

A STUDY OF FACTORS AFFECTING THE GROWTH OF LETHBRIDGE

PREPARED BY GERALD A. P. CARROTHERS, B. ARCH. M.R.A.I.C. A.I.P.T.P. P.M.A.I.P., THE UNIVERSITY OF MANITOBA

SURVEY FOR PLANNING - 1951

Study of Factors Affecting the Growth of Lethbridge

Part 1 - Existing Conditions

Part 2 - Basis for Planning

By Gerald A. P. Carrothers



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G. C.

TABLE OF CONTENTS

PART ONE	Existing Conditions	
SECTION I	Physical Surroundings	page
Chapter 1	Geographical Location	3
2	Topographical Features	6
3	Geological Characteristics	9
	A - Sub-Surface Geology	
	B - Soil Characteristics	
4	Climatic Conditions	13
SECTION II	Historical Background	
Chapter 5	Early History of the City	22
6	Government and Administration	37
	A - Form of Government	
	B - City Council	
	C - City Manager	
	D - Advisory Commissions	
	E - School Boards	
7	Existing Legislation and Planning	43
	A - Provincial Legislation	
	B - Town and Rural Planning Act	
	C - Provincial Sub-Division Regulations	
	D - Civic By-Laws	
	E - Planning Activities	
SECTION III	Socio-Economic Background	
Chapter 8	Population Characteristics	61
	A - Past Population Growth	
	B - Present Population	
	C - Natural Increase	
	D - Migration	
	E - Future Population	
9	Economic Background	84
	A - Agriculture and Irrigation	
	B - Forests and Fisheries	
	C - Power and Mineral Resources	
	D - Industry	
	E - Markets	

Chapter 10	Financial Structure of the City	101
	A - Assessment and Taxation	
	B - Indebtedness	
	C - Financial Activities	
11	Ecological Characteristics	106
	A - Land Use	
	B - Property Ownerships and Appraisement	
12	Sociological Characteristics	120
	A - Indices of Social Disorganization	
	B - Public Protection and Social Services	
	C - Religious Organizations	
	D - Cultural Activities	
13	Public Utilities	126
	A - Water Supply	
	B - Sewage and Garbage Disposal	
	C - Electric Light and Power	
	D - Natural Gas	
	E - Transit System	
	F - Taxi Service	
14	Roads and Traffic	133
	A - Existing Street Pattern	
	B - Traffic and Parking	
15	Transportation	140
	A - Railway Service	
	B - Air Service	
	C - Bus Service	
PART TWO	Basis for Planning	
Chapter 16	Planning Problems	145
	A - Location and Direction of Growth	
	B - Use Districts	
	C - Areas of Blight Development	
	D - Street Pattern	
	E - Parking Problems	
	F - Recreational Areas	
17	Planning Effectuation	152
	A - Civic Ordinances	
	B - Administration	

LIST OF ILLUSTRATIONS

1	Summary of Climatic Statistics to 1949, Lethbridge	14
2	Percent of Wind Frequency by Hours, Lethbridge	17
3	Temperature	19
4	Precipitation	19
5	Sunshine	19
6	Schematic Diagrams of the Government of Lethbridge	41
7	Schematic Relationship of Levels of Planning	49
8	Summary of Zoning Regulations, Lethbridge	52
9	Population Growth	65
10	Population Statistics	66
11	Dwelling Units 1946-1950	68
12	1946 Population of Lethbridge over 15 years	68
13	Population Age and Sex Compositions	71
14	National Origins 1946	73
15	Summary of Vital Statistics, Lethbridge	76
16	Marriage Rate	77
17	Birth Rate	77
18	Death Rate	77
19	Rate of Natural Increase	77
20	Migration Rate	78
21	Percent Population Increase	78
22	Future Population Based on Migration and Natural Increase	81
23	Future Population Based on Projected Rate of Increase	82
24	Irrigation Districts of Southern Alberta	89
25	Commercial Fish Production	91
26	Coal Reserves in the Lethbridge Region	91
27	Oil and Natural Gas Production	93
28	Value of Production in the Lethbridge Railway Division Area	99
29	Financial Statistics, Lethbridge	104
30	Land Use Areas	111
31	Public Recreational Areas	111
32	Lethbridge Schools 1950-1951	113
33	Age of Dwellings, Lethbridge	118
34	Lethbridge Water Supply System	128
35	Standard Street Cross Sections	135
36	Highway Traffic Volumes	137

LIST OF MAPS

The following maps form part of this report but are not included herein.

Preliminary Reconnaissance Map, Lethbridge 1950

Chapter 1

Watersheds of the Lethbridge Region

Chapter 3

Generalized Soil Zones of the Lethbridge Region
Geological Formations of the Lethbridge Region

Chapter 7

Use Zones and Fire Limits, Lethbridge 1950

Chapter 8

Population Distribution, Lethbridge 1950

Chapter 9

Type of Farming Areas of the Lethbridge Region
Irrigation Areas in Southern Alberta
P.F.R.A. Small Water Projects in the Lethbridge Region
Natural Resources of the Lethbridge Region
Areas of Influence in the Lethbridge Region

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Irrigation Areas in Southern Alberta
P.F.R.A. Small Water Projects in the Lethbridge Region
Natural Resources of the Lethbridge Region
Areas of Influence in the Lethbridge Region

Chapter 11

Land Use Map, Lethbridge 1950
Age of Buildings in the Built-Up Area, Lethbridge 1950
Condition of Buildings in the Built-Up Area, Lethbridge 1950
Tax Delinquent Property, Lethbridge 1950
Public Property, Lethbridge 1950
Public Recreation Areas, Lethbridge 1950
Public Schools, Lethbridge 1950
Separate Schools, Lethbridge 1950

Chapter 12

Sociological Characteristics, Lethbridge 1950

Chapter 13

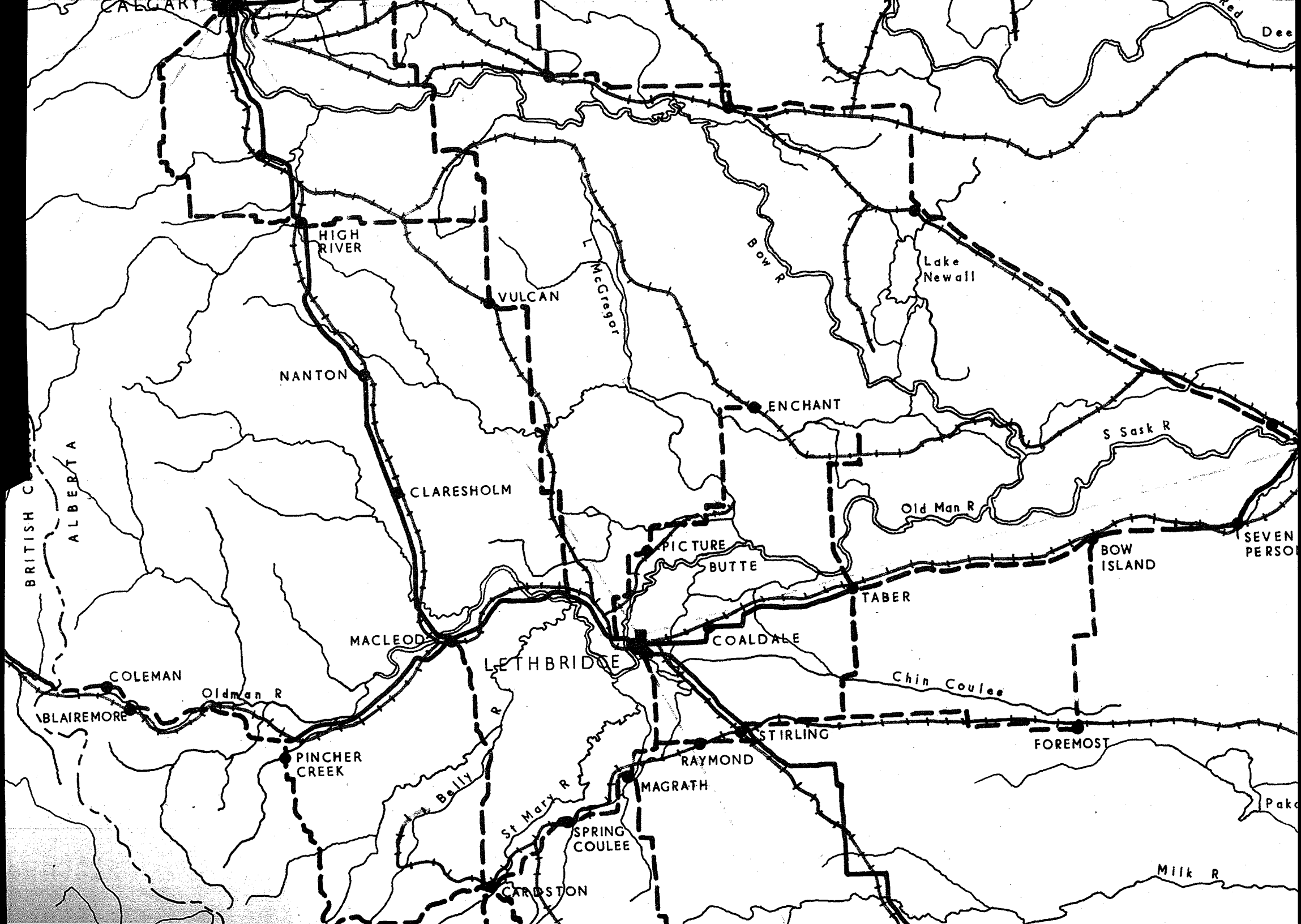
Storm Sewers, Lethbridge 1950
Sanitary Sewers, Lethbridge 1950
Water Mains, Lethbridge 1950
Power Lines, Lethbridge 1950
Gas Mains, Lethbridge 1950
Street Lighting, Lethbridge 1950
Transit Routes, Lethbridge 1950
Power and Telephone Lines in the Lethbridge Area

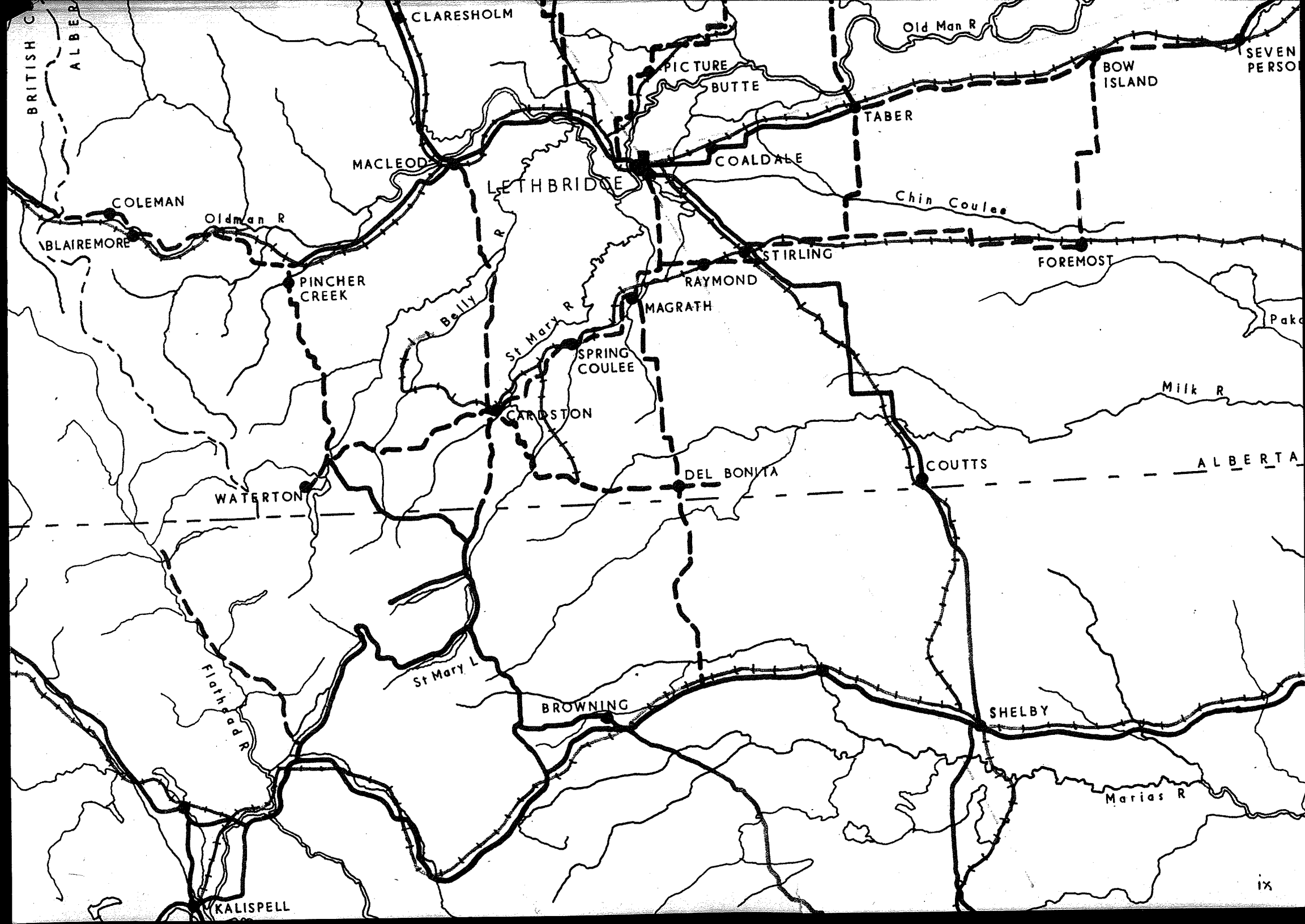
Chapter 14

Roads and Traffic, Lethbridge 1950
Road Surfacing, Lethbridge 1950

Chapter 15

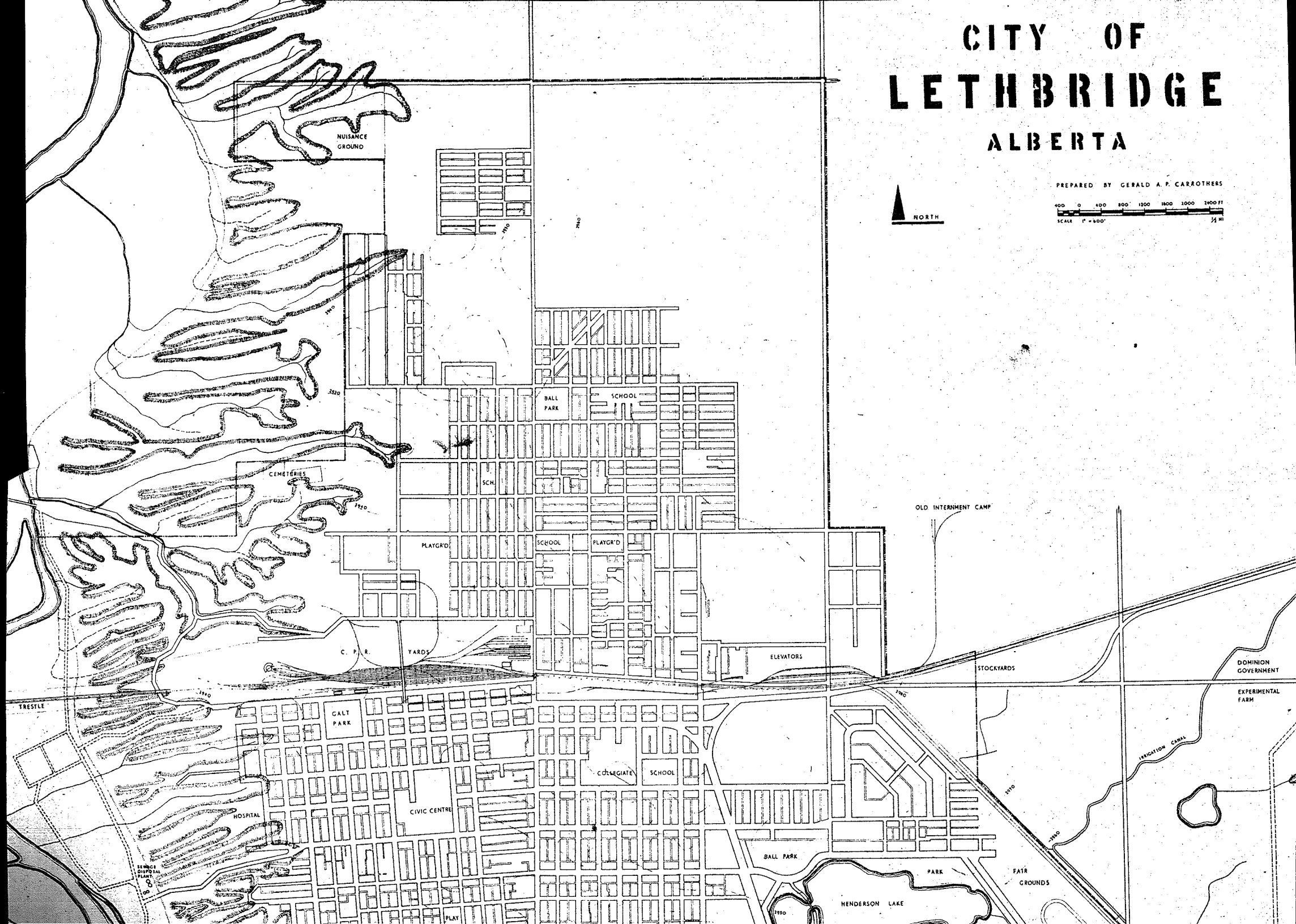
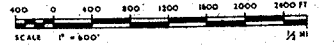
Transportation Routes in the Lethbridge Region
Inter-city Bus Routes, Lethbridge 1950

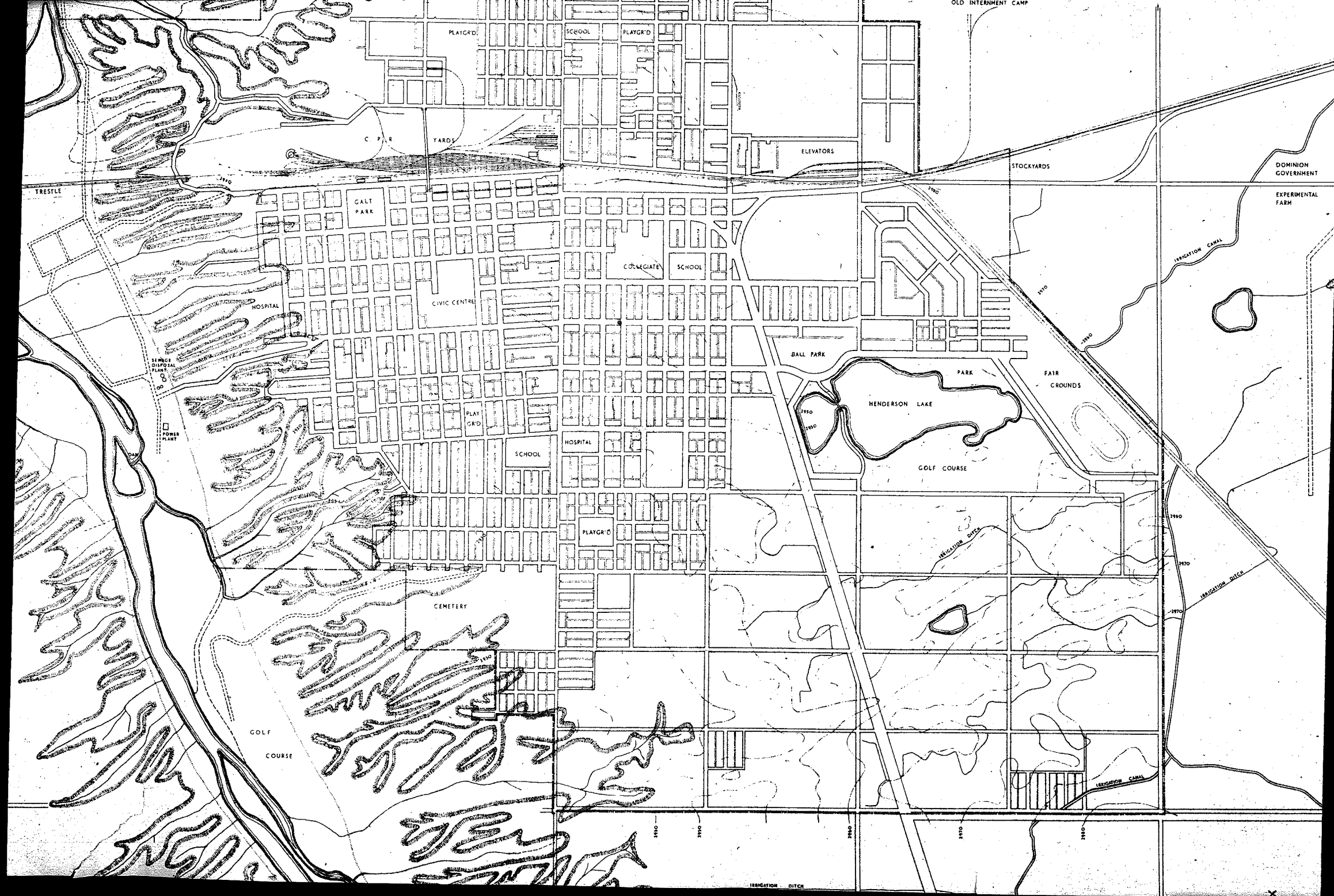




CITY OF LETHBRIDGE ALBERTA

PREPARED BY GERALD A. P. CARROTHERS





INTRODUCTION

Planning is often regarded with suspicion by those of us who like to think of ourselves as proponents of "free enterprise". And yet, of all human activities, planning is probably the most universal. Every thinking individual plans his activities to a greater or lesser degree: when one arises in the morning the sequence of getting dressed is "planned"; breakfast, "planned" before preparation, is eaten in a "planned" fashion; travel to one's place of work must be "planned", as must the day's work itself; recreational activities for the evening are "planned"; and one retires at a "planned" hour, to arise again in continuation of this daily "planning"; and so on, ad infinitum. This is planning in the broadest and at the individual level. Nevertheless, it is planning, and the more intelligently it is carried on, the more pleasant, satisfactory, and useful will be the existence of the individual.

Town Planning is just as straightforward. It is the process by which a community organizes certain of the activities of the individual for the greater benefit of the whole. But it must be remembered that one of the basic foundations of planning is the individual and it is essential that planning objectives be concerned with bettering the environment of the individual inhabitant and visitor.

A city will continue to exist, and all the activities with which planning is concerned will go on whether or not a planning program in under-

taken. The function of planning is to make these activities easier, better, and more equitable. As with the individual, the more intelligently these activities are coordinated the more useful will be the city.

Suspicion of planning generally derives from ignorance of its purposes and processes. Carl Feiss has described the planning process as follows:

1. Identification of problems, goals, and objectives.
2. Inventorying of facts and resources.
3. Analysis of the inventories and the forming of conclusions and decisions based on such analysis.
4. Preparation of plans and programs drawn from conclusions and decisions.
5. Effectuation of plans by means of three mechanisms:
 - (a) Programming
 - (b) Regulation
 - (c) Administrative Operations.

True planning is the organic synthesis of these procedures and no one phase can be considered as constituting the ultimate process. The value of planning is dependent upon knowledge and understanding of present and past conditions, on creative ability in planning "design", and on administrative resource in carrying out plans.

Planning cannot be static. Conditions and needs of a city are forever changing and to serve a useful purpose the "development" or "general" plan of a city must be flexible, growing as the city grows. All too often the general plan is considered to be the sole means of planning and is produced as an inflexible instrument of development. Disillusionment caused by resulting impracticalities

jeopardizes future planned development. Cut and dried solutions can only be applied as phases of a plan are carried into realization and other means of effectuation must be concurrently utilized.

This report is primarily intended to consist of information necessary for the preparation of plans and programs. It is the "inventory of facts and resources". Certain planning problems in Lethbridge are self evident; others are less obvious. But all are important. The healthy development of the city is dependent upon the acknowledgement and solution of these problems.

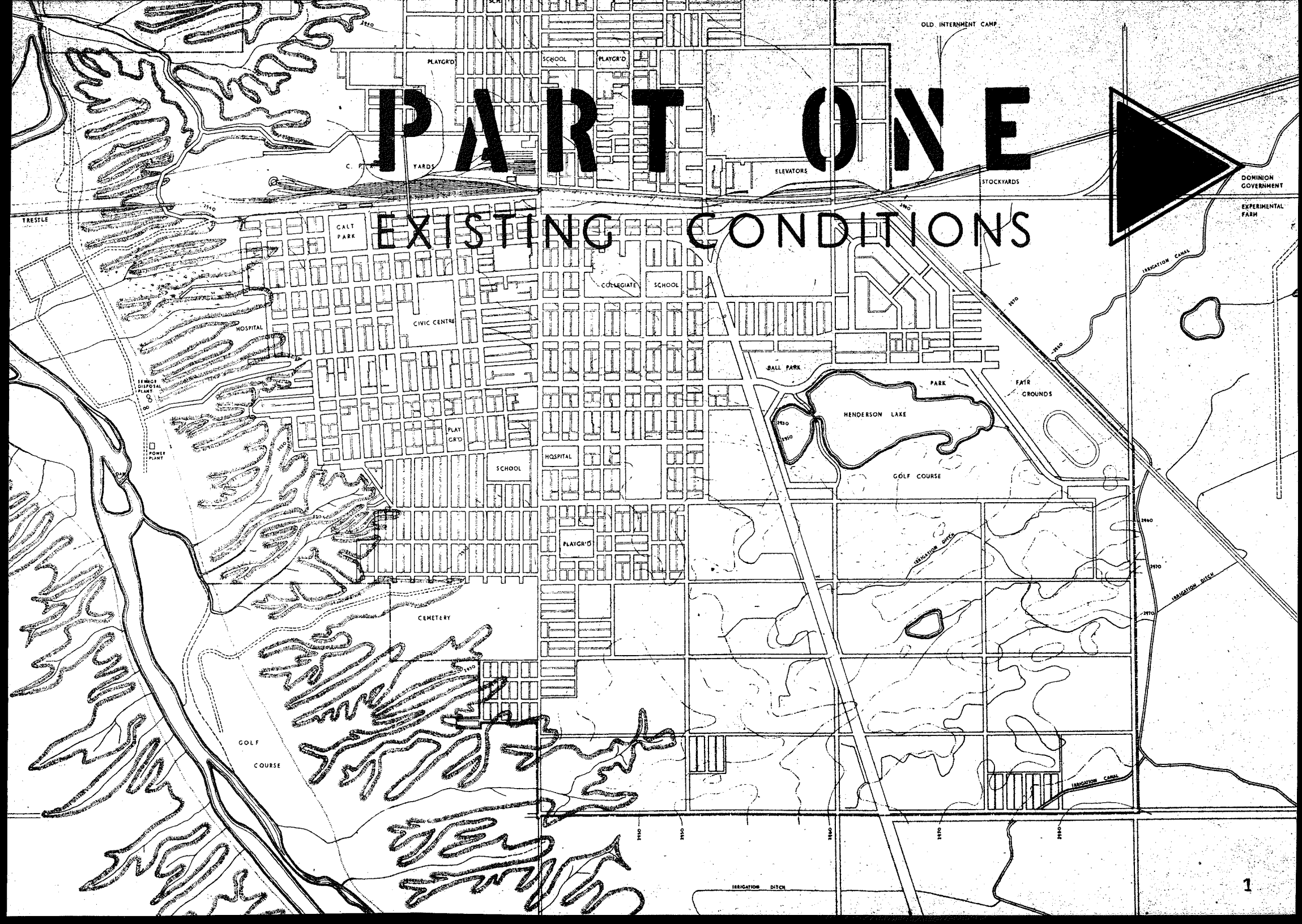
Whatever form future planning activities in Lethbridge may take, the information in this report is submitted in the hope that it will serve as useful background material for analysis.

Gerald A.P. Carrothers

The University of Manitoba
May, 1951.

PART ONE

EXISTING CONDITIONS



S E C T I O N O N E

Physical Surroundings

CHAPTER ONE

Geographical Location

Lethbridge is located in southern Alberta at latitude 49/40 and longitude 112/50 at an altitude of 2983 feet. It is situated on the east bank of the Oldman River about seven miles down stream from the confluence of the Oldman and St. Mary Rivers. More specifically, the city occupies 6440 acres in sections 28, 29, 30 (part), 31, 32, and 33 (part) of township 8, range 21, west of the 4th meridian; sections 4 (part), 5, 6 (part), 7 (part), and 8 of township 9, range 21, west of the 4th meridian; and part of section 1, township 9, range 22, west of the 4th meridian.

Within the Lethbridge region are parts of three watersheds; those of the Pacific Ocean, Hudson's Bay, and the Gulf of Mexico. At Lethbridge the drainage area of the Oldman River, part of the Hudson's Bay Watershed, is 6710 square miles.

The city is located at the natural junction of east-west and north-south rail and highway routes in the southern part of the province. It is situated near coal deposits and is surrounded by splendid agricultural land, a large part of which is either now irrigated or is included in schemes for future irrigation. About 75 air miles to the west are the Rocky Mountains and 60 air miles to the south is the Canada-U.S. border. Waterton Lakes National Park in Canada and Glacier National Park in the U.S. are within easy access 75 air miles to the south-west. The nearest urban centres are Calgary, 125 air miles to the north,

and Medicine Hat, 100 air miles to the east. Vancouver lies 475 air miles to the west and Winnipeg 700 air miles to the east. Spokane and Great Falls are the nearest cities in the U.S.

The steady growth of Lethbridge can undoubtedly be attributed in part to the city's favourable geographical position.

CHAPTER TWO

Topographical Features

The district in which Lethbridge is located is relatively level and only slightly undulating. In the city itself the ground slopes down gradually from east to west from an altitude of about 2980 feet in the south-east and north-east parts of the city to about 2930 feet at the top of the coulees of the Oldman River. At the same time there is a long shallow depression running across the city in an east-west direction limited roughly by Seventh Avenue South and Ninth Avenue South and fanning out somewhat to the west of Thirteenth Street. The east part of this dip has been used to create a large artificial lake about 91 acres in extent.

Bordering the city on the west and running in a north-south direction the Oldman River cuts into the prairie and creates a natural barrier on that side of the city. The river lies about 300 feet below the level of the surrounding prairie and the banks rise sharply in the form of steep finger-like coulees reaching outward from the river. At the base of these coulees the river valley forms a well-defined flat area, colloquially known as the "river bottom". Within the city limits this river bottom land is about 225 acres in extent and most of it is naturally wooded. Parts of it are subject to occasional Spring flooding. To the south and the north of the city the river bottom is somewhat higher but less densely wooded.

North of the city the Oldman River swings toward the east resulting in

a natural barrier on two sides of the city. As a result there are not transportation routes directly to the north, the roads and railway crossing the river immediately to the west of the city.

CHAPTER THREE

Geological Characteristics
A - Sub-surface Geology
B - Soil Characteristics

A - SUB SURFACE GEOLOGY

The city is located at the junction of two formations of glacial rock deposits of the Upper Cretaceous age. The contact occurs in the "river bottom" west of the city. To the east of the city is the older of the two, the Belly River formation, which is of fresh-water deposition, consisting chiefly of grey, greenish, and buff sandstones interstratified with grey, greenish and carbonaceous shales. The Bearpaw formation of marine shales occurs to the west of the city. It consists mainly of dark grey clay-shales and sandy shales.

Fossils occur in both formations and several coal beds occur in the Belly River Strata. A buried drainage course of preglacial age occurs under the city approximately 300 feet below the surface. It extends from the Oldman River eastward toward Chin Coulee.

B - THE SOIL

Within the Lethbridge region are four of the general soil types which are based principally on the colour of the soil profile. These are the brown soils, the dark-brown soils, the black soils, and the grey-wooded soils. The zones consist of bands running roughly parallel to Palisser's Triangle. The city is located within the dark-brown soil zone which averages about 50 to 75 miles in width.

The dark-brown soil zone forms a broad transition belt between the brown and black soils of the province. These soils developed under more humid

conditions than prevail in the brown zone but under less humidity than in the black zone. The area was originally grass land dotted with small tree clumps. These dark-brown soils are generally quite irrigable and a large part of this zone has been classed as arable land and is under cultivation.

The brown soil zone is semi-arid prairie containing soils relatively low in nitrogen and with a shallow profile.

The black zone soils have a fairly deep profile and are the most productive soils in Alberta.

The grey-wooded soil zone is agriculturally undeveloped.

The following soil profile is fairly typical of the medium textured silt loams of the area adjacent to Lethbridge and to the south-west.

"A" (Surface) Horizon: 0" to 5" deep. Largely silt of a very dark brown colour and with a cloddy structure.

Upper "B1" Horizon: 5" to 12" deep. The colour is dark brown and the structure is fairly friable. It contains twice as much clay as the "A" horizon.

Lower "B1" Horizon: 12" to 18" deep. Soil is brown in colour and is

slightly more friable than that in the Upper B1.

Upper "B2" Horizon: 18" to 24" deep. Soil is cloddy and quite friable containing a heavy lime carbonate disposition.

Lower "B2" Horizon: 30" deep. Soil is tightly packed.

C H A P T E R F O U R

Climatic Conditions

stration 1.

SUMMARY OF CLIMATIC STATISTICS to 1949 - LETHBRIDGE

		Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
erature 48-year period	Mean Temp.	17.5	18.5	28.5	42.2	51.0	58.3	64.6	62.4	53.3	44.5	31.4	41.1	41.1
	Mean High Temp.	51.9	54.4	62.5	75.8	82.3	86.6	92.7	91.4	84.1	77.6	63.7	54.4	53.00
	Mean Low Temp.	-24.1	-24.0	-11.5	11.7	25.4	35.0	40.4	37.0	25.8	13.7	-7.1	-19.9	28.00
ipitation hes) 48-year period		0.65	0.73	0.91	1.11	2.35	2.83	1.69	1.51	1.70	1.00	0.79	0.70	15.98
(m.p.h.) ear period	Average	14.1	12.5	12.5	13.4	12.0	10.4	9.2	8.9	10.1	12.5	13.1	13.8	11.9
ht sunshine rs) 41-year period	Daily Averages	3.22	4.35	5.22	7.08	8.27	9.27	10.98	9.68	6.91	5.42	3.70	3.02	6.43

t Data

Latest last frost of spring June 18, 1949 - 32°	Earliest last frost of spring April 26, 1940 - 30°
Earliest first frost of fall ... August 14, 1928 - 31°	Latest first frost of fall Oct. 14, 1938 - 27.8° Oct. 14, 1940 - 23°
Latest last killing frost of spring .. May 30, 1917 - 28°	Earliest last killing frost of spring .. April 11, 1915 - 28°
Earliest first killing frost of fall . Sept. 6, 1929 - 28° May 30, 1920 - 26°	Latest first killing frost of fall. Oct. 22, 1947 - 19.5°
Shortest crop season (1921) 110 day;	Longest crop season (1940) 178 days
Average crop season 140 days	
Shortest frost-free season (1910) 80 days	Longest frost-free season (1940) 171 days
Average frost free season 115 days	
Note: 32° of less considered as frost 28° or less considered as killing frost	

Source - Lethbridge Chamber of Commerce

The climate of the Lethbridge area is exceedingly variable. The extremes to which the rest of the prairie provinces are subjected in a more or less regular pattern year by year do not occur consistently in this region. Furthermore, within the area climatic conditions are not the same in different localities. Nevertheless, three general statements can be made regarding the climate of the area: the total annual rainfall decreases from west to east; the mean annual temperature increases slightly from west to east; and although the prevailing wind is westerly over the entire area the average velocity in the eastern part is lower than in the west.

Illustration 1 summarizes statistics concerning the climate of Lethbridge.

Lethbridge lies in the direct path of the chinook winds sweeping over the Rocky Mountains. These are warm winds of low relative humidity which have great drying power. During the winter they have a distinctly moderating effect on the climate. Coming with great suddenness they may raise the temperature from sub-zero to well above the freezing point in a few hours. During the summer these warm drying winds may be quite destructive to growing crops, especially during prolonged dry spells. The seasonal wind roses (Illustration 2) indicate the high percentage of winds from the west and south-west. While the

average velocity on a yearly basis is 11.9 m.p.h. (29 year period), the wind often reaches gale proportions. For example, from June 1950 to March 1951 there were 56 days when the wind velocity averaged greater than 20 m.p.h. and on more than half of these days the wind average was over 25 m.p.h.

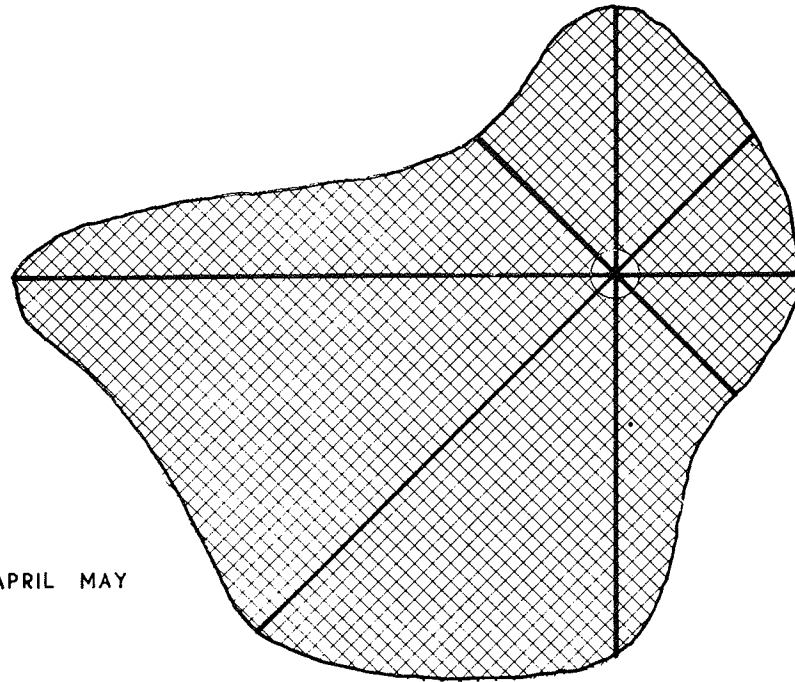
Lethbridge has about 2370 hours of sunshine yearly or an average of 6.43 hours daily (41 year average). This varies from an average of 3.02 hours daily in December to 10.98 hours daily in July.

The average yearly precipitation at Lethbridge is 15.98 inches (48 year average). The average annual rainfall is 9.96 inches and the average annual snowfall is 50.5 inches (30 year average). The distribution of precipitation is comparatively favourable since most of it occurs during the growing period of April to October. Seventy-seven percent of the total precipitation in Lethbridge comes during this period. However, between 1902 and 1938 about one year in every three was considered a drought year on the basis that less than 10 inches of precipitation fell during the growing season.

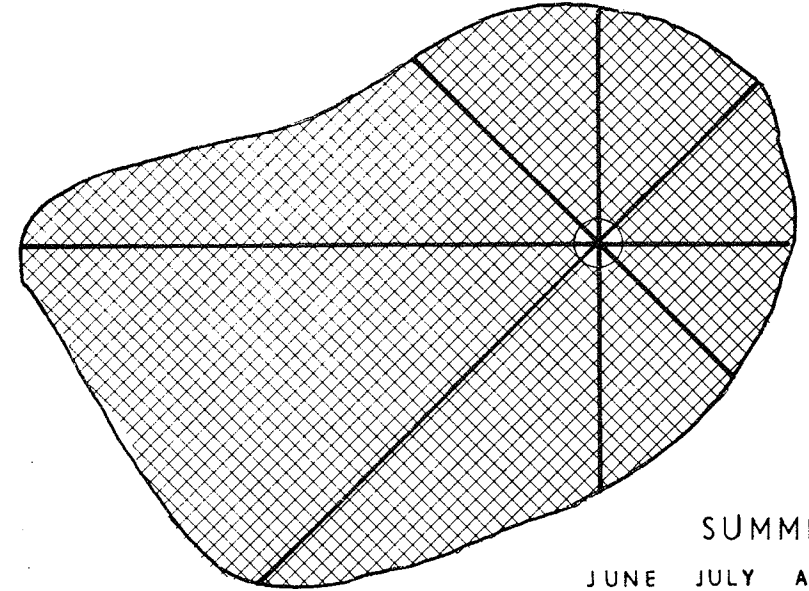
The average frost-free period in Lethbridge is 115 days and is seldom as long as the growing season. The longest was in 1940 when 171 days were free of frost and the shortest was in 1910 when only 80 days were frost-free. The average period free of killing frost (28 degrees) is 140 days.

ILL, 2 - PERCENT OF WIND FREQUENCY BY HOURS, LETHBRIDGE

SPRING
MARCH APRIL MAY



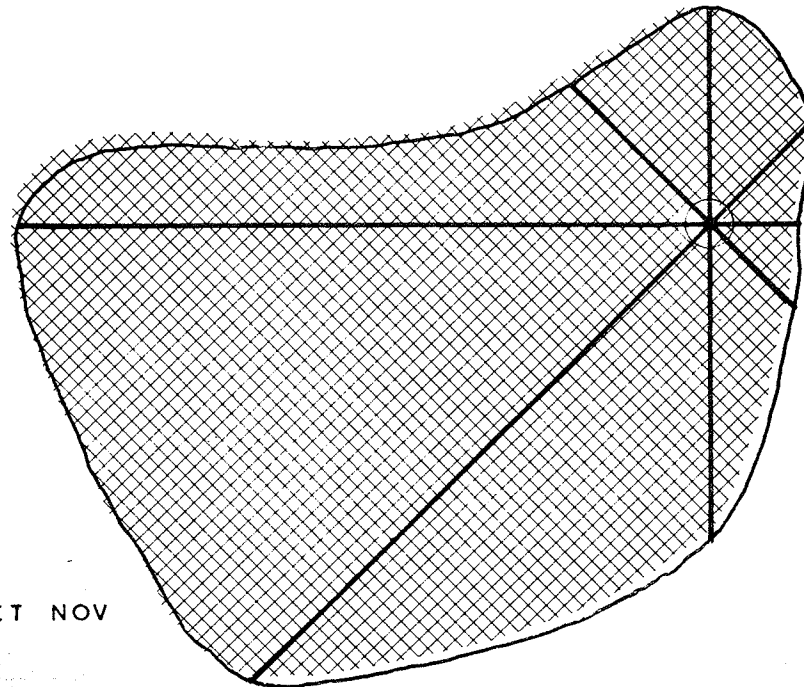
SUMMER
JUNE JULY AUG



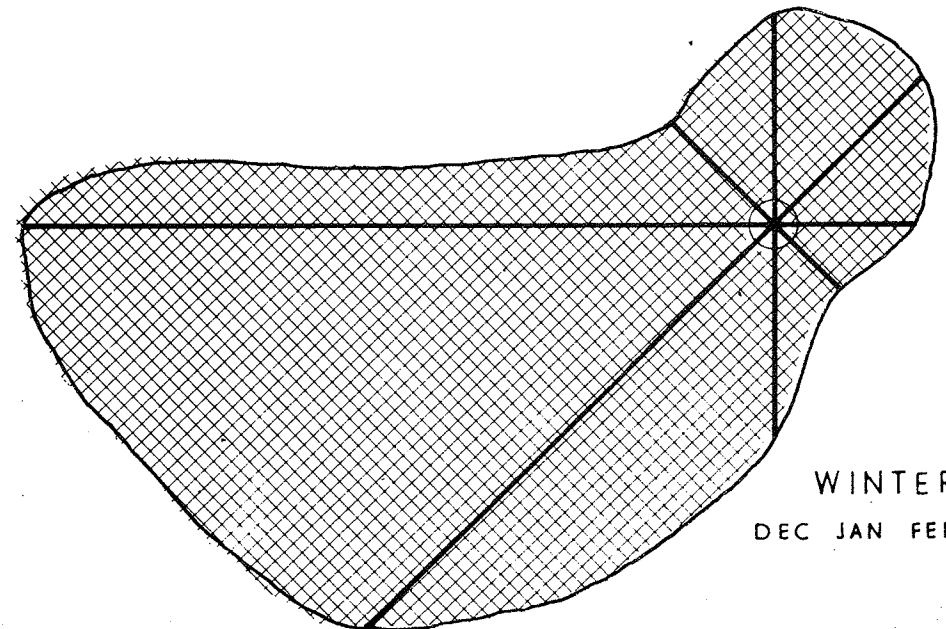
NORTH



FALL
SEPT OCT NOV



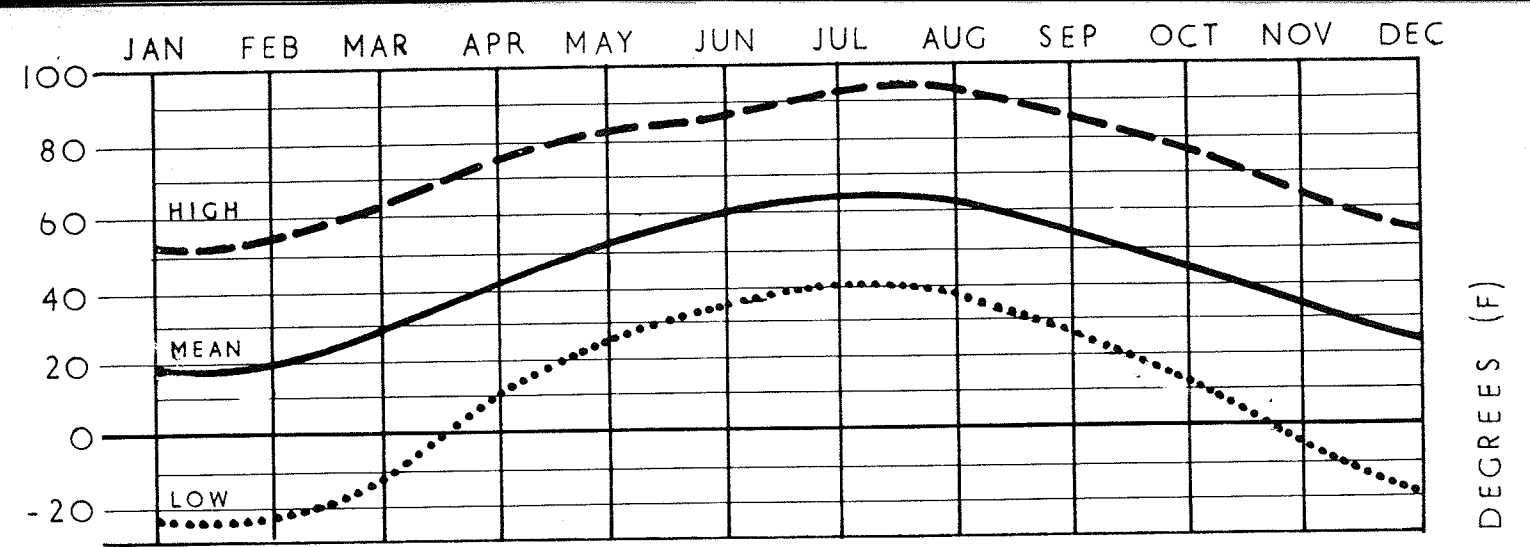
WINTER
DEC JAN FEB



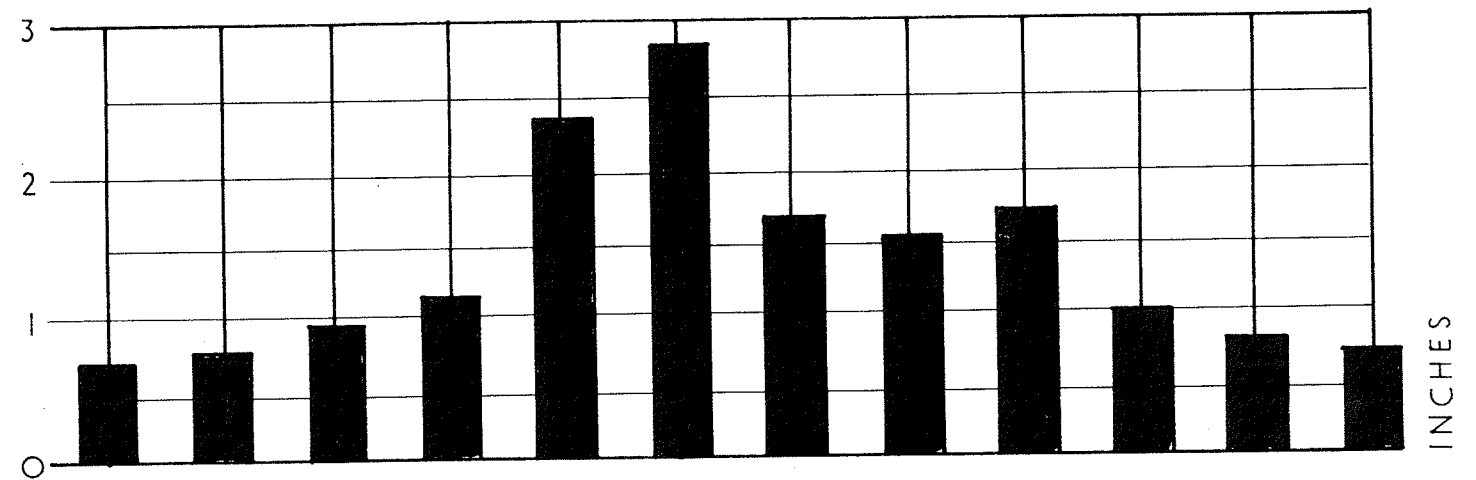
Although the temperature is normally high in summer and relatively low in winter, it is subject to great fluctuations due to the chinook wind. The average annual temperature is 41.1 degrees, ranging from an average of 17.5 degrees in January to an average of 64.6 degrees in July. However, the temperature fluctuation can be seen from the variation of the mean low temperatures and the mean high temperatures. The range is from a mean low temperature in January of 24.1 degrees below zero to a mean high temperature in July of 92.7 degrees. During the growing season (April to July) the mean temperature is 54 degrees. The fall (August to October) temperature is only slightly lower, averaging 53.4 degrees, while the winter (November to March) temperature averages 23.5 degrees.

Parts of the "river bottom" area of Lethbridge are subject to flooding at high water in the springtime. However, the discharge of the Oldman River has been decreasing in recent years and the average dry weather flow now stands at about 200 cubic feet per second.

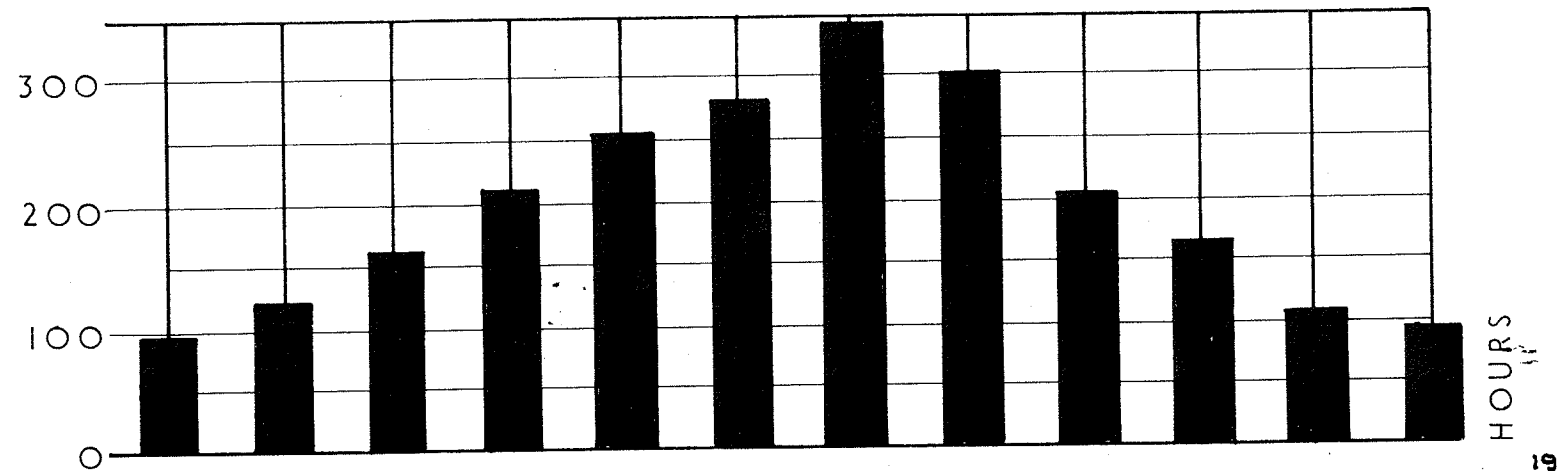
3 - TEMPERATURE



4 - PRECIPITATION



5 - SUNSHINE



SOURCE OF INFORMATION

SECTION I

- "Soil Survey of Lethbridge and Pincher Creek Sheets", by F.A. Wyatt,
W.E. Bowser, W. Odynsky, and J.A. Allen - U. of Alberta 1939.
- "Farming in the Irrigation Districts of Alberta", By C.C. Spence,
B.H. Kristjanson, and J.L. Anderson - Dom. Dept. of Agric. 1947.
- "Farming in Alberta", by R.E. English - Alberta Dept. of Agric. 1949.
- "Alberta Facts and Figures, 1950" - Alberta Dept. of Industries and Labour.
- "Economic Survey of Lethbridge", - Alberta Dept. of Economic Affairs, 1950.
- "Progress Report, 1937-1946" - Dominion Experimental Station, Lethbridge.
- "Canadian Consumer Survey, 1949" - MacLean-Hunter.
- Meteorological Division of Air Services, Dominion Department of Transport.
- Lethbridge Chamber of Commerce
- Lethbridge Herald
- Lethbridge City Engineer
- District Maps
- R.C.A.F. Aerial Photographs, 1950

S E C T I O N T W O

Historical Background

C H A P T E R F I V E

Early History of the City

One of the first evidences of the westward movement of the white man in southern Alberta occurred in 1867 when a trading fort was established on the Oldman River about six miles south west of the present site of Lethbridge. It was built by a pair of traders, Healy and Hamilton, who were operating in the district at that time in open defiance of law, justice and human decency. The post was christened Fort Hamilton, shortly afterwards becoming known as Fort Whoop-Up in recognition of the type of activity which took place in and around its walls. Naturally this type of activity was not conducive to permanent settlement and the effect on the Indian tribes who at best did not encourage the advent of the white man could be nothing but detrimental.

In 1870 the flat land on the banks of the Oldman River near the present site of the Lethbridge Power House was the scene of the last of the great Indian battles of western Canada. During a relatively short struggle Blackfeet warriors slaughtered about two hundred and fifty Cree braves and suffered about seventy casualties themselves. The next year the two tribes made a formal treaty of peace, marking the end of the era of Indian warfare. In the same year Fort Whoop-Up was burned to the ground by Indians at the height of an orgy undoubtedly stimulated by the very whiskey which Healey and Hamilton were dispensing. However, the fort was immediately rebuilt and the same trading practices resumed.

In 1874 a detachment of the Northwest Mounted Police entered the district to establish a base of operations. At Fort-Whoop-Up they discovered that the traders had been warned of their danger and after hiding their liquor and contraband goods had hastily disappeared leaving a completely deserted fort. Since the structure was strong and well built and since the traders could not be permitted to resume their former unhealthy practices the Northwest Mounted Police offered to buy the building for their own use. However, the price demanded by Healy and Hamilton was considered to be excessive so the Mounties proceeded thirty miles farther west where they established Fort MacLeod. Fort Whoop-Up was never again used as a trading post and the buildings eventually disintegrated.

Thus the early period of lawlessness was ended and a turning point in the development of southern Alberta was reached. Subsequent settlement was of a more permanent nature and was achieved by peaceful and orderly processes.

Shortly after the Indian battle of 1870 a coal mine was opened by Nick Sheran on the bank of the Oldman River directly opposite the present site of Lethbridge, which was then known by the Blackfeet Indians as "Ashsoysem" or Steep Banks. The mine became the source of fuel for Fort Whoop-Up and later for Fort MacLeod. The small settlement which grew up as a result of the mining operations became known as Coal Banks and was the first suggestion of permanency in the

development of the district.

During 1879 Elliott T. Galt came across Coal Banks while he was on a trip through the west. He became interested in the coal deposits and largely as a result of his influence the North West Coal and Navigation Company was formed in 1881 with the purpose of developing these coal properties. The subsequent activities of this and other Galt enterprises were to have a profound influence upon the growth and development of southern Alberta.

Later in 1881 it was learned that the C.P.R. was going to locate its line near Coal Banks and plans for the development of the deposits were consequently speeded up so that coal might be supplied to the railroad which at the time had been completed as far as Brandon. In the fall and winter of 1882 under the direction of William Stafford Sr. the first mine shaft was sunk into the side of the coulees near the "river bottom" just west of the present city.

The activities at this time of the North West Coal and Navigation Company were by no means limited to the mining of coal. A contract to construct Northwest Mounted Police barracks at MacLeod, Medicine Hat and Maple Creek led to the production of lumber by means of a portable sawmill located in the Porcupine Hills about sixty miles to the west of Coal Banks. The company also operated a mail stage between Medicine Hat and MacLeod.

By October of 1883 the C.P.R. had been built as far as Medicine Hat and an agreement was concluded whereby the North West Coal and Navigation Company would supply coal to the C.P.R. at that point. In order to transport the coal from the mines at Coal Banks to Medicine Hat it was decided to venture into the ship building industry and employ the natural transportation facilities of the Oldman River. Consequently during the winter of 1883-84 "shipyards" were established at Coal Banks and timber from the sawmill in the Porcupine Hills was used to construct about a dozen coal barges and the hull of a steamboat to be named the "Baroness" after Baroness Burdett-Coutts, one of the founders of the North West Coal and Navigation Company. The "Baroness" was a flat bottomed boat with a length of 175 feet, a beam of 31 feet and with a draft of 6 inches when empty and 24 inches when loaded. Early in 1884 the hull was floated downstream to Medicine Hat for the installation of machinery and the completion of the superstructure. During the same period a second boat, the "Alberta" was built at Medicine Hat and a third, but smaller one, the "Minnow" was purchased in Winnipeg and shipped to Medicine Hat. In the spring of 1884 the three vessels loaded up with freight at Medicine Hat and steamed up the Oldman River to Coal Banks. Meanwhile the barges at Coal Banks had been loaded with coal for delivery to Medicine Hat.

Unfortunately this ambitious venture into the shipping industry was

doomed to failure. The only time that the river channel was satisfactory for the operation of the boats was during the period of high water --- but in order to travel against the current at high water the boats consumed almost as much coal as they could transport. Thus at the close of the first navigation season in the fall of 1884 this method of transportation was abandoned completely. At the outbreak of the Northwest Rebellion in April 1885 the three steamboats were leased to the Dominion government for the transport of troops and material. Later the "Minnow" was sold and the "Alberta" and the "Baroness" dismantled. The hull of the "Baroness" lay on the bank of the Oldman River, ^{in the} "river bottom" at Coal Banks for many years and gradually disintegrated.

In order to continue to deliver coal to the C.P.R. at Medicine Hat, according to agreement, an alternative method of transport had to be developed. In 1885 the North West Coal and Navigation Company obtained a charter from the Dominion Government to construct a narrow gauge railway from Coal Banks to Dunmore, near Medicine Hat. The company also obtained land grants of 3840 acres a mile at the rate of ten cents an acre. Coal was first delivered at Dunmore on the 29th of August 1885 and the official opening of the railroad took place on September 24 under the auspices of the Governor-General, the Marquis of Lansdowne. The line soon became known colloquially as the "Turkey Trail". At first coal was

elevated from the mine on the "river bottom" to the top of the coulees by means of an inclined tramway located near the present high level railway bridge. As the coal output increased new shafts were sunk in the prairie near the railway at the head of the coulees.

During these years of activity the community at Coal Banks had been growing steadily and in the spring of 1885 a townsite was surveyed and laid out on the table land above the "river bottom". At this time the name of the community was changed to Lethbridge in honour of William Lethbridge the first president of the North West Coal and Navigation Company. The construction of the first house in the new town at the corner of Fourth Avenue and Sixth Street South was followed by considerable building activity during 1885 and 1886.

The following five years saw the development of many social activities in the small community. A school board was established by the Board of Education of the Northwest Territories and under the chairmanship of William Stafford the first school was opened in April 1886 near the Number One Galt Mine. A separate school was opened in 1889 and in the following year sisters of the Order of Faithful Companions of Jesus arrived in the community to found a convent.

During this period several religious denominations established themselves in the town. The foundations for religious activity has been laid in 1880 by Roman Catholic and Protestant missionaries and prior to the establishment

of the new town much work had been carried on at the "river bottom". After 1885 the upper town became the centre of this activity when most of the denominations took advantage of the North West Coal and Navigation Company's generous offer to donate free land in the new townsite for the construction of churches. In 1886 the Presbyterians and the Anglicans built the first churches, followed the next year by the construction of Roman Catholic and Methodist churches. The first Masonic Lodge was instituted in March 1888.

1885 saw the establishment of the Lethbridge News and the arrival of the first resident lawyer, Dr. C.F.P. Conybeare. About this time Superintendent P.R. Neale of the N.W.M.P. was appointed as the first Resident Magistrate and the first medical practitioner, Dr. Frank Hamilton Mewburn, who later became a prominent surgeon, settled in the community. The Union Bank, the first chartered bank to move west of Winnipeg, opened the first banking office in the new town. During 1890 oil leases were filed on land surrounding Lethbridge and the following year Galt Hospital was built by Sir Alexander Galt for the employees of the Galt enterprises.

Culminating these activities the Lethbridge Board of Trade and Civic Committee was formed in 1889. The first president was C.A. Magrath of the North West Coal and Navigation Company who, since his arrival in the area in 1885, had been very active in the development of the community.

By 1890 Lethbridge had become sufficiently prominent to warrant an

application for incorporation as a town. In the same year the government of the Northwest Territories passed an ordinance providing for this step, and on January 15th, 1891 the Lieutenant-Governor signed the proclamation creating the Town of Lethbridge. C.A. Magrath was subsequently elected the first Mayor by acclamation.

In spite of these outward indications of prosperity the economic growth of the community during this period was neither smooth nor secure. In the words of C.A. Magrath, "Lethbridge in the earlier days depended entirely on the Company's (North West Coal and Navigation Company) coal and railway pay sheets. The construction of the C.P.R. had not brought to the west the anticipated prosperity. Our coal miners were busily employed for a couple of months in the winter only; in the summer it was a matter of a couple of day's work weekly." As a result, in order to remain in operation, it became necessary for the company to enlarge its market for coal. It was decided to expand into the American market and in 1889 with this intention a U.S. charter was obtained for the Great Falls and Canada Railway Company. At the same time the North West Coal and Navigation Company was reconstituted as the Alberta Railway and Coal Company. In 1890 two hundred miles of narrow gauge railway was constructed between Lethbridge and Great Falls, Montana. Land grants in Alberta in the neighbourhood of one million acres were obtained from the Dominion government. The original portion of the Company's railway, between Lethbridge and Dunmore, was sold to the C.P.R. in 1893 and subsequently converted to standard gauge. Later, in 1901, the Montana section

of the Company's southern line was purchased by the Great Northern Railway.

Other railway activity was taking place at this time. Early in the 'nineties a line was built from Calgary to MacLeod, and in 1898 the line from Lethbridge through the Crowsnest Pass was completed.

The history of Lethbridge is closely related to the development of farming and irrigation in southern Alberta. Possibly the first agricultural enterprises in the southwest of the province were started in 1875 in the form of a dairy farm south of MacLeod and a horse ranch along Pincher Creek, both supplying the R.N.W.M.P. Ranching spread very rapidly and by 1885 most of the land south and west of MacLeod was leased for this purpose. Railway development and the spread of settlement later resulted in the gradual disappearance of the ranches and the extensive cultivation of the land. By 1885 the Blood and Peigan Indians had been established on their respective reserves, and as early as 1892 a good potato crop was grown on the Peigan reservation.

As in most of the early ventures in the Lethbridge area, the Galts were influential in the 1890's in introducing irrigation. Active support for the project was found in the Mormon settlement which had been established by Charles Ora Card in 1887 on Lees Creek, southwest of Lethbridge. The advantages of irrigation were well known to these people from their experiences in their native Utah, and they were of great assistance in emphasizing the possibilities of irrigation in

southern Alberta. In 1893 Sir Alexander Galt obtained a charter for the Alberta Irrigation Company and in 1897 enlisted the aid of the Dominion government through the cooperation of Sir Clifford Sifton, then Minister of the Interior. In the same year C.A. Magrath met with the leaders of the Mormon Church in Utah to conclude an agreement whereby its members would construct irrigation canals in southern Alberta in return for payment half in cash and half in land at three dollars an acre. In this way land settlement was accomplished concurrently with the construction of the canals by experienced labour. At the same time temporary employment was thus provided for the immigrants until such time as the land was irrigated and could become productive. In 1898 construction of the headworks near Cardston was commenced and at the turn of the century irrigation had reached the farming districts around the embryonic towns of Magrath, Raymond and Stirling, which communities were then being established as a result of the construction work. Lethbridge itself received irrigation water for the first time on September 1st, 1900.

With the commencement of irrigation construction in 1898 the necessity of railways along the canal system to Cardston became evident. In that same year the St. Mary River Railway Company was formed by Elliott Galt and in the following year the Alberta Irrigation Company was reorganized and named the Canadian North West Irrigation Company. Subsequently, in 1902 a narrow gauge railway was completed from Stirling to Cardston and in 1905 this line was also converted to standard gauge.

The advent of irrigation was also accompanied by the introduction of the sugar industry to southern Alberta. An agreement was made by Elliott Galt in 1901 with Jesse Knight of Utah whereby the latter undertook to build a sugar factory at the town of Raymond to be ready for operation in the fall of 1903, in return for which he was to receive an interest in some sixty thousand acres of land near that community together with the option to purchase, at two dollars an acre, two hundred thousand acres of the Galts' range lands. At the same time Mr. Knight undertook to plough three thousand acres of virgin soil during the summer of 1901 so that it would be available for sugar beet culture when the factory was complete. The success of this first sugar factory unfortunately did not measure up to expectations and the industry remained relatively inactive for a number of years until the factory was rebuilt in 1925 by the Utah-Idaho Company. The plant later became the property of the Canadian Sugar Factories Limited who were in the process of expanding the sugar industry in the area.

The long awaited prosperity in western Canada which was expected to follow the building of the C.P.R. was beginning to be felt at the turn of the century. As conditions improved it was decided to consolidate the Galt interests, which in 1904 consisted of the Alberta Railway and Coal Company, the Canadian North West Irrigation Company, and the St. Mary River Railway Company. The three companies were amalgamated into the Alberta Railway and Irrigation Company with P.L. Naismith as the first general manager. A year later ill health forced the

retirement of Elliott Galt and A.N. Nanton became managing director of the company. By 1908 the C.P.R. had obtained controlling interest and in 1911 acquired the entire holdings of the company. The Manyberries railway line was built about 1913 and the Cardston line extended about 1925.

The general prosperity in the west at the beginning of the twentieth century was reflected in the development of Lethbridge. In 1904 the town undertook to pump water to the residents and made a five year agreement with the Lethbridge Electric Company to supply electric power to operate the pumps. The city took over the supplying of electric light and power from this company in September 1908. The power plant was destroyed by fire in December 1909 but was immediately rebuilt. The City commenced operation of its own coal mine upon taking over the power plant (and remained in the mining business until 1941). Construction of a street railway was started in the city in September 1911 (which operated until being replaced by gasoline bus service in 1946). In 1912 a sewage disposal plant was installed on the "river bottom" and in 1917 a water filtration plant was built near the power house. Apart from the introduction of these utilities other developments were taking place. The Dominion Experimental Station was established in 1906 immediately east of Lethbridge for the study of irrigation and dry land farming. The Lethbridge Herald was established in 1907 and, with the discontinuation of the Lethbridge News in 1913, became the only newspaper in the city. In 1909 the C.P.R. constructed the high level steel railway bridge over the Oldman River to the west

of the city, its length of over one mile and height of over three hundred feet making it the highest and longest of its type in the world.

These various developments were paralleled by the political growth of the community. On May 9th, 1906, the year following the creation of Alberta as a Province, Lethbridge was incorporated as a city. In 1913 the city limits were enlarged to include the adjacent community of Staffordville. In 1914 the commission form of government was adopted and this in turn was abandoned in 1928 in favour of the managerial form of government, which is in effect to date.

The steady development of the city which took place during World War I and the following period of expansion was slowed somewhat by the depression of the early 1920's. At this time Lethbridge was becoming established as the commercial centre of the rich agricultural land which was being developed as a result of irrigation. As in all parts of the country the boom in Lethbridge of the late 1920's was cut short by the great depression of the 1930's and during this decade growth and development were at a relative standstill. Following World War II general prosperity, good crops in the area and the establishment of new industries in the city resulted in a period of unprecedented expansion which is currently continuing.

SOURCE OF INFORMATION

CHAPTER 5

- "When the West Was Young", by John D. Higinbotham - Ryerson Press, 1933.
"How Alberta Grew Up", by C.A. Magrath - Lethbridge Herald Press, 1936.
"Economic Survey of Lethbridge", Alberta Dept. of Economic Affairs, 1950.
"Green Acres" - Lethbridge Board of Trade.
"Soil Survey of Lethbridge and Pincher Creek Sheets", U. of Alberta, 1939.
Lethbridge Herald
Lethbridge City Clerk
Lethbridge Chamber of Commerce

C H A P T E R S I X

Government and Administration

A - Form of Government

B - City Council

C - City Manager

D - Advisory Commissions

E - School Boards

A - FORM OF GOVERNMENT

Upon incorporation of Lethbridge the municipal government was of the council type which was prevalent in western Canada at that time. In 1914 the city adopted government by commission and in 1928 an act of the provincial legislature established the managerial form of government. This innovation proved entirely successful and has remained in effect since then.

Under this system the City Manager carries out the administration of general policies as formulated by the City Council. The Council (and the Mayor in particular) are spared the burden of administrative detail which so often prevents such a body from acting to their best efficiency, and thus are free to concern themselves with the broader aspects of city governments.

B - THE CITY COUNCIL

The City Council consists of seven councillors, each serving for a term of two years. Four of these are elected in one year and three the next. At the first meeting of each year the City Council elects one of its members as the Mayor of the city for the ensuing year. The Council appoints the City Manager and ultimate authority for all official civic activity rests with the Council. Any danger of undue usurping of the Council's authority is prevented by the provision in the city charter whereby all powers not specifically granted to the City Manager shall be exercised by the Council. The members of the various advisory commissions are also appointed by Council as are the following civic officials: the City Solicitor, the Auditor, the Medical Health Officer, the City

Clerk, and the City Treasurer.

C - THE CITY MANAGER

Within the limit of authority as set forth in the city charter and various by-laws, the duties of the City Manager are very broad. With the exception of those officials mentioned above, all civic employees are appointed by the Manager. He is responsible for the operation of all civic utilities --- the electric and power system, the water works, the sewage disposal system, the transit system, and (until recently) the city coal mines. His duties also include the collection of taxes. The activities of the Engineering Department fall under his jurisdiction and he is thus responsible for streets, boulevards, parks, buildings, etc. He is responsible for the Fire and Police Departments and serves as a member of the Police Commission. He is purchasing agent for the city and must call for competitive tenders for purchases exceeding five hundred dollars. He must be conversant with all the financial aspects of the city and must submit estimates of revenue and expenditure to Council. He may spend no money which has not previously been authorized by Council. He attends all Council meetings and is required to submit reports on any work or matter under his jurisdiction whenever ~~ever~~ called upon to do so.

D - ADVISORY COMMISSIONS

There are a number of commissions which serve in an advisory capacity to the City Council. These include the Town Planning Commission, the Industrial

Commission, the Police Commission, the Traffic Commission, and the Recreation Commission. The membership of these bodies consists of public spirited citizens appointed by Council.

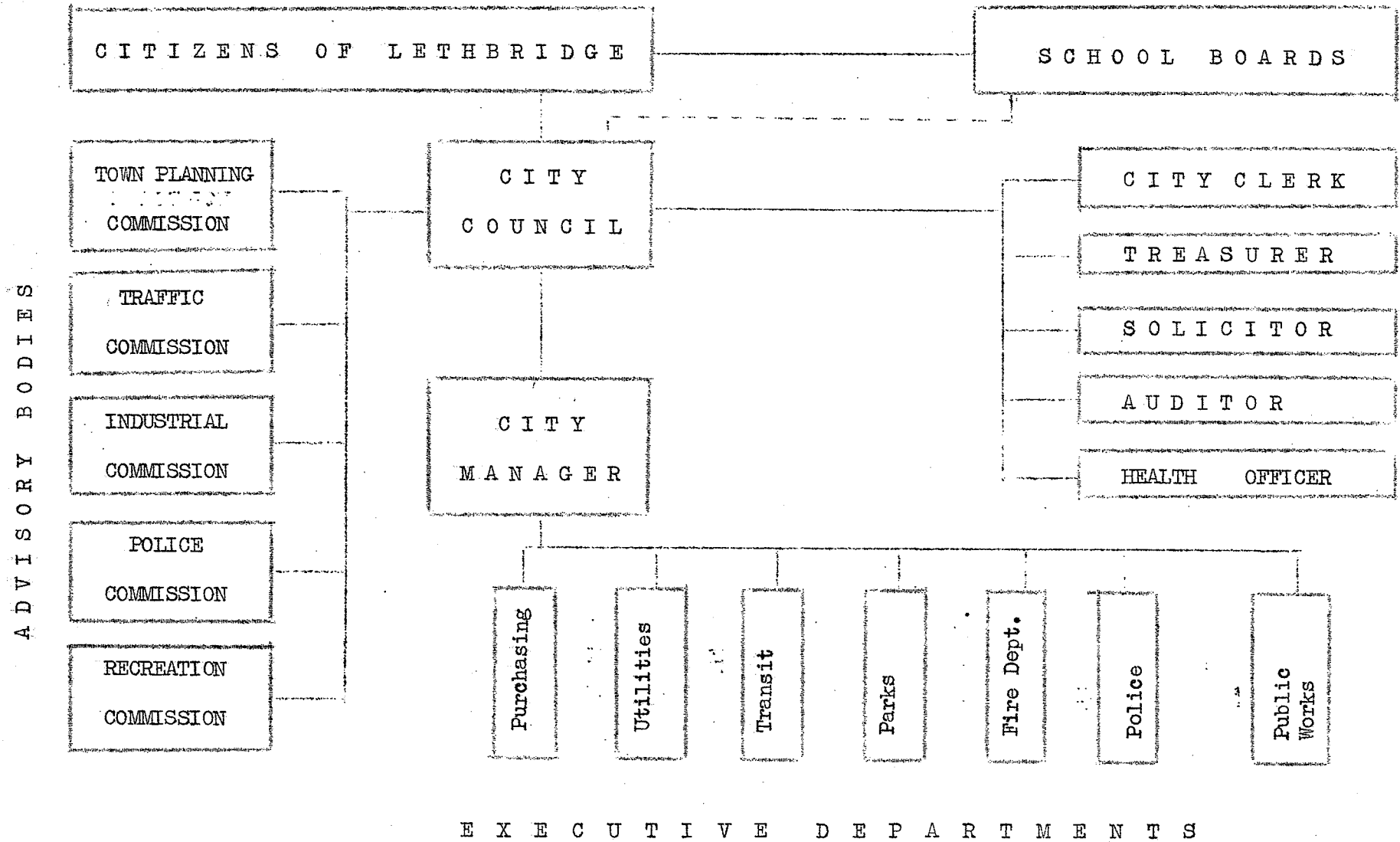
E - SCHOOL BOARDS

Schools are controlled by elected school boards distinct from the City Council. The Public School Board which governs Lethbridge School District #51 consists of five members elected for two year terms, two being chosen one year and three the next. The executive administration of the public schools is conducted by the Superintendent of Schools, the Assistant Superintendent and their staff.

The Lethbridge Catholic Separate School District #9 is governed by the Lethbridge Catholic Separate School Board consisting of five members elected on the same basis as the members of the public school board.

Illustration 6.

SCHEMATIC DIAGRAM OF THE GOVERNMENT OF LETHBRIDGE



SOURCE OF INFORMATION

CHAPTER 6

"Economic Survey of Lethbridge", - Alberta Department of Economic Affairs, 1950.
Lethbridge City Charter
Lethbridge City Clerk

C H A P T E R S E V E N

Existing Legislation and Planning

A - Provincial Legislation

B - Town and Rural Planning Act

C - Provincial Sub-division Regulations

D - Civic By-Laws

E - Planning Activities

Under section 92 of the British North America Act the Provincial Governments derive the power to make laws relative to municipal institutions and to matters of a local and private nature. Thus the authority by which planning activities and controls are exercised in Lethbridge rests ultimately with the Government of Alberta. There are numerous provincial statutes which directly or indirectly influence town planning in Lethbridge. The main planning powers of the city are derived from two of these; the Lethbridge City Charter and the Town and Rural Planning Act.

The City Charter establishes specific powers of the Lethbridge City Council together with the general authority to enact by-laws and pass resolutions necessary to the "peace, order, and good government" of the city. By virtue of these powers the City Council carries on activities which directly and indirectly affect town planning. The Town and Rural Planning Act concerns itself more particularly with town planning activities as such.

Other provincial statutes which have some bearing on planning activities in Lethbridge are:

- Public Highways Act
- Public Works Act
- Water, Gas, Electric and Telephone Act
- Provincial Parks and Protected Areas Act
- Drainage Districts Act
- Pipeline Act
- Public Health Act

ALBERTA TOWN AND RURAL PLANNING ACT

The basic principle of this act is the granting of permissive and regulatory powers to units of local self-government for the purpose of carrying on planning activities. Planning powers thus granted are not unequivocal, for the scope of such activities is prescribed in the act and certain powers and responsibilities necessary to over-all planning control are specifically retained by the Provincial Government. The responsibility of administering the act rests at the present time with the Department of Public Works.

Under the provisions of this act planning activities may be carried on at three levels. First, provincial planning activities are carried on within the Department of Public Works by a Director of Town and Rural Planning, assisted by a technical staff, whose duties are prescribed by the Lieutenant-Governor-in-Council. There is a Provincial Planning Advisory Board consisting of the Director of Town & Rural Planning as chairman and representatives from other government departments. This board exercises general advisory powers and maintains control over land subdivisions and replotting schemes. In addition it has other functions concerned primarily with rural and unorganized areas outside the limits of cities, towns and villages.

The second level of planning may occur in a District Planning Area. Two or more adjoining municipalities may be combined to form this area and a District Planning Commission consisting of municipal and provincial representa-

tives may act on planning matters of common concern to the member municipalities. The Lieutenant-Governor-in-Council may order a municipality to become a part of such a planning area. To date Lethbridge is not a member of such a planning area.

The third level of planning is the individual municipality, city, town or village. Following is a summary of the provisions of the Act as related to this level of planning.

Planning Bodies. To carry out planning activities, the City Council may appoint two bodies, a Planning Advisory Commission and a Technical Planning Board. The first serves in an advisory capacity on planning matters and may be delegated powers by the City Council "other than the power of raising money, expropriating land or preparing a general plan, official scheme, or zoning by-law". The second body, the Technical Planning Board, as the name suggests, is designed to accomplish more specific planning measures. It may prepare a general plan, official schemes, a zoning by-law, and various other plans providing for the physical development of the city. The Board may be delegated such other powers as council sees fit (other than the power of raising money or expropriating land) and may be authorized to employ technical planning personnel.

Plans. The Act establishes the procedure by which any plan or scheme

must be adopted by Council, allowing for public inspection and criticism. Final approval of the responsible Minister is necessary for any such plan to become effective. Upon the adoption of a plan the Council is not bound to undertake any projects contained therein but it cannot carry on activities inconsistent with the plan. The City Council may purchase or expropriate any land necessary to carry out a plan and may order work to be done by or for owners of property in the area affected by the plan in order to carry out its provisions. If, however, in the process of executing a plan, property is injuriously affected, the owner is entitled to obtain compensation from Council.

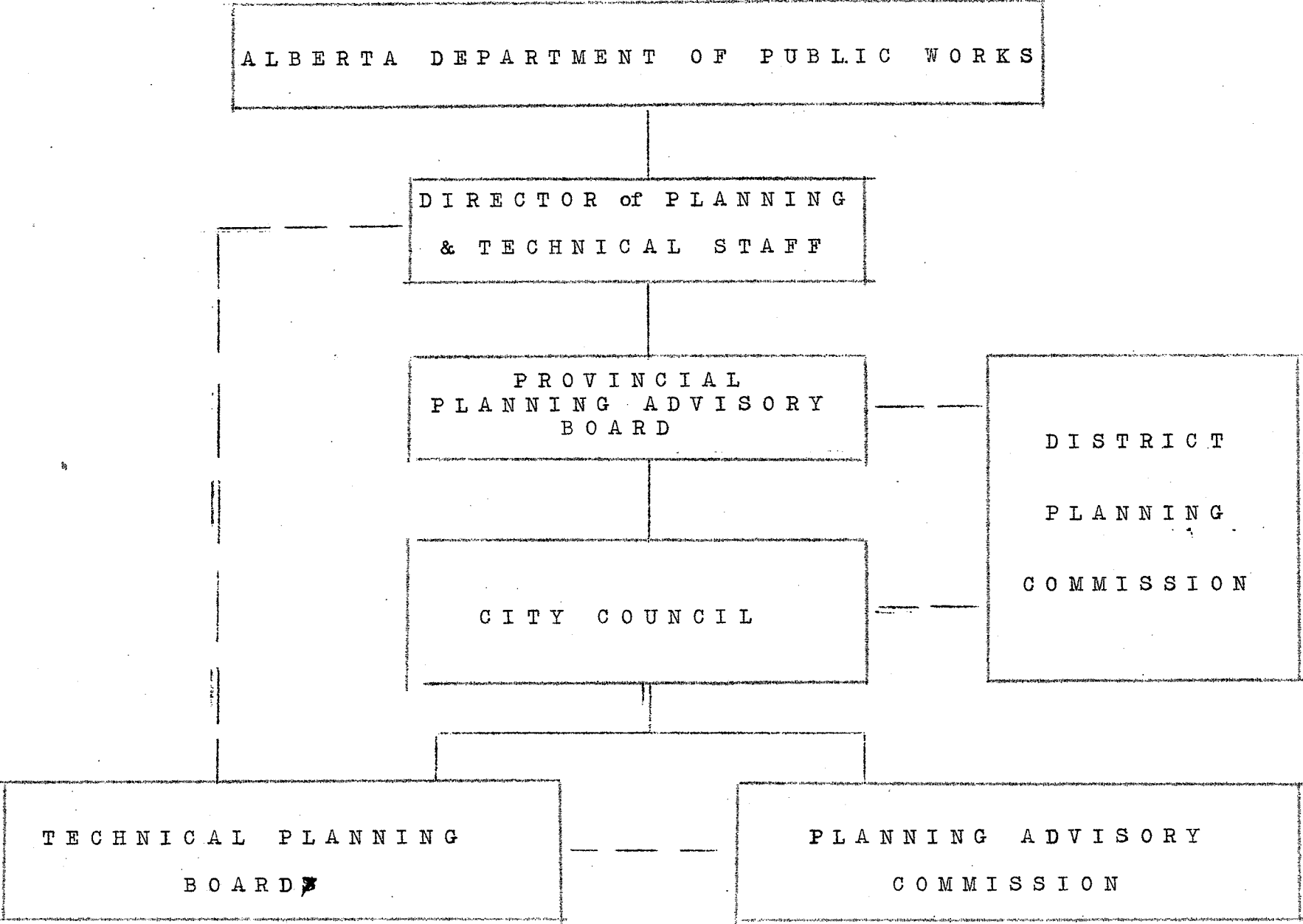
If a local municipality is not carrying out planning activities the responsible Minister is empowered to order the preparation of a general plan, official schemes, or a zoning by-law. If a local authority is not conforming to its plan or zoning regulations the Minister may order such conformation.

Zoning. Under the authority of the act Council may enact a zoning by-law whereby the following may be regulated:

- the use of land
- density of population
- height, ground area, and bulk of buildings
- system of building permits
- building lines and size and shape of open spaces
- boardings and advertisements
- type of building construction
- architectural design
- the condemnation of buildings
- development of areas lacking utilities

Illustration 7.

SCHEMATIC RELATIONSHIP OF LEVELS OF PLANNING



Such a by-law cannot become effective until publicly advertised and approved by the responsible Minister. While property cannot be deemed injuriously affected by a zoning by-law, arbitrary action is prevented by a series of checks. One of these is the required establishment in the by-law of a local Zoning Appeal Board consisting of one or more persons. The Act also provides for interim zoning regulations in new subdivisions. In a case where the zoning by-law conflicts with ~~the ordinance~~ the Act provides that the more stringent of the regulations involved shall prevail.

Subdivisions. Land subdivisions are regulated by the Provincial Planning Advisory Board and must be approved by it before plans can be accepted by the Registrar of Land Titles. On unsubdivided land occupied by two or more premises the local authority may require the registration of an appropriate subdivision. Subject to the written consent of the owners of sixty percent of the land involved the local council may authorize replotting schemes for existing subdivisions. Such schemes are regulated by the Provincial Planning Advisory Board. The Act sets forth the procedure to be followed and allows for compensation to the respective owners and the apportionment of the cost of carrying out the scheme.

- **PROVINCIAL SUBDIVISION REGULATIONS**

Under the authority of Section 23, Chapter 14 of the Revised Statutes of Alberta (1922) and the Town and Rural Planning Act (1929) the provincial Department of Public Works has made regulations in regard to the subdivision of land. Following is a summary of the most significant requirements as they apply to the City of Lethbridge.

Public Reserves. Every subdivision of over five acres must have 5% of its area reserved for public purposes and an additional 5% reserved for use as parks.

Streets and Lanes. Major streets must be from 80 to 100 feet wide while minor streets must be at least 66 feet wide. On water frontages a street (or public reserve) may be required between the water and private development. Streets parallel to railroads must have their centre line at least 150 feet from the boundary of the railway right of way, the intervening land, wherever practicable, being reserved for park or public purposes. Maximum grades for major streets are set at 5% and for secondary streets at 7%.

Lanes at least 20 feet wide must be provided at the rear of all lots. Where lanes are impracticable, easements at least 10 feet wide may be permitted.

Blocks. Blocks in commercial areas cannot exceed 500 feet in length. Residential blocks may be permitted up to 1,000 feet long but if they are over

800 feet a ten foot pedestrian right of way must be provided near the centre of the block. In new subdivisions not adjoining existing ones the block widths cannot be greater than 300 feet nor less than 240 feet.

-Lots. Residential lots must be at least 5,000 square feet in area, with a minimum width of 50 feet and a minimum depth of 100 feet. Lots for commercial purposes must be at least 2,500 square feet in area with a minimum width of 25 feet and a minimum depth of 100 feet; that is, one half the size of residential lots. Residential corner lots must maintain yard requirements on both the front and side streets.

D -- CIVIC BY-LAWS

Of the numerous civic by-laws in some way affecting planning^{and} the use of land the following are most directly concerned with these activities:

Town Planning Commission By-Law (#1169, 1947)
Zoning By-Law (#895, 1945)
Building By-Law (#83, 1910)
Traffic By-Law (#613, 1934)
Advertising Signs (#371, 1921; #609, 1934; #747, 1942)

Town Planning Commission By-Law. This by-law is discussed in the next section, "Planning Activities".

District	Uses Permitted	Lot Requirements			Yard Requirements			Limitation in height
		Area	Width	Depth	Front	Rear	Side	
Residential	Dwellings of all types except Hotels	4680 sq. ft.	37.5 ft.	none	25 ft.	25 ft.	10% of width or 5 ft. (minimum of 3 ft.)	45 ft. 3 stories
	Churches							
	Schools							
	Libraries and Museums							
	Golf Courses and Agricultural Uses							
	Private Clubs							
	Hospitals and Sanatoria	Two attached dwellings on one site 4680 ft. 50 ft. none						
	Retail Grocery Stores							
	Private Garages and Stables							
	Professional Offices as part of residence	Four attached dwellings on one site 4680 ft. 100 ft. none						
Commercial	Provincial Regulations	5000 ft.	50 ft.	100 ft.	---	---	---	---
	Uses in residential district							
	Hotels	4000 ft.	none	none	none	none	none	100 ft. 6 stories
	General Commercial Uses							
	Public Garages							
	Theatres							
	Blacksmiths							
	Stables							
	Warehouses and Materials Storage	One or two family dwellings 4680 ft. 37.5 ft. none			none	25 ft.	10% of width or 5 ft.	
	Carting Establishments							
Industrial	Dyeing and Cleaning Works	Multiple Dwellings						
	Meat Plants	4000 ft.	none	none	none	25 ft.	none	
	Printing Shops	2500 ft.	25 ft.	100 ft.	---	---	---	
	Provincial Regulations							
	All uses permitted except dwellings and retail stores	4000 ft.	none	none	none	10 ft.	none	60 ft. 4 stories

Source. Provincial Subdivision Regulations
Lethbridge Zoning By-Law #895.

Zoning By-Law. The zoning by-law establishes three land use districts in the city; residential, commercial and industrial, as shown on the zoning map. Illustration 8 summarized the restrictions imposed in these districts. Provincial regulations are also shown where applicable.

In terms of planning a significant regulation is that which requires the accessibility of light, water, sewers, and other utilities before a building permit may be issued.

The by-law sets up a Zoning Appeal Board consisting of the City Council with the Mayor acting as chairman. The by-law is enforced through the Engineering Department of the City and more specifically by the Building Inspector.

In general the zoning by-law takes precedence over other civic ordinances (by virtue of the Town and Rural Planning Act). However, in the case of conflict between any provisions the more stringent restriction applies.

Building By-Law. The building by-law is also administered by the Engineering Department. No building permit is issued by the Building Inspector until he is sure that the provisions of both the zoning by-law and the building by-law are satisfied. As well as establishing general building practices the building by-law designates two classes of fire limits in the city as shown on the fire zone map. Within these districts certain types of construction must be used

and other restrictions complied with. In practice (but not by law) the National Building Code is used to establish building standards.

Traffic By-Law. The traffic by-law governs the use of the streets of Lethbridge by vehicles and pedestrians by means of speed zones, one-way streets, and traffic control points and areas. One of the most important aspects of the by-law is the regulation of parking. The use of streets for parking is restricted in terms of places where parking is permitted, the style of parking (parallel and diagonal), and the length of time a vehicle may be parked. The by-law also designates certain city owned properties as off street parking lots.

Advertising Signs. Of the various by-laws concerning advertising signs and billboards, #371, 1921 and #747, 1942 are the most important in terms of planning. The first prohibits the erection of billboards etc. in areas other than the first class fire limits except by consent of affected property owners. The latter restricts the erection of signs on the three highway approaches within the city.

E - PLANNING ACTIVITIES

Town planning as a distinct activity is relatively new in Lethbridge. The need for comprehensive direction in the growth of the city has been more fully realized in recent years. The passing of the Zoning By-Law in 1945 was the first recognition of this need.

In 1946 the City Council engaged Mr. Cecil S. Burgess, F.R.A.I.C. to visit Lethbridge and advise on the need for town planning in the city. In his report Mr. Burgess made three main recommendations: first, the "surveying and recording of the relative facts that form the basis of town planning; second, the institution of a Town Planning Commission to make recommendations based on the recorded facts; and third, the appointment of a trained director of town planning." The type of survey maps needed, the functions of a Town Planning Commission, and the concept of the "master plan" were outlined. Basic difficulties in mixed land uses and defects in the grid-iron pattern of street layout were pointed out. In addition Mr. Burgess made specific proposals as follows:

1. That the highway approaches to the city be studied for improvement.
2. That the industrial area at the east of the city be carefully planned and perhaps limited to the north side of the railway.
3. That the properties opposite the C.P.R. passenger station be improved in appearance.
4. That off-street parking areas be considered.
5. That grade separation between the C.P.R. tracks and the 21st and 29th streets be considered.
6. That the possibility of a scenic drive skirting the west side of the city at the head of the coulees be investigated. This was considered as involving the extensive improvement of the west portion of the city.

7. That the "river bottom" should be developed as a public park area including additional road access to the upper city.

In 1947 the City Council passed a by-law under the authority of the Town and Rural Planning Act appointing a Town Planning Commission and delegating to it the following powers:

1. To act in an advisory capacity in matters pertaining to Town Planning.
2. To prepare and submit to the Council an Official Town Plan or Scheme to be dealt with in such manner as to the Council seems fit and proper.
3. To prepare and submit to the Council amendments to the existing Zoning By-Law of the City of Lethbridge to be dealt with in such manner as to the Council seems fit and proper."

The commission consists of nine members who are (1951) Messrs C.J.F. Berv, J.M. Campbell, C.S. Clendening, W.H. Fairfield, G.F. Hamilton, H. Lowe, G.R. Robins, A.J. Watson, and G. Watson. Since this body was established the Town and Rural Planning Act has been amended and as a result none of the planning bodies now permitted by that Act correspond exactly to the Lethbridge Town Planning Commission.

Due to circumstances of time and the lack of technically trained planning personnel the Commission has been unable to undertake the preparation of an "Official Town Plan or Scheme" (* See note). Nevertheless, under the leadership

* By the terms of the Town and Rural Planning Act an Official Town Plan and a

of Mr. George Watson, chairman of the Commission since its inception in 1947, the group has been extremely active in its other capacities. Careful attention has been given to all proposed land subdivisions and zoning by-law amendments and other planning matters before giving approval or making recommendations to the City Council.

Numerous planning problems have been the subject of special investigation by the Commission. In 1947 a report on parking conditions by Mr. C.C.F. Beny recommended the improvement of curb parking space, the acquisition by the city of offstreet parking lots, the establishment of offstreet loading and carrying out of a "program of public information". In 1949 Mr. G. Watson participated in a report on tourist traffic routing and highway marking in the city prepared by Mr. A.L.H. Somerville, the City Manager, and Mr. C.E. Forster of the Chamber of Commerce. In 1950 as a result of a report on the "river bottom" area by Messrs A.J. Watson, W.H. Fairfield, and J.M. Campbell, the Commission recommended that all residential and other private building uses be discontinued and that the possibilities be investigated of developing the area as a park and establishing a scenic drive

Scheme are two different things. In the 1950 amendments the term "Official Town Plan" was replaced by "General Plan" and is defined as "a plan or plans prepared for the purpose of providing for the development of the territory of a municipality . . . or any part or parts thereof in an orderly, economical, and convenient manner." The term "Official Scheme" is defined as "a plan or scheme for specific public improvements not inconsistent with the General Plan".

there. In 1951 a further study of offstreet parking was instituted and further recommendations made to the City Council concerning advertising signs and the highway approaches to the city.

The Town Planning Commission serves as an active and effective "watchdog" over the physical development of the city. It performs a vital function in the community but is hampered somewhat in its endeavours by the absence of a broad basis for planning.

Alberta Town and Rural Planning Act, 1929, as amended to 1950
 Alberta Department of Public Works Land Subdivision Regulations
 Lethbridge Town Planning Commission minutes and reports
 Various Civic By-Laws and Ordinances
 Report on Town Planning, 1946 by C.S. Burgess
 "Planning Legislation in Canada", by H. Spence-Sales - C.M.H.C., 1949.
 Lethbridge Herald

S E C T I O N T H R E E

Socio-Economic Background

C H A P T E R E I G H T

Population Characteristics

A - Past Population Growth

B - Present Population

C - Natural Increase

D - Migration

E - Future Population

A - PAST POPULATION GROWTH

The population growth of Lethbridge is shown in illustrations 9 and 10 as compared to Alberta and other cities in the province.

Population statistics for Lethbridge were first collected in 1890 when application was made for incorporation as a town. The townsite, having been laid out only five years before, a comprehensive history of population growth is available. These first figures show a total population for the city of 1478 persons. Immigration into western Canada and the economic prosperity which had been expected to follow the construction of the C.P.R. did not immediately materialize. Anticipated growth of the west did not take place. At that time Lethbridge depended upon a single industry (coal mining) for its existence and as a result early growth was relatively slow and by 1906 the population totalled only 2313 persons.

The phenomenal growth of the population of western Canada during the first five years of the 20th century which resulted generally from national prosperity and relatively free immigration was not paralleled in Lethbridge until after 1906. In 1901 Lethbridge contained 2.8 per cent of the total population of Alberta, but by 1906 this proportion had dropped to 1.2 per cent.

In the first few years of the century irrigation water supply for the city had been achieved, further railway connections to other parts of the province had been started and electric power for the city had been inaugurated. These developments would normally encourage a population increase. Their influence together

with the general advance of the area had dramatic effect in the five years between 1906 and 1911 when the population of the city increased 248 per cent and the ratio to the total provincial population rose to 2.2 per cent. In 1911 one-quarter of the population was immigrant from countries other than Canada.

The surge of new population levelled off rather abruptly after 1911. Although Lethbridge was no longer dependent on a single industry, having become the trading centre for the southern part of Alberta, the economic base was not such as to maintain a high population increment. The absence of manufacturing industry and the drain of manpower during the war years of 1914 to 1919 acted to further retard the rate of population growth. Nevertheless, between 1911 and 1921 the population of the city increased by 38 per cent and immigration remained at a fairly high level, 1613 persons moving to Lethbridge from other countries between 1911 and 1923.

Between 1921 and 1926 the population decreased slightly but rose again in the following five years. This paralleled a general economic trend of depression and prosperity. The census of 1931 showed a population of 13,489, an increase of 22 per cent over the 1921 figure.

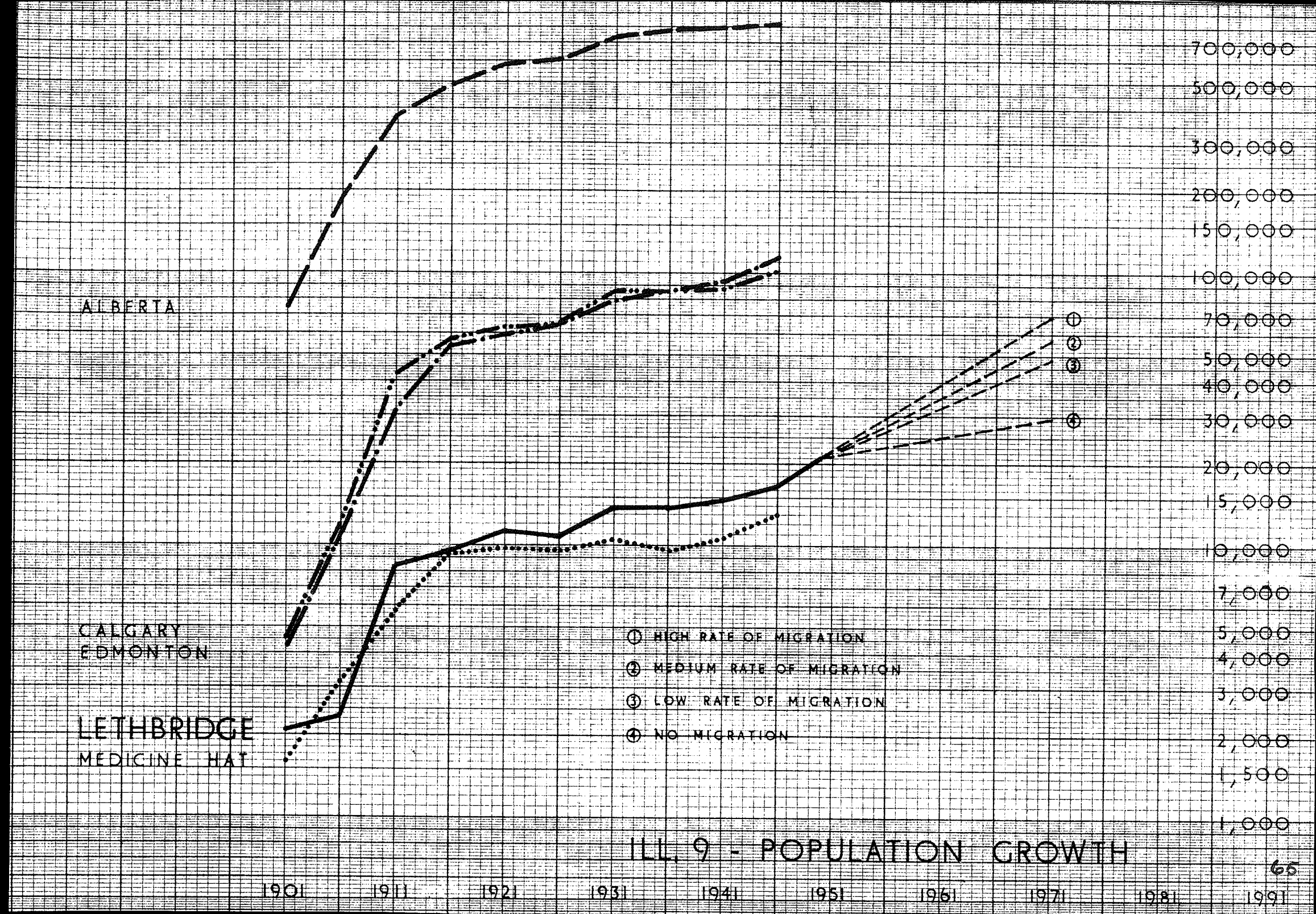
During the depression of the 1930's the population of Lethbridge remained relatively static, ending the decade in 1941 with 14,612 persons, a rise of 3 per cent for the period. Only a gradual growth took place during the war of 1939-45.

there being no special industries to attract great numbers of migrants. The population of the city in 1946 was 16,522.

Following the war these three factors were influences in a significant growth of population; general economic prosperity, increasing population and wealth in the trading area of the city, and the establishment of numerous new industries. In 1950 population totalling about 21,000 persons represented an increase of 27 per cent over 1946 and 44 per cent over 1941.

Illustrations 9 and 10 show a striking similarity between the growth of Alberta and its four main urban centres. At the beginning of the century the population of Lethbridge was 2.8 per cent of the population of the province. This ratio dropped sharply in 1906 and rose again in 1911. From 1916 the proportion stabilized at about 1.8 per cent and remained constant through the next thirty years, rising slightly to 2.0 per cent by 1946. There can be no surety, however, that this similarity will continue in the future. Unusual circumstances such as have recently affected the growth of the population of Edmonton act to upset this balance.

It can be seen from the foregoing that the population growth of Lethbridge has been closely linked to external economic forces. This is a common phenomenon of cities such as Lethbridge which are essentially distributing centres for a rural population. Two current trends will tend somewhat to decrease this



POPULATION STATISTICS

Illustration 10.

Date	ALBERTA			LETHBRIDGE			CALGARY			EDMONTON			MEDICINE HAT		
	Population	% inc.		Population	% inc.	% Prov. pop.	Population	% inc.	% Prov. pop.	Population	% inc.	% Prov. pop.	Population	% inc.	% Prov. pop.
1891		-		1478	-	-	-	-	-	-	-	-	-	-	-
1901	73022	-		2072	40	2.8	4392	-	6.0	4176	-	5.7	1570	-	2.1
1906	185412	115		2313	12	1.2	11967	172	6.5	11167	167	6.0	3020	92	1.6
1911	374663	100		8050	248	2.2	43704	265	11.7	31064	178	8.3	5608	86	1.5
1916	496525	33		9436	17	1.9	56514	29	11.4	53846	73	10.8	9272	65	1.9
1921	588454	19		11097 ^A	18	1.9	63305	12	10.8	58821	9	10.0	9634	4	1.6
1926	607409	3		10735	-3	1.8	65291	3	10.8	65163	11	10.7	9536	-1	1.6
1931	731605	20		13489	26	1.8	83761	28	11.4	79197	22	10.8	10300	8	1.4
1936	772782	6		13523	0	1.8	83407	0	10.8	85774	8	11.1	9592	-7	1.2
1941	796169	3		14612	8	1.8	88904	7	11.2	93817	9	11.8	10571	10	1.3
1946	803330	1		16522	13	2.0	100044	13	12.4	113116	21	14.1	12859	22	1.6
1950	-	-		21000 ^{AA}	27	-	-	-	-	-	-	-	-	-	-

^A Staffordville annexed 1913

^{AA} Estimated

Source - Dominion Bureau of Statistics

effect of external forces on population growth. Diversification of local industry will broaden the economic base of the city and the spread of irrigation in southern Alberta will provide the support for a larger population market in the trading area of the city. Nevertheless, future changes in the population growth of Lethbridge will continue to be greatly influenced by external economic conditions.

B - PRESENT POPULATION

The growth of population since the census of 1946 having been great it is difficult to make estimates as to the size of the present population of Lethbridge.

In 1946 there were 16,522 persons and 4,636 dwelling units in the city, or an average of 3.56 persons per family. An analysis of aerial photographs and land use and population distribution maps for 1950 indicate approximately 5600 dwelling units in the city in that year. Applying the 1946 ratio of persons per unit, the population in 1950 would be approximately 20,000 persons. In calculating the number of dwelling units from these maps it was difficult to estimate the equivalent family units for apartment buildings, multiple dwellings and rooming houses. A fairly conservative equivalent based on observations made in the city in 1950 was used, resulting in an estimated current population which may prove low.

A second estimate can be made by using the number of residences erected in the city since 1946 as derived from records of the Building Inspector. This is

Illustration 11. Dwelling Units 1946-50

	Building Permits for Residential Use	Estimated Dwelling Units occupied since 1946 census
1946	222 (includes 3 duplexes)	112
1947	226 (includes 5 duplexes)	231
1948	351 (includes 1 apt. bldg.)	355
1949	422 (includes 3 apt. bldgs.)	435
1950	341 (includes 14 duplexes)	177
	<u>1562</u>	<u>1310</u>

Source - Lethbridge Building Inspector

Illustration 12. 1946 Population of
Lethbridge over 15 years.

	Total	Male	Female
Total	12675	6288	6387
Married	8368	4268	4100
Single	3450	1775	1675
Widowed	785	213	572
Divorced	72	32	40

Source - Dominion Bureau of Statistics

shown in illustration 11. Since no record is kept of building completions this table is compiled from the number of building permits issued in each year. If it is assumed that one-half of the dwellings shown for 1946 were completed and occupied at the time the census of that year was taken and also that one-half of the dwellings shown for 1950 were incomplete and unoccupied at the end of that year, then the total new dwelling units occupied since 1946 would be 1310. Again applying the 1946 ratio of 3.56 persons per family the resulting increase in population is 4663 and the total population for 1950 would be approximately 21,200 persons.

In both methods of calculating the present size of the population of Lethbridge arbitrary assumptions had to be made. Consequently the resulting totals cannot be accepted as infallible. Nevertheless, it would seem reasonable to assume a total population in 1950 in the neighbourhood of 21,000 persons.

Population distribution. As shown by the population distribution map the heaviest concentration of population is in the area to the east and south of the central business district. This band of concentration ends abruptly at the edge of the built-up residential area. The south-east part of the city has only scattered settlement in the form of intensive, small agricultural holdings. In the north part of the city residential areas are surrounded by vacant or extensive farming land. Strip development along 13th street at the north end of the city and Staffordville form isolate concentrations of population. There is also some scattered

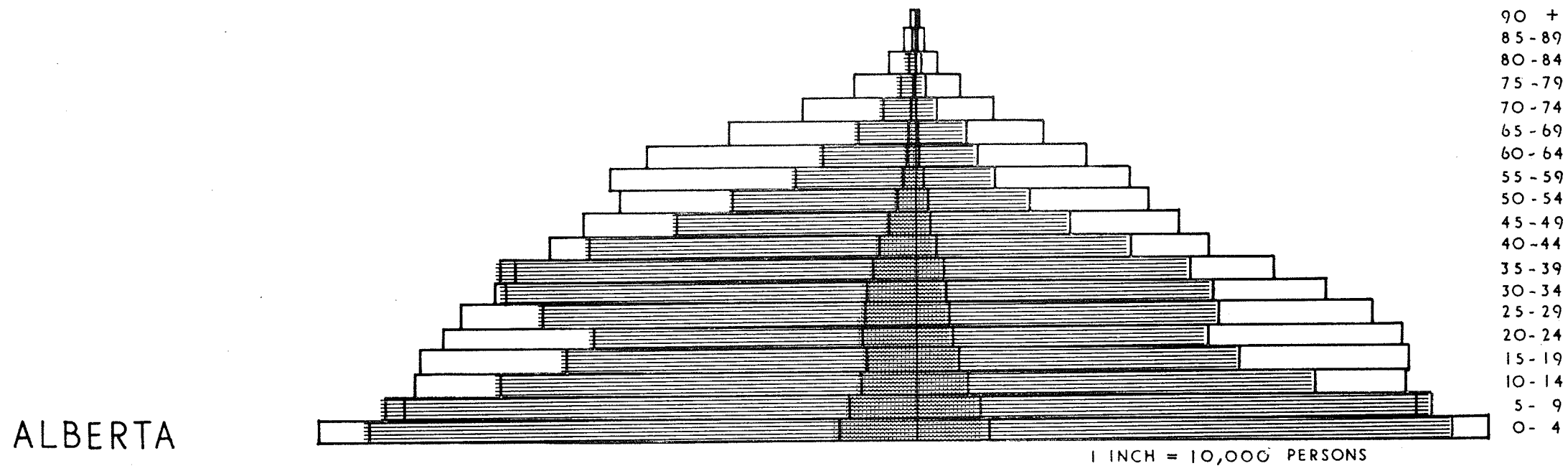
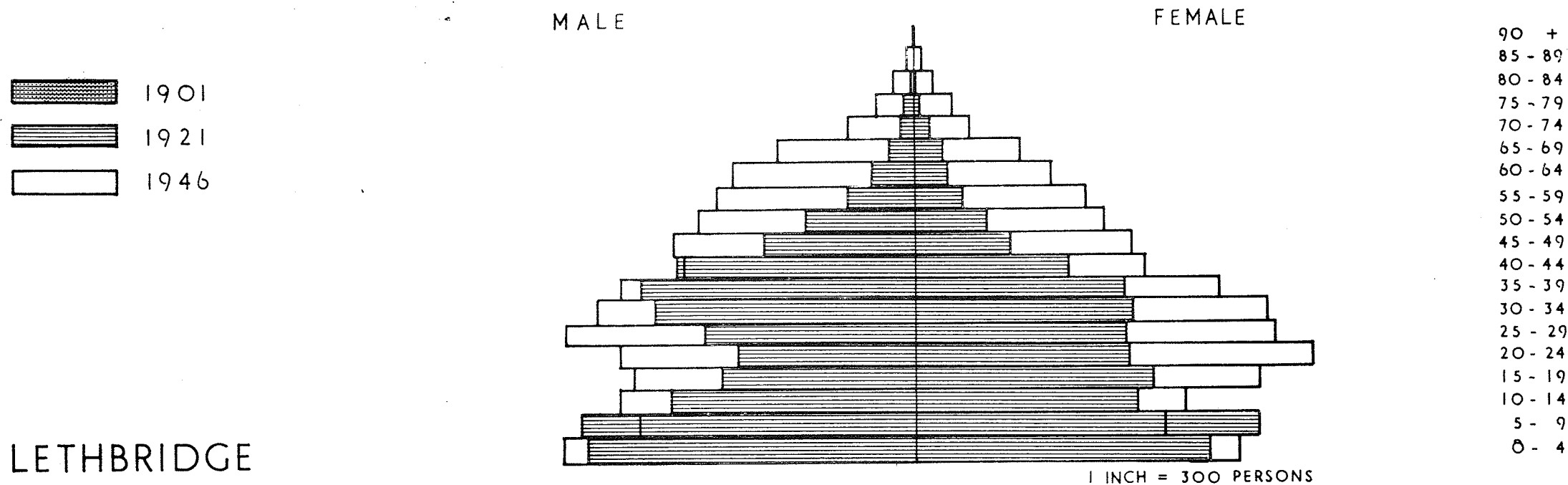
residential developmetn in the "river bottom" area.

Population composition. Apart from total population figures it is important to know something of how this population is made up. Age and sex composition have a direct influence on school and recreational needs, and changes in age characteristics and family status are important in terms of housing facilities, while economic and racial composition will affect residential neighbourhoods.

The age and sex compositions of the population of Alberta and Lethbridge for various years are shown in illustration 13. In both cases the national trend is reflected, indicating that in general the population is "aging". Although in 1946 the great majority (73%) of the people of Lethbridge were under 45 years of age, the overall trend is apparent when the number of people under 20 years old nad over 45 are compared. In 1921, 43 per cent of the population were under 20 years of age while in 1946 the ratio had dropped to 31 per cent (36% in Canada as a whole). During the same period the proportion of those persons over 45 years of age had risen from 13 per cent to 27 per cent. (In 1946 32% of the population of Canada were over 40 years of age.) The age group from 20 to 44 remained relatively static, dropping by only 2 per cent. Between 1921 and 1941 the "under 10's" actually decreased in number. The "baby-boom" of the war years slowed this trend somewhat but recent birth rates suggest that the respite may be temporary.

While the total of males in Lethbridge very closely equalled the total of

ILL. 13 - POPULATION AGE & SEX COMPOSITIONS



females in 1946, in the age group of 15 to 35 the men were outnumbered. This same condition existed in 1921. This is not a natural phenomenon since the number of male babies born exceeds the total of female babies born and can only be accounted for by excessive emigration of men between the ages of 15 and 35.

The changing balance in age groups will have an influence on future population. In 1946 there were 3580 females between the ages of 20 and 44 and only 2590 under 20. Within the next twenty years this discrepancy will be significant in terms of reproduction.

Illustration 12 indicates that in 1946 a fairly high proportion (nearly two-thirds) of the population over 15 years old were married. Another 7 per cent were widowed or divorced, leaving only 27 per cent of the marriageable age group unmarried.

National Origins. The population of Lethbridge is preponderantly of Canadian origin. In 1946, 69 per cent of the people were born in Canada (50% in 1921) and 97 per cent were Canadian citizens. Of the 31 per cent born out of Canada nearly half of these were born in other parts of the British Commonwealth. Only 16 per cent of the population were foreign born (20% in 1921), mostly in the United States and Europe, each area claiming an almost equal proportion of this group. The only other sizable group, accounting for .7 per cent of the population, were born in China. These characteristics of national extractions is

Illustration 14

NATIONAL ORIGINS, 1946

Birthplace		Citizenship		Mother Tongue	
	Persons		Persons		Persons
Canada	11439	British	16079	English	13817
Other British countries	2496	U.S.	185	Magyar	502
U.S.	1016	European	141	Slovak	446
Austria	246	Chinese	115	Polish	346
Czechoslovakia	180	Other Asian	2	Ukrainian	249
Hungary	300			Italian	192
Poland	170			Russian	144
Russia	111			Chinese	143
Total Europe	1437			German	124
China	122			Swedish	81
<i>Other</i>	<i>12</i>			Gaelic	77
				Norwegian	72
				French	71
				Netherland	56
				Yiddish	35
				Austrian	28
				Danish	19
				Indian	12
				Rumanian	12
				Japanese	7
				Icelandic	4
				Finnish	4
				Flemish	2
				Other	79

further illustrated by the fact that in 1946 the mother tongue of 83 per cent of the population was English. (Illustration 14)

In 1946 average earnings of wage earner heads of households was \$1,840. over 88 per cent of these wage earners earned less than \$3,000. There are no figures available for different parts of the city, but in general the professional and "high-income" portion of the population resides in the southern part of the city while the lower income groups are located in Staffordville.

C - NATURAL INCREASE

Illustrations 15 to 19 show statistics concerning the natural increase or the population of the city.

The marriage rate has remained fairly stable since 1921. Changes in age composition influence the marriage rate and as the older age groups increase the marriage rate will decline. Illustration 16 indicates that this rate also closely parallels economic trends. After an immediate post World War II spurt in weddings the rate is now levelling off at about 20 marriages per 1000 people.

The marriage rate has a direct effect on the birth rate and from illustration 17 it can be seen that the latter has also declined somewhat since 1947. However, if national trends are an indication the rate is likely to remain higher than in the prewar years, probably in the nature of 28 births per 1000 people.

The death rate has remained very constant since 1921 and might be expected to continue at approximately 9 deaths per 1000 people. (Illustration 18)

The rate of natural increase as derived from the birth rate and the death rate might be expected to continue at an increase of approximately 20 per 1000 people. (Illustration 19)

D - MIGRATION

Like other urban centres the population growth in Lethbridge has not been entirely due to natural increase. With the exception of the depression years of 1931 to 1935 there have been more people immigrating to Lethbridge than leaving for other parts. The rates of the balance for five year intervals are shown in illustration 20. Without this favourable balance the population of the city between 1926 and 1946 would have increased by 3353 persons instead of the actual number of 5787. Immigration from countries other than Canada has been significantly low in recent years. Before 1931 there had been a total of nearly 5000 immigrants while since that time only slightly more than 300 persons have moved to Lethbridge from other countries.

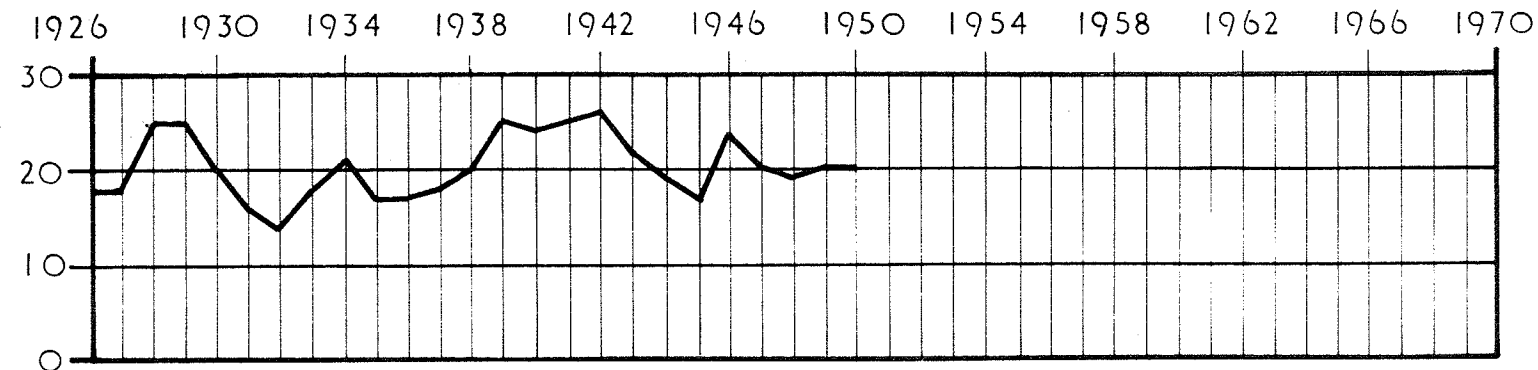
A stable population is desirable in any community and migration of families within the city is an important consideration. In 1946 the residents of the city had been in the same dwelling for an average of 7.9 years, a comparatively long period. It is significant to note that home owners had remained an average of 11.3 years while tenants had been only an average of 4.3 years in the same residence.

Year	Population	Marriages AA		Birth A		Deaths		Natural Increase		Migration		Actual Increase	
		Total	rate per 1000 pop.	Total	rate per 1000 pop.	Total	rate per 1000 pop.	Total	rate per 1000 pop.	Total	rate per 1000 pop.	Total	rate per 1000 pop.
1926	10735	194	18	219	20	65	6	154	14				
1927	11290	205	18	228	20	51	5	177	16				
1928	11840	293	25	254	21	109	9	145	12				
1929	12390	307	25	269	22	125	10	144	12				
1930	12940	262	20	320	25	112	9	208	16				
Five Year Period								828	77	1926	180	2754	256
1931	13489	213	16	311	23	108	8	203	15				
1932	13490	184	14	266	20	109	8	157	12				
1933	13500	238	18	245	18	104	8	141	10				
1934	13510	284	21	215	16	115	8	100	7				
1935	13520	229	17	252	19	89	7	163	12				
Five Year Period								764	57	-730	-54	34	2.5
1936	13523	233	17	229	17	103	8	126	9				
1937	13740	244	18	234	17	109	8	125	9				
1938	13960	273	20	218	16	102	7	116	8				
1939	14180	348	25	232	16	100	7	132	9				
1940	14390	344	24	253	18	103	7	150	10				
Five Year Period								649	48	440	33	1089	80
1941	14612	360	25	249	17	114	8	135	9				
1942	14990	387	26	353	24	124	8	229	15				
1943	15380	333	22	366	24	127	8	239	16				
1944	15760	297	19	409	26	132	8	277	18				
1945	16140	274	17	421	26	159	10	262	16				
Five Year Period								1112	76	798	55	1910	131
1946	16522	392	24	483	29	154	9	329	20				
1947	17640	359	20	588	33	146	8	442	25				
1948	18760	354	19	558	30	188	10	370	20				
1949	19880	392	20	557	28	175	9	385	19				
1950	21000	-	-	-	-	-	-	-	-				
Five Year Period								1526 AA	92	2942 AAA	220	4478	271

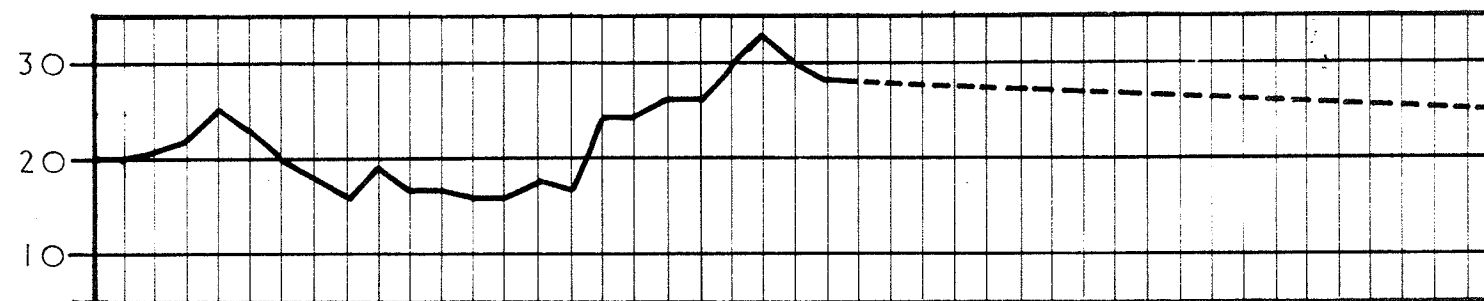
Source - Dominion Bureau of Statistics and City Clerk.

TES PER 1000 POPULATION

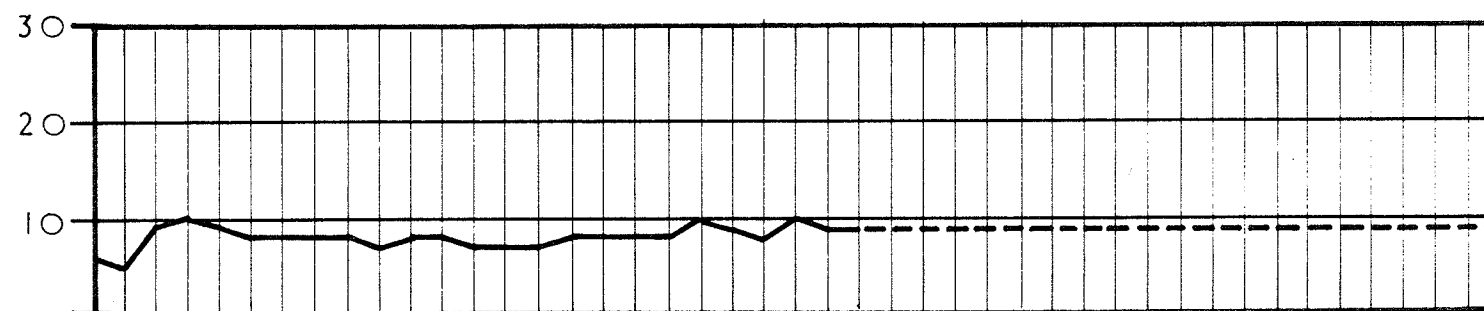
L, 16 - MARRIAGES



L, 17 - BIRTHS



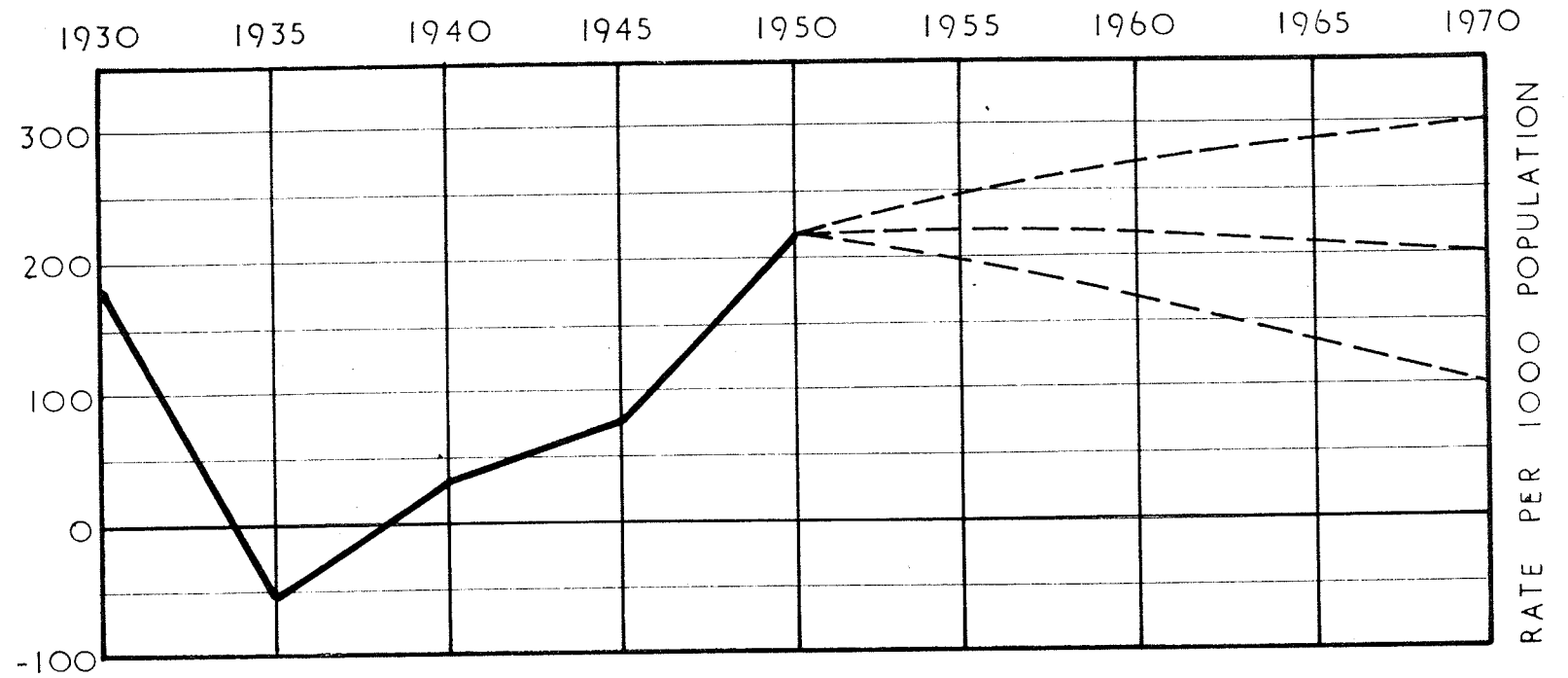
L, 18 - DEATHS



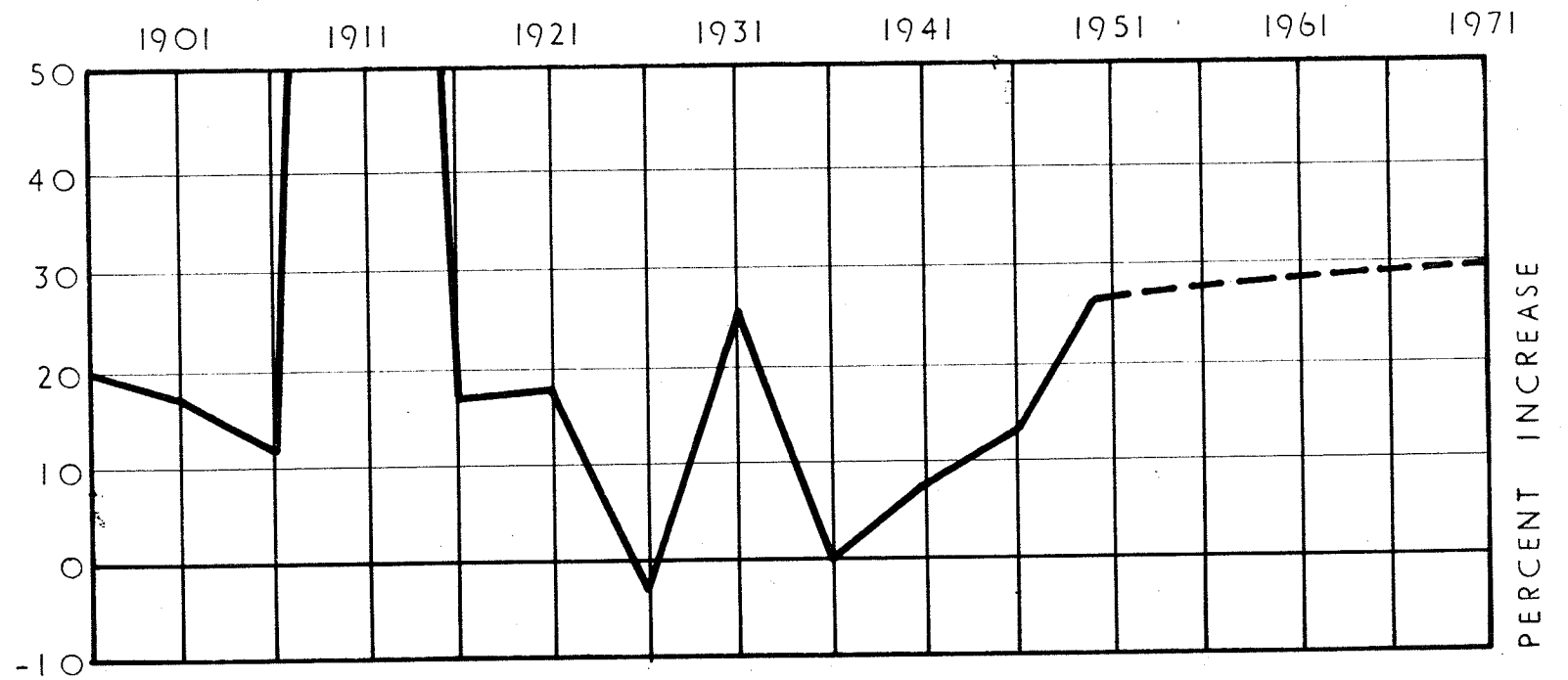
L, 19 - NATURAL INCREASE



LL, 20 - MIGRATION



LL, 21 - POP. INCREASE



E - FUTURE POPULATION

In making predictions of future population of the city all the factors previously discussed must be taken into consideration. Any estimate must of necessity be in the nature of guesswork, particularly in view of the fact that external conditions have such an influence on population changes in the city. However, it is important to have some idea of population changes likely to occur in the next twenty years or so.

The future population will, of course, be dependent upon natural increase and migration. It has previously been suggested that although the birth rate is unlikely to increase appreciably it will probably remain relatively high and as shown in illustration 17, might be expected to drop gradually by 1970 to approximately 25 births annually per 1000 population. In line with national trends the death rate will probably stabilize at about 9 deaths annually per 1000 people. Thus the rate of natural increase might logically be predicted to drop from the present rate of 105 per 1000 people for a five year period to approximately 80 per 1000 people by 1970. (Illustration 19) A prediction of migration is less obvious. Apart from occurrences such as the discovery of great new oil deposits or another world war, and if economic conditions continue in their present state, a fairly high rate of immigration might be expected. If "good times" slacken off then a parallel decrease in immigration might be expected. Illustration 20 shows the migration rate extended to 1970. With continued high prosperity the immigration rate might rise to 300 per 1000 people

for a five year period. With adverse economic changes the rate might drop to 100 per 1000 people.

Illustration 22 shows the estimated changes in total population that might be expected from natural increase and from high, medium, low, and no immigration. With low immigration the population in 1970 is estimated to be 47,400 while with high migration it is shown to be 69,300. With medium immigration the predicted population is 57,700. With no migration of any sort natural increase would result in a population of 29,600 by 1970.

An alternative but less accurate method of calculating future population is based on the projection of the rate of population increase as shown in illustration 21. The rate of increase might be predicted to rise only slightly by 1970 to about 31 per cent per five year interval. Thus the population in 1970 would be about 59,000 as shown in illustration 23. This compares with the prediction of 57,700 based on medium immigration.

		1954 - 1955	1956 - 1960	1961 - 1965	1966 - 1970
High Migration	Population at beginning	21,000	27,700	37,100	50,300
	Natural rate/1000	98	92	86	80
	Increase Increment	2,000	2,500	3,200	4,000
	Migration rate/1000	225	250	275	300
	Increment	4,700	6,900	10,000	15,000
	Population at end	27,700	37,100	50,300	69,300
Medium Migration	Population at beginning	21,000	27,200	35,100	45,100
	Natural rate/1000	98	92	86	80
	Increase Increment	2,000	2,500	3,000	3,600
	Migration rate/1000	200	200	200	200
	Increment	4,200	5,400	7,000	9,000
	Population at end	27,200	25,100	45,100	57,700
Poor Migration	Population at beginning	21,000	26,700	33,200	40,200
	Natural rate/1000	98	92	86	80
	Increase Increment	2,000	2,500	2,900	3,200
	Migration rate/1000	175	150	125	100
	Increment	3,700	4,000	4,100	4,000
	Population at end	26,700	33,200	40,200	47,400
No Migration	Population at beginning	21,000	23,100	25,200	27,400
	Natural rate/1000	98	92	86	80
	Increase Increment	2,100	2,100	2,200	2,200
	Population at end	23,100	25,200	27,400	29,600

Illustration 22. FUTURE POPULATION BASED ON MIGRATION AND NATURAL INCREASE

Illustration 23.

FUTURE POPULATION BASED ON PROJECTED RATE OF INCREASE

	1951 to 1955	1956 to 1960	1961 to 1965	1966 to 1970
Population at Beginning	21,000	26,900	34,200	45,200
Rate of Increase (percent)	28	29	30	31
Increment	5,900	7,800	10,500	14,000
Population at End	26,900	34,700	45,200	59,200

SOURCE OF INFORMATION

CHAPTER 8

"Alberta Facts and Figures, 1950", - Alberta Dept. of Industries and Labour
Dominion Bureau of Statistics
Lethbridge City Engineer
Lethbridge City Building Inspector
Lethbridge City Clerk
R.C.A.F. Aerial Photographs, 1950

C H A P T E R N I N E

Economic Background

A - Agriculture and Irrigation

B - Forests and Fisheries

C - Power and Mineral Resources

D - Industry

E - Markets

A - AGRICULTURE AND IRRIGATION

Type of Farming. Cattle ranching was the earliest form of agricultural development in southern Alberta. At one time most of the south west portion of the province was devoted to this use. Gradually other types of agricultural uses were developed and today, while ranching remains an important activity, southern Alberta is agriculturally diversified.

In the area immediately surrounding Lethbridge, within the dark-brown soil zone, farming types are mixed, cereals, sugar beets, vegetables and livestock being produced there. A large part of this district is irrigated and farming activities are fairly intensive. Surrounding this is a large grain-growing region in most of which wheat is the farming specialty. In the western part and the south east corner of the province are the ranch areas producing chiefly beef cattle and sheep. Dairying is carried on further west in the Cranbrook and Fernie areas in B.C. and fruit is produced in the Kootenay Lake area.

Land Use. Although some ranches cover several townships, the average ranch includes about four sections of deeded land and about the same amount of leased land. Dry land farming is generally a large scale operation, farms averaging about one and a half sections. Irrigated farming is much more intensive, the average size of an irrigated farm being 230 acres. The number of farms in southern Alberta have decreased somewhat since 1921, indicating that the average size of farms increased during the period. However, the spread of irrigated

farming is likely to reverse this trend.

Improved farming practices, pioneered by the Dominion Experimental Station at Lethbridge have resulted in increasingly heavier crop yields and higher quality farm products.

Agricultural Production.* Wheat is the major farm product of the Lethbridge "district" both in terms of acreage and value of production. In 1948 over 2 million acres of wheat produced a crop value in excess of \$61 million, representing somewhat less than half of the new wealth entering the "district" in that year. Coarse grains are next in importance. In 1948 coarse grain crops valued at over \$24 million were grown on 815,000 acres. The importance of grain growing can be seen from the fact that in 1946 81.4% of crop land of the "district" was used for this purpose, representing nearly one quarter of the total grain acreage of the province.

Ranching activities in the "district" in 1948 produced cattle valued at over \$18 million, and sheep valued at slightly less than \$2 million. Sheep ranching has declined in the past few years. Apart from the grazing lands which support these activities production of forage crops is important to the economy

* In terms of agricultural activities and statistics the Alberta census divisions 1, 2, 3, and 4 are considered as constituting the Lethbridge "district".

of the "district". In 1946 over 300,000 acres of crop land were given over to growing fodder. Winter feed lot finishing of livestock in the area close to Lethbridge is also important in balancing the agricultural economy of the "district". This technique provides a market for unfinished stock and a market for surplus feeds. At the same time by-products from the beet sugar and vegetable canning industries are utilized and farmers are provided with a profitable occupation during the slack season. Another important animal raising activity in the area is hog farming.

Of the root crops grown in the irrigated part of the "district", the sugar beet is the most important. Sugar beet growing occurs principally in the Raymond, Picture Butte, and Taber areas, where sugar factories are located. Root and other vegetables are grown not only for distribution fresh, but also for canning purposes. As irrigation spreads the acreage devoted to these crops will undoubtedly increase.

The dairy industry in the "district" produces primarily for local consumption, but the value of milk, butter, and cheese produced in 1948 was about \$3 million. Eggs and poultry in the same year were valued at slightly less than \$4 million.

Some fur farming is also carried on in the "district".

As can be seen from the foregoing, Lethbridge is located at the heart

of one of the richest agricultural areas in the country.

Irrigation. Irrigation is a vital factor in agricultural production and living conditions in the Lethbridge region and is more highly developed there than anywhere else in Canada. For instance, a comparison of crops grown over a period of forty years on dry and irrigated land at the Dominion Experimental Station at Lethbridge shows a 104% increase in the yield of marquis wheat and a 147% increase in the yield of banner oats, due to irrigation.

There are at present eleven major irrigation districts in southern Alberta (excluding the Western and Eastern Irrigation Districts east of Calgary) comprising a total area of 786,675 acres. Of these, about 224,000 acres are irrigated which represents 67% of the irrigable area. Proposed future projects being undertaken by the Provincial and Dominion governments in the St Mary - Milk River development will add an additional 390,000 acres of irrigable land south and east of Lethbridge. Construction of headworks on the St Mary River and of diversion canals is now in progress. Expansion of the Canada Land and Irrigation District is also anticipated which will add 200,000 acres of irrigated land north east of Lethbridge.

In addition to these large scale irrigation activities many small water development projects have been undertaken by the Dominion government under the Prairie Farm Rehabilitation Act. These consist of individual dugouts, stock-

Illustration 24.

IRRIGATION DISTRICTS OF SOUTHERN ALBERTA

River and Irrigation Districts	Tract Area acres	Area Irrigated (1947) acres	Percent of Irrigable area
BOW RIVER			
Canada Land & Irrigation Company	200,000	40,100	72.9
New West Irrigation District	8,000	3,494	76.5
BELLY RIVER			
United Irrigation District	62,800	7,463	21.7
Mountain View Irrigation District	6,400	3,300	92.5
Leavitt Irrigation District	16,100	1,300	28.1
Aetna Irrigation District	-	-	-
ST. MARY RIVER			
St. Mary-Milk River District ^W	200,000	76,207	90.7
Magrath Irrigation District	18,873	3,500	50.2
Raymond Irrigation District	20,520	12,000	79.3
Taber Irrigation District	33,200	19,141	89.0
OLDMAN RIVER			
Lethbridge North Irrigation District	220,782	57,434	59.2
Total	786,675	223,939	66.8
^W New land in S.M. & M.R.D. proposed development - 390,000 acres			

Source - Alberta Dept. of Industries and Labour, Dominion Bureau of Statistics.

watering dams, and small irrigation projects.

B - FORESTS AND FISHERIES

About one-quarter of the total area of the Lethbridge district is without tree growth of a size to make saw timber. Much of the timber land of the foothills and mountain area is included in forest reserves, and much valuable timber is not at present available due to its location. Timber is cut in the Crowsnest area on the Oldman River and its tributaries and in the Porcupine Hills, primarily for regional consumption. The value of this production in census divisions 2 and 4 was slightly more than \$600,000 in 1946. The principal tree species are spruce, lodge pole pine, Douglas fir, balsam fir, white birch and tamarack.

Fish production in southern Alberta is very small in comparison with the northern part of the province, and the entire provincial production is not great. Illustration 26 summarized the commercial fish production of lakes Newell and McGregor the two fishing areas of the region. Only 3.75% of the fish output of the province came from these lakes in 1947-48. The principal fish caught in both lakes is the whitefish, about 90% of which is exported to the U.S. Two fish rearing ponds are located in the area at MacLeod and Pincher Creek for the supplying of whitefish eggs for replenishment of the lakes.

ustration 25. Commercial Fish Production, 1947-48.

Type of Fish	Lake McGregor (lbs)	Lake Newell (lbs)
Ling	--	2,200
Suckers	--	800
Pike	940	20,000
Whitefish	127,798	219,592
Total	128,738	242,592
% of Provincial Output	1.30	2.45

ustration 2. Coal Reserves in the Lethbridge Region.

Formation and Area	Probable Reserves (000 tons)	Possible (additional 000 tons)	Production 1947 (tons)
Kootenay Formation			
Oldman	4,216,800	596,400	--
Crowsnest	4,735,920	1,308,720	1,967,880
Belly River Formation			
Pincher	235,200	302,400	681
Magrath	656,850	58,800	-
Lethbridge	1,018,080	216,720	462,322
Brooks	273,840	638,400	134,643
Taber	613,200	344,400	128,376
Milk River	643,440	423,360	1,605
Redcliff	77,280	117,600	8,603
Pakowki	381,360	85,680	16
Edmonton Formation			
Champion	100,800	25,200	8,296
Total	12,952,770	4,127,680	2,712,422

Source - Alberta Department of Industries and Labour,
Dominion Bureau of Statistics.

C - POWER AND MINERAL RESOURCES

Coal. Coal mining is the basic industry of Lethbridge. The city was founded as a result of coal and it continues to be dependent on it as a principal economic base. There are four mines on the outskirts of the city that employed over 700 men in 1949.

Alberta contains 12% of the known coal resources of the world and coal-bearing formations underlie most of the southern part of the province. The largest reserves are in the foothills and consist mainly of medium and low volatile bituminous coal. The next largest reserves are high volatile bituminous coals in the outer foothills. Extensive deposits of sub-bituminous coals occur in the central plains and small deposits of lignite are found in the south east part of the province. Illustration 26 summarized the reserves of the various coal areas of the region. In the Lethbridge area, immediately surrounding the city, total sub-bituminous coal reserves are estimated at more than one billion tons. Production in this area has fallen off somewhat in the past few years, dropping from a peak annual output in 1943 of over 579,000 tons to an output of about 385,000 tons in 1949.

Petroleum. Known oil and gas deposits are scattered through the Lethbridge region. The Taber and Conrad oil field have yielded a total of 2,352,450 barrels of oil up to January 1st, 1951 and the Barons field was opened up in November 1950. The Del Bonita field has produced small quantities of oil for some years and was brought into commercial production in 1950. Canadian operations

Illustration 27.

OIL AND NATURAL GAS PRODUCTION IN THE LETHBRIDGE REGION - 1948

Field	Production of Oil (Barrels)	Production of Natural Gas (000 cubic ft.)	Proven Gas Reserves (000 cubic ft.)
Taber)	387,332	--	--
Conrad)			
Del Bonita)			
Pincher Creek	2,739	--	1,580,000,000
Foremost	--) 743,415 (15,000,000
Bow Island	--)	
Medicine Hat	--)	342,000,000
Redcliff	--) 5,239,925 (
Brooks	--		
Pendant d'Oreille	--	--	257,000,000
Manyberries	--	--	100,000,000
Black Butte	--	--	30,000,000
Dummore	--	--	25,000,000
Bow Island	--	--	20,000,000
Smith Coulee	--	--	18,000,000

Source - Alberta Dept. of Economic Affairs,
~~Dominion Bureau of Statistics,~~
Lethbridge Herald.

in the Red Coulee field were abandoned in 1944.

The Pincher Creek gas field, discovered in 1948, is one of the greatest single gas structures in the world. It has demonstrated wells capable of yielding in excess of 80 million cubic feet of gas a day. First permission by the Alberta Government to export gas was recently granted and gas will be taken from the Manyberries, Pendant d'Oreille, Smith Coulee, and Black Butte fields. Of the gas deposits in the area the Bow Island and Foremost fields have been under production longest, the latter having been boosted with gas from the Turner Valley field. Proven gas reserves are shown in illustration 27.

Water Power. Water power reserves in the Lethbridge area are very small. Most of southern Alberta's water power sites are located near Calgary and are developed by the Calgary Power Company. Power is also generated in the B.C. portion of the Lethbridge trading area by the East Kootenay Power Company. There are only two available sites in the Alberta portion of the area, one located on the Crowsnest River near Lundbreck and the other on the Oldman River near Cowley. On the basis of available 24 hour power at 80% efficiency, the Crowsnest site could produce 250 HP ordinary minimum flow and 510 HP ordinary six months flow. The Oldman site could produce 280 HP ordinary minimum flow and 700 HP ordinary six months flow. Neither of these capacities is of great power significance.

Other Mineral Resources. Clay for building brick and tile, sand, and

gravel are produced in the immediate vicinity of Lethbridge. Shale for cement and rockwool, limestone, and other building stones are products of the area. Gypsum, barite, gold, silver, lead, zinc, antimony, marble, magnesite, bismuth, cadmium, and tin are all produced commercially in the B.C. portion of the Lethbridge trading area.

D - INDUSTRY

Manufacturing and food processing industries are becoming increasingly important to the economy of the Lethbridge area. Diversification of the industrial base is taking place and the primary limiting factor seems to be availability of markets rather than any lack of natural resources. Electric power and light, coal, communications and labour are all relatively available, and industrial sites in Lethbridge are plentiful.

Food processing is the most important of the industries of the area. Sugar factories at Raymond and Picture Butte produced sugar in 1949 with a market value of \$7 million. A new sugar plant in Taber commenced operations in 1950. The total capacity of these plants is about 40,000 tons of sugar per day. Vegetable canning factories in Lethbridge, Coaldale, Taber, Magrath, and Brooks, processed vegetables in 1949 whose final market value exceeded \$5 million. The Catelli macaroni factory in Lethbridge has a capacity of 22,000 pounds a day. Sick's Brewery in Lethbridge employs over 200 persons with an annual payroll of over \$600,000. Grain elevators in the city have a capacity of 1,644,000 bushels and flour milling is carried on.

Other manufacturing industries in Lethbridge include an iron works, a furniture and box factory, clothing factories, cinder block and concrete product plants, and a heavy metal fabricating plant. Efforts are being made by the Industrial Commission and other civic bodies to attract more manufacturing industries to the city.

Thirty-seven manufacturing plants of all kinds in Lethbridge in 1947 produced goods valued at over \$10 million and employed nearly 900 persons with a payroll of nearly \$1 $\frac{1}{2}$ million.

E - MARKETS

One of the determining factors in the future growth of Lethbridge and southern Alberta will be the development of markets for raw materials, agricultural products and manufactured goods.

Grain grown in the Lethbridge area is marketed elsewhere in Canada and is exported to other countries. Several markets are required to handle the variety of produce grown in the irrigated area, and distances coupled with transportation costs are a limiting factor in accessibility of markets for these products outside the immediate district. Markets for this specialty crop produce are largely limited to the Prairie Provinces and markets for the more perishable products are more or less confined to the immediate trading area in southern Alberta.

Possibilities for expanding the Western Canadian market for sugar and

canned vegetables are fairly good since at present neither of these commodities are produced locally in sufficient quantities to supply the needs of that part of the country.

Markets for coal are probably the furthest developed of all products of the area. Apart from sales in Alberta, the Canadian market for coal includes B.C., Saskatchewan, Manitoba, and Ontario. In addition to general consumption in these areas coal from the area is supplied in quantity to the railways and shipping industry on the Pacific coast. The U.S. is also an important, although relatively undeveloped, market.

The construction of new oil and gas pipe lines to points in Canada and the U.S. will expand the market for petroleum products of the area.

The commercial trading area of Lethbridge includes most of the southern part of Alberta and the south-east corner of B.C. It is bounded on the south by the U.S. border and in the other directions roughly by a line starting at Rossland, B.C. and curving through Nelson, Kootenay Bay, Canal Flat, Nanton, Alberta, Vulcan, Lamond, and Medicine Hat, and connecting with the Saskatchewan border west of Maple Creek. The population of the trading area in 1946 was about 150,000 and in 1950 was estimated at over 160,000 people, about 60% of whom were located in Alberta. The effect on this market population of future expansion of irrigated farming could be significant. The density of population in those areas at present partly under irrigation averages 12.7 persons per square mile as compared to a

figure of 3.5 in the dry farming areas. That is, the density of population in the irrigated area is triple that of the dry farming areas, and in the more fully developed districts the figure jumps between eight and fourteen times.

Retail sales in the trading area in 1949 totalled over \$73 million, a jump of \$13½ million over 1948 and of \$26½ million over 1947. Farm income in the area in 1948-49 averaged more than \$5,000; a figure 16% greater than the Alberta average and 62% greater than the Dominion average. Yearly bank clearings in Lethbridge have increased 3½ times since 1939. The value of annual postal revenues doubled between 1941 and 1949 and the annual value of building permits issued in Lethbridge has increased 1½ times in the same period. Circulation of the Lethbridge Herald has increased 25% since 1941 and about half of the present circulation is in the trade area outside of Lethbridge. All these factors suggest increasing purchasing power in the trading area.

Illustration 28.

VALUE OF PRODUCTION IN THE LETHBRIDGE RAILWAY DIVISION AREA

Product	1948	1949
Wheat	\$ 75,600,000	\$ 62,125,000
Other Grains	17,250,000	12,432,000
Cattle and Hogs	12,500,000	10,500,000
Sheep and Wool	3,500,000	2,500,000
Poultry and Eggs	2,500,000	2,000,000
Dairy Products	3,000,000	2,750,000
Potatoes, Vegetables	2,000,000	2,000,000
Hay and Feed	7,500,000	6,000,000
Sugar	7,000,000	5,600,000
Honey	100,000	100,000
Coal, Oil and Gas	15,000,000	15,000,000
Manufactured Goods	6,000,000	6,000,000
TOTAL	<u>\$151,950,000</u>	<u>\$127,010,000</u>

Source - Lethbridge Chamber of Commerce.

SOURCE OF INFORMATION

CHAPTER 9

- "15th Annual Report of Activities Under the P.F.R.A.", - Dom. Dept of Agric., 1950.
"Alberta Facts and Figures, 1950" - Alberta Dept of Industries & Labour.
"Green Acres" - Lethbridge Board of Trade.
"Farming in Alberta", by R.E. English - Alberta Dept of Agric. 1949.
"Farming in Canada" - Dominion Department of Agriculture, 1950.
"Progress Report, 1937-1946", - Dominion Experimental Station, Lethbridge.
"Farming in the Irrigation Districts of Alberta" - Dom. Dept of Agric., 1947.
"Canadian Consumer Survey, 1949"
"Alberta Statistics" compiled by A. Bradshaw - Alberta Dept of Economic Affairs.
Lethbridge Herald
Lethbridge Chamber of Commerce

C H A P T E R T E N

Financial Structure of the City

A - Assessment and Taxation

B - Indebtedness

C - Financial Activities

A - ASSESSMENT AND TAXATION

In Lethbridge, residential and business buildings are liable to taxation on 66 2/3% of their assessed value, farm land and buildings are subject to taxation on 33 1/3% of their assessed value, and other land is taxed on 100% of its value. Certain properties such as those owned by Dominion, Provincial, and Municipal governments, and those used for educational, religious, and charitable purposes are exempt from taxation.

Illustration 29 shows that the total assessed value of property in the city has been increasing steadily since the depression of the 1930's.

The tax rate has fluctuated somewhat over the years and in 1949 stood at 48 mills, consisting of a general tax of 19.82 mills, debenture tax of 3.58 mills, and school tax of 24.6 mills.

The total tax levy has shown a considerable increase recently, standing at over \$950,000 in 1949. Accumulated tax arrears totalled more than \$112,000 in the same year, which constituted a noticeable rise over 1948.

B - INDEBTEDNESS

Lethbridge has maintained excellent credit for many years. Even during the depression in the 1930's the city managed to reduce its indebtedness and in 1945 the net debt stood at the very low figure of \$629,244. After the war the city undertook an immense construction program of civic buildings and public utilities. As a result the net debt increased in the post-war years, rising to

\$1,500,600 in 1949, a figure which compares favourably with indebtedness during the prewar years.

Of the public utilities and local improvement debentures totalling over \$1½ million in 1949 and outstanding at the end of the year, 80% of the total was issued by the installment method and 20% by the sinking fund method. 38% of these bonds were unsold at the end of that fiscal year.

In 1949 the city had no bank loans pending receipt of taxes or pending the sale of debentures.

C - FINANCIAL ACTIVITIES

Since 1939 the current revenue of the city has exceeded its expenditures. In 1949 revenue totalled \$1,514,566 while expenditures were \$1,393 171 .

Civic public utilities were operated at a net profit in 1949, although the transportation department was operated at a loss. This department has not made a profit since 1946. The water and electric departments have consistently operated on a profit basis. In 1949 the net profits of the water and electric departments were \$43,455 and \$213,898. In that year the street railway lost a net sum of \$27,518.

Illustration 29.

FINANCIAL STATISTICS, LETHBRIDGE, ALBERTA

Year	Assessed Value for Taxation	Value of Exempt Properties	Tax Rate (Mills)	Tax Levy	Accumulated Tax Arrears	Net Debt
1915	\$15,112,980	\$ --	30.5	\$516,463	\$453,269	\$3,448,244
1920	12,468,930	--	43.0	608,817	387,631	3,042,951
1925	9,408,830	--	48.7	564,782	251,962	2,589,886
1930	9,698,430	--	44.5	546,831	163,930	2,130,878
1936	9,561,594	---	46.8	547,063	429,985	1,505,533
1940	10,469,965	7,910,140	42.0	538,911	309,789	1,321,455
1945	12,072,430	9,044,662	37.0	542,808	94,662	629,244
1948	14,552,125	9,799,675	49.5	825,969	85,990	1,428,444
1949	17,291,875	9,820,735	48.0	950,891	112,247	1,500,660

SOURCE OF INFORMATION

CHAPTER 10

Auditor's Reports and Financial Statements, the City of Lethbridge, 1939-1949.
"Cities of Alberta" - Submission to the Royal Commission on Dominion-Provincial
Relations, 1938.
"Economic Survey of Lethbridge" - Alberta Dept of Economic Affairs, 1950.

C H A P T E R E L E V E N

Ecological Characteristics

A - Land Use

B - Property Ownership and Appraisement

A - LAND USE

The general built-up area of Lethbridge is relatively well defined and occupies about 2000 of the city's 6440 acres. Of this built-up area about 65% is in south Lethbridge. The prevalent lot size in the older developed areas is 25 feet by 125 feet, but in the new districts the minimum is $37\frac{1}{2}$ feet by 125 feet.

There was a time, as in most western Canadian cities, when much more land in the city was subdivided than could have possibly been absorbed as developed area at that time. However, most of these subdivisions were cancelled before unhealthy scattered development could take place and the city is now following the sound policy of opening up land only as it is needed and is not permitting construction upon land that is not serviced by utilities. This has prevented many of the serious problems prevalent in numerous cities where large areas were subdivided prematurely and subsequently were left vacant, thus wasting much valuable land.

In the south part of the city most of the subdivided properties are now built upon and few vacant lots exist. New residential subdivisions are being opened up to the south and east of the older built-up area and a fair amount of vacant land exists in and adjacent to these new developments. The entire south east portion of the city beyond this new residential development is presently given over to agricultural uses. Most of this land is irrigated and is broken up into acreage plots for market gardening and other intensive agricultural uses. At the eastern edge of the city, between the railway and Henderson Lake, is a new residential

subdivision divided into half-acre plots. This is completely occupied and only some land at the edge of this and previously subdivided into smaller lots is vacant.

North of the railway the built-up area is more scattered. There is a densely built-up section in Staffordville and a strip of development along 13th Street at the north edge of the city. The bulk of development in north Lethbridge is bounded by 12th Street, 21st Street, and 9th Avenue North. Vacant land is scattered through the area in parcels of varying sizes. A large area at the head of the coulees and to the west of 12th Street North is vacant. A roughly rectangular area running north and south and located west of 13th Street at the north end of the city is also vacant, as is the old airport north of the railway ~~and~~ at the eastern edge of the city. The remainder of the undeveloped land in north Lethbridge is used for large scale, dry-land farming.

Areas of blight development exist to the west of the central business district in south Lethbridge and in Staffordville and along 13th Street in North Lethbridge.

Residential Uses. There is little consciousness of residential communities as geographical entities other than those of "south" and "north" Lethbridge. This is partly due to the fact that the over-all street pattern does not lend itself to neighbourhood development in that little or no differentiation exists between local and through traffic; every street is a "through" street.

The absence of recognizable communities is also partly due to the fact that existing social institutions are not located in such a way or are not suited to forming the nucleus of relatively self-sufficient neighbourhoods, or are inadequate for this purpose. Some consciousness of "neighbourhoods" exists in the new residential subdivisions which have been opened up as units, but this does not appear to be a basic phenomenon.

Some residential development occurs in the "river bottom" area. However, this area is unserviced and the land is city owned, either under lease to residents or occupied by squatters. This city is at present planning to discontinue the residential use of the area and is encouraging residents to remove to other sites in the city.

Most residential land use consists of single family and semi-detached dwellings. Some multi-family dwellings and apartments exist in and around the central business district. Occasional apartment blocks have also been allowed to encroach in some of the single family areas.

Commercial Uses. The main business district of the city is located at the western edge of the city to the south of the railway and is about 160 acres in extent. Another commercial area in which development is not quite as intensive but which is rapidly growing is situated in a strip along both sides of 3rd Avenue South and extending from the central business district to 21st

Street. Both sides of 13th Street North from the railway to 8th Avenue are zoned for commercial use but development is sparse.

Small commercial areas which serve local shopping needs are scattered throughout the residential districts. Some of the newer districts are presently without shopping areas. Due to the absence of definite residential communities the location of these local shopping areas do not follow a basic pattern.

Industrial Uses. The major industrial use of land in the city is the C.P.R. yards and trackage, occupying over 200 acres. Other principal industrial areas are located in a strip $1\frac{1}{2}$ blocks wide and south of the railway between the business district and 21st Street; west of the business district at the top of the coulees; north of the railway on both sides of 9th Street; and along the railway at the east side of the city. New development has recently taken place in the triangle of industrial land north of the Exhibition Grounds. Just outside the western city limits along Highway #3 are two sizable areas devoted to stockyards. A great deal of the vacant land in the city is in the areas zoned for industrial use. Almost half of the area zoned for industry is not used for this purpose.

Recreational Uses. Public parks and recreation areas in the city total 340 acres, or roughly 60 persons per park-acre. Illustration 31 breaks this total down.

Illustration 30.

LAND USE AREAS

Land Use	Area in acres	% of total area
Built-up Area	2,000	31.3
Residential and other uses	1,760	27.5
Recreational	340	5.3
Commercial	215	3.4
Industrial	360	5.6
Agricultural	2,000	31.3
River Bottom	225	3.5
Coulees	700	10.9
Other Vacant Land	800	12.5
Total	6400	100.0

Illustration 31.

PUBLIC RECREATIONAL AREAS

	Location	Area (acres)
1	Henderson Park Lake Golf Course 91 Ball Park 96 Park Area 13 <u>33</u>	233
2	Fair Grounds	48
3	Ball Park	9.7
4	Civic Centre	16.8
5	Eckstrom Park	1.2
6	Kinsmen's Play-ground	4.2
7	Queen Victoria Park	6.9
8	Parkdale Reserve	3.1
9	Adams Ball Park	8.3
10	Lions Playground	4.2
11	Staffordville Playground	4.2
	Total	339.6

The largest single recreational area is Henderson Park with an area of 233 acres. Within the park are located Henderson Lake, a golf course, and a ball park, leaving an area of 33 acres for general park use. The fair grounds are located to the east of Henderson Park. The Civic Centre and Galt Park, both located adjacent to the central business district, are two other large public recreational areas. As well as outdoor facilities the Civic Centre contains the Sick Memorial Sports Centre and the Ice Sports Centre. A hockey arena is located on 2nd Avenue South between 12th Street "A" and 12th Street "B". In addition to the ballfields at Henderson Park, Adams' Ballpark is located in North Lethbridge.

Four playgrounds are spotted through south Lethbridge and two are situated in the north part of the city. As well as the swimming area at Henderson Park, swimming pools are located at the Civic Centre and the Lions' Playground in north Lethbridge. Wading pools are located at the Civic Centre, the Lions' Playground and across from Adams Park. While most playground needs are served there are few areas allocated for the use of the very young and pre-school age children and within easy access of residential development.

q The only other recreational areas near the city are a private golf course located in the "river bottom" just outside the city limits to the south west and Park Lake ten miles north west of the city.

School	Location	Enrollment	Average pupils per room	Average pupils per grade	Date built	Grades taught	Number of classrooms	Area of site (acres)	Special Facilities
Central	5 Av S & 8 St	623	31	104	1909	1-6	12	5.5	Auditorium-Gymnasium
Bowman					1912		8		
Fleetwood	9 Av S & 12 St A	493	31	82	1911	1-6	16	9.3	Auditorium
W Fleetwood		-	-	-	-	1-6	8		
Galbraith	9 Av N & 18 St	213	36	36	1913	1-6	6	5.1	Auditorium
Junior High	15 St S & 4 Av	648	36	216	1929	7-9	18	15.0	(Auditorium-Gymnasium
Senior High	5 Av S & 17 St	490	31	163	1950	10-12	16		(Typing, Library
"Parcel N"	7 Av S & 21 St	-	-	-	-	1-6	8	7.9	3 Sci. labs, 6 Tech. shops, 3 H.Ec. labs,
"Lot 46"	12 Av S & 22 St	-	-	-	-	-	-	4.9	(Gym-Aud., Music Room
Westminster	5 Av N & 15 St	385	32	64	(1906 (1909 (1912 (1926	1-6	12	3.7	(Library, Audio-Vis., Rifle range. Auditorium
Total		2852					104	51.4	
St. Patrick's	4 Av S & 9 St	155	39	31	1928	1-5	4	.86	2 playrooms
St. Basil's	12 St BN & 7 Av	278	35	35	1914	1-8	8	3.6	Auditorium-Gymnasium
St. Joseph's	5 Av S & 19 St	244	27	35	1949	6-12	9	6.7	(Auditorium-Gymnasium
School Site	5 Av S & 18 St	-	-	-	-	1-6	-	3.6	(Science laboratory
School Site	18 St N & 4 Av	-	-	-	-	-	-	4.3	
Total		677					21	19.0	
Grand Total		3529					125	70.4	

Proposed for construction in 1951

Source of Information - Superintendent of Lethbridge School District #5 and Secretary of Lethbridge Separate School District #9.

Educational Uses. Educational needs of the city are served by both public and separate schools as well as by two private business schools.

The Lethbridge Public School District #51 contains a senior high school, a junior high school, and five elementary schools, with a total of 88 classrooms. The senior high school, containing extensive facilities for technical as well as academic training, was completed in 1950. Two additional 8-room elementary schools are planned for construction in 1951. The junior and senior high schools are located in south Lethbridge and serve the entire city. Two of the elementary schools are in north Lethbridge and three are in south Lethbridge. The proposed elementary schools are both to be located in the south part of the city. The area occupied by existing and proposed schools totals over 46 acres and an additional school site of 5 acres is held in the south east part of the city. At present the parkdale subdivision in south Lethbridge and Staffordville in north Lethbridge are the only major developed residential areas not in relatively easy walking distance of elementary schools.

The Lethbridge Catholic Separate School District #9 contains one elementary school, one school teaching elementary and junior high grades and one junior/senior high school. *built in 1949, is near the public high school* The junior/senior high school site, and the other two schools are located one in north Lethbridge and one in south Lethbridge. Classrooms total 21 and the area occupied by the schools is over 11 acres. Two future school sites are owned, totalling 8 acres. Present plans call for the construction in 1951

of an elementary school upon the south Lethbridge site.

One of the two private commerical colleges is located in north Lethbridge and the other is in the central business district.

School enrollments in both public and separate schools totalled over 3500 in 1950-51. This represents an increase of over 1000 since 1947. The trend of steadily rising enrollments is most prevalent in the elementary grades and the full effects of the increases has not yet been felt in the junior and senior high schools.

PROPERTY OWNERSHIP & APPRAISEMENT

A large part of the land in the city is publicly owned property. Within the built-up area this is mostly in the form of parks, playgrounds, and public buildings. A fair amount of vacant city-owned property is scattered through the built-up area of north Lethbridge. Large tracts of vacant land lying at the outskirts of the city are city-owned and while a good deal of this consists of coulees there are several sizable areas in north Lethbridge appropriate for development. One of these, at the east edge of the city, is zoned for industrial use. The "river bottom" area at the west of the city is entirely city owned and a large part of the land surrounding the cemetery in south Lethbridge is city property. Most of the area in the south east part of the city which is used for agricultural purposes is privately owned.

The map showing the age of buildings in the built-up area illustrates clearly the successive stages of the development of the city. Some of the older buildings in the central business district have been replaced in recent years and the area surrounding the civic centre now constitutes the section of older buildings. In north Lethbridge new buildings and old buildings are interspersed and little sequence of development by areas is apparent. Staffordville is relatively old in terms of the age of buildings. The age of dwellings in the city is shown in Illustration 33.

There is an apparent relationship between the age and condition of buildings in the built-up area. In general the older buildings are classed in the assessment records as "fair" to "poor" while the newer structures are shown generally to be "good". A higher proportion of the buildings of north Lethbridge fall in the lower categories than is the case in the south part of the city. In the area west of the central business district and in Staffordville the buildings are classed generally as "fair" to "poor", a characteristic significant in terms of social development and living conditions.

In contrast to many urban areas, property tax delinquency in Lethbridge is a relatively insignificant problem. This is undoubtedly due to present economic conditions in the region and to the city's policy of avoiding the sale of land for purely speculative purposes. Of the small amount of delinquent property in 1950 most occurred in north Lethbridge. Also, in terms of length of time, tax delinquency is more prevalent in north Lethbridge.

Illustration 33.

AGE OF DWELLINGS, LETHBRIDGE

Period of Construction	Number	% of Total
Before 1911	1869	27.4
1911-1920	1131	16.6
1921-1930	402	5.9
1931-1940	611	8.9
1941-1950	2809	41.2
Total	6822	100.0

SOURCE OF INFORMATION

CHAPTER 11

"Alberta Facts and Figures, 1950" - Alberta Dept of Industries & Labour.
Secretary, Lethbridge Catholic Separate School District No. 9
Superintendent, Lethbridge Public School District No. 51
Lethbridge City Engineer
Lethbridge Assessment Department
Lethbridge Recreation Department
Lethbridge Herald
R.C.A.F. Aerial Photographs, 1950

C H A P T E R T W E L V E

- A - Indices of Social Disorganization
- B - Public Protection and Social Services
- C - Religious Organizations
- D - Cultural Activities

INDICES OF SOCIAL DISORGANIZATION

Lethbridge is socially a very stable community and normal indices of social disorganization apparent in most urban centres are not present to any great extent.

Crime is not a significant problem in the city. Statistics of adult crime are not available in such a form as to indicate any pattern. Juvenile delinquency is relatively slight, the number of cases totalling 24 in 1949, by far the majority of which involved boys. This is fairly representative of recent trends. Cases in 1948 were exceptionally few, only 2 being reported. There is no particular spacial pattern of delinquency and the principals involved in 1949 came from all parts of the city and from all economic "classes". Truancy is also of limited significance, less than 5 repeating offenders being reported for public elementary schools in 1949-50.

Recipients from the city of financial relief are located mostly in north Lethbridge. Of a total of 37 recipients in 1949, 11 were in Staffordville and 10 were in other parts of north Lethbridge. Four recipients were located in the "river bottom" area and the remainder (12) lived in other parts of south Lethbridge.

In 1946 only .1% of the population of the city were divorcees, of whom 32 were male and 40 female. No spacial pattern is apparent.

As might be expected these indices of social disorganization relate

somewhat to the blighted areas of development west of the central business district in Staffordville, and the squatter development in the "river bottom". Delapidated buildings and other depressed living conditions are not conducive to stable social development.

B - PUBLIC PROTECTION AND SOCIAL SERVICES

City Fire Department. There are two fire stations in the city, one in north Lethbridge on 13th Street adjacent to the C.P.R. yards and the other in the central business district at 4th Street South and 2nd Avenue. The city is served by a fire alarm system of 42 alarm boxes. Department personnel consists of the Chief and 31 firefighters and other persons.

City Police Department. The city Police Court and administration building is located at the edge of the central business district at 5th Avenue South and 5th Street. Law enforcement needs are served by a Chief Constable and 21 other ranks in addition to the personnel of the courts.

Health Services. Lethbridge contains three hospitals: Galt Hospital, owned and operated by the city, with 108 beds and baby accomodation for 18; St. Michael's Hospital, operated by the Sisters of St Martha, with 130 beds and baby accomodation for 38; and the city's Isolation Hospital with 16 beds. All three are located in south Lethbridge. In 1950 a new wing with about 75 beds was added to St Michael's Hospital and a new Galt Hospital building to contain about 150 beds is planned for immediate construction.

The city's ambulance service is operated by the Fire Department and there is also a private ambulance service.

The city's Public Health Department is the inspection agency for the supply of water, commercial ice, meat, and other foods. It is responsible for the inspection of restaurants, food and other commercial establishments, housing, and the swimming pools and must pass upon all plumbing, gas, and sewer installations.

The school boards employ physicians and nurses for physical examination, immunization, and vaccination of the students.

Service Clubs. For its size of population Lethbridge supports an unusually large number of service clubs. Seven international service clubs are represented in the city and carry on such activities as health and welfare services, development of parks, playgrounds and swimming pools, and other social and recreational activities. There are also a number of Canadian and local organizations serving various purposes.

C - RELIGIOUS ORGANIZATIONS

About 25 churches of various denominations are scattered through the city, about 2/3 of which are located in south Lethbridge. Most of these organizations carry on social and recreational activities in addition to religious services. The Y.M.C.A. and Y.W.C.A. both have hostels in the city. Fraternal lodges in the city number 23.

D -- CULTURAL ACTIVITIES

The Lethbridge Public Library, located in Galt Park, contained nearly 26,000 books in 1949 with a circulation of 117,000. In addition to general, children's, and reference books the library circulated films and musical records. A new addition to the library building is currently being completed. In the north part of the city the Lethbridge Miners' Library (for the use of miners only) contains about 800 volumes.

The Gurney Museum is located in Galt Park and contains wildlife specimen and historical relics of the Lethbridge area.

The Allied Arts Council is composed of various cultural organizations active in the city. Other cultural activities are carried on by the city's Recreation Department, the schools, churches, service clubs, etc.

SOURCE OF INFORMATION

CHAPTER 12

Dominion Bureau of Statistics
Lethbridge Child Welfare Department
Lethbridge Police Department
Lethbridge Relief Department
Lethbridge Health Department
Lethbridge Nursing and Welfare Mission
Lethbridge Public Library
Lethbridge Recreation Department
"Economic Survey of Lethbridge" - Alberta Dept of Economic Affairs, 1950.
Lethbridge Herald

C H A P T E R T H I R T E E N

Public Utilities

A - Water Supply

B - Sewage and Garbage Disposal

C - Electric Light and Power

D - Natural Gas

E - Transit System

F - Taxi Service

A - WATER SUPPLY

The city gets its water supply from the Oldman River at a point about 300 yards from the Power Plant. At this location a concrete suction well and low lift pumps draw the water from the river and deliver it to a sedimentation basin from where the water flows by gravity to the sand filters. (Two of these filters were installed in 1950.) From here the water flows through a clear well where it is chlorinated and sterilized. High lift pumps take the water from the clear well and deliver it to the distribution system which consists of 69.7 miles (1950) of cast iron, steel, and wood mains. (22 miles are wood.) Two standpipes in south Lethbridge are utilized in this system and a third, in north Lethbridge by the old airport site, is used for fire protection purposes only since it gives too much pressure for the wooden mains in the area. A concrete reservoir is located near the north Lethbridge standpipe. Illustration 34 shows the capacities of the various components of the water supply system.

The maximum water pressure occurs in the central business district and is 40 pounds per square inch. At the high point of the system near the north Lethbridge standpipe the pressure is 22 pounds per square inch. These pressures vary during short peak periods. In 1950 the maximum amount of water delivered to the city in one day by the high lift pumps was 5,900,000 gallons; that is, nearly $\frac{3}{4}$ the present capacity of the sand filters.

Illustration 34.

	STAGE	CAPACITIES (1950)
Treatment Plant	Low lift pumps from river	9,000,000 gal/day
	Sedimentation Basin	500,000 gallons
	Sand Filters	8,000,000 gal/day
	Clear Well (sterilization)	80,000 gallons
	High Lift Pumps	10,000,000 gal/day
Distribution System	Water Mains	69.7 miles
	Standpipes - South Lethbridge	600,000 gallons
	Standpipe - North Lethbridge	150,000 gallons
	Reservoir - North Lethbridge	650,000 gallons

B - SEWAGE AND GARBAGE DISPOSAL

The sewerage system in Lethbridge is of the separate type, sanitary sewers and storm sewers forming individual networks.

Storm sewers, about 20 miles in length (January 1950) collect surface water from an area considerably less in size than the build-up area of the city and discharge into the coulees at the west side of the city.

About 50 miles (January 1950) of sanitary sewers serve most of the built-up area of the city. The entire network of sanitary sewers converges at the sewage disposal plant in the "river bottom" at the end of the Laundry Hill Road where the sewage is treated before being discharged into the Oldman River. This plant with a capacity of 3 million gallons a day restores about 40% of the free oxygen required to purify the sewage. Dilution with the river water takes care of the balance. The operation of the plant is briefly as follows. Two trunk sewers discharge the raw sewage into a control chamber from where it flows by gravity through a bar screen and trash rack to remove foreign matter such as sticks. The sewage then passes into two large clarifiers or sedimentation tanks where suspended matter settles out. The effluent from these tanks is treated with chlorine and is discharged into the river. The settled sludge is pumped from the clarifiers to two heated digester tanks where biological decomposition is accelerated. The decomposed sludge which by this time is harmless and odourless is then pumped into open sand beds where it is dried out, the resulting effluent being carried off to the river. The dried sludge is disposed of as ground fill or as fertilizer.

Effluent discharged into the river is harmless to aquatic life and cannot contaminate the water supply of communities down stream from Lethbridge.

Garbage is collected from residences on a weekly schedule and from institutions and business houses on a daily basis. It is disposed of in an open nuisance ground in the coulees at the far north west corner of the city. At times the smoke from burning refuse blows across the north part of the city. This nuisance ground has been in use since 1948 and the area previously used for the purpose is located in the coulee at the end of 3rd Avenue South.

C - ELECTRIC LIGHT AND POWER

Three phase, 60 cycle power is supplied by the city owned steam-electric plant, located in the "river bottom" south west of the business district. The plant at present has a capacity of 8,500 Kilowatts and proposed additions are expected to bring this up to 13,500 Kilowatts by 1952. The peak load in 1949 was 7800 Kilowatts. Coal from local mines is used in the plant and in 1949 over 45,000 tons were consumed, an increase of nearly $1\frac{1}{2}$ times over the previous year. Total production in 1949 of 40,533,570 Kilowatt-Hours was 65% greater than in 1945. Of this total 45% was sold to the Calgary Power Company, 46% was used at the pumping station, and 8% was distributed in the city and used for street lighting. The number of consumers has been increasing in proportion with the population and in 1949 the total stood at over 6,000. Of these, 82% received domestic service. Electric

power lines cover the entire built-up area of the city and most of the area is served with street lighting.

D - NATURAL GAS

Natural gas is supplied under a franchise as a public utility by the Canadian Western Natural Gas Company Ltd. Gas is obtained from the Turner Valley, Foremost, and Bow Island fields. The main supply line comes into the city from the north along 13th Street and a second main supply line is proposed from the east, probably along #3 Highway to 2nd Avenue South. Secondary gas lines serve the entire built-up area of the city and consumption in 1949 totalled 1,410,205 million cubic feet.

E - TRANSIT SYSTEM

Lethbridge operates its own transit system which was converted from electric streetcars to gasoline buses in 1946. Passengers carried on the fleet of 17 buses in 1949 totalled 2,513,256. Most of the built-up areas of the city are within easy walking distance of bus lines. In 1950 curb bus-stops were established in the business district. Prior to that time buses stopped for passengers in the moving traffic lane.

F - TAXI SERVICE

Five taxi companies operate in the city, four based in the central business district and one in north Lethbridge. Of a total in 1950 of 24 taxis 17 were equipped with two-way radio. All cabs are metered.

SOURCE OF INFORMATION

CHAPTER 13

Lethbridge City Engineer
Lethbridge Transportation Department
Lethbridge Electric Light and Power Department
Canadian Western Natural Gas Company Limited
"Economic Survey of Lethbridge", Alberta Dept. of Economic Affairs, 1950.
Lethbridge Herald

C H A P T E R F O U R T E E N

Roads and Traffic

A - Existing Street Pattern

B - Traffic and Parking

A - EXISTING STREET PATTERN

Apart from any aesthetic considerations, the existing grid pattern of street layout is not ideal either for traffic or for residential development. With so many street intersections the number of traffic crossings slows down travel and increases accident risk. A great amount of otherwise valuable land is absorbed in street area. In residential areas it is highly desirable to have segregation of through and local traffic, as much distance as possible between vehicles and pedestrians, and to reduce the speed of local traffic. With few exceptions dwellings face through streets in the grid layout. Even with an uncompromising grid base awkward jogs and congestion points occur on what might otherwise be suitable major traffic streets. In some of the residential areas blocks are exceptionally short, thus increasing these difficulties.

Streets in the original subdivision in the central part of the city were laid out with unusual width. In later subdivisions and in the north part of the city this width was considerably reduced, but no allowance was made for occasional major streets of greater width standards.

The three highway approaches are wide enough for present needs but with the exception of Mayor Magrath drive from the south they have very little land allowance for future widening and landscaping. The intersection of #3 Highway with Mayor Magrath Drive presents a serious traffic problem which is currently receiving attention by the city.

Illustration 35.

STANDARD STREET CROSS SECTIONS

Location	Existing Road Allowance (feet)	Pavement Width (feet)	Sidewalks (feet)	Boulevard (feet)
Business Section	100	64	36	none
Bus Route through Residential Area	100	50	9	41
Residential Area	100	40	9	51
Business Section	66	42	24	none
Bus Route through Residential Area	66	40	9	17
Residential Area	66	35	9	22
Bus Route through Residential Area	60	35	9	16
Residential Area	60	35	9	16
No Standards	50	-	-	-

Source - City Engineer.

In 1950 there were $63\frac{1}{2}$ miles of treated streets and 40 miles of lanes and alleys in the city. $35\frac{1}{2}$ miles of the streets were paved (2 miles of concrete and $33\frac{1}{2}$ miles of asphalt) and 28 were gravelled. Present widths of street paving vary from 26 feet to 65 feet and standards as set forth by the city engineer in 1945 for the various street allowances are shown in illustration 35.

Lethbridge is bisected by the C.P.R. running east and west and two separated crossings at 9th Street and 13th Street connect north and south Lethbridge. The highway leading out of the city to the west passes under the railway trestle. Level crossings occur at 21st Street and #3 Highway from the east. A pedestrian underpass is planned at 17th Street.

B - TRAFFIC AND PARKING

As Lethbridge is the trading centre for a large area it is natural that much automobile traffic should originate outside the city. A considerable portion of road traffic in the city is from outside points. In July 1950 the Alberta Department of Public Works took traffic counts on the three highway approaches to the city. Illustration 36 shows that most traffic travelled the highway west of the city, followed in order by the highway to Medicine Hat, the Coutts Highway and the Cardston route.

No figures are available regarding traffic volumes within the city.

Most of the on-street parking space in the central business district is

Illustration 36.

HIGHWAY TRAFFIC VOLUMES, LETHBRIDGE

Highway	Location of Count	Date 1950	Number of Vehicles, Daily Average	% of Total
#3 West to MacLeod	$\frac{1}{2}$ Mile West of Lethbridge	July 24-30	3,183	39.4
#3 East to Medicine Hat	$\frac{1}{2}$ Mile East of Lethbridge	July 24-30	1,838	22.9
#4 South to Coutts	$\frac{1}{2}$ Mile East of Junction of Highways #4 and #5	July 17-23	2,034	25.2
#5 South to Cardston	$\frac{1}{2}$ Mile South of Junction of Highways #4 and #5	July 17-23	1,029	12.7
		Total	8,084	100.0

Source - Alberta Department of Public Works.

restricted, some being limited to one hour and some to fifteen minutes. In certain places parking is not permitted at all. In general, 15 minute stalls are provided at the middle of the block with one hour stalls adjoining on either side. In August 1950 there were 714 such regulated stalls in the central business district. Two off-street parking areas are located in the area west of Galt Park and four such areas are located in the area west of Galt Park and four such areas are located in north Lethbridge. However, these areas bear little relation to the city's parking needs. Lack of adequate parking facilities is a common problem in growing urban centres which is usually more severe in cities such as Lethbridge which attract a high proportion of out of town traffic. While parking has only recently become a generally recognized problem in the city it may be expected to become a serious difficulty in the future.

SOURCE OF INFORMATION

CHAPTER 14

Alberta Department of Public Works
Lethbridge Police Department
Lethbridge City Engineer

C H A P T E R F I F T E E N

Transportation

A - Railway Service

B - Air Service

C - Bus Service

A - RAILWAY SERVICE

The city is the divisional point for the Lethbridge Division of the Canadian Pacific Railway. Major lines run west through the Crowsnest Pass to Nelson and Vancouver, north through Calgary, east through Medicine Hat, and south to Great Falls via Coutts. Other lines run north east to Turin, south west to Cardston via Stirling, and east from Stirling to connect with other lines in Saskatchewan. 951.2 miles of main railway line is included in the Lethbridge Division of the C.P.R.

B - AIR SERVICE

Located $2\frac{1}{2}$ miles south of the city limits is the municipal airport, Kenyon Field. The airfield is owned by the city and operated by the Dominion Department of Transport. In an area of 875 acres there are three asphalt runways (150 feet wide and 5512, 5525, and 5750 feet long) and seven hangars, six of which are owned by the R.C.A.F. and one by T.C.A. Only three of these hangars are in regular use. A general administration building, a radio range beam and instrument landing system, and a traffic control system serve the field.

Trans-Canada Airlines routes from Lethbridge go north to Calgary and east to Winnipeg via Medicine Hat and Regina. Between August 1949 and July 1950 the airline boarded an average of 633 passengers monthly and off-loaded an average of 656 passengers. Lethbridge is a natural cross-roads for T.C.A. service, being on the most direct east-west, coast to coast route and sometime in the future the company intends to re-establish a transcontinental flight through the city.

Western Airlines operate routes south to Great Falls, and north to Edmonton. Monthly totals of passengers boarded and off-loaded between August 1949 and July 1950 averaged 310 and 278 respectively.

The Lethbridge Flying Club is situated at Kenyon Field and is extremely active, maintaining hangar accomodation and a large clubhouse and operating a charter flying service.

C - BUS SERVICE

Greyhound Bus Lines operate from Lethbridge to the south via Coutts, to the east via Medicine Hat, to the North via MacLeod and Calgary, and to the west through the Crowsnest Pass. Service in 1950 consisted of 4 arrivals from the west and 4 departures ; 3 arrivals from the east and 3 departures; and 2 arrivals from the south and 2 departures.

The Lethbridge Northern Bus Company operates a service to Turin via Shaughnessy and Picture Butte, carrying between 150,000 and 200,000 passengers yearly.

Paul's Bus Line runs between Lethbridge and Foremost via Wrentham.

SOURCE OF INFORMATION

CHAPTER 15

Canadiam Pacific Railway
Trans-Canada Airlines
Western Air Lines
Greyhound Bus Lines
Northern Bus Company
Lethbridge Herald

PART TWO

BASIS FOR PLANNING



CHAPTER SIXTEEN

Planning Problems

A - Location and Direction of Growth

B - Use Districts

C - Areas of Blight Development

D - Street Pattern

E - Parking Problems

F - Recreational Areas

An examination of Part One of this report and of the survey maps indicates certain basic problems of future development of the city. It cannot be within the scope of this report to present solutions to these problems: much more time for detailed analysis would be necessary before comprehensive proposals could be attempted. However, in this and the following chapter of the report an attempt is made to point out some of the more significant problems which require special attention and to suggest some of the processes of analysis and means of effectuation by which solutions could be achieved. Discussion is necessarily broad and is intended only as a guide to the type of action required for the preparation and achievement of a comprehensive development plan.

A - LOCATION AND DIRECTION OF GROWTH

The fundamental cause of many of the current as well as future planning difficulties is the physical location of the city. The natural barriers of the Oldman River to the west, Henderson Lake to the east, and the airport coulee to the south, together with the man-made barriers of the Dominion Experimental Farm and the old internment camp to the east are all definitely confining to future expansion of the city. While there is probably sufficient land within the city to accommodate between 15,000 and 20,000 more inhabitants, study should be made of possible directions of growth and of future extensions of the city limits to accommodate this expansion.

The C.P.R. which bisects the city in an east west direction does not

present immediate difficulties to growth. However, in any development to the ~~west~~^{east} and to the south ~~west~~^{east} care should be taken that it is related to the railway.

The sequence of developing new areas should be carefully studied and should be examined in terms of utilities and other public services.

B - USE DISTRICTS

The location of the major business district in the corner formed by the C.P.R. and the coulees of the Oldman River places it definitely "off-centre" in relation to the present built-up area of the city and to possible future expansion. This is a disadvantageous position in terms of the "functioning" of the business district. Since activities of the city centre upon this area, problems of traffic circulation and parking and of land use are bound to intensify as the city expands. Attention should be given to alleviating the problems as much as possible before they become serious.

As the city grows the need for recognizable residential "communities" will become more apparent. City planning studies indicate that relatively self-contained communities consisting of about 4,000 people and having social, educational, recreational and shopping facilities of their own are desirable in terms of daily living. These "communities" generally consist of three or four sub-communities or "neighbourhoods" and a social "centre" of the neighbourhood and of the community is considered necessary. The population of the community is designed to be sufficient to support a junior high school and the population of the neighbourhood is

considered sufficient to support an elementary school. Thus the "community" would contain one junior high school and three or four elementary schools. Two communities are generally required to support a senior high school. The school is only one of the many possible nuclei of the "community" and "neighbourhood" concept. These and other social institutions in Lethbridge should be examined in the light of the development of "communities" as the city expands.

Attention should also be given to the type of development in residential and other areas. Indiscriminate intermingling of multiple family dwellings, apartments, duplexes, and single family dwellings is not wise, particularly where other than residential uses are also present. Considerations should be given to careful allocation and design of areas suitable for apartment and multiple family type dwellings.

Industrial uses should be consolidated as much as possible. Straggling areas of mixed industrial and other uses are undesirable. Attention should be given to the design of existing industrial areas before they become built-up in order to ensure the most profitable and satisfactory use of the land. Industrial areas create barriers to residential development and care should be exercised in opening new areas so that unnecessary restrictive land uses do not occur. This is particularly important in view of the limited directions of possible expansion of the city.

The sizable area of currently vacant land at the west side of north Lethbridge should be studied carefully in the light of desirable uses before being developed.

C - BLIGHT AREAS

In any city there are bound to be areas where physical conditions are substandard in relation to overall development. Such areas are expensive both financially and socially and in cities such as Lethbridge are ill-afforded. Two such areas exist west of the central business district and in Staffordville and should be the subject of a detailed and comprehensive study of problems and possible solutions.

D - STREET PATTERN

The street pattern is the physical frame work of the city. One of the essential fundamentals of an optimum street layout is the separation of the various types of traffic. As much as possible pedestrians should be separated from vehicles and local vehicular traffic separated from through traffic. Street access between the central business district and the other areas of the city and between these various areas should be provided by relatively high-speed through traffic routes. The width of these major traffic thoroughfares should be related to traffic volumes and jogs or other congestion points should be eliminated. Feeding into these major routes should be a network of minor traffic streets serving purely local needs. These should not be through streets and should be designed to reduce vehicle speeds, at the same time permitting traffic to move smoothly within the area without

undue disruption. Sidewalks should be placed as far from moving traffic as practicable. Within residential areas this separation of traffic and reduction of vehicular speed is essential for safe and pleasant living, and if possible no dwellings should face onto major traffic arteries. The street pattern must be inseparably coordinated with the development of residential "communities" as previously discussed.

The entire street pattern of the city should be examined in these terms of traffic and land use needs. To accomplish this a traffic analysis of the city should be made, counts being taken not only of volumes but also of origins and destinations and types of traffic. Transit routes and extensions should also form part of this study. The need of a highway trucking route through or by-passing the city should be studied from such a traffic analysis. Existing level crossings, street jogs, and other congestion or danger points should be investigated as to the possibility of their elimination. In connection with the street pattern the current city policy of eliminating advertisement billboards on the highway approaches in the city is sound.

E - PARKING PROBLEMS

Such a traffic study as suggested above would bring to light many of the parking needs of the city. The most serious parking problem occurs in the central business district and without action of some sort is likely to become very serious in the future. A study of existing parking facilities, (both public and private) together with a traffic analysis should form the basis of

an analysis of on-street and off-street parking requirements, both as to location and as to extent.

F - RECREATIONAL AREAS

One of the fundamental needs of a city is the establishment and preservation of open spaces, both in the built-up area and in future development. As far as possible these open or "green" areas should join one another and form a continuous network of open space. Parks, playgrounds, recreation area, scenic drives, promenades etc should be the constituents of this network. Existing parks and playgrounds should form the basis of such "green" spaces.

The discontinuation by the city of residential uses in the "river bottom" area is wise. This is an excellent site for the development of an extensive recreational area of a semi-natural character. Consideration should also be given to additional road access to the area from the city.

Playgrounds and parks are important as centres of "neighbourhoods" and "communities" and future development should be planned with this and the development of schools in mind.

There is a pressing need in the city for local play areas for pre-school children. These should be the size of one or two residential lots and should be within easy access of all dwellings, preferably located one in each residential block.

C H A P T E R S E V E N T E E N

Effectuation

A - Civic Ordinances

B - Administration

A - CIVIC ORDINANCES

The present city Building By-Law, enacted in 1910, is badly out of date and in need of revision. Until this is done it will be of limited use as a planning tool; which should be one of its primary functions.

The Zoning By-Law, enacted in 1945, is also in need of revision. It contains a number of seeming inconsistencies and in several places is not as comprehensive or as restrictive as provincial regulations covering the same subjects. For a city the size of Lethbridge the by-law designates an insufficient variety of land use areas. No differentiation is made between types of residential uses, or between intensities of commercial and industrial uses. As a result the categories become too broad and undesirable uses have to be permitted.

B - ADMINISTRATION

Planning is necessarily a continuing function. While one of the first and most important phases of planning in a city such as Lethbridge must be the preparation of a general development plan, problems cannot be solved immediately and neither can the preparation of a plan or schemes ensure that problems will be solved or remain solved. As needs and problems change, emphasis and direction in planning must also change. It is vital that problems be recognized before they become serious or even perhaps beyond solution.

It is a widely accepted practice on this continent that the functions of planning be carried on by a separate civic department. Existing departments have neither the time nor the technically trained personnel to undertake this

work. What is equally as important, the preparation of a general development plan and planning schemes should not be done by persons working under others who will be charged with the responsibility of carrying out component parts of the plan. The activities of all civic departments must be coordinated within the concept of planning and thus a planning official must be a liberty to work with all departments at all times.

As the citizen advisory body essential to planning in the city the present Town Planning Commission functions admirably. The city by-law which establishes the commission delegates to it the power to prepare "an official Town Plan"; that is, a general development plan. The preparation of such a plan is more properly the function of a civic department. A group of public-spirited citizens cannot be expected to devote the necessary time nor to have the technical training to accomplish this task, nor can they be expected to be fully conversant with all phases of planning problems. However, in cooperation with a planning department the Commission could be expected to be able to function even more efficiently as an advisory body.

The 1950 revisions of the Alberta Town and Rural Planning Act permit the establishment of two citizen planning bodies, one to act in an advisory capacity and the other to prepare technical plans and schemes. It is questionable whether two such citizen bodies would be in any better a position to accomplish these tasks than the existing Commission. The advantage of the current legis-

lation lies in the more explicit statement of the powers of these Bodies, which specifically permits the appointment of trained planners.

Consideration of problems of roads and traffic properly falls within the function of town planning and ^{it} is unwise to isolate any of the component parts of the planning process. Consideration should be given to coordinating the efforts of the Town Planning Commission and the Traffic Commission in this regard. It is also important that planning activities be related to the work of other advisory commissions such as the Recreation Commission and the Industrial Commission, and also to the work of the school boards.

Briefly, in summary, consideration should be given to the establishment of a civic planning department with technically trained personnel to coordinate the planning activities of the city and to work with other civic departments and the Town Planning Commission as presently organized.