

A HISTORICAL GEOGRAPHY OF
GRAND LEDGE, MICHIGAN

Thesis for the Degree of M. A.
MICHIGAN STATE UNIVERSITY

Thomas R. Odenkirk

1959



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by

Thomas R. Odenkirk

AN ABSTRACT

Submitted to the College of Science and Arts
Michigan State University of Agriculture and
Applied Science in partial fulfillment of
the requirements for the degree of

MASTER OF ARTS

Department of Geography

1959

Approved: _____

Edward C. Prophet

The objective of this thesis is to trace the history of settlement and development of Grand Ledge, Michigan and to analyze the various economic activities that have prevailed. From the village's beginning to the present there have been five major periods in the economic development of the city. These are: pioneer, farm service, resort, industry, and residential.

Early activities in the Grand Ledge area centered around utilization of natural resources--local timber for shelter and the Grand River for power. Climate and soil favorable to general farming have encouraged agriculture which in turn created for Grand Ledge the role of a farm service center. Other activities important to the economic development are the "Seven Islands" resort area, services to local residents, and industry, also dependent on local resources.

Recently Grand Ledge has been dependent upon nearby Lansing for the support of more than half of its working force. Industry and services to residents and farmers are still significant to the support of Grand Ledge, but today the city's primary role is that of a residential suburb directly related to the prosperity of Lansing.

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The author is deeply indebted to those who aided him during his research--Miss Geneva Kebler, Research Assistant, State Archives in Lansing; Walter Cantine, Publisher of the Grand Ledge Independent; and Robert W. Bryant, Mayor of Grand Ledge. Much valuable information pertaining to historical data of Grand Ledge was provided by Len Marshall and Grace Porter Pierce during a number of personal interviews. Sincere thanks is extended to Harry O. Culp who made it possible for the author to observe and photograph the Grand Ledge area from the air. Finally, the author wishes to acknowledge the interest and co-operation of Otto D. Pearl, Grand Ledge Realtor, whose untiring assistance and incentive made possible the obtaining of otherwise unavailable material.

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STATEMENT OF PROBLEM

The objective of this study is to present the reasons for the existence of Grand Ledge, Michigan, a community of 5,000 inhabitants.

An examination has been made to see what, if any, influence physical and cultural geographic factors have had in affecting the number of people making up the community, their means of support and the pattern of land occupancy. This has been done for various periods of time throughout the history of the community in order to trace its evolution from a pioneer settlement some 110 years ago to the present city.

Figure 1. Frontspiece.

Areal View of Grand Ledge and the Surrounding Area. (There were no unmarked copies of the mosaic of areal photographs for Grand Ledge available so a marked copy had to be used for this photostat.)



CHAPTER I

THE PHYSICAL SETTING

Orientation

Grand Ledge, a city of 5,000 inhabitants, is situated in Oneida Township in the northeast corner of Eaton County, approximately eleven miles west of Lansing and fifty-three miles southeast of Grand Rapids (Figure 2). The city occupies a picturesque site on both banks of the Grand River.

Grand Ledge is favorably served with regard to transportation facilities; it is traversed in a north-south direction by M-100 and from east to west by M-43, each a hard surface, all weather highway (Figure 3). Tying in with this road pattern is U. S. 16, located three miles north of the city and connected by an interchange with M-100. The city is also located on a main track of the Chesapeake and Ohio Railroad, a factor which is of primary importance to the economic development of the city.

Local Surface and Subsurface Characteristics

The elevation of Grand Ledge is 860 feet above sea level. The surrounding area¹ varies from 775 feet to 1,000

¹For the purpose of this discussion on physical setting, the term "surrounding area" refers to an area within a 10 to 12 mile radius of Grand Ledge.



Figure 2. Orientation Map of Grand Ledge

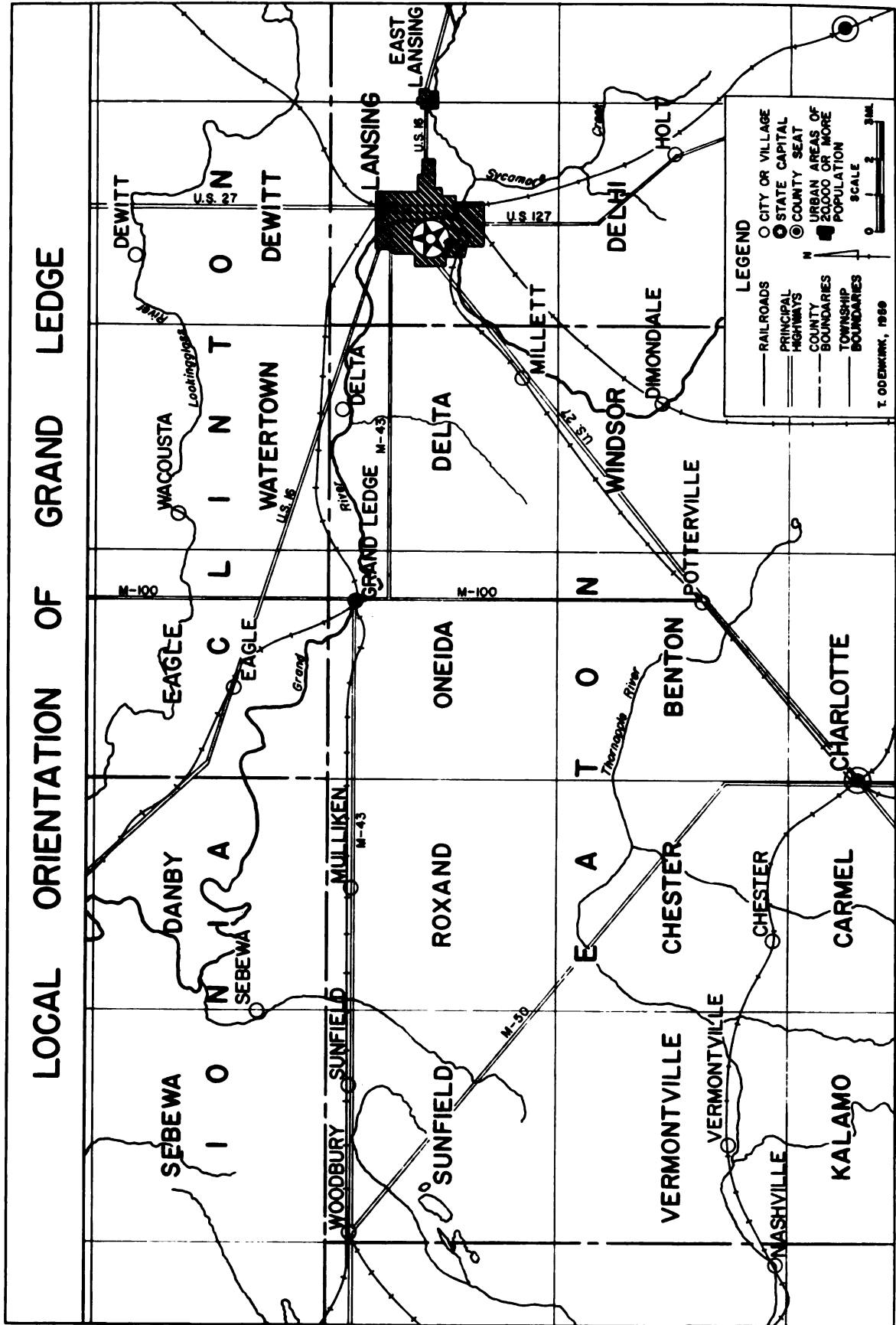


Figure 3. Local Orientation of Grand Ledge

feet above sea level. The entire area is characterized by undulating or gently rolling surface relief which has a slight downward slope from south to north (Figure 5).

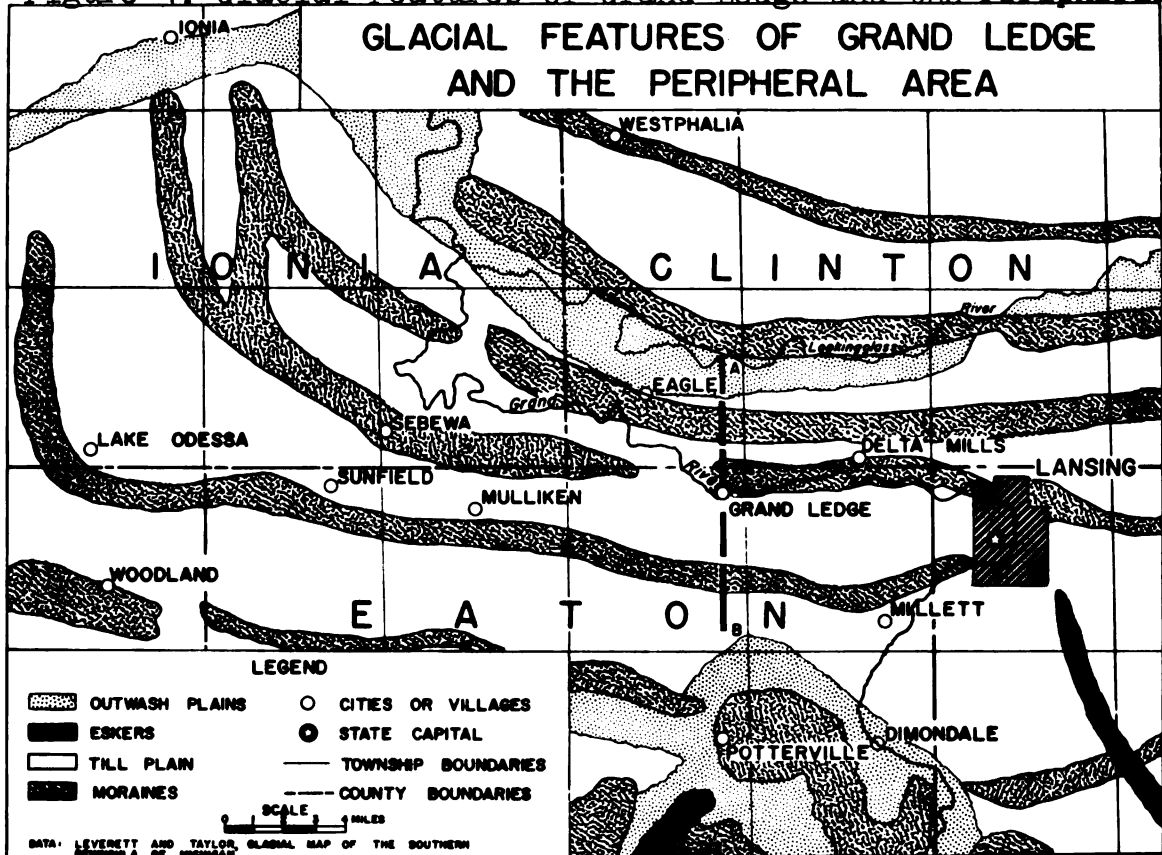
Eaton County and the Surrounding area to the north of the county is a plain cut by a few shallow valleys. This plain is the result of glacial deposition, and the shallow valleys and low rounded hills are also mainly of glacial origin. Although most of the valleys are fairly broad, shallow, and enclosed by gentle slopes, the Grand River Valley at Grand Ledge is an exception. For a distance of about a mile and a half the Grand River has entrenched its bed to a depth of sixty feet below the surrounding surface, thus exposing the rugged mass of sandstone which underlies the surface till. Such an occurrence is most unusual for the lower Peninsula of Michigan. The remainder of the Grand River Valley within the county ranges from a quarter of a mile to a mile wide and is bordered by gentle slopes.

Analysis of a section through these bluffs (located within the city limits and west of the main traffic bridge) reveals the stratigraphy shown in Table I.

As indicated in the table, this section of nearly horizontal bedrock includes formations of sandstone with seams of shale interbedded with an occasional coal seam.

Another interesting physical feature resulting from the postglacial work of the Grand River is the mile long

Figure 4. Glacial Features of Grand Ledge and the Peripheral Area



A NORTH-SOUTH PROFILE OF THE GRAND LEDGE AREA

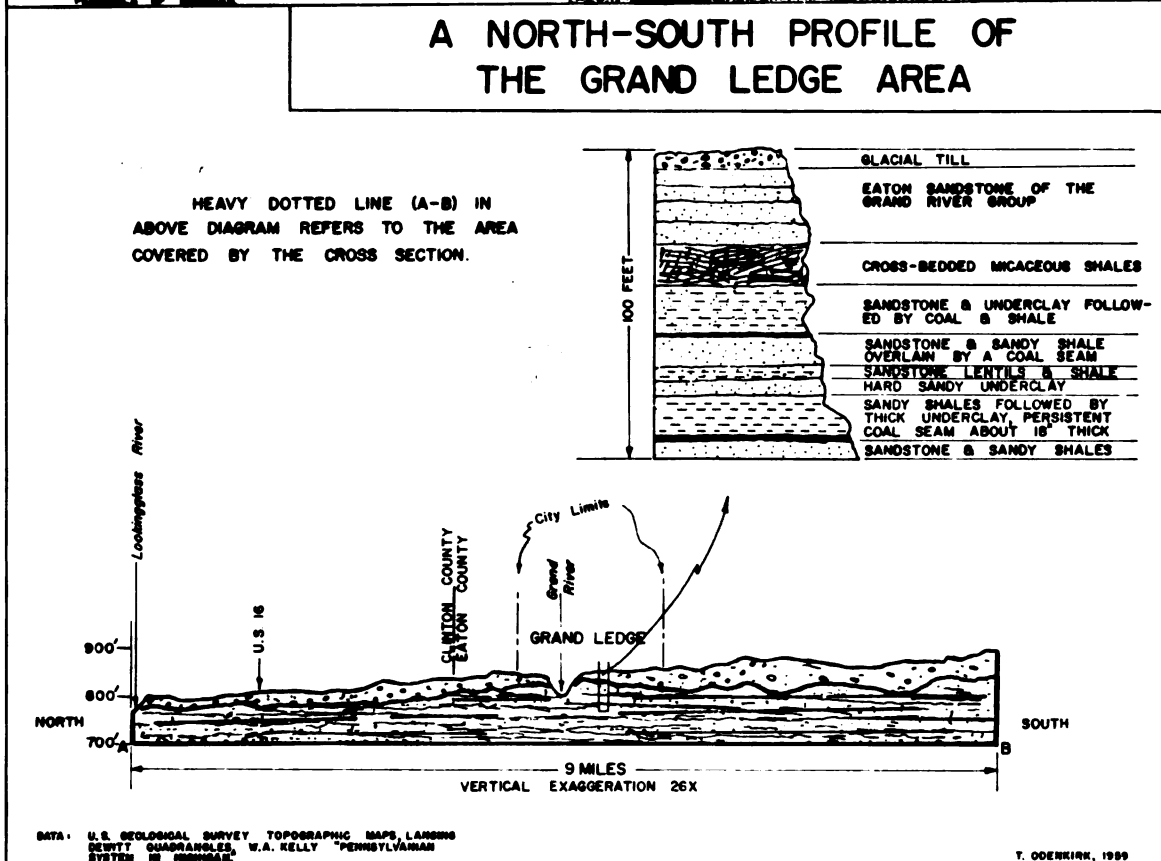


Figure 5. A North-South Profile of the Grand Ledge Area.

TABLE 1

A STRATIGRAPHIC SECTION IN THE CARBONIFEROUS OF THE
PALEOZOIC AT GRAND LEDGE

Description	Average Thickness
Glacial Till	0 - 15 feet
Eaton Sandstone of the Grand River Group	25 - 40 feet
Bluff-colored, cross-bedded micaceous shales	15 feet
White to light gray micaceous sandstone, lenticular shales and underclay followed by coal and carbonaceous shale.	15 feet
Sandstone lenticular and sandy shale passing into white plastic underclay, sometimes overlain by coal seam.	10 feet
Sandstone lentils, hard sandy underclay over- lain by a thin coal seam followed by a shale member.	5 feet
Grey to white, structureless, soft underclay followed by a thin coal seam.	5 feet
Irregularly laminated sandy shales followed by thick, sandy underclay. Persistent coal seam, the Grand Ledge Seam, about 1-1/2 feet thick.	12 feet
Non-micaceous sandstone overlain by sandy shales, a thin underclay and shales	5 feet

Source: W. A. Kelly, "Pennsylvanian System in Michigan," Occasional Papers on the Geology of Michigan, Michigan Geological Survey, Publication 40, Geological Series 34 (Lansing, Michigan: Franklin DeKleine Company, 1936), pp. 179-180.



Figure 6.

A section of the exposed Sandstone Ledges. These ledges were carved by the Grand River during the early Postglacial Period. This formation (outcrop) is approximately 40 feet deep.



Figure 7.

Strata exposed in mining shale near the Grand Ledge city limits. Vertical light lines are "tooth" marks left by the shovel scoop. Each tooth is approximately three inches in width.

chain of seven tearshaped islands which are centrally located in the Grand River within the present city limits (Figure 16). Located on the larger islands and scattered throughout the city of Grand Ledge are a number of mineral springs which have resulted from borings into an artesian basin.

Another interesting physical feature is the major streams flow irrespective of topography (Figure 4). Because of the moderate relief the moraines are not a barrier.

Although no pronounced geographic divisions are revealed by the moderate, but noticeable, differences in the surface expression of the area, a general grouping into till plains, outwash plains, and moraines may be made.² The distinct, narrow, outwash plains cross the surrounding area in a general east to west direction (Figure 4). One follows the Thornapple River Valley from Vermontville to a point near Potterville and eastward to the Grand River at Dimondale. The other plain follows along the Lookingglass River in Clinton County, turning northwestward after passing into Ionia County. The areas of greater relief are the moraines which are comparatively low, averaging only about

²Till unstratified glacial drift composed of clay, sand, gravel and boulders.

Till Plains consist of a widespread mantle of unsorted and unstratified drift which possesses a very gently undulating surface.

Outwash Plains, generally flat, are formed by deposits from heavily loaded streams of glacial meltwaters.

Moraines composed of till deposited during glacial recession occur as hilly belts having knob and basin topography.

twenty feet above the till plain. Each of these moraines has been named according to its relative geographical position. Of importance to the Grand Ledge area are the Ionia, Grand Ledge, and Lansing Moraines. Although at points these moraines become broken and irregular, they may readily be identified in the field. The Ionia Moraine begins near Ionia (approximately twenty-five miles northwest of Grand Ledge) and extends to Grand Ledge in a southwest direction paralleling the Grand Ledge Moraine. It passes near Portland and Eagle and then continues in an eastward direction, passing approximately two miles north of Grand Ledge. The Grand Ledge Moraine is a slender moraine which runs toward Grand Ledge from the northwest. The main section crosses to the north of the river at Grand Ledge and is slightly higher on this northern side (Figure 5). From Grand Ledge it runs directly east to a point about two miles north of Lansing where it turns to the southeast. The Lansing Moraine extends eastward through northern Eaton County to the southern part of Lansing, passing near the villages of Sunfield and Mulliken. Where the moraine passes two miles south of Grand Ledge, it is relatively narrow (less than one mile) and of slight relief (less than ten feet) in relation to the surrounding till plain.

The remainder of the area, identified as a till plain, is characterized by undulating or very gently rolling surface relief. This till is of sufficient depth (forty to

seventy-five feet) and relatively high fertility to encourage agriculture. The predominance of silt loams of Miami and Conover types with sufficient slope to permit easy drainage has also enhanced the agricultural function.

Climate

Climatically the Grand Ledge area is of the humid continental type (Köppen-Dfb)³ and has rather sharp seasonal contrasts with warm summers and cold winters.

The mean temperature for January is $22-1/2^{\circ}$ F. and for July $71-1/2^{\circ}$ F.⁴ Therefore, the difference between the mean winter and summer temperatures is considerable, being 49° F. The length of the growing season is approximately 150 days, with the average frost free period a few days longer in the extreme southwestern part of the county due primarily to shallow valleys and depressions. Prevailing winds are southwesterly, high velocities (above 25mph) are seldom reached, and tornadoes are extremely rare.

Although the city of Grand Ledge and the immediate area lack a weather station, the following data on precipitation has been recorded:

³The boundary between the a and b in the Dfa-Dfb climate type is 71.6° F. East Lansing with a mean July temperature of 71.1° F. is Dfb type while Charlotte with a mean July temperature of 72.7° F. is Dfa type. (U. S. Department of Commerce, Mean Temperature and Precipitation: Michigan, Weather Bureau (Washington, D. C.: Government Printing Office, June, 1957)).

⁴Glen T. Trewartha, An Introduction to Climate (3rd edition; New York: McGraw-Hill Book Company, Inc., 1954), p. 328.

TABLE 2

AVERAGE ANNUAL PRECIPITATION IN INCHES FOR
GRAND LEDGE DURING SELECTED YEARS

Selected Years	Inches
1948	x
1949	33.28
1950	32.11
1951	x
1952	23.21
1953	22.03
1954	30.90
1955	29.04
1956	29.23
1957	40.11
Mean	29.99

Source: Water Resource Survey, Red Cedar Watershed, Section 1, Part A (East Lansing, Michigan: Department of Resource Development, Agricultural Experimental Station, Michigan State University, 1958).

Even with the marked increase in precipitation during 1957, the annual average is approximately thirty inches. Extremely low or excessive amounts of precipitation are uncommon and rainfall, which is evenly distributed throughout the growing season, has a rather marked summer maximum. The climatic conditions of the area have been favorable to the support of general farming.

With the preceeding general description and discussion of the physical environment of the area, examination may now be made of the occupance, progressive growth, and changing character of Grand Ledge.

CHAPTER II

EARLY OCCUPANCE OF THE AREA

At the beginning of the Nineteenth Century, prior to the first white agricultural settlers, the southwest **portion** of the Lower Peninsula of Michigan was occupied by bands of the Potawatomi Indian Tribe. These bands were scattered throughout the forest in small settlements of usually less than two hundred inhabitants. Agriculture, which was practiced by most of the bands, consisted mainly of growing corn, peas, beans, squash, and pumpkins. Fish and wild game supplied the Indians with meat, and deer skins were used for clothing and moccasins. The Indians obtained their only source of sweetening by tapping the sugar maples in the northern part of the county.

To a notable degree, the "open oak land"¹ in southern Eaton County seemed better adapted to the Indian mode of life. The northern portion of the county was more heavily timbered, thus greatly limiting the amounts of wild game and hindering movement and settlement. The Indians of Eaton

¹The open oak land had scattered clumps of oak trees in grassy pasturelands. This section of light forest was in sharp contrast to the dense growth of timber throughout most of the county.

County followed a seasonal pattern of north-south migration. It is believed that three temporary Indian villages were situated within or near the present city limits of Grand Ledge. These villages were occupied during the sugar making season. After the sugar harvest the bands would return to the oak openings in the southern part of the county to cultivate corn and pumpkins and to gather berries. Movement within the county was confined to two well-worn trails; one trail traversed the county in an east-west direction approximately four miles south of Charlotte and the other, the "Duck Lake Trail," followed Butternut Creek east of Charlotte passing through Potterville into Oneida Township to meet the Grand River at Grand Ledge (Figure 3).

Period of Transition

In the early Nineteenth Century the tranquil and passive life of the Indians of Eaton County was nearing an end. A series of treaties resulted in many of the Michigan Indians ceding their lands to the American government. For cash, liquor, and merchandise, the white man gained 57,000 square miles of land which became the State of Michigan in 1837.²

After the Treaty of Saginaw in 1819 the Federal government took over most of the land in Eaton County. With the

²Historical plaque (Indian Room), Michigan State Historical Commission Building, Lansing, Michigan.

signing of the Treaty of Chicago, on August 21, 1821, the Indians ceded all of southwestern Michigan except a small section southwest of the St. Joseph River. White settlement was sparse during this period, and it was not until 1830 that any considerable part of Michigan had more than two inhabitants per square mile.³

With the increasing influx of white settlers the United States government began to enforce its restrictions on the Indians. In 1840 the government removed the Potawatomies from Michigan to beyond the Mississippi River. Government agents and soldiers thought that the Indians would resent their expatriation and, in turn, massacre isolated settlers. In contrast, however, the Indians were more sad than revengeful over the change. After their removal the woods seemed lonely and, as one early pioneer commented, "They had gone six months before we wished them all back. They helped us hunt and keep track of our cattle. They furnished us with turkey or venison--the regular price for a deer large or small being one dollar in silver."⁴ With this shifting of the greater portion of the Indians out of Michigan (only a few escaped the search), the dividing

³George J. Miller, "Some Geographic Influences in the Settlement of Michigan and in the Distribution of its Population," Bulletin of the American Geographical Society, XLV, No. 5 (1913), p. 328.

⁴"Historical Sketch of the Early Days of Eaton County," Michigan Pioneer and Historical Collection, Vol. 3 (Lansing, Michigan: W. S. George and Company, 1881), p. 382.

line between the old and new era of human occupance was established.

Improved means of transportation were both a cause and a result of the increased movement of white population into Michigan. A period of less than twenty years witnessed a transformation from the Indian trail to the railroad. This new era in the settlement of Michigan was aided by four main factors: (1) the navigation of the Great Lakes by steam vessels; (2) the opening of the Erie Canal in 1825, thus completing an all-water route between Michigan and the Atlantic Ocean; (3) the stage roads and the Post Road from Detroit to Muskegon; and (4) the development and expansion of the railroad. Not only did this development give an impetus to settlement, but it also resulted in more immigration via the canal and Great Lakes rather than by the overland route from the Ohio Valley. Transportation on the canal was comparatively inexpensive, and large numbers of New England and New York pioneers came to Michigan via canal boat. Between 1830 and 1840 counties of the southern tier in Michigan became well settled. Streams of immigrants moved overland, and every steamer that crossed Lake Erie to Detroit was crowded. By 1837, Eaton, Shiawassee, Van Buren, and Ionia Counties were organized. The first purchases of land in these counties were mainly by speculators, not by settlers.

In the "Michigan Fever" of 1836, thousands of acres of land in Michigan were purchased by men who never planned

to settle on it. Most of these purchases were made with the intent to hold the land from the market until it might be resold at a high profit. For a short period (1836-1839) this excessive speculation had a restraining effect on immigration. By 1840, however, this retardation was counteracted by the crop failures and hard times in New England which resulted in extensive immigration from that area to central and southern Michigan.

Settlement of Eaton County and Oneida Township

In most of the counties through which the Grand River passes early settlement was along the river banks. In Eaton County, however, first settlement did not follow this pattern. The more centrally located section of the county offered sufficient water power plus more open land for agriculture and settlement than did the heavily timbered banks of the Grand River. The first settlements in Eaton County were at Bellevue, in 1833, and Charlotte, in 1835.

In the fall of 1836 Oneida Township received its first settlers. Salomon Russell and his family, who located in Section 22 (two miles southwest of the present city limits of Grand Ledge), had traveled by ox team and lumber wagon from Orleans County, New York. February, 1837, witnessed the arrival of Samuel Preston and his family who had cut a track through the dense forest to settle in southern Onieda Township. Later that same year came the founders of the "Canada Settlement"--six young men who established residence

in Section 36 of the township (four miles south of the present Grand Ledge city limits). By 1839 there were thirty-two inhabitants residing in Oneida Township.⁵

Early Pioneers in Grand Ledge

As a result of the speculators holding land for higher prices, the first permanent settlement in Grand Ledge was not until 1848. Henry A. Trench owned a number of acres⁶ along the south side of the river to the east of what is now Bridge Street (Figure 10). When Edmund Lamson arrived on the site of the village in October, 1848, he found that Mr. Trench had cleared a half acre of land and had built a small frame shanty. A few years later Mr. Trench returned to Connecticut, leaving Mr. Lamson as the first permanent settler of Grand Ledge. In September, 1849, Abram and Chestina Smith settled in a temporary little log cabin on the south bank of the Grand River at the present location of the corner of East River Street and South Bridge Street.

The following quotation is incorporated here because of the vivid description of primitive architecture as well as for the flavor it imparts:

⁵Samuel W. Durant, History of Ingham and Eaton Counties, Michigan (Philadelphia: D. W. Ensign and Company, 1880), p. 494.

⁶The number of acres mentioned in various accounts range from eight to forty.

Log shanties were eight by ten feet square and built by piling up small logs--cob close together, and filling up the spaces between them with split pieces of wood two or three feet long and plastering the outside with mud. The fireplace stood in one corner and was made by pounding earth against the logs about a foot thick to make a chimney back and keep the logs from burning. The roof slanted only one way and was made of troughs from small basewood trees. In this way in a few days a man could knock up a pretty comfortable shelter and so at once begin to live on his land while making a small clearing and putting up the more pretentious log house.⁷

Most of these early settlers came into the new wilderness with the intention of finding homes and occupations, not only for themselves but for their children. For these purposes Grand Ledge offered a number of natural advantages. The village site was located on a river which provided power for sawmilling and the grinding of wheat. The area was covered with a dense forest of fine hardwood trees, notably beech, maple, ash, and elm. Although originally the heavy forest cover acted as a factor in discouraging settlement, it became a definite advantage to the building minded pioneers.

In the winter of 1848 Abram Smith and John Russell obtained permission from the state legislature to build a dam across the Grand River. The dam, two hundred thirty feet in length and six feet tall, was located slightly upstream to the present downtown bridge (Figure 9). Before

⁷The Past and Present of Eaton County, Michigan
(Lansing: The Michigan Historical Publishing Association,
n.d.), pp. 48-49.

the winter of 1849 the dam was completed, and a saw mill was built and put into operation on the south side of the river, slightly west of the dam (Figure 8). By 1850, as the result of natural assets and the determination of the pioneers, the small settlement of Grand Ledge was well on its way to commanding a place of importance in relation to the surrounding townships.

Early Town Development

Although the first half of the Nineteenth Century had witnessed a relatively slow occupance of the Grand Ledge area, the human response to a favorable natural scene resulted in progressive growth in the last half of the century (Figure 14), and was destined to make Grand Ledge the second most important city of Eaton County.

In the spring of 1850 Nathan Allen and Ruben Wood contracted with the sawmill company to construct a building for them. This establishment, a general store, opened in June, 1850, was located on River Street adjacent to the sawmill yard. Later that same year the firm of Wood and Allen, with the aid of David Taylor, built a two-story frame grist mill on the north bank of the river. This structure stood a few yards east of the present Consumer's Power Office near East Front and North Bridge Streets (Figure 11).

The milling process of one hundred years ago was fairly simple. The following description will present a basic idea of how the work was done utilizing the water power of the Grand River.

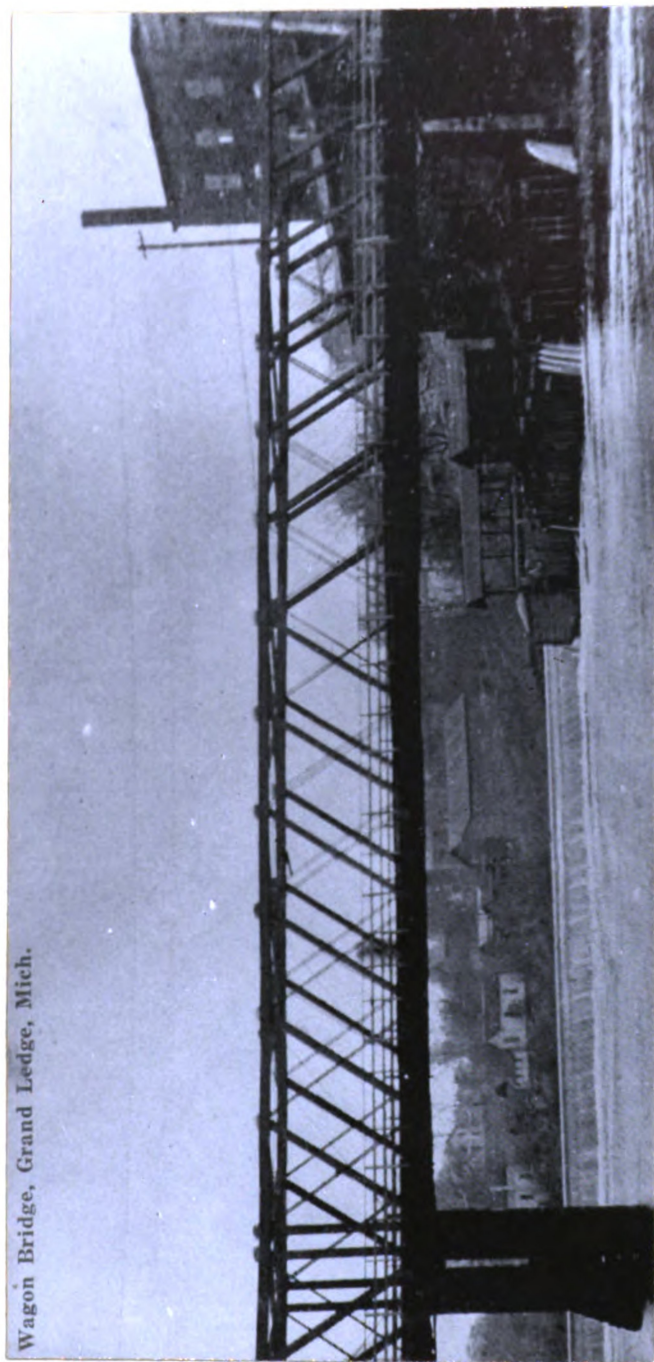
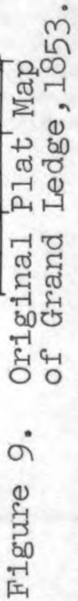


Figure 8. Wagon Bridge of Grand Ledge. Note the dam located east of the bridge.



GRAND LEDGE

Eaton Co.

Scale, 40 Rods to an inch.

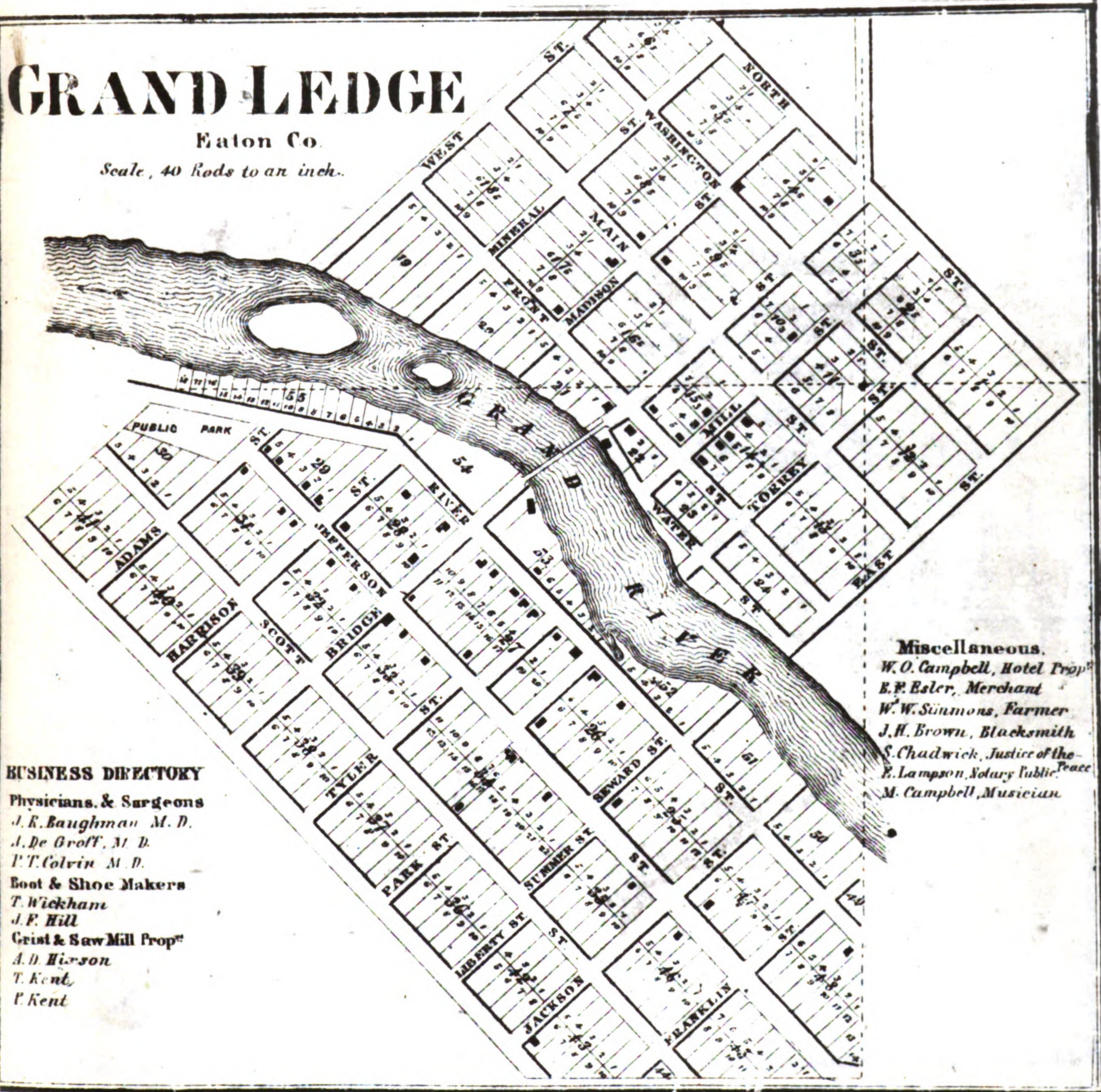
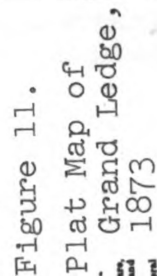


Figure 10. Plat Map of Grand Ledge, 1860



The milling process was rather simple--there was a vertical shaft water wheel and on the upper shaft was mounted a large flat cylindrical stone like a giant grindstone lying on its side. Beneath on heavy timbers was a similar stone through which passed the waterwheel shaft with no connection with the lower. The upper and nether stones had grooves properly placed. Grains came through openings beside the shaft in the upper stone and drawn into the grooves was reduced to flour or meal in a few seconds as the upper slowly revolved.⁸

Until 1850 Grand Ledge had been known by the Indian name of Big Rocks. With substantial community growth and spirit, a number of interested citizens called a meeting to pass on a town name so that a petition might be made to the state legislature to establish a post office. Several names such as Trenchville, Lamsonville, and still other "villes" were suggested, but Grand Ledge was finally agreed upon. Later that same year (1850) a post office was granted. With no railroad, however, the villagers were forced to take turns riding through the dense forest to Lansing to carry the mail. For a few years a true pony express was in operation.

The next year witnessed the opening of the first school house with nine pupils in attendance. The little red frame building stood on the north side of the river near the present site of the second ward school. In 1853, the settlers, wearied of using boats to cross the river, built a wooden bridge. Until this time the river had not only

⁸ Lansing State Journal clipping, January 17, 1937, clipping file, Michigan State Library, Lansing, Michigan.

made movement difficult, but it had also created a rivalry between those living on the south side and those on the north. There were times when this rivalry reached the proportions of a feud and was carried to such extremes that a number of commercial firms had a store on each side of the river. Old timers tell that the rivalry was so great that a person who died on one side of the river was never taken to an undertaker on the other side. As time passed and harmony grew, more and more of the commercial life of the city became concentrated on the south side of the river where residential development was greatest.

The next ten years (1853-1863) was a period of marked growth and expansion. By 1860 the population was listed at 225--a sizeable increase from the six or seven families of a decade before.⁹ The Michigan State Gazetteer and Business Directory of 1860 listed the following enterprises for Grand Ledge:¹⁰

1. Six stores of various kinds
2. One select school
3. One grist mill
4. One saw mill
5. Two wagon shops
6. Three blacksmith shops
7. Two stone ware manufactories [sic]
8. One pump manufactory [sic]
9. One cabinet shop
10. One copper shop
11. Two asheries

⁹George W. Hawes, Michigan State Gazetteer and Business Directory for 1860 (Detroit: F. Raymond and Company, n.d.), passim.

¹⁰Ibid.

Also present in the town were a chair manufacturing firm and the Grand Ledge Hotel. The Congregational, Baptist, and Methodist Episcopal Churches had been organized by this time.

Particular attention to the preceeding Gazetteer listing reveals the large number of establishments orientated toward service to the farmers. Although the original town activities focused on the river and its nearby natural resources, the orientation soon changed into one of a farm service community--a strong factor in the town's growth that has continued to the present day.

With this orientation toward a farm service community and Grand Ledge's central location among several rich and prosperous farming townships (Figure 3), the community was destined to take on new proportions. Early settlement was near the banks of the Grand River, but as the town expanded, the effective area of settlement began also to enlarge. Note the plat map of 1860 (Figure 10) which indicated structures in the various blocks showing actual development. Note especially River and Mill Streets.

CHAPTER III

TOWN GROWTH AND PATTERN OF DEVELOPMENT

The Coming of the Railroad

The expansion of the 1850's picked up momentum in the 60's and continued in the 1870's after the completion of the Detroit, Lansing, and Northern Railroad which passed through Grand Ledge. Grand Ledge, now more than ever, acted as a collection and reshipment center for agricultural products from the outlying areas.

The economic foresight of the citizens of Grand Ledge resulted in securing the railroad for their community. The original plans called for extension of the road from Lansing through Wacousta and Portland, a few miles to the north, thus by-passing Grand Ledge. The townspeople, realizing the significance of the railroad to their town, called a meeting to raise money to influence the builder to route the railroad through Grand Ledge. Each town resident offered to give as much money as he possibly could; still it was not enough to entice the railroad company to build into Grand Ledge. One local citizen said that he would give a certain number of days of free work with oxen. Others quickly joined him, and it was agreed to build five miles of roadbed on the northeast and northwest side of the community.

This ten mile stretch of free roadbed plus financial help was enough to persuade the railroad company to include Grand Ledge in its route. In September, 1869, the Detroit, Lansing, and Northern Railroad commenced regular service through Grand Ledge. Examination of the present railroad pattern in this area (Figure 3) will reveal the pronounced V-shape in the railroad north of Grand Ledge--emphasizing how the town's own determination was the key factor in bringing the railroad to Grand Ledge.

In 1879, new track, leading to the west out of Grand Ledge, was connected to the original road which took a more northwesterly direction. This new rail route, unlike the original railroad, crossed over the Grand River thus necessitating the building of a six hundred foot long steel bridge. The bridge contained three spans, one of which (center) was anchored to one of the islands in the river.

1870--1900

In 1870 internal communication was enhanced by the building of a new bridge of iron and wood to replace the original wood structure which ice and high water had washed away. In 1874 Messrs. Burtch and Boyce, prompted by a growing resort industry, built another bridge--a wooden foot bridge--from the south bank of the river to one of the seven islands in the Grand River.

Settlement was reaching such proportions that the town was incorporated as a village by an act of legislature on

April 8, 1871. In order to better serve the steadily increasing population--both rural and urban--a number of new business establishments were founded during this period. On January 7, 1870, the Grand Ledge Independent Newspaper began regular publication. In 1872 two new sawmills were put into operation. The Exchange Bank, which was located near the railway station, was established in July of 1873. That same year the Mineral House Hotel, a large three story frame building, was put into operation. The photocopy of an 1873 map of Grand Ledge (Figure 11) shows the location of these various enterprises. It is interesting to note that, prior to this period (1874), commercial establishments and residences were located in proximity to Bridge and River Streets. However, by 1874, expansion and growth from the river was evident. Compare the plat map of 1860 (Figure 10) with the one of 1873 (Figure 11), noting particularly the pattern of buildings and their locations with respect to the Grand River.

The original settlement of Grand Ledge was fairly equally divided between the two sides of the river in close proximity to blocks 21, 22, 53, and 54 (Figure 10). By 1860, as settlement was beginning to expand away from the river, the south side of town was developing more than the north, a pattern which has continued to the present. The original reason for this pre-eminence of southern town growth was, no doubt, created by the barrier of the river which greatly impeded free movement until the first bridge was built in



Figure 12. North Side of the Grand River, 1874



Figure 13. South Side of the Grand River, 1874

1853. Movement into Oneida Township and Grand Ledge was substantially from the south and, as early settlers reached the river, there was little need or motivation for crossing. As new settlers reached the small community they tended to locate on the south shore near established settlement. Also, the topography is considerably more favorable south of the river; the land is more level and the drainage is better. After 1870 this pattern was further influenced by the railroad yards on the north side of town. Residential areas farthest away from the railroad were more desirable, thus emphasizing southern town development.

A tally of structures on the 1860 plat map reveals that at this time the south side totaled thirty-nine structures as compared with nineteen on the north. Examination of the 1873 plat map strengthens this contrast between the two sides of the river; there were 132 structures on the north side and 177 on the south side. It is interesting to note the heavy concentration of settlement strung out along Jefferson Street.

Between 1864 and 1874 the population had increased from 300 to 1,119, over 250 per cent, a significant period in the history of Grand Ledge and the greatest percentage increase for any ten year period (Figure 14). An official census taken by Mr. George W. Jones in June, 1874 gave the following summaries:¹

¹Grand Ledge Independent, July 3, 1874.

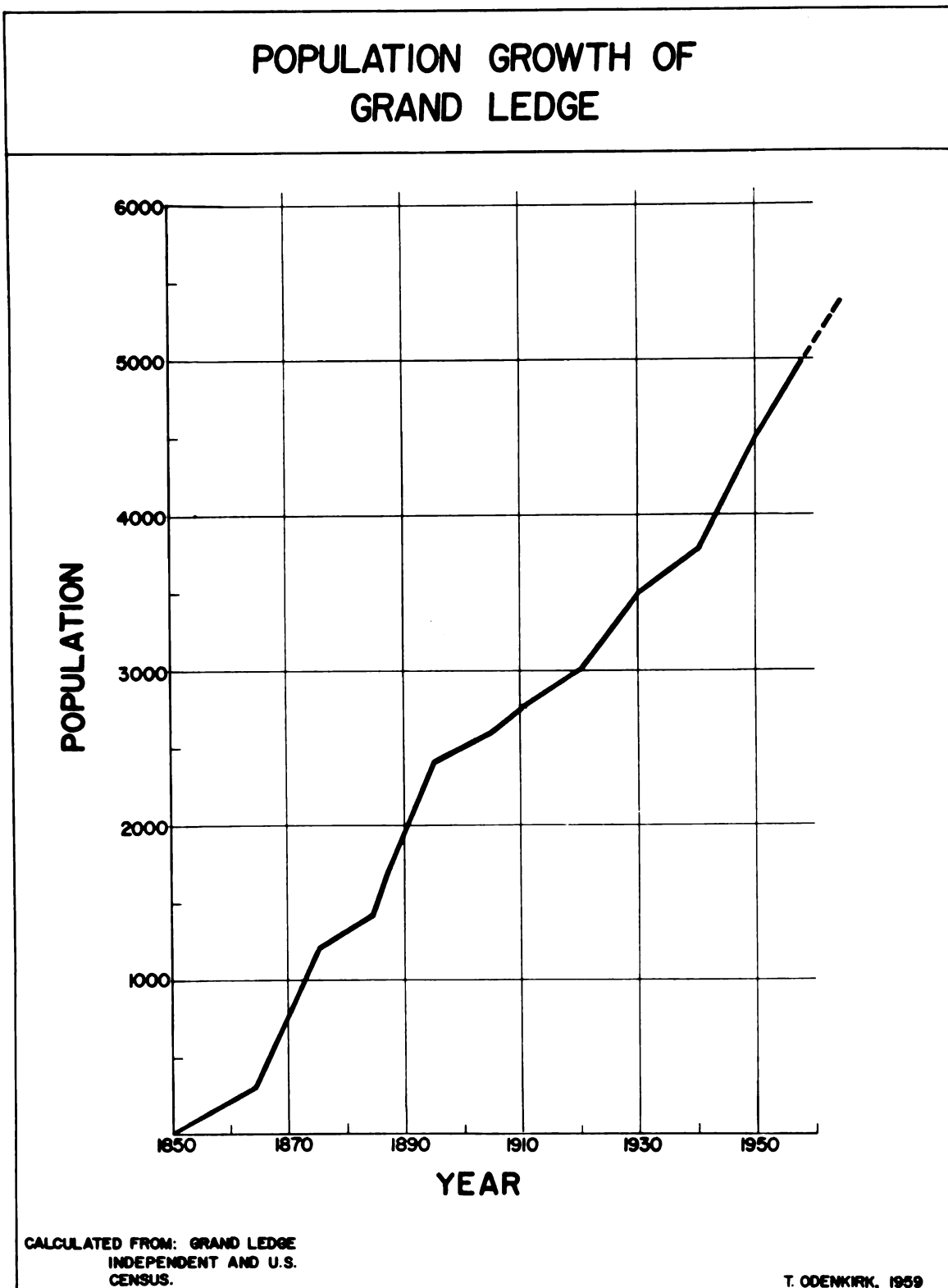


Figure 14. Population Growth of Grand Ledge

Males age 21 and over	334
Females age 18 and over	337
Males under 21	239
Females under 21	219

Total Population	1119
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The census of statistics for Oneida Township for this same year (1874) points out the relevance of Grand Ledge as a service center:²

Population of Grand Ledge	1119
Population outside of Grand Ledge	1250
Total Population of Township	2369
Acres of taxable land in ownership	22,790
Acres of improved land	8,826
Acres of wheat sown (May, 1874)	2,354
Bushels of wheat raised the preceeding year	34,155
Bushels of all other grains-- preceeding year	34,438
Capital invested in manufacturing	\$ 81,000
Total value of manufactured products	\$ 95,400

The above statistics indicate the relative growth and land use of the township as a whole, plus the fact that Grand Ledge was taking on a true dual character. Not only was the town growing as a farm service center, but also serving a community of nearly 1200 inhabitants. Many of the local citizens were engaged in small business enterprises and manufacturing including the building of wash boilers, manufacture of oars, production of lumber, and building of carriages.

²Grand Ledge Independent, July 17, 1874.

Tragedy struck the village of Grand Ledge on December 2, 1876. A number of buildings on the west side of South Bridge Street were destroyed by the "Great Fire." Besides destroying one-fourth of the business buildings of the village, the fire took the life of one inhabitant.³ By 1880 the village of 1378 people had completed rebuilding the entire burned district with brick structures.

Between 1876 and 1880 improvement and expansion continued. Residential and business establishments were being erected at a noteworthy rate. The building boom of 1881 also added many brick and frame structures. As the economic activities of the town increased, so did its effect on the surrounding area. The following article from the Grand Ledge Independent of March 26, 1880, indicates this growing importance of Grand Ledge as a farm service community:

Planing mill and lumber business is lively. Last Saturday Summers, Wareham and Rossman sold \$175.00 worth of lumber. During last week Burtch, Streeter and Hixson sold upwards of \$1200.00 worth. During past two weeks farmers residing within five miles of Charlotte have been to this place to purchase lumber.⁴

Grand Ledge, in a region of excellent farming country and favorable local resources was now shipping lumber, flour, and livestock in considerable quantities. To a notable degree, many of the establishments present at this

³Centenary and Historical Pageant, 1836-1936, Souvenir Program (Grand Ledge: Grand Ledge Independent Publishing Company, 1936), p. 27.

⁴Grand Ledge Independent, March 26, 1880.

time on the Grand Ledge scene were directly related to the agricultural service function of Grand Ledge. In 1874, the Michigan State Gazetteer and Business Directory listed the following business and manufacturing establishments for the village:⁵

<u>Establishment</u>	<u>Number</u>
Dressmaker	2
Dentist	2
Billiard room	1
Physician	4
Founder and machinist	1
Blacksmith	4
General store	6
Reverend	4
Gunsmith	1
Hotel proprietor	4
Justice of the Peace	1
Boot and shoemaker	1
Grocer	4
Harness maker	1
Millinery	1
Exchange Bank	1
Boot and shoe store	1
Newspaper	1
Hardware	1
Barber	1
Hair dresser	1
Blacksmith and wagon maker	1
Groceries and drugs	3
Restaurant	1
Books and stationery	1
Photographer	1
Flour mill	1
Wagon maker	2
Livery stable	2
Express agent	1

This inventory indicates the basic activities of the village for this period. The establishments orientated towards the

⁵Michigan State Gazetteer and Business Directory for 1875 (Detroit: R. L. Polk and Company, 1875).

townspeople were in operation to supply services to those people who in turn offered services to the farmers. This list should be compared with the list for the community in 1860 shown in Chapter II, and with the list for the present in Chapter VII.

Economic Prosperity

Prior to 1880 the town's expansion had resulted from Grand Ledge's increasing role as a farm service center, which in turn was a direct result of the location of the railroad. These facilities made Grand Ledge of prime importance, not only to the immediate agricultural area, but to the agricultural areas of the western section of the county which were completely lacking in urban settlement. Abundant agricultural production created local buying power which in turn caused economic development within the city. The following tabulation provides an accurate idea of the amount of livestock, grain, et cetera, shipped from Grand Ledge from January 1 to December 30, 1882:⁶

Number of cars of wheat	.	.	.	.	.	.	263
oats	.	.	.	.	.	.	42
corn	.	.	.	.	.	.	7
flour	.	.	.	.	.	.	47
feed	.	.	.	.	.	.	26
livestock	.	.	.	.	.	.	145
Total freight cars	.	.	.	.	.	.	530

⁶Grand Ledge Independent, January 5, 1883.

The 145 cars of livestock consisted of:

Number of head of cattle		1,614
hogs		2,033
sheep		6,412
Total Animals		10,059

In addition, fifty cars of hardwood lumber, and six cars of manufactured timber were shipped during the year.

Such figures as the preceding present quite a contrast to the small milling community of thirty years before.

As a grain and stock market, Grand Ledge had achieved a notable reputation. Now another agricultural activity was becoming important. This was the role of Grand Ledge as a wool market. Four or five Grand Ledge merchants purchased the wool from local farmers. The wool was then stored until wool buyers from the New England area came to bid on it. In one week in June, 1887, \$26,000 was paid by outside buyers for 81,000 pounds of local wool.⁷ By 1892, the wool market served a considerable area.

Wool, 200,000 pounds, have been purchased here at prices ranging from twenty-one to twenty-nine cents for washed--and several farmers residing thirty miles away have hauled their clip here. On Tuesday over \$7,000.00 paid out at Berry's Bank on wool checks.⁸

Another indication of the prosperity of the times was the fact that Grand Ledge now had five fully licensed saloons with prospects for a sixth.

⁷Grand Ledge Independent, June 17, 1887.

⁸Grand Ledge Independent, July 1, 1892.

Throughout the period of the 1880's, the 1890's, and the early 1900's Grand Ledge had achieved economic prosperity. The rich soils, favorable climate, adequate drainage, and lack of topographic barriers in the area surrounding Grand Ledge had encouraged extensive agricultural development. Grand Ledge, ideally located in proximity to the railroad, became a thriving farm service center. The excellent reputation of "The Seven Islands Resort" (to be covered in the next chapter), also contributed much to the community's growth.

CHAPTER IV

SEVEN ISLANDS RESORT ERA--1870-1900

"Seven Islands" was the name commonly given to the resort area of Grand Ledge, which, for a period of twenty years, made Grand Ledge one of the principal resort centers in Michigan. The seven tear-shaped islands, arranged in a chain, are located in the Grand River within the present city limits. They begin a few yards west of the main downtown bridge and continue westward for nearly a mile (Figure 15). For convenience the islands are numbered from one to seven from east to west. The second, third, and seventh islands are the only three large enough to have any significance. Today the second and third islands are joined by a narrow ribbon of land. During the late Nineteenth Century when the river was dammed, the higher water level separated the two islands.

In 1870 John Burtch, a local lumber operator, visualized the development of a summer resort utilizing these islands and their scenic attractions. The mineral water from the artesian wells on the islands was regarded as beneficial to invalids and was another factor which drew people to the area. Mr. Burtch built a small one-story plank house on the second island and placed a steamer on

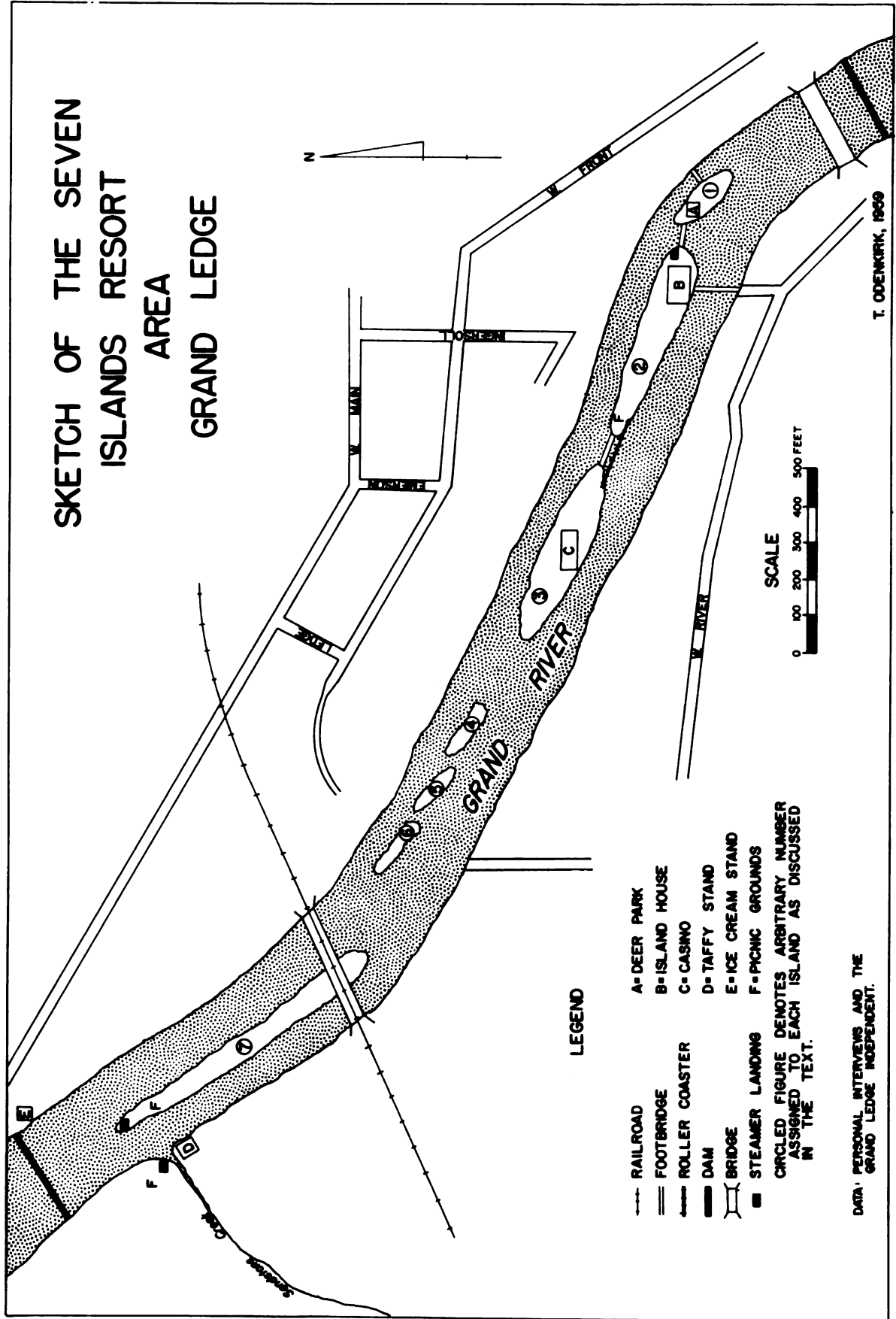
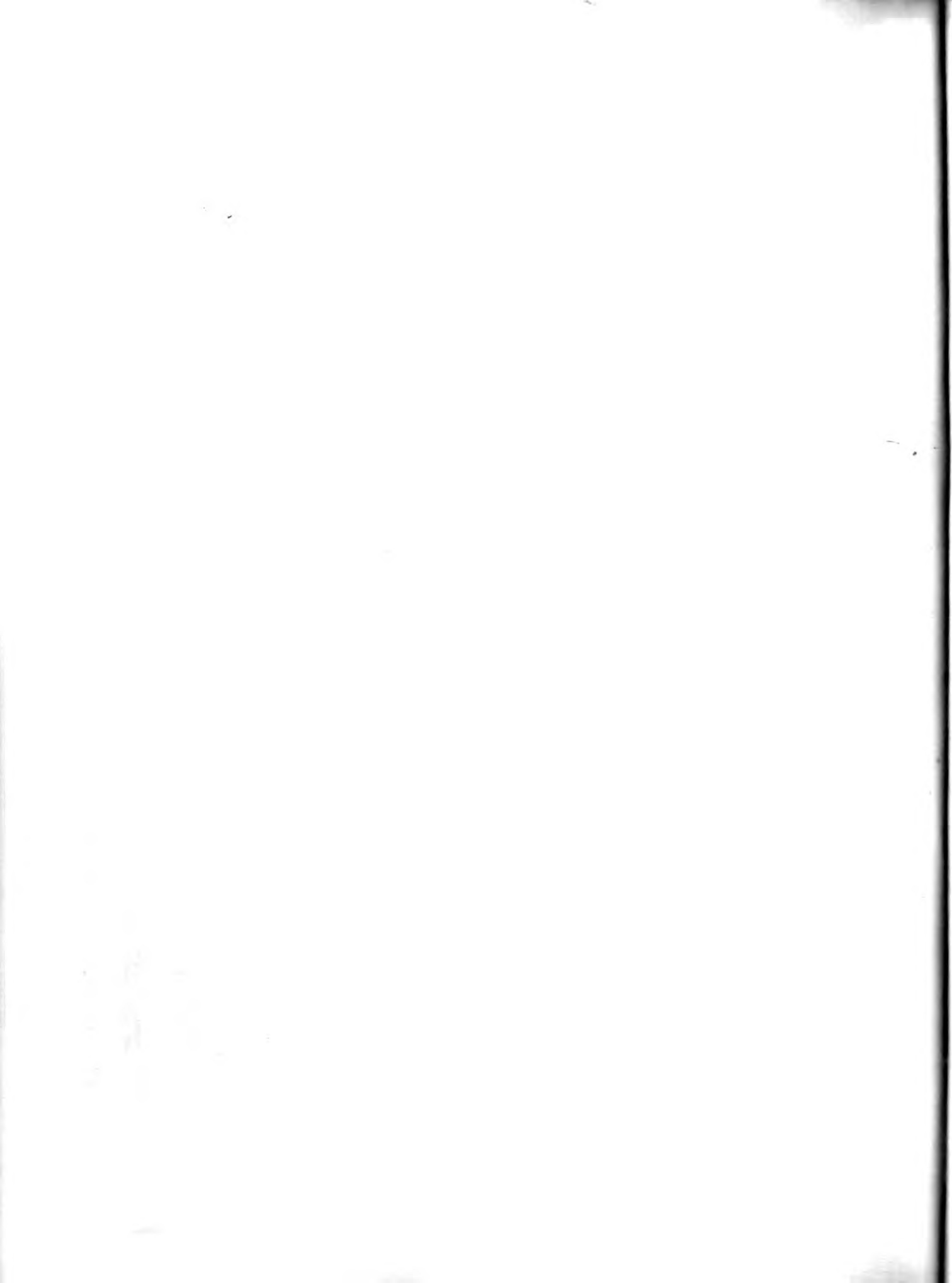


Figure 15. Sketch of the Seven Islands Resort Area, Grand Ledge



the river enabling visitors to cruise the river and view the picturesque scenery. In 1874 after the completion of a foot bridge to the third island, a "grand opening dance" was held in the newly completed Island Hall. Mr. Burtch's venture gained little support, however, mainly because of lack of advertising. In 1877 Mr. S. M. Hewings purchased the business and began to make extensive improvements. A larger steamer, the "Gertie," was put into operation, and a new island house was built on the second island. This two-story structure, containing a ballroom and hotel, measured over 144 feet in length (including veranda) and 25 feet in width.¹ These extensive improvements helped to make "The Seven Islands" one of the most profitable and well known resorts in Michigan. Hewings also initiated a rowboat service, arranged for balloon ascensions, constructed a bath house, and set up archery ranges as well as croquet grounds. Refreshment stands, swings, and hammocks were placed throughout the islands, and a zoo was established on the first island for the entertainment of visitors. The three upstream islands were connected to the north and south banks by bridges (Figure 15).

J. S. Mudge, who became the owner in 1887, continued to make extensive improvements. He obtained permission from

¹Samuel W. Durant, History of Ingham and Eaton Counties, Michigan (Philadelphia: D. W. Ensign and Company, 1880), p. 500.

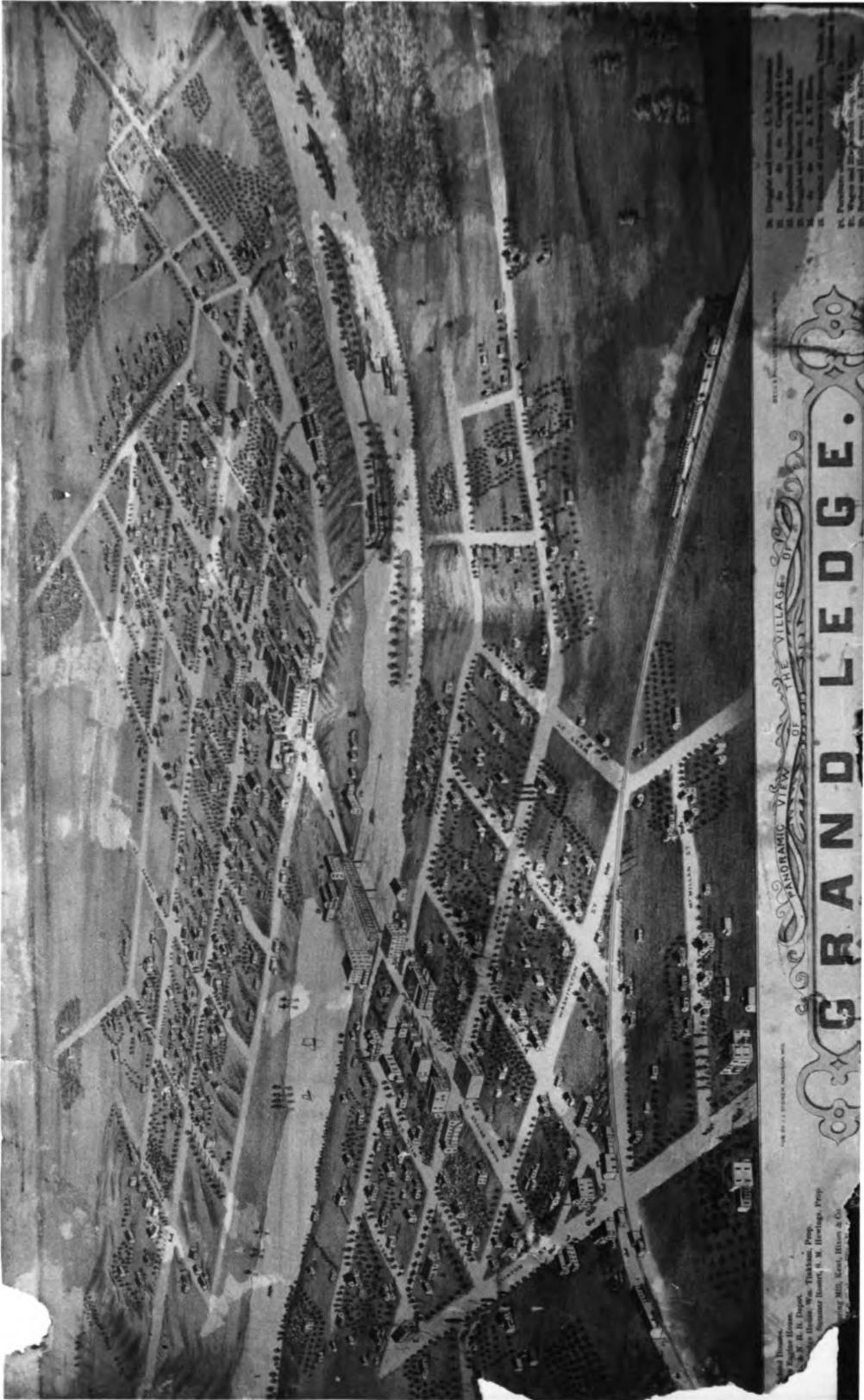


Figure 16. Town Panorama ca. 1880. Courtesy: Michigan Historical Commission

the state to construct a dam across the Grand River near the present Fitzgerald Park. This dam replaced a temporary one built in 1876. During the summer months logs were placed on top of the dam to increase the river's effective height and depth, thus making a portion of the river navigable for larger steamers. A two-wheeler steamer, "The Island Queen," was put into operation to replace the smaller "Gertie." The following year another steamer, "The Lanota," was placed in operation. For a ten cent fair excursionists could board a steamer at the north side of the second island and ride up and down the river.² Passengers disembarked down river on the seventh island or at the south shore to picnic and roam along the river near the ledges.

Other attractions, established to enhance the entertainment value of the "Seven Islands," included a roller coaster which bridged the river to connect the second and third islands. Near the Island House there was a small zoo as well as a hexagon shaped concession stand where taffy and soft drinks were sold. Mr. Mudge enlarged the Island House, as business warranted it, by installing a soda fountain and equipping a special ice cream room on the first floor. A casino (pavilion), which later served as a summer theater, was built on the third island. Because of their small size, the fourth, fifth, and sixth islands were left in their natural state.

²Jean Wonser, "The Seven Islands of Grand Ledge, Michigan," Research paper, March 11, 1957, Grand Ledge Public Library (typewritten).



Figure 17. Steam roller-coaster which ran between the second and third islands. The track was destroyed by the ice flood in 1893 and was never replaced. Courtesy: Michigan Historical Commission.



Figure 18. Pavillion (casino) located on the third island. Note the steamer to the right and roller-coaster track to the left. Courtesy: Michigan Historical Commission.



Figure 19. A Picnic Party ca 1890. Baskets and blankets left in the Island House while picnickers went on rides, et cetera. Courtesy: Michigan Historical Commission.

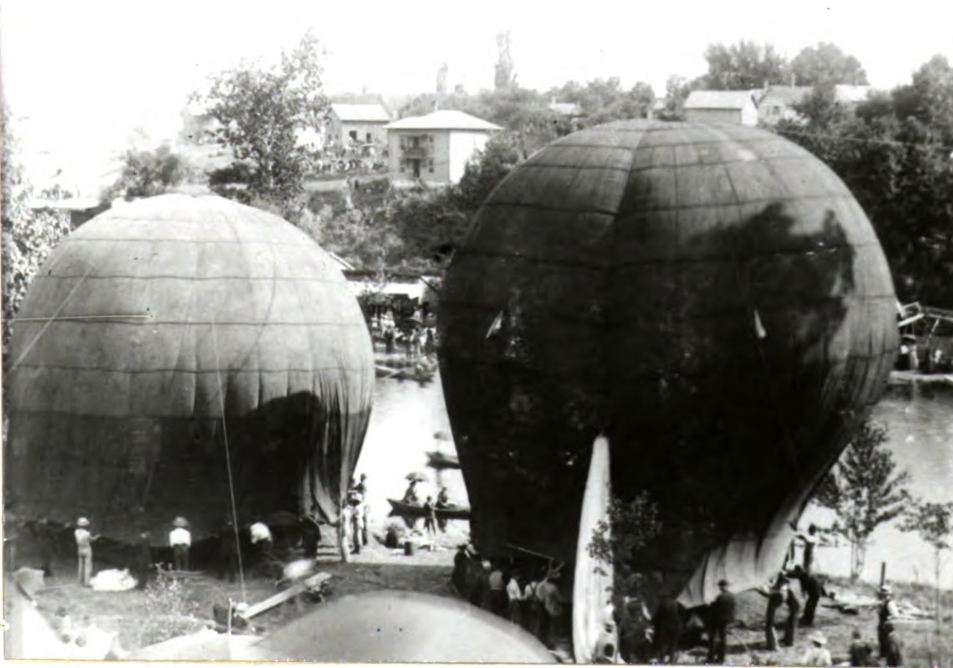


Figure 20. Balloon Ascension ca 1890. One of the many attractions which lured excursionists to the islands. Courtesy: Michigan Historical Commission.

Such organizations as the Knights Templar of Lansing and the Grand River Valley Masons held picnics on the islands. The Farmers' Picnic was an important annual event which attracted people from all of the surrounding counties. A typical agenda for an event such as the Farmers' Picnic was as follows:³

12 o'clock	Basket dinner
1 o'clock	Speaking and music on the stand at third island
4 o'clock	Balloon race
8 o'clock	Grand display of fireworks

The Grand Ledge Independent, on July 8, 1892, carried the following account of a typical Fourth of July celebration:

. . . Grand Ledge had its customary crowd being in the neighborhood of 6,000 people here. The islands were literally thronged with people. The row boats, steamer, roller coaster, public dances, merry-go-round etc. did a thriving business. Lansing contributed very largely to the crowd and the railroad was obliged to run a special train. Charlotte contributed her customary quota with hundreds of carriages at the various feed stables.⁴

Excursion Trains

The expansion and development of "The Seven Islands" soon established a reputation for Grand Ledge as an excursion area. The Pere Marquette Railroad began to sponsor excursion trains to Grand Ledge from Toledo, Detroit, Grand Rapids, and Howard City, then a thriving lumber town. An

³Grand Ledge Independent, September 5, 1892.

⁴Grand Ledge Independent, July 8, 1892.

excursionist could buy a round trip ticket between Detroit and Grand Ledge for one dollar.⁵ As many as eleven or twelve excursion trains were parked in the Grand Ledge yards on a Sunday. Some visitors came to Grand Ledge to spend two or three days fishing, swimming, or just relaxing at the resort. On a single holiday, there often were 15,000 visitors within "The Seven Island" area.⁶ One low fare excursion from Traverse City to Grand Ledge was patronized by hundreds of Grand Traverse County residents. An indication of the significance of the resort industry to Grand Ledge was the fact that in the late 1880's Petosky and Grand Ledge were the only two resort areas in Michigan to which rail excursions were run.

Waning Years

"The Seven Islands Resort" continued to thrive and attract thousands of visitors in the late 1890's. By the turn of the century, however, the popularity of the resort was beginning to ebb. Newspaper articles of this period clearly depict the situation. On July 6, 1904, the Grand Ledge Independent printed the following:⁷ "A fair crowd was present for the Fourth of July. The program, two bands, sports and fireworks, didn't produce the crowds of old."

⁵Lansing State Journal, July 1, 1898 (clipping file, Michigan State Library, Lansing, Michigan).

⁶Lansing State Journal, August 18, 1946 (clipping file, Michigan State Library, Lansing, Michigan).

⁷Grand Ledge Independent, July 6, 1904.

On July 6, 1906, The Independent ran the following:⁸ "The day was celebrated quietly in Grand Ledge with about 2,000 people present for the Fourth of July." By 1910, the local paper carried no mention of "The Seven Islands."

The people who had economically supported the resort industry were dependent upon excursion trains for transportation. As additional excursion areas were served by the railroad, the vacationers lost interest in "The Seven Islands." The excursion trains to Grand Ledge were no longer profitable, and service was discontinued in 1908.

From 1920 till 1950 the Island House served as a dance hall, skating rink, and as a meeting place for such local organizations as the Veterans of Foreign Wars and American Legion. The Island House was condemned and recently torn down, as had been the case with the other buildings on the islands. Today the only remaining remnant of the once flourishing resort is a small section of the concrete foundation of the Island House.

⁸Grand Ledge Independent, July 6, 1906.

CHAPTER V

INDUSTRY

The development of manufacturing, motivated by the character and quality of local resources, has paralleled the serving of the adjacent agricultural area. The abundance of dense hardwood forests resulted in the development of saw and planing mills which ultimately led to the establishment of furniture manufacturing. With the realization of the value of certain shale and coal deposits, tile manufacturing also developed. Throughout Grand Ledge's history, tile and furniture manufacturing have been the main industrial activities.

Manufacturing and agriculture were interdependent in the early years of Grand Ledge's growth. The town existed by trading its local manufactured goods for the farmer's agricultural products. As the town expanded and improved transportation facilities were made available, Grand Ledge was no longer limited to local markets. Industrial activities became firmly rooted in the town's economy and contributed much to its prosperity.

The major industries of Grand Ledge evolved rapidly and remained at a status quo in relation to the economic prosperity of Grand Ledge as a whole. Therefore, the

influence of industry on Grand Ledge would be of greatest significance during a period of lesser population and greater industrial activity. To aid in analysis of the period of major industrial significance, a brief review of each industrial establishment will be made according to its state of activity in 1959. Two factors, the dates of activity and the number of employees of each industry, have been used as criteria in evaluating the various industries. The active industries appear on the following pages, and the defunct companies are listed in the Appendix.

C. W. Durst Cement Block Factory, engaged in the manufacture of concrete and tile blocks, is located near the intersection of Morley and Orchard streets. The original business was established in 1942 in a garage and now maintains a small factory which employs an average of five men.

Parsons Chemical Company,¹ which started its original business on a plant site on Green Street, later expanded to a brick office on North Bridge Street, and in 1946, moved to its present site served by M-43, one quarter mile west of the city limits. The company's products include insecticides, fumigants, and herbicides used primarily for agricultural purposes. The company was founded in 1916 and today employs an average of ten to twelve men.

¹The Grand Ledge Clay Products and Parsons Chemical Companies, as well as the defunct Grand Ledge Face Brick Company, are located within a mile and a half of the city limits and, therefore, are included with the industries of Grand Ledge.

Ferndale Dairy was organized in 1928 in a small plant near West River and Harrison Streets. In 1932 the company moved to its present location on M-100 near the northern city limits. The dairy's primary function is the collection and processing, bottling, and local redistribution of milk. The company supplies employment to ten men.

Grand Ledge Milk Company manufactures condensed milk products and powdered milk, which is shipped to the Berger Creamery in Detroit for redistribution to various food manufacturers in the Detroit area. The Grand Ledge Milk Company is an example of the dependence on the local farms (within a twenty-five mile radius) for supply of basic resources. The company, originally called the Arctic Milk Company, was organized in 1935 as an independent stock company. In 1957 the establishment was taken over by the Lansing Dairy Products. Employment today is about twenty workers.

Michigan State Seed Company's office and warehouse are located at the north side of town near the intersection of Marquette Street and M-100. The main function is jobbing--the plant acts as a collection agency for all types of seed products which are processed and then redistributed to wholesalers. The company and its present plant have been in operation since 1940 and currently employs seven workmen.

Hamill Manufacturing Company is located at the southern edge of the city limits near the M-43 bypass. The company originally started manufacturing picnic tables in

1944. Eight years ago the company began to manufacture log cabins--both cottages and permanent homes. Only three workers were employed during the early years (1944-1948). The company now employs ten men full time, and during the summer months employment reaches fifteen.

C. K. and H. Die and Tool Corporation is located at the south edge of the city near the new M-43 bypass. The company manufactures tools and dies for industry and does some special machinery work. The company was founded in December, 1957, on Bridge Street. In the winter of 1958 they moved to their present location. In early 1958 the plant employed two or three workers. Today there are fifteen on the payroll.

Die-Aids maintains a small plant in an old store on North Bridge Street at the corner of West Main. The plant builds all types of tooling aids including plastic models, templates, and patterns. Operations began in 1958, and today the company employs approximately eight persons.

Riverdale Steel Works is located on Orchard Street on the original site of the Crawford Chair Company. The Riverdale Company is engaged in the manufacture of boat and house trailer frames which are sent to the main plant in Riverdale, Michigan, for final fabrication. The original plant was first used by the O. S. Baker Machine Welding Company which established business in 1947. In 1956 the Riverdale Company purchased the plant and expanded it with two new additions to the building in 1957 and a further

addition to these in 1958. Employment varies between fifteen and thirty (during the summer months) with a yearly average of twenty men.

Grand Ledge Chair Company² is one of the oldest operating industries in Grand Ledge and has been a major source of employment through the years. In 1881 the original company took over operation of a wood shop and sawmill which were located near the bank of the Grand River on the West and East River Streets, respectively. In 1883 a new factory was established on the south shore, slightly east of the intersection of South Bridge and River Streets. The company prospered, and in December, 1888, it was incorporated. In 1893 the three founders sold out to Mr. E. A. Turnbull, the company's accountant. As the company grew and the firm's product gained a widespread reputation, the small factory was no longer adequate. In 1905 the plant had joined operations with the Grand Ledge Table Company and moved to its present site at the end of Perry Street. During the next ten years Mr. Turnbull made extensive improvements by installing new machinery, erecting a large three-story factory building, and expanding the number of kilns in operation. With this early expansion and development the company was able to maintain its rank as a manufacturer of high grade specialty chairs. The company's

²Much of the information pertaining to the Grand Ledge Chair Company was obtained by personal interviews with Mr. Hull, President.

employment record has remained very stable; in the early 1900's the employment figure was approximately ninety workmen, today it is one hundred five.

Active Industries Dependent on Shale Resources

Shale beds with shallow over-burden have a limited distribution in southern Michigan, thus increasing the commercial value of the exposed coal measure shales of the Saginaw formation near Grand Ledge. These shale measures are located approximately one and one-quarter miles northwest of the city limits and run in an east to west direction, crossing under the Grand River. The American Vitrified Products Company, formerly called the Grand Ledge Sewer Pipe Company, was the first to use these shales for the production of vitrified products such as sewer pipe and drain tiles. The Grand Ledge Clay Products Company and the Grand Ledge Face Brick Company have also utilized these shale formations. The pits of the two tile companies are located on the southwest side of the river, and the Grand Ledge Face Brick Company maintained a pit on the northeast side of the Grand River.

The American Vitrified Products Company³ is located at the western margin of the city limits near M-43. The company was founded as the Grand Ledge Sewer Pipe Company in the late 1880's and by the early 1890's was doing a considerable volume of business. In 1905, after a period of

³Much of this information has been obtained from Mr., Charles McKee, Supt. of American Vitrified Products Company.



Figure 21. Grand Ledge Chair Company. The white-roofed structure to the right of the factory is the new addition built within the past five years. Note the river to the north of the chair company.



Figure 22. American Vitritified Tile Company. Dome-shaped structures are bee-hive kilns.



Figure 23. Active clay pit of the American Vitrified Tile Company located just outside the Grand Ledge city limits. Note size of steam shovel in relation to depth of pit.



Figure 24. Air view looking northeast of mine presently used by Grand Ledge Clay Products Company. Steam shovel to the right of the pit is clearing away overburden. Note proximity of river and size of equipment in relation to depth of pit.

rapid growth, the plant was manufacturing sewer pipe of all types, ranging in size from three inches to twenty-four inches in diameter. At this time the plant had twelve kilns in operation, each over thirty feet in diameter.⁴

Employment figures for this early period were between eighty and ninety men. The original plant was destroyed by fire in November, 1924. By 1926 it had been rebuilt, and the company was doing a volume of business which surpassed the previous record. The American Vitrified Products Company, an organization of nearly twenty plants throughout the mid-west with headquarters in Cleveland, has controlled this plant since 1930. During the ensuing years the company has maintained an average working force of one hundred and ten employees and has continued to supply all types of sewer, chimney, and drain tile to the Michigan, northern Indiana, and northern Illinois area. These tiles are usually purchased on a truck volume basis and are, therefore, shipped accordingly. The scattered destinations and low cost of trucking add to the advantage of this method.

The Grand Ledge Clay Products Company⁵ is located near M-43, approximately one quarter mile west of the Grand Ledge city limits. The company began operation in June,

⁴Grand Ledge Independent, April 21, 1905.

⁵Much of the information on the Clay Products Company was obtained from Mr. Bruce F. Decke, Manager.

1906, with the manufacture of sewer pipe, conduits, building blocks, and other glazed and vitrified products. The company has witnessed a record growth and expansion similar to the American Vitrified Products and the Grand Ledge Chair Company. Production and employment figures, nearly comparable to today's totals, were achieved within ten years of inception. The company had fifteen kilns in operation by 1913. The Grand Ledge Clay Products Company had a payroll of seventy-five to eighty men in the early 1900's. Due to greater mechanization, the present average yearly figure is sixty-five. Shipments are confined to points within the state and are distributed solely by trucks.

Methods of Shale Extraction

When the Grand Ledge Face Brick Company first began operations, clay was extracted from the pits by pick and hand shovel. The material was hoisted by a windlass to the crusher a few rods above the river bank. A gasoline shovel scoop replaced the hand operation of extraction in the 1930's.

The Grand Ledge Clay Products Plant originally was connected to the pits, about one mile distant, by a narrow gauge railroad track. The clay cars were moved along the track to the plant by horse and windlass which were replaced by a five ton locomotive in 1928. Early mining methods were solely by pick and hand shovel. Later a gasoline tractor was used to remove the till overburden so that the shale could be blasted and the fragments shoveled into cars by hand methods.

The American Vitrified Products Company originally employed the same basic type of operations for extraction. The company transported the material to the plant in heavy wagons in place of a narrow gauge locomotive and cars. Today, both companies use a large diesel scoop shovel and several two and one-half ton dump trucks in transporting the clay to the plants.

Summary and Industrial Outlook

A study of the defunct industries (listed in the Appendix) keynotes three major businesses which, because of their relatively high employment, were significant in helping to support Grand Ledge.

It may be interpreted from Table 3 that the period of prime importance for the defunct industries was between 1900 and 1930. During this era employment by these industries reached approximately two hundred and fifty Grand Ledge workers.

Review of the active industries also placed emphasis upon three major plants. These figures indicate that the three major active industries were significant between 1890 and 1959. Employment before 1930 averaged two hundred and fifty-five as compared with three hundred and eighty after 1930. Table 4 shows employment figures for the active industries. Table 5 combines the data from Table 3 and Table 4.

TABLE 3

DATES AND EMPLOYMENT FIGURES FOR DEFUNCT INDUSTRIES

Industry	Founded	Dissolved	Employment
Grand Ledge Face Brick Company	1900	1949	50 - 75
Crawford Chair Company	1905	1926	100 -150
Coal Mining Operations	1890	1920	25 - 40
Average of the other defunct industries	1905	1930	25 - 30

TABLE 4

DATES AND EMPLOYMENT FIGURES FOR ACTIVE INDUSTRIES

Industry	Founded	Employment Before 1930	Employment After 1930
Grand Ledge Chair Company	1884	90	100
American Vitrified Products Company	late 1880's	85	110
Grand Ledge Clay Products Company	1906	75-80	65
Other active industries	1916-1959	--	105

TABLE 5

INCLUSIVE DATES AND EMPLOYMENT FIGURES FOR DEFUNCT
AND ACTIVE INDUSTRIES

Industries	Most Important Era	Approximate Employment
Defunct	1900-1930	250
Active	1890-1930	255
Active	1930-1959	380

Industrial enterprises of Grand Ledge employed approximately five hundred persons between 1890 and 1930, as compared with three hundred and eighty between 1930 and 1959. Analysis of a population graph (Figure 14), comparing the population of Grand Ledge for the two periods indicates that the population for the second period has almost doubled that of the first. Therefore, with a population figure half that of the present, there were twenty-five per cent more people employed in local industry in the period from 1890 to 1930. Industry made its most outstanding economic contribution during the first thirty years of the Twentieth Century. The availability of resources (water power, timber, coal, and shale) was of primary importance in encouraging industry in Grand Ledge. Although sources for Grand Ledge's support have varied throughout the years, industry coupled with farm services activities has remained a strong basis for its stable economy.

Analysis of past industrial activity indicates that it is unlikely that economic trends in the near future will center around further industrial development. The major active industries of Grand Ledge have existed for many years and the ambivalent attitude of the local residents does not encourage increased industrialization. However, a future dispersion of industry from Lansing might possibly result in further industrial growth for Grand Ledge.

CHAPTER VI

CURRENT TRENDS

The economic advantages of "The Seven Islands" had declined markedly by 1905, but the town's basic orientation as an agricultural center and small industrial area had become well established. Grand Ledge was a hustling business community of 2600 people.

The innovations in transportation at this time resulted in many changes. In 1910 work was begun on a new concrete bridge to the east of the old plank bridge (Figure 25). New and more modern highways facilitated motor travel between Grand Ledge and nearby urban areas. During this period there had been talk of an interurban railroad connecting Grand Ledge to Lansing which was an indication of the increasing influence of Lansing on Grand Ledge. The tracks were laid in Grand Ledge, but the road bed between the two cities never reached completion. The route was not heavily enough traveled at this time to warrant an interurban in addition to the already existing railroad shuttle service.

Two factors, the development of the automobile and the growth of Lansing less than eleven miles away, were destined to shift the basic economic support of Grand Ledge. Grand Ledge was to become a residential suburb of Lansing,

GRAND LEDGE, MICH.



Figure 25. Panorama of Grand Ledge, looking East--1910. Note construction of concrete bridge in foreground. Courtesy: Michigan Historical Commission.

a "dormitory town," where the people lived while earning their living in Lansing. More than eighty per cent of the adult workers living in Grand Ledge were earning their living in Lansing in 1959.¹

Grand Ledge as a Residential Suburb

The city of Grand Ledge, with its growing population and increased residential area, has not proportionally increased its local economy to support this concentration. Because job opportunities within Grand Ledge were not adequate to support the working population, local residents began to seek employment in Lansing. Another factor which strengthened Grand Ledge's role as a residential suburb was the increasing number of Lansing workers who began to seek homes outside the Lansing city limits. The proximity to Lansing, the established fine residential areas, and the reduction in traffic and congestion from the larger urban area made Grand Ledge a desirable location for many Lansing workers. The increase in residential population has resulted in expanding the services these people demand.

The construction of public buildings, such as churches and schools, has been pronounced during the recent era. In 1911 the city's Public Library was built on East Jefferson Street. A number of religious institutions were organized

¹Analysis of the Grand Ledge City Directory for 1956 revealed that the main centers of employment in Lansing were the Oldsmobile Division of General Motors Corporation and the State of Michigan.

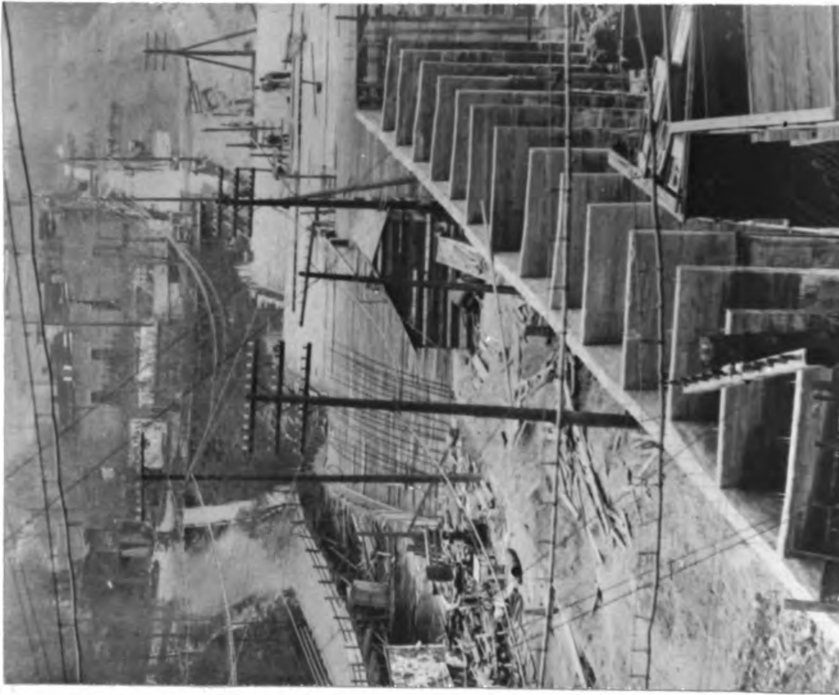


Figure 26. View looking north of concrete bridge--1910. Courtesy: Michigan Historical Commission.



Figure 27. Air view looking west showing concrete bridge today. Note islands in river between concrete bridge and railroad bridge in middle foreground.

in the early 1900's, but for the most part construction of buildings was more evident after the 1930's as there was greater need for these services. The Protestant Episcopal Church was organized in 1907. Following in rapid succession were the Free Methodist Church in 1915, the First Church of Christ Scientist in 1918, the Church of the Nazarene in 1928, St. Michael's Catholic Church in 1930, and the Church of God in 1932. More recently organized (1957) was the Assembly of God.

The Grand Ledge school system has made notable advancement since 1850. The school service area has been firmly established, and today includes twenty-nine rural districts, which depend completely upon the city's school services, and ten additional rural districts, which send part or all of their secondary students to Grand Ledge. This service area encompasses a radius of eight miles. Throughout the years school facilities have kept abreast of the community's needs, especially during the past thirty years. Table 6 clearly indicates this trend.

With the opening of the new \$1,500,000 high school in the fall of 1959, Grand Ledge was able to adequately provide facilities for all of its 3,150 students.²

Present recreational facilities for the city include Fitzgerald Field, a lighted softball field near the southwest

²Lansing State Journal, August 23, 1959, Grand Ledge clipping file, Michigan State Library, Lansing, Michigan.

TABLE 6

GRAND LEDGE SCHOOLS, DATES OF CONSTRUCTION,
AND PUPIL CAPACITY

Name of School	Date Constructed	Pupil Capacity
Union Building	1887	600
Greenwood Elementary School	1887	200
High School Building (Renamed Jonas Sawdon Junior High in 1959)	1929	600
Music addition	1949	
Agriculture shop	1952	
Greenwood Elementary School (new)	1950	300
Kindergarten	1952	120
West Elementary School	1953	210
Grand Ledge High School	1959	1500

Source: William H. Roe, A Survey of the Grand Ledge Community School Area (East Lansing, Michigan: Department of Educational Services, Michigan State College, 1954), p.55.

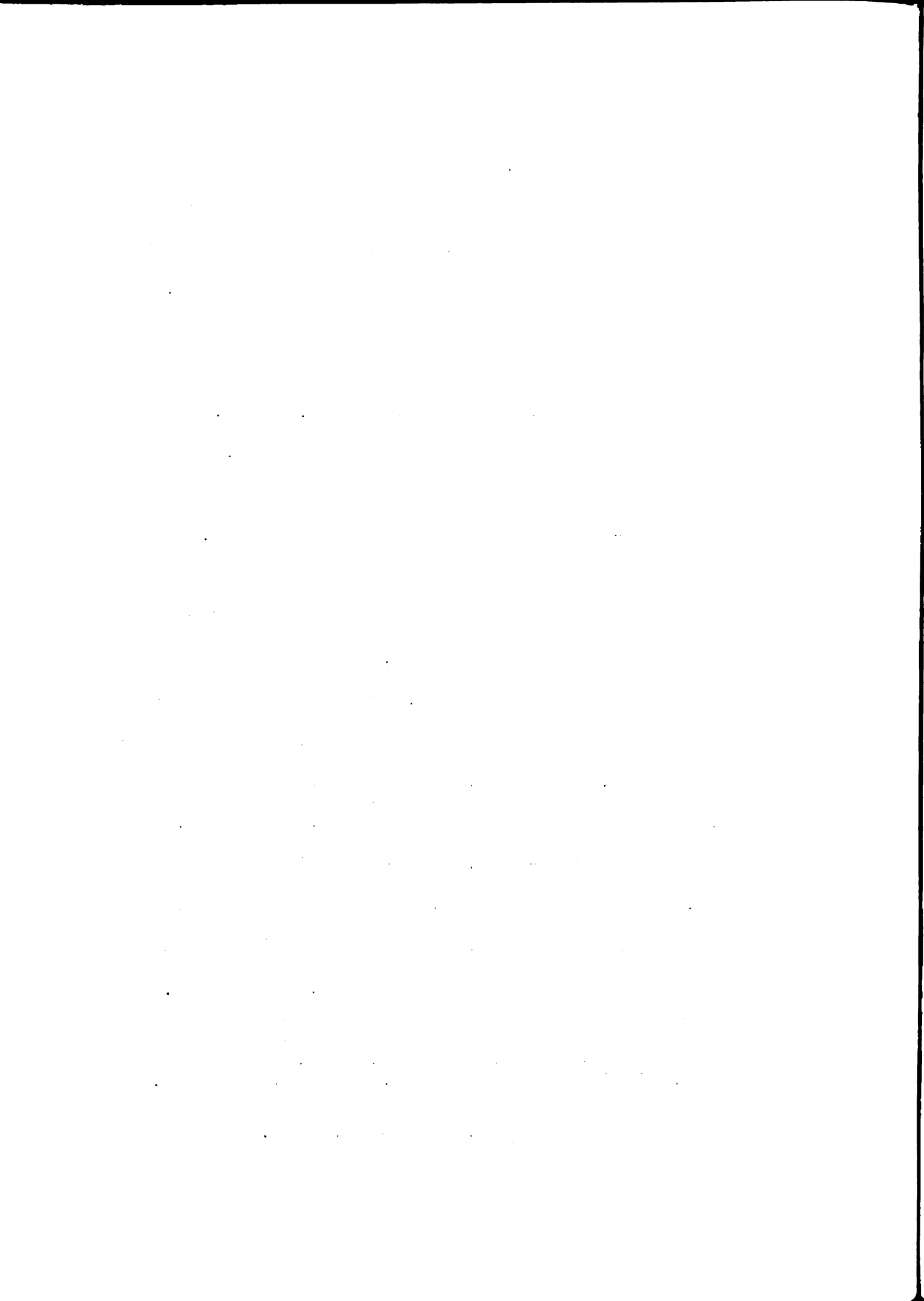
corner of the main bridge, and Fitzgerald Park just west of the city limits and slightly north of M-43 (Figure 30). In the early 1900's the park was the site of a spiritualist camp, where, during the summer months, a number of meetings and lectures were held. As public opinion changed, the site was made into the present Fitzgerald Park, a twenty acre tract, which contains a large baseball field, picnic tables and benches, outdoor grills, shuffle boards, horseshoe courts, swings, hiking trails, and a number of other attractions.

The park affords an excellent vantage point from which to view the scenic rock ledges. A recent innovation which might be considered a revival of "The Seven Islands" resort activities is the summer theater, which presents a variety of stage plays during the season from June to September. For the past five years the plays have been regularly attracting patrons from such outlying communities as East Lansing, Lansing, Jackson, Charlotte, and St. Johns.

The Seventh Day Adventist Church of Michigan, after a survey in 1933, selected forty acres southeast of the city limits near M-43 as a site for its camp grounds. This site was selected largely because of its central location in the southern portion of the Lower Peninsula and for its proximity to Lansing and Battle Creek, both active centers of the Seventh Day Adventist Church. Today the camp contains one hundred and eighty double cottages, several administration buildings, a library, dining hall, a number of classrooms, and an auditorium which seats 7,000 people.³ The camp maintains a full-time, state-accredited secondary school which, in the fall of 1959, had an enrollment of one hundred and sixteen pupils. Religious meetings held for two weeks each summer attract as many as 15,000 members.⁴

³Lansing State Journal, August 4, 1946, Grand Ledge clipping file, Michigan State Library, Lansing, Michigan.

⁴Grand Ledge Independent, August 13, 1959.



A survey made in 1954⁵ revealed the stability of residence and employment of the people living in Grand Ledge. Fifty-five per cent of the families had resided in Grand Ledge for more than ten years and fifty-two per cent had worked in the same employ for more than ten years. It is significant that only thirteen per cent of the population in 1954 worked in Grand Ledge proper. Of those who worked in Grand Ledge in 1959, three hundred and eighty were employed by industry and (according to the Superintendent of Schools), one hundred and sixty by the local school system.

Residential expansion was a natural result of the steady population growth (Figure 14). The number of residential structures has shown a most rapid increase in the years since 1930, the most important period being after 1945 (Figure 29).⁶ The period between 1930 and 1945 may be labeled as a period of transition; emphasis on a residential use of the area gradually superceded the long existent farm service orientation. Table 7 showing the real estate assessed valuations for Grand Ledge confirms this.⁷

⁵William H. Roe, A Survey of the Grand Ledge Community School Area (East Lansing, Michigan: Department of Educational Services, Michigan State College, 1954), p. 21.

⁶The map of Areal Development of Grand Ledge was compiled on a one-fourth block basis, i.e., if the one-fourth block contained one or more structures for the selected year, that portion of the block was considered developed.

⁷After 1939, real estate assessments were not broken down on a ward basis. Therefore, the more recent figures are a total of the two wards.

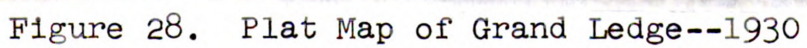


Figure 28. Plat Map of Grand Ledge--1930

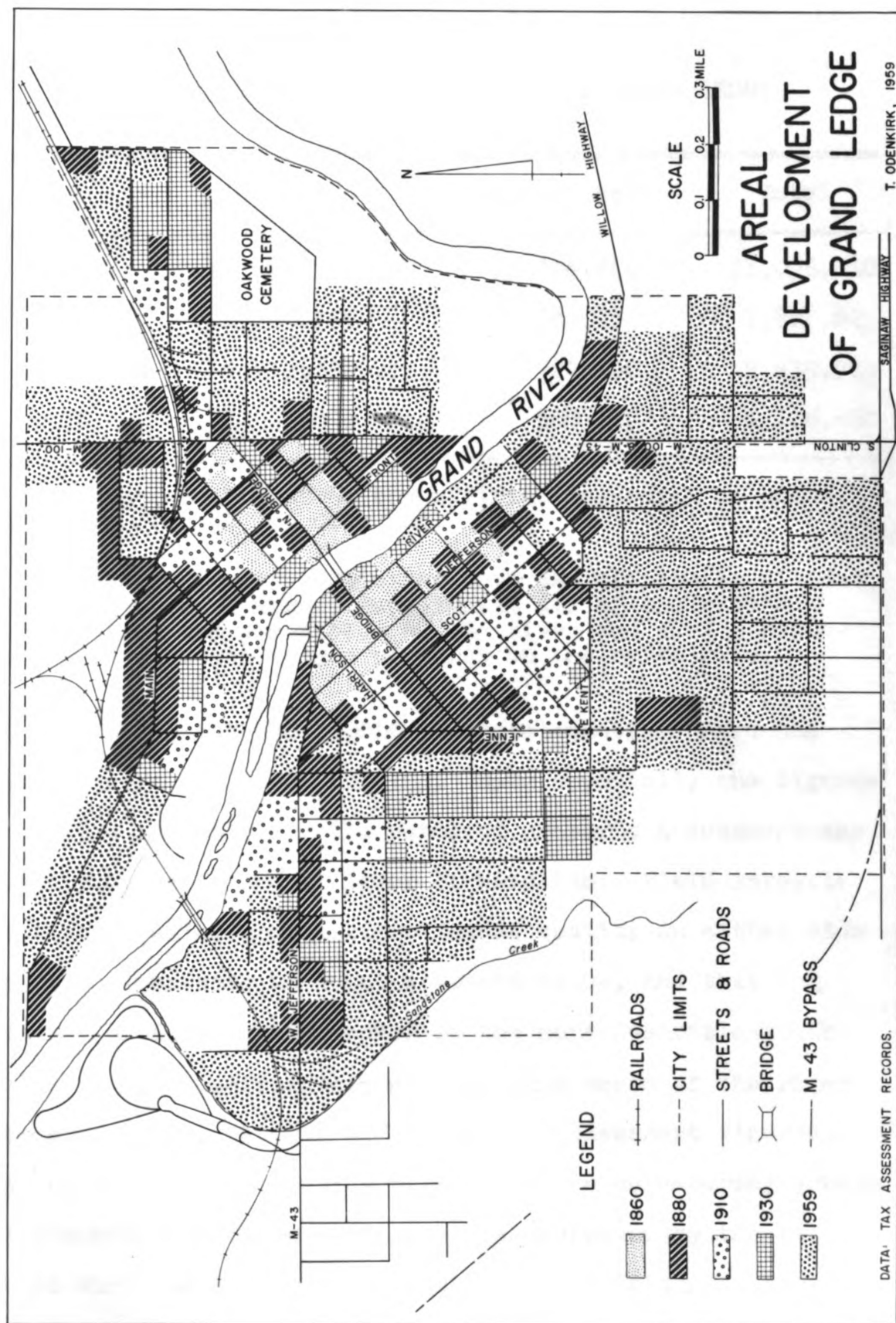


Figure 29. Areal Development of Grand Ledge

TABLE 7

WARD ASSESSMENT OF REAL ESTATE IN GRAND LEDGE
FOR SELECTED YEARS¹

Year	First Ward	Second Ward	Total
1909	\$ 771,510	\$ 324,500	\$1,096,010
1919	1,245,775	581,250	1,827,025
1929	1,719,800	720,100	2,439,900
1939	1,517,850	588,550	2,106,400

Source: Data from the official tax rolls of Grand Ledge on file at the City Hall.

¹In the early 1900's the city was officially divided into two wards: Ward 1 represented all of the city's property on the south side of the river and Ward 2 represented all of the city's property on the north side.

Throughout the 1900's the development of Ward One became more and more dominant. Note especially the figures for 1939 in Table 7. The ratio of property assessment was nearly three to one in favor of Ward One. Field investigation revealed that homes of equal quality on either side of the river have an equal assessed value, and that the number of higher value homes on the more desirable south side is not significantly greater than north of the river to account for the tax difference in assessment figures. Also, the degree to which business and manufacturing establishments affect the statistics is minimized by the fact that Ward One and Ward Two each contains an almost equal

share of these establishments. Therefore, Figure 29 indicates the extent of residential expansion south of the river.

TABLE 8

TOTAL TAX ASSESSMENT OF REAL ESTATE FOR GRAND
LEDGE--WARD I AND WARD II COMBINED

Year	Combined Assessment
1934	\$ 2,122,850
1939	2,106,400
1946	2,300,975
1950	4,850,550
1956	4,418,600

Source: Data from official tax rolls of Grand Ledge on file at the city hall.

Analysis of the preceding table indicates a very marked increase in assessment between 1946 and 1950. A complete re-evaluation of all properties in Grand Ledge by the State Tax Commission was the most significant contributor in raising the total figure from 2.3 to 4.8 million dollars. However, it should be emphasized that new construction also influenced this increased figure.

Also worthy of consideration are the number of more recent plat additions to the city. Those additions since 1945 include nine new subdivisions, ranging in size from one to fifty-five lots, with a total of two-hundred and fifteen lots.⁸ All of these additions are located south

⁸Eaton County Plat Book, County Treasurers Office, Charlotte, Michigan.

of the river in or near Supervisor's Plat No. 2, Owen's Addition, and the South Side Addition (Figure 28).

CHAPTER VII

PRESENT LAND USE PATTERN

The present¹ city of Grand Ledge may best be presented by studying and analyzing a land use map as well as an inventory of the existing economic establishments to give an indication of the complexity and orientation of the town.

Inventory of Establishments

An inventory of the one hundred and seventy-five economic establishments located within the city limits revealed the following:²

Farm Equipment and Service:		
Farm equipment dealers		3
Grain elevators		3
Welding shops		2
Seed company		1
Automotive:		
Used car dealer		1
New car dealers		4
Garages		2
Gas stations		13
New parts store		1
Tire shop		1
Western Auto store		1

¹The word "present" refers to the summer and fall of 1959.

²The city inventory was done on a block to block basis using an inventory sheet designed by Dr. A. K. Philbrick, Department of Geography, Michigan State University.

Food:	
Bakeries	2
Cafe--restaurants	4
Confectionery	1
Drive-in	1
Grocery stores	5
Supermarkets	6
Taverns	4
Home Furnishings:	
Furniture stores	3
Upholstering shop	1
Antique dealer	1
Recreation:	
Movie	1
Personal Service:	
Barber shops	5
Beauty parlors	1
Laundries and dry cleaning establishments	3
Drug stores	3
Florist	1
Funeral parlors	2
Hotel	1
Jewelry stores	2
Radio and TV repair shops	2
Variety store	1
Sporting goods shops	2
Laundromats	2
Sharpening (saw--mower)	2
Shoe repair shops	1
Clothing:	
Dry goods store	1
Men's shops	3
Shoe store	1
Costume shop	1
Women's and children's wear	3
Hardware:	
Hardware stores	4
Electrical appliance store	1
Paint and wall paper store	1
Plumbing and heating service	1
Professional:	
Dentists	3
Medical doctors	3
Insurance brokers	2
Optometrists	2

Professional--continued:

Real estate brokers	2
Veterinarian	1
Chiropractor	1
Attorneys	2

Construction:

Lumber yards	3
Sheet metal	1
Cement	1
Excavating and bulldozing	1

Financial:

Banks	2
Loan companies	2

Manufacturing:

Grand Ledge Chair Company	
Hamill Manufacturing Company	
Ferndale Dairy	
Grand Ledge Milk Company	
American Vitrified Products Co.	
Riverdale Steel Works	
C. K. and H. Die and Tool Corp.	
Die-Aids	

Utilities:

Gas company	1
Electric and power company	1
Telephone company	1

Wholesaling:

Bulk oil company	1
------------------	---

Community Services:

Weekly newspaper	1
Printer	1
Churches	10
American Legion	1

Transportation:

Truck terminal	1
Mobile home sales	1
Chesapeake and Ohio Railroad freight house	1

Government Units:

Junior high school	1
Senior high schools	2
Elementary schools	3
Kindergarten	1
City hall	1

Government Units--continued:	
Fire house	1
Armory	1
Post offices	2
Vacant Establishments:	4
TOTAL	175

Analysis of the inventory suggests that the town has a relatively balanced economy for a community of its size. Although a larger percentage of the population shops outside the Grand Ledge area for many items (approximately seventh-six per cent for clothing and twenty-nine per cent for food),³ there seems to be enough internal buying to favorably support the commercial establishments. A good indication of this is the fact that of the four vacant stores, three were vacant not because of poor business but due to a change in location. The greatest motivation for buying elsewhere is the lack of a wide selection of merchandise, especially clothing and appliances.

The character of the present commercial establishments is indicative of the various economic functions of Grand Ledge. For example, the large number of gas stations (thirteen) is in agreement with the large proportion of people from Grand Ledge who commute to work. The inventory of elevators, farm equipment establishments, and farm oriented services indicates that the town still serves as a farm service center. Another secondary function is the one

³Roe, op. cit., p. 20.

performed by the industrial establishments of the immediate Grand Ledge area. The large number of local establishments, approximately ninety per cent, which serves the residential population, point to the activities associated with serving the city's own population.

Present Land Use

Analysis of a land use map (Figure 30) of present day Grand Ledge markedly reflects the early history of the community. The map reveals the greatest concentration of homes to be on the south side of the river; a town pattern which has been prominent since early settlement in 1850. The map also reveals three distinct commercial and industrial districts:

1. The southeast area--along M-100, M-43, and Saginaw Highway on the M-43 bypass.
2. The central business district--which extends northward to the outskirts of town. This is actually one extended district.
3. The western edge--centered along M-43.

District one, along the two principal highways leading into Grand Ledge, is the most recently established commercial area. This section has developed simultaneously with the southward residential expansion. All of the establishments in this area are of a commercial nature and are oriented toward the heavy concentration of residential blocks located immediately to the west.

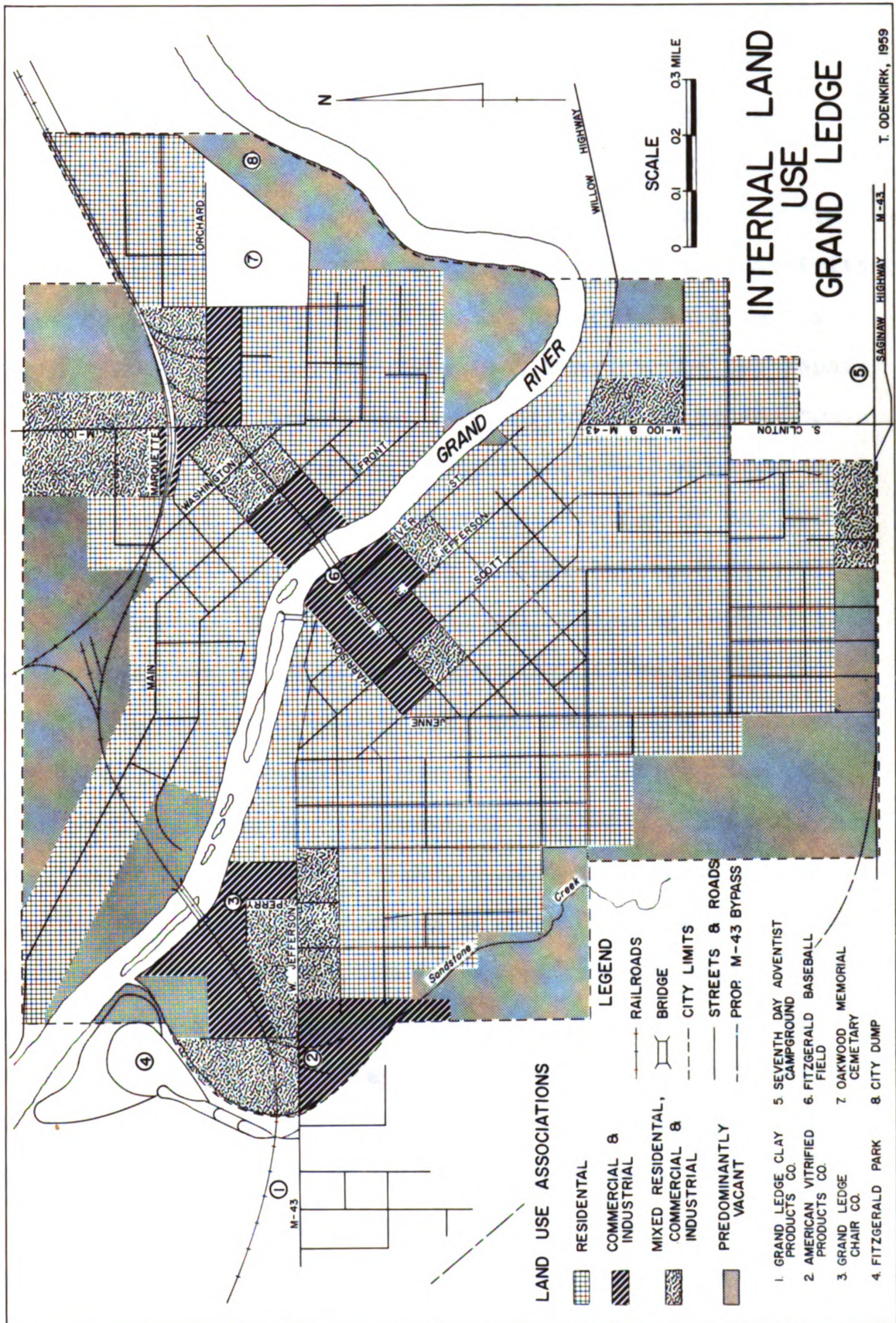


Figure 30. Internal Land Use Map--Grand Ledge

District two is the oldest established commercial area within the city. For the most part this central district has been the core of Grand Ledge since white settlement began. Commercial land use originally was limited to the north and south banks of the river. A few years after completion of the railroad, commercial activity appeared in proximity to the tracks and the depot to the north. By the turn of the Twentieth Century the two separate districts had joined and were beginning to expand to the south and north, as the present pattern indicates. Since inception the character and orientation of the town has successfully supported this central business district.

A proposed fifty store regional shopping center, to be located five miles east of the city, is scheduled for completion sometime between 1961 and 1962. The question arises as to the economic impact of the construction of this shopping area on the downtown merchants. With the completion of the new M-43 bypass, a certain percentage of traffic which has been passing through Grand Ledge will now bypass the city. While the decreased through traffic will not affect the economic stability of the central service area, the bypass will make the new shopping center readily available to local residents who now shop in Grand Ledge. Should such a pattern of consumer buying be established, the central service area will cease to serve Grand Ledge residents as fully as it now does and will become little more than a series of vacant stores.

The third district, the zone of industrial establishment centered on M-43 on the western edge of town, focuses mainly on two plants--the Grand Ledge Chair Company and the American Vitrified Products Company. These two companies originally located here because of the proximity of the railroad, the water power offered by the river (in the case of the former) and the availability of shale (in the case of the latter). The two stores and the gas station in this section are oriented to the surrounding residential section.

CHAPTER VIII

CONCLUSION

This thesis has shown that through a segment of time the interplay of three major factors--geographic, historic, and changing human needs--has resulted in a changing emphasis on the means of support for the city of Grand Ledge.

Beginning with the village's inception, occupance was oriented toward the physical; i.e. the use of the rich timber for homes and the potential of the Grand River for power. It was not long before the rich till plain of the surrounding townships turned the small village into a thriving farm service center; a function which was destined to run like a thread, with varying degrees of importance, through the historic evolution of the city.

Industry, which may be considered a secondary activity has run the gamut of town evolution. Observation and analysis indicate that industry played its most significant role between 1900 and 1930. This premise is based upon a greater industrial employment record during these years and upon the fact that the population at that time was only one-half its present figure.

Another secondary activity, the resort industry which flourished in the late Nineteenth Century, grew from the

ECONOMIC ACTIVITIES IN AND ABOUT GRAND LEDGE



Figure 31. Agriculture: A basic activity contributing to the support of Grand Ledge throughout its history. Note farmlands in background, west of town. Industry: Of greatest significance from 1900 to 1930. American Vitri-fied Products Company is in the foreground and Grand Ledge Clay Products Company in upper center. Note M-43 and railroad located diagonally in the picture.



Figure 32. Retail Trade: An activity which has existed from early town development to the present (view looking south from bridge).



Figure 34. Residential Housing: Most significant from 1930 to the present. In the foreground is the south side of the river--the major residential area.



Figure 33. Resort. Of major importance from 1880-1905. A southview of the second island showing the Island House in the background. Courtesy: Michigan Historical Commission.

assets of a picturesque location with woods and bluffs and a number of strategically located islands. The initiation of excursion trains in 1890 greatly increased the accessibility of the area, and a thriving business resulted.

Still a third secondary activity is the retail trade which exists to serve the residents of the community.

Within the past thirty years the economic support of the community has gradually shifted, so that today the existence and prosperity of the town depend upon the large urban area of Lansing.

Throughout the years of growth and expansion of the city, certain characteristics stand out. The basic area of original town focus still possesses the most important commercial aspect. Town growth, significant on each side of the river, has made its greatest advancement on the south side, due to a combination of physical and cultural elements.

It is doubtful that any of the existing industries will expand significantly or that new industry will locate in Grand Ledge in the very near future. These factors, combined with the diminishing importance to Grand Ledge of intensive farming, indicate that Grand Ledge will continue to function primarily as a residential suburb of Lansing and that any new residential development will be entirely dependent upon Lansing. It has been stated that "Lansing serves as a barometer for the future of Grand Ledge."¹ Such

¹Ibid., p. 75.

a statement seems more than valid, especially after considering the present figure of eighty per cent of Grand Ledge's total labor force employed in Lansing.

At present the city has a relatively stable commercial economy for a community of this size. However, with the advent of a new regional shopping center to be located one-half the distance between Lansing and Grand Ledge, Grand Ledge's commercial district must suffer to some degree. It seems reasonable to assume that, after construction is completed, the local town merchants will be faced with a problem quite similar to the fate of the resort industry. To a notable degree such a pattern of decreased commercial and economic activity in Grand Ledge is inevitable.

It has been shown that, during the occupance and progressive growth of Grand Ledge, the activities of this region have not and can not remain stable. As a series of changing events, both physical and cultural, have acted upon the scene, the predominance of certain economic activities has prevailed.

APPENDIX

DEFUNCT INDUSTRIES

Grand Ledge Furniture Company was located at 200 South Bridge Street. The company began operations on September 4, 1919, and dissolution was declared on May 31, 1938. The company was engaged in the manufacture of overstuffed furniture and employed less than ten workers.

Grand Ledge Paint Company, with its office and plant at 208-210 West Washington, was organized in 1900 and manufactured a complete line of house and barn paints. At the peak of production, between 1910 and 1920, the company employed ten to twelve workers. The plant closed in August, 1935, after the death of the original owner.

Grand Ledge Face Brick Company, which was owned by the Lansing Brick Company, was situated approximately three-quarters of a mile northwest of the present city limits. The plant was originally built in 1914 by the Baker Clay Products Company to manufacture conduits for silos. The kiln which Baker had installed was of the continuous rather than the bee hive type so the tile could not be glazed. Realizing this, the plant was sold to the Lansing Brick Company for the manufacture of face and common brick. The plant was well located on the Grand River and utilized the

extensive shale deposits that were in the area. The plant had a daily capacity of 40,000 to 43,000 bricks when operated at peak capacity in 1920.² Maximum employment was seventy-five workmen, with an average of fifty.³ The inability to control the temperatures of the continuous kilns resulted in bricks of varying qualities. The company was declared bankrupt in 1949.

Crawford Chair Company, which was organized in 1905, was located on the north side of the river on Orchard Street. The five story brick factory was devoted to the manufacture of chairs and tables. The company periodically supplied work to an average of one hundred and thirty men. The plant was idle between 1925 and 1928 and was officially closed due to economic complications in 1929. The plant was the home of a number of small industries during the depression years. In 1938 the Grand Ledge Manufacturing Company was organized and utilized the building for the manufacture of furniture and novelty articles until December, 1943, when the plant was destroyed by fire. Recently the Lintzcraft Trailer Manufacturing Company, which was engaged in the fabrication of house trailers, built a large metal quonset building near the original site. This company

²George B. Brown, Clays and Shales of Michigan and Their Uses, Michigan Geological Survey, Pub. 36, Geol. Series 30 (Lansing, Michigan: Wynkoop Hallenbeck Crawford Company, 1926), p. 243.

³Personal interview with Mr. Harry D. Towner, President Grand Ledge State Bank.

was dissolved in 1957, and the quonset building is presently used by Thompson Ramo Woolridge, Incorporated, of Ionia for the storage of automotive parts.

Vanator Tool Works was established by M. Vanator in 1895. The shop was located on West River Street near Harrison. This company was engaged in the manufacture of all types of knives, pruning shears, and cold chisels. Prior to going out of business in 1899 the company employed ten workmen.⁴

Grand Ledge Industries, Incorporated, at 164 Orchard Street, was organized in 1947 and petitioned for bankruptcy in 1948.

The Grand Ledge Metal Company, at 121 East Jefferson Street, was organized in January, 1947, and dissolved in August, 1947.

There was considerable mining activity in the coal seams near the river between 1890 and 1915. A number of small soft coal mines employed thirty to forty men on a seasonal basis. In 1894 the Grand Ledge Coal and Fire Company mined 1150 tons of coal and some fire clay. This same year the Starks Mine extracted approximately nine hundred tons of coal.⁵ For a four month period in 1905, there were

⁴Interview with Mr. Len Marshall.

⁵Grand Ledge Independent, January 4, 1895.

seven mines in operation employing a total of twenty-seven men.⁶ A much higher quality of coal which competed effectively with the soft coal of the area was being shipped into Grand Ledge. As this better coal became more readily available people were reluctant to buy the "sooty, dirty coal," and mining operations ceased in 1920.

⁶Grand Ledge Independent, May 26, 1905.

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2. The second part of the document addresses the challenges of data management in a rapidly changing environment. It highlights the need for flexible and scalable solutions that can adapt to new technologies and data sources. The author argues that organizations must invest in training and development to ensure their staff are equipped with the skills necessary to manage complex data sets effectively.

3. The third part of the document focuses on the importance of communication and collaboration within an organization. It stresses that clear communication channels and a culture of openness are vital for the success of any project or initiative. The text provides practical advice on how to foster a collaborative environment where team members can share ideas and resources freely.

4. The fourth part of the document discusses the role of leadership in driving organizational change. It argues that leaders must be visionaries who can inspire and motivate their teams to embrace new ways of working. The text outlines key strategies for effective leadership, including setting clear goals, providing support and resources, and encouraging innovation and risk-taking.

5. The fifth part of the document explores the impact of external factors on organizational performance. It discusses how market trends, regulatory changes, and technological advancements can influence an organization's success. The text suggests that organizations should conduct regular external audits to stay informed about these factors and adjust their strategies accordingly.

6. The sixth part of the document concludes by summarizing the key points discussed throughout the document. It reiterates the importance of accurate record-keeping, effective data management, strong communication, and visionary leadership. The author encourages organizations to continuously evaluate and improve their processes to remain competitive in a dynamic market.

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