling nationally could manage to survive in such a location, and even these tend to locate at a point close to their greatest market.

Until such time as the population density of the Ottawa Valley increases to form a more lucrative consumer market, only the lumber industry will prosper in Pembroke and the other industries will seek more advantageous locations.

Figures 4 - 5 and 4 - 6 show quite clearly the relative importance of the various industries to each other.

# DISTRIBUTION OF LABOUR FORCE IN MAJOR INDUSTRIES



CAMP PETAWAWA	600
ATOMIC ENERGY	700
TEXTILES	65
WOOD PRODUCTS	975
STEEL & ELECTRICAL	265

Fig. 4 - 5

LABOUR FORCE, 14 YRS. AND OVER,BY INDUSTRY AND SEX, 1951

Industry	Male	Female
1. All industry	3751	1289
2. Agriculture	38	3
3. Forestry and logging	65	2
4. Fishing and trapping	1	--
5. Quarrying	1	--
6. Manufacturing		
(a) Total	1069	174
(b) Food and beverages	26	2
(c) Leather products	16	6
(d) Textile products (except clothing)	28	36
(e) Clothing (textile and fur)	4	10
(f) Wood products (includes Manufacture of steel furniture)	639	51
(g) Paper products	4	--
(h) Printing, publishing, and allied industry	27	10
(i) Iron and steel products	22	1
(j) Transportation equipment	81	2
(k) Non-Ferrous Metal Prod.	7	--
(l) Electrical apparatus and supplies	44	28
(m) Non-metallic mineral Prod.	9	--
(n) Chemical products	152	31
(o) Misc. Manu. Industry	10	2
7. Electricity, Gas, and Water	78	3
8. Construction	321	--
9. Transportation, Storage, and communication	208	53
10. Trade		
(a) Total	598	275
(b) Wholesale	132	21
(c) Retail	466	254
11. Finance, Insurance and Real Estate	50	40
12. Service		
(a) Total	1309	734
(b) Community	111	379
(c) Government	700	58
(d) Recreation	23	5
(e) Business	324	38
(f) Personal	151	254

Fig. 4 - 6

## CHAPTER V

THE TOWNSCAPEIntroduction

We often speak of a landscape, but this term hardly seems to be ascribable to a town. Just what do we mean when we speak of a landscape? The landscape as defined by Grimm, may be used to indicate a unit political area as a whole, including its population. <sup>(1)</sup> Krebs defines landscape further by saying that the term refers to certain aspects of the character of an area that might be considered typical of many similar areas. <sup>(2)</sup> Similarly the term townscape can be defined in much the same fashion.

In the townscape we have a summation of all those things which are common to all towns of similar size; the streets, the use of land, the railway tracks, the civic services such as fire and police protection, water, sewage, transportation, and power, as well as such things as town planning and demography.

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(1) Hartshorne, R., The Nature of Geography, P. 154

(2) Ibid. P. 154.

### The Street Pattern

Superimposed upon the ground occupied by a town is the street pattern. These streets may be laid out in numerous types of patterns and may or may not conform to the physiography of the site.

Basically the streets of Pembroke are laid out in a grid pattern, i.e. the great majority of the streets cross each other at right angles. When, however, one looks closely at a map of the town, it appears to look like a crazy-quilt, with one grid block meeting another at a slight angle as if some great force had moved the grid out of line. The explanation for this configuration is clear when you begin with what appears to have been the first street, and then, like a child playing with blocks, add the streets one by one onto this street.

Pembroke Street, which in early times was a portage road, has been laid out to follow as closely as possible the contours of the bank of the Ottawa River. In doing so the street appears on a map as a flattened "S". The planners did not follow a more obvious course, which was along one of the bordering terraces, but chose rather to ignore these, with a result that Pembroke Street alternates between

terraces.

When it came time to lay out streets parallel to Pembroke Street, they too became "S" shaped and the perpendicular streets ran parallel to each other only in groups of five or six blocks.

Not only was the Ottawa River an effective control, but a look at Fig. 5 - 1 will show the effectiveness of the Indian and Muskrat rivers. All north - south streets, but one, stop at the Indian River as do all east - west streets, but two, stop at the Muskrat River. In the area between the two rivers a grid pattern has been laid down which ignores the contours of the river and runs parallel to the southern town boundary. This also true in the western end of the town.

The street pattern to the east of the Muskrat River appears to be controlled by two streets, McKay and Cecilia. Both start out perpendicular to Pembroke street, but Cecilia after the first block swings slightly eastward. Between these two streets are four streets, two of which run parallel to McKay and two which run parallel to Cecilia. The cross streets originate perpendicular to McKay street and are bent to also meet Cecilia Street at



right angles. There appears to be no logical reason for this pattern which must have originated as a whim of the town engineer.

The streets of Pembroke are a typical example of the disadvantages of using a grid in an area where the topographic features prevent the completion of an unaltered pattern. A pattern which took advantage of the topographic features would have resulted in streets of far more practical value as well as being more aesthetic.

### Land Use

Now that the street pattern has been established, to what use has the land bordering these streets been put?

#### Commercial Core (Fig. 5 - 3)

The core of a town is generally considered to be that land which is being used for the transaction of retail business along with certain financial and professional functions. In Pembroke this core is located along Pembroke street between Victoria and Henry streets. It extends about one-half block towards Lake street, but extends only a very short distance on the other side of Pembroke

street. This southern boundary is effectively regulated by a river terrace (Fig. 1 - 4) which separates Pembroke street from Renfrew street, as well as separating the commercial core from the residential area. (Fig. 5 - 2, inside back cover)

This commercial core reflects a relatively intensive use of land with three and four storey buildings occupying both sides of the street for at least five blocks. The floors giving entrance on to the street are occupied by retail stores, restaurants, theatres, banks, and hotels, while the upper floors are given over to offices and apartments. Towards the eastern and western ends of the core we find an intermixing of retail stores, cheap hotels, gasoline stations, and boarding houses reflecting an east and west growth of the commercial core and decadence of a surrounding residential area. (Fig. 5 - 4, and 5 - 5)

Occupying an area north of the commercial core and along Lake street is an area given over to light industry (Fig. 5 - 6), including boat builders, welding shops, auto repair shops, and some wholesale warehouses. This use of land tends to mix somewhat along the border between the wholesale and



Fig. 5 - 3; The Commercial Core, Pembroke Street looking east.



Fig. 5 - 4; Fringe of the Commercial core showing the intermixing of retail stores, cheap hotels, and residences



Fig. 5 - 5; A boarding house on the fringe of the commercial core showing decadence of a surrounding residential area.



Fig. 5 - 6; Light industrial zone on Lake street, bordering the commercial core.

light industry zone, and the commercial zone.

### Industrial Land Use

The rest of the industry in Pembroke is located in three pockets. The first and original location is a linear stretch of land along the river, for the most part north of the C.P.R. main line. Here are located those lumber industries that do, or did at one time, depend on the river for transportation of raw materials. They are also located here because of their requirement of large acres of flat land on which to store their logs and lumber.

The second industrial area is that occupied by the Shook Mills and the Steel Equipment Company in the western end of the town. The use of this land for industry has been determined by the railway line which preceded the establishment of these two industries.

The third industrial zone is located between the Canadian National Railway line and the Muskrat river. This is a zone of light industry (Canada Veneers) and oil bulk stations.

Two other industries fail to fall into the general pattern. These are Superior Electric which

occupies the land at the corner of Pembroke Street and John, and Forest Valley Lumber (Planing Mill) which is located in the triangle bounded by the C.N.R. main line, Bennet street, and Julien street.

### Residential Land Use

As is usually the case, the residential use has been forced to occupy the remaining land and even here it has been forced to share it with corner stores, used car lots (Fig. 5 - 7), and gasoline stations. This plus certain other factors gives the residential areas of the town a look of dowdiness.

Two factors besides the mixed use of land give the residential land use an appearance of ugliness. The first is the condition of the streets. Of the thirty miles of streets in the town only seven are paved and these are the main access roads. The rest of the streets which include nearly all the residential streets are gravel, have no curbs, and are generally bordered by broken concrete sidewalks. (Fig. 5 - 8) This, needless to say, detracts even from the finest house. The other factor is, that in few of the older areas do the houses all date from the same period. Houses do not appear to have

been built on successive lots, and when the time came for more houses, these vacant lots have been utilized by housing of a later vintage. (Fig. 5 - 9) As a result, the observer is presented with mixed housing in a single area which makes it exceedingly difficult for him to place any one area into a single house classification.

In order to accommodate this problem of mixed housing I have been forced to adapt my classification to the town. This has resulted in a mixed classification, first and second class housing, second and third class housing, third and fourth class housing, and fourth and fifth class housing.

It is most difficult to attempt to explain the basis of this classification because it has no arbitrary foundation. In other words, the houses were not intentionally judged on whether they had good roofs or whether the walks were swept, although unconsciously these factors might have been taken into consideration, but the judgment was based purely on personal tastes and preferences. This is the only way a general classification can be reached. For a more detailed account a minute examination of every house in the town would have



Fig. 5 - 7; Example of uncontrolled land use in a residential area, McKay St.



Fig. 5 - 8; A photograph showing the general condition of the streets throughout the residential area.



Fig. 5 - 9; A photograph showing the intermixing of house classes; 1st and 2nd class houses, Esther St., near Peter St.

been necessary and would have required a lengthy door to door survey. I think, however, that most people have the same tastes and will understand, especially after consulting the accompanying photographs, the basis of the classification.

The central area of the town, west of the Muskrat River and north of the Indian River has been classified as 2nd. and 3rd. class and 3rd. and 4th. class. It is an area classified thusly because of the age of the homes and the general appearance. Needless to say, there are a few homes which have been kept in excellent repair, but are ignored in the overall general classification.

The area to the west of the Muskrat River can be divided into three sections. The section north of Pembroke street is adjacent to an industrial zone and reflects this location in poor rundown housing. (Fig. 5 - 10) Pembroke street and the section south is an area of 1st. and 2nd. class houses. (Fig. 5 - 11, 12) A large section of this, especially the eastern part, is post-war, (Fig. 5 - 13, 14, 15) while that part in the western section is of 1930 to 1939 age. Between this section and the railway tracks is an area of 3rd. and 4th. class housing.





Fig. 5 - 10; 3rd and 4th class housing on Nelson St.

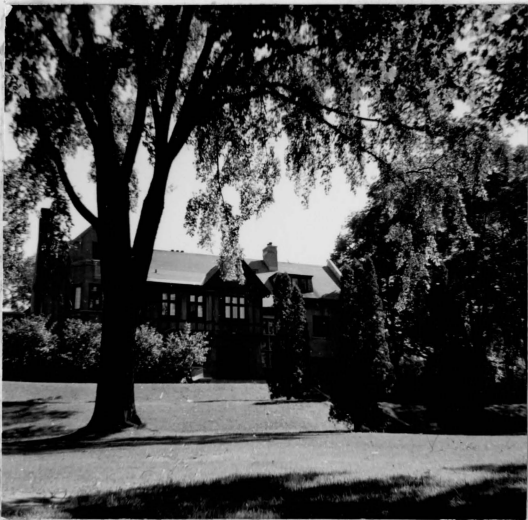


Fig. 5 - 11; 1st class house on McKay Street.



Fig. 5 - 12; 1st class house on Pembroke Street at Peter Street.

In the area between the Muskrat and Indian rivers is a section that could be described only as shabby. It is an area of one and two room houses constructed from materials ranging between logs and tar paper. This type of dwelling occurs again in the western end of town to the north of the Shook Mill and the railway line.

The use to which the land in Pembroke has been put for residential purposes reflects a complete lack of control and disinterest on the part of town authorities. The near slum area in the south end of town appears almost to be due to this lack only. Had legislation been established to prevent the slum development in this area there is no reason to believe that this land could not have supported at least 2nd. class houses. True, the town has recently passed a zoning by-law which will be discussed later, but it will take at least twenty-five years to correct a problem which could have been checked years ago. This zoning by-law, conscientiously applied and not abused, plus a street paving programme would go a long way in improving the appearance of the residential area of the town.

Three uses of land remain, public land use,

quasi-public land use, and public recreational land use.

### Public Land Use

Public land is land being used by the municipal government to carry on its business and to provide certain services expected of it.

The municipal offices of the town occupy quarters on Pembroke street in the heart of the commercial core. The building is of no particular significance and appears to have been formerly occupied by a retail store. These offices were formerly housed in a building at the southern end of Victoria street, a building which is now occupied by the fire and police departments. Near this building and on the same street is the public library. The public and separate schools are shown in Fig. 5 - 1.

Being a county town certain land is used by the county government and this is located on Pembroke street between William and Peter streets. Here are found the Registry office, the jail, and court house. (Fig. 5 - 16)



Fig. 5 - 13; 1st class housing  
in a new sub-division in the  
eastern end of town and south of  
highway # 17.



Fig. 5 - 14; 1st class  
houses on McKay Street  
(note: railway line runs  
back of these homes.)



Fig. 5 - 15; 1st class  
house in same sub-division  
as above.

### Quasi-public Land Use

Quasi-public Land, which for the most part is occupied by churches (Fig. 5 - 17, 18), is scattered throughout the town with a particular concentration on Renfrew street between Victoria and Isabella streets. The Armouries (Fig. 5 - 19), which is also included in this classification occupies land on Victoria street, north of Pembroke street.

### Public Recreational Land Use

Public recreational land includes five parks and the Memorial Centre. Two parks are located on the Ottawa River, one a ball park at the foot of Albert Street, and the other, Riverside Park, in the western end of town near the pumping station. (Fig. 5 - 20) This park has a bathing beach on the river, but as Fig. 5 - 21 shows, it is in a rather poor condition. The other three parks are small and are located, two on Pembroke street, one at the Muskrat River (Fig. 5 - 22), and the other at John Street, while the third is located on McKay street at Alfred. The Memorial Centre is located on Pembroke street opposite the collegiate.



Fig. 5 - 16; Renfrew County Court House, Pembroke Street at William Street.



Fig. 5 - 17; St. Columbia Roman Catholic Church, Renfrew Street.



Fig. 5 - 18; Wesley United Church, Pembroke Street at William Street.



Fig. 5 - 19; Curling rink and armouries, Victoria St.

The land use in Pembroke is only beginning to sort itself out. The core is well-defined and industries occupy certain well-defined zones except for one or two. There is very little evidence of decadence, i.e. one land use dying out because of the encroachments of another, objectionable to it. The land use is static and even the zoning plan has made no drastic changes in the distribution.

### Planning

As mentioned above the Corporation of the town of Pembroke in the year 1954, saw fit to implement a by-law respecting the use of land and the use, bulk, height, and location of buildings. This by-law is of the standard type applicable in hundreds of towns and is not designed to conform with any master plan for the town.

The by-law divides the land in the town into eight classifications.

Area A - Restricted Residential

Area B - Restricted Residential

Area C - Partially restricted residential

Area D - General Residential

Area E - Light Commercial



Fig. 5 - 20; Riverside Park.



Fig. 5 - 21; Bathing beach on the Ottawa River at Riverside Park.



Fig. 5 - 22; Park on Pembroke Street at the Muskrat River.



Area F - General Commercial

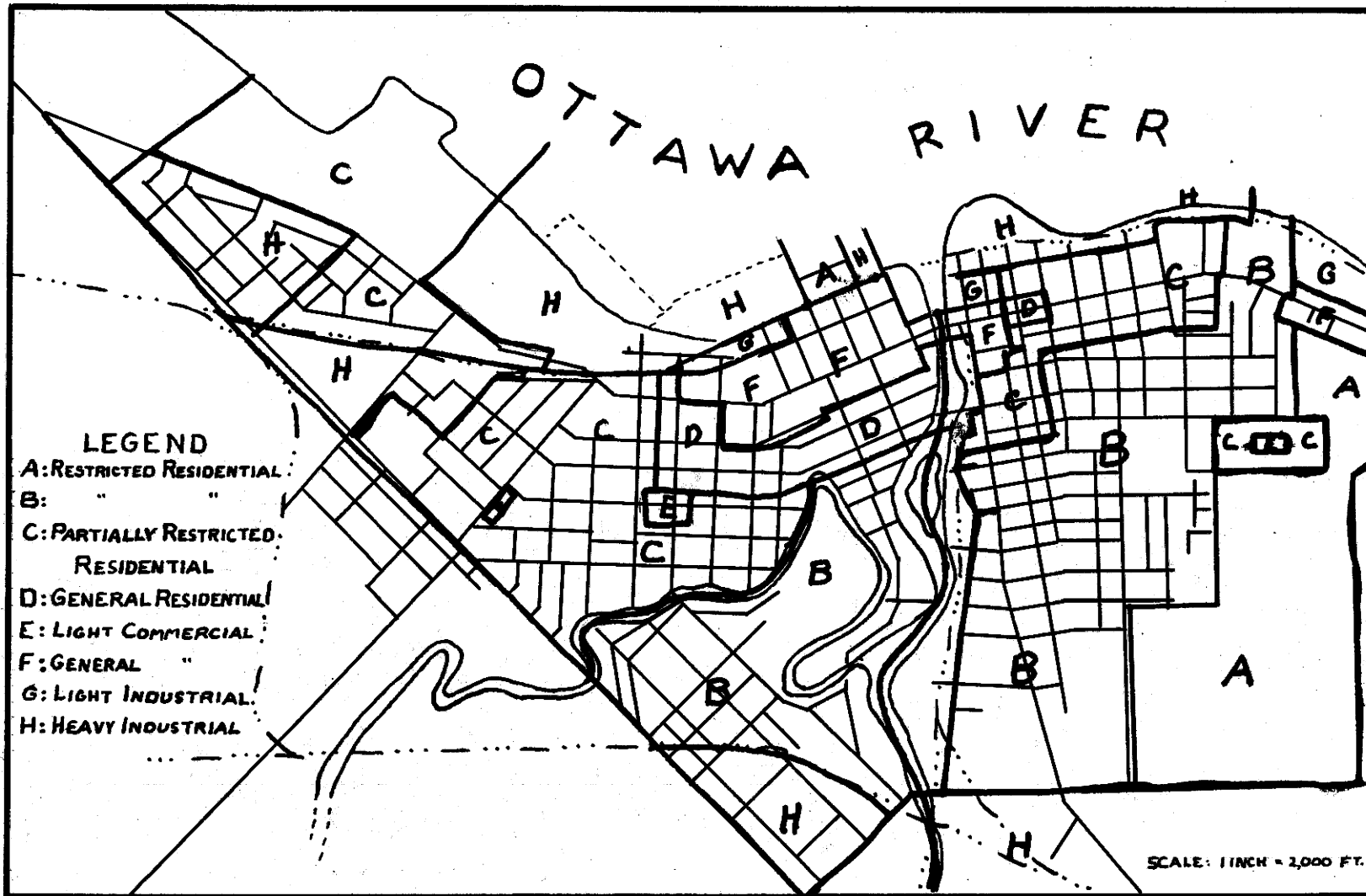
Area G - Light Industrial

Area H - Heavy Industrial

The location of each of these classifications is shown in Fig. 5 - 23.

Area A allows the construction of a single family dwelling on a lot having a minimum area of 7,200 square feet and a minimum frontage of 60 feet. Of this area the house must occupy not less than 700 square feet. The land in this same area may also be used for a public park, playground, swimming pool or wading pool, a bowling green, a tennis court, a church, a parish hall, a school, or the home office of a physician or dentist. The area allocated to this use is a large section in the eastern end of town, an area as of yet undeveloped. Two small areas are located on the river and mark the existence of two public parks, both of which are in the heart of an heavy industrial zone.

Area B has been set aside for the same use as Area A, except that the lots have a minimum area of 5,000 square feet and a frontage of 50 feet. Of this the house must occupy an area of not less than 500 square feet. (See Fig. 5 - 23 for areas set



PEMBROKE ZONING PLAN

aside for this purpose)

Area C, partially restricted residential, allows the construction of a single family dwelling, a semi-detached double, or duplex dwelling, an apartment house (maximum 8 dwelling units), row-houses, the various public and quasi-public uses in Area A and B, tourist courts and motels (in an area west of King Street and north of Pembroke street), trailer camp (Same as tourist courts, but within 500 feet of the town limits). This area may be noted on the map.

Area D includes the uses listed in Area C as well as apartment buildings not exceeding 50 dwelling units, boarding and rooming houses, institutional buildings, and commercial uses as listed in Area E.

Area E, light commercial, permits institutional or administrative buildings, a community hall or centre, a public library, a health unit or clinic for medical or dental purposes, a retail store or shop, a bake shop, barber shop, or beauty parlour, restaurant, a veterinary office, a bank, a hotel, a service station, a parking lot ancillary to the above activities. This area is located around the

present commercial core.

Area F, general commercial, permits those commercial uses allowed in section E as well as an auditorium or concert hall, undertakers establishment, a motion picture theatre, a repair or building work shop, a retail store, an automobile repair garage, telephone exchange, telegraph agency, and electric substation, passenger depots, small non-noxious industry, tourist courts and motels east of Belmont street on highway #17, and trailer camps on highway #17 within 800 feet of the easterly town limits.

Area G, light industrial, allows a workshop of a working proprietor, an automobile repair garage, a telephone exchange, telegraph agency, and an electric sub-station, passenger depots, dairy, ice-cream plant and stables, yards for contractors, builders, lumber, coal, etc., government yard, cold storage, warehouse, printing and book binding, laundry, cleaning and dyeing works, bakeshop, bottling and food packaging, non-noxious chemical manufacturing, railway right-of-way, electrical high tension lines and power plant, a morgue, stone cutting yards, storage garage, poultry killing plant

animal pound and kennels.

Area H, heavy industrial, includes nearly all the uses allowed in Area G, plus any industry which is not of an offensive or dangerous nature, or which will "adversely effect the health, welfare, pleasure, or safety of the inhabitants of the Town of Pembroke by smoke, noise, fumes, smell, fire, or explosion."

Any step towards regulating the land use in Pembroke is welcome and it is hoped that the by-law will go a long way in alleviating the problem that has developed in years gone by. As pointed out earlier the use to which land has been put in the past has been based on what was expedient at the time. Little thought was given to unity or standards of construction, especially in the residential areas which has resulted in the difficulty which was pointed out earlier in classifying housing. The zoning by-law should go a long way to rectify this problem, although it does not establish any overall unity. We must, however, realize that the by-law has had to be made conform as much as possible with the present land use and without a complete reconstruction of the town no better plan could be made.

## Civic Services

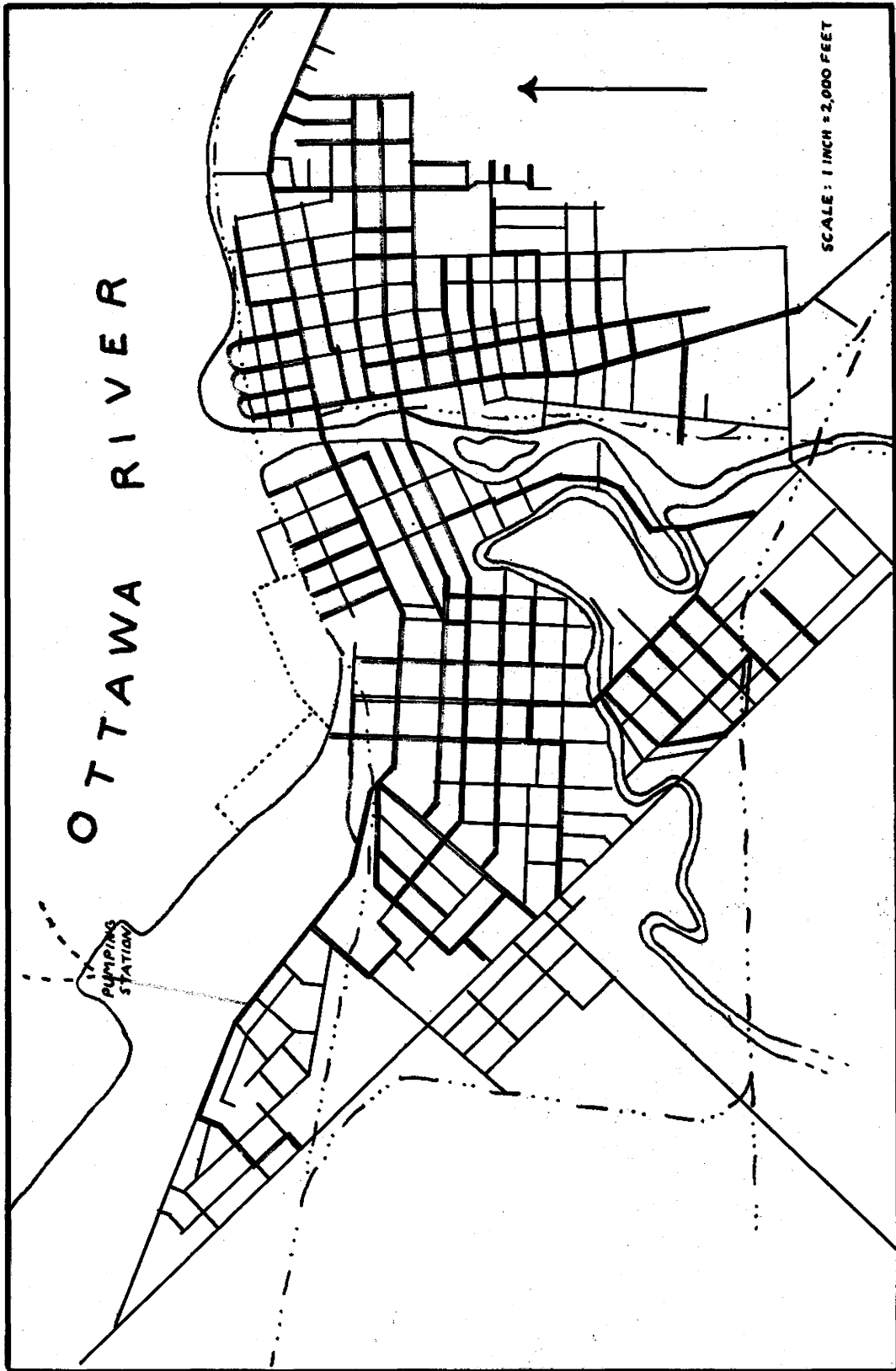
The municipal government of every town is set up to provide certain essential services to the inhabitants of the town. Pembroke is adequately endowed with these services.

### Water (Fig. 5 - 24)

The source of the water supply to Pembroke is the Ottawa River. A pumping station in the western end of town, by electric pumps and a standby gasoline pump, maintains pressure at 75 to 80 P.S.I. and has a daily capacity of  $3\frac{1}{2}$  million gallons or  $4\frac{1}{2}$  million gallons if augmented by gasoline pumps. The water is pumped to a 127,000 gallon stand pipe from where it runs by gravity to industrial and domestic users through mains which vary in diameter from 18 inches to 4 inches. In the densely populated area the mains are 10 inches and 18 inches (18% of the system). 69% of the system is 8 inch and 6 inch mains and 13% is 4 inch mains. The water is treated by a chlorination process.

### Sewage (Fig. 5 - 25)

In the town there are 18.9 miles of



OTTAWA RIVER

PUMPING STATION

SCALE: 1 INCH = 2,000 FEET

WATER MAINS, PEMBROKE

Fig. 5 - 24

sewers and 11 miles of storm drains. The sewers outlet into the Ottawa River at three points (one of 12 inches and two of 24 inches). Sewage is unprocessed and dumped raw into the river, although the town plans a disposal plant in the near future.

### Police

The town police force consists of ten full time constables and a chief. There is a cruiser patrol at least once both day and night and a constable patrol in the heart of the town. This force is augmented by a Provincial Police detachment, an R.C.M.P. office, and the Canadian Army Provost Corps.

### Fire Protection

The fire department consists of two platoons totalling twenty men and a chief. Equipment includes one car, three pumpers, and a hook and ladder. There are 244 hydrants spaced at intervals of 300 feet and 48 street alarm boxes. In case of fire the water supply can be cut off to the stand pipe and the full resources pumped into the mains at 100 P.S.I.



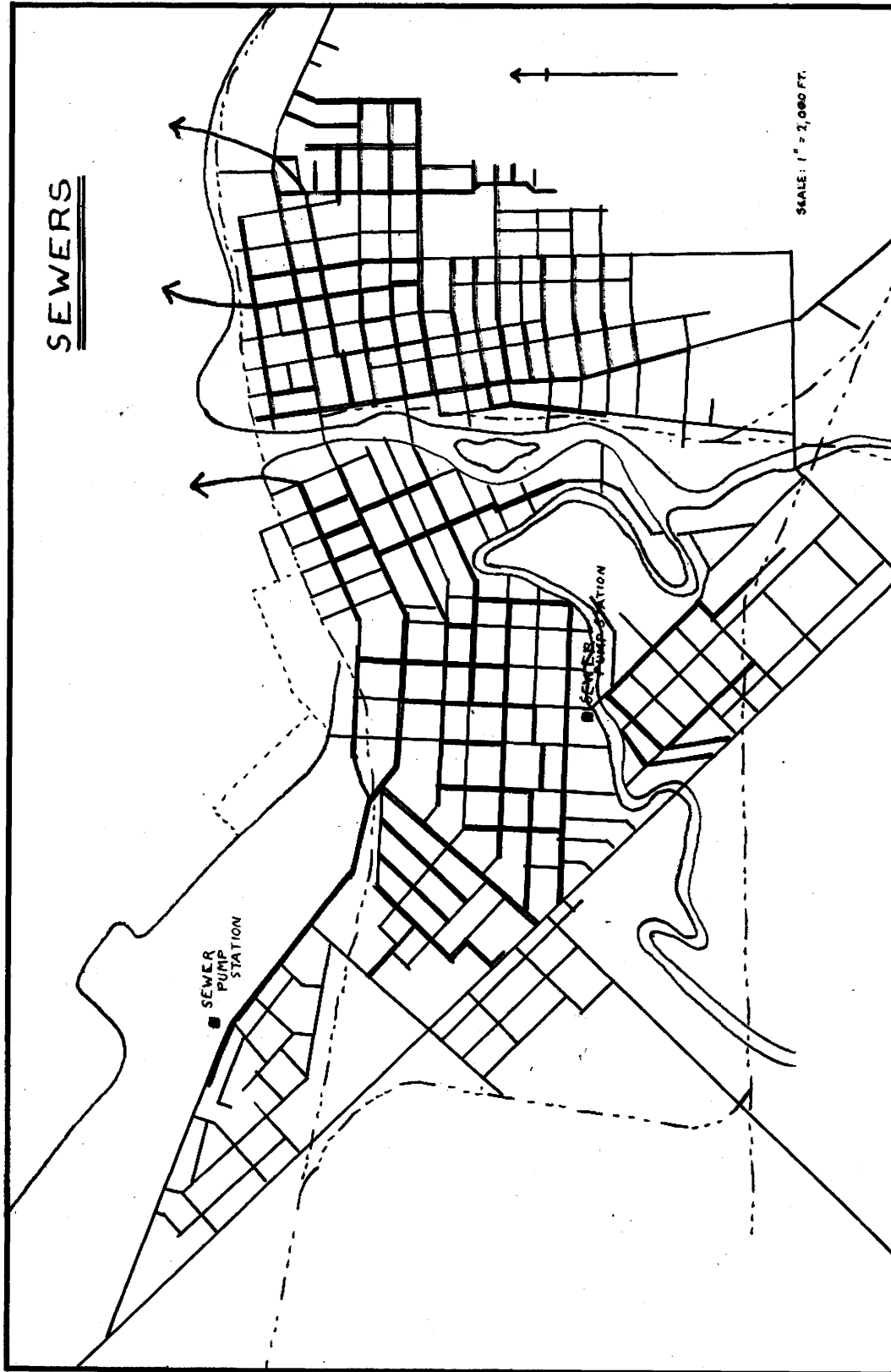


FIG. 5 - 25

### Power

As mentioned before, power is supplied by the Pembroke Electric Light Company.

### Schools (Fig. 5 - 26, 27)

The town has two public schools, one public high school, four separate schools on the elementary level, and a separate high school.

### Transportation

Although this is not a civic service it is a service and is being placed here.

1. Railways: The Canadian National Railway provides daily service to Montreal, Ottawa, North Bay, Winnipeg and Vancouver, as well as service to Barry's Bay, Madawaska, Whitney and Golden Lake. The Canadian Pacific Railway gives service to Montreal, Ottawa, North Bay and points west as well as Renfrew and Chalk River.
2. Buses: Colonial Coach Lines provides four buses daily to Montreal, Ottawa, Renfrew, and North Bay.
3. Highways: Highway No. 17 connects the town with Montreal, Ottawa, North Bay and Sudbury.



Fig. 5 - 26; One of the two public elementary schools, Alfred and William Streets.



Fig. 5 - 27; Pembroke Collegiate, Pembroke Street at Christie Street.



Fig. 5 - 28; Ferry connecting Pembroke and Allumette Island.

County roads connect the town with Golden Lake, Eganville, Beachburg, and Westmeath as well as linking the town with Highways No. 60 and 41, which give access to Toronto and Hamilton.

At the present time the town is connected with the Quebec side of the river by a ferry service (Fig. 5 - 28), but a bridge spanning the river is now under construction east of the town.

### Demography

The information that follows is statistical data derived from the 1951 Canadian Census and is designed to show population increase, present age distribution, countries of birth and of origin, and religious denominations.

### Population Growth 1856 to 1955 (Fig. 5 - 29)

The population of Pembroke has shown an even growth of about 2,000 per census period. The period between 1941 and 1951 shows a growth less than would be expected in war time, but this is due mostly to the fact that, unlike many towns, Pembroke did not experience an industrial boom during this period.

POPULATION 1856 to 1955

1856	app. 800
1871	1,508
1881	2,820
1891	4,401
1901	5,156
1911	5,626
1921	7,875
1931	9,368
1941	11,159
1951	12,704
1955	13,910

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Fig. 5 - 29

Population by Five Year Age Groups

Figure 5 - 30 shows clearly the breakdown of the population into five year age groups and also shows what has been happening to the population.

The graph shows a slight tendency towards a decrease in population during the depression years and during the war, but since the war the population has made a rapid recovery.

The overall shape of the graph reflects an increasing rather than a decreasing population.

Population by Birthplace (Fig. 5 - 31)

A large majority of the people are of Canadian birth showing almost a complete absence

## POPULATION BY 5 YEAR AGE GROUP, 1951

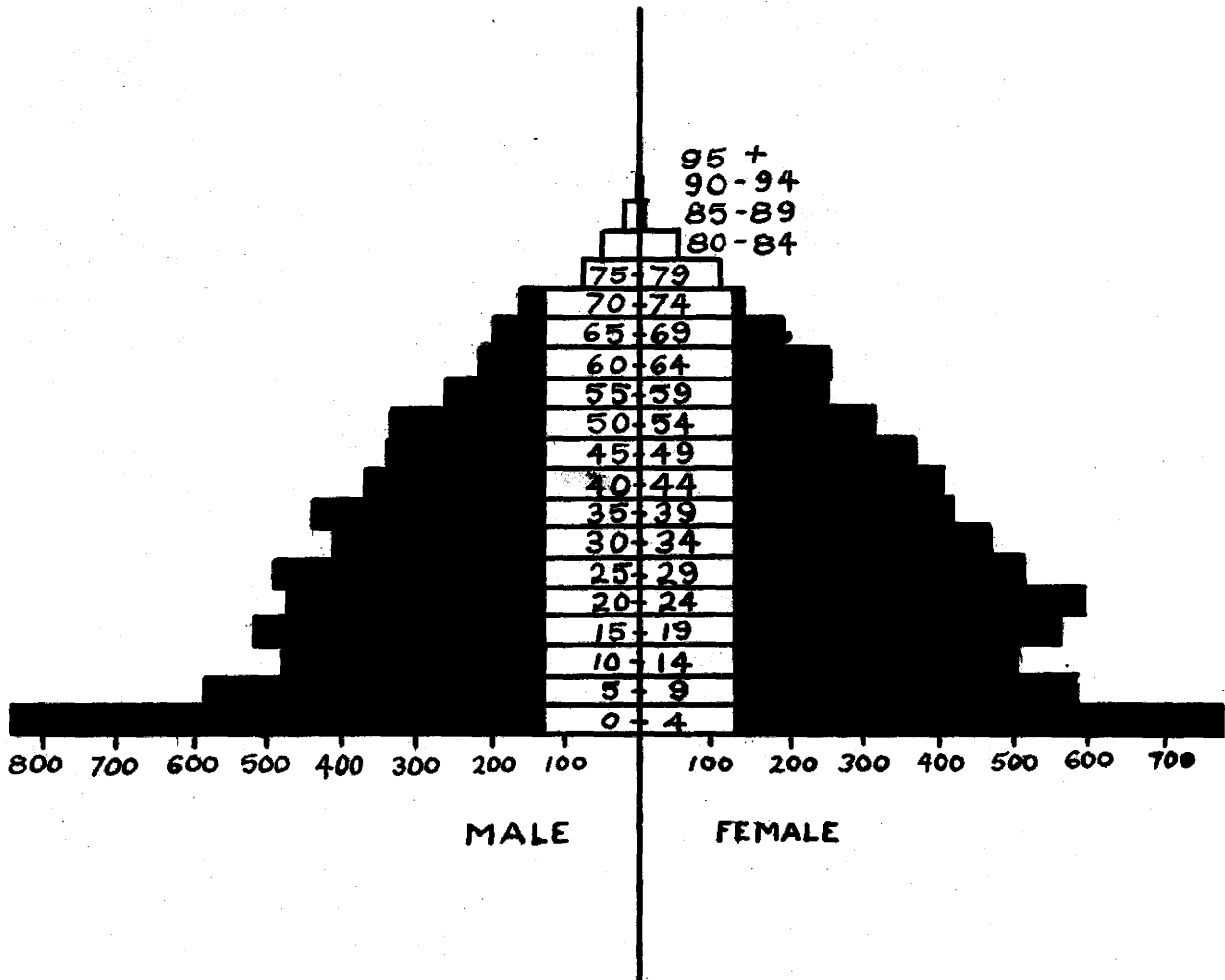


FIG. 5-30

of immigrant settlement in the town in recent years.

POPULATION BY BIRTHPLACE AND SEX 1951

	<u>Birthplace</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
1.	Total	6,192	6,512	12,704
2.	Canada	5,838	6,163	12,001
3.	United Kingdom	149	150	299
4.	Other Commonwealth countries	2	--	2
5.	United States	31	63	94
6.	European Countries	147	136	283
7.	Asiatic "	23	--	23
8.	Others	2	--	2

Fig. 5 - 31

Population by Origin (Fig. 5 - 32)

The Census figures show three predominant national origins, British, French, and German.

POPULATION BY ORIGIN AND SEX 1951

	<u>Origin</u>	<u>Total</u>	<u>Male</u>	<u>Female</u>
1.	Total	12,704	6,192	6,512
2.	British Isles	5,701	2,746	2,955
3.	French	3,263	1,599	1,664
4.	Austrian	3	2	1
5.	Czech and Slovak	3	1	2
6.	Finnish	19	7	12
7.	German	3,096	1,588	1,563
8.	Hungarian	5	2	3

Origin	Total	Male	Female
9. Italian	41	17	24
10. Jewish	26	15	11
11. Netherlands	114	53	61
12. Polish	184	81	103
13. Russian	10	6	4
14. Scandanavian	38	21	17
15. Ukrainian	23	12	11
16. Other European	85	43	42
17. Chinese	22	21	1
18. Japanese	--	--	--
19. Other Asiatic	4	3	1
20. Native Indian or Eskimo	35	13	22
21. Others and not stated	32	17	15

Fig. 5 - 32

Population by Religious Denomination (Fig. 5 - 33)

47.4% of the population is of Roman Catholic affiliation. The remainder is divided amongst the various protestant denominations with the largest numbers affiliated with the Anglican Church, the Lutheran church, and the United Church of Canada.

POPULATION BY RELIGIOUSDENOMINATION AND SEX 1951

Denomination	Total	Male	Female
1. Total	12,704	6,192	6,512
2. Adventists	5	2	3
3. Baptist	293	146	147
4. Christian Science	2	--	2
5. Church of Christ, Disciples	--	--	--



Denomination	Total	Male	Female
6. Church of England	1,119	530	589
7. Confucion or Buddist	--	--	--
8. Evangelical Church	538	253	280
9. Greek Orthodox	9	5	4
10. Jewish	32	19	13
11. Lutheran	2,012	1,002	1,010
12. Mennonite	--	--	--
13. Mormon	--	--	--
14. Pentecostal	219	105	114
15. Presbyterian	490	249	241
16. Roman Catholic	6,020	2,891	3,129
17. Salvation Army	46	25	21
18. Ukrainian*(Greek) Catholic	1	--	1
19. United Church of Canada	1,847	920	927
20. Other	71	40	31

Fig. 5 - 33

CONCLUSION

We must at this time go far back to the introduction of this thesis. There it was stated that the town of Pembroke was in a transition period, a period of adjustment to new conditions.

For many years the town was dominated by the lumber industry. The processing of timber was its natural function because of its location on the edge of the forest frontier, but now that frontier has retreated and the situation of former years is not quite the same. The resources have diminished and are now much farther away, making the location of Pembroke as a lumber town not quite as advantageous as previously. Unfortunately there have not been other changes of great enough magnitude to balance this change.

The market patterns of the Province of Ontario have not developed in such a way as to make Pembroke the choice of industries. With the urban population of the province located at the western end of Lake Ontario and a low density of population in the Ottawa Valley, industries find it to their disadvantage to locate here, as is true of nearly all the towns in the valley. Pembroke at least is

fortunate in still having its lumber industry. A town, such as Renfrew, which lost its lumber industry many years ago, and only recently lost its big employer, textiles, is faced with an acute unemployment problem.

In Pembroke, lumber will probably be maintained at its present level of production with the help of conscientiously applied forest management. One might almost say that the lumber industry, barring some major calamity, is a permanent institution in the town. Of the other industries, the impression is given that their roots are not as solid in Pembroke, and that they are rather temporary. This should not be misconstrued as a prediction, but should be looked upon merely as an impression gained through observation and study. And so perhaps we should not look upon Pembroke as being in transition, but should look upon it as a town in the fortunate position of having a mainstay in the lumber industry and being able to experiment with secondary industries without seriously effecting its economic stability.

APPENDIXIndustrial Questionnaire

1. Is this a branch or head office? If a branch where is the head office located?
2. Brief history of the plant in the town.
  - (a) When did it get started?
  - (b) Why?
  - (c) How big was it approximately?
  - (d) When did expansion take place?
  - (e) When was the peak operating period of the plant?
3. Products of the plant.
  - (a) What are they?
  - (b) Are they completely or partially manufactured?
  - (c) Where are they shipped? -- bill of lading destination, not ultimate.
  - (d) How is distribution handled?
4. Raw Materials.
  - (a) What are the raw materials?
  - (b) What are the semi-manufactured components?
  - (c) Where are the suppliers located?
    - (i) raw materials
    - (ii) semi-manufactured com-

ponents.

5. Transportation.

- (a) Do you have a railway siding?
- (b) Do you have your own fleet of trucks?
- (c) How do you ship your finished products?
  - (i) Percentage shipped various ways.
  - (ii) Broken down, if possible, by individual product.
- (d) How do you receive your raw materials, semi-, and fully manufactured components?
- (e) If the products are being shipped to a number of points, are their correlations between methods of shipment and destination?

6. Labour.

- (a) Approximately how many are employed?
  - (i) full time
  - (ii) seasonal peaks
  - (iii) male
  - (iv) female
- (b) Does your industry have a high per-

centage of skilled workers?

- (c) Is the plant unionized?
- (d) If so, have there been any strikes or walk-outs?
- (e) Are the people townsfolk, or do you have a large number of people commuting from the outskirts or nearby towns?
- (f) If commuters are employed, from where do they come, how far, and how?

7. Power.

- (a) types: coal, oil, electricity.
- (b) Proportion of each.
- (c) Is the industry a heavy user?
- (d) Coal or petroleum sources?
- (e) Is water a major item in the plant process?

8. Markets. (partially covered in section 3, above)

- (a) Regional
- (b) Provincial
- (c) National
- (d) Export -- even if you do not export directly, is your product ultimately marketed nationally or internationally

in the form that it left the plant,  
with no subsequent changes?

9. Location of the plant.

(a) Do you think that the plant is well-located in regard to each of the following major factors?

- (i) Power
- (ii) Raw materials
- (iii) Labour
- (iv) Transportation
- (v) Markets

(b) As far as your plant is concerned which way do the above factors rank in relation to the successful operation and profitable business returns of this industry?

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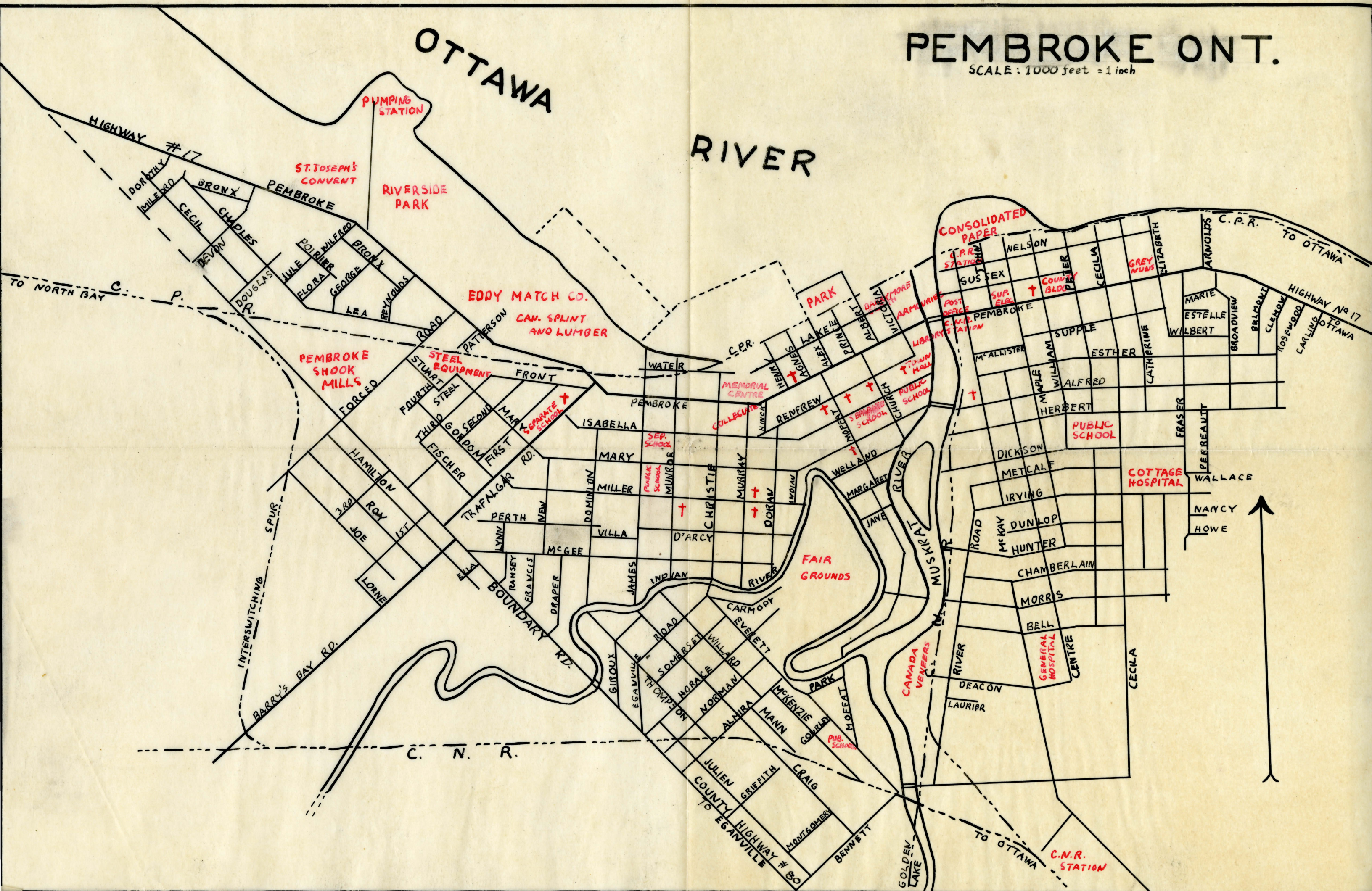
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# PEMBROKE ONT.

SCALE: 1000 feet = 1 inch



OTTAWA

RIVER

HIGHWAY #17

ST. JOSEPH'S CONVENT

RIVERSIDE PARK

EDDY MATCH CO.  
CAN. SPLINT AND LUMBER

PEMBROKE SHOOK MILLS

STEEL EQUIPMENT

PARK

CONSOLIDATED PAPER

FAIR GROUNDS

COTTAGE HOSPITAL

GENERAL HOSPITAL

C.N.R. STATION

