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# Amherst Township, A Regional Study

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# AMHERST TOWNSHIP, A REGIONAL STUDY

A Thesis

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By

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# PREFACE

Amherst township was selected as the area to be studied because it was believed to be as nearly representative of the aspects of land and life in north central Ohio as any small area that could be found. It is located on a section of the Lake Plain which has somewhat parallel dividing lines formed by three beach-ridges, and on the northern edge of the Glaciated Plain. Then, the quarrying of the world famous Berea sandstone gives somewhat of an individual aspect to the small towns within Amherst township.

The purpose of the paper is to describe the physical landscape, and to interpret the influence of the natural environment upon the cultural features. Many of the essentials of the landscape forms, both physical and cultural are represented in maps, photographs, and tables.

In addition to the personal observations made during the past summer many references have been used in the gathering of information for this paper for which credit is accorded in the footnotes and bibliography.

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OUTLINE

# I. INTRODUCTION

Amherst township, consisting of 24.65+ square miles of territory, and bounded by surveyed lines, lies astride the level lake plain surface and the northern edge of the glaciated plain of northern central Ohio. Three former lake beaches, Maumee Beach, Whittlesey Beach, and Warren Beach form three well defined ridges on the level lake plain surface. Stream systems are post-glacial, youthful, and poorly developed; the western part of the township is dissected to some extent but the eastern half is level and undisturbed by stream erosion.

Agriculture is the most important and lasting industry of the township, although Amherst has become world famous because of the Berea sandstone which is quarried in the vicinity. Since Amherst township received its first settler about 125 years ago, these quarries have furnished building materials for over 88 years.

Two towns in Amherst township have grown to form population centers. Amherst, primarily a residential town, the larger and earlier developed, was stimulated to growth first, by the agricultural development, and next by the early quarrying activities. South Amherst is a recent outgrowth of the quarrying industry near it.

In the following chapters, the natural environment is described, the pattern and functions of the past landscapes are depicted, and the modern agricultural and village landscapes are described and analyzed.

## II. PHYSICAL CHARACTERISTICS

### A. Topography

1. The Beach Ridges (Plate I)

Three beach-ridges, Maumee beach, Whittlesey beach and Warren beach formed by glacial lakes[1] cut across Amherst township in a general northeast to southwest direction. Maumee beach, the southernmost one, forms a dividing line between the lake plain and the till plain, while the remaining beach ridges divide the lake plain into narrow strips of territory varying from three-fourths of a mile to two miles in width. Warren beach, the northernmost one, divides into two parts west of Beaver Creek. Both branches continue in a westerly direction, but one is about three-fourths of a mile north of the other. These beach-ridges have very even crests and are seldom more than a fourth of a mile wide. They stand from 20 feet to 30 feet above the bordering lake plain, and the southern slope is more gentle than the northern or the shore side. Maumee beach, which has been subjected longest to erosion, is the least distinct of the three ridges. Warren beach, which is the youngest ridge, has a precipitous northern slope. The beach-ridges descend in elevation with relation to each other in step-like terraces. Maumee beach, the southernmost is 777 feet above sea level, Whittlesey Beach is approximately 731 feet above sea level, and Warren beach is about 681 feet above sea level. Locally these beach-ridges are known as the South Ridge, Middle Ridge, and North Ridge.

1. Leverett, Frank, Glacial Formations and Drainage Features of the Erie and Ohio Basins, Monographs of the U.S.G.S. Vol.XLI

The beach-ridges are well drained because of their slope and their porous soils. Beaver Creek has cut across and partially destroyed the three beaches in the western part of the township. Little Beaver Creek and another small tributary have cut narrow trenches through the beaches in the eastern part of the township. Another small tributary has cut through the two younger beaches in the northwest part of the township. These very youthful streams often parallel the beaches from ¼ to 1 mile or more before they cut through and continue their courses to Lake Erie.

2. The Lake Plain

About two-thirds of Amherst Township lies on the lake plain of north central Ohio. The lake plain, including the beach-ridges, is approximately four and three-eighths miles wide along the western side of the township and only three and one-half miles wide on the eastern side. The lake plain rises toward the south approximately 42 feet per mile or 152 feet in three-and three-fourths miles. This consequent slope of the lake plain rises in three step-like surfaces so that its southern edge is almost 200 feet higher than Lake Erie. The lake plain is divided into three sections by beach-ridges. Each surface merges with and is bordered by a sandy gravelly ridge. These three well developed surfaces represent former lake bottoms. Consequently they have a minimum slope of 10 feet per mile which increases to 30 feet or more per mile as each beach-ridge is approached.

The monotonously level surface of the lake plain in

Amherst township is broken by a few rock hills. These are composed of Berea sandstone which was laid down in Mississippian times and then eroded to advanced maturity in the subsequent geologic periods. Because of resistance to erosion before and during glacial times these hills of sandstone, particularly those remnants which had filled pre-Mississippian valleys, stood out on the surrounding topography as rock hills. All of these hills were sufficiently high to stand as islands in glacial Lake Whittlesey and two northernmost ones remained as islands in the lower glacial Lake Warren. Two of the hills, approximately 750 feet and 760 feet above sea level, are east of Amherst, and three such hills, two of which are about 760 feet above sea level and the third 789 feet above sea level, are west of Amherst. All of these hills with the exception of the 750 foot one have been the sites of former quarries, for the soil cover on the tops is very thin and in some cases small exposures of bedrock about 50 feet or 60 feet square show at the surface.

Drainage is poor on the Lake Plain due to the youthful development of the streams. Beaver Creek, whose source is in the adjoining till plain has carved a narrow, meandering valley through the lake plain and beach-ridges on the western side of the township. This stream is from 30 feet to 70 feet below the upland surface. The bluffs are very precipitous and in some cases almost perpendicular, the valley having been carved out of the underlying Bedford Shale. Beaver Creek has a fall of approximately 170 feet in its course from south to north across the Township. The flow of the stream

varies greatly with the season of the year. In summer it becomes a mere ribbon of water.

There are three smaller streams which have carved extremely youthful channels through the lake plain and beach-ridges. The upper reaches of these smaller streams have narrow, shallow, weed-choked channels. In order to improve the drainage of the surrounding farm land, farmers have straightened and dredged those east of Beaver Creek. However, one of these streams which is west of Beaver Creek has been ponded for recreation purposes. Due to this extremely youthful stream work and the resulting inadequacy of drainage the lake plain is dotted with swampy areas.

3. The Glaciated Plain

About one-fifth of Amherst Township lies on the Glaciated Plain of northern Ohio. This is the area south of Maumee beach in the southeast corner of the township. The surface is level to slightly undulating. So level is the surface and so youthful is the stream work that Little Beaver Creek which is the only stream on the Glaciated Plain has worked headward from South Ridge about three quarters of a mile, but its channel in this portion of the township is nothing more than a weed-choked gully.

## B. A Geological Section

The beach sands and gravels of the ridges and the stratified and thickly bedded lake clays of the Lake Plain form the mantle rock over the Lake Plain and the ridges. These clays and sands are the sediments which formed along

the shores and at the bottoms of the pre-glacial lakes.

The lower portion of the mantle rock of the Lake Plain and the ridges consists of unassorted and unstratified glacial drift which varies from a few inches to over 80 feet in thickness. This glacial till forms the top portion of the mantle rock in the Glaciated Plain.

The bedrock of the region is the Bedford shale and the Berea sandstone when present. The Bedford shale is a thin-bedded, often flaky, soft, reddish chocolate colored arenaceous shale. The dip is to the southeast. The formation varies in thickness, the maximum being about 60 feet. The Bedford formation has long been regarded as the basal member of the Mississippian or Lower Carboniferous system, but some geologists are of the opinion that it forms a part of the Devonian system.

The Berea sandstone is near the base of the Mississippian system. It is a sandy buff to blue-gray colored rock. It varies in thickness from 0 to 312 feet. The dip of the rock is usually to the southeast. However, in the quarries (No. 6 and No. 9) at South Amherst the dip is nearly everywhere toward the center where the thickness is greatest. Some geologists claim that this sandstone was laid down by a Mississippian sea on a stream-carved, mature surface.[2] Others claim that it was laid down on a surface gouged by sea currents. Because of pre-glacial and glacial erosion only those remnants which filled the valleys or gouges of

2. Prosser, Charles S., The Devonian and Mississippian Formations of Northeastern Ohio, Geological Survey of Ohio, Fourth Series, Bulletin 15, 1912, p.

that pre-Mississippian surface and the particularly resistant remnants which became rock hills on the new topography remained. Consequently this sandstone is found as the underlying bedrock only in scattered places throughout this township.

C. Soils

The soils of Ohio belong to a group which Marbut designated as the "Brown Forest Soils", which includes soils that are transitional in character between the true podsol of the north, and the laterite of the south.[3] The term "podsolic" is often applied. The soils of the lake plain of Amherst township are characteristic of the Glacial Lacustrine soils of northeastern Ohio. They consists of sands, gravels, and silt which lie upon a clay hard pan. As a rule these soils are acid and rather low in crop productivity. They are very sticky in wet weather and retentive of surface waters.

The soil on the crests of the beach-ridges is very similar to the Plainsfield sandy loam in Conrey's and Paschall's "Classification of the Ohio Soils". This soil is generally a very fine, brown sandy loam, although in some phases it is gravelly. This Plainsfield sand is friable and loose, and thus easily worked. It varies in depth from 40 feet to 100 feet. The subsoil is usually heavier and is a light yellow in color. The natural drainage is good and conditions are favorable for rapid leaching of the soil,

3. Marbut, C.F., Atlas of the American Agriculture Part III, Soils of the U.S., 1935, p.13.

and the farmers preserve its fertility only by using generously barnyard manure and artificial fertilizers. Because of the high acidity lime is sometimes applied.

The soils on the Lake Plain vary considerably. The Caneadea clay loam covers the most of the level, low surface of the Lake Plain. It is a silty clay loam of a brown gray to gray color at the surface. It becomes a mottled gray and yellow brown in the sub-soil. Laminated sand, silt, and clay are often found at depths of about 3 feet. On the edges of the Lake Plain which border the north sides of the beach-ridges the Reynolds sandy loam is usually found. This is a fine sandy dark gray loam, the subsoil is heavy and a mottled yellowish brown in color. A clay hardpan is usually found beneath the soil which is around 2 feet or 3 feet deep. Conrey and Paschall rate this acid soil as very poor. Farmers practice rotation of crops and use manufactured fertilizers and barnyard manure because of the low fertility of these soils.

About $\frac{1}{2}$ mile north of South Ridge and east of Amherst, there is a bed of a former lagoon which covers an area about 1,000 feet by 300 feet. The soil is a swamp marl which is lumpy and varies in color from brown to dark gray. The soil cover is not more than 3 feet or 4 feet deep. Pieces of shelly rock from the underlying Berea sandstone and glacial boulders are scattered profusely over the surface. Because of the low fertility of the soil and its swampy character little cultivation was practiced.

A long serpentine ridge, similar to an esker, crosses in a north-south direction between Whittlesey Beach and War-

ren beach, east of Amherst. The ridge is over 1,000 feet long and varies from approximately 200 feet to 300 feet in width. It ranges in height from 10 feet to 15 feet; the slope is steep. At the north end it forks to the east and to the west. The soil cover is thin, very sandy, and gravelly. This ridge contains many boulders of cobble-stone size. About one boulder out of 15 or 20 is foreign. Farmers have picked up many of the boulders which had lain on the surface and piled them into piles over 15 feet high. Cultivation has been practiced on this rocky, infertile ridge, but it has been given up as unprofitable and today a large area of unproductive land covers its surface.

The Mahoming soil[4] is found on the till plain in this part of Ohio. This brownish-gray soil varies from a silt loam to a silty clay loam. The subsoil is a heavy clay which acts as a hard pan to the surface. It is acid and not productive.

## D. Climate

Amherst township is in the Temperate Zone of cyclonic storms, and is on the borderline between Koppen's Cfa and Cfb types of climate, that is, a constantly moist climate with at least one month having a mean temperature of 64.4°F. The nearest government cooperative weather station is located at Oberlin in the adjoining township five miles away. Here, 33.63 inches of rainfall has been found to be the mean annual rainfall over a period of 38 years. Every month has

4. G.W. Conrey and A.A. Paschall, A Key to the Soils of Ohio, p.19.

over two inches for an average mean with the exception of May, June, and July which has over three inches per month. Thus, during the growing season the earth receives over half the annual amount of rainfall. The amount of rainfall for some years departs from the mean as much as 11,62 inches, often to the detriment of crop production. In some years Oberlin has as little as 25.01 inches for the annual rainfall and in others as much as 48.06 inches. From 1930 to 1935 a sub-normal rainfall was received.

The mean monthly temperatures vary from 72.5° F. in July to 26.0°F. in January. The three warmest months are June, July, and August. Thus the combination of rain and high temperatures makes possible a splendid growing season. The high temperatures of August and the fore part of September and the decreasing amount of rainfall permit an economical harvest season. As a result of this climate, corn, winter wheat, and oats can be successfully grown here.

Ordinarily in Ohio the length of the growing season is expected to decrease from south to north, but south from the shoreline of Lake Erie the length of the growing season decreases because of the ameliorating influence of Lake Erie. Amherst Township is in one of the two sections of Ohio which has a growing season longer than 192 days. The average date for the first killing frost in autumn along the lake shore if October 30th and that of the last killing frost in spring is April 15th while the corresponding dates at Oberlin Ohio are October 10th and May 8th. Amherst township is in a climatic transitional zone.

### E. Original Forest

When the first settlers came to this township they found this level land covered with a magnificent forest of hardwoods. The region had a forest transition between the southern hardwood (Oak-Hickory) Forest, and the Southern Chestnut (Chestnut, Chestnut-Oak, Yellow Poplar Forest). The climate was cold enough and warm enough to permit the first two types of forest and the thin sandy soils of the beach-ridges permitted the Chestnut associations. Because of the distribution of rainfall so that the maximum comes during the summer and because of the long growing season, the forest trees grew to an unusually large size.

## III. THE LANDSCAPE OF THE PIONEER PERIOD

### A. Farms

Following the Indian removal, the surveys were made and the lands equalized; that is, the value of the inferior townships was made equal to the better townships by the addition of land. Then, the ownership of the land which was drawn by lots was established. Amherst Township was drawn by Martin Sheldon, Calvin Austen, Oliver L. Phelps, and Asabel Hathaway. After more equalization of the lands had been carried out, these four owners of the township subdivided the land and sold parcels to individual settlers.

In 1811 Jacob Shupe, a Pennsylvanian, made the first clearing in Amherst township near Beaver Creek about a mile and a half north of the present village of Amherst where a

broad flood plain with the stream near the center, and gently sloping bluffs add an easy crossing to the attractions of the stream for navigation and for power. Most of these early settlers coming from New England or Pennsylvania were primarily farmers looking for productive agricultural lands. They drove their oxen along the trails which followed the better drained beach-ridges to the sites of their respective farms. The dense forests accentuated the poor drainage of the Lake Plain so that much of the surface was marshy. The best drained surfaces were those bordering the streams and along the beach-ridges. Consequently, the first settlers of Amherst township chose these sites to settle on, and the pattern of settlement roughly followed the beach-ridge lines and the streams.

While Amherst Township formed the western fringe of the American frontier the settlements were in scattered clearings, isolated from the main area of established farms by the yet uncleared wilderness. Simple cabins of rough-hewn logs with chimneys of stone and mud, and roofs of mudded thatch formed the homes of the pioneers. The first crops of corn and forage were often raised among the stumps of a partially cleared land. With the enormous task of clearing their land and the abundance of wood on every side, fire was usually resorted to as the cheapest and easiest way of clearing the land. Logs were cut and stacked into great piles and then burned. With remarkable rapidity the landscape was transformed from the virgin forest with the scattered clearings to the rectangular, open fields waving with grain or dotted with woodland. The farms were generally much larger than those

of today, ranging from 200 acres up to 900 acres.

Subsistence farming was necessarily the most important occupation of the period. Wheat, corn, oats, and potatoes were planted on the cleared spaces. The sheep and cattle grazed on the swamp lands until sufficient land had been cleared. The following table gives the agricultural statistics which show the relative importance of the agricultural productions of Amherst township in 1878.[5]

Table I

| Product | Number of Acres | Amount Produced |
|---|---|---|
| Wheat | 1,058 | 18,630 bushels |
| Potatoes | 107 | 12,572 bushels |
| Oats | 758 | 33,190 bushels |
| Orchards | 415 | 12,405 bushels |
| Corn | 1,042 | 36,493 bushels |
| Meadow | 1,930 | 2,482 tons |
| Butter | | 29,690 pounds |
| Cheese | | 132,080 pounds |
| Maple Sugar | | 195 pounds |

Most of the other industries of the pioneer period were primarily subsistence industries which were subsidiary to farming. Jacob Shupe built the first grist mill and the first saw mill in 1814 or 1815 on Beaver Creek. Previous to this time the farmers of Amherst township had had to carry their corn to Chagrin Falls, over 48 miles away, or to Huron River, over 30 miles away; in either case a three-day journey was necessary. A year or two later Shupe moved his mill

5. Williams, W.W., History of Lorain County, p.341

a mile or more upstream to take advantage of the ridge road travel and to use a narrower dam site. During the next twenty years a saw mill or grist mill was erected on every small stream that could possibly furnish any power. These mills were known as 'thunder shower' mills for they ran only after heavy rains.

In the 70's cheese factories flourished. They were found near the more travelled ridge roads. The farmers of this township had to produce products which would stand the high costs of transportation to the then distant market of Cleveland.

Roads soon became a part of the landscape. The first road developed from an Indian trail which had followed the well-drained Middle Ridge. South Ridge road was opened next. This was made suitable for the stage coaches which carried mail and passengers. The Cleveland road which follows North Ridge was the last of the three ridge roads to be opened. As the settlers cleared the more desirable sections of the lake plain, roads leading from the lake southward tied these ridge roads into one great network.

## B. Growth of the Villages

The settlers tended to congregate in small groups on the ridges where the trails across the lake plain intersected the main trails of the ridges. Webb's Corners, the present South Amherst, Kendeigh's Corners on Middle Ridge north of South Amherst, Whiskeyville on South Ridge, and the Corners, the embryo village of Amherst were the impor-

tant settlements of the period.

The village of Amherst was founded by Josiah Harris who had settled near a spring which still persists near Beaver Creek. For many years this embryo village was known as "The Corners" because this was the crossing point for the main north-south and east-west routes. Josiah Harris, a man of exceptional business ability who had kept a tavern here for many years, finally decided to lay out a portion of his grant into town lots. He named the settlement Amherstville. Through the 30's, 40's, and 50's the village growth was slow. Farming was the chief industry of that period, and that did not demand a grouping of peoples. However, the building of the Lake Shore and Michigan Southern Railroad, then called the Cleveland and Toledo Railroad stimulated the growth of Amherstville. The town gradually increased in size until 1870 when the stone quarries of the township began to be worked upon a scale much farther advanced than ever before, and then for several years the population increased quite rapidly.

About this time Milo Harris purchased the interests of the other heirs to his father's estate and laid out an addition to the village. The name was changed to North Amherst, and in 1873 the town was incorporated.

South Amherst was known as Webb's Corners in the early period of settlement. The first tavern of Amherst Township, kept by the Webbs, was located here, a point where the north-south road which follows Beaver Creek crossed the east-west road along South Ridge. As late as 1903 there were but ten houses mapped on the site of the present South Amherst which

was then called Amherst, and these were scattered over a distance of a mile along both sides of South Ridge.

## C. Quarrying

Amherst township has long been famous because of the excellent sandstone which it has produced. The quarrying of Berea sandstone began in this region in 1848 when Sylvester Silsby began to quarry grindstones out of the sandstone hills on lots 59 and 60, east of Amherst. Some of the first stone quarried in Amherst township was shipped by way of Beaver Creek to the Lake. Then, the coming of the Lake Shore and Michigan Southern Railroad gave an impetus to the quarry business. For forty years quarrying flourished in the northern and western parts of the township. The Clough Quarry located on a sandstone hill in the NW corner of the township, another quarry 1½ miles west of Amherst furnished excellent building stone, curbing, and grindstones when they were first opened. Later, because the workmen encountered different structures they were able to split the stone of some layers into choice flagging, while only cheap breakwater stone could be taken from others. Quarries were located ½ mile west of Amherst, a mile west of Kendeigh's corners, and Turkey Rock Quarry about 3 miles north of South Amherst. The latter produced grindstones which rivaled the famous Wickersley stones of England.

The sandstone at South Amherst must have been known to the pioneers as soon as they located in the vicinity

for it was barely covered with drift and lake clays. The early farmers looked upon this as waste land. Stone may have been quarried here in a small discontinuous way before 1855, but it was quarried in appreciable amounts in that year and hauled to Oberlin. In these early years this stone was used principally for grindstones.

Men worked, in those days, terrifically hard to wrest the land from the forest which had required 200 years to grow, in order to plant upon it corn, wheat, oats, and potatoes, all annuals; and they made their profit by quarrying stone which had been completely prepared for use millions of years before. Thus at different times man responds very differently to similar conditions.

In less than half a century the sandstone hills in the northern and western parts of the township lost their wooded solitudes. The great trees were cut off and the thin soil covers stripped to expose the bed-rock. The hills bristled with heavy iron derricks, which, worked by steam engines, swung ponderous blocks of stone from the quarry holes to the railroad cars above. Hundreds of men toiled along the ledges and in the pits. Buildings which housed sawmills, turning lathes, and other necessary machinery sprang up like mushrooms. Just as suddenly as the quarry industry had come into being on the hill tops did the industry die out, for the stone was exhausted. Derricks disappeared, buildings were torn down, and nature was left to cover the scars left by the quarrymen. Today wooded solitude and unproductive tracts again hold sway. South Amherst with more abundant sandstone still continues.

## IV. DEVELOPMENTAL CHANGES IN THE LANDSCAPE

The landscape of Amherst township has gradually changed since the early period. Population has increased, farms have become smaller, types of farming have changed, and quarrying has narrowed down to the one place near South Amherst. Hard surfaced motor roads, railroads , telephone and electric lines which have strengthened regional connections, have been established.

## V. THE PRESENT-DAY LANDSCAPES

The rural landscape of Amherst township bears many resemblances throughout but a land use analysis brings out some significant differences. Some of the differences are: the unequal distribution of population, the type and location of the farmsteads, and the kinds of crops. Where there is a change in the slope, the kind of soils or in air and water drainage, the cultural forms also change. In order to show the more striking contrasts in the land use and in the characteristics of its occupancy, Amherst Township has been divided into three Geographical Sub-divisions: the Beach-Ridge Sub-region, the Lake Plain Sub-region, and the Glaciated Plain Sub-region.

### A. The Beach-Ridge Sub-region

Numerous well-kept farmsteads line the hard-surfaced roads which follow the crests of the beach-ridges. Electric lines and telephone lines trace the sinuous but distinct routes of the beach-ridges. Even the Indians recognised these

ridges as marking lake margins and took advantage of their good drainage and levelness in laying out their trails. Orchards with their carefully spaced rows of trees, and gardens with their rows of neatly weeded vegetables form a pleasant relief to the picture.

Farmsteads are twice as numerous on the beach ridges as in any other sub-region in the township because of superior drainage, and because of the main routes of travel. The farms of the beach-ridges have been sub-divided many times. The resulting small farms with their small fields receive greater intensity of cultivation, which they are well able to bear, and consequently land values are increased.

The names of the land owners shows a predominance of the Early American stocks but many of the tenants are Hungarians, Italians and Slovaks who have come in during the last two decades. The names on the tombstones of the cemeteries show a much greater predominance because most of the recent arrivals are still living. Many of these newcomers live on the small farms which are subdivisions of the original pioneer grants. By working on the farms, members of the families are able to supplement the incomes earned by the men who have part-time employment in the South Amherst quarries and in the industrial plants of the neighboring cities.

Two district school houses of Berea sandstone, one on South Ridge and one on Middle Ridge are necessary to supply the cultural needs of the surrounding community. The Mt. Zion Evangelical Church is maintained on South Ridge.

A Typical Farmstead on a Beach Ridge

The typical farmstead located on a beach-ridge is very attractive. Buildings are for the most part wooden frame structures with varied styles in architecture. These buildings, most of which were erected more than thirty years ago, reflect the proximity by boat of the pineries of Wisconsin.

A Sandstone House

Four sandstone houses, built about 50 years ago, indicate the relative cheapness of the stone in that early period. The foundations and steps of most of the buildings constructed

before the last decade are of Berea sandstone. Recent foundations of the newer buildings are of cement blocks or tile which show the increasing geographic range of the region's expansion of local industry and the better means of transportation in the township.

The barns are not as numerous or pretentious on the beach-ridges as those on the till plain for livestock is relatively unimportant. A basement shelter for the livestock is built below the rest of the ridge so that the lofts may be entered directly from the ridge. Many of the farms are equipped with cold storage cellars which are made of cement or tile because of the importance of fruit and vegetable raising in this region.

Windmills were used to pump water but today they remain only as skeletons of the past. Gasoline and electric motor-driven pumps are more reliable, and have replaced the windmills without an exception.

Each farmstead has a spacious lawn, usually well-planted with fruit trees rather than shade trees, thus combining utility with attractiveness.

The farmsteads along the beach-ridges were generally equipped with the conveniences of the modern day. Telephone lines and electric power lines follow the beach-ridges where the population is sufficient to create a profitable demand. Few homes have the advantages of running water. Most of the drinking water comes from wells which have been sunk to the underlying bed-rock. From the Berea sandstone the water is

clear, hard, and rich in iron, while from the Bedford shale it is often softer and more ferruginous. Each farm has from one to three wells, most of which have the durable sandstone covers. Since the water from the dug wells is very hard, rain water is stored in large cisterns.

Fruits and vegetables are the most important crops from the beach-ridges. The orchards occupy 23.2 per cent of the surface on the beach ridges and gardens occupy 16.4 per cent. Sandy soil and air drainage as well as the retarded growth in spring, due to the proximity to Lake Erie, are favorable for the growth of peaches, apples,and cherries. Consequently the largest orchards in the area are found along the crests of the ridges and extending down the north slopes into the lake plain. (Plate V). The largest fruit farm of the area is found in the northeast corner of the township. Here, orchards extend from the middle ridge across the lake plain to north ridge. Over sixty acres of land are devoted to one apple orchard. Others orchards are often a mixture, apple and peach trees alternating. Thus the horticulturist has his work and his income distributed more evenly over a year; for the peaches are harvested the latter part of August and the first part of September while most of the apples are harvested the latter part of September and October. Relatively few cherry orchards are found because of the perishable nature of the fruit and the limitation of the markets. Cherry trees for the most part are planted on the crests of the ridges for they demand the best drainage and warm sandy soils. Berries and grapes are also found in small

rectangular plots along the ridges. These demand a great deal of labor especially during the harvest season, thus reflecting the proximity of population centers. Peaches, grapes, cherries, and berries are very perishable, and have to be marketed quickly. Consequently most of them from this township are taken by truck to the neighboring industrial cities of Lorain and Cleveland.

Vegetables thrive on the beach ridges because of the summer maximum of rainfall, temperatures of 50°F. or above, especially because of the well-drained and friable soils. However, gardens occupy less acreage (16.4 per cent of the entire surface) than do the orchards. Sometimes vegetables are planted between the rows of trees along the ridges, thus permitting the maximum use of this ridge land. These small plots demand intensive cultivation and care throughout the summer season. Consequently farms are small, from 2 to 5 acres on which members of the family cultivate orchards and gardens, while the men work in the steel plant in Lorain, in the shops of other neighboring industrial centers, or in the quarries at South Amherst.

Some of the land on the ridges is devoted to general crops such as corn, small grains, pasture in rotation or even in permanent pasture or woodland. (Table II). The corn, small grains, hay, and pasture are raised mainly for stock food. They are planted in rotation for the good of the soil and at the same time serve as a cover crop which prevents erosion. They are not produced as a cash crop, for vegetables and fruits allow a higher margin of profit. The perman-

ent pastures and woodlands are found on the uncultivable land around streams and near the sites of abandoned quarries. (Plate II).

Fences are not as conspicuous on the ridges as they are on the lake plain or on the glaciated plain, for livestock farming is not a characteristic feature on the ridges. There is no necessity for fencing gardens and orchards which border the highways.

Livestock forms a minor feature in the picture of the beach-ridge sub-region. Many of the farms have a team of horses with which they cultivate the land, although some farms have tractors which demand upkeep while in use only. These tractors, often small and home-made, having been built from the engine of an old automobile, have sufficient power to cultivate the loose soil. Most of the farms have from one to four cows. These supply the family needs for milk and butter. The few dairy farms which occupy ridge locations are those on South Ridge which border the glaciated plain and those near large pastures of permanent grass. (Plate III). One dairy, having 23 cows, is a notable exception to this general rule. This dairy farm is located on the northeast side of South Ridge. The milk is pasteurized and taken to Amherst where it is retailed. Another exception is found on North Ridge. This dairy having 35 cows specializes in Guernsey milk production which commands a higher price on the market. Thus these specialized phases of dairying pay the ridge farmer more for the use of his land.

About one-half of the farms on the ridges have hogs. The average number per farm is four. However, some farms have as few as two and others as many as twelve. These supply the home needs and the surplus is sold in the markets created by the neighboring industrial centers. Hogs are particularly economical in the general farming for they act as scavengers and at the same time supplement the general income.

Most of the farms keep chickens for poultry take a relatively small amount of space on this valuable ridge land. The flocks range in size from five fowls to over 300. The products from all but the largest flocks are used at home, the surplus being marketed in the neighboring towns or sold from roadside stands. Small flocks of turkeys and ducks are kept occasionally but these are of negligible importante.

## B. The Lake Plain Sub-region

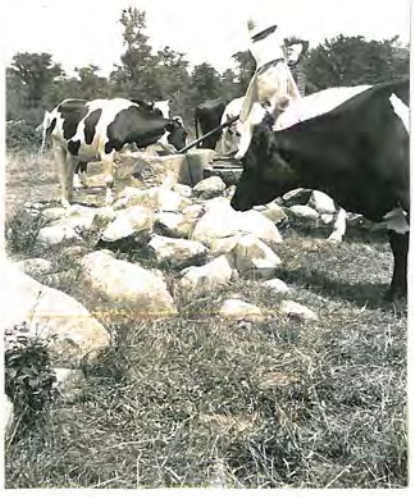
The general view of this region starts with a monotonously level plain dotted with farmsteads and stretching between the beach-ridges across the township. The smoothness of the plain surface is broken only by occasional rock hills, Beaver Creek, or Little Beaver Creek. Rectangular fields are described on the level surface. This established pattern is disturbed only when a rock hill, a valley, or a railroad right of way occurs. Fences usually bound the fields, and bordering many of the fences are deep, artificially constructed drainage ditches. Thus the amount of unproductive land is minimized, and a convenient arrangement of the fields is maintained.

About 55 per cent of the land is under cultivation. General crops on the lake plain are similar to those on the beach-ridges, although the proportions of land devoted to the various crops vary greatly between the two sub-regions. (Table II). Small grains(wheat and oats), hay, and corn are the most important crops of this region, for the soil and the lack of sufficient air drainage does not admit the more profitable fruit and vegetable crops of the Beach-ridge. (Plate IV). Soy beans form a small percentage of the small grains crop. This is a relatively new crop for the region, and it seems to be gaining rapidly in popularity. This legume increases the nitrogen content of the soil, hence is desired as a rotation crop. It may be used as a grain or as a fodder for dairy cattle. As a fodder or soy bean hay it produces a richer milk than ensilage and demands less labor. For these reasons most dairy farms now have abandoned silos. The small grains, hay, and corn are used mainly as stock feed for farm animals and the surplus is sold at a close margin of profit. Gardens and orchards are usually small and kept for subsistence purposes. Large gardens and orchards are usually extensions of those found along the beach ridges, thus overrunning the soil boundaries. More intensive farming, with tree crops and vegetables as the main products, has been attempted on the slopes of Beaver Creek and Little Beaver Creek, for here better water drainage is had . The landscape resembles, in type, that of the beach-ridges. The farmsteads are more numerous and the fields are

smaller than elsewhere on the lake plain. The soil is more sandy and better drained on the slopeswwhich border the streams. A large percentage of the owners of these small farms have settled here within the last twenty years. Many families are of Hungarian, Polish, and Slovakian extraction. These families supplement their small farm incomes by quarry or shop wages.

One large farm, consisting of over 300 acres and located beside Beaver Creek about 1½ miles southwest of Amherst is an exception. The owner who lives in Cleveland maintains a nursery on this farm. The soil is well-drained and sandy. A pond has been dug on the flood plain of Beaver Creek. From this pond a gasoline engine pumps water during the dry season to irrigate the fields of young trees and shrubs.

The high percentage of permanent grassland (15.2%) and woodland (11.1%) on the lake plain contrast sharply with the low percentage on the beach-ridges (Plate II). The permanent grasslands border the streams and mark the swampy places. Many of these swampy areas are due to the grading which was done for the railroad beds. These permanent pastures are often



Pastures on Lake Plain

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Pastures on Lake Plain

covered with a growth of bushes and scrub trees, and sizeable plots of a tough, wiry swamp grass.

Woodlots are confined chiefly to the rock hills and to the swampy, poorly drained areas, thus accounting for some of the peculiarly shaped fields. Many of these woodlots are pastured and they often supply the farmer with fence posts and fuel. One woodlot of considerable size, about 2½ miles west of Amherst which covers the site of a former quarry is owned by the Amherst Outdoor Life Association. This group of Amherst business men has improved this woodland for recreational purposes. Sapling evergreen trees have been set out by the hundreds, a few rustic shelters have been erected; and the small stream which cuts through this area has been ponded so that

Abandoned Quarry Now Used
for Recreational Purposes

boating facilities are offered. Another woodland north of South Ridge is used for similar purposes. One woodland, which covers a rock hill east of Amherst is used because of its isolation and seclusion for the storage of dynalite by the

Dynalite Co. of America.

Livestock are more numerous on the lake plain than on the beach-ridges. Most of the farms in the lake plain sub-region have a team of horses, a few cows, from two to four hogs, and a flock of poultry. A few of the larger farms have tractors as well as a team of horses. Dairy farms are more numerous than on the beach-ridges, although most of the farms keep only enough cows for subsistence purposes. These dairy farms generally have a large permanent pasture; thus the un-cultivable land is utilized profitably. (Plate III). A few hogs, which are profitable on a general farm because they eat scraps which would otherwise go to waste, are also kept for subsistence. Flocks of chickens varying in size from 10 to 300 are kept on almost every farm. The surplus poultry products are sold in the markets of the neighboring indus-trial centers or from roadside stands. One chicken farm near Beaver Creek, about ½ mile south of Amherst, has over 1,000 chickens. The products from this farm are sold in Amherst and Cleveland. Ducks and geese are kept on some farms but these are of minor importance. One farm has a herd of nine goats. The goat milk is sold at considerable profit in Lor-ain. Two farms have two small flocks of sheep. Sheep are not profitable in this area for they demand well-drained pastures and better fences.

Five and three tenths per cent of the land in this region is unproductive. This is due mainly to sterile soil and poor drainage. Some of this land has served as a dump-ing ground for quarry waste, some has been made swampy and

untillable by the grades for the railroad beds, and a small percentage of this land has such poor soil and poor drainage that it cannot be tilled profitably.

The fences in this region are usually made of barbed wire which is attached to wooden posts. Boulders from some of the fields have been piled up to form a part of the fences. Some of the woodlots and the fields near the woodlots are fenced with rail fences which are remnants of pioneer days when wood was abundant.

The farmsteads are not as numerous or as well kept in this region as in the beach-ridge sub-region. Most of the buildings on these farmsteads are of wood as on the beach-ridges although in the eastern part of the township one sandstone house of an early date stands as a memorial to the cheapness and durability of the Berea sandstone. The foundations of the older houses and barns are generally of sandstone, but the newer houses have cement or tile foundations as did those on the beach ridges. The lawns are spacious and generally well-planted with fruit trees.

A Farmstead on the

Lake Plain

Modern conveniences are not as frequently found on these farmsteads as on those of the beach-ridge sub-region. Fewer farms have telephones and electricity for the general farming necessitated by the soil and the air and water drainage leaves smaller profits than the specialized fruit and vegetable farming on the beach-ridges. Most of the farms have from one to three wells which are usually covered with a durable piece of sandstone. One well is always located near the house, and one well is usually found near the barns, and a third in a distant pasture lot, thus conveniently located for the watering of live stock.

Roads on the lake plain are of second and third class with the exception of the Leavitt Road which is State Route 58. This road connects Lorain with the industrial cities in the central and southern part of Ohio. Often the roads have been graded to a level above the swampiness of the lake plain.

The improved road through Beaver Creek Valley to Amherst

A graded road through Beaver Creek Valley

The roads for the most part are surfaced with cinders or slag in contrast with the paved roads found on the beach-ridges.

The quarter of a mile of unimproved road on the northern border of the township is on the lake plain. Thus the type of roads found in this region reflects the amount of use given them and the ability of the taxpayer to maintain them.

Small, one-way bridges are usual on the lake plain. Many of the abutments of the newer bridges and the culverts are made of the cheaper cement.

A Sandstone Bridge
Across Beaver Creek

Three railroads cross the lake plain sub-region. The Lake Shore and Michigan Southern Division of the New York Central Railroad is by far the most important. The road-bed for this railroad has been cut through the beach-ridges so that the level of the lake plain is maintained. However, at Amherst this railroad follows a level above the level of the town because of greater convenience and safety for the townspeople. The Wheeling and Lake Erie railroad which runs in a SW to NE direction across the township has a road-bed which is graded above the level of the lake plain to a level with

the beach-ridges. This railroad has been abandoned for the last decade. The Lorain, Ashland and Southern Railroad runs parallel to the Wheeling and Lake Erie Railroad. This railroad has been graded 10 feet to 15 feet above the level of the lake plain, thus disturbing the local drainage. Most of the branch lines which ran to quarries have been abandoned. South Amherst, the only site in which quarrying is active, has a quarry line which follows the level of the lake plain to a junction with the New York Central Railroad at Amherst.

These railroad right of ways disturb property lines, the rectangular fields, and drainage. Often a farm is divided into two or more portions by a railroad right of way and because of the diagonal routes of the railroads, the fields often assume varied shapes. Because of the disturbed drainage permanent pastures and woodlots are numerous. (Plate II.)

C. The Glaciated Plain Sub-region

The glaciated plain which is located in the southeastern corner of this township is extremely level because of the considerable depth of the glacial drift and the levelness of the pre-glacial topography. Cultural patterns are therefore, similar to those found on the level lake plain. The fields of this region follow a rectangular pattern as do those on the lake plain. This pattern is disturbed only by one small stream, Little Beaver Creek or by a railroad right-of-way. The regularity of the pattern is emphasized by the numerous fences of barbed wire on wooden posts. Occasionally rail fences outline the woodlots or the fields

bordering woodlots.

The size of the farms varies from 60 to 100 acres, and the type and distribution of the cultivated crops are similar to those found on the lake plain. (Plate IV). General farming in small grains, hay, and corn is also important in this region. (Table II). Soy beans are gaining in importance for the same reasons as they are on the lake plain. A smaller proportion of this region is devoted to gardens and orchards than in either of the other regions because the soil is not especially suitable. (Plate V). All of the gardens and most of the orchards are for subsistence purposes only. But one large orchard is found in this region, and that is an extension of a commercial orchard which is located on South Ridge. Of minor importance is the potato crop which is mainly for home consumption. The five fields of potatoes which contain more than five acres each are located on the more gravelly phases of the till plain. Due to the poor drainage and the poor soil, the quality of the cultivated crops of the region is not high.

A high percentage of permanent pasture corresponds to that found on the lake plain. The permanent pastures of this region border Little Beaver Creek and occupy poorly drained areas. Covered with a second growth of bushes and scrub trees they resemble those on the lake plain.

The woodlots are generally smaller than those found on the lake plain, thus accounting for the smaller percentage of the area devoted to this use. They are pastured and serve

as sources for fuel and fence posts. Most of them cover poorly drained areas and only one of them and none of the permanent pastures borders a road for here the land is more accessible and thus more profitably drained. (Plate II).

Approximately 5.3 per cent of the land in this region lies idle due to the poor drainage and poor soil. One farm which has very poor drainage and poor soil is almost entirely abandoned. Only one small field is cultivated and this is planted to soy beans.

Farmsteads are not as attractive as those on the beach ridges. The buildings form a heterogeneous group. Usually they consist of a frame house, one or two frame barns, a granary, a garage, and from five to ten sheds. The buildings on two of the fifteen farms are well kept. However the lawns are spacious, and without exception planted with fruit trees.

Dairy and livestock farming is carried on in this region. A higher percentage of dairy farms is found here than in either of the other regions. However, the herds on the dairy farms vary in size from five to seventeen cows. One farm has a herd of 12 goats. The milk from these dairies is gathered every morning by trucks which haul it to the Lorain or Cleveland markets, thus reflecting the advantage of improved roads and modern methods of transportation. The farms generally have a team of horses with which they cultivate the land. Four tractors are used in this entire region, and two of these tractors belong to farmers who own ridge land. Other kinds of livestock in this region are used mainly for subsistence purposes. Most of the farms have a few hogs and some poultry. The poultry usu-

ally consists of chickens, and the size of the flock varies from five to two hundred fowls. One chicken farm on State Route 59 is an exception. The owner of this farm, who works in Lorain keeps a flock of over 400 chickens in order to supplement his income.

This region is well connected with the surrounding regions by a network of improved roads. State Route 58, a macadam road, goes from north to south across this region. Then several slag and cinder roads serve the region. The predominance of these roads reflects the limited ability of the taxpayer to maintain them.

## D. Amherst Village

Amherst, a compact settlement of 2,844 inhabitants, is situated inthe north central section of this township. (Plate VI). The town is elongated somewhat in an E-W direction because of the early settlement of peoples along North Ridge. Due to the convergence of the main route which follows North Ridge with the routes which come from the lake plain and due to the diagonal route of the New York Central Railroad across the town, Amherst might be termed a town of many "flatiron" corners. The settlement is more compact east of Beaver Creek which has a narrow gorge-like valley about 600 feet west of the town square. The east side which is nearest the neighboring industrial centers where many of the residents commuting by automobile, work in the factories, quarries, and shops, is more urbanized than that which is west of the Creek.

The aspect of the residential part of the village is

generally attractive. The better kept homes and the broader lawns lie mainly on streets which form a triangle, the longest sides of which converge near the center of town. The shorter side is a new allotment which has been laid out on a sandstone hill which overlooks the town. Elsewhere smaller homes, narrower lots, a very small per cent of which are vacant and a larger per cent of which are occupied by well-kept kitchen gardens emphasize the impression of a comfortable population living upon small cash incomes. The yards for most of the homes are planted with fruit trees, and in most of the back yards may be seen a small chicken house which fits snugly beside the family garage.

Homes are generally equipped with modern sanitary conveniences and with running water, supplied from the lake by a punping station on Lake Erie. The underground sewage system leads to the Sewage Disposal Plant, which is owned by the village, and is situated about 1½ miles north of the town on Beaver Creek. Occasional wells, which have remained since an early period, still supply a few families with drinking water.

Styles in architecture are extremely varied. The larger, older homes are of the ornate style, prevalent during the 80's. The homes of hte new allotment, east of Amherst are of varied styles used in this modern day. Most of the homes are small, not more than two-story frame structures to which rooms have been added as occasion has required, thus indicating the cheapness of land and the modest incomes. Most of the homes are well kept with an air of permanence and but few are of

recent construction, conditions which suggest no expansion of population, and no need for increased housing facilities.

Amherst has some industrial establishments which furnish a livelihood for a few hundred of the inhabitants. The Western Automatic Machine Shop which employs from 80 to 100 men has been favored by local capital, cheap land, and some local market. This is housed in a two story brick structure standing near the New York Central Railroad on the east side of the town. This shop manufactures various machine parts which are shipped by railroad to numerous markets in industrial centers in the eastern states. On the western edge of the Corporation is a Cutstone Plant where the sandstone from the quarries at South Amherst is cut and shaped for market. This is situated near the branch railroad line which runs from the quarries to the New York Central Railroad to facilitate easy movement of the fragile product to markets.

Other manufacturing establishments reflect the needs of the surrounding agricultural community, and the needs of the village residents. One small factory near the New York Central Railroad manufactures various articles such as vegetable washers, sorters, etc, which are used on vegetable and fruit farms. This factory does not contribute much to the maintenance of the village or to the freights of the railroad for it employs not more than a half doxen men. Its products are sold directly to the neighboring farmers or shipped by truck to the neighboring rural centers, assisting and reflecting the type of farming in the surrounding rural areas.

Near the Western Automatic Machine Shop is a two story

brick ice plant and cold storage building. Over a score of men are employed here. Fruit from some of the ridge farms is stored in this building for the winter season so that the higher prices of spring markets can be taken advantage of.

A milling company and a lumber yard border the New York Central Railroad. Farmers of the surrounding districts often sell their surplus grain supply at this mill and bring grain to be ground for stock feed. Sometimes the mill ships this surplus grain by railroad or truck to Cleveland and other markets farther east. The lumber company buys sawed lumber from outside regions, receiving it by railroad and distributing by trucks.

The subsistence industries consist chiefly of two creameries and one bakery. The Baetz Dairy Co. and the Zimmerman Dairy Co. buy most of their milk supply from the farmers of the lake plain sub-region. Trucks collect it each day and bring it to the town where it is made ready for retailing. Not more than a half dozen men are employed by each Dairy Company. The Amherst Bakery delivers its baked goods not only to those who live within the limits of the corporation but also to farmers within the township. This home bakery has some outside competition; for the Spang Baking Co. of Lorain and the Ward Baking Co. of Cleveland, encouraged by the improved roads, send their delivery trucks daily through the towns and the rural areas of the township.

Although Amherst is not a manufactural town, it does not lack residents who are employed in factories and industrial occupations. It is estimated that about half of the popula-

tion is dependent upon incomes earned in the factories of Lorain and Elyria, and in the quarries of South Amherst. The other half is supported by retail merchandizing, the professions, and the personal and public services.

The central block of the town is the nucleus of the retail business. The retail establish ments are arranged on the two principal north and south streets and on the connecting east and west street. (Plate VI).

The buildings of the retail district are similar to those found in the small towns of northern Ohio. Two story brick structures, mingling with a liberal supply of one or two story frame buildings form most of the district. Thus, the lack of compactness emphasizes the relative cheapness of the land. Buildings contain sale or storage rooms below, and frequently professional and living apartments above. The neat two story brick bank building with its stone front adds a note of stability and modernity to the town.

The largest retail establishment is a combined hardware and agricultural implement store whose influence is extended into the ageicultural districts of the township. The size of the stock and the varieties of the wares show that this business caters to the needs of the farmer who demands quick service in utensils, tools, and mechanical replacements in his farm equipment. Sales rooms and storage rooms of this hardware occupy approximately one fourth of this central retail block. One large barn on less expensive ground, east from the center of Amherst and beside the railroad, is used to display and store the merchant's farm machinery which is brought in by the railroad.

Other merchandizing establishments are of the usual types: garages with sales rooms for the popular and less expensive automobiles, groceries, a meat market, furniture, clothing, and drygoods stores. Three of the four groceries are chain stores. The town boasts of one bookstore which also deals in confections and tobacco. One movie house which is open only a few days each week cannot do a very prosperous business because the modern means of transportation encourage serious competition of the movies houses of Lorain and Elyria about six miles away. Filling stations occupy several of the important corners in town, especially those on the north ridge road. Thus the immediate needs of this small community are supplied by this small town.

A great deal of expense and effort has been applied to the cultural needs of this community. There are seven church buildings, a parochial school, a two story public school building, a Carnegie library, and a hospital. The last three buildings, two of the churches, and the town hall testify to the beauty and durability of the Berea sandstone and to the proximity of the quarries. The public school, after many stages of development, includes a high school and occupies a site two blocks from the center of town. The Catholic Church occupies

Carnegie Library

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a humble frame structure, but the Catholic School is a modern brick building with an attractive sandstone front. The Methodists, the Congregationalists, and the Lutherans maintain white frame churches. The latter draws most of its adherents from the older German families. The St. Peter's Evangelical Reformed Church worships in a brick structure south of the center of town. Near this church is the attractive First Evangelical Church which has been built recently of sandstone. The members of these two churches are drawn mostly from German families; in fact some

First Evangelical Church

of the sermons preached in the former are in the German language. A Four-Square Church denomination, who look upon Aimee Semple MacPherson as their founder, have been meeting in the town hall until sufficient funds for a church building can be raised. A small group of Baptists meet occasionally, in the home of one of the adherents, and sometimes in an abandoned one room sandstone school house. All the schools, the library, the hospital, and all the churches are found within 3 blocks from the nucleus of the town, thus giving convenience and accessibility.

Amherst has two parks. The smaller one covers but an acre of ground near the center of town. This is the site of the spring which induced Hilo Harris to settle in Amherst township. The larger park covers over six acres of ground on the northern border of the town, where the land is cheaper. This park is used for tennis, baseball, football, and other sports and recreation.

On the outer zones of the residentail sections of Amherst is an irregular zone of agricultural land. This illustrates well the cheapness of land within the corporation. Gardens and fruit tend to occupy the beach-ridge land, and hay, corn, and small grains become more popular on the lake plain. A very small percentage of the land in this outer zone of the town remains vacant and unproductive.

## D. South Amherst Village

South Amherst is an unincorporated village and is a direct result of the development of the sandstone quarries on this site. The size of the village is subject to fluctuations depending upon the permanence of the quarrying. (Table III). The village is not compact, but scattered almost carelessly over the surface. Derricks with their spider-web nets of stay wires, and an occasional tall chimney sweep the sky line at South Amherst. The sturdy one and two story buildings with their varied roofs furnish a solid basis for the village nucleus.

The residential section of South Amherst extends

over two miles along the South Ridge road and from this several side arms follow the adjoining lake and till plain roads. (Plate VII). All of the homes are modest; none could be called pretentious. The remarkable evenness of quality and similarity of type which pervades this region is due apparently to the general equality of employment which exists in South Amherst and to the recency of the growth of the village. The better-kept middle class homes with the broader lawns lie mainly on the South Ridge road, where excellent drainage is afforded. The humbler houses of the day laborers in the quarries are located on the north-south streets. About 50 per cent of these homes have their narrow lawns confined by a picket or wire fence. This represents an old world custom which is practiced by the residents of recent European extraction. On these front lawns chickens and ducks mingle with the numerous children of the family. A good sized kitchen garden, a few fruit trees, and one or two rows of grape vines are found on nearly every lot in South Amherst, thus indicating the cheapness of land and the modest incomes. Community gardens have been staked out on some of the unused quarry land.

Quarry Houses at South Amherst

The homes of South Amherst are generally one or two story structures. Groups of six to a dozen houses which have the same plan and are painted alike have been built by the Quarry Company for its workers. The homes on South Ridge for the most part are in a creditable state of repair, but those on the north and south streets generally have a delapidated appearance. (These standardized homes show the cheapness of mass production on the part of the quarry company.) One-family houses are the most prevalent, although a few duplexes, one quadruplex (4 family), and one square frame building which is used as a boarding house for quarry workers are present.

Over 90 per cent of the residences of South Amherst have sandstone foundations and steps which reflect the durability of the Berea sandstone and the proximity of the quarries. All of the sidewalks and many of the driveways are paved with the durable sandstone flagging.

From three to five sheds, which house a few chickens, sometimes a cow, and occasionally a goat, are found in nearly every back yard, thus emphasizing the abundance of land in the village and the modest standard of living. Fowls are usually confined to yards, but other livestock is generally staked on the vacant and unoccupied quarry land during the spring and summer months.

Four farmsteads are within the corporation, thus indicating the rural character of the village. One farmstead has a large basement barn which shelters 25 cows, 2 horses, and 3 hogs. The dairy products from this farm are retailed in the village.

The homes in South Amherst are seldom equipped with modern conveniences. This is probably due to the recent growth of the village and the moderate incomes of the residents. Wells, which still supply the drinking water, are found in nearly every yard.

Cisterns which were used to store soft water have been abandoned for the most part, because the Quarry Company has ponded Beaver Creek from which water is pumped to the houses of the Village. Some of the Quarry Company's houses, in order to decrease costs, have one water hydrant serve three or four houses. This unusual method of supplying water for this village is necessary because of the distance from Lake Erie or any other sufficient water body.

The few retail establishments of the village are arranged along the main street which follows South Ridge. The stores are not all grouped around the center of the town; at least half of them are scattered along South Ridge road, widely separated by the residences of the village. The buildings are mainly one and two story frame structures. The basements and upper rooms are used for storage purposes. Two buildings


Far West Inn

South Amherst

in the center of the village which housed restaurants and a former movie house now stand vacant, probably to be correlated with the decline of the quarrying industry rather than the economic depression.

The retail business houses in South Amherst, which are 2 grocery stores, 2 restaurants, 1 meat market, 2 filling stations, 1 repair garage, and 1 barber shop, supply only the immediate needs of the community. Many of the residents do their shopping in the nearby cities of Elyria, Lorain, or Cleveland.

One schoolhouse, four churches, and two foreign lodges supply the educational and spiritual needs of the village. The Methodist, the Congregational, and the Evangelical Churches have frame structure with sandstone foundations. The members of these churches are mainly from the older residents. The Catholic Church has recently been organized. The adherents are drawn principally from the quarry workers who are of foreign extraction. Formerly these Catholics had to go to Amherst

Public School House at South Amherst

The Catholic Church at South Amherst

in order to attend church. An abandoned sandstone schoolhouse has been remodeled and is used as the Church building. All the churches are either on the ridge or within a block of the ridge because of the increased distribution of people here.

A large two story sandstone structure houses a grade school and a high school. This building has had two additions within recent years, thus representing the growth of population in South Amherst.

The foreign lodges are housed in two humble wooden structures. Both these buildings are situated near the homes of recent immigrants who work in the quarries.

South Amherst does not have a post office. All the mail for the village is shipped by railroad to Amherst from which it is delivered to South Amherst and the rural sections of the township. This suggests the recent growth of the village and makes use of the good roads and modern modes of transportation.

Much of the land in South Amherst is used for agricultural purposes particularly the poorly drained lots and the areas of thin soil near the quarries. Permanent pasture is found on land which borders Beaver Creek and the quarries, where cultivation is impossible due to excessive erosion and thinness of soil. The cropped land on the poorly drained lake plain in the NE. section of the town is used by the dairy which supplies South Amherst. (Plate VII).

Over half South Amherst is devoted to the quarries and quarrying. This village is at the present time, as for some years past, the most important locality in Ohio for the quarry-

ing of the Berea sandstone. These quarries are the principal source of building stone from the Berea horizon, for the rock is freer from iron spots than in any other place in Ohio. There are seven quarry holes at South Amherst, 3 of which are being worked at the present time. All of them are in the SW corner of the village. No. 6 and the Buckeye Quarry or No. 9 are the two largest quarries. The No. 6 Quarry is in the shape of an immense rectangle with a depth of about 175 feet. The Berea sandstone extends eastward, but in order to quarry this a road would have to be removed, as was done in the case of No. 9, but the thickness of the stone does not warrant this. The

No. 6 Quarry at South Amherst

following sections used to describe the stone in this quarry is typical of the sandstone at South Amherst.

Section of No. 6 Quarry [6]

Cleveland Quarries Co.

South Amherst

| | Feet |
|---|---|
| Glacial Drift ---------- | 4-10 |
| Berea Sandstone | |
| Shell-rock. Thrown on dump or used for ballast --- | 15-20 |

6. Brownocker, J.A., Building Stones of Ohio, p.92

Buff-rock, in places shelly. Used for grindstones,
and to a small extent for building stone ------- 10

Discolored rock, buff with brown spots.
Used for bridge work and rip-rap ---------- 8

Spider-web. Used for flagging, steps and sills,
The softer parts for grindstones ---------- 16

Cross-bedded. Used chiefly for rip-rap and
breakwater, occasionally for flagging ---------- 10

Split rock. Used for building stone, flagging
and curbing, the softer parts for
grindstones. This is marketed under
the name of Gray Canyon Sandstone.[7] ----------25-30

Cross-bedded. Chief uses for rip-rap & breakwater ---- 12

Split rock. Used for building stone, flagging
and curbing. Too hard for grindstones.
Marketed as Gray Canyon Sandstone ---------- 26

Spider-web. Sawed for sills, steps or flagging,
and marketed as Gray Canyon sandstone ---------- 10-12

Base of Quarry, but not of Berea Sandstone.

Loading Berea Sandstone at
No. 6 Quarry, S.Amherst

The Buckeye Quarry or
No.9 Quarry, S. Amherst

7. "Gray Canyon" was chosen as a profitable trade name.

Quarrying has been improved by the introduction of modern machinery. From two to five channeling machines may be found in these quarries. The Buckeye Quarry which has been quarried to a maximum depth of 212 feet has had lights arranged over it so that work may be continuous day and night.

From two and a half to three million cubic feet of stone are quarried in one year at South Amherst. The biggest percentage of this is usually sold for curbing. The amounts of flagging and building stone produced are about equal, and the sawed or firestone is of more commercial importance than the grindstone. However, this summer about fifty per cent of the stone shipments were for lake filling. The stone used for breakwater was formerly considered a by-product but because of the recent demand it has become of major importance. Most of the stone is delivered by the small railroad, which is owned and operated by the Quarry Company, to the New York Central Railroad at Amherst. A small percentage of the stone quarried (about half of the curbing and flagging stone) is trucked to the nearby markets.

The Cleveland Quarries Company has established several shops which are necessary for the maintenance of the quarries. A blacksmith shop and a long, one story glass shop where stone is cut and sawed border No. 6 Quarry. Three mills, housed in brick structures, and the frame office buildings are located about a half mile east of the Buckeye Quarry. Only two of these mills are in use at the present time.

The Cleveland Quarries Company at South Amherst employs approximately four hundred men, 60 to 70 per cent of

Shops of Cleveland
Quarries Co.
S. Amherst

Cleveland Quarries Co.
Blacksmith Shop
South Amherst

whom live in the village. The remaining 40 or 30 per cent live in the village of Amherst and in the rural areas of the township. Consequently over 75 per cent of the residents of South Amherst are composed of quarry employees and their families. This home employment eliminates practically all transportation costs.

The Quarry railroad
and Quarry Shops
at S. Amherst

Shops of Cleveland
Quarries Co.
S. Amherst

Cleveland Quarries Co.
Blacksmith Shop
South Amherst

whom live in the village. The remaining 40 or 50 per cent live in the village of Amherst and in the rural areas of the township. Consequently over 75 per cent of the residents of South Amherst are composed of quarry employees and their families. This home employment eliminates practically all transportation costs.

The Quarry railroad
and Quarry Shops
at S. Amherst

# VI. FUNCTIONAL RELATIONSHIPS OF AMHERST AND SOUTH AMHERST

The villages contain a combined population of 4,593 which is four-fifths of the total population (5,649) of Amherst township. (Table III). They therefore form a relatively important part of the area. Amherst, the older and more densely settled village (2,844) depends to a large extent upon the employment of its residents in the quarries in South Amherst. The workers commute by autos. The improved roads and the proximity of the towns make this easily possible.

South Amherst, the more recent and sparsely settled village (914 people) has been and still is dependent to a large extent upon Amherst for many of its retail goods and cultural needs. Since an early period the residents of the smaller village have shopped for their necessities at Amherst. However, shopping at Amherst still continues, but due to the good roads and modern methods of travel, much of it is done in the neighboring population centers.

During the early years of South Amherst's history the residents of this village went to Amherst to attend church and meetings of other social groups. Today South Amherst has its own churches but many social gatherings are still attended by residents of both towns.

The dependency of South Amherst upon Amherst is well illustrated by the U.S. mail delivery situation. South Amherst depends upon daily rural free delivery from Amherst. This situation is maintained because the New York

Central which carries the mail for the township goes through Amherst, and the hard surfaced roads between the towns allow daily delivery.

## VII. EVIDENCES OF OUTSIDE INFLUENCES

Amherst township occupies a favorable position with relation to population centers, which furnish markets for the agricultural products and for the Berea sandstone. The railroads, particularly the New York Central and the macadam and cement motor roads form excellent regional connections with these markets. Much of the Berea sandstone is shipped by means of the New York Central Railroad, but most of the agricultural products are shipped by trucks.

The importance of the railroads and the roads may be estimated from the large amount of land in the township utilized by these cultural features. Railroads have cut diagonally across the township sometimes paralleling ridges, thus disturbing the rectangular pattern of the property lines, the fields, and the motor roads. The New York Central Railroad has modified to some extent the plan of the village of Amherst. This railroad cuts diagonally across the blocked-out town, thus making it a town of many corners. However, these railroads have connected and two of them continue to connect the township with outside regions and markets.

The metropolitan influence of Cleveland and Lorain may be seen from various other features on the local landscape. The numerous gardens and orchards in the township result from

the nearness to compact industrial population centers such as Lorain, Elyria, and Cleveland which furnish the necessary markets. Two facts, the distribution of the daily editions of the Lorain, Elyria, and Cleveland newspapers throughout the area, and the greater volume of traffic on the Lorain, Elyria, and Cleveland roads suggest the nearness to metropolitan centers. However, all the metropolitan influences are not particularly beneficial. No wholesale concerns are found in the township. The chain stores and the local retail merchants depend chiefly on the wholesale concerns in Cleveland for their supplies, for improved methods of transportation allow this. All the retail dry goods shops carry a meager stock of goods, for much of the shopping is done in the three named centers which distribute shopping news twice a week throughout the towns and rural areas.

# BIBLIOGRAPHY

## Books

"A Commemorative Biographical Record of Huron and Lorain Counties." J.H. Beers and Co., Chicago, 1894

Armstrong, Robert Grenville. "Amherst's Story". Issued under the Auspices of the Amherst Old Home Week Committee, 1914

Boynton, W.W. "The Early History of Lorain County". Published Address, Jubilee Celebration, July 4,1867

Howe, Henry. "Historical Collections of Ohio". The Laning Printing Co., Norwalk, Ohio, 1896

Monroe, Mrs. O.H. "Lorain County Ohio, Picturesque and Industrial Features"., 1906

Williams, W.W. "History of Lorain County, Ohio, Philadelphia, Williams Bros., 1879

Wright, George Frederick. "A Standard History of Lorain County". Vol.I. Lewis Publishing Co., Chicago,1916

## Governmental Publications

(Ohio)

Alexander, William Henry. "A Climatological History of Ohio". Published by the Engineering Experiment Station of the Ohio State University, Columbus, Ohio,1924

Conrey, G.W. and Paschall, A.H. "A Key to the Soils of Ohio". Special Circular No. 44. Ohio Agricultural Experiment Station, Wooster, Ohio, 1934

Bownocker, J.A. "Building Stones of Ohio". Geological Survey of Ohio, Fourth Series, Bulletin 8, Columbus, 1915

Prosser, Charles S. "The Devonian and Mississippian Formations of Northeastern Ohio". Geological Survey of Ohio, Fourth Series, Bulletin 15, 1912

(United States)

Atlas of American Agriculture, Part II, Climate, Section I
Atlas of American Agriculture, Part II, Climate, Section II
Atlas of American Agriculture, Part II, Climate, Section III

Marbut, C.F. "Atlas of American Agriculture, Part III, Soils of the United States, 1935

Shantz, H.L. and Lon, R. "Atlas of American Agriculture, Natural Vegetation, 1924

Sixth Census of the United States, 1840
Seventh Census of the United States, 1850
Eighth Census of the United States, 1860
Ninth Census of the United States, 1870
Tenth Census of the United States, 1880
Eleventh Census of the United States, 1890
Twelfth Census of the United States, 1900
Thirteenth Census of the United States, 1910
Fourteenth Census of the United States, 1920, Vol. I
Fifteenth Census of the United States, 1930, Vol. III, Part II

Leverett, Frank. "Glacial Formations and Drainage Features of the Erie and Ohio Basins". Monographs of the U.S.G.S. Vol. XLI. House Document No. 310, Fifth Congress, First Session, 1901.

## Miscellaneous

Conrey, G.W. "Chemical and Physical Changes in Soil Development in Humid Regions". Agronomy Seminar, Wooster, Ohio, March 7, 1930

## Periodicals

Dodge, Stanley D. "Sequent Occupance on an Illinois Prairie". Bulletin, Philadelphia Geographical Society, Vol. 29, 205-209, 1931

Finch, V.D. "Montfort, A Study in Landscape Types in Southwestern Wisconsin". Geographical Society of Chicago, Bulletin 9, 15-44, 1933

Finch, V.C. "Written Structures for Presenting the Geography of Regions". Annals of the Association of American Geographers Vol. XXIV, No. II, 113-125, June, 1934

Frost, R.B. "A Study in Urban Geography", Ohio Journal of Science. Vol. XXXV, No. 3, May 1935

James, Preston E. "The BLackstone Valley, A Study in Chorography in South New England". Annuals of the Association of American Geography, Vol XIX, 67-110, June 1929

James, Preston E. "The Tapajoz and Xingu Valleys of Brazil, A Type Study in the Evolution of Amazon Landscape". Bulletin of the Geographic Society of Philadelphia, Vol. XXVIII, 63-78, 1930

James, Preston E. "The Terminology of Regional Description". Annals of the Association of American Geographers, Vol XXIV, No. II, 78-93, June 1934

Leighly, John B. "The Towns of Malardalen Sweden, A Study in Urban Morphology". University of California Publications in Geography, Vol.3, No. 1, 1928

Platt, Robert S. "A Detail of Regional Geography". Annals of the Association of American Geographers, Vol. XVIII, 81-127, 1928

Roorbach, G.B. "The Trend of Modern Geography, a Symposium". Bulletin of the American Geographical Society, Vol. XLVI, 801-817, 1914

Rose, John Kerr, "Delavan Prairie; An Illinois Corn Belt Community". The Journal of Geography. Vol. XXXII. No. 1, 1-14, January 1933

Table II

LAND USES OF AMHERST TOWNSHIP

| Sub-region | Permanent Pasture % | Rotation Pasture % | Hay % | Woodland % | Small Grains % |
|---|---|---|---|---|---|
| Lake Plain | 15.2 | 3.9 | 17.7 | 11.1 | 18.3 |
| Beach-Ridge | 4.6 | 4.7 | 10.5 | .8 | 10.8 |
| Glaciated Plain | 10.2 | 2.8 | 23.4 | 4.3 | 24.4 |

| Sub-region | Corn % | Gardens % | Potatoes % | Orchards % | Idle % | Farm-Steads % |
|---|---|---|---|---|---|---|
| Lake Plain | 13.8 | 3.4 | 1.5 | 10.5 | 5.5 | 2.6 |
| Beach-Ridge | 8.3 | 16.4 | 2. | 23.2 | 2. | 16.2 |
| Glaciated Plain | 18.1 | 1.8 | 2.3 | 4.6 | 5.3 | 1.7 |

Total Area in Amherst Township 24.6533203125 square miles

or 15,778.125 acres

TABLE III

Population of Amherst Township

| Date | Amherst Township | Amherst Village | South Amherst Village |
|---|---|---|---|
| 1840 | 1,186 | | |
| 1850 | 1,399 | | |
| 1860 | 1,882 | | |
| 1870 | 2,482 | (North Amherst Village) | |
| 1880 | 3,259 | 1,542 | |
| 1890 | 3,464 | 1,648 | |
| 1900 | 3,749 | 1,758 | |
| 1910 | 4,597 | 2,106 | |
| 1920 | 5,102 | 2,485 | 944 |
| 1930 | 5,649 | 2,844 | 914 |

| | | |
|---|---|---|
| Rural population | 1930 | 1,056 |
| | 1935 | 1,208 |

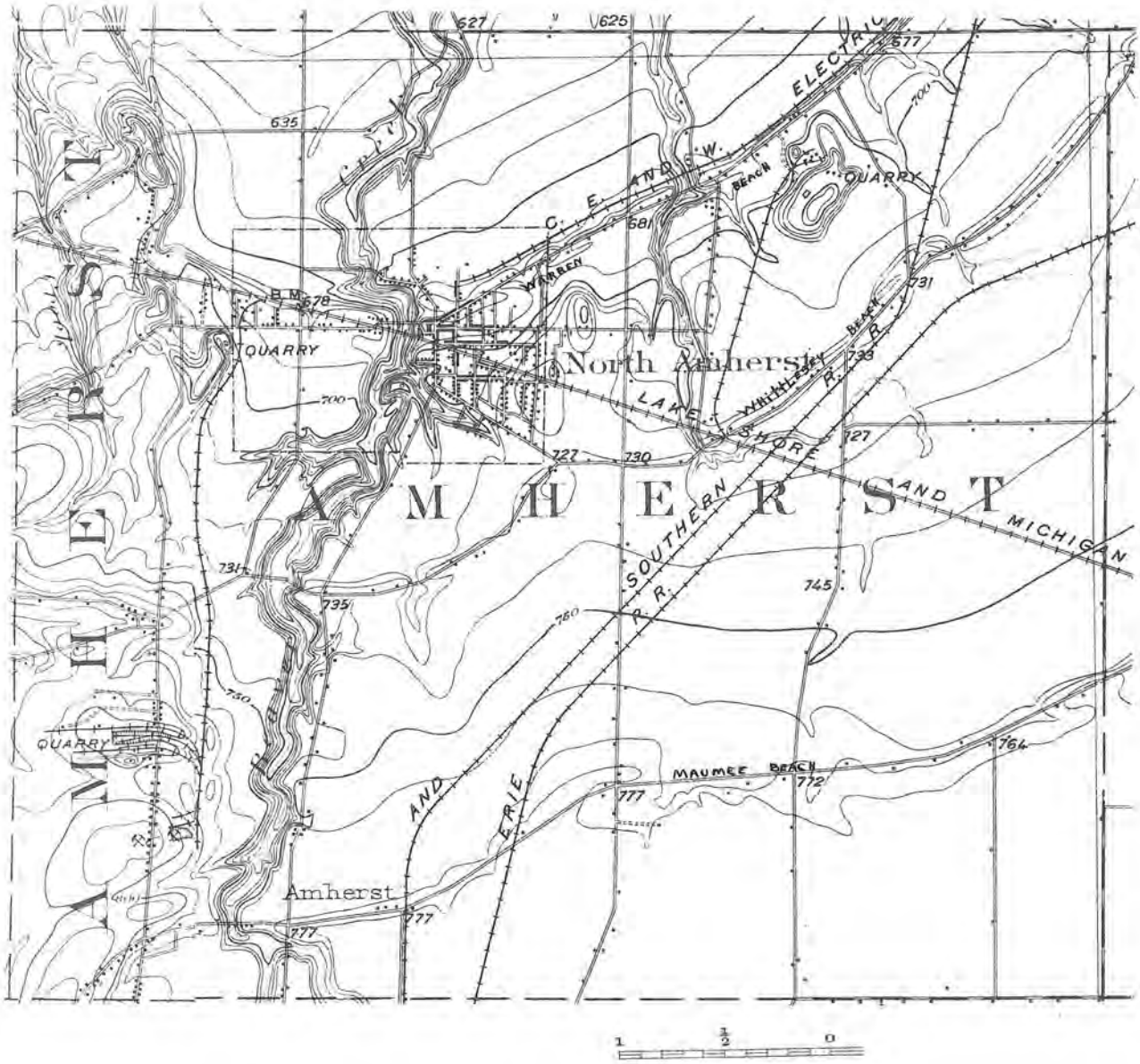

627
625
577
635
700
ELECTRIC
C. E. AND S. W.
BEACH
QUARRY
681
WARREN
B.M.
678
731
QUARRY
North Amherst
LAKE
SHORE
727
730
AMHERST
SOUTHERN MICHIGAN
R.
745
735
750
780
764
MAUMEE BEACH
772
777
AND
ERIE
Amherst
1
½
0

PLATE I

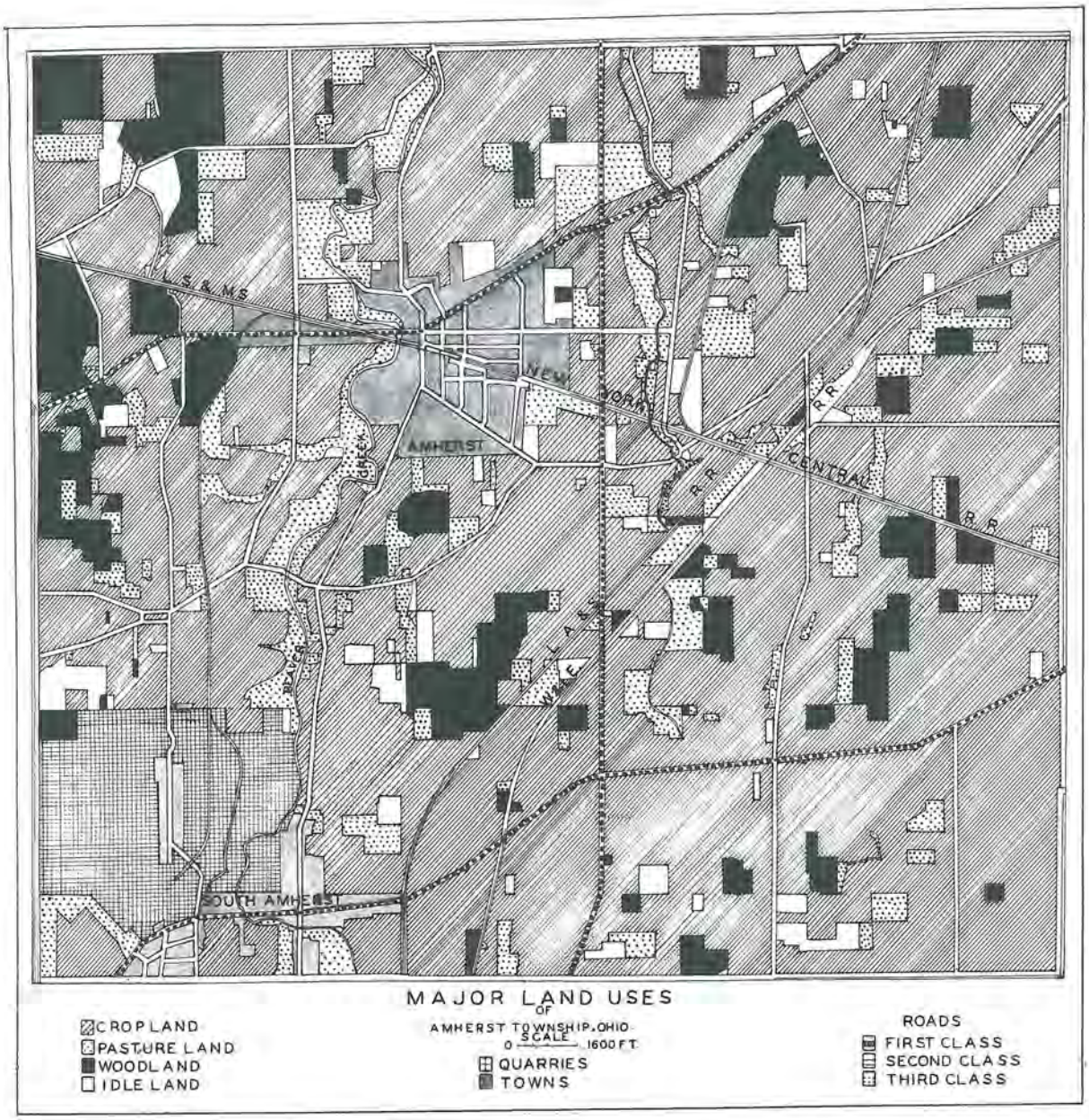

L.S.&M.S.
NEW YORK
CENTRAL
R.R.
AMHERST
BLACK RIVER
MILL CREEK
SOUTH AMHERST
MAJOR LAND USES
OF
AMHERST TOWNSHIP, OHIO
SCALE
0 1600 FT.
CROP LAND
PASTURE LAND
WOODLAND
IDLE LAND
QUARRIES
TOWNS
ROADS
FIRST CLASS
SECOND CLASS
THIRD CLASS

PLATE II

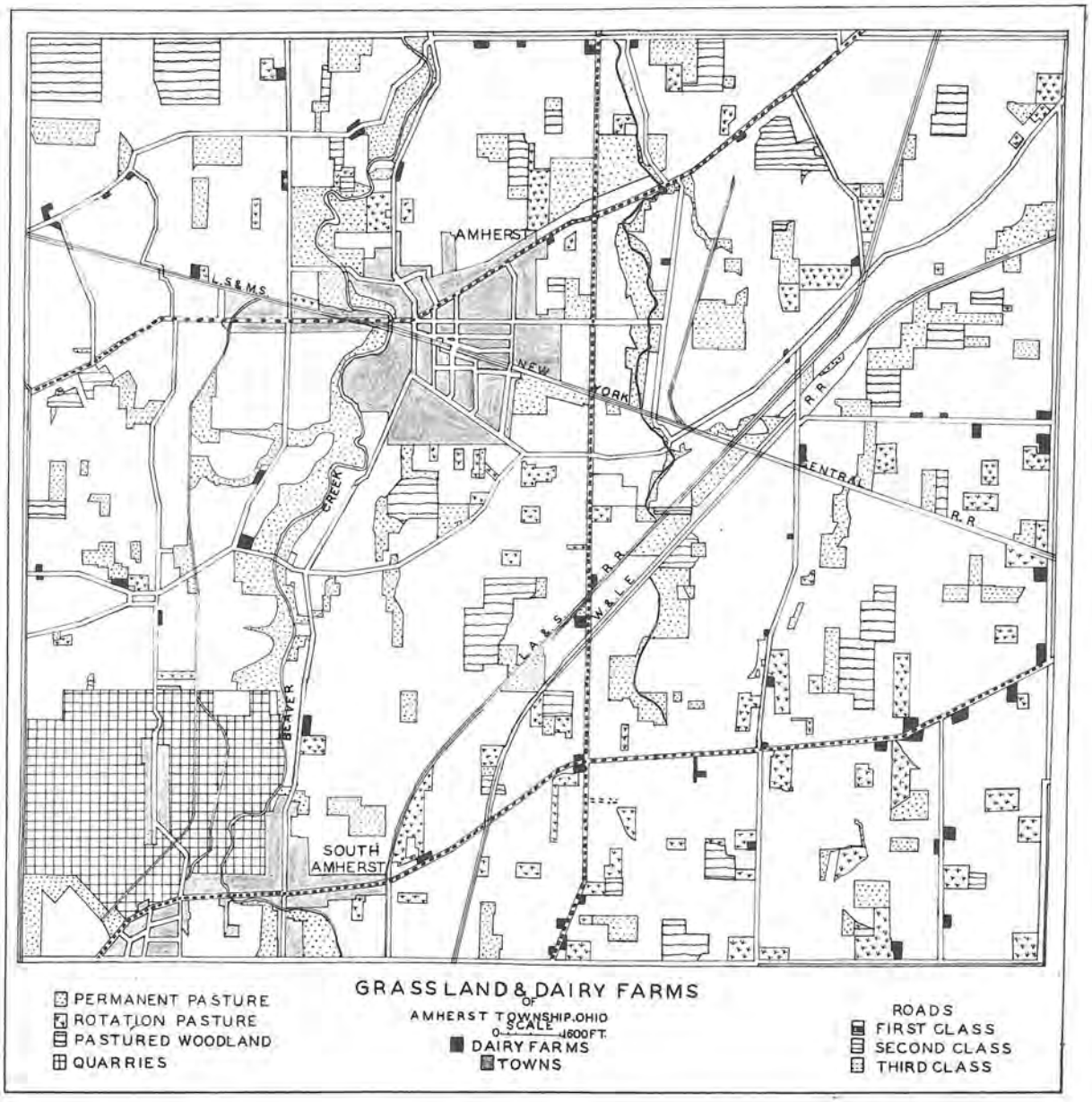

AMHERST
L.S.&M.S.
NEW YORK CENTRAL R.R.
BEAVER CREEK
L.A.&S. R.R.
W.&L.E. R.R.
SOUTH AMHERST
GRASS LAND & DAIRY FARMS
OF
AMHERST TOWNSHIP, OHIO
SCALE
0 1600 FT.
PERMANENT PASTURE
ROTATION PASTURE
PASTURED WOODLAND
QUARRIES
DAIRY FARMS
TOWNS
ROADS
FIRST CLASS
SECOND CLASS
THIRD CLASS

PLATE III

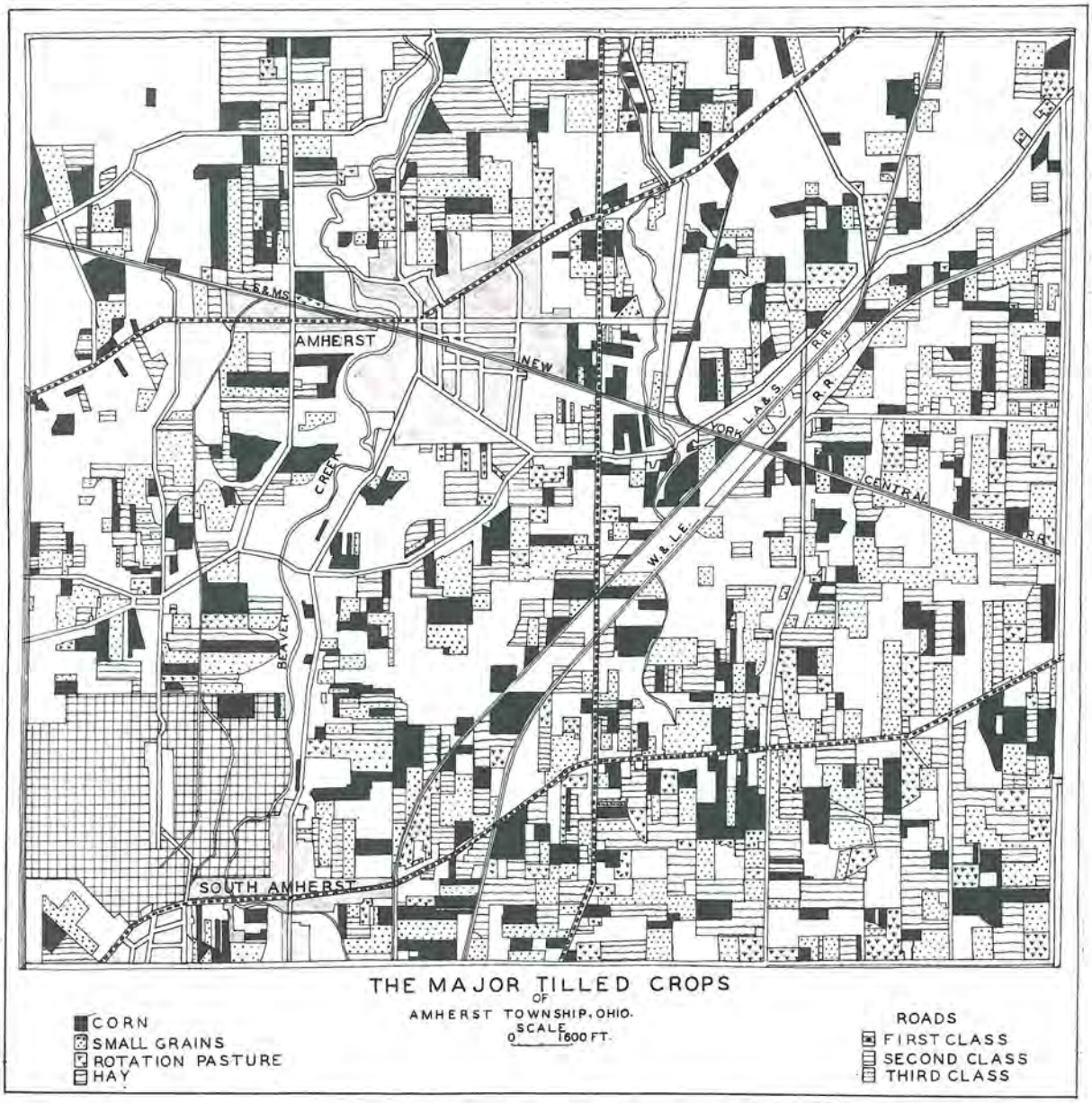

L.S.& M.S.
AMHERST
NEW
YORK, L.A.& S. R.R.
CREEK
CENTRAL
R.R.
W.& L.E.
BEAVER
SOUTH AMHERST
THE MAJOR TILLED CROPS
OF
AMHERST TOWNSHIP, OHIO.
SCALE
0 1600 FT.
CORN
SMALL GRAINS
ROTATION PASTURE
HAY
ROADS
FIRST CLASS
SECOND CLASS
THIRD CLASS

PLATE IV

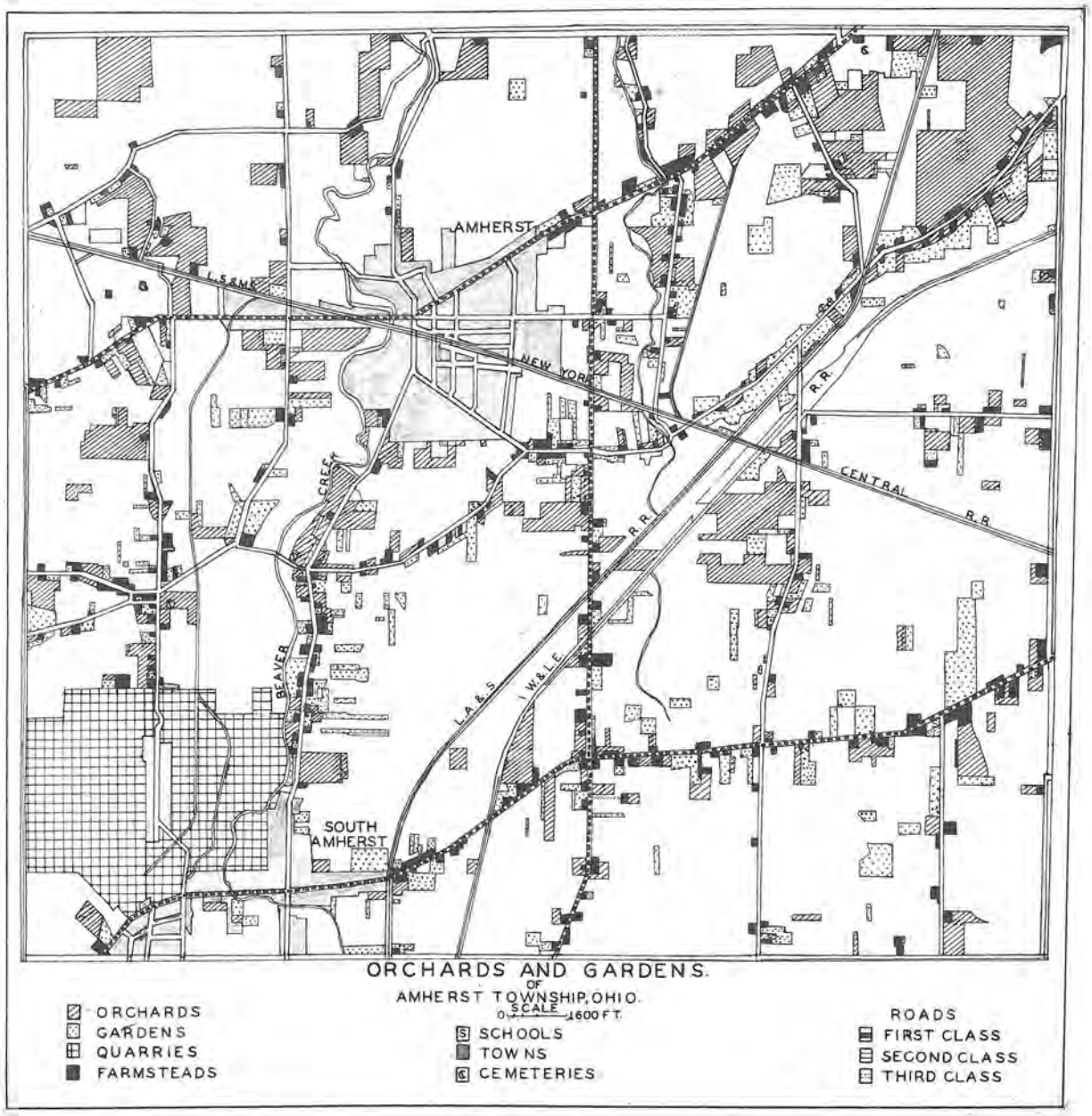
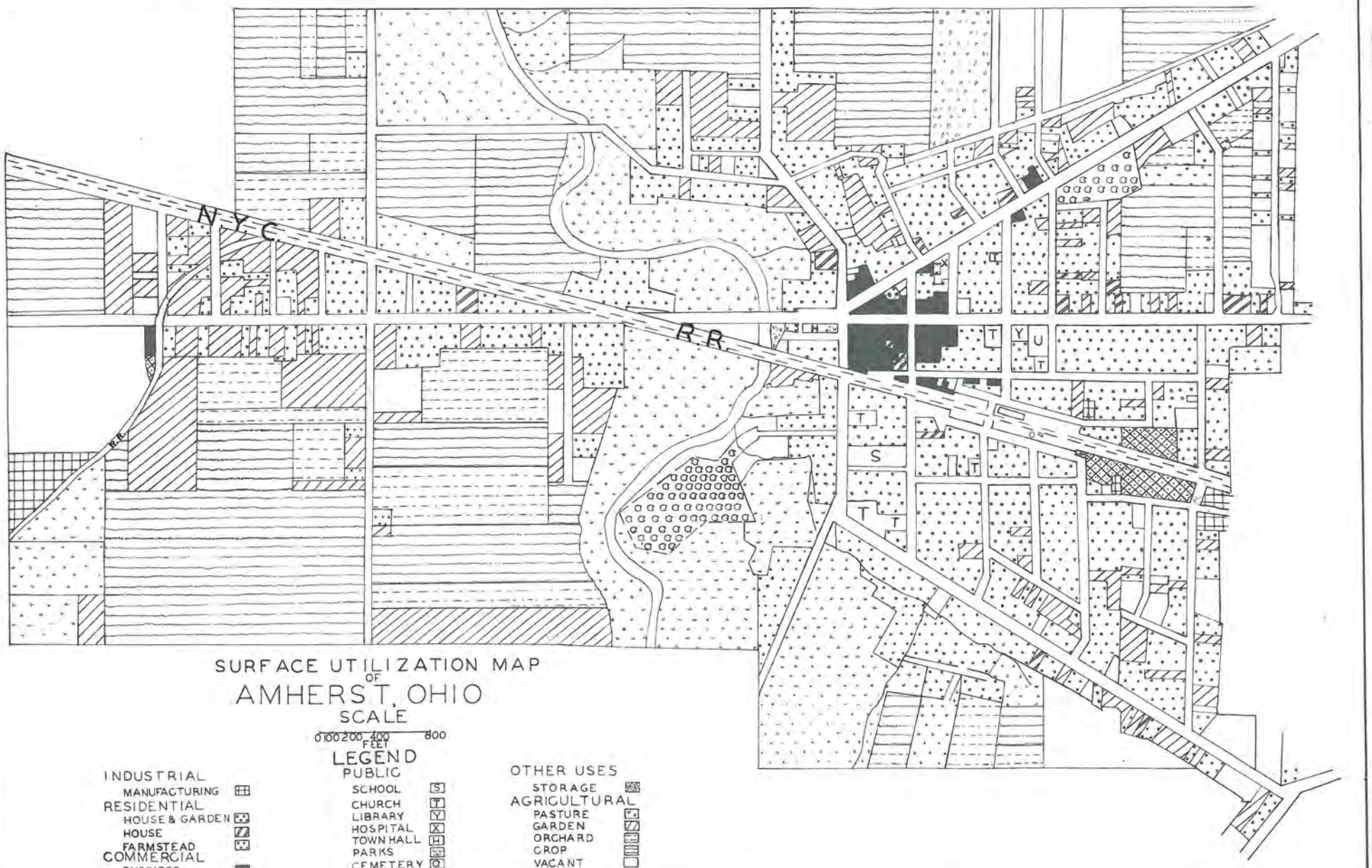

AMHERST
L.S.&M.S.
NEW YORK
CENTRAL
R.R.
BEAVER
CREEK
L.A.&S.
I.W.&L.E.
SOUTH
AMHERST
ORCHARDS AND GARDENS.
OF
AMHERST TOWNSHIP, OHIO.
SCALE
0 1600 FT.
ORCHARDS
GARDENS
QUARRIES
FARMSTEADS
S SCHOOLS
TOWNS
C CEMETERIES
ROADS
FIRST CLASS
SECOND CLASS
THIRD CLASS

PLATE V




SURFACE UTILIZATION MAP
OF
AMHERST, OHIO

SCALE
0 100 200 400 800
FEET

LEGEND

INDUSTRIAL
- MANUFACTURING

RESIDENTIAL
- HOUSE & GARDEN
- HOUSE
- FARMSTEAD

COMMERCIAL
- BUSINESS

PUBLIC
- SCHOOL [S]
- CHURCH [T]
- LIBRARY [Y]
- HOSPITAL [X]
- TOWN HALL [H]
- PARKS
- CEMETERY [Q]

OTHER USES
- STORAGE

AGRICULTURAL
- PASTURE
- GARDEN [S]
- ORCHARD
- CROP
- VACANT

PLATE VI

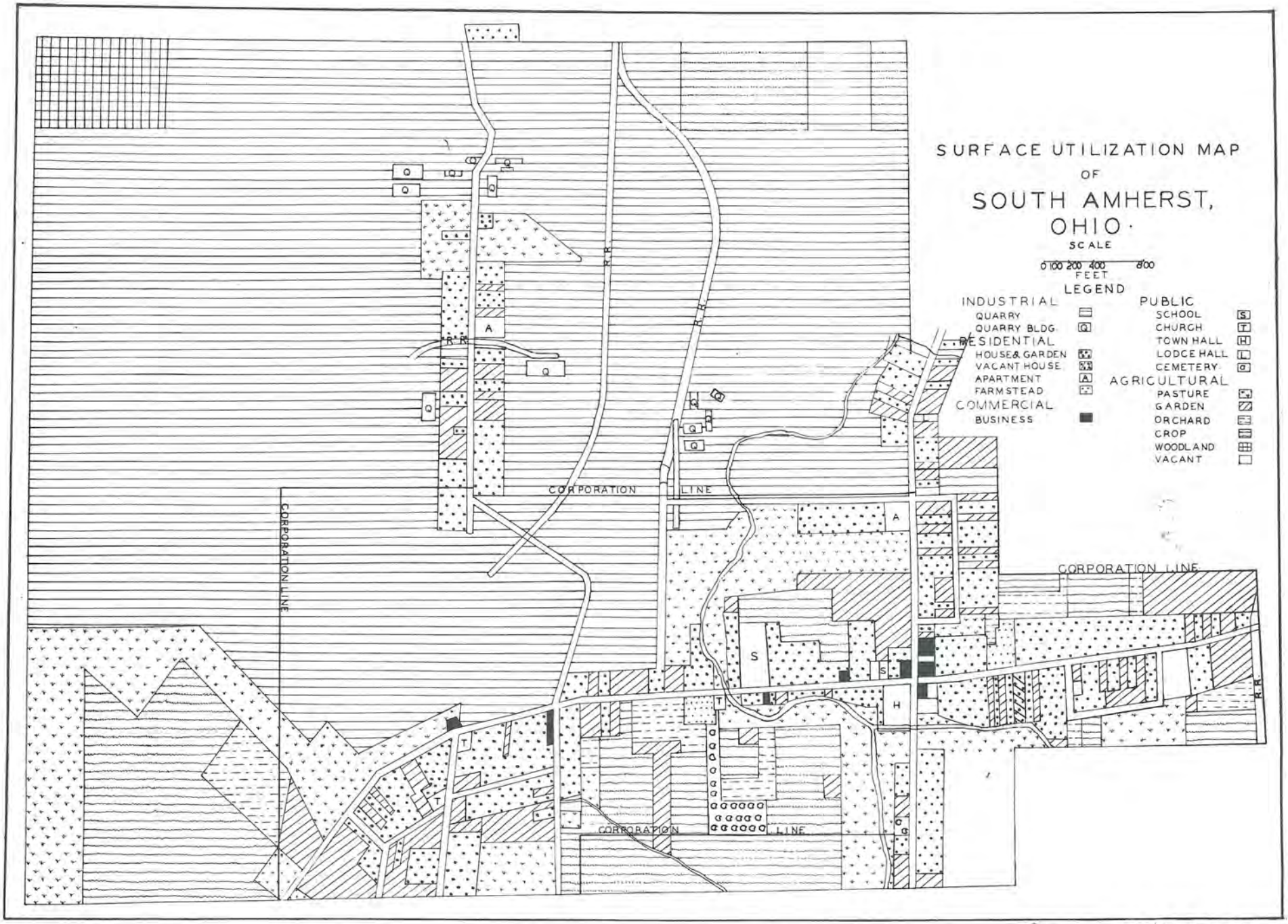

SURFACE UTILIZATION MAP
OF
SOUTH AMHERST,
OHIO.
SCALE
0 100 200 400 800
FEET
LEGEND
INDUSTRIAL
QUARRY
QUARRY BLDG.
RESIDENTIAL
HOUSE & GARDEN
VACANT HOUSE
APARTMENT
FARMSTEAD
COMMERCIAL
BUSINESS
PUBLIC
SCHOOL
CHURCH
TOWN HALL
LODGE HALL
CEMETERY
AGRICULTURAL
PASTURE
GARDEN
ORCHARD
CROP
WOODLAND
VACANT
CORPORATION LINE
CORPORATION LINE
CORPORATION LINE
CORPORATION LINE
R.R.
R.R.

PLATE VII