

THE HISTORICAL GEOGRAPHY OF THE CITY OF OTTAWA

BELL-FAST BOND

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HISTORICAL GEOGRAPHY OF OTTAWA AND ITS REGION

INTRODUCTION

Geography is inseparable from the history which helped produce it. A region, unless it has wholly escaped human contact, is a compound of two contrasting, yet interwoven, elements -- a physical basis which is relatively stable, and cultural patterns and distributions which are always changing. The present-day geography of any settled **area** contains residual features of many past geographies as it inherits the moving forces generated in the past. An area of land, like a person, cannot be fully explained without bringing in history.

It is convenient to regard the present-day picture as temporarily at rest, although it is really dynamic and not just static. The geographer is concerned with cultural landscapes which have reached varying stages of development.

In the beginning, we find the Ottawa Valley a sea of forest roamed by wild animals and nomadic Indians. Then came the white man; the explorer, the *coureur de bois*, the voyageur and the fur-trader. They were closely followed by the monks and their missions. Soon, settlers began cutting into the forest and widening clearings along the Ottawa. Lumbering became more and more important. Then decline set in, but the building of the Rideau Canal brought new life to the Ottawa Valley. Workers were brought in and settled. Soon

a sizeable town grew up around the Chaudiere Falls. Then, abruptly, the tempo of life changed. Ottawa was chosen as the Capital of Canada, and on the heels of this development came Confederation.

It is the purpose of this study to show how the geographical setting has influenced the various historical periods; to correlate the site of the city and regional location with the growth of the city.

The region to be considered extends from Petawawa in the West to Hawksbury in the East, and is bounded in the North by the Laurentian Hills. The southern boundary is indefinite, but a line drawn through Smith's Falls would serve to limit the area.

CHAPTER ONE

PHYSIOGRAPHY AND CLIMATE

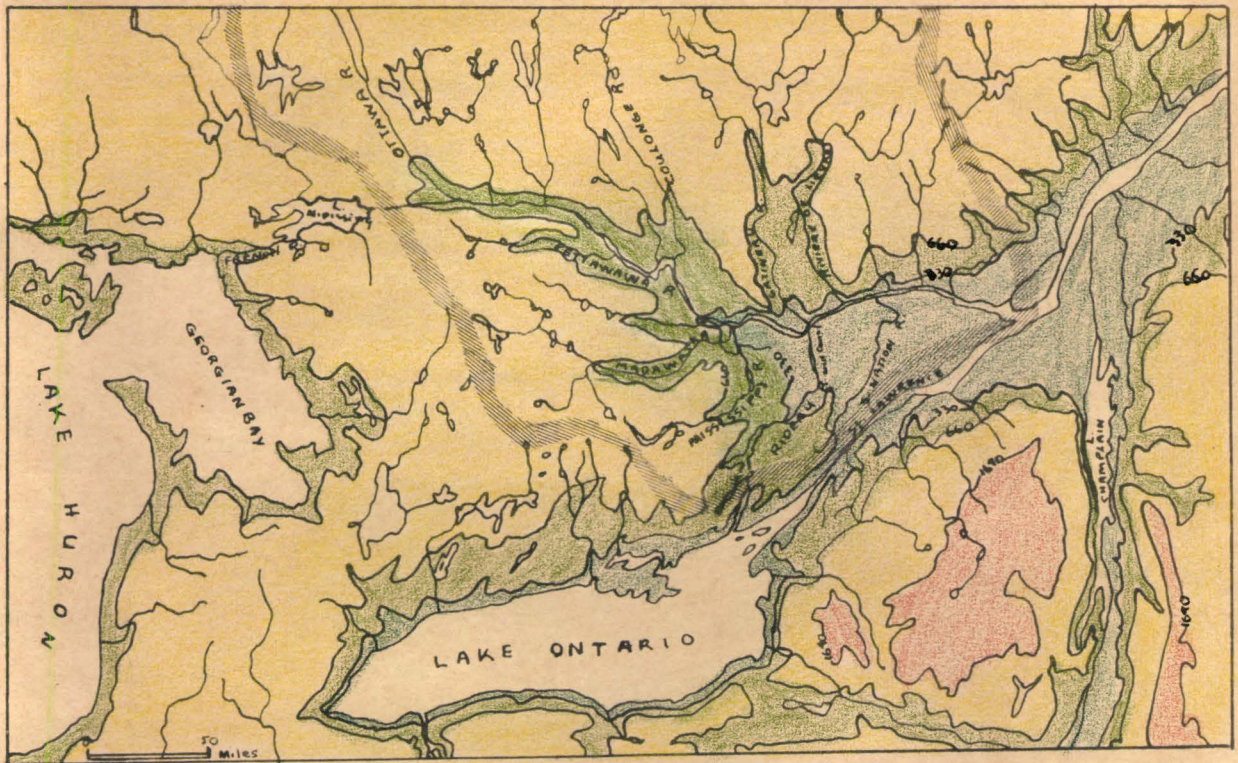
Introduction

The Ottawa River basin is essentially a graben bounded in the west by the Frontenac Axis, and in the north, just beyond the Ottawa River, by the edge of the Shield.

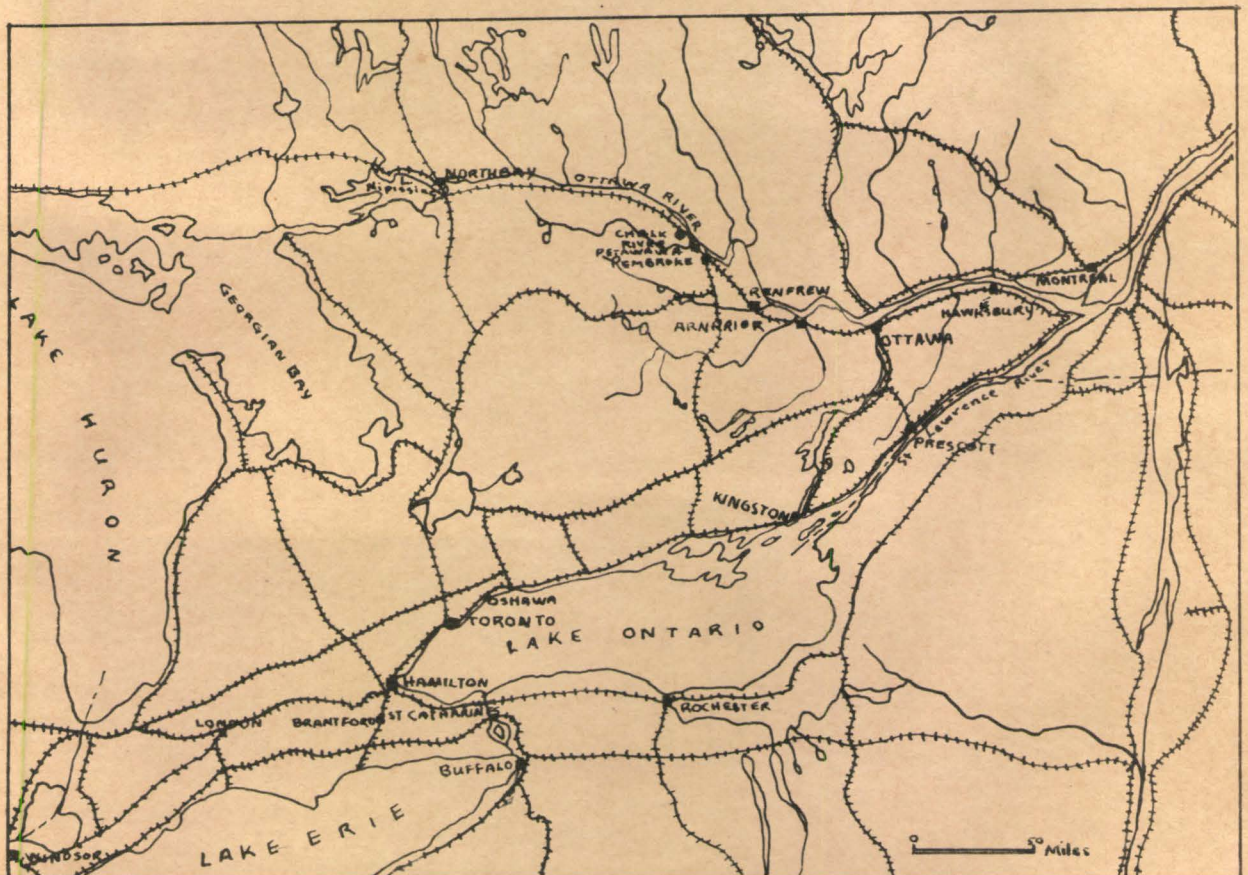
On the floor of the graben, with the exception of one low ridge north of the Carp River, the bed rock is composed of Paleozoic formations of Ordovician Age. These Paleozoic rocks consist of limestone strata over shale. The down-dropped block remained protected from the full force of erosive agents, while the edges of the up-thrust Pre-Cambrian blocks to the north and south were scraped clean by the Pleistocene glaciation and have remained bare.

The whole area was covered with glacial debris which appears as deep till near the St. Lawrence. Most of the glacial deposits, however, were buried by water-laid material of the Champlain Sea which came in as the glacier retreated. A good deal of the glacial till has been sorted into beds of clay and sand by marine action.

As the Champlain Sea gradually receded, many Pre-Cambrian hills and knobs were laid bare becoming islands and peninsulas with sand and gravel beaches left as ridges on their slopes.



THE DRAINAGE BASIN of the OTTAWA RIVER



LOCATION of the CITY of OTTAWA

The marine and alluvial deposits range from coarse stratified gravel and sand to heavy clay. The coarse sands were deposited in fan-shaped deltas where the Ottawa River emptied into the Champlain Sea. Subsequent stream erosion has carved several shallow valleys across these deltas.

Physiographic Divisions

There are five physiographic divisions according to Chapman and Putnam. They are shown on the accompanying map (Page 5).

1. Limestone Plain.

This is a large, unbroken tract of shallow soil over limestone bedrock, extending over 1,400 square miles. The Rideau River divides it into two nearly equal portions. The area abounds in bogs which are especially prevalent in the south because of the closeness of bedrock and lack of slope. West of Smith's Falls are a few low drumlins.

2. Sand Plains.

There are three areas of extensive sand plains. The first area to be dealt with is called by Putnam the Edwardsburg Sand Plain. Here most of the boulder clay is covered by sand of glacial origin that has been reworked by the Champlain Sea. As the land emerged from the sea, beach ridges were formed. These sands lie within the South Nation watershed. The relief is small and the water table is close to the surface causing muck and peat bogs to form in places.

The next area of sand plains is sixty-five miles long, stretching from Ottawa to Hawksbury. It is called the Russell

and Prescott Sand Plain. At one time it was a continuous delta built by the Ottawa River into the receding Champlain Sea. Everywhere the sand is underlain by marine clays. Drainage is not very good. There are few streams since the water percolates into the sand and drains to the clay beneath.

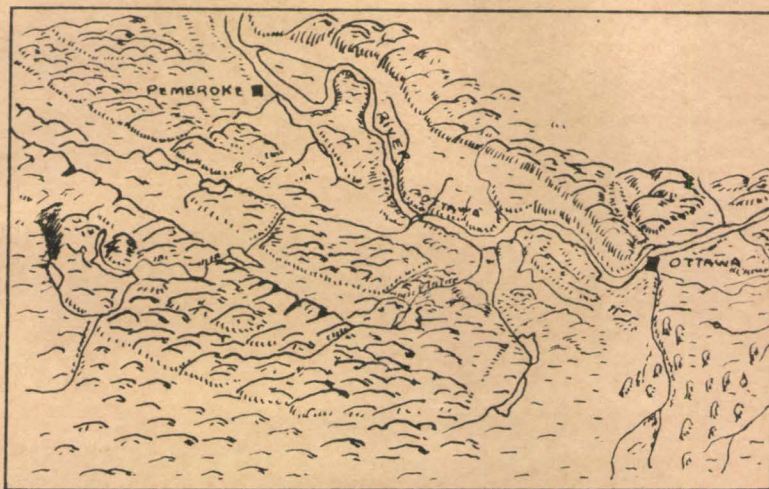
The third area extends south of Petawawa, covering one hundred and thirty square miles. It is called the Petawawa Sand Plain. It originated as a delta built in the Champlain Sea by the Ottawa River. This plain was formed at an earlier date than the Russell and Prescott Sands. Around Petawawa the sands are coarse and drainage is excessive. Near Pembroke there is a finer sand due to stratification and sorting of the deltaic material in the deeper water of the Champlain Sea.

3. Drumlin Field.

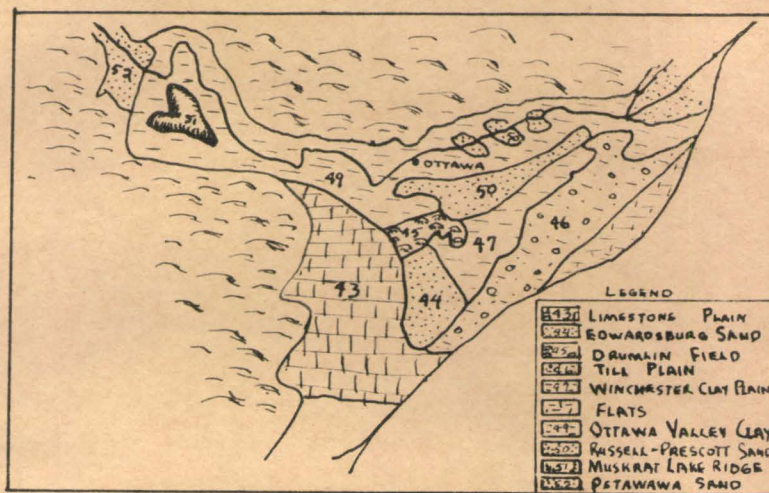
The North Gower Drumlin Field occupies one hundred and fifty square miles in the western half of Carleton County. The drumlins are scattered, the largest group clustered around the village of North Gower. The lowland areas between the drumlins are half-bog and poorly drained.

4. Till Plain.

The Glengarry Till Plain is a region of low, undulating relief, covering nine hundred and thirty-five square miles. Drainage is immature and there are many lakes and marshes dammed up by the morainic debris. Many streams have their source in this region, flowing sluggishly for a long distance before finally finding outlets to the Ottawa River.



PHYSIOGRAPHY of the OTTAWA-BONNECHÈRE GRABEN



PHYSIOGRAPHIC DIVISIONS

5. Clay Plains.

There are two areas of clay plains. One area, called the Winchester Clay Plain, lies within the drainage basin of the South Nation River. It extends over three hundred and sixty square miles and has a low relief. In some areas the underlying till reaches the surface in the form of a number of low drumlins. There are also many acres of bog.

The only outlet is the Nation River, which has a very low gradient. The river banks are so low that floods are common in the spring.

The other area of clay plain lies between Pembroke and Hawkebury. This is the Ottawa Valley Clay Plain. This plain is not continuous, but is interrupted by ridges of rock or sand. The bedrock has been faulted so that some blocks appear at the surface in ridges in marked contrast to the deep clay soil around them. South of Pembroke there is a limestone outcrop caused by a fault line. North, West, and South of Arnprior are several other areas where the Pre-Cambrian rock and limestone outcrop. Another outcrop flanks the Carp Valley. Drainage is poor and several thousand acres of bog have developed. The most outstanding are the Mer Bleue, which lies a few miles east of Ottawa, and the Alfred bog, in the eastern section of the plains.



Clay Plain



Bouldery Till

Climate

The Ottawa Valley has a cool humid climate classified as "Humid-Microthermal" of the short summer phase. Winters are characteristically very cold and snowy, while summers are warm.

The valley lies in the path of the prevailing westerly air stream, which is accompanied by the northern cyclonic activity, which results in great variations in the weather from day to day and year to year.

The climate is affected by the Great Lakes, which have a considerable influence in modifying the temperatures. Severe cold occurs at Ottawa only when the air moves directly down from the north and avoids the relatively warm lakes.

January and February are about equally cold, the mean low temperature, however, being lowest in February. The warmest month is July with a mean of 69°.

The average length of the growing season is one hundred and fifty to one hundred and ninety days.

The mean annual precipitation is 34.24 inches. On an average, 90 inches of snow falls annually. Summer rainfall is uniform with little tendency to extremes. There is a slight maximum in late summer and a slight minimum in the spring.

OTTAWA ONTARIO, 45°20'N. 75°41'W. 339 feet above Sea Level.

TEMPERATURE								PRECIPITATION			
AVERAGE DAILY			EXTREMES				RECORD	RAIN		SNOW	
MEAN	HIGH	LOW	HIGH	LOW	HIGH	LOW		INCHES	DAYS	INCHES	DAYS
J	11.9	20.8	3.0	40	-21	54	-32	0.78	4	21.5	10
F	12.9	22.3	3.5	40	-20	54	-35	0.94	3	17.3	11
M	24.5	33.1	15.9	49	-8	78	-34	1.33	5	14.4	9
A	40.8	50.5	31.0	72	15	86	-2	2.26	9	4.4	2
M	55.0	66.0	44.1	84	30	94	21	2.47	11	Less than 5 days in 10 years	
J	64.6	75.6	53.7	89	41	97	33	3.52	10	"	"
J	69.6	80.9	58.2	98	47	101	38	3.39	11	"	"
A	66.2	77.0	55.4	89	43	100	35	2.56	10	"	"
S	58.2	68.4	48.1	85	33	102	24	3.23	11	"	"
O	45.8	54.3	37.2	72	23	87	14	2.85	12	0.8	"
N	32.2	38.5	15.8	58	5	71	-10	2.34	8	6.4	4
D	16.8	24.4	9.1	43	-17	55	-34	0.86	4	17.2	11
YEAR	41.5	51.0	32.1	93	-24	102	-35	26.03	98	82	47

Vegetation

The natural vegetation of the Ottawa Valley is a mixed forest of hardwoods and conifers. The northern area is a transition belt between the deciduous hardwoods and the mixed forest. This is largely due to the colder temperatures and the poorer soils found at the edge of the shield.

South of the shield the forests are generally broad-leaved with sugar maple and beech dominant. On the lighter soils, especially on the shield and where the bedrock is granite, the white pine and spruce are dominant.

White and red cedar and sugar maple are dominant on the shallow limestone plain; sugar maple, beech and hemlock on the deeper, well-drained drift. On the poorly drained areas elm, ash and soft maple are common. A mixed forest is found on the Pre-Cambrian Shield. White pine, soft maple, birch and white and black spruce are the most common species. There is more spruce to the north because of the low winter temperatures.

Soils

The soils reflect the transitional nature of the climate and of the vegetation under which they develop. The comparatively low temperatures and the relatively high humidity have resulted in an acidic podzolic profile. Grey-brown podzolic and brown podzolic soils are found on the well-drained loams of the southern and northern areas.

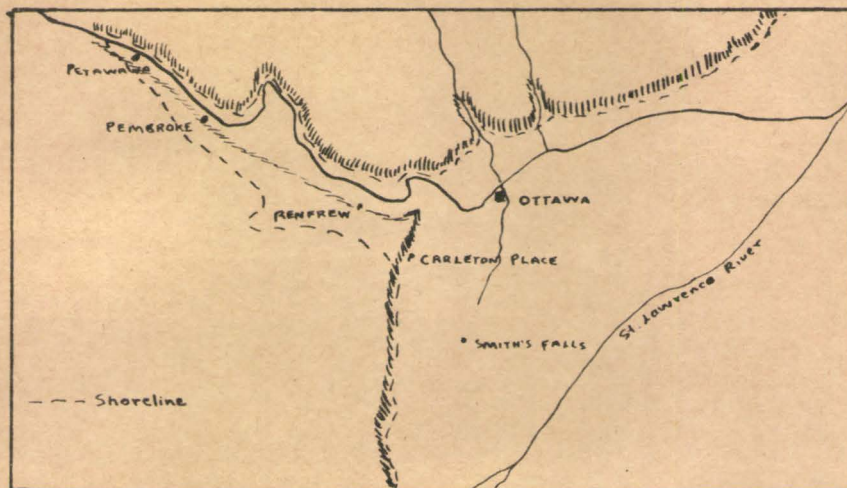
The Carleton County Soil Survey lists the following soil types, which can be seen on the accompanying map. (Page 11)
Grenville Loam.

This loam is prominent on the till plain. It occupies the better-drained sites. It is a well-drained morainic soil. Drumlins are a prominent factor. Imperfect drainage occurs where a compact layer restricts both drainage and root penetration.

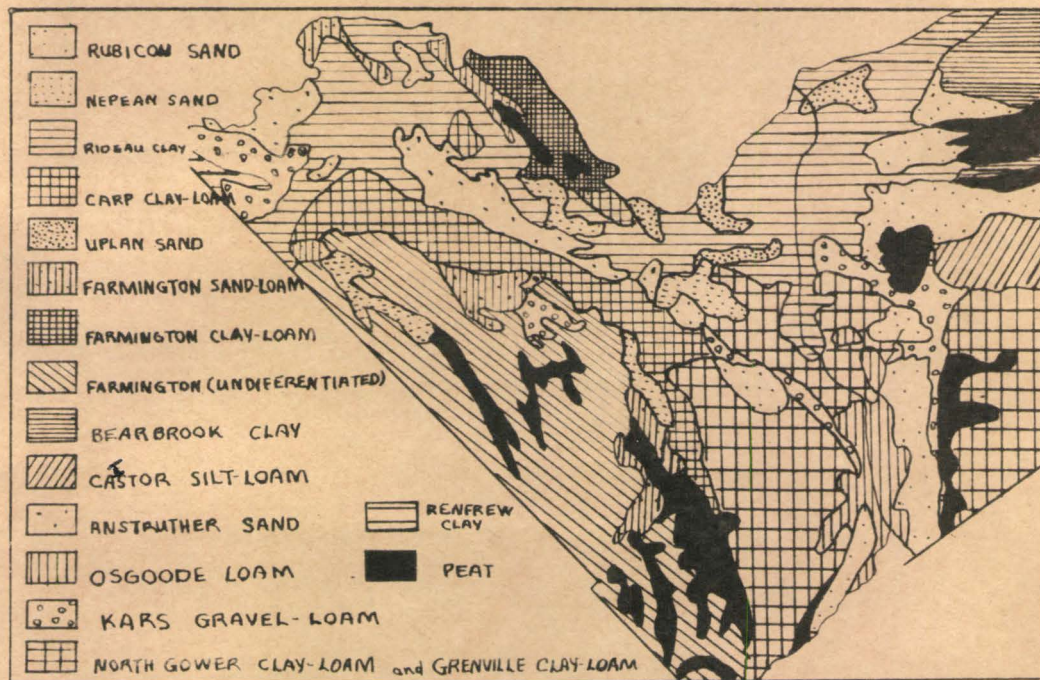
Gravelly Ridges

These have a light sandy loam soil which is excessively drained. The gravel ridges are long, but narrow and frequently intermittent in their occurrence above the general level of the plain.

The Carp and North Gower Series have developed on clays and silts. They are found chiefly in those sections of the marine plain which extend from the Northwest through the valleys of the Carp and Jock Rivers. These clays contain particles of eroded and weathered Pre-Cambrian rock and so are acidic.



APPROXIMATE SHORELINE of the CHAMPLAIN SEA



DISTRIBUTION of SOILS in CARLETON COUNTY

Carp Clay Loam.

This is a moderately to imperfectly drained soil which is neutral in reaction. A gentle slope to the Carp River provides moderate to slow external drainage.

North Gower Clay Loam.

This is a poorly drained soil in close association with the Grenville Clay Loam. Topography is level, and the drainage is slow. Mottling often occurs close to the surface. In this series there are shallow pockets of muck.

Rideau Clay.

The clay podsols developed under pine and spruce forests are mapped as Rideau Clay. This soil type occurs in Renfrew County on clays and silts with moderate external drainage.

The Rideau Clay is a very heavy, moderately drained, stone-free soil slightly acid in reaction. The heavy clay layers cause slow internal drainage. Its distribution is limited. Small areas appear near Ottawa along the Rideau and Ottawa Rivers.

There is also a sand spot phase. There is usually a broad transition zone between the sand and the clay areas.

The Rock Knob Phase occurs where clay and silt materials have been deposited as a shallow mantle over undulating Pre-Cambrian bedrock. These conditions are found in the Northwest of Carleton County.

Knobby outcrops of bedrock are common. In the clay depressions and rocky pockets the drainage is poor.

Renfrew Clay.

It occurs in the northwest of the County. It is a heavy, moderately drained soil with a leached layer of ashy grey colour of the podsol.

There is usually a gentle slope towards the small streams that dissect the plain. The internal drainage is slow because of the impervious B horizon of compact clay. This soil has developed under a pine and spruce vegetation.

Bear Brook Clay.

This is a gently undulating heavy clay soil with fair to poor natural drainage. Small, poorly drained flats have been included within this series. The internal drainage is slow. This soil type is located mostly along the eastern border of Carleton County.

There is a sand spot phase which is a complex soil in which the clays of the Bear Brook Series are irregularly covered with patches of acid sand seldom more than three feet in depth. The sand is commonly imperfectly drained.

Osgoode Loam.

This is an alkaline stone-free loam, found typically on level sites and often in the poorly drained basins between ridges of till or glacio-fluvial gravels. External drainage is poor and internal drainage is imperfect due to the high water table.

Castor Silt Loam.

This is an imperfectly drained soil of intermediate texture occurring in the southeast of the County. The topography is almost level. The internal drainage is imperfect because of the high water table.

Manotick Sandy Loam.

This is a soil complex on an undulating plain of acidic clay which has been covered by layers of fine sand and silt.

The topography ranges from slightly to strongly undulating. The drainage is variable, owing to differences in texture, depth, and slope. Poor drainage occurs where a few feet of coarse material lies over a clay base. On thicker soil of finer texture better drainage occurs.

Uplands Sand.

This is an excessively drained coarse acid sand. Blow out spots are common. The topography is varied, but smooth upland areas bounded by steeper slopes are common.

The open nature and originally low lime content of the parent material and the coniferous type of vegetation combine to develop the podsol type of soil profile.

Rubicon Sand.

This is an acid soil developed on an undulating plain in which the water table is close to the surface. In parts of the County the topography becomes more undulating and the drainage varies from excessive to very poor. A very shallow profile develops on the excessively drained knolls, a ground water podsol on the imperfectly drained areas, and a podsol-glei in the depressions.

Granby Sand.

This is a neutral sandy soil with poor drainage. The topography is generally level with scattered depressions.

One quarter of Carleton County consists of limestone plain covered with only a shallow mantle of soil. There are large areas where the bedrock is either at the surface or within a few feet of it..

Farmington (Undifferentiated).

Large areas in which the drift averages less than one foot in depth have been mapped as Farmington (undifferentiated). The soils in these undifferentiated areas are too shallow to warrant separation on a textural or drainage basis.. Those soils which are somewhat deeper have been put into the shingly loam, sandy loam, loam and clay types.

The level topography is broken by frequent rocky ledges. The drainage is excessive except where bedrock restricts the drainage of excess water in wet seasons. The profile varies with the depth of the soil.

The shingly, sandy loam Farmington is an excessively drained soil developed on undulating shingly ridges. These ridges are the marine beaches discussed in the introduction. The topography varies from gently to strongly undulating. The stronger relief usually occurs where the shingle beaches have been formed on fairly steep, rocky slopes.

The Farmington Sandy Loam is developed on slightly undulating sandy materials of depths varying up to ten feet.

The relief is usually small, although undulations occur due to irregularities in the bedrock or in the depth of drift. The drainage is imperfect to poor where the water table is held up by the rock strata. Elsewhere it is moderate.

The Farmington Loam is a shallow loam soil, excessively to imperfectly drained. The profile varies depending upon the depth of the soil.

Nepean Sand.

This is a complex of sandy drift over sandstone bedrock. The topography is broken by rocky slopes, although level upland areas are fairly general. The drainage is excessive. Frequently the profile is practically featureless, with only a shallow, grey-brown, organic layer over-lying the sandy parent material.

Chandos Sand.

This is a complex shallow soil over basic Pre-Cambrian rock. The topography is gently undulating and, in general, the drainage is excessive.

Anstruther Sand.

This is also a complex shallow acidic soil over Pre-Cambrian granite. In some of the rocky hollows there are shallow deposits of marine clays.

Eastport Sand.

This type consists of shifting sand dunes and associated marshy and poorly drained sand areas. There is practically no profile development.

Bottom Land.

This land lies along stream courses and is subject to flooding. Except in local areas along the larger rivers, the strips of flood land are quite narrow.

Muck.

Muck is widely distributed in Carleton County on flat lying sites or in slight depressions. The drainage is very poor, and there is abundant surface water.

Peat.

Peat is found in the Mer Bleue Bog and the Alfred Bog.

CHAPTER TWO

OTTAWA VALLEY DRAINAGE

The drainage pattern of the Ottawa River system presents a comparatively youthful appearance with numerous parallel tributaries.

South Nation River.

This tributary drains an area of about 1,430 square miles. It is 110 miles long, having a very low gradient since it flows in a flat plain. It has a number of fairly important branches, the Bear Brook and Castor being the largest. The river has not been able to drain all of the flat plain, and so there are numerous peat bogs.

Spring floods are frequent, and the river does not drain the whole region. Thus, it presents a difficult problem of drainage and flood control.

Rideau River.

The Rideau rises in the shield area to the south, where the Rideau Lakes serve as a headwater reservoir. The Rideau has been canalized throughout almost its entire length (126 miles of canal), and its flow is now completely controlled.

Mississippi River.

This tributary has numerous headwater lakes in the Shield. It is 120 miles long, and drains an area of 1,150 square miles. The Clyde and Fall Rivers are large tributaries.

Madawaska River.

This is the largest Ontario tributary of the Ottawa, draining 3,300 square miles and being 200 miles long.

The Opeongo, York and Waba are important tributaries. Because of its great volume and steep gradient, the river is a valuable source of power.

Bonnechere River.

This river is 100 miles long, draining 935 square miles. Included in its drainage are a number of lakes, for instance, Golden Lake, Round Lake, and Clear Lake. The course of the stream is almost entirely controlled by the block-faulted relief of the area.

Petawawa River.

The Petawawa is 140 miles long, and drains an area of 1,572 square miles. It has cut a deep valley into the sand plain through which it flows.

Ottawa River.

The Ottawa River is 360 miles long. It is in a youthful or ungraded state with a chain of long, narrow lakes connected by swift-flowing sections often having rapids and waterfalls. The falls and rapids are the result of the more resistant limestone strata lying over shale, causing erosion to be slowed down thus forming rapids and falls.

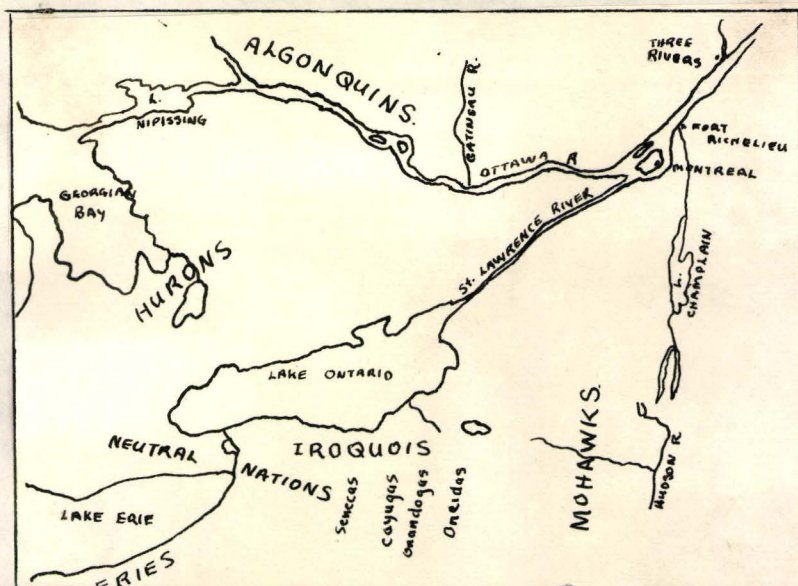
Allumette Lake, Coulonge Lake, Lac des Chats, and Lac Deschenes are examples of these still-waters.

The Ottawa is one of the longest rivers in Eastern Canada, and the most voluminous tributary to the St. Lawrence. It also contains a great number of falls and rapids, of which the Chaudiere is the most important. Here the river plunges over a half-circle limestone cliff thirty-five feet high. Above and below the falls the water contracts into a narrow channel impeded by numerous small islands and jutting points, the current becoming very swift and dangerous.

The Ottawa provides a route to the Upper Lakes using the Mattawa, Lake Nipissing and the French River.

The streams coming from the Laurentian Hills are turbulent, offering a vast hydro potential. Three large tributaries of note are the Gatineau, Coulogne and Riviere de Lievre.

The major drawback of the Ottawa and its tributaries is that they are all obstructed by falls and rapids, making navigation difficult.



Early Map of the Ottawa - St. Lawrence Region



A Typical Power Development



Ottawa River from the Mouth of the
Rideau River

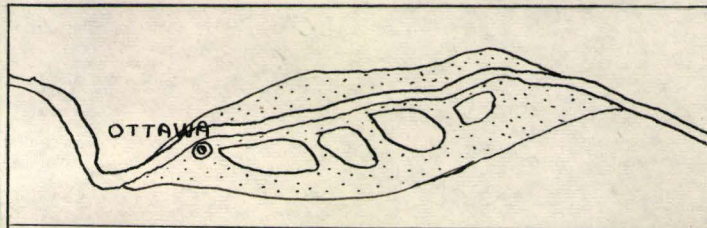


View of the
Ottawa River

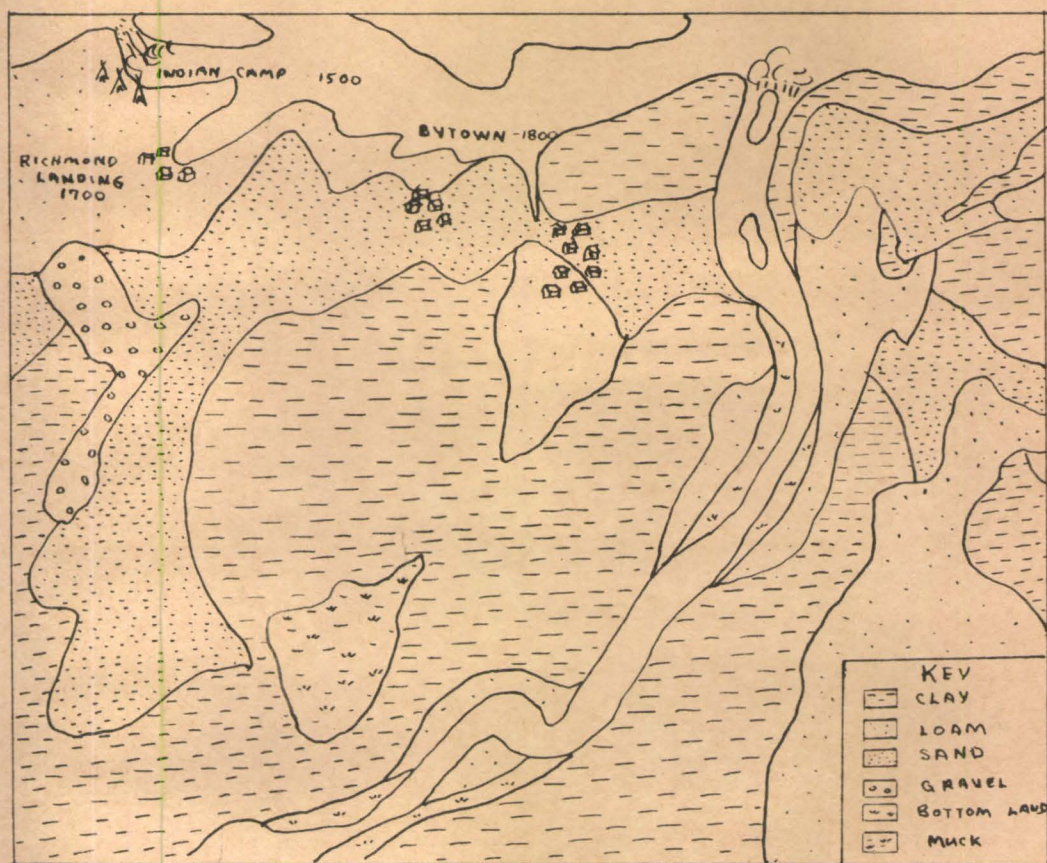
CHAPTER THREE

SITE OF THE CITY OF OTTAWA

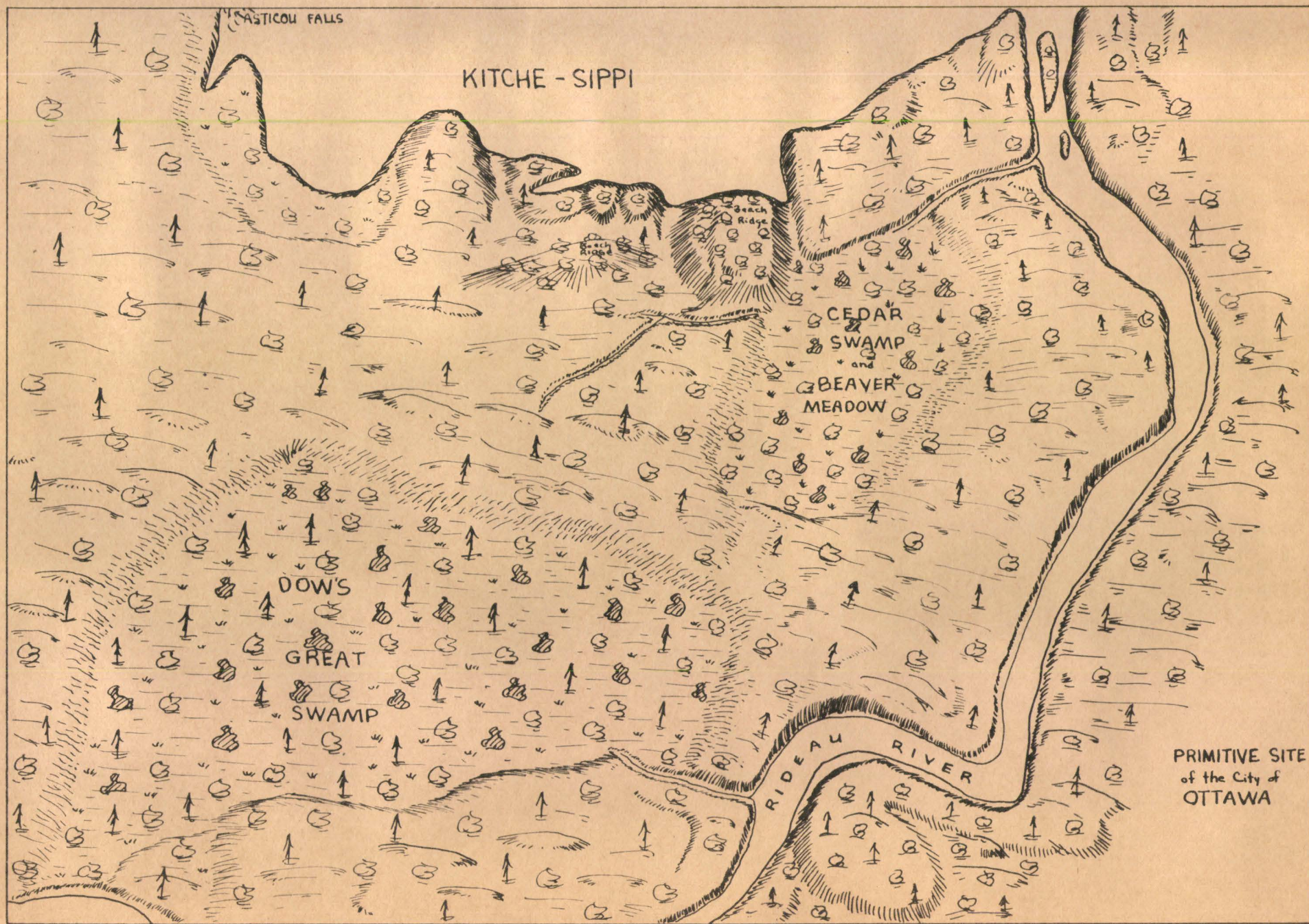
The original site of the city was on sand which was laid down in a delta formed by the Ottawa River in the receding Champlain Sea. The first-deposited materials were coarser since the velocity of the River was slowed down by the water of the Champlain Sea. Thus, we have gravel to the east. Today, most of the city is on clay and loam laid down in the Champlain Sea.



River Channels in the Delta East of Ottawa



SOILS and SETTLEMENT PATTERN



CHAPTER FOUR

PRE-SETTLEMENT PERIOD

The Ottawa River was for several centuries the line of communication used by the Indians, who named it Kitchi-Sippi, the Grande River. The Indians of the Ottawa Valley were a nomadic people travelling back and forth along this great highway through the unbroken forest, portaging at the Chaudiere. This was the most difficult and dangerous portage. Here was undoubtedly the most strategic and historical point on the Ottawa River. During the time of the Indians it was a trading place as well as a place of ambush for the Iroquois. Up the river the Algonquins were comparatively safe, for the natural difficulties of the turbulent stream made access so hard and retreat so perilous that the Iroquois preferred to await them at the Chaudiere. This was the focal point where furs and pemmican from the far north were exchanged for tobacco and wampum from the south. The falls were the meeting place of the Iroquois and the Algonquins. The Algonquin Indians were a nomadic people because the climate was harsh and the soils infertile. To the south, where soils were more fertile and the climate was milder, the Hurons and Iroquois developed a settled form of agriculture. Thus, there was a basis for exchange between the two groups.

The Algonquins were the first inhabitants of the Ottawa Valley, but with the coming of the white man in 1600 they gradually began to move deeper into the northern forests. Later the Outaouas infiltrated the region, trading furs with the white man. They acted as middle men between the white men in the east and the Indians in the northwest.

The Iroquois, in order to enlarge their hunting grounds and to weaken their competitors who carried furs to the French, decided to chase the Algonquins away. From 1636 to 1649, they relentlessly pursued them.

The first white man to come up the Ottawa was Etienne Brulé in 1610. Soon he was followed by many more, and the Ottawa became the highway to the west and northwest for the fur-traders, voyageurs, coureurs de bois, etc., who penetrated deep into the somber forest. Missions were set up in the Huron country by missionaries who followed in the wake of the fur-traders.

Almost all French and Canadian travellers who, from 1611 to 1760, went west preferred the Ottawa route to the St. Lawrence. The distance was shorter and chances of Iroquois incursions fewer. Also, because of the greater expanse of water in the Great Lakes, the waves were much stronger than on the Ottawa.

The one staple traffic -- the fur trade -- was not conducive to settlement. Regions quickly became exhausted, and new ones were sought further and further along the canoe routes. There was rapid advance, but little real

settlement. The fur traders had always discouraged settlement and brought back reports to the effect that the land was worthless for agriculture. Furs, on the other hand, were a good source of income. Huge companies were formed, like the Hudson's Bay Company and the North West Company, monopolizing the trade. These companies tried to keep settlers out of the valley because colonists drove out the game and forced the Indian hunters back into the wilds.

CHAPTER FIVE

PRE-INDUSTRIAL SETTLEMENT

Lumberers were the first settlers in the Ottawa Valley, and for a long time lumbering was the chief source of wealth. Philemon Wright was the father of settlement in the Ottawa Valley. He came from Massachusetts in 1799, and the next year brought out a colony of twenty-five men and their families to the site of Hull on the north side of the River. Wright's exploitation of the timber resources led to permanent settlement.

There was a wave of migration as soldiers disbanded after the American Revolution and the civilian loyalists were the first to get grants here in the Ottawa Valley. Almost all of the first settlers were Americans, refugees from the Revolution.

The colonists did not see any attraction in the surroundings of the Chaudiere. Most of the area was a cedar swamp of deep, thick mud, so soft and watery that the trees seemed to float on it. Hull was a flourishing village long before the southern shore of the Ottawa began to be developed.

The first lumberers were United Empire Loyalists who explored the Ottawa Valley and prepared square timber for market. The logs were driven loose down the creeks and tributaries to the Ottawa River where they were made into cribs for easier transportation. Then this immense

quantity of timber was floated down the Ottawa as far as the Chaudiere Falls. Here the rafts were collected, the oak and other heavy timber taken out and hauled overland along a road to Richmond Landing Bay. The light timber was floated over the falls. The cribs were then collected into booms and made into rafts again. At times, the passageway over the falls became completely choked up causing a three to four week delay. In 1826-27, a timber channel was constructed to avoid the expense of hauling across the portage.

Timber was to that age what coal and iron are to this. In 1809 Canada had developed so big a timber industry that for the first time she had a favourable balance of trade. Thousands of men were sent into the bush to cut timber. Much of the land that was cleared was turned into farmland by the settlers.

In the early part of the Nineteenth Century, steady progress was made in clearing land and getting it under cultivation. Settlement was slow because the land had to be cleared of stumps with implements that were very primitive. But the plough was more efficient than the crude wooden hoe used by the Indians. Thus, the white man sought land which had up to now been avoided because of soil and drainage difficulties.

After the war of 1812-15, several English regiments stationed in Canada were disbanded and encouraged to settle in the Ottawa Valley because of the importance of the route of transportation. It was hoped at that time that canals

could be constructed to Lake Ontario and Lake Huron. A settled country was needed to supply labour and food. They settled at the old Indian portage on the south side of the Chaudiere Falls. Here all the traffic to and from Montreal and the Valley landed. By 1818, the place was called Richmond Landing. It became the important center of a new settlement. Richmond Landing, being the natural stop-over for all settlers going up or down the Ottawa, would have certainly developed into an important business center; but the opening of the Rideau Canal half a mile below Richmond Landing attracted the tradesmen and shops, creating a small commercial nucleus which grew at the expense of Richmond Landing.

Hull, by this time, had become a supply and market center for the Chaudiere basin. Agriculture was developed in its hinterland, orchards were planted, and cattle were raised to supply the settlement and lumber camps with food.

Up until 1819, all freight coming up the Ottawa was carried in large canoes, bateaux, or Durham boats, but in that year Philemon Wright established a steam boat service between Grenville and Hull. The cost of carrying or carting freight past the rapids and falls and reloading it into boats was prohibitive for bulky and low-priced goods. To move this class of freight in ever-increasing volume, it became necessary to build canals. In 1825, the Ottawa system of canals was completed and cargoes could be shipped to Montreal.

The Rise of Bytown and the Rideau Canal

The Rideau Canal is undoubtedly responsible for the founding of Bytown, which later became Ottawa, but it can be said that without the canal a city would have probably risen here at some later date. Bytown was founded by Colonel Joyn By of the Royal Engineers, who set up his headquarters there in 1826 preparatory to building the Rideau Canal.

The Earl of Dalhousie saw that "the canal site offered a valuable locality for a considerable village or town for the lodging of artificers and other necessary assistants in so great a work." So Dalhousie and By can be considered as joint founders of Ottawa. The former conceived the idea, the latter fulfilled it.

In 1827 Colonel By arrived with a detachment of British engineers and started to build a canal from the Ottawa River to Lake Ontario, so that if Canada had to fight another war with the United States it would be possible for gun boats and military supplies to get from Montreal to Lake Ontario without passing close to American territory.

In October of 1827, two villages were laid out and all lots were eagerly taken up. The smaller of the villages, "Upper Town", was laid out west of Parliament Hill, and the larger one, "Lower Town", was along the Rideau River and the new canal. In a few years, the "mushroom town" of Corktown became part of it. Many newcomers refused to build in Lower Town because of the swampy

nature of some sections of the area. They preferred to pay higher prices for drier land. In the spring of 1828 drains were cut to carry away the surplus water. Upper Town, west of Parliament Hill, was "upper" socially as well as geographically, because the lumber merchants, contractors and supervisors built their homes there. Lower Town, east of the canal and along the canal cut, was the district where the working people lived.

A third settlement developed a few years later. It was called New Edinburgh and was founded east of the Rideau River. It began with grist and carding mills on the falls of a small stream emptying into the Ottawa River, which served a small settlement which began as a lumbering settlement.

There were natural barriers between these settlements. New Edinburgh was separated from Lower Town by the Rideau River. Lower Town was separated from Upper Town by the Canal, and more effectively by Parliament Hill which was mostly forested wilderness. This interrupting promontory, commanding both river and canal, sloped off to the south into beaver meadow and swamp. The only route from Upper to Lower Town was a roadway over this hill which led to Sapper's Bridge across the Canal. Colonel By had reserved Parliament Hill for the erection of public buildings, and the cliffs of Major Hill Park for military purposes.



A Timber Boom on the Ottawa River



The First Eight Locks
of the Rideau Canal

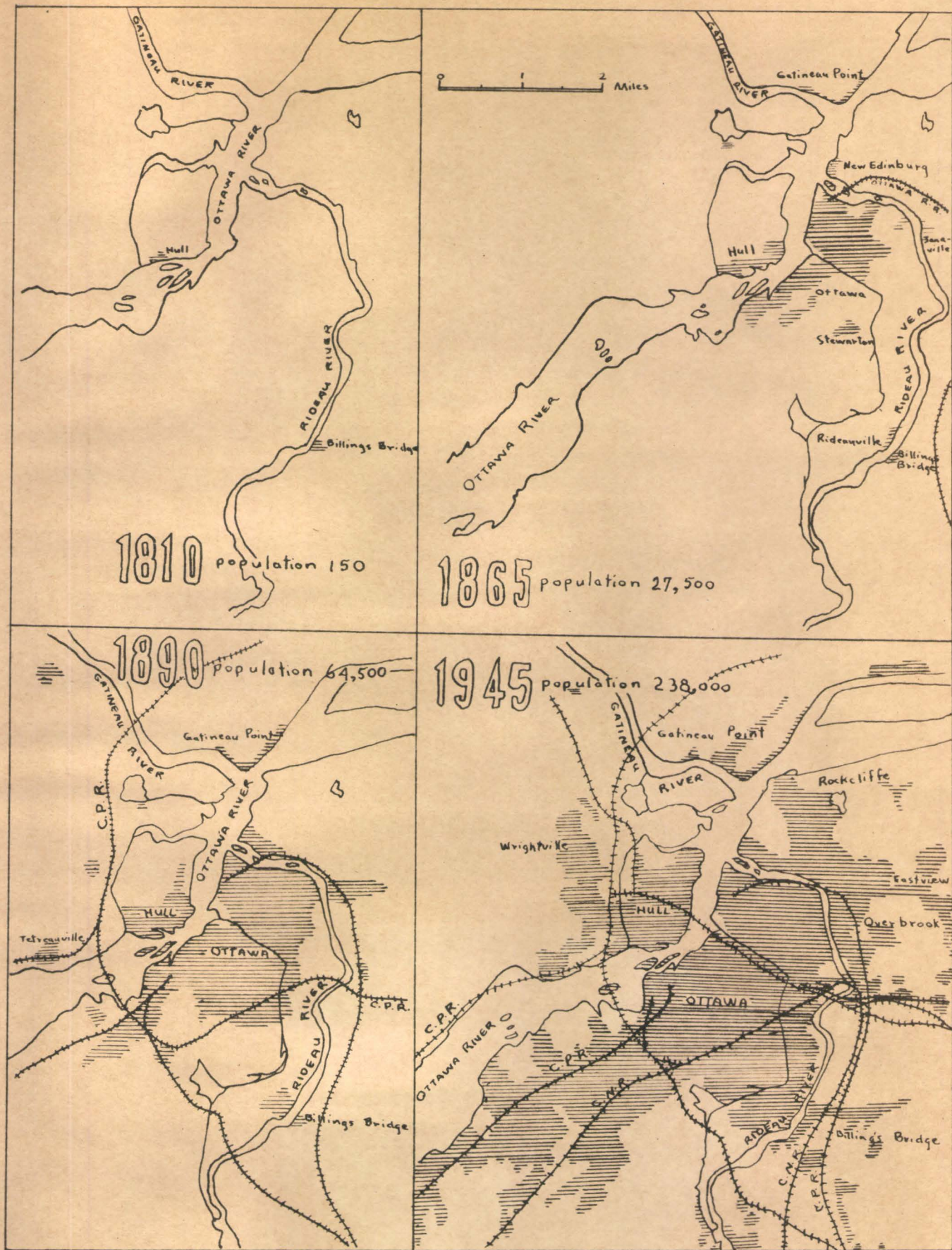


Pulp and Paper Mills at Hull
Across From the Parliament Buildings

The Company of Royal Sappers and Miners sent out from England expressly for the service of the Canal were camped out on the flats near Richmond Landing on Nepean Point. They lived in tents and roughly built shacks in the woods until stone barracks were built on Parliament Hill. To check desertion, which was prevalent near the American border, they were promised one hundred acres of land in the canal zone for retirement.

The canal follows the swampy land from Entrance Bay where the locks were built to Dow's Lake. This twelve acre swamp, generally called the Beaver Meadow, at the head of Entrance Bay, was chosen for a basin or reservoir. The Rideau River was used as the bed of the canal for about six miles above its entrance into the Ottawa. Entrance Bay was used for the locks because it was found to be more practical to take advantage of a natural gully into the interior, rather than to try to pass the rapids and falls at the mouth of the Rideau.

Upper Town and Lower Town soon came to be known as Bytown. Irish labourers poured into the new town. Two thousand Irishmen were employed on the canal. Once the canal was completed, these men were released, many settling down in Bytown and along the route of the canal. The workers attracted others to build. Soon carpenters, blacksmiths, and shoemakers appeared. A post office was opened, along with a telegraph office, town hall, schools and churches.

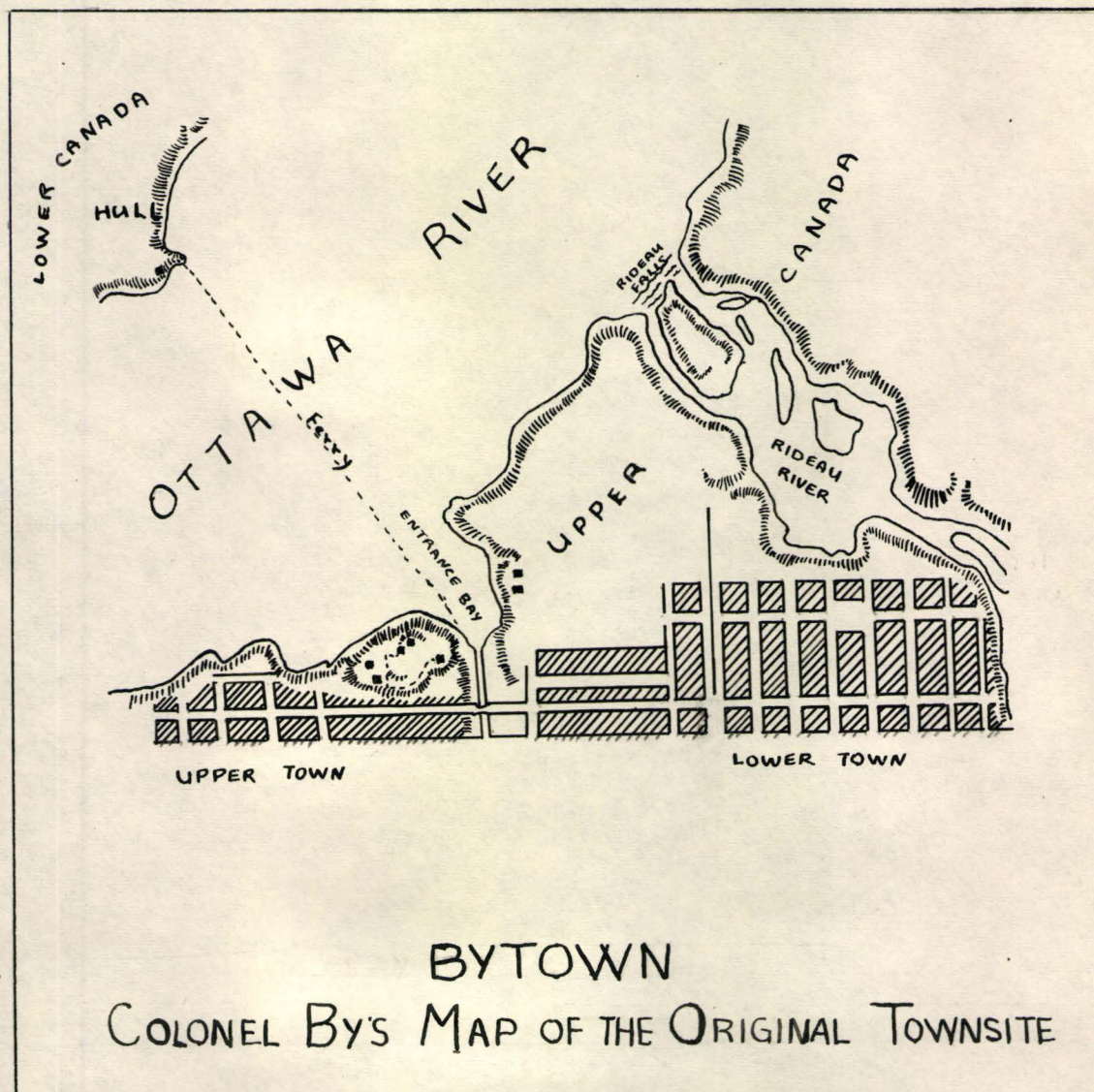


GROWTH of URBAN DEVELOPMENT

Upon the completion of the canal, the lumber industry underwent a considerable expansion, and Bytown developed into a provision depot for the lumber camps along the Ottawa and its tributaries. Being also the focus of the lumber trade, it grew into one of the principal markets in Upper Canada, especially for pork and beef.

With the combination of the lumber trade and the canal, the population of Bytown grew to 1,500 in 1832. For a few years after that date, its economic foundations were insecure, but the timber trade of the Ottawa valley kept it alive. The timber trade became the barometer of population in Bytown. During 1840-41 its population increased from 2,171 to 3,122. In 1843 it was 2,400, and in 1846 it was 7,000. The following year a financial crisis sent the figure down to 5,000. These figures show the continual fluctuation in population which existed until Ottawa was chosen as the seat of government.

Although it was conceived for strategic reasons, the canal contributed largely to the development of Canada in various ways. It attracted numerous labourers who, when discharged, settled in the Ottawa valley; it opened to immigration and agriculture the interior of Southern Ontario which would not have been reached for a long time; and it stimulated the trade and development of natural resources of the interior of the province. The Rideau Canal promptly cut freight rates in half to Southern Ontario, which helped the immigrants now just beginning to pour



out of Europe. In 1832, literally hundreds of thousands of settlers passed up the canal to settle in Upper Canada.

Many of these poor destitute people settled around Bytown, farming the land. But the canal was not a financial success.

In winter, Ottawa was cut off from the outside world except by stagecoach to Prescott, fifty miles away, through which the trunk line of the railway ran. To lay a railroad over intervening country was the immediate ambition of the citizens. In 1854 the town's people had a line built to Prescott, incurring a heavy debt. There was not enough traffic even to pay the running expenses, but the city fathers felt that there was a need for a railroad because many towns had died away for lack of communications to the outside world and its markets.

In 1882 with the purchase of the North Shore Line from Montreal to Hull by the C.P.R., Ottawa was placed on the main line of Canada's first trans-continental railroad.



Beauty-Spot of Ottawa - Dow's Lake



Another View of Dow's Lake



Picturesque Rideau Canal

CHAPTER SIX

PERIOD OF INDUSTRIAL DEVELOPMENT

As settlers came in, they began to till the soil and develop industries in the towns and villages. In the Fall of 1802, a saw and grist mill was erected. A blacksmith shop and brewery were built, but the home market was limited. There were not enough people in the area, so an outside market was needed to enable the industries of the Ottawa Valley to develop. Hull became the hub from which roads radiated out to the lumber settlements and the scattered clearings of the settlers in the forest round about.

In 1804 a bakehouse, a shoemaker shop, and a tailor shop were built and a tannery begun. In 1805 more land was cleared and the building of roads and bridges spread. By 1806, a quantity of flour was taken to Montreal on sleds, but the cost of the trip was equal to the price obtained. The people felt, however, that they needed to export to balance all the things they were importing. So, in the Spring of 1807, a raft of square timber was sent down the Ottawa for the first time. It took thirty-five days to pass the Long Sault Rapids, which, after the channel was improved years later, took only twenty-four hours. These pioneers, rafting logs down to Quebec, started the great Ottawa lumber trade which was to supply England with so much of her ship timber and masts.

Philemon Wright began the manufacture of sawn timber in 1808, but his mills burned down, the loss crippling the community until the mills were rebuilt four years later. From 1836 on, saw and grist mills went up all over the country at convenient sites. Americans came up thinking that cutting the timber into planks here they could obtain a greater profit when the planks were sold in Montreal. For this purpose, they erected mills at the Chaudiere Falls.

In 1818, Wright built a tannery and a hotel in Wrightsville, which later became Hull. A hotel was needed because many of the travellers and shanty men going up and down the Ottawa stopped overnight. At this date the village had five mills, four stores, a hotel, three schools, two distilleries and a brewery. The population was seven hundred and three. By 1828, the population had increased to one thousand and sixty-six, mostly Americans. There were at that time two grist mills, four saw mills, twelve lime kilns, two tanneries, and numerous shops.

In 1838, a blast furnace was set up in Bytown to make mould-boards, side-plates, and points for ploughs to supply the growing agricultural hinterland. In 1852, the water power privileges at the Chaudiere Falls were bought by enterprising lumbermen who established saw mills there. Up until then the Chaudiere Falls had been considered too large and turbulent to harness, but with new methods and growing technical knowledge the Chaudiere was harnessed. The mills meant work for many and gave a great impetus to the development and expansion of

Bytown. By 1853 there were sixty stores, three banks, three insurance offices, three newspapers, a telegraph office and seven schools. In 1854, the town was incorporated into a city, discarding its old name of Bytown for the more dignified and euphonious one of Ottawa.

In 1854, Ezra Butler Eddy, of Vermont, located on the Hull side of the Chaudiere where he began the manufacture of matches, clothes pins, and wooden bowls.

By 1855, sawn lumber was being produced on a large scale for shipment out of Canada. A most advantageous location for saw mills was on Victoria Island. Here the mills had the advantage of the timber slides over the Chaudiere Falls on the south side and the swift current provided power for the mills. As business grew, a limestone hill at the foot of the island was removed to make room for more lumber piles and docks. In the late fifties, the average annual production was fifty million board feet of the best sawn lumber.

Previous to 1868, the work of the mills at the Chaudiere was greatly hampered by low water during the summer. To remedy this, the interested parties undertook the construction of a four hundred foot long dam across the top of the falls where the present day dam is located. The dam was built there because of the shallowness of the water and the narrowness of the river channel at that point.

In 1890, Eddy began to make paper, and today the entire plant is made up of large factories, finishing rooms, warehouses, machine shops, engine rooms; covering seventy-eight acres and giving employment to about eighteen hundred people.

The John Booth Company established on the Ottawa side and developed both lumber and wood pulp. At a later date conditions in the lumber trade altered considerably. The amount of sawn lumber was reduced and the production of newsprint was extended. Today, about two thousand people are employed in the vicinity of Ottawa and four thousand in the lumber camps.

There were three major reasons for the decline of the lumber trade. The first reason was the repealing of preferential duty on Canadian lumber by England, who went back to the Baltic for her supplies after peace was regained in Europe. Another reason was the use of steel instead of wood in the construction of sailing vessels. The third reason for the decline of lumber was the exhaustion of the best quality lumber and the neglect to replant in cut-over areas. The disappearance of this industry in the Valley was detrimental to trade in general.

Lumber continued strong until the Twentieth Century. The waning square timber trade gave way to sawn lumber and, in time, to the pulp industry of today. Paper mills succeeded lumber mills, and flourished on account of spruce being plentiful in a region with easy and cheap transportation facilities.

CHAPTER SEVEN

OTTAWA.... CAPITAL OF A NATION

The selection of Ottawa as the seat of the Canadian government was almost accidental. The government had shifted from city to city; Niagara-on-the-Lake, York, Kingston, Montreal and Quebec, satisfying the claims of each of the main colonial communities; but constant movement was too costly. A permanent abode had to be selected. The young Queen Victoria, shocked by the discontent of her colonial subjects, looked at the map of the country. To her it was obvious that the Canadian capital must be as distant as possible from the American border in case of future war, and also in a central position in what was then Canada. Ottawa seemed to be the safest settlement of a dangerous question.

"The question is essentially one of compromise. Unless some insuperable bar exists to its selection, it is expedient to take that place which will be most readily acquiesced in by the majority. If Quebec was taken, all Upper Canada would be angry at the choice. If any place in Upper Canada (with the exception of Ottawa) were taken, all of Lower Canada would raise an outcry. If Ottawa is chosen, Montreal will acquiesce, and the majority of Upper Canada will not in any way resist, for to them it is a partial triumph. The whole matter is a choice of evils, and the least evil will, I think, be found in placing the

seat of government at Ottawa. Whichever section predominates, and however far westward the commerce of Canada may extend, Ottawa will be a convenient position.¹

With the union of the provinces in 1841, the position of Ottawa was greatly enhanced. It put her in the heart of the country instead of the outskirts of a province. The river that had been a dividing line, was now a connecting link. On December 31, 1857, Ottawa became the capital of Canada. At this time, Ottawa was looked upon as "a sub-arctic lumber village converted by royal mandate into a political cockpit".²

In 1859, when the first sod was turned on Parliament Hill, the new capital was the government seat of Upper and Lower Canada. In 1867 the Confederation of Canada was born, and Ottawa became the capital of a nation which stretched from the Atlantic to the Pacific Ocean.

When the city was chosen as the capital, the arrival of civil servants and their families inevitably caused a large increase in business. Ever since then, trade has unceasingly increased in volume. Population doubled its figures in a short time. Although from 1876 to 1879 it fell from 25,471 to 23,789, on account of an economic depression; from 1880 to 1914 it increased yearly.

¹ The Struggle for the Capital of Canada, F. Cook; p.6.

² The Charm of Ottawa, B. Davies; p.156.



The Peace Tower



The Parliamentary Library

In 1875, with the exception of Stewarton, there was practically nothing but pasture land south of Lisgard Street; but in 1889 Stewarton, Rochesterville and Orangeville (1,216 acres) in Nepean Township and 148 acres adjoining New Edinburgh in Gloucester Township were annexed. In 1907, 1,566 acres in Nepean Township became part of the city. This annexation continued as the city extended its influence over the immediate countryside.

Ottawa and Its Region

The City of Ottawa, as a geographical phenomena, exerts an influence on the countryside. It is bound to its hinterland by a net of communication. Ottawa provides a market and a source of supplies for its region, and provides an outlet for the surplus population.

Farming practices vary in the different parts of the Valley. Near Ottawa, the Rideau clay has a high value on account of its location, because most farms produce fluid milk for the city. Practically all of the land has been cleared, and a rather high proportion, 30%, is used for pasture. The clays of Russell and Prescott are cheese-producing areas, since they are further away from the market. Choice of crops is limited to oats, timothy, and red clover, because of the stress on dairying.

In the Carp Valley, on what is the most fertile soil in the whole Ottawa Valley region, a more general type of farming is practiced in which small grains and beef cattle appear to be the chief products. A few dairy herds are

present and seem to indicate the direction of agricultural development within the next few years as Ottawa grows in population.

Transportation favours centralization in Ottawa, since highways and railroads converge on the city. No. 17 Highway extends from end to end of the clay plains, while the main lines of both railroads do the same. There is a radial road net centered on the city.

The fine sand and silt plains have become prosperous dairy-farming areas, while the coarser sands show a poor development in agriculture. Large areas of sand plain should be withdrawn from agricultural use, and reforested. Land should not just be abandoned. The provision of good drainage outlets and the raising of fertility levels are important. Flax has recently had some success, and potatoes do fairly well.

The solid block of settled country in the Ottawa Valley ends near Petawawa in a sand plain which covers about one hundred and thirty square miles. About 50% of the area is wooded. The podzolic soils of this plain are strongly leached, acidic, low in organic matter and fertility. Under cultivation, the drier sands are subject to drifting, and agriculture has been abandoned on some farms. About 70% of the cleared land of the sand plains (35% of the total) is in crops, mainly hay and oats.

The three hundred and sixty square miles of the Winchester Clay Plain (see Page 5) is an area of low relief, lying almost entirely within the drainage basin of the South Nation River. The soils are mostly imperfectly drained, but are highly productive when drained. Municipal ditches have been cut to provide drainage throughout the clay plain, and very little uncleared land remains.

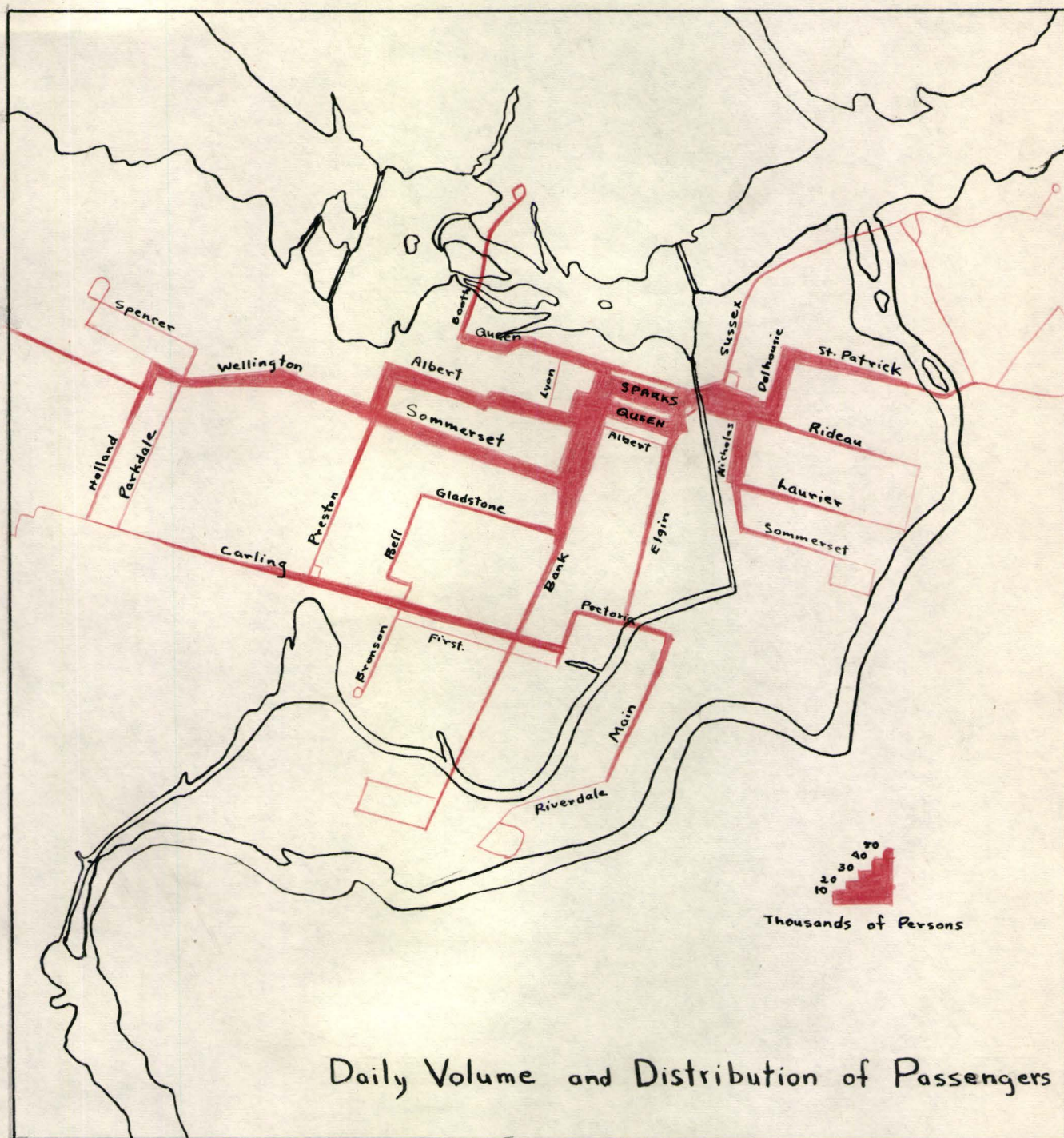
In spite of the presence of surface water at certain times of the year, water supply for livestock and home use is a pressing problem. Wells often go dry because the impervious clay holds little available reserve even at a depth of fifty feet.

The Winchester Clay Plain is one of the outstanding agricultural districts in Ontario. 94% is under cultivation. There are three large bogs, but today even they are being reduced in size. One of the greatest problems is that of drainage, the only outlet being by way of the South Nation River, whose banks are so low that it overflows annually. Also, there is difficulty in maintaining roads, because of the absence of nearby gravel deposits. This is important, since the chief product is fluid milk which must be taken out daily to the market in Ottawa.

Being the capital of the country, Ottawa has grown with rapidity, and shows as yet no signs of slowing down. Its importance as a market outlet for the farms of the clay plains is bound to increase. There will be further specialization of the older general crop system of farming, with emphasis on dairying.

Ottawa, with its present population of about two hundred thousand, dominates the valley. Of the numerous towns of the lumbering period, only one, Pembroke (11,159) has grown even to small-city size. Renfrew (5,511), and Arnprior (3,859) are important locally, while east of Ottawa there is no incorporated center larger than Rockland (2,040). These larger centers are all manufacturing centers, but they all serve also as farmers' towns in their respective regions. These towns have not grown because of the domination of Ottawa. The region is not large enough or rich enough to support several large cities. Thus, Ottawa grows at the expense of the towns in the area.

The railroads have tended to concentrate trade and services in the large center of Ottawa. Many young and active people have gone to work in the nearby city, thus leaving the villages with a high proportion of both the old and the very young.



CHAPTER EIGHT

OTTAWA TODAY.

Functions.

Ottawa is primarily an administrative city. Its major function is that of being the capital of Canada. Parliament Hill is almost a little nation of its own, at once the center of Canada, the instrument of its joint will, and yet strangely apart. The modern city of Ottawa clusters around the Hill, but the iron railings of Wellington Street mark a definite boundary between politics and ordinary life, between the government of Canada and an Ontario city.

Ottawa, today, is not merely the political capital, but the home of business leaders, professors, scientists and soldiers.

The second major function is that of commerce. Both Ottawa and Hull are commercial cores serving the lesser urban entities throughout the Ottawa Valley. Ottawa is the normal trading center arising from its location within a highly developed dairy farming and agricultural producing area.

Industry is closely tied with commerce and government. Many things are made for use within the region, refrigerators, electrical goods, newsprint, clothing, farm implements, armaments, technical equipment, and various other goods required by the government departments. The largest establishments are those connected with the pulp and newsprint industries.

Communications.

Eight different railway lines traverse Ottawa segregating it into isolated parts. Grade crossings obstruct movement and constitute a danger in the urban area. Residential developments are scattered in a framework of tracks, warehouses, factories, and sidings. Both railroad operations and industrial development are hampered by crowded surroundings with no opportunity for expansion.

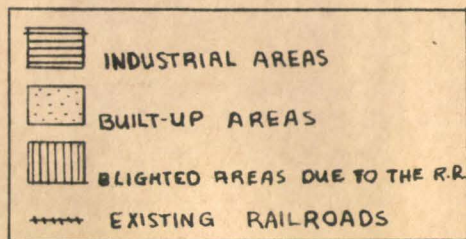
The highways, too, converge on the center of the city, adding to the traffic congestion which is gradually becoming a major problem. All classes of traffic - local, shopping, general, inter-urban, streetcars - converge on Rideau and Wellington Streets, the main east-west artery. The existing main roads offer neither facility nor safety for rapid movement. The main streets are crowded, with parked cars using space which should be utilized for through traffic.

There are no physiographical reasons for the location of the routes. They tended to locate where they were needed.

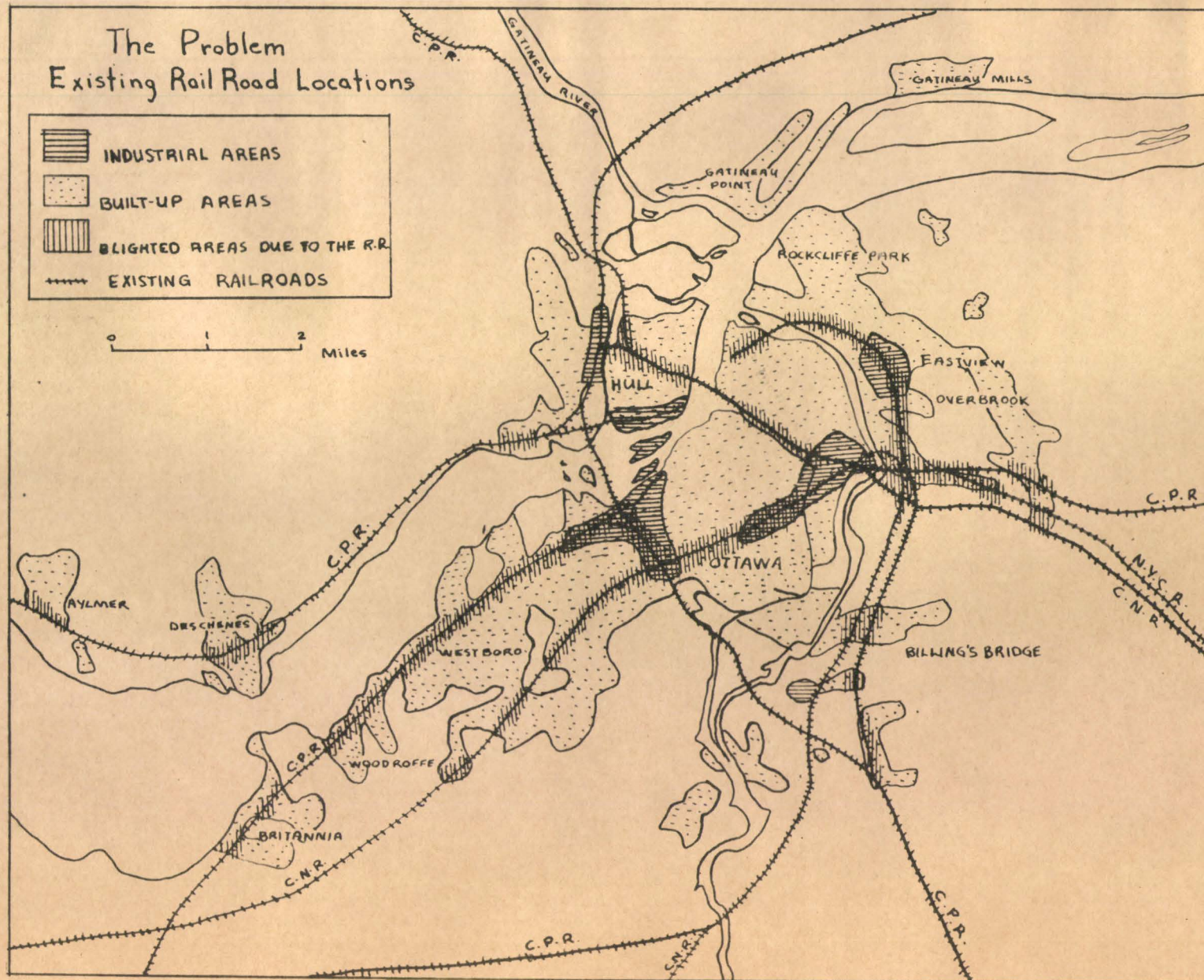
There are three bridges across the Ottawa River to Hull, linking the two cities closely together. The bridges were built where the river channel was narrowest, or where islands facilitated their construction.

The city's expansion is now hampered by the lack of proper communications. With the tendency of developing along the western arteries, distances have become prohibitive. These arteries have failed to meet the dual functions of local shopping streets and of traffic lines. Thus, today, developments wanting to be integrated with the central area

The Problem Existing Rail Road Locations



0 1 2 Miles



have utilized grounds formerly rejected because of their proximity to undesirable neighbourhoods.

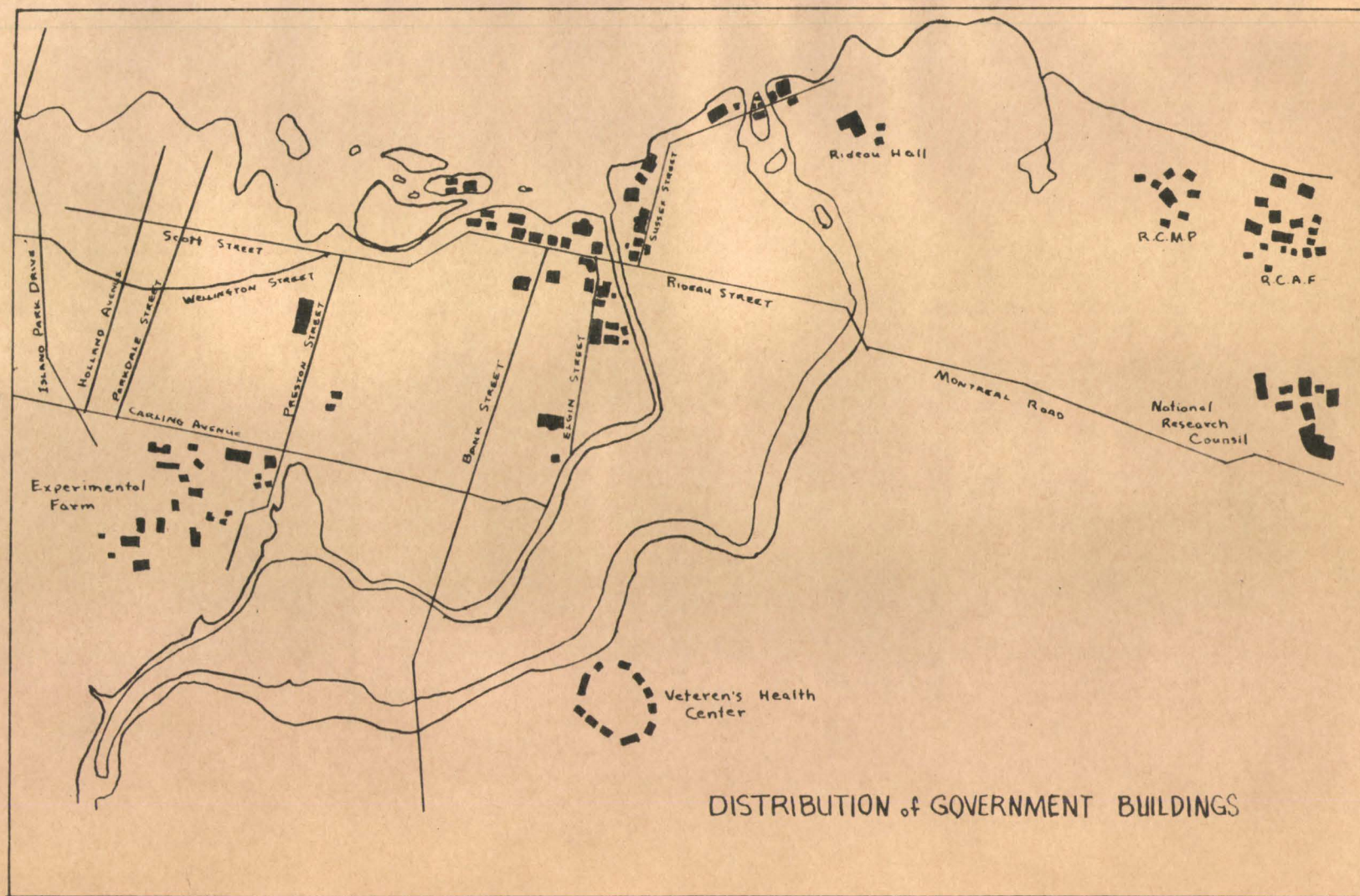
All the bus and streetcar routes are radial in character, having a common focal point. Thus, they add to the congestion at the heart of the city.

Distribution of Functions.

Government.

The location of government buildings has a direct bearing on the distribution of population, because their personnels become domiciled in groups contiguous to these buildings. This phenomena can be easily seen when the distribution of civil servants (Figure I) is compared with the distribution of government buildings (Page 56). There is a close association between the National Research Council on the Montreal Road, the R. C. A. F. Station, and the National Research Council on **Sussex Street**, and the density of civil servants living in this area.

There are three main areas where the government buildings have located. The major area is Parliament Hill, along Wellington Street, Elgin and Sussex Streets. This is an historical location because when Ottawa, then known as Bytown, was planned this area was set aside for public administration. The other two areas are on the outskirts of the city. In the East there is the R. C. M. P. and the R. C. A. F. Station and the National Research Council. They have located out here because of the crowding within the city, and partly because of the trend towards decentralization of government buildings. The third area is to the Southwest of the city. Here we find the experimental farm



and several temporary buildings belonging to the National Defence Headquarters. They have located here because of crowding in the central section of the city, and because of the availability of building space.

Industry.

Industry has located within the city along the railroads. There is a heavy concentration on the east side of Nepean Bay. This is where industry was first established, and it has just continued to grow. It has the advantage of the Chaudiere Falls for power and water, and has good railway connections. There are railway yards, workshops, warehouses and industrial sidings to take care of the industrial development. The industries that have developed here are mainly those engaged in pulp and newsprint manufacture.

Another area of industrial development is found southwest of Eastview on the Rideau River and Canal. They have located here because of the excellent transportation facilities. Here, four main railway lines cross, encouraging the development of industry.

There are various industries in Ottawa, manufacturing farm equipment, clothing, electrical supplies. These are scattered throughout the city along the railway lines and the waterfront.

Commerce.

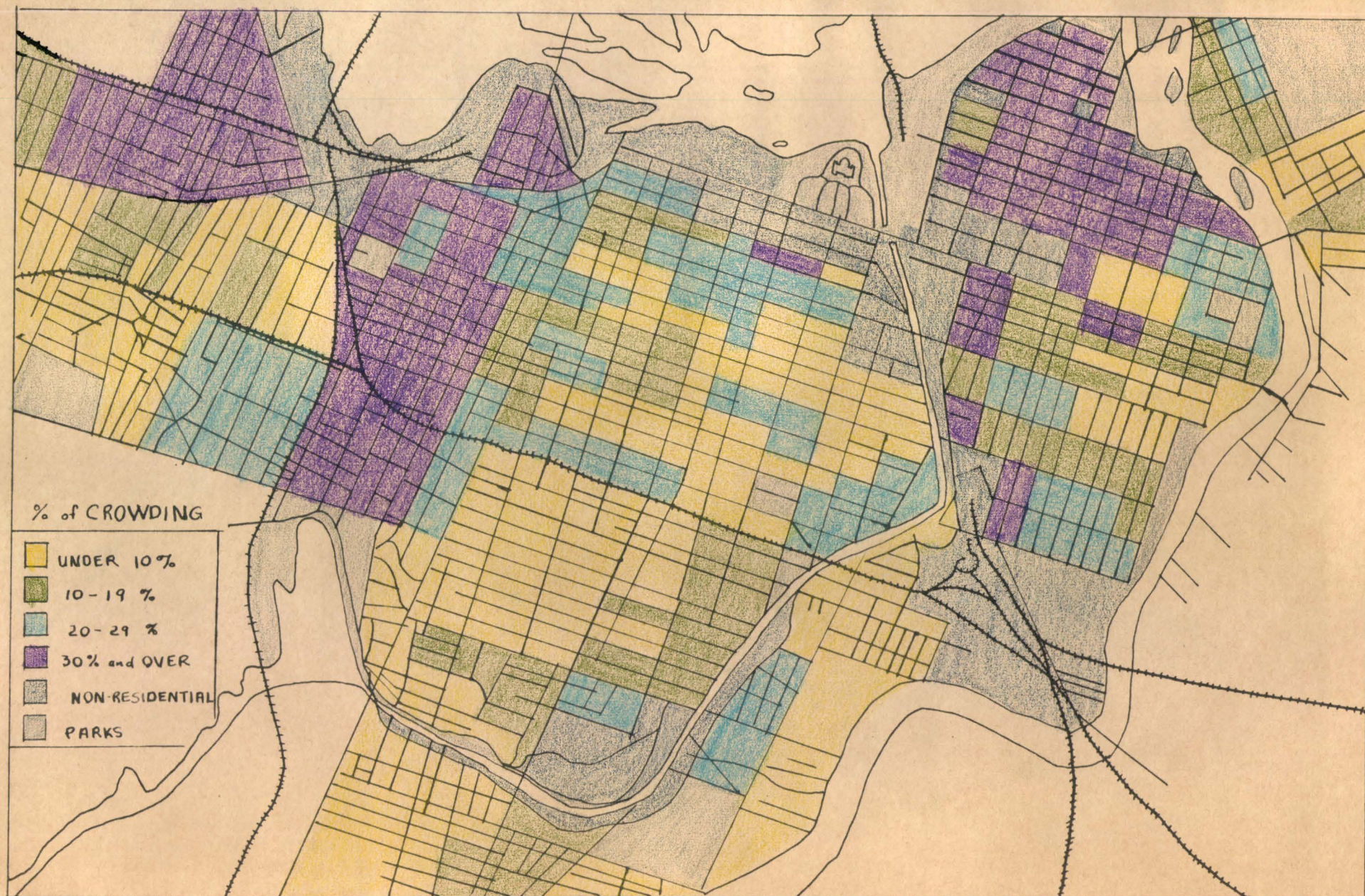
Commerce has located along the main streets in the center of the city. The greatest concentration is along

Rideau Street, especially right near the canal and railway terminus. This is the oldest part of the city, and so commerce had an early beginning. Commerce has also located along Bank Street, Carling Avenue, and along Richmond Road. These are the main commercial arteries.

Residential Areas.

The residential districts immediately surrounding the business areas show evidence of blight. The Chaudiere Falls area has continued to develop as an industrial area, expanding year after year, and encroaching with its plants, warehouses and railway sidings on residential quarters. The downtown area has continued to expand commercially and semi-industrially, constantly moving in on crowded residential areas. These districts have followed a constant evolution under the pressure of added demands for services, for example, the North end of Bronson Avenue which was once the choice residential area has had its properties converted into small apartments or replaced by flats. Residential areas have continuously regressed from the commercially active sections of the city.

The center of the city is filled with the typical square brick houses of the 1890's. These are old homes, getting worse every year. To the East, the oldest section of the city is predominantly French. It includes the Sandy Hill residential district of old mansions. A large student population, attending the University of Ottawa, which is located in this area, now lives in the fine old residences which were once Ottawa's most pretentious homes. Lower Town was one of the first residential districts of Ottawa. It is



CROWDED HOUSEHOLDS 1941

now overcrowded with many low-income families with many children and boarders. There is a great deal of crowding between the Rideau River and the Rideau Canal, along the Ottawa River. (See map, Page 59) There are two other areas of intense overcrowding. One of these is found north of Dow's Lake between Bronson and Preston Avenues. The third area is west of Nepean Bay.

The areas of least crowding are found on the outskirts of the city. In the South there is a wide band of modern homes which is spreading out into farmland on the edge of town. There is another large area of new homes in the West towards Britannia. Rockcliffe is another rapidly expanding residential area. Eastview, southwest of Rockcliffe, is also being flooded with new homes and apartment buildings, because of the rapid increase in population in the last few years.

One can trace the development of these various regions by merely studying a street map. The old city has a regular grid pattern, while the new residential districts built up since the war have curving and twisting streets. (See map, Page 59)

Rapid growth in the defense departments and the creation of a vast new organization in the munitions department, which has almost five thousand employees, were the major causes of the increase of some twenty-five thousand in Ottawa's working personnel during the recent war. Housing and office accommodations were among the most serious problems the city had to face. In the suburbs, apartment blocks and whole streets of new houses sprang up to accommodate the increased population.

Arising out of the predominance of civil servants is an attitude, described as "the Civil Service Complex", that tends to block the participation of government officials in community and municipal affairs. In a sense, the city is split into "status groups", following the civil service pattern. There is a large single, young-adult population, mostly office personnel, many of whom have come from other parts of Canada to work in government departments.

Rapid and insufficiently controlled growth and lack of foresight, coupled with the demands of industrial progress and the evils of unregulated real estate speculation, have resulted in defective and blighted areas, and depreciated land values. There are many depressed areas where there are crowded households, low rentals, doubled-up families, and poor housing. Ottawa, like many other Canadian cities, is suffering from a legacy of nearly a century of uncontrolled industrial, commercial, and residential development without regard for economic expansion and future needs.



Temporary Government Offices



Temporary Building on a Former
Park on Elgin Street



Poor Housing
on Queen Street



Poor Homes on King Edward Drive



1820 Style Houses on Nepean Street



Beautiful Modern Homes Facing Dow's Lake



A New Apartment Building
on Metcalfe Street



First Class Housing on Island Park Drive

CHAPTER NINE

THE NATIONAL CAPITAL PLAN AND THE FUTURE

"Ottawa occupies a unique position in relation to other cities of the nation. Its consequences lie not in its size or commercial or industrial importance, but in its function as the center of a country's law and government and the home of its national institutions. It is a community without boundaries -- every citizen is a member, and its activities and interests, problems and aspirations are shared by all."³

In planning the National Capital of the Dominion, the methods and experiences of other countries were studied, and desirable features, including the extension of the planning area into the region surrounding the capital, were adapted to Canada's requirements.

"It contemplates adding to the splendor of the natural surroundings, and to the distinction of her public buildings, the advantages of an airy city, freed from traffic congestion, ridded of the obstructions of railway tracks, crossed by wide avenues and circling autostrades, providing space for new imposing structures to house departments, museums, theatres, and convention halls. A new Ottawa should emerge from this plan which envisions a co-ordinated group of communities harmoniously developing in a setting of beauty."⁴

³ Planning Canada's National Capital, The National Capital Planning Commission; p.3.

⁴ The National Capital Plan, Preliminary Report, Jacques Greber, p. 25.

Ottawa's growth has been largely unplanned, and the city is a hodge-podge of slums, residences, industry, railroad yards, etc., all scrambled together. It has reached the point where urban development is rapidly depleting and endangering the city's natural resources. The National Capital Plan answers the urgent needs for wise community planning and efficient traffic and transportation facilities. It corrects deficiencies resulting from unplanned undertakings in the past, and it enhances the possibilities of preserving that which is still unspoiled.

Ottawa's first town plan was the townsite map drawn by its founder, Lieutenant-Colonel John By, in 1826. Serious consideration for the need of replanning of long-range improvement was not considered until years after Ottawa became the national Capital, even although the growing community quickly stretched beyond its original boundaries. Several plans were prepared, but twice international events intervened to prevent their being carried out.

The Federal Government commissioned a famous Montreal landscape architect, Frederick Todd, to make a report on the park and parkway requirements of the Capital. Many of his suggestions were adopted by the commission and have since been extended into the system of parks and scenic driveways. But this was only part of a sound town plan and development programme needed for the Capital and its region. So, in 1913, a Federal Planning Commission was appointed to prepare a plan for the cities of Ottawa and Hull. The First World War began before the plans were completed, but, under the chairmanship

of Sir Herbert Holt, the Commission finished its work in 1915 when the "Holt Report" was submitted. It was left too long, and when considered conditions had changed so much that a re-examination was needed. But it was not wasted, for the Holt Report has been the basis for many of the studies in the new master plan.

The second report on the planning of the National Capital was based on a series of surveys and studies made over a period of years by Noulan Couchon, a planning consultant to the city. His studies, especially of the railroad problem and of the proposed new bridge over the Rideau Canal were used. The Second World War prevented the beginning of the replanning of the center of the Capital as put forward by Mr. Greber in 1937. In 1945, Mr. Greber was invited to return as consultant-in-chief on a new master plan for the entire nine hundred square mile National Capital Region.

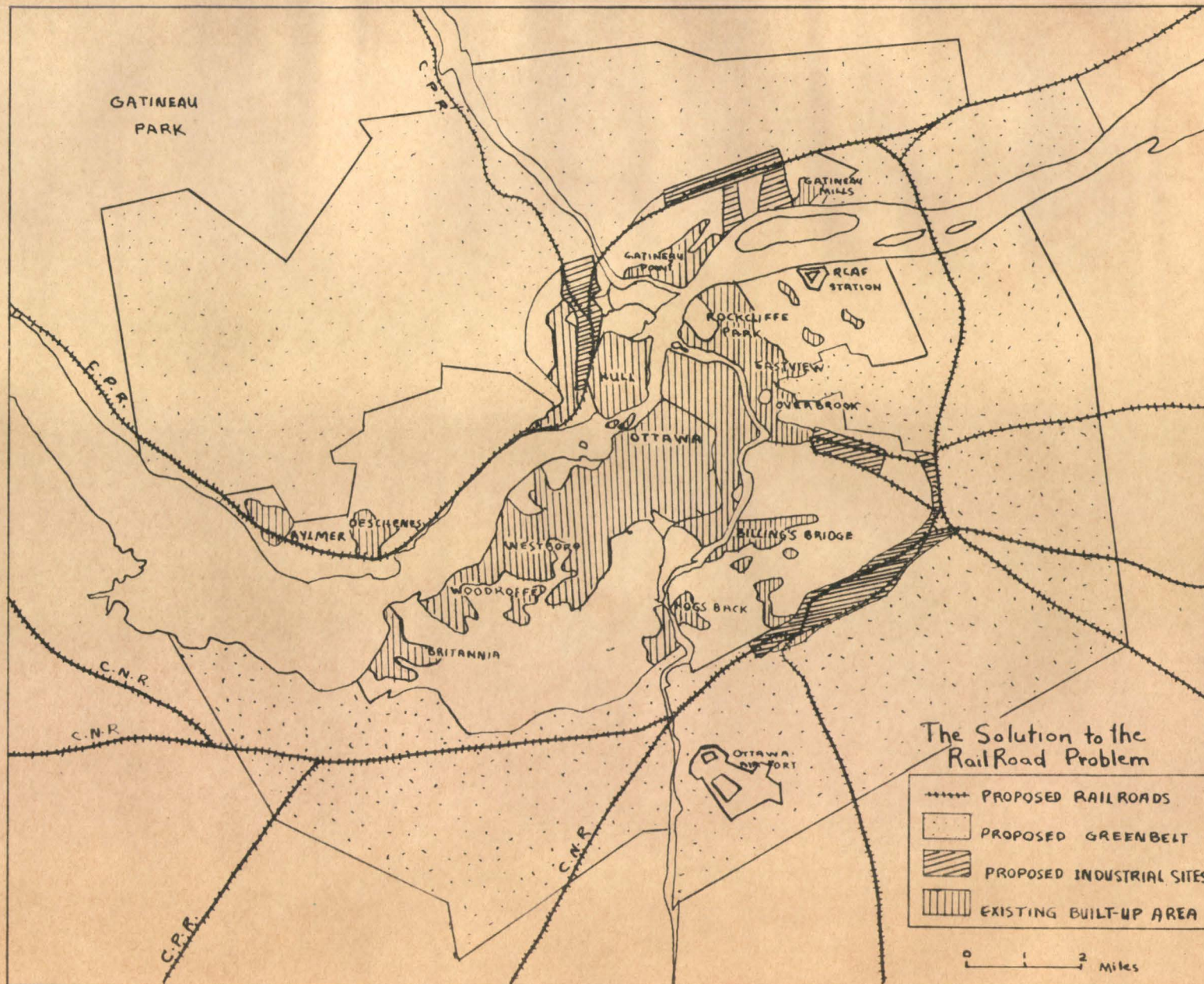
In 1945, the Government defined the National Capital District as an area of nine hundred square miles, including the cities of Ottawa and Hull and twenty-six other municipalities. About two-fifths of the region is in the Province of Ontario, and the rest in Quebec. Jacques Greber was appointed to carry out the planning of the National Capital. In 1946, powers of the Commission were broadened and the funds at its disposal were increased in order to enable more efficient planning and execution. The total population of the National Capital area is 305,687 with 231,280 in Ontario and 74,407 in Quebec, according to the 1951 census. The city of Ottawa has 202,045,

Eastview has 13,799, Rockcliffe has 1,595, and Hull has 43,871 of the total.

There are thirty-three immediate projects and twenty-five long-range ones. Highest priority has been given to two new bridges and removal of railway tracks inside the city. In city growth, communication facilities are seldom thought of before developments take place, causing ribbon-development along the traffic arteries. One of the marked advantages of a master plan lies in its prior designation of the location of the different areas of activity in relation to which the determination of the road system can be predicted.

The solution to the railway problem is effected by entirely removing the railways and their operations from the present built-up areas. They will now form a loop around the east, south and west edges of the city. The movement of rail traffic will be greatly simplified and more economical. A new union station near Walkley Road will be more accessible to all parts of the City than the present downtown station as the City grows southward and eastward, according to its present trend.

New industrial areas will be situated along the re-located railways at the southeast corner of the urban area on the Ottawa side, and in the north-central and northeast sections of Hull. The Federal Government has purchased approximately four thousand acres of land to provide the new industrial areas, an amount which is considered ample for all present and future requirements. Existing industries now scattered throughout the downtown area will be able to locate in the areas reserved for them, when the new railway



facilities are provided in about two years.

Besides solving the Capital's railway problem the solution is considered to be economically sound, because valuable land in the highly assessed downtown areas will be released for desirable commercial and residential use.

A proposed bridge across the Rideau Canal and the railroad yards along Albert and Slater Streets will be an immediate remedy for the congestion of Wellington Street and Confederation Square. The bridge can be built without disturbing present railway operations, and, in the future, will become the central theme of the final development of the center of the city. This new traffic improvement will give immediate relief to present bad conditions.

A greenbelt frames the perimeter protecting the area within against undesirable development. Outside the extreme limit of the greenbelt the territory will retain its rural character, except for limited and controlled minor developments. The belt will be laid out along grounds of poor building value and along creeks or woodland, to form the necessary space of nature in the city. Within these limits the population may easily grow to half a million or more. The gradual development of the urban extension is thus guided and controlled within the limits of a predetermined maximum growth. The urban area will be controlled by limitations of population density and regulation of land use.

From the technical standpoint, the survey and the planning of this large region were easy matters, as the physical conditions lend themselves to the work. The greatest problem is to unify the legal machinery existing in both Provinces. The implementation of the master plan is a co-operative effort between the Federal Government and the two Provincial Governments and the municipal authorities. It will take many years to complete, but, given understanding, goodwill, and co-operation, the work which has been launched will be brought to a successful conclusion.

The Plan consists of a series of progressive projects divided into three groups: urgent or short-range operations, long-range operations, and desirable proposals. The timing of the execution of the short-range and the long-range operations is organized according to a gradual programme of implementation and financing, with the view of avoiding the waste of double expenditure caused by temporary solutions.

The projects in various stages of construction are: the expansion and extension of various municipal services and road improvements by the City; buildings and facilities being constructed by the Department of Public Works. The MacKenzie King Bridge and the railroad yards, which are costly, are the work of the Federal District Commission.

The numerous projects are concrete evidence that the Capital Plan has passed from the drafting room to the building stage. The sum of Two Million Five Hundred Thousand Dollars has been voted annually by the Federal Government to maintain the National Capital Fund.

While it will probably be twenty years before the railway and the industrial relocations are completed, owing to the extent and complexity of the project and the necessity of installing new services before the existing lines can be abandoned, a start has been made. Grading is now practically completed for new yards for the Canadian National Railway along Walkley Road, and highway overpasses for the Metcalfe and Russell Roads. If the railway equipment can be obtained, the new yards should be ready for use in about two years.

The first major completed project in the Capital Plan is the MacKenzie King Bridge. But circumstances have prevented the completion of the approaches to the bridge. Construction of the link with Slater Street at the western approach will be delayed until the Aylmer Building is demolished. When the full route is in use, the new bridge will fulfil its other functions of lessening the congestion at the Square and of permitting the re-routing of heavy commercial traffic away from Wellington Street. The rebuilding of several other bridges is under study at the present time.

The National Capital calls for ample facilities for governmental, parliamentary, diplomatic, cultural and social life. There is also a need for careful protection of the natural setting of the capital area.

CONCLUSION

In each period one factor has been dominant. In the early periods of pre-settlement and settlement, transportation was the major influence. The Ottawa River was the main highway to the West. The Chaudiere Falls caused a stop-over and trans-shipment point. To the Indians, it was a camping and trading place.

Lumbering could only have been developed because of the cheap and easy transportation provided by the Ottawa River and its tributaries.

The incoming settlers travelled up the Ottawa, settling along its shores. They could ship their produce down to Montreal, and bring in supplies up the Ottawa. Without the river, they would have been self-sufficient, isolated settlements without any hope of growing.

It was the building of the Rideau Canal in the late 1820's which dominated the development of the Ottawa Valley. The actual construction of the canal brought in hundreds of workers who settled down after the canal was completed. But the canal also attracted shopkeepers, tinsmiths, blacksmiths, and other service industries, around the locks. These shops, in turn, attracted more people. The Canal opened up the interior of Southern Ontario to settlement. Settlers now had an easy route into the country. The Canal also provided immigrants with work, and directed the incoming tide of immigrants to the Great Lakes and the United States beyond.

The influence of the Canal was short-lived. The coming of the railways in the 1850's nullified the usefulness of the Canal. The railroads were a much more flexible form of transportation. Their only limiting factor was rough and difficult relief. Also, railroad construction was much easier and cheaper.

The fourth great influence on the Valley was the availability of water power. In the early days of industry, mills were located wherever there were falls. Villages often developed around the mill sites. The Chaudiere Falls, however, could not be developed until new techniques and methods had been devised. The falls were too wide and turbulent for their primitive equipment. Once the power was harnessed, saw and grist mills located here, along with other industries, adding their establishments to the growing Bytown.

With the establishment of the Federal Government, a great change gradually took place. Government buildings and services came to be more and more important. Government departments employed a great number of workers, attracting people from all over Canada.

Today Government activities dominate the economy of the City of Ottawa, and commerce and industry have to take second place. Industry, and commerce to a certain degree, are closely tied to government functions. The major influence in the City is political.

Parliament Hill, Elgin Street, and Sussex Street are the heart of the Federal Government; but this area has been

completely filled, so that today new developments have been built on the edge of the city. Certain residential areas, especially adjacent to government buildings, are dominated by civil servants.

The Chaudiere Falls section of the city, however, is dominated by industry, because of the availability of cheap water transport, plentiful water supply, and power.

The only section of the city which is greatly influenced by commerce is Rideau Street. There are several areas like Bank Street and Richmond Road which have a concentration of commercial activity.

As Canada grows and becomes more prosperous, her Government too will grow. New laboratories and departments will be set up, and more and more people will be engaged in government work. The new development will be on the outskirts of the City. The Greber Plan is going to decentralize as much as it can.

Industry too will grow, but not as greatly as will the government function. Industry will also continue to be closely tied with government, as it is today.

The City is growing rapidly today. It is expanding out along the main highways, causing a star-like development. Railroads also are a controlling factor in the development of the City. Today transport is much more important as a controlling factor than physical terrain.

The National Capital Plan shows the urgent need for

wise community planning and efficient traffic and transportation facilities. It corrects deficiencies resulting from unplanned undertakings in the past, and it enhances the possibilities of preserving that which is as yet unspoiled.

To understand the location and growth of any city, it is necessary to know something of its political, economic, and social history, the geographic conditions of the area in which it is located, and the forms of available transportation and communication. It is very significant, especially in studying Ottawa, that population and wealth tend to collect wherever there is a break in transportation. The location of a city and its functions may be explained in terms of particular factors, local and regional, which characterize its site and position. There should also be a reference to the process of its actual foundation and growth.

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