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"The Results of Annexation. A Case Study
of the Annexation of the Everett District
to the City of Lansing, Michigan."

presented by

Robert B. Hotaling

has been accepted towards fulfillment
of the requirements for

Masters degree in Urban Planning

Harold W. Lawrence
Major professor

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THE RESULTS OF ANNEXATION

A CASE STUDY OF THE ANNEXATION
OF THE EWE CREEK DISTRICT TO THE
CITY OF LANSING, MICHIGAN

by

Robert E. Hotaling

A THESIS

Submitted to the School of Graduate Studies of Michigan
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QUESTION 1

1. The following table shows the number of people who visited the museum in each month.

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Visitors	120	150	180	200	220	250	280	300	280	250	220	180

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CHAPTER I

INTRODUCTION

Orientation of the Study

The growth of cities by annexation is an increasingly important major urban planning problem and controversial issue. Studies have often been made prior to annexation, but rarely is one able to find a case where such studies have been made after annexation. Primarily for these two reasons, this study - "The Results of Annexation-A Case Study of the Annexation of the Everett District to the City of Lansing, Michigan" - has been made.

The general purpose and scope of this study is to present: (1) an inventory of the physical conditions, and (2) an analysis of governmental policies including regulations, construction standards and cost distributions that resulted in these conditions before and since annexation.

Whenever possible, the question of public facilities, utilities and services will be related to the physical land developments. Economic factors and legal problems and procedures whenever pertinent, will be related to major developments, changes and improvements.

The Everett District

Geographical location. The location of the Everett District is graphically shown on Map No. 1, "The Everett District and Environs". It is principally an urban residential area located in the most southerly section of the City of Lansing, Michigan, and covers a 2.2 square mile area. It is bounded on the north by the rear of properties located on the south side of Greenlawn Avenue; on the east by the Michigan Central Railroad right-of-way; on the south by Jolly Road; and on the west by a north-south section line located approximately 500 feet east of the intersection of South Washington Avenue and Holmes Road.

Responsible local governments. Prior to the annexation of the District to the City on November 12, 1949, it was a part of Lansing Township. However, other local governments having public interests in the District were Ingham County and the State of Michigan, Lander Metropolitan District, and the Everett School District.

Lansing Township was generally considered to be the "local government" of the people in the Everett District. It afforded the most convenient governmental offices to which the citizens could turn. Its primary responsibilities to the people were fire and police protection, township

planning, building and zoning regulations, tax assessment and collection, and township parks and recreation.

In the District, Ingham County was responsible for all highways and streets, drainage-districting and storm-drainage system, county parks and recreation, libraries, and public health service. Ingham County and the State of Michigan co-operated in carrying out the responsibility for Cedar Street - U.S. Route No. 127 - which runs north and south through the heart of the Everett area.

The Landel Metropolitan District, formed in 1947 as a special public corporation under state enabling legislation,¹ was and still is primarily responsible for the water distribution and sanitary sewer systems in the area.

The Everett School District, from which the area gets its popularized name - the "Everett District" - was responsible for public schools and school playgrounds.

Land development in the Everett District depended very heavily upon each of the above governmental units, commensurate with their legal and economic limitations

¹ Act 312 of 1929. Michigan Compiled Laws 1948, Chapter 119, Metropolitan Districts.

as prescribed by state law, local government corporation charter, local ordinance and local administrative organization and procedures. Their ability to meet ever increasing demands for more and high standards of public facilities, utilities and services was fundamental to the urban land development which was taking place in the Everett District. These public functions had to be provided efficiently and at a reasonable cost to the taxpayer and land developer.

Reasons for urban land development. During the years subsequent to 1939 the Everett District experienced its greatest rate of urbanization. This growth, primarily because of World War II, was due to increased employment opportunities provided by the expansion of old and the establishment of new industrial and commercial enterprises in the southern sector of the Lansing metropolitan area. This increased employment consequently resulted in more family units in need of urban housing facilities in this southern sector. The southern part of the City of Lansing was already experiencing a relatively high degree of land saturation development. Thus, the new residential development was caused to take place in those more desirable and somewhat developed areas immediately south of the corporate city limits.

In view of its proximity and direct highway accessibility to these employment centers, and its generally desirable physical land character in terms of topography, soil types and drainage, the Everett District received a major share of this urban residential development.

The Annexation Movement

Public demands due to urbanization. The relatively rapid rate of urbanization in the District subsequently evolved into increasing pressures and demands upon the various responsible local government units for more and better public facilities, utilities and services.

Lansing Township felt the pressure for better fire and police protection. Ingham County was asked for better highway and street construction and maintenance. The State of Michigan was approached for improvement of South Cedar Street (U. S. Highway No. 127). Ingham County was asked to provide better surface and subsurface storm drainage. The Landel Metropolitan District continued to provide additional water and sanitary sewer service. Expanded school and school playground facilities were demanded of the Everett School District.

Reasons for desiring city annexation. The people in the Everett District were generally satisfied with the educational standards and progressively developed school

facilities provided by their school district. However, as land development intensified, dissatisfaction arose over the purported inability of the other local governments to provide, adequately, and at a reasonable cost, certain public facilities, utilities and services.

Lansing Township was accused of not being able to provide economical fire and police protection. Ingham County was believed to be unable to provide, economically, paved streets with curb and gutter, proper maintenance of the street surface in the warmer months and timely removal of snow and ice during the winter. Surface and subsurface drainage by the County was believed to be generally impractical from an economic standpoint. Boulevard lighting seemed economically impossible through the County or Township. The Landel Metropolitan District water and sewer service rates seemed high when compared with the rates in the City of Lansing.

These dissatisfactions became the "core" of a movement in the Everett District for disassociation from the jurisdiction of Lansing Township, Ingham County, and the Landel Metropolitan District (three local government units), and annexation to the City of Lansing (one local government unit).

Steps taken to accomplish annexation. In view of the above dissatisfactions, and after innumerable public discussions, committee hearings, official public hearings and

private conversations, the movement among the people in Everett District for annexation to the City of Lansing gained momentum. A group organized and drew up the necessary petitions. These petitions legally described the boundaries of the District and requested that the question of annexation to the City be placed on an official ballot and that an election be held as soon as possible.

During the month of July, 1949, 32 petition-carriers secured 1,352 signatures of qualified voters in the Everett area. This was more than the one percent of the approximately 8,000 people in the District as required by State law² to place the issue on the ballot.

The Lansing city council, after investigating the question of annexing the area, unanimously approved the placing of the issue on the same ballot for a deciding vote by the qualified voters residing in the city.

At the November 8, 1949 election, the annexation to the City of Lansing was approved in (1) the Everett District by a vote of 870 to 706; and (2) the territory outside of the Everett District, including the remaining portion of Lansing Township and the City of Lansing, by a vote of 3,551 to 1,915.

² Act 279 of 1909, Michigan Compiled Laws, Home Rule Cities. Chapter 117, paragraph 117.6

It is of particular interest to note that, while the voters in the Everett District gave a majority vote in favor of the issue, upon analysis the city votes were overwhelmingly in favor of annexing the District, but the township votes were 7:1 against the annexation.

On November 12, 1949, in compliance with established legal procedures, the vote favoring annexation was certified as being correct by the Board of County Commissioners. Thus, the Everett District became a part of corporate Lansing.

CHAPTER II

CONDITIONS IN THE EVERETT DISTRICT AT THE TIME OF ACQUISITION

Natural Conditions

The general topography, soil types and land drainage within the Everett District are graphically shown on Map No. 2, "Land Elevation and Soil Types".

The topography, generally, has a gentle rolling character on either side of the Holmes Drain. This drain, with its low and poorly-drained alluvial, peat and muck soils, has divided the District in the sense that it has formed a development barrier. However, because it has afforded a common drainageway, it consequently has formed a basis for solving many common drainage, water supply, and sanitary sewer problems.

The better soils for urban development in terms of drainage and soil-bearing capacity, are located on either side of the Holmes Drain.

General Land-Use Character

Of the 2.2 square miles, or 1420 acres, which the Everett District covers, approximately 910 acres, or 64 percent, at the time of annexation were platted and under urban development. The remaining 510 acres, or 36 percent, were principally open agricultural land or public areas.

The urban development in the area was predominantly residential, with its associated commercial, industrial, public and semi-public facilities, utilities and services, which were necessary and convenient for neighborhood and community living.

The land development in the Everett District evolved around a basic rectangular or "grid" street pattern.

Map No. 5, "Land Uses at Time of Annexation", graphically shows the general land-use character and the specific location of major land developments.

Regulations, Utilities, Facilities and Services

Regulations. At the time of annexation, the major regulations affecting land development in the Everett District were those contained in the Lansing Township Zoning Ordinance. General land-use planning in the District was effectuated principally through these regulations.

Utilities. Public utilities provided by local governments or utility companies included a water supply system, combined sanitary sewer system, electric power lines, gas mains, and telephone lines.

Facilities. Major public facilities occupying land in the District at that time, included highways and streets, parks, schools, and other public buildings. Semi-public facilities included churches and a parochial school.

Services. Principal public services affecting land development included public transportation, fire protection, police protection, and garbage and trash disposal.

Planning and Zoning

The local government responsible for planning and zoning in the Everett District prior to annexation was Lensing Township.

The Township Board was principally responsible for carrying out the function of planning and zoning. The general policy of this Board was to continuously plan for the District in terms of revising or amending the zoning ordinance to meet changing land development conditions.

Primarily, the zoning ordinance was based upon a land-use study and subsequent over-all land-use plan. This plan established the specific land uses which would be permitted in the various zoning districts.

Interpretation and enforcement of the zoning regulations was the responsibility of the township building inspector. Special cases were reviewed by the Zoning Board of Appeals for more specific interpretation or decision. Map No. 3, "Zoning at the Time of Annexation", graphically shows the proposed land-use plan for the Everett District.

This plan basically envisioned the Everett District as a single-family residential type of area. The commercial developments would be permitted to extend the full length of South Cedar Street. Smaller business districts would be

located on South Washington Avenue. Light industrial areas would be confined to the extreme northwest and northeast corners of the District. Small farms would be permitted in the southeastern corner of the area.

The following table includes a summary of acreages contained in the various zoning districts.

Table No. 1

Zoning District Acreages

<u>Zoning district</u>	<u>Acres</u>	<u>Percent</u>
Residential	1229	86.5
Commercial	66	4.6
Industrial	35	2.5
Small farm and agricultural	90	6.4
Total	1,420	100.0

Residential Development

Residential development at the time of annexation occupied approximately 573 acres (excluding streets), or 63.0 percent of the total developed acreage in the District. The intermingling of incompatible land uses and the residential areas was non-existent except for a few scattered independent neighborhood grocery stores.

The 1,873 dwellings were almost exclusively of the single-family type. It was estimated that 8,000 people lived in these dwellings. The type and number of dwellings which existed, are included in the following table.

Table No. 2

Type and Number of Dwellings

<u>Type</u>	<u>Number</u>	<u>Percent</u>
Single-family	1,869	99.8
Two-family	2	0.1
Three-family	1	0.05
Four-family	1	0.05
Total	1,873	100.00

The distribution and density of dwellings which existed are included in the following table.

Table No. 3

Distribution and Density of Dwellings

<u>Section*</u>	<u>Total Acres</u>	<u>Net Residential Acres</u>	<u>Dwellings No.</u>	<u>%</u>	<u>Dwelling Density**</u>
Northeast	180	98	378	20	3.9
Southeast	490	172	619	33	3.6
Southwest	500	159	405	22	2.5
Northwest	250	144	471	25	3.3
Total	1,420	573	1,873	100	

* Sections formed by the intersection of South Cedar Street and Holmes Road.

** Dwelling density per net residential acre.

The geographical pattern of development is shown on Map No. 5, "Land Uses at Time of Annexation".

Primary influence for this distribution was due to the layout of the major highway and street pattern which focused on the employment and shopping centers of the City of Lansing. South Cedar Street was the major influence in this respect, and South Washington Avenue was of somewhat lesser importance. Main secondary or "feeder" streets were Holmes and Cavanaugh Roads. Development took place along and between these streets. South Pennsylvania Avenue,

which was opened to traffic just prior to the date of annexation, was not a factor in the pre-annexation development.

Also of major importance to residential development were topography, soil types and drainage. Early subdivisions were located as near Lansing as possible on the higher and better-drained land areas immediately accessible to highways and streets. Later subdivisions occupied the lower and more poorly-drained and inaccessible land areas. These areas, which were subdivided later, were generally located adjacent to or between those located on higher and better lands.

Natural land conditions were not primary factors in the northwest, northeast and southeast sections. They were, however, of particular importance in the southwest section. The large area of land with poor drainage and soil-bearing capacity along the Holmes Drain was a barrier to orderly development in this section. The isolated developments in the northwest and along Jolly Road resulted from this natural influence.

Map No. 2, "Land Elevation and Soil Types", graphically shows the relationship of topography, soil types and drainage to the platted subdivisions as they exist at the present time.

At the time of annexation, zoning regulations in effect we basically directed toward the retention of the existing single-family type of residential development. Under the zoning regulations, residential areas could have expanded from the existing 523 acres to approximately 921 acres (excluding streets) - a possible increase of 76 percent. These regulations were evolving a desirable urban residential dwelling density and spacing, through its minimum standards for lot sizes and yard requirements. The minimum standards for building heights and floor area were also helping to produce a more desirable residential character.

Commercial Development

The general character of the commercial developments was that of a neighborhood and community shopping-and-service center.

The type and number of commercial establishments which existed, are included in the following table.

Table No. 4

Type and Number of Commercial Establishments

<u>Type</u>	<u>Number</u>
Grocery stores.....	12
Restaurants	12
Gas stations	8
Business and professional offices.....	10
Hardware and appliance stores	10
Laundry and dry-cleaning establishments..	5
Drug stores	3
Tourist cabin colonies	3
Barber shops	2
Used-car lots	2
Motorboat sales and service shops	2
Vacant stores	2
Bicycle shop, Auto trailer sales and service, Welding supply store, Sign shop, Shoe repair shop, Floor covering shop, Upholstering shop, Bowling alleys, Beauty shop, Sport shop, Clothing store, 5¢-to 1.00 store, Gift shop, Bakery shop, and Fruit and vegetable stand	1 each (16 total)

Total establishments 88

The geographical pattern of commercial development is graphically shown on Map No. 5, "Land Uses at Time of Annexation".

The commercial development, interspersed with residences, occurred on both sides of South Cedar Street - the "main" street of the District. This presented a lineal or "string" type of business district. Scattered neighborhood grocery stores were established to serve the individual neighborhood residential areas of the District. These were all located at intersections on primary neighborhood "feeder" streets, or at neighborhood-centered street intersections.

The location of commercial developments were primarily influenced by such economic factors as (1) central location in relation to residents of the District; (2) location in relation to the most frequently-travelled routes of the residents of the District, and (3) location in relation to the most frequently-travelled routes of through traffic on South Cedar Street (U.S. No. 127) and "filtering" traffic from Lansing.

Other than streets, important physical factors in the commercial development of the Everett District were water supply and sanitary sewers. Both were provided by the Lander Metropolitan District, and were not primary limiting factors.

In addition to the above factors, zoning regulations were the principal limiting factor on commercial development. These land use regulations restricted commerce to South Cedar Street and South Washington Avenue. They would have allowed commercial developments to expand from the existing 25 acres to 66 acres - a possible increase of 150 percent.

Industrial Development

Industrial development at the time of annexation occupied approximately 14 acres, or 1.5 percent, of the total developed acreage in the District.

All industry located in the District was of the light industrial type.

The type and number of industries which existed at the time of annexation are included in the following table.

Table No. 5

Type and Number of Industrial Establishments

<u>Type</u>	<u>Number</u>
Automotive repair garages	5
Contractor office and storage yard	1
Lumber storage yard	1
Welding shop	1
Tool and die plant	1
Total	<u>9</u>

The geographical distribution of the industrial development at the time of annexation is shown on Map No.5, "Land Uses at Time of Annexation".

With the exception of the tool and die plant and one Automotive repair shop, the industrial developments were intermingled with the commercial developments along South Cedar Street. These industries were established primarily to serve the Everett District and southern Lansing.

The tool and die plant was located on the west portion of a 14-acre site in the extreme northeast corner of the District. It was located with truck access between the plant and South Cedar Street, over residential South Park Boulevard. Street access was not directly available to the factory from Pennsylvania Avenue because of the elevated viaduct located along this frontage. The location of the factory adjacent to the Michigan Central Railroad did not result in a railroad siding for use of this form of transportation.

Additional industrial development was limited primarily because of the lack of adequate water supply and sewer systems. These systems were essentially designed and built for residential purposes; consequently, new industries requiring other than comparatively normal residential water consumption and sewer service, could not be served.

Zoning regulations were a very important limiting factor of industrial development in the District, in terms of sites available. Under zoning regulations, industry could have expanded from the existing 14 acres to 35 acres - a possible increase of 150 percent. The additional 21 acres was contained in two sites of almost equal size.

Highways and Streets

Accessibility to land is fundamental to its development and use. Highways and streets are major items in affording this accessibility. In the case of the Everett District, it is historically interesting to note that the highways and streets which existed in 1910 are today still the major traffic arteries. South Cedar Street (U.S. Highway No. 127) remains the principal highway. South Washington is, to a lesser degree, also an important highway. Holmes and Cavanaugh Roads are major connecting or "feeder" streets between the residential areas and the major traffic arteries. Along these highways and streets, the initial development took place. Later, as the demand for urban land was felt upon the area, newly-platted streets used these existing highways and streets for ingress and egress.

Prior to city annexation, the responsibility in the Everett District for highways and streets was that of Ingham County. This was true with the exception of South Cedar Street (U.S. Route No. 127), which was primarily the responsibility of the State of Michigan.

No over-all plan of a street system for the Everett District existed at the time of annexation.

The location of highways and streets in the Everett District was effectuated through the County Plat Board,

which was composed of the County Clerk, County Treasurer and Register of Deeds. It was the responsibility of this Board to decide on new subdivision plats. Their decisions of approval subsequently established the basic physical pattern for land development.

The general street pattern which evolved up to the time of annexation was the rectangular or "grid" pattern. This pattern typically showed little or no relationship to topography and land surface drainage. Map No. 7, "Street Improvements at Time of Annexation", graphically shows this street pattern and their surface construction. The street pattern and its lack of consideration for natural conditions is graphically shown on Map No. 2, "Land Elevation and Soil Types".

Except for South Cedar Street, highway and street construction standards were established by the County Highway Commission.

Generally, the County standards were: (1) a minimum of 16-foot width of pavement centered in the street right-of-way; (2) drainage ditches located on either side of the road at a depth sufficient to maintain a dry roadbed and uninterrupted surface run-off of water; (3) metal driveway culvert pipes having a minimum of ten inches in diameter, aligned in the roadside drainage ditches, and (4) optional curb and gutter on either side of the pavement.

New street construction, including preparation of roadbed, ditching and gravelling, was owner-accomplished. This was usually done through the hiring of a road building contractor. The one exception to this rule was when owners installed curb and gutter on both sides of the pavement. In these cases, the County Highway Commission would pave the street with a bituminous concrete surfacing which would be paid for out of general road funds.

The effect of the Ingham County Road Commission policies in relation to street construction in the Everett District generally resulted in narrow, high-crowned pavements with narrow shoulders and drainage ditches on either side.

At the time of annexation, the Everett District had 27.61 miles of highways and streets. Of this total, 18.25 miles, or 66 percent, were surfaced with gravel; 7.25 miles, or 26 percent, were surfaced with bituminous concrete; and the remaining 2.11 miles or 8 percent, were paved with Portland cement concrete.

The total area of street right-of-ways with street surfacing, was approximately 229 acres or 26.5 percent of the developed acreage of the District. These surfaced streets provided access to 3,129, or approximately 98 percent, of the platted lots. Although street right-of-ways existed, 74 lots, or 2 percent of the total number, were not provided with paved street access.

Water System

In 1947, the Landel Metropolitan District was founded as a result of a cumulative demand in the Everett District, and the remaining urban portions of Lansing Township, for a public water and sanitary sewer system. Since the State enabling legislation required that two political units of government were necessary for the formation of a public utility corporation of this type, all of unincorporated Lansing and part of Delhi Townships became the Landel District (refer to Map No. 1, "Everett District and Environs").

The water supply system which existed at the time of annexation is graphically shown on Map No. 9, "Water System Improvements at Time of Annexation".

The system essentially followed the established street pattern. Of the 3,200 lots contained in the platted subdivisions, the water system served 2,863 or 89.4 percent of them. The remaining 340 lots, or 10.6 percent, were not served.

The system was designed to supply water to all existing and future residential developments. Water mains of adequate size were installed to the edges of the developed areas for future extensions into the vacant land as it developed.

The fact that the system was built in 1947-48 resulted in high construction costs, which had to be defrayed at a high rate of borrowing.

The water system was financed entirely by revenue bonds because the Landel Metropolitan District was limited to this type of borrowing by its charter. As a result, a higher interest rate had to be paid in order to sell these bonds. This additional service charge subsequently increased the cost of the utility.

Another financial limitation placed upon the Landel Water System at the time of initial construction, was the lack of any appreciable amount of financial or physical assets upon which it could depend for help in spreading and defraying these high costs among the system's few customers.

These factors resulted in annual high principal and interest payments in order to amortize the cost of the utility. The net result was that a financial situation was created in which it was impossible for the Landel District to extend its water system. This situation existed at the time of annexation.

Because of the financial condition of the Landel District, owners and developers making extensions from the water system were required to do their own contracting, subject to Landel approval, and assume the full cost of construction.

Sewer System

The sewer system, as it existed, is graphically shown on Map No. 11, "Sanitary Sewer Improvements at Time of Annexation".

The design of the entire system followed the natural drainageways. The main outfall sewer generally paralleled the Holmes Drain with the connecting sewers rising on either side. The street pattern formed the basis of service to the developed areas.

The system provided for ultimate residential development needs. Sewers of large size terminated at the edge of the developed areas. They were designed to take care of future extensions for sewer service into vacant areas as they developed.

At the time of annexation 2,789 platted lots, or 87 percent of the total of 3,203, were served by this system. The remaining 414, or 13 percent of the lots, were not served.

Prior to the establishment of the Landel Metropolitan District, all sewers in the Everett area were the responsibility of the County Drain Commission.

The policy of the Commission was to keep natural drainageways open and build necessary lateral pipe drains

to provide general drainage of the various drainage districts. The sewers installed under this policy formed the basis of the sewer system in the Everett District.

These "county drains" were used for both storm water and effluent from septic systems. They were, therefore, classified as modified combined sewers.

When the Landel Metropolitan District proceeded with its planning and construction, this existing county drain system was included. However, the planned sewer system was to function for sanitary purposes.

Like the water system, this sanitary sewer system construction was financed by revenue bonds which, through high interest rates, added to the high construction costs of the utility. Also like the water system, due to the lack of any appreciable amount of financial or physical assets (plus the high rate of capitalization, which had to be spread over a relatively few customers), a financial situation was created where the Landel District could not extend its sewer system. This condition existed at the time of annexation.

Because of the financial condition of the Landel District, the owners and developers who made extensions from the sanitary sewer system were required to do their own contracting, subject to Landel approval, and assume the full cost of construction.

Other Public Utilities

Other public utilities provided in the Everett District at the time of annexation, included electric power, gas and telephone.

Electric power and gas were furnished by Consumers' Power Company, and telephone by Michigan Bell Telephone Company.

Electric power and telephones were conveniently available throughout the entire District. Connections to and extensions from the existing systems were made at no cost to the owner or developer. For these reasons, these utilities were not factors in terms of limiting development.

Gas was available in most of the developed area. Consumers' Power Company extended its mains, based upon a consumer demand commensurate with its financial limitations. Connections to and extensions from the gas mains were made at no cost to the land owner and developer. Another factor in relation to gas, was the availability of substitutes such as coal, oil and electricity. As a public utility, therefore, it was not a factor in limiting development in the Everett District.

Schools

Up to the time of annexation, the Board of Education of the Everett School District was responsible for the policies which resulted in the public school facilities in the area.

The facilities provided at that time are included in the following table.

Table No. 6

Public School Facilities

<u>Name</u>	<u>Approximate Acreage</u>
Everett elementary- high school building and site	5
Everett school athletic field	4
Maplehill elementary school site	2
Pennsylvania Avenue site	14
Total	25

The geographical distribution of the public school facilities is graphically shown on Map No. 5, "Land Uses at Time of Annexation".

Everett School. The only public school building was located on the 5-acre Everett School site. The 4-acre Everett Athletic Field located on the opposite side of South Cedar Street, in addition to the school site,

totalled 9 acres. The 1600 public school children in the more than two-square-mile School District were served by this building. On the basis of minimum area standards established by the Department of Public Instruction of the State of Michigan for these 1600 pupils, the Everett School site should have had an area of 20-25 acres.³

The school was generally located slightly north of the center of the general area of residential development. This relationship between the school and the residential areas was a major factor in the residential development of the District. Concentrated development tended to evolve around the school.

Travel distance between home and school exceeded the generally accepted maximum of one-half mile in the case of approximately 40 percent of the dwellings. The location of the school on the west side of heavily-travelled South Cedar Street created a hazard for east-side children walking or riding to school,

Everett School Athletic Field. This 4-acre site was acquired and developed to provide facilities for the high school inter-scholastic athletic program. The field was, however, designed primarily for football games.

³ Department of Public Instruction, "Planning Together for Better School Buildings", Bulletin No. 412, page 29.

The field was well-graded, had a good grass cover, had night football floodlighting facilities, and was enclosed by a seven wire fence.

It met the specifications for high-school league football, and served as an outdoor physical education area. Because of the limited width of the area, baseball could not be played.

The physical separation of the field from the school by South Cedar Street presented a continuous hazard and inconvenient relationship to physical education and dressing-room facilities, which were located in the school building.

Laplehill School Site. This 2-acre school site was acquired for the building of an elementary school. On the basis of standards established by the State Department of Public Instruction, this site should have had an area of⁴ at least five acres.

The site was centrally, conveniently and safely located within one-half mile of 97 percent of the dwellings in the southeast section of the District. This section contained one-third of the total dwellings and was exceeded in dwelling density only by the much smaller northeast section.

⁴ ibid.

At the time of annexation, a \$75,000 building fund was available toward the construction of the Maplehill School building. At the rate of an estimated construction cost of \$20,000 per classroom, this fund would have paid for three classrooms, the required administrative offices, storage space, toilets, heating plant, and circulation areas.

Pennsylvania Avenue Site. This 14-acre, undeveloped area was located in the extreme eastern section of the District. This site was acquired for school recreation purposes.

The location of this site in the small area between South Pennsylvania Avenue and the Michigan Central Railroad, coupled with its peripheral location in relation to the people - particularly the children - of the District, were factors in the lack of development and use of the site for its intended purposes.

If developed as a high school site, the area would have had the advantage of adequate acreage, and the disadvantage of a poor and hazardous location in relation to the school children.

Unserved Sections. The unserved sections of the District, in terms of a desirable relationship between home and school, were the northeast and the southwest.

The northeast section, with one-fifth of homes, the highest density of development, and the most rapid rate of residential building, was generally convenient to Everett School, but hazardous for children due to the necessity for crossing South Cedar Street. The families, particularly the newer ones, were young, with school-age and pre-school-age children. These factors intensified the need for school facilities in this section.

The southwest section, equal in size to the large southeast section, was developed with principal access to South Cedar Street. The subdivisions in the northwest portion of this section and along Jolly Road were not desirably served. Distance from the school was the major factor in the relationship between these homes and the school. Large areas of poor-soil types precluded orderly development in this section, and consequently perpetuated the problem of providing convenient school facilities to the more isolated residential developments.

Parks

The extent of public parks in the Everett District was limited to one County park and one Township park. Neither the County nor the Township provided a planned park and recreation system for the District.

The 12-acre Foxson-Jessop Park was under the jurisdiction of Ingham County. The park functioned as a "landscape" type of park. The steep topography and open Holmes Drain running through its center precluded development of the park for playground purposes.

Waldo Park was the property of the Township. The one-half-acre-size of the area limited its function to that of providing a small open space of lawn, trees, and shrubs in a residential area.

Map No. 5, "Land Uses at Time of Annexation" graphically shows the location of these park areas.

These two "landscape" parks, in addition to the Everett School playground, Everett athletic field, undeveloped Maplehill School site, and the undeveloped Pennsylvania Avenue site were the recreational areas provided in the District. Of these, the Everett School site provided the only developed "active recreation" facilities.

The Everett School playground, on the basis of the generally-accepted maximum of one-quarter mile walking distance, served approximately 327 or 17 percent of the dwellings in the District. The remaining 1,546, or 83 percent of the dwellings, had no convenient neighborhood playgrounds.

All other types of public recreation facilities were provided outside of the District. The most convenient parks with diversified recreational facilities were located in the southern part of the city of Lansing. Facilities available in Lansing parks included picnic areas, organized playfields and playgrounds, tennis courts, swimming pools, zoo, golf courses, boating areas, flower gardens and park drives.

Table No. 7

Public Park and Recreation Areas

<u>Name of area</u>	<u>Type of recreation area</u>	<u>Acres</u>
Everett School site	playground	5
Everett Playfield	athletic field	4
Maplehill school site	undeveloped	2
Pennsylvania Ave.site	undeveloped	14
Poxson-Jessop Park	landscape park	12
Waldo Park	landscape park	0.5
Total		37.5

Public parks and recreation areas occupied 2.6% of the total area of the District.

The 27.5 acres, on the basis of the 8,000 population, was the equivalent of 4.7 acres per 1000 population.

Public and Semi-Public Buildings

Public and Semi-public buildings in the District are included in the following table.

Table No. 8

Public and Semi-Public Buildings

<u>Name</u>	<u>Site Acreage</u>
Lansing Township Hall	0.3
Lansing Township Garage	0.6
Ingham County Tuberculosis Sanitorium	26.0
Ingham County Mental Fluoride Center	0.15
St. Mary's Church and Parochial School	2.0
Lansing Gospel Temple	0.8
Baptist Church	0.5
Church of the Brethren	0.5
Free Methodist Church	0.15
Total	31.50

The above building areas occupied 2.2 percent of the total area of the Everett District. Map No. 5, "Land Uses at Time of Annexation", graphically shows their geographical location.

Most important to land development was the Ingham County Sanitorium. The employment opportunities and consequent need for housing of employee families, resulted in an influence upon land development in the

. Everett District as well as the City of Lansing. The location of the relatively large 26-acre site of the Sanatorium on the extreme north boundary of the District, was not a barrier to other land developments. Other public and semi-public buildings were of small acreage, and therefore minor factors in influencing general land development. Their presence, however, served the needs of the people in terms of their various functions, and tended to make for more efficient and convenient community living in the Everett District.

Public Services

Public services afforded by various public agencies and private enterprises, included fire and police protection, public health service, public transportation, and garbage and trash disposal.

Fire Protection. This service was provided by Lansing Township and the Grand Metropolitan District. Lansing Township provided the fire protection organization and equipment, and the Grand District provided the fire hydrants and water for fighting fires.

The Everett District was served from the fire station located on the western edge of the District, at the intersection of South Washington Avenue and Holmes Road. The distance from the station to the center of the District, which was at the intersection of South Cedar Street and Holmes Road, was three-quarters of a mile. The greatest distance, which was two and three-quarters miles, was from the station to the intersection of Jolly Road and the Michigan Central Railroad.

Of the 1,875 total dwellings in the District, 129, or 7 percent, were not within 500 feet of a fire hydrant, and did not, therefore, receive adequate fire protection. Of the platted lots, 202, or 6.5 percent, did not have adequate fire protection available. Fire hydrants were immediately available to all commercial, industrial, public and semi-public buildings.

Police protection. At the time of annexation, the Ingham County Sheriff and the Michigan State Police furnished police protection.

Main offices were located in the town of Holt, which was four and one-half miles south of the center of the District. A branch office was open in the Lansing City Hall during weekday office hours. These offices were responsible for local police protection of the people and their property.

The Michigan State police were responsible for patrolling and enforcing state highway regulations along South Cedar Street (U.S. Route No. 127). The State police offices, which were located immediately south of the City of East Lansing, were five miles distant from the center of the District.

Public health service. The Ingham County Health Director was responsible for public health services throughout the County. The County health offices were located in the Lansing City Hall.

Public transportation. The Everett District had to rely on the "through" buses of the Lansing Suburban Lines, Inc. These were the Lansing-Holt buses which travelled north and south on South Cedar Street, and the Lansing-Edgewood buses which travelled north and south on South Washington Avenue.

Bus stops were made along these routes in the Everett District. Service hours were from 5:00 A.M. to 12:00 P.M. daily, with the time schedule between buses varying from 45 minutes to two hours.

Garbage and trash disposal. This service in the Everett District was provided by private garbage and trash collectors. Collections were made once a week. No public agency provided any part of this service: nor did any public agency provide disposal facilities such as dumping areas, incinerators or sanitary fill areas for the disposal of the collected garbage and trash.

The locations of all private dumping and other disposal facilities were outside of the Everett District, and were, therefore, not a factor within the District itself.

CHAPTER III

CONDITIONS IN THE EVERETT DISTRICT SINCE ANNEXATION

Natural Conditions

There has been no change in the natural conditions that existed in the Everett District prior to annexation.

General Land Use Character

At the time of annexation, 910 acres of land was under urban development. Since that time, 40 acres, representing a 3 percent increase, have been added. Of the 1,420 total acres in the District, 950 acres, or 67 percent, are developed and 470 acres, or 33 percent remain as open agricultural land or public areas.

The urban development in the area has remained predominantly residential, with its associated commercial, industrial, public and semi-public facilities, utilities and services which are necessary and convenient for neighborhood and community living.

Newly constructed streets in the additional 18 acres of urban development have extended the previously established "grid" street pattern.

Map No. 6, "Land Uses Since the Time of Annexation", graphically shows the general land use character of all new developments and their specific location.

Regulations, Utilities, Facilities and Services

Regulations. Since annexation, the major regulations affecting land development in the Everett District have been those contained in the Zoning Ordinance of the City of Lansing. General land-use planning in the District has been effectuated principally through these regulations.

Utilities. Public utilities provided by local governments since annexation, have continued to include a water supply system, a combined sanitary-storm sewer system, electric power lines, gas mains and telephone lines.

One change which has been taking place is the division of the combined sanitary-storm sewers. This division has provided certain areas of the District with a separate storm sewer system. The previously combined sewers have become exclusively sanitary sewers.

Facilities. Major public facilities occupying land in the District have continued to include highways and streets, parks, schools and other public buildings. Semi-public facilities continue to include churches and a parochial school.

Services. Public services provided by various public agencies and private enterprises since annexation, include fire and police protection, public health service, public transportation, and garbage and trash disposal.

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Planning and Zoning

The local government responsible for planning and zoning in the Everett District since annexation has been the City of Lansing.

The City Planning Commission, in conjunction with the City Council, has been responsible for carrying out the function of planning and zoning. The general policy of the City has been to plan for the District in terms of amending the zoning ordinance to meet changing land development conditions.

In accordance with the Lansing zoning ordinance, the Everett District, upon annexation, automatically became a "Residential A" zoning district. Since that time, all new developments or changes in existing developments, other than residential "A" developments, have been effectuated by petitioning the City Council. The procedure has been for the City Council to refer the petition to the Planning Commission for recommended action. If the change was recommended by the Planning Commission, the City Council held a public hearing on the issue. By a majority vote of the Council, the petition was approved or disapproved. If approved, the petitioner, upon meeting the requirements of the office of the Building Inspector, was issued a building permit.

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To date, the Planning Commission has generally studied the Everett District, but no overall general land-use plan of record has been completed. Studies and plans have been completed for alleys and off-street parking for the commercial developments in the District.

Map No. 6, "Zoning Changes Since Annexation" graphically shows the land uses permitted in accordance with existing zoning regulations.

The following table includes a summary of acreages contained in the various zoning districts.

Table No. 9

Zoning District Acreages

<u>Zoning district</u>	<u>Acres</u>	<u>Percent</u>
One-family residential	1,360.7	95.8
Multiple dwellings	2.5	0.2
Apartment	0.3	0.02
Apartment-shop	0.5	0.03
Commercial and business	12.3	0.9
Industrial	43.0	3.0
Parking	0.7	0.05
	1,420.0	100.00

Residential Development

Residential development since annexation has increased from 573 to 588.8 acres. The additional 15.8 acres represents a 2.8 percent increase, and the 588.8 acres represents 62 percent of the present 950 developed acres.

Housing built in the District since annexation has totalled 211 single-family dwellings. This represents an increase of 11.3 percent over the previous 1,873 dwellings which existed at the time of annexation. There are, at the present time, 2,084 houses in the District.

It is estimated that an additional 900 persons now reside in the new dwellings. This represents an 11.25 percent increase over the 8,000 population that existed at the time of annexation. The present population is estimated at 8,900.

The type and number of dwellings which now exist are included in the following table.

Table No. 10

Type and Number of Dwellings

<u>Type</u>	<u>Number</u>	<u>Percent</u>
Single-family	2,080	99.8
Two-family	2	0.1
Three-family	1	0.05
Four-family	1	0.05
Total	2,084	100.00

The distribution and density of dwellings which now exist are included in the following table.

Table No. 11

Distribution and Density of Dwellings

<u>Section*</u>	<u>Total Acres</u>	<u>Net Residential Acres</u>	<u>Dwellings No.</u>	<u>%</u>	<u>Dwelling Density**</u>
Northeast	180	98	478	23	4.9
Southeast	490	188	673	32	3.8
Southwest	500	159	446	22	2.8
Northwest	250	144	487	23	3.4
Total	1,420	589	2,084	100	

* Sections formed by the intersection of South Cedar Street and Holmes Road.

** Dwelling density per net residential acre.

1. The first step in the process of the scientific method is to ask a question.

2. The second step is to do background research to see what has already been discovered.

3. The third step is to form a hypothesis, which is a prediction about the outcome of the experiment.

4. The fourth step is to design and conduct an experiment to test the hypothesis.

5. The fifth step is to analyze the data and draw a conclusion about whether the hypothesis was supported or not.

6. The sixth step is to communicate the results of the experiment to the scientific community.

7. The seventh step is to repeat the experiment to see if the results are consistent.

8. The eighth step is to use the results of the experiment to develop a theory.

9. The ninth step is to use the theory to make predictions about the outcome of future experiments.

10. The tenth step is to use the theory to explain the results of the experiment.

11. The eleventh step is to use the theory to make predictions about the outcome of future experiments.

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28. The twenty-eighth step is to use the theory to explain the results of the experiment.

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34. The thirty-fourth step is to use the theory to explain the results of the experiment.

35. The thirty-fifth step is to use the theory to make predictions about the outcome of future experiments.

Residential development since annexation is graphically shown on Map No. 6, "Land Use Changes Since Annexation".

The distribution of this additional housing occurred in the form of general dispersal throughout the subdivisions which were established prior to annexation.

The opening of Pennsylvania Avenue brought about the only concentrations of new housing. Evidence of further residential activity along South Pennsylvania Avenue was the opening of the 18-acre Pennway Subdivision. This development is located north of Cavanaugh Road, east of Pennsylvania Avenue and extending eastward to the Michigan Central Railroad.

Since annexation, residential development tended to intensify in the areas where gravelled or paved streets were available. Most of the new buildings located on lots which were naturally or artificially well-drained. Water mains and sanitary sewers were also immediately available to all except 5 (located on or near Ora Street) of the 211 new dwellings.

All new residential development was built in single-family zoning districts in conformance with the zoning policy of Lansing. This policy retained the single-family character of the Everett District. In view of the comparative similarities of present City zoning regulations



and those of Lansing Township, which were previously in effect, the residential dwelling density, spacing and height did not change. One major difference, however, was that City regulations did not require a minimum building floor space for dwellings, whereas the Township regulations included this provision.

The present single-family residential zoning district area, although subject to being made smaller (upon City Council-approved petitions permitting other types of land uses in this district), now totals 3,361 acres. On the basis of this acreage, the present 589 acres of residential development could increase 772 acres, or 57 percent.

The portions of the single-family, residential zoning districts which were re-zoned by the City Council for other types of residential development, included: (1) multiple dwellings (2.5 acres); apartment (0.3 acres), and (3) apartment shop (0.5 acres). The total land area of these three zoning districts was 3.3 acres. While they were re-zoned for these land uses, no development was made upon this land at the time of this survey. (Refer to Map No. 4, "Zoning Changes Since Annexation" for location of these districts.)



Commercial Development

All new commercial developments, while they expanded existing facilities, did not change the general neighborhood and community-shopping character of the business districts.

The type and number of existing commercial establishments are included in the following table.

Table No. 12

Type and Number of Commercial Establishments

<u>Type</u>	<u>Number</u>
Grocery Stores	12
Restaurants	12
Gas Stations	11 (2)
Business and professional offices	10
Hardware and appliance stores	10
Laundry and dry-cleaning establishments	5
Drug stores	3
Tourist cabin colonies	3
Barber shops	2
Used-car lots	2
Motorboat sales and service shops	2
Vacant stores	2

Bicycle shop, Auto trailer sales
and service, welding supply store,
Sign shop, Shoe repair shop,
Floor covering shop, Upholster-
ing shop, Bowling alleys, Beauty
Shop, Sport shop, Clothing store,
5¢-\$1.00 store, Gift shop, Bakery,
Fruit and vegetable stand..... 1 each
(16 total)

Total establishments - 90 (2)

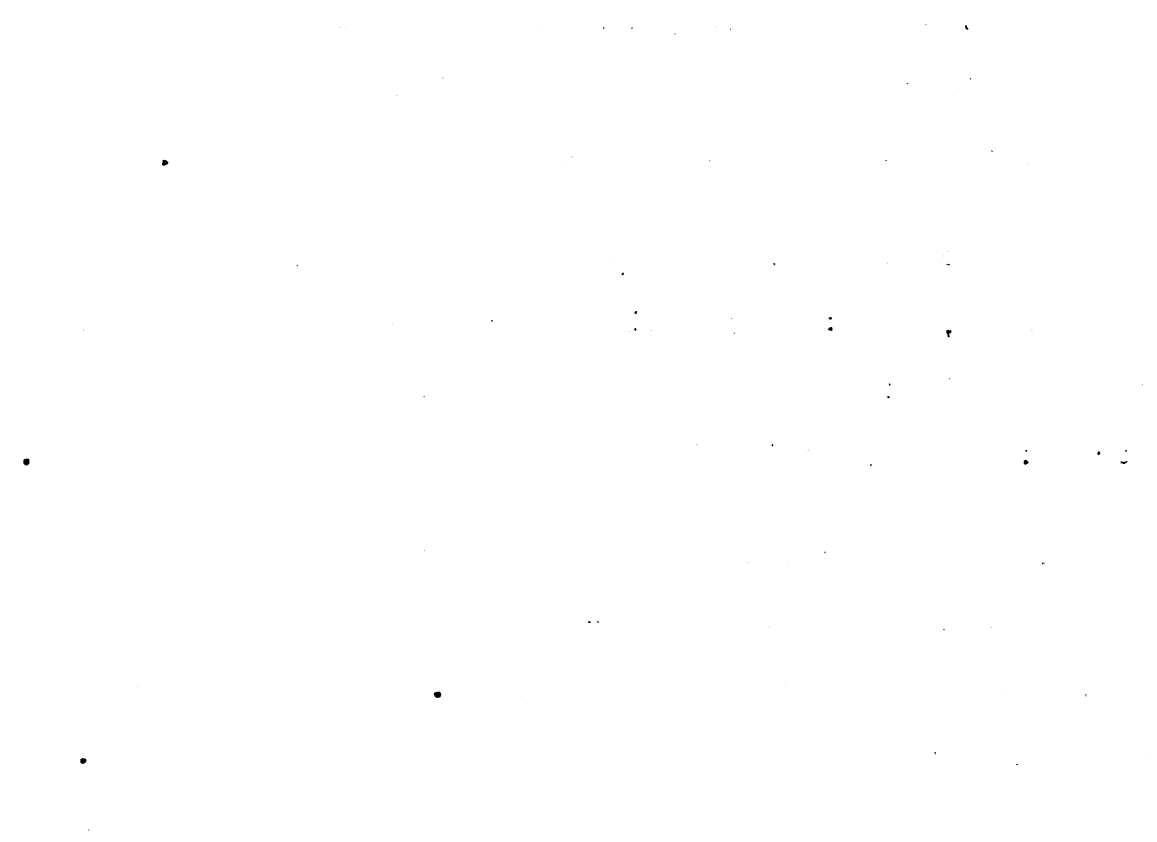
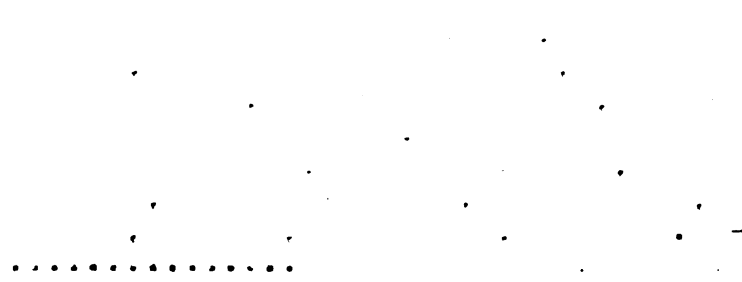
"(2)" represents the increase
since time of annexation.

The geographical distribution of commercial develop-
ment since annexation is graphically shown on Map No. 6,
"Land Use Changes Since Annexation".

The two additional gas stations located on lots which
were previously vacant in the established commercial pat-
tern of "string" development on South Cedar Street.

The reasons for building these establishments on
these lots, were: (1) their central location in relation
to population; (2) trade from heavy traffic on South Cedar
Street; and (3) availability of water and sanitary sewers.

These commercial developments were built after the
City Council approved the re-zoning of these lots from a
residential to a commercial district. This procedure was
in accordance with City zoning policy for the District.



Because of this zoning policy, it is not possible to determine the locations of, or ultimate areas for, future commercial development in the Everett District.

Industrial Development

Industrial development has not changed in the Everett District since the time of annexation. (For acreage, character, type, number and location factors of industrial establishments, refer to pages 20 and 21.)

The geographical distribution of industrial development is graphically shown on Map No. 5, "Land Uses at the Time of Annexation".

A 43-acre tract in the southeast section along the Michigan Central Railroad was re-zoned, after City Council approval, from a residential to a light industrial district. This acreage allowed for a possible net industrial area increase over existing development, of 29 acres, or 67 percent. However, because of the City zoning policy, the locations for and ultimate acreage of future industrial development in the District is undeterminable.

Highways and Streets

Upon annexation of the Everett District, the City of Lansing became responsible for streets. The only exception to this was South Cedar Street (U.S. Route No.127) which became the joint responsibility of the City and the Michigan State Highway Department.

Since annexation, no overall plan for a street system has been made for the Everett District.

The location of new streets in the Everett District became the responsibility of the City Planning Commission. This responsibility was normally effectuated upon the Commission's approval of new subdivision plats. Since no new plats were presented to and approved by this Commission, they did not influence the existing street pattern. However, Planning Commission decisions of approval will, in the future, establish the basic physical pattern for land development in the District.

The Pennway subdivision was platted at the time of annexation, but has since been opened for dwelling construction. The street pattern of this residential area was an extension of the existing rectangular or "grid" pattern. Map No. 8, "Street Improvements Since Annexation", graphically shows the Pennway subdivision street pattern.

Except for South Cedar Street, highway and street construction standards from the time of annexation have been established by the City of Lansing.

Generally, the minimum standards in effect require: (1) a minimum of 26-foot-wide, hard surface pavement, centered in the street right-of-way in order to provide for two lanes of traffic and parallel parking on either side of the pavement; (2) adequate surface and sub-surface drainage structures, for quick and efficient run-off of surface water, which minimizes percolation and subsequently, the amount of sub-surface water; and (3) curb and gutter on both sides of the pavement for the purposes of containing traffic on the street pavement and directing the flow of storm water.

The preparation of the roadbed on all new street construction was accomplished and paid for by the owner through the hiring of a road-building contractor. The City delivered the gravel at cost, but it was spread and compacted by the contractor whose services were paid for by the owner.

When petitioned by property owners, the City installed curb and gutter. The costs for the pavement edging was defrayed by an 80 percent assessment against the owner and a 20 percent contribution on the part of the City from general street funds.

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All bituminous concrete surfacing was installed by the City and paid for out of general street funds. Curb and gutter, however, had to be installed before the City would pave a gravelled street. Another requirement prior to paving this type of street was that sewers of adequate size to take care of storm water must exist or be installed. The City policy, (including cost distribution) for storm sewers, is discussed under "Sewer System" .

The effect of the City policy in relation to street construction in the Everett District, where construction has been completed, resulted in: (1) residential streets of adequate pavement width to meet urban requirements; (2) low-crowned streets; (3) adequate surface and sub-surface drainage structures, and (4) curb and gutter.

All newly-opened streets were surfaced with gravel. Since annexation, the Everett District has added 0.34 miles of newly-surfaced streets. This represents a street length increase of 1.2 percent. The length of streets at the present time totals 27.95 miles.

Streets which have been edged with curb and gutter on both sides of the pavement, since annexation, total 5.3 miles. Streets which have been paved with bituminous concrete, since annexation, increased by 2.9 miles, or 31 percent. The total length of hard surface street pavement which now exists is 12.26 miles.

The total surfaced street right-of-ways has been increased from 229 acres to 231.5 acres (i.e., by 2.5 acres). This total acreage now represents 24.4 percent of the developed acreage of the District. Surfaced streets now provide access to 3,180, or 98.4 percent, of the platted lots. Although street right-of-ways exist, 23 lots, or 1.6 percent of the total number, are not provided with street access.

Water System

The Landel Metropolitan District has continued to provide the major share of water in the Everett District through the administration and operation of its water system. The reason for continuance of Landel jurisdiction (in lieu of the City of Lansing assuming the responsibility) is because the provisions of the bond issue, which financed the initial construction of the system, precluded this. The bond issue defined the area which the Landel District was to include. Until the bond issue is amortized, this "defined" area cannot be segmented except through contract agreements which meet the approval of the Landel Metropolitan District.

In the Everett District, the north portion of the South Washington Avenue frontage is now served by water mains installed since annexation by the City of Lansing. This was permitted as the result of an agreement reached with the Landel District. Water for these mains is supplied from Lansing water sources.

All other water main extensions installed since the time of annexation were installed by the owner and turned over to the Landel District.

All additional water supply extensions in the Everett District are graphically shown on Map No. 10, "Water System Improvements Since Annexation".

All new water mains were located in existing street right-of-ways.

The water main extension from the Lansing water system served an additional 12 platted lots, and the extensions from the Landel water system served an additional 35 platted lots. This represents a total increase of 47 platted lots, or 1.6 percent.

Of the 3,203 platted lots in the Everett District 2,910, or 89.9 percent are now served by a public water system. The remaining 293 platted lots, or 9.1 percent of the total, are not served.

All new water extensions were designed to serve existing and future residential development. Water mains of adequate size for water extensions into areas of potential development still exist at the edges of the developed area of the District.

As was the condition at the time of annexation, (because of the financial condition of the Landel District) owners and developers making extensions from the Landel water system are still required to do their own contracting, subject to Landel approval, and assume the full cost.

Sewer System

Sanitary Sewers. The Landel Metropolitan District has continued to administer and operate the sanitary sewer system in the Everett District since the time of annexation. The reasons for this are the same as those expressed previously, in connection with the Water System. (Refer to Page 60.)

Extensions from the Landel sanitary sewer system are graphically shown on Map No. 12, "Sanitary Sewer Improvements Since Annexation".

All new sewers were located in street right-of-ways.

Under an agreement with the Landel District, the City of Lansing installed the sewers, connected them to the Landel system, and turned them over to Landel for administration and operation.

The designed size of these sewers was adequate for the residential areas in which they were installed, and for the development that can take place in the adjacent vacant areas.

Since annexation, 110 additional platted lots are now served by the sanitary system facilities. This represents an increase of 4 percent. Of the 3,203 total platted lots in the Everett District, 2,899, or 91 percent, are now adequately served by this sewer system. The remaining 304,

or 9 percent, are not served.

As was the situation at the time of annexation (because of the financial condition of the Landel District), owners and developers making extensions from the Landel sewer system are still required to do their own contracting, subject to Landel approval, and assume the full cost. However, in the case of all sanitary sewer extensions which have been completed to date, the City of Lansing has installed them for the owners and turned them over to the Landel District. The City, in these instances, has been required, by agreement with the Landel District, to assess the owner 100 percent of the cost of construction. Ordinarily, if it were not for the Landel District agreement, upon receipt of a petition from the owners, the City would install the sanitary sewers, and assess the property owners for five-sixths of what it would cost to install a 12-inch diameter sewer. The remaining one-sixth of the cost of a 12-inch diameter sewer, plus the total difference in cost between the larger diameter sewer and the 12-inch sewer, would be paid for by the City out of general sewer funds.

Storm Sewers. Since annexation, the City of Lansing has divided the Everett District into drainage areas. It has planned a complete storm sewer system for the total District and each of the drainage areas. A program of construction and cost estimates for installing the system has been outlined.

The storm sewer system, as envisioned by the City, will, upon completion, adequately serve the Everett District. It will also eliminate existing catch basin and storm sewer connections to the Landel sanitary sewer system.

At the present time, an area of 200 acres, or 14 percent of the District, has adequate surface and subsurface drainage structures (all of which have been installed since annexation). The remaining 1,220 acres, or 86 percent of the area, are unserved at the present time. (See Map No. 13)

Upon receipt of a petition from the owners, the City installed these storm sewers and assessed the property owners for five-sixths of what it would have cost to install a 12-inch diameter sewer. The remaining one-sixth of the cost of a 12-inch diameter sewer, plus the total difference in cost between a larger diameter sewer and the 12-inch sewer, was paid for by the City out of general sewer funds.

Other Public Utilities

Other public utilities provided in the Everett District since annexation continue to include electric power, gas and telephone.

There has been no change in the status of these utilities as major factors in terms of influencing land development in the Everett District. (Refer to Page 30)

One change in ownership of a public utility in the Everett District occurred when the City of Lansing acquired the electric power lines and facilities in the Everett District from Consumers' Power Company. In return, Consumers' Power Company acquired electric power lines and facilities located in the Potterville area and owned by the City of Lansing.

Schools

Since the time of annexation, the Board of Education of Lansing has been responsible for the policies which have resulted in the additional public school facilities in the Everett District.

Additional public school facilities which have been provided in the Everett District since annexation, are included in the following table.

Table No. 13

Additional Public School Facilities

<u>Name and type</u>	<u>Additional Acreage</u>
Everett school building addition	0
Maplehill elementary school building*	0
Cavanaugh Road site	16
Lyons Ave. elementary school building* and site	5
Total additional acres -	21

* under construction; will be completed for the 1952-53 school year.

The geographical distribution of these additional public school facilities is graphically shown on Map No.6, "Land Use Changes Since Annexation". (Note: the Pennsylvania Avenue site has been sold by the Lansing Board of Education.)

Introduction

The purpose of this study is to investigate the effects of the proposed system on the performance of the participants.

The study was conducted in a controlled environment with a sample of 30 participants.

The results of the study show that the proposed system significantly improved the performance of the participants.

The study also found that the proposed system was easy to use and did not cause any adverse effects.

The study was limited by the small sample size and the controlled environment.

Future research should investigate the effects of the proposed system on a larger sample and in a more natural environment.

The study was funded by the National Science Foundation.

The study was conducted by the Department of Psychology, University of California, Los Angeles.

The study was published in the Journal of Experimental Psychology.

The study was reviewed and approved by the Institutional Review Board.

The study was conducted in accordance with the ethical standards of the American Psychological Association.

The study was conducted in accordance with the ethical standards of the European Union.

The study was conducted in accordance with the ethical standards of the United Kingdom.

The study was conducted in accordance with the ethical standards of the United States.

The study was conducted in accordance with the ethical standards of the International Union of Pure and Applied Chemistry.

The study was conducted in accordance with the ethical standards of the International Union of Pure and Applied Physics.

The study was conducted in accordance with the ethical standards of the International Union of Pure and Applied Mathematics.

The study was conducted in accordance with the ethical standards of the International Union of Pure and Applied Biology.

The study was conducted in accordance with the ethical standards of the International Union of Pure and Applied Earth Sciences.

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The study was conducted in accordance with the ethical standards of the International Union of Pure and Applied Sciences.

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The study was conducted in accordance with the ethical standards of the International Union of Pure and Applied Law.

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The study was conducted in accordance with the ethical standards of the International Union of Pure and Applied Religion.

The study was conducted in accordance with the ethical standards of the International Union of Pure and Applied Philosophy.

The study was conducted in accordance with the ethical standards of the International Union of Pure and Applied Literature.

The study was conducted in accordance with the ethical standards of the International Union of Pure and Applied Music.

The study was conducted in accordance with the ethical standards of the International Union of Pure and Applied Visual Arts.

The study was conducted in accordance with the ethical standards of the International Union of Pure and Applied Performing Arts.

The study was conducted in accordance with the ethical standards of the International Union of Pure and Applied Media.

The study was conducted in accordance with the ethical standards of the International Union of Pure and Applied Communication.

The study was conducted in accordance with the ethical standards of the International Union of Pure and Applied Information Technology.

The following table includes all public school facilities in the Everett District at the present time.

Table No. 14

Total Public School Facilities

<u>Name and type</u>	<u>Approximate Acreage</u>
Everett elementary-high school building and site	5
Everett school athletic field and building	4
Maplehill elementary school building and site-	2
Lyons Ave. elementary school building & site-	5
Cavanaugh Road Site	16
Total	32

Everett School. Since annexation there has been no change in the size of the 5-acre Everett School site and the 4-acre Everett School Athletic Field - a total of 9 acres. At the present time, the school building is being enlarged at a cost of \$118,000.

Since annexation, the enrollment at the Everett School has decreased in number of students, from 1600 to 1450. Students in the Everett District now attending other Lansing schools, total 230 .

It is anticipated that further decreases in enrollment will be realized when the new Lyons Avenue elemen-

tary school in the northeast and the Maplehill elementary school in the southeast are completed and opened for use in the fall of 1952. It is estimated that these schools will decrease the enrollment at Everett School to 1050 students. If the students now attending other schools in Lansing return to the Everett School for the 1952-53 school year, it is estimated that the enrollment will be 1280 .

If the Everett School is to continue to serve the southwest and northwest sections of the District, the present 5-acre site for the anticipated 1952-53 enrollment of 1050 students will lack 14 acres of being adequate (based upon minimum standards established by the Michigan State Department of Public Instruction).

Within the northwest section of the Everett District there are 487 dwellings, of which 190, or 40 percent, are more than one-half mile from the Everett School.

In the southwest section, 235, or 53 percent of the 446 dwellings, are more than one-half mile from the Everett School.

Map No. 6, "Land Use Changes Since Annexation", graphically shows the geographical relationship between the Everett School and the dwellings.

Everett School Athletic Field. The area of the athletic field has remained at 4 acres. The major change in facilities on the field has been the addition of a fieldhouse at a cost of \$12,000. The function of this fieldhouse has been to provide team dressing rooms and showers for the athletic teams using the field.

Maplehill Elementary School. There has been no change in the size of the 2-acre Maplehill School site.

When the \$155,000 school building is completed in the fall of 1952, it is estimated that the enrollment will be 200 students. On the basis of this number of students, the school site area should be a minimum of 6 acres.

The Maplehill School is located within one-half mile of 653, or 97 percent, of the existing homes in the southeast section of the Everett District.

Lyons Avenue Elementary School. The Lansing Board of Education, in co-operation with the Lansing Park Commission, acquired a 10-acre site in the northeast section of the District for an elementary school site and park playground. The new \$155,000 Lyons Avenue Elementary School, which is now under construction, will be ready for use by the fall of 1952.

It is estimated that the enrollment of the Lyons School will be 200 students. On this basis, the site is adequate in terms of minimum standards established by the Michigan State Department of Public Instruction.

Within the northeast section of the District, the Lyons Avenue School will be within one-half mile walking distance of every home.

The construction costs for the new school facilities in the Everett District have amounted to \$440,000. This amount was partially defrayed by the \$75,000 building fund which the Everett School District turned over to the Lansing Board of Education upon being annexed. The remaining \$365,000 will be paid for out of general school building funds, to which all of the taxable real properties in the City contribute.

Cavanaugh Road site. This 16-acre area has recently been purchased by the Board of Education for a future high school site. When developed, it will provide an area sufficiently large for an enrollment of 700 students. The location of the site is within one-and-one-half miles of all parts of the Everett District.

Parks

Since annexation, the City of Lansing has assumed the responsibility for providing parks in the Everett District.

Poxson-Jessop Park and Waldo Park, which were previously under the jurisdiction of Ingham County and Lansing Township, respectively, were both turned over to the City Park Commission for administration, development and operation.

Since annexation, the City has acquired the 10-acre South Washington Avenue and the 5-acre Lyons Avenue playground sites. As yet, these areas are undeveloped for playground use. Plans have been made for South Washington playground and development is to begin during 1952. Development of the Lyons Avenue playground will begin upon completion of the school building. These two areas will provide "active" recreation areas for the northeast and northwest sections of the District.

Map No. 6, "Land Use Changes Since Annexation", graphically shows the location of these two additional playground areas.

The name; type and acreage of all public park and recreation areas in the Everett District are included in the following table.

Table No. 15

Public Park and Recreation Areas

<u>Name of area</u>	<u>Type of Recreation Area</u>	<u>Acres</u>
Poxson-Jessop Park	landscape park	12
Waldo Park	landscape park	0.5
S.Washington Ave.park site-undeveloped playground		10 *
Lyons Ave. park site	undeveloped playground	5 *
Lyons Ave. school site	undeveloped playground	5 *
Everett school site	playground	5
Everett playfield	athletic field	4
Maplehill school site	undeveloped playground	2
Cavanaugh Road school site	undeveloped playfield	16
Total		59.5

* areas acquired since annexation.

On the basis of the generally-accepted standard of a maximum of one-quarter mile walking distance to "active" recreation facilities, the South Washington Avenue, Lyons Avenue, Everett School and Maplehill School playgrounds will serve 1300 or 62 percent of the existing dwellings in the Everett District. The remaining 784, or

38 percent of the dwellings, have no convenient neighborhood playgrounds.

All other types of recreation facilities, available to the Everett District, are provided in the part of Lansing immediately north of the District. Facilities available include picnic areas, organized playfields and playgrounds, tennis courts, swimming pools, zoo, golf courses, boating areas, flower gardens and park drives.

The 59.5 acres of public park and recreation facilities occupy 4.2 percent of the total area of the District.

On the basis of an 8,900 population in the District at the present time, the 59.5 acres is the equivalent of 6.7 acres per 1,000 population.

All park and recreation areas acquired by the City and the Lansing Board of Education in the Everett District since annexation, have been paid for out of funds derived from the general tax base of the City.

Public and Semi-Public Buildings

Since annexation, no public buildings (except those built for public school purposes) have been built.

The only semi-public building erected since annexation has been the gas main pressure regulator building of Consumers' Power Company. This structure is located on a lot having an area of 0.15 acres. Map No. 6, "Land Use Changes Since Annexation", graphically shows the location of this regulator building.

All other existing public and semi-public buildings were erected prior to annexation. For a listing of these buildings, refer to Table No. 8, "Public and Semi-Public Buildings" on Page 39.

The total area now occupied by all public and semi-public buildings (except those used for public school purposes) is 31.45 acres or 2.2 percent of the total area of the District.

Public Services

Public services provided by various public agencies and private enterprises since annexation, include fire and police protection, public health service, public transportation, and garbage and trash disposal.

Fire protection. This service has been provided by the City of Lansing and the Landel Metropolitan District. The City has provided the fire protection organization and equipment, and the Landel Metropolitan District has continued to provide fire hydrants and water for fighting fires.

The Everett District has been served from the fire station located at the intersection of South Washington Avenue and Baker Street. The distance from the station to the center of the Everett District (the intersection of South Cedar Street and Holmes Road) is 1.5 miles. The greatest distance, which is 3.5 miles, is from the South Washington Avenue fire station to the intersection of Jolly Road and the Michigan Central Railroad.

Of the 2,084 total dwellings in the District, 125, or 6 percent, are not within 500 feet of a fire hydrant, and do not, therefore, receive adequate fire protection. Of the platted lots, 197, or 6.1 percent, do not have adequate fire protection available. Fire hydrants are immediately available to all commercial, industrial,

public and semi-public buildings.

Police Protection. Since annexation, the City of Lansing has assumed the full responsibility for police protection in the Everett District.

Main police offices are located in the Lansing City Hall, which is two and three-quarter miles from the center of the District. This office has been responsible for local police protection of the people and their property.

Public Health Service. There has been no change in the public health service to the Everett District since annexation. (Refer to Page 42.)

Public Transportation. Upon annexation to the City, the Everett District was automatically served by the Intercity Coach Lines, Inc. under city bus service franchise requirements. City buses have been operating the full length of South Cedar Street in the District since the time of annexation.

Designated bus stops are located along South Cedar Street. Service hours to these bus stops are from 5:00 A.M. to 12:00 midnight daily. The time schedule between buses is every 24 minutes during the service hours.

Garbage and trash disposal. Upon annexation, it became mandatory, in accordance with the City garbage collection ordinance, for all garbage to be collected and disposed of by the City of Lansing. Collections have been made once a week. The City has provided all personnel and equipment for the collection of the garbage. All garbage has been disposed of either through the City sewage disposal plant, or through City-maintained sanitary fill areas,

All trash (waste material other than garbage) disposal has continued to be the responsibility of the occupants of the individual dwellings. "Private enterprise" trash collectors have been offering their services to those desiring them.

The locations of the City sewage disposal plant and sanitary fill areas, and the private dumping sites, have been all outside of the Everett District and have not, therefore, been a factor within the District itself.

CHAPTER IV

SUMMARY

At the time of annexation, the Everett District was a 2.2 square-mile, urban, residential extension of the southern part of Lansing, Michigan. It had 1,873 dwellings, which housed an estimated 8,000 people. The heavy concentration of commercial development was "strung" along South Cedar Street. The only industry of any size was a tool-and-die plant.

Through the efforts of the people and their local governments, the area was provided with all the essential types of urban facilities, utilities and services.

The Lansing Township Zoning Ordinance was in effect. It was the purpose of this ordinance to retain the single-family, residential character of the District.

Highways and streets were accessible, but generally lacked curb and gutter, hard-surface paving and good drainage. Ingham County construction standards tended to produce a low-type of urban, residential street.

The Landel Metropolitan District water supply and sanitary sewer systems were available throughout most of the developed subdivisions. The systems were adequately designed for extensions to future developments in the vacant areas.

The Everett District needed an adequate storm drainage system consisting of surface and sub-surface structures to take care of the run-off of excessive surface water.

Electric power and telephones were available throughout the area. Gas was available in all developed subdivisions.

The Everett School provided elementary-high school facilities for the 2.2 square-mile area. The facilities were overcrowded and inconveniently located. One additional school site had been acquired. A \$75,000 fund was available for additional school building facilities.

Developed park and recreation areas were limited to two landscape parks, and the Everett School playground and athletic field. The District depended primarily upon Lensing for its community recreation facilities.

Services available to the public included County Sheriff police protection, Township fire protection, public transportation on "through" buses, and private garbage and trash disposal.

Since annexation to the City of Lansing, the number of dwellings in the Everett District has increased to 2,084. They house an estimated 8,900 people.

There has been limited additional commercial development, and no additional industrial development.

The City Zoning Ordinance is in effect. Zoning districts have been approved for multiple-type dwellings.

Gravelled streets in the District have been, and are being provided with surface and subsurface drainage structures, curb and gutter, and bituminous surfacing.

The Landel Metropolitan Authority has continued to serve the District with its water supply and sanitary sewer systems.

Through the City, the District has had an over-all storm sewer system plan prepared. The construction progress of this system has been very closely tied to the street improvement program.

Except for the City of Lansing's assuming the ownership of the electric power lines in the District from Consumers' Power Company, the status of electric power, gas and telephone service has not changed.

Through the Lansing Board of Education, the Everett District has been provided with two additional school sites and a fieldhouse on the Everett School athletic field. At the present time, a \$440,000 school building program is under way, and will be completed by the fall of 1952. These additional school facilities will more adequately and conveniently serve the school children of the District.

Additional park playground areas in the District include two sites of 10 and 5 acres each. They will serve the northeast and northwest sections of the District.

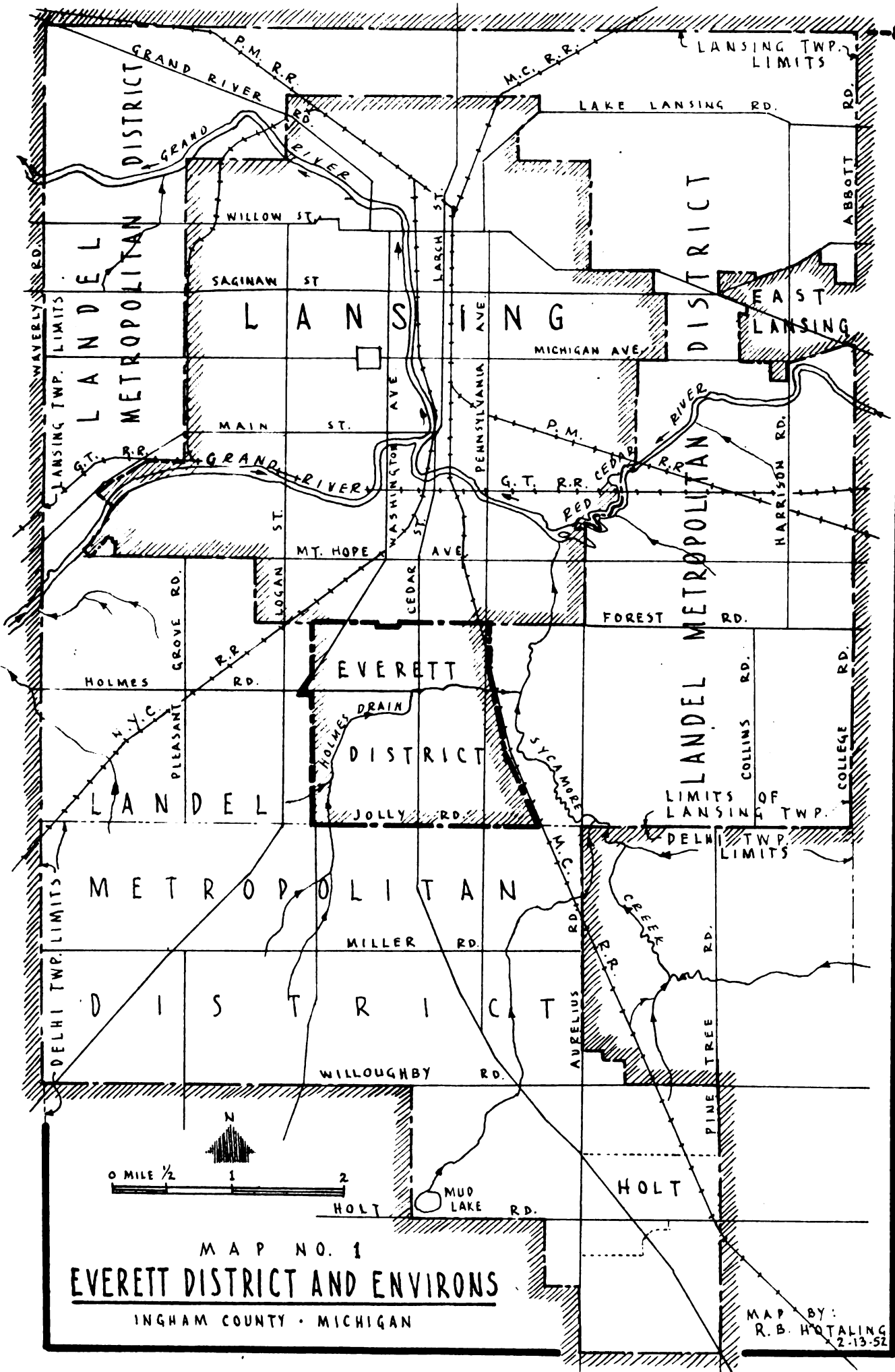
Services available to the public have been City police and fire protection, city-franchised public bus transportation, and City garbage collection and disposal. Private trash collection is still in effect.

Concluding Statement. As pointed out in this study, conditions at the time of annexation showed the need for much improvement in order to meet the standards required for urban living. Since annexation, these standards are being attained and the Everett District is becoming a more desirable place in which to live.

BIBLIOGRAPHY

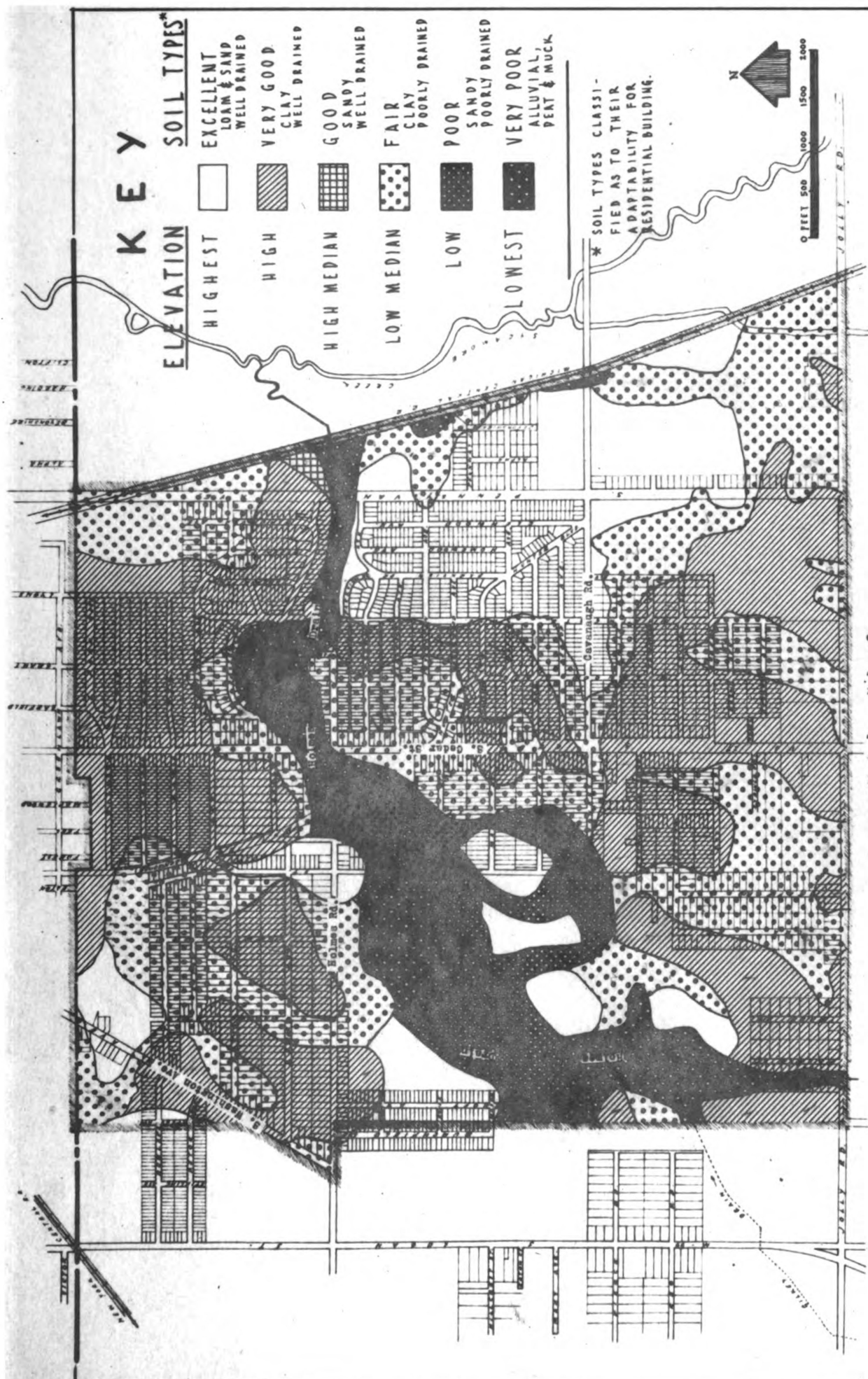
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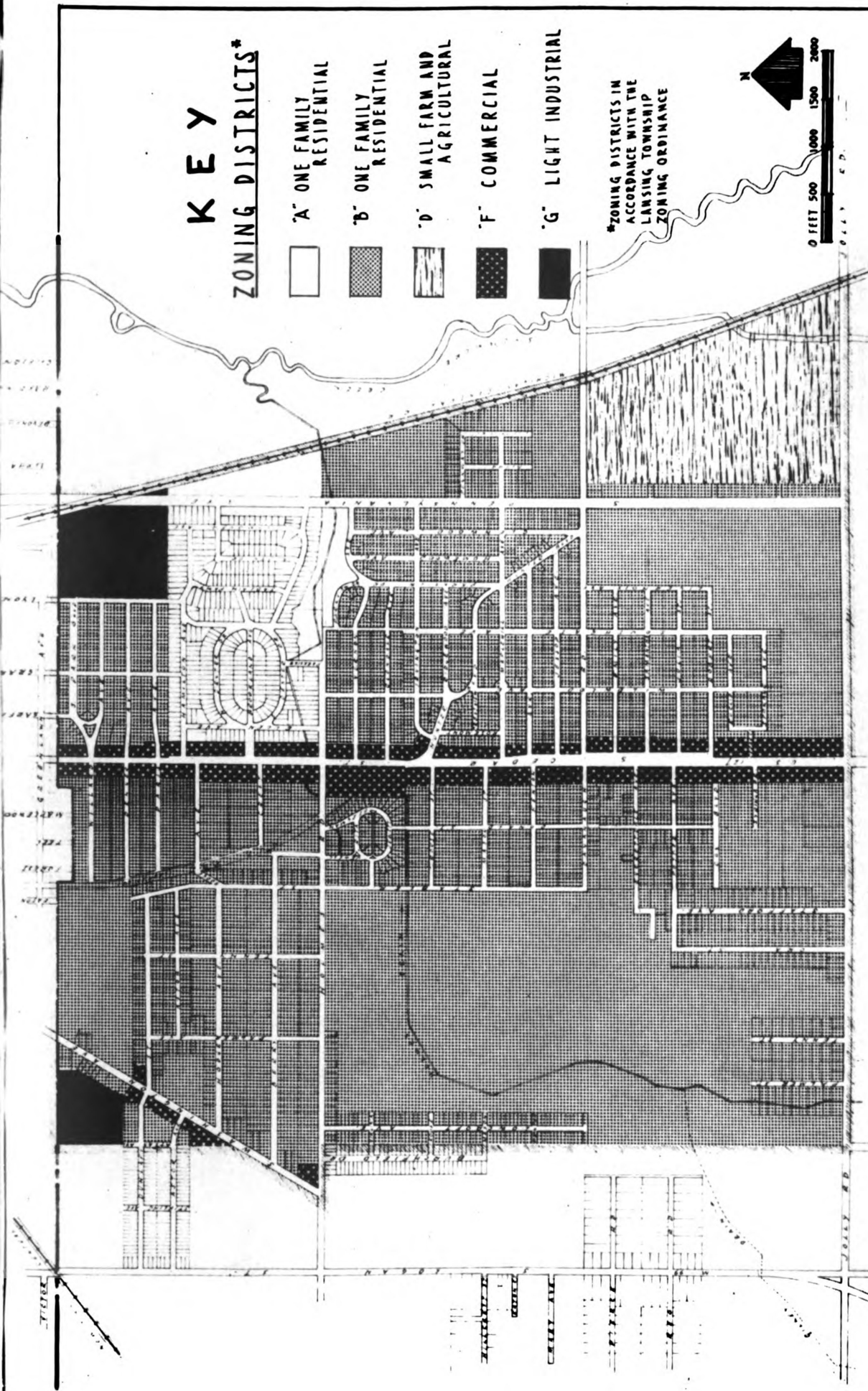
APPENDIX



MAP NO. 1
EVERETT DISTRICT AND ENVIRONS
INGHAM COUNTY - MICHIGAN

MAP BY:
R.B. HOTALING
2-13-52

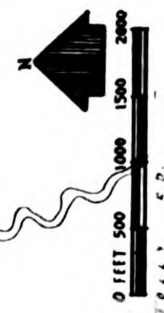




KEY **ZONING DISTRICTS***

- A** ONE FAMILY RESIDENTIAL
- B** ONE FAMILY RESIDENTIAL
- D** SMALL FARM AND AGRICULTURAL
- F** COMMERCIAL
- G** LIGHT INDUSTRIAL

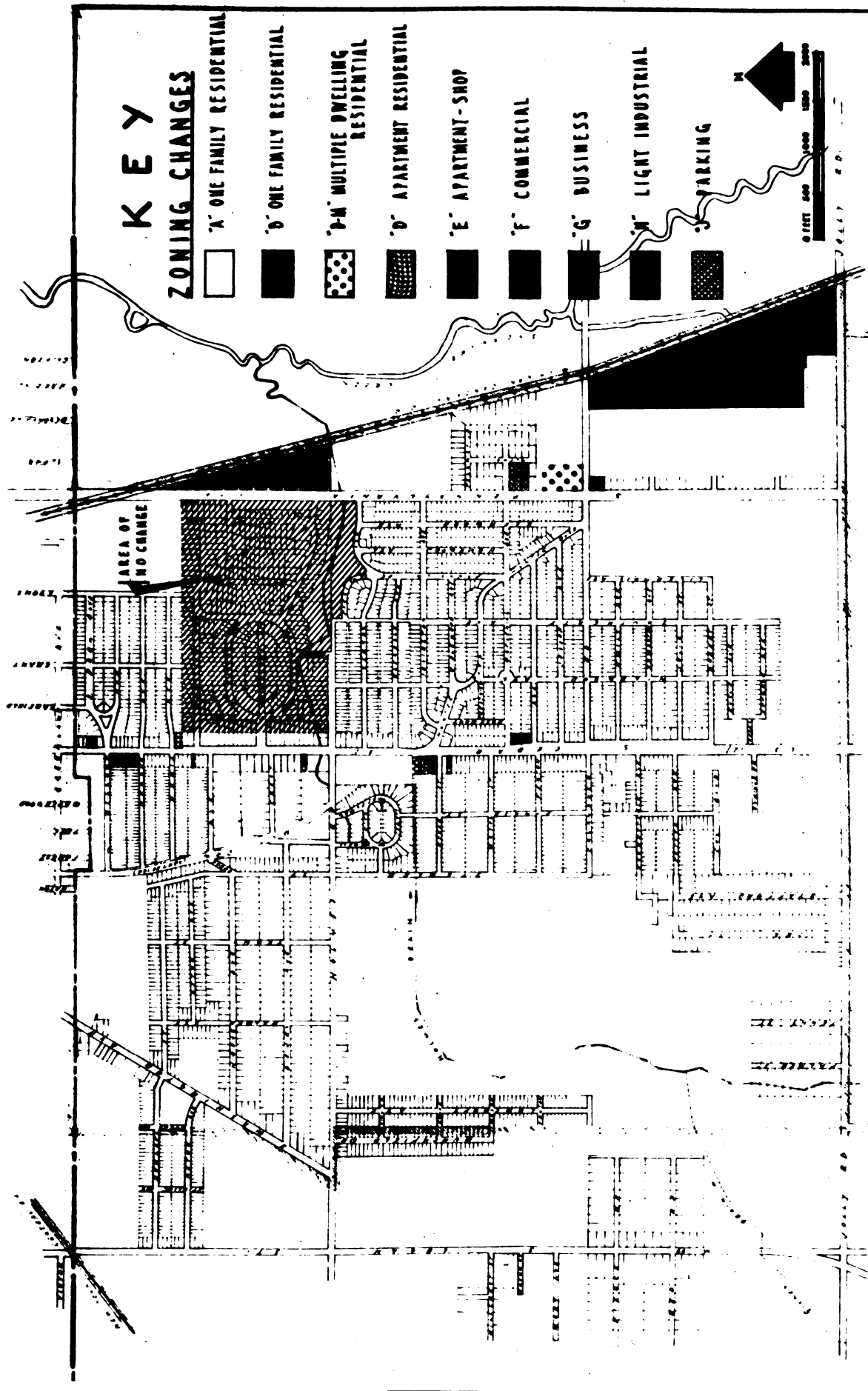
*ZONING DISTRICTS IN ACCORDANCE WITH THE LANSING TOWNSHIP ZONING ORDINANCE



MAP NO. 3 **ZONING AT TIME OF ANNEXATION** EVERETT DISTRICT • LANSING • MICHIGAN

ZONING AT TIME OF ANNEXATION

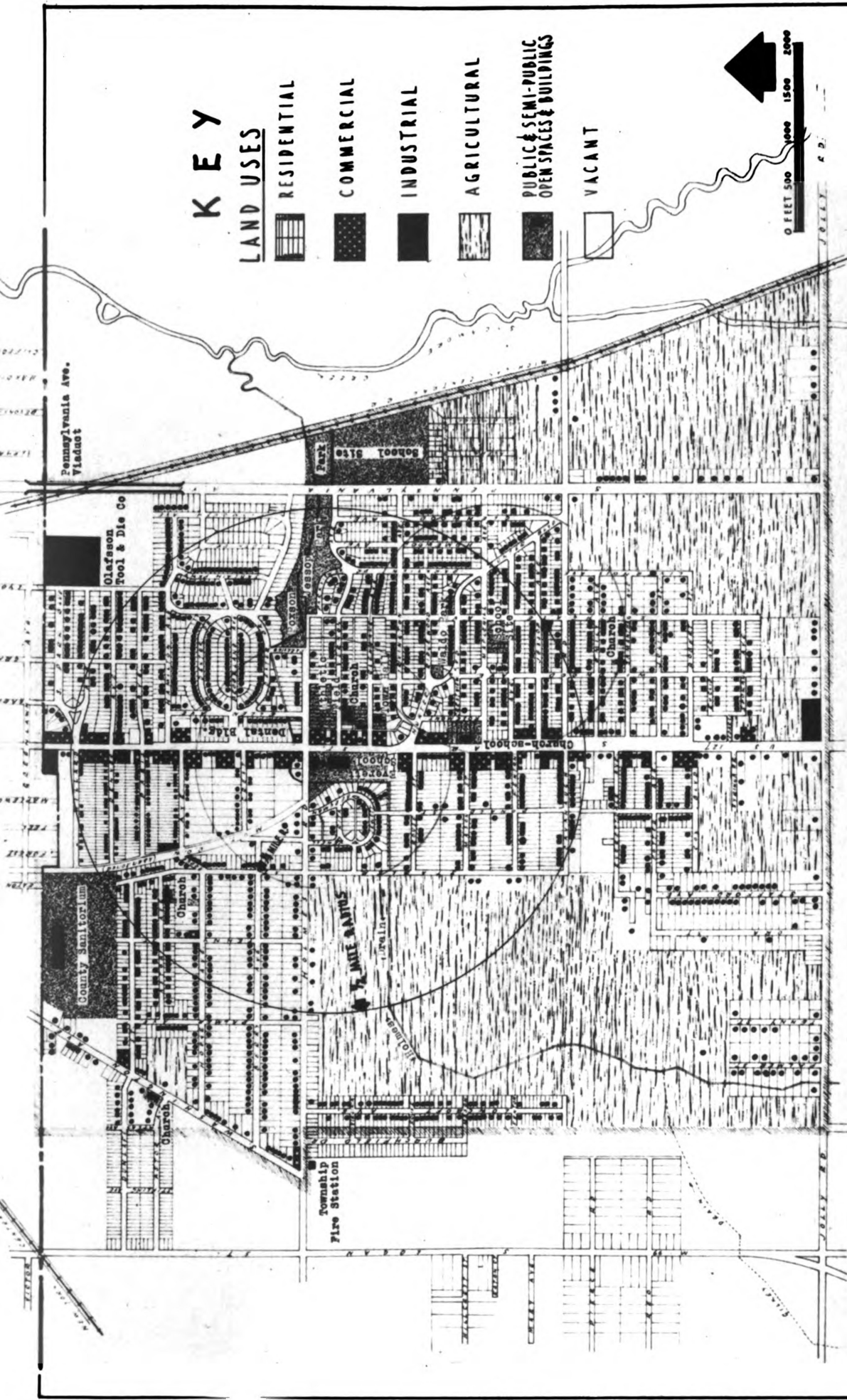
EVERETT DISTRICT - LANSING, MICHIGAN



MAP NO. 4

ZONING CHANGES SINCE ANNEXATION

EVERETT DISTRICT • LANSING, MICHIGAN



KEY

LAND USES

RESIDENTIAL

COMMERCIAL

INDUSTRIAL

AGRICULTURAL

PUBLIC & SEMI-PUBLIC
OPEN SPACES & BUILDINGS

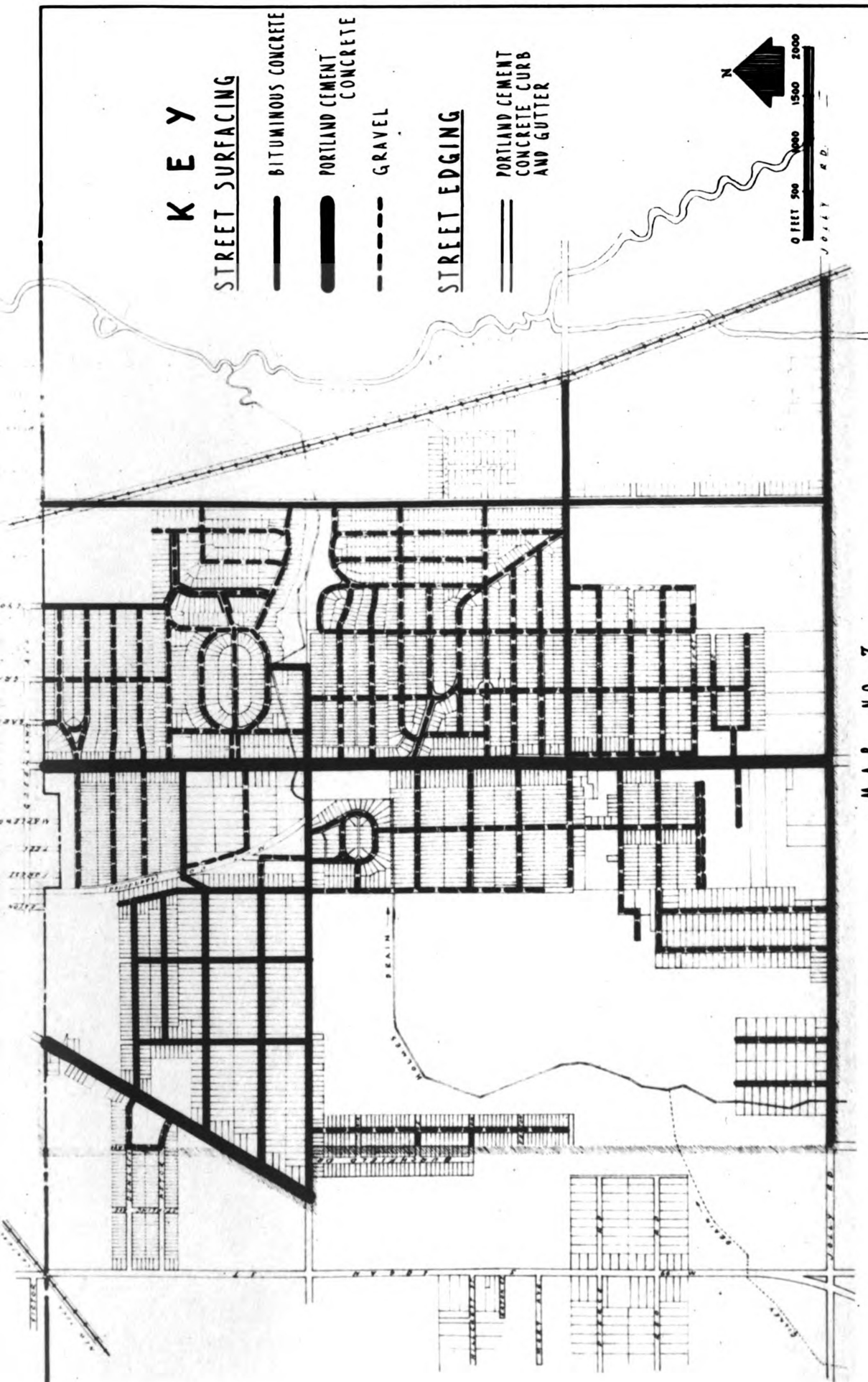
VACANT

MAP NO. 5

LAND USES AT TIME OF ANNEXATION

EVERETT DISTRICT • LANSING • MICHIGAN

MAP BY: R.B. NOTALING 1-28-28



KEY

STREET SURFACING

— BITUMINOUS CONCRETE

— PORTLAND CEMENT CONCRETE

- - - GRAVEL

STREET EDGING

== PORTLAND CEMENT CONCRETE CURB AND GUTTER

MAP NO. 7

STREET IMPROVEMENTS AT TIME OF ANNEXATION

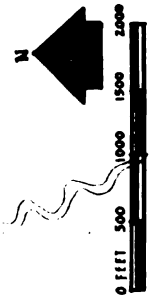
EVERETT DISTRICT • LANSING, MICHIGAN

KEY
STREET SURFACING

- BITUMINOUS CONCRETE
- - - GRAVEL

STREET EDGING

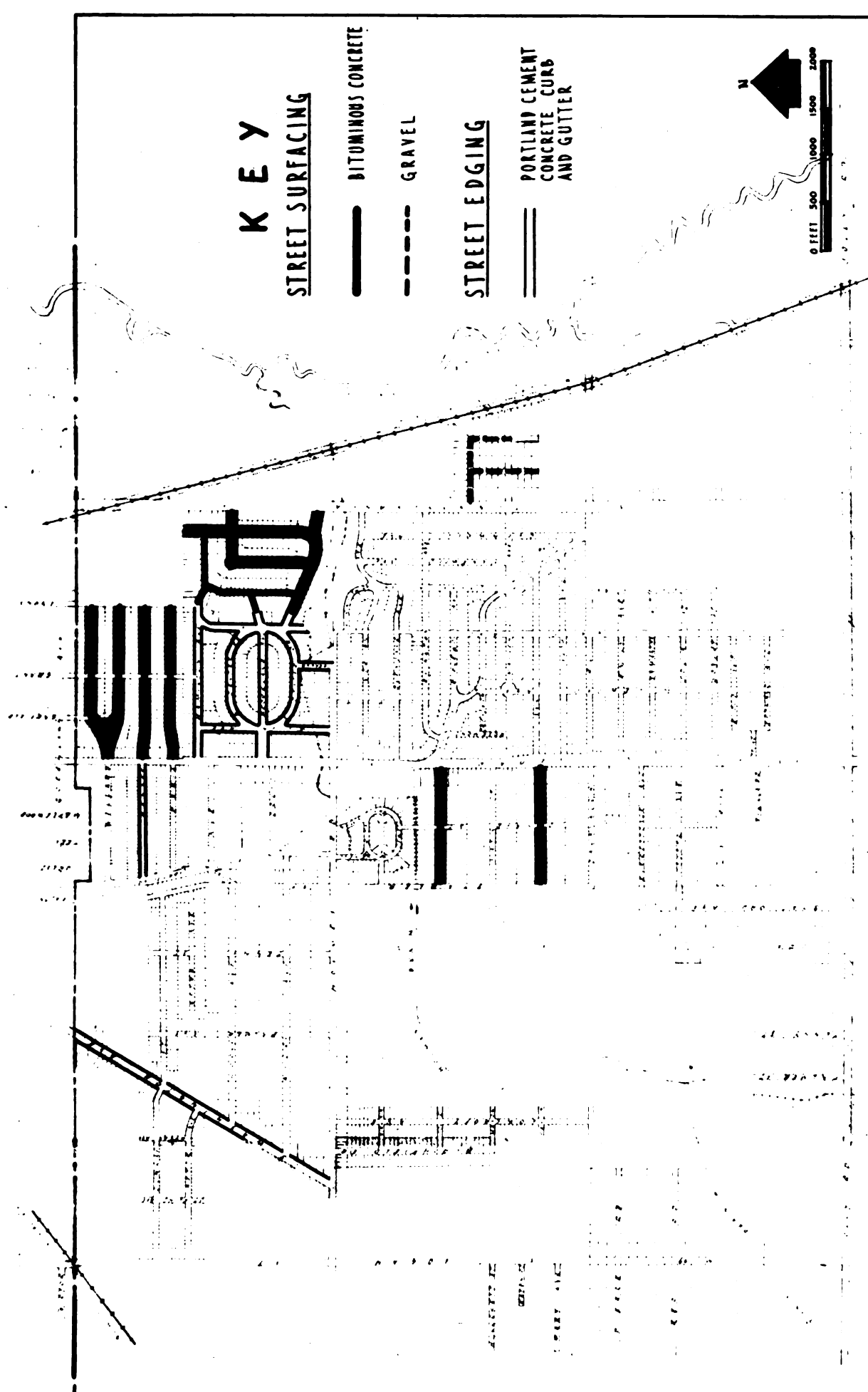
- == PORTLAND CEMENT CONCRETE CURB AND GUTTER



MAP NO. 8

STREET IMPROVEMENTS SINCE ANNEXATION

EVERETT DISTRICT • LANSING • MICHIGAN



KEY

WATER MAIN SIZES

----- 2" DIAMETER

----- 4" DIAMETER

----- 6" DIAMETER

----- 8" DIAMETER

----- 12" DIAMETER

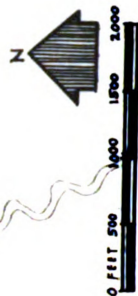
----- 14" DIAMETER

• FIRE HYDRANTS

LANDEL
METROPOLITAN
DISTRICT
ADMINISTRATION
BUILDING

WELL

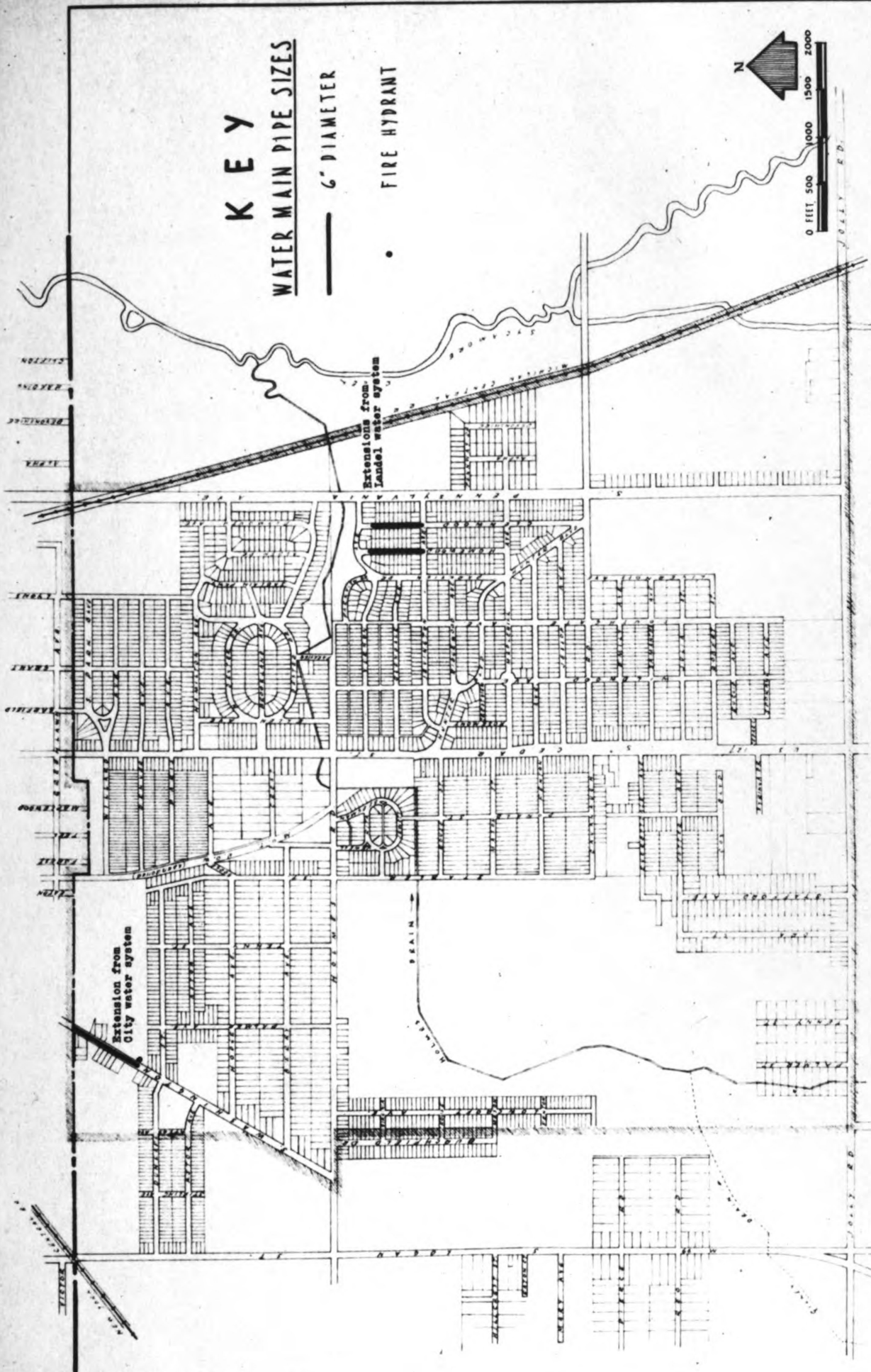
ELEVATED
TANK
WELL



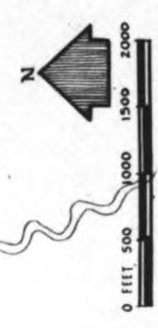
MAP NO. 9

WATER SYSTEM IMPROVEMENTS AT TIME OF ANNEXATION

EVERETT DISTRICT • LANSING • MICHIGAN



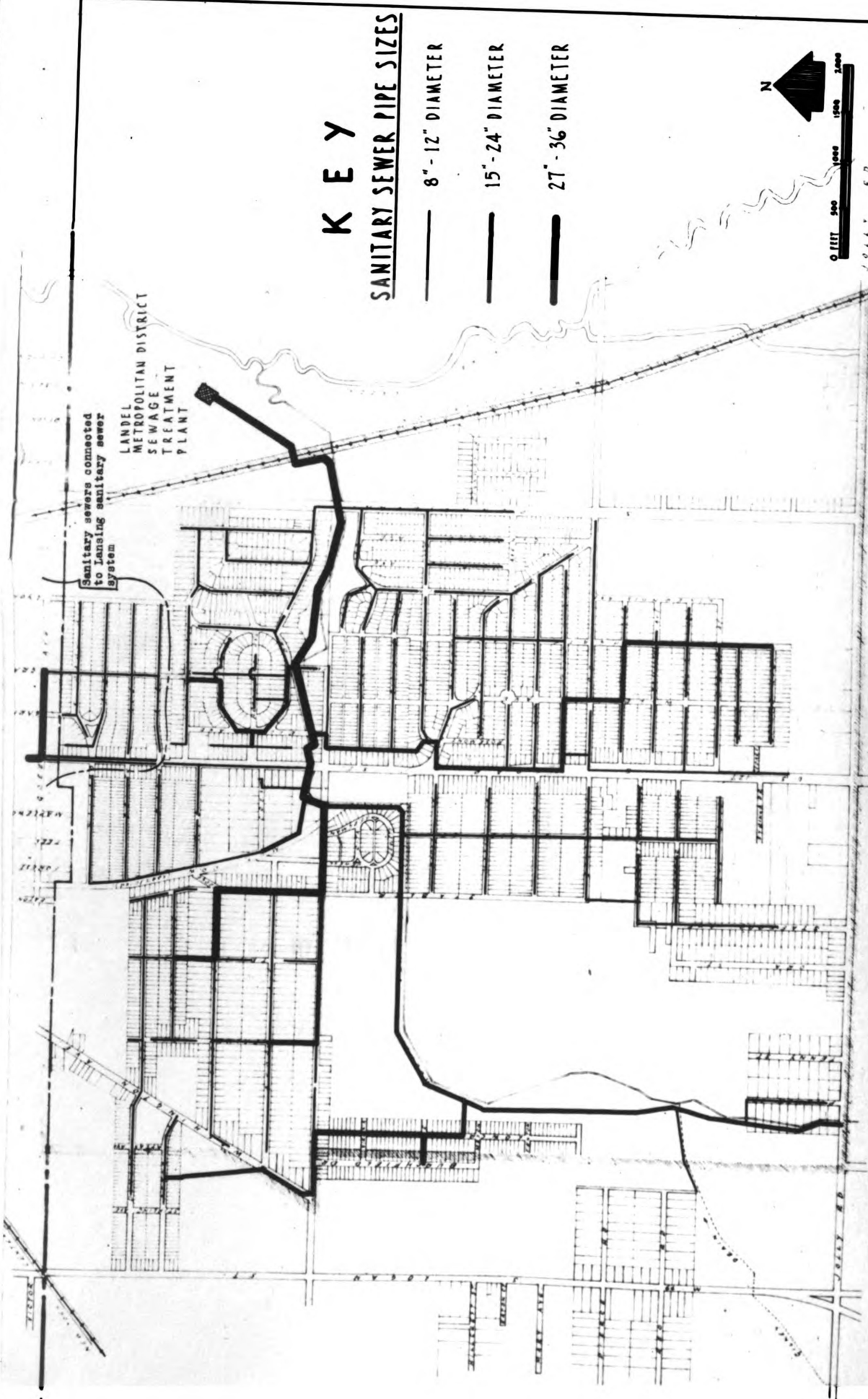
KEY
WATER MAIN PIPE SIZES
— 6" DIAMETER
• FIRE HYDRANT



MAP NO. 10

WATER SYSTEM IMPROVEMENTS SINCE ANNEXATION

EVERETT DISTRICT • LANSING - MICHIGAN



K E Y

SANITARY SEWER PIPE SIZES

— 8" - 12" DIAMETER

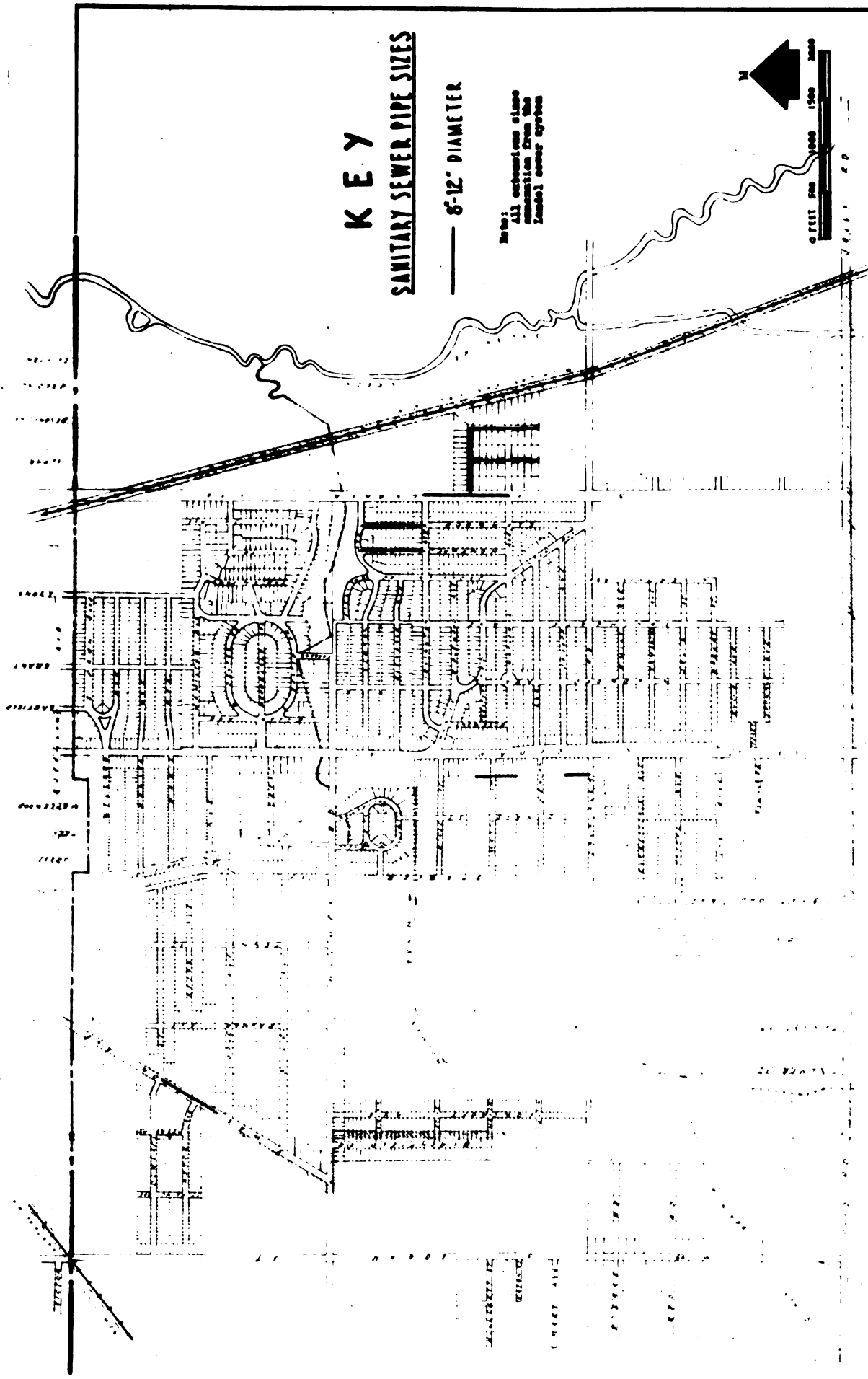
— 15" - 24" DIAMETER

— 27" - 36" DIAMETER



MAP NO. 11

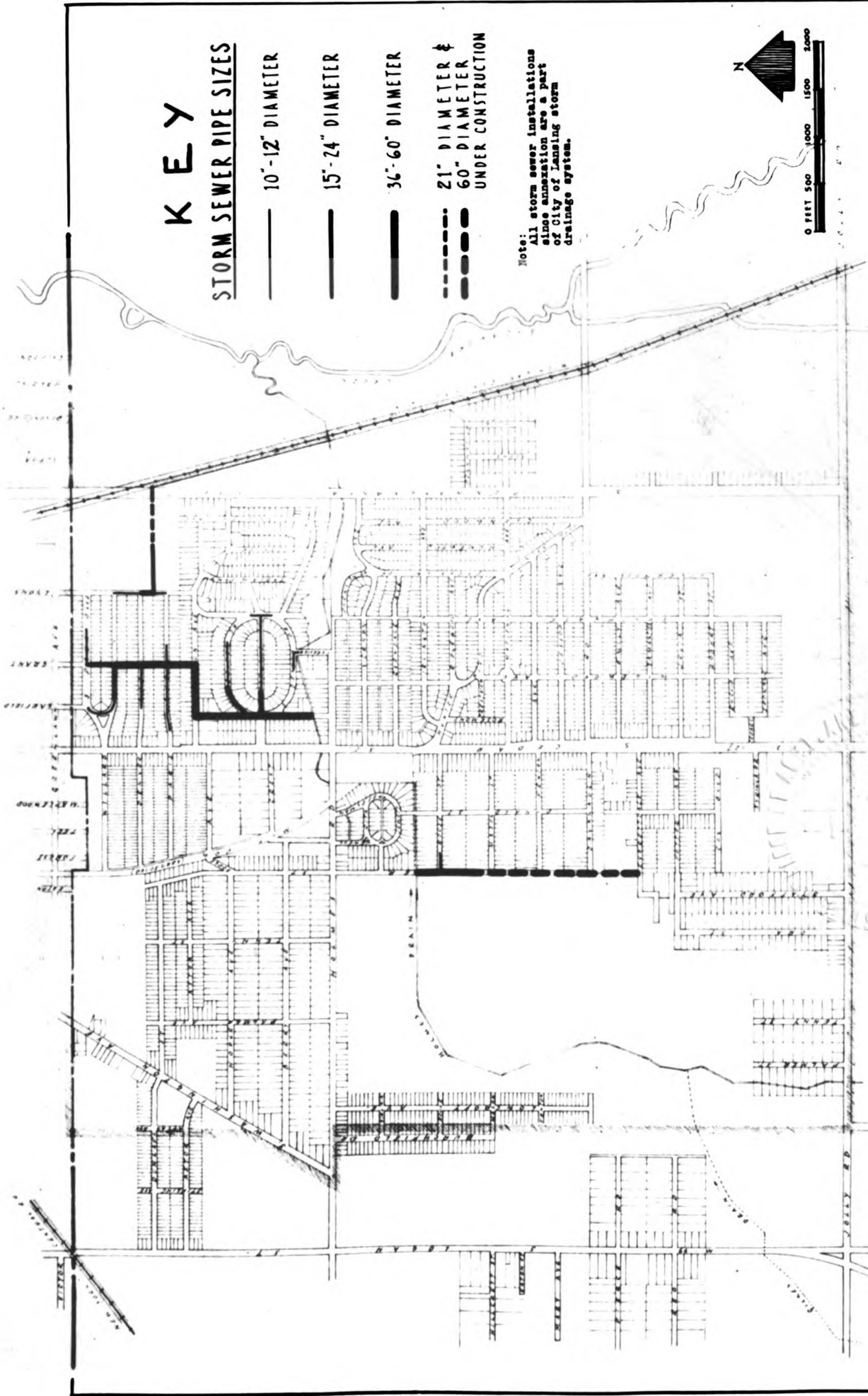
SANITARY SEWER IMPROVEMENTS AT TIME OF ANNEXATION
EVERETT DISTRICT . LANSING - MICHIGAN



MAP NO. 12

SANITARY SEWER IMPROVEMENTS SINCE ANNEXATION

EVERETT DISTRICT • LANSING • MICHIGAN



- KEY**
- STORM SEWER PIPE SIZES**
- 10'-12" DIAMETER
 - 15'-24" DIAMETER
 - 36'-60" DIAMETER
 - 21" DIAMETER & 60" DIAMETER UNDER CONSTRUCTION

Note:
 All storm sewer installations since annexation are a part of City of Lansing storm drainage system.



MAP NO. 13

STORM SEWER IMPROVEMENTS SINCE ANNEXATION

EVERETT DISTRICT • LANSING, MICHIGAN

ROOM USE ONLY

Jun 19 '57

20 Jun 59

⁵⁻¹⁶⁻
~~MAY 17 1961~~

~~APR 2 1964~~

ROOM USE ONLY

~~JUN 16 1966~~

~~DEC 8 1968~~ *Rjd90*
~~JAN 6 1969~~

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