

4207

HE
356.5
.A34
M52
1967

Allegan

STATE HIGHWAY PLAN

LIBRARY
michigan department of
state highways
LANSING

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
PLANNING DIVISION - 1967

65-4207

COMMISSION:

ARDALE W. FERGUSON,
Chairman
CHARLES H. HEWITT,
Vice Chairman
WALLACE D. NUNN
RICHARD F. VANDER VEEN

STATE OF MICHIGAN



GEORGE ROMNEY, GOVERNOR

DEPARTMENT OF STATE HIGHWAYS

STEVENS T. MASON BLDG. LANSING, MICHIGAN 48926
HENRIK E. STAFSETH, Acting Director

Oct. 1, 1967

E. A. Bellenbaum
Chief Planning Engineer
Office of Planning

Dear Mr. Bellenbaum:

The "Allegan State Highway Plan" was initiated to review scheduled improvements on M-40 on the northwest side of Allegan and to coordinate this project with a long-range highway plan for the Allegan area.

Highway improvement goals include the provision of better traffic flow and a reduction of hazards to safety based on sound transportation planning principles. Selection of recommended alternatives was based on an analysis and forecast of economics, population, land use and traffic. This plan was formulated with the cooperation and coordinated efforts of the Department of State Highways, Bureau of Public Roads and the City of Allegan officials. Implementation of recommended proposals presented in this plan will benefit the community and increase highway efficiency and safety in the Allegan area. It is, therefore, suggested that these proposals be submitted to Route Location and Programming Divisions for appropriate action.

LIBRARY
michigan department of
state highways
LANSING

Sincerely,

Robert S. Boatman

Robert S. Boatman, Director
Planning Division
Office of Planning



ACKNOWLEDGMENTS

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

Commission

Ardale W. Ferguson, Chairman
Charles H. Hewitt
Wallace D. Nunn
Richard F. Vander Veen

Henrik E. Stafseth, Acting Director
John E. Meyer, Deputy Director, Engineering
Frederick E. Tripp, Deputy Director, Administration

Office of Planning

E. A. Bellenbaum, Chief Planning Engineer
Paul J. Marek, Assistant Chief Planning Engineer

Planning Division

Robert S. Boatman, Director
Richard J. Lilly, Assistant Director

Urban Planning Section

Mearl Talsma, Acting Chief, Urban Planning Unit A
Donald R. Pethick, Project Planner

Contributing Staff

Robert R. Treichel
Robert M. Stuart
John P. Lincolnhol

Graphic Presentation

John C. Meyers
Jerry Kiser
Charles A. Ruble, Jr.

With Participation of:

Bureau of Public Roads
Federal Highway Administration
U.S. Department of Transportation

In cooperation with:

The City of Allegan

TABLE OF CONTENTS ---

LETTER OF INTRODUCTION	I
ACKNOWLEDGMENTS	II
PREFACE	V
INTRODUCTION	VI
ECONOMICS	I
Economic Background	1
Resident Labor Force	1
Retail Trade	1
Disposable Income	2
Future Growth Potential	2
POPULATION	4
Trends	4
Forecast	5
LAND USE	6
Existing Land Use	6
Land Use Development Factors	6
Future Land Use	9
TRANSPORTATION	11
Transportation Facilities	11
Local Streets	11
State Highways	11
Traffic Accident Analysis	13
Rights-of-way and Pavement Widths	13
Sufficiency Ratings	13
EXISTING TRAFFIC AND TRAVEL PATTERNS	15
Through Traffic	15
Terminal Traffic	17
Internal Traffic	17
Vehicle Registration	22
Traffic Volumes	22
FUTURE TRAFFIC	24

ANALYSIS	26
Planning Principles – Factors	26
Alternative 1	26
Alternative 2	27
Alternative 3	28
Alternative 4	28
Alternative 5	29
Evaluation and Recommendation	29
Traffic Critique	32
Resolutions	33

TABLES

1. Resident Labor Force Characteristics	2
2. Retail Trade	3
3. Disposable Income	3
4. Labor Force Projections	4
5. Population Growth	5
6. Population Projections	5
7. Land Use Acreage Per 100 Persons	9
8. Average 24 Hour Traffic Flow	22

MAPS

1. Geographic Location	VII
2. Existing Land Use	7
3. Subdivision Plat Trends	8
4. Future Land Use	10
5. Highway and Major Street System	12
6. Highway Rights-of-way and Pavement Widths	14
7. Through Traffic	16
8. M-89 and M-118 Terminal Traffic	18
9. M-40 and M-89 Terminal Traffic	19
10. Central Business District Terminal Traffic	20
11. Internal Traffic Distribution	21
12. 1961 Traffic Volumes	23
13. 1990 Traffic Volumes	25
14. Alternative 1	26
15. Alternative 2	27
16. Alternative 2A	27
17. Alternative 2B	28
18. Alternative 3	28
19. Alternative 4 and 4A	29
20. Long Range Highway Proposals	30

PREFACE

Michigan Department of State Highways policy requires a state highway plan be formulated and approved by both local and highway officials before highway construction of significant proportion is undertaken in a Michigan municipality. The equitable balance of state and local needs necessitates collaboration between state and local agencies involved. Therefore, the Planning Division of the Department of State Highways works with local planning agencies to determine the status of existing highway service as well as future needs of urban areas. Each highway plan consists of analysis of the local economic situation, population characteristics, land use patterns, traffic generation, major thoroughfares and local development plans.

Effective use of the planning process requires continuous planning consultation between the Department of State Highways and the community. By this means, the program of highway improvements can be periodically adjusted to meet changing transportation needs of both the state and the community. Since unforeseen changes often occur in the development of a community, implementing portions of the plan may be necessary sooner than presently estimated or it may develop that other alternatives would provide better solutions. Use of the continuing planning process will insure the formation of a total highway system that will be integrated with desired community development.

INTRODUCTION

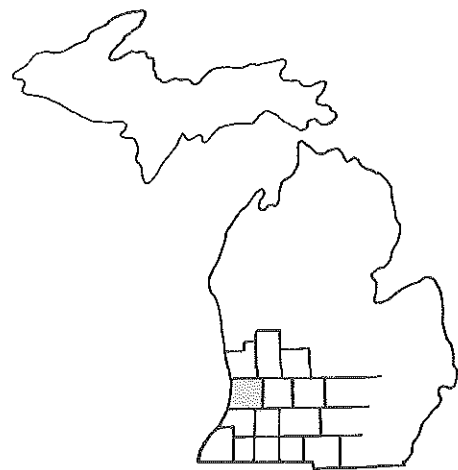
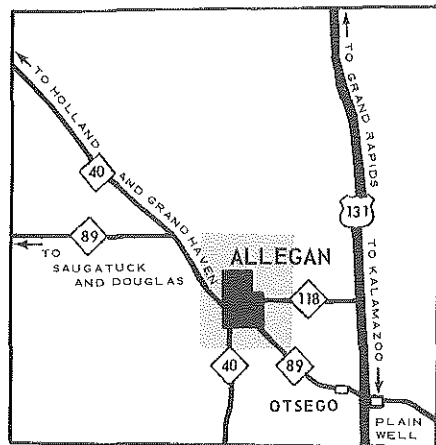
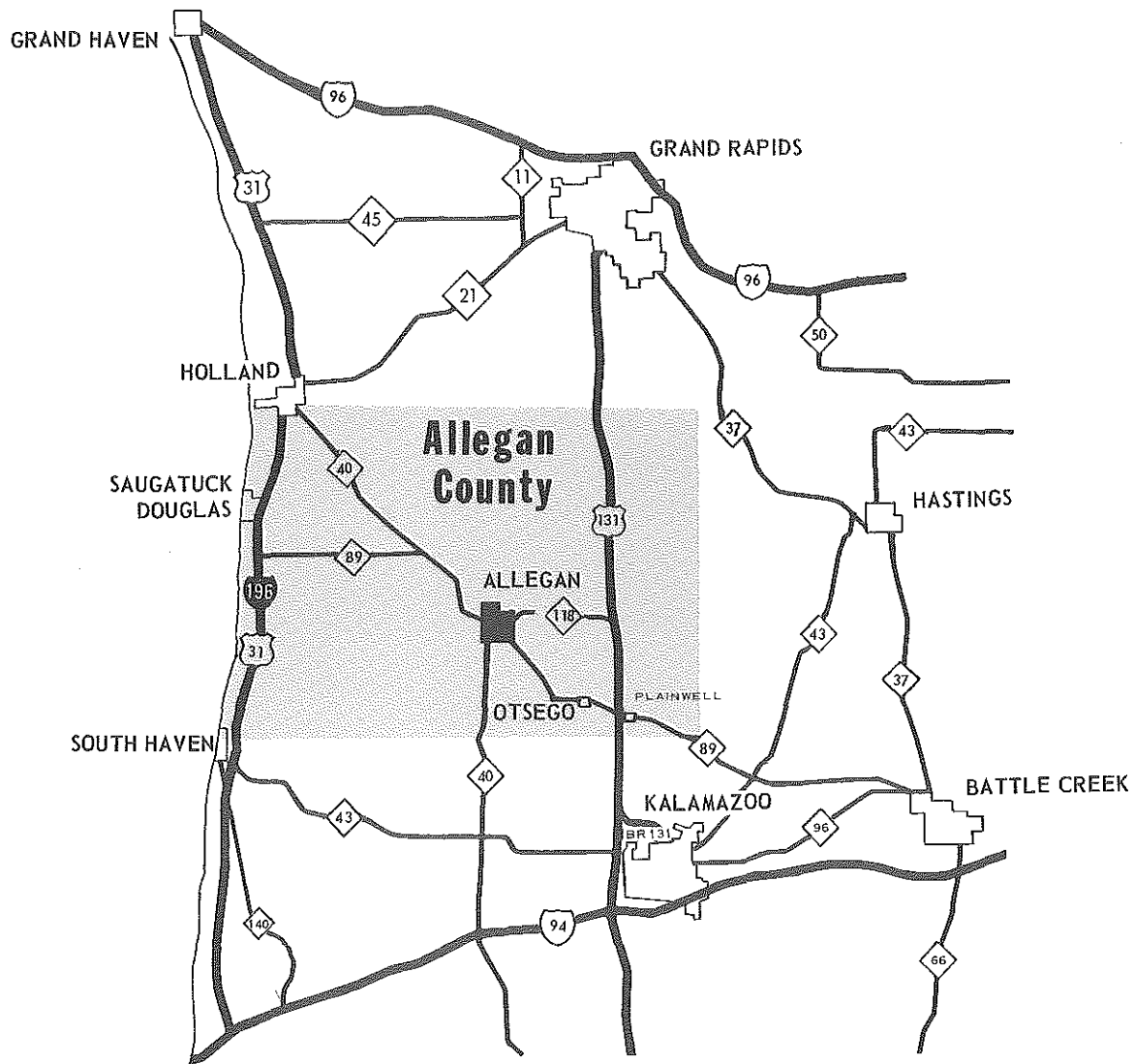
Allegan, the county seat and largest city of Allegan County, is located in southwestern Michigan approximately 25 miles north of Kalamazoo. The community lies in the south-central portion of Allegan County. The county features more than 100 lakes, numerous streams and the Kalamazoo River. The 41,500 acre Allegan State Game Area, lies approximately one mile west of the city (see Map 1).

Four freeways surround the Allegan area: I-196, 21 miles to the west; US-131, 10 miles to the east; I-94, 25 miles to the south and I-96, 30 miles to the north. Allegan is directly served by three state highways; M-40, M-89 and M-118.

The Allegan study area is comprised of the City of Allegan, Allegan Township and a portion of Trowbridge Township. The 1960 population for this area was approximately 7,500 persons. Total urban needs are to be considered for the highway planning study.

The "Allegan State Highway Plan" is organized into sections covering the inventory and forecast of economics, population, land use, transportation and traffic. This organization follows the natural sequence of development leading to the need for highway improvement. With this background information, alternative plans are analyzed in relation to highway deficiencies and requirements. A recommended highway system is then proposed.

GEOGRAPHIC LOCATION



Study Area

Key Map

ECONOMICS

Analysis of economic data provides a means of determining trends needed in predicting future growth. The economic data available for Allegan and surrounding area, although limited, provides a basis to determine future growth potential and needs.

ECONOMIC BACKGROUND

Availability of water power was an important factor to early settlers in selecting the site for the first industry in Allegan—a sawmill. Other early industries included planing and shingle mills, a grist mill, shipyards, a furniture factory, a wagon factory and a woolen mill. Today, there are 13 industries employing from 15 to 550 people within the City of Allegan. Products include caskets, paper products, pipe fittings and tubular products, drugs and chemicals, concrete blocks and universal joints. The economy of Allegan is stabilized through diversification in small industries and by abundant agricultural production. Allegan County, one of the state's top ten agricultural counties, is a fruit growing and canning center and has been a state leader in barley and poultry production. Income supplied by agricultural production and tourism plays an important part of the local economy. It helps to explain why the business district of the city is many times larger than would be expected for a community of 5,000. Allegan is the shopping center for a large geographic area.

Several economic indicators are available for determining the economic growth potential of the Allegan area. These include resident labor force, retail trade and disposable income.

RESIDENT LABOR FORCE*

Labor force by place of residence is shown in Table 1 for Allegan and Allegan County. Total resident labor force in the City of Allegan decreased by 12 people in the ten years between 1950 and 1960. Size of labor force has leveled out but significant changes have occurred among the various groups within the labor force.

*Resident labor force includes all members of the labor force that reside within a geographical area (Allegan or Allegan County), regardless of where employed.

In 1960, three categories of resident employment—manufacturing, services, and wholesale-retail trade—comprised 77.49 percent of Allegan's resident labor force, compared to 69.52 percent for the county. Percentages for these three categories in 1950 were 75.09 for the city and 58.24 for the county. Manufacturing is the major source of employment, followed by services and wholesale-retail trade, in that order. Manufacturing employment for Allegan residents in 1960 comprised 32.32 percent of the labor force, which is below the county percentage of 37.83 for 1960. Allegan's manufacturing employment appears to be stabilizing at approximately 30 percent of the resident labor force.

Services, which include all business, personal, repair and professional services, increased from 21.99 percent of the resident labor force in 1950 to 24.69 percent in 1960. This compares favorably with county percentages of 13.48 in 1950 and 16.43 in 1960. Wholesale-retail trade employment, among city residents, decreased from 22.36 percent of the labor force in 1950 to 20.48 percent in 1960. This is still approximately five percent higher than the county percentage.

Unemployment as a percentage of the city's resident labor force increased from 3.29 in 1950 to 4.00 in 1960. In 1960, this was below the county rate of 4.62 and Michigan's figure of 6.94.

RETAIL TRADE

Even with the decrease in percentage of resident labor force in wholesale-retail trade, the volume of total retail sales has increased for the City of Allegan (see Table 2). However, Allegan's retail sales as a percentage of the county and state has steadily decreased, but the rate of decrease is slowing. Loss of retail sales could be the result of other market centers increasing their percentages of the county's total sales.

Allegan's number of retail establishments decreased from 102 in 1954 to 91 in 1963. At the same time, the number of retail employees increased from 410 in 1954 to 471 in 1963, while the payroll for retail employees increased from \$879,000 in 1954 to \$1,103,000 in 1963. This indicates a consolidation of retail functions into larger, more competitive units.

TABLE 1

RESIDENT LABOR FORCE CHARACTERISTICS

Group	Allegan County					City of Allegan				
	1950	Percent of Total	1960	Percent of Total	Percent change 1950-60	1950	Percent of Total	1960	Percent of Total	Percent change 1950-60
Extractive	4,712	26.74	2,541	12.17	-46.07	95	5.03	51	2.72	-46.32
Construction	968	5.49	1,191	5.70	23.04	129	6.84	128	6.83	-0.78
Manufacturing	5,361	30.42	7,902	37.83	47.40	580	30.74	606	32.32	4.48
Wholesale and Retail Trade	2,526	14.34	3,187	15.26	26.17	422	22.36	384	20.48	-9.00
Transportation Communication & Utilities	645	3.66	754	3.61	16.90	74	3.92	45	2.40	-39.19
Services	2,376	13.48	3,431	16.43	44.40	415	21.99	463	24.69	11.57
Other	513	2.91	917	4.39	78.75	110	5.83	123	6.56	11.82
Total Employment	17,101	97.05	19,923	95.38	17.13	1,825	96.71	1,800	96.00	-1.37
Unemployment	520	2.95	964	4.62	85.38	62	3.29	75	4.00	20.97
Total Labor Force	17,621	100.00	20,887	100.00	18.54	1,887	100.00	1,875	100.00	-0.64

SOURCE: United States Department of Commerce, Bureau of the Census Reports for 1950 and 1960.

DISPOSABLE INCOME*

No income data is available for the city, but data on the county will be similar to trends in the city. Disposable income for Allegan County residents has increased 97.5 percent from 1949 to 1966, compared to the state increase of 102.7 percent during the same period (See Table 3). Although Allegan County's total disposable income as a percentage of the state decreased slightly during the period 1949-66, the upward trend of the County seems likely to continue.

A comparison of the percentage increase between disposable income and retail sales in Allegan County for past years shows that disposable income has increased at a considerably higher rate than retail sales. The greater increase in buying income over retail trade indicates that Allegan County residents are being drawn to retail centers outside the county; probably in Grand Rapids and Kalamazoo. Retail centers within the county have received some of the increases in disposable income, but a slight increase toward buying outside the county is evident.

*Disposable income is income available for the purchase of goods and services after tax payments to Federal, state and local governments.

FUTURE GROWTH POTENTIAL

Analysis of the foregoing economic growth indicators suggests that the resident labor force of Allegan City is leveling off at approximately 1,900 persons. Manufacturing employment has continued to grow slowly, while other changes in composition of resident labor force are taking place, especially in the service and retail categories. Service and retail categories are growing rapidly in relation to the rest of the labor force. The number of retail establishments decreased, but a larger volume of sales resulted in the employment of more people in the retail area. This may be due to increasing disposable income, population gains in the area surrounding Allegan and consolidation of retail functions into larger units. Still, disposable income is growing faster than retail sales. These observations indicate that some of Allegan's economic growth potential may lie in further development as a convenience goods and service center for the surrounding area. The loss or attraction of a single large source of employment would change this future outlook by greatly increasing or decreasing the size of the labor force.

Assuming that the City of Allegan and Allegan County develop their growth possibilities, projections have been made for the 1990 labor force

TABLE 2

RETAIL TRADE

Allegan County

Year	Number of Establishments	Number of Employees	Payroll (\$1,000)	Retail Sales (\$1,000)	Retail Sales as Percent of State
1948	633	2,187	\$3,015	\$43,936	0.62
1954	542	1,980	3,567	45,967	0.52
1958	601	2,347	4,431	55,806	0.63
1963	592	2,464	5,652	64,208	0.63

City of Allegan

Year	Number of Establishments	Number of Employees	Payroll (\$1,000)	Retail Sales (\$1,000)	Retail Sales as Percent of County
1948	107	489	\$ 768	\$ 9,713	22.09
1954	102	410	879	10,759	23.87
1958	107	476	906	10,682	19.14
1963	91	471	1,103	11,862	18.48

All dollar amounts have been adjusted to constant dollars using 1957-59 as a base.

SOURCE: US Department of Commerce, Bureau of the Census, Census of Business for 1948, 1954, 1958 and 1963.

TABLE 3

DISPOSABLE INCOME

Year	Allegan County	Michigan	Allegan County as Percent of State
1949	\$59,895,000	\$10,388,182,000	0.58
1953	62,273,000	12,197,079,000	0.51
1957	79,377,000	14,730,484,000	0.54
1961	92,178,000	15,196,331,000	0.61
1964	105,840,000	18,025,435,000	0.59
1966	118,316,000	21,061,845,000	0.56

All dollar amounts have been adjusted to constant dollars using 1957-59 as a base.

SOURCE: "Sales Management Survey of Buying Power," Copyright 1950, 1954, 1958, 1962, 1965, and 1967. Further reproduction is forbidden.

(see Table 4). It is estimated that the resident labor force for the City of Allegan will grow slowly to a total of 2,080 by 1990. Based on present population-to-worker ratio, the projected labor force of 2,080 by 1990 would support a population of approximately 5,500.

Based on the foregoing information, Allegan's potential for continued population growth would

lie in manufacturing, provision of urban services and further development of the area's recreational facilities. Provision of urban services means further development as a convenience marketing, professional, personal and business service center. Such development could be helped by intensifying the development of the recreational potential surrounding Allegan in Allegan State Game Area and at Allegan Lake.

TABLE 4

LABOR FORCE PROJECTIONS

Year	City of Allegan	Allegan County	Allegan as a Percent of Allegan County
1940	1,856	15,648	11.86
1950	1,889	17,621	10.72
1960	1,875	20,887	8.98
1970	1,910	22,615	8.44
1980	1,975	24,450	8.08
1990	2,080	28,950	7.19

SOURCE: US Department of Commerce, Bureau of the Census Reports for 1950 and 1960. Projections made by ratios based on past trends.

POPULATION

Population change generally occurs as a result of economic growth or decline. Economic growth results in population gain through natural increase and migration, while economic decline generally results in a loss in population through out-migration. Population is an important factor in determining future highway needs for an urban area. An analysis of existing and future population provides one means of determining the volume, direction and distribution of future traffic.

gain of 296 between 1940 and 1960 increased the total population to 4,822. The Statistical Methods Section of the Michigan Department of Public Health estimates the City of Allegan's 1964 population at 5,000, an increase of 178 since the 1960 Census of Population. These figures suggest that the population within the city is growing slowly. However, growth is not confined within city limits and significant growth has taken place in the Township of Allegan and nominal growth has occurred in most of the other townships surrounding Allegan (see Table 5).

TRENDS

The population of the City of Allegan has not grown extensively in the past 20 years; a

In percentages, the City of Allegan increased by 6.08 percent from 1940 to 1950 and 0.44 percent from 1950 to 1960. Allegan Township increased 23.26 percent from 1940 to 1950 and

51.20 percent from 1950 to 1960, which again shows growth is not within Allegan but the townships immediately surrounding it. Allegan Township had a 1960 population of 2,404 which, for the most part, is made up of the urban fringe of the city.

FORECAST

Based on population projections prepared by the Population Studies Center, University of Michigan in cooperation with the Michigan Department of Commerce, and projections by the Department of State Highways, the Allegan area is expected to grow to approximately, 8650 by

1990, a gain of 1,422 over 1960 (see Table 6). It is estimated that 972 of the population increase will be in Allegan Township with the remainder in the city.

The above population forecast compares closely with the estimate for future growth made in the Allegan Master Plan completed in 1963 and the population forecast in a preliminary planning report for the water and sewer systems completed in 1965. Population growth predictions are only an approximation, because the addition or loss of any large source of employment would exert a considerable influence on population for a period of time.

TABLE 5

POPULATION GROWTH

Area	1940	1950	Percent change 1940-50	1960	Percent change 1950-60	Percent change 1940-60	1964
Michigan	5,256,106	6,371,766	21.23	7,823,194	22.78	48.84	8,100,000
Allegan County	41,839	47,493	13.51	57,729	21.55	37.98	58,500
Allegan Area	5,816	6,391	9.89	7,226	13.07	24.24	N.A.
Allegan	4,526	4,801	6.08	4,822	0.44	6.54	5,000
Allegan Township	1,290	1,590	23.26	2,404	51.20	86.36	N.A.

SOURCE: US Department of Commerce, Bureau of the Census, and Michigan Department of Public Health.

TABLE 6

POPULATION PROJECTIONS

Area	1960	1970	Percent change 1960-70	1980	Percent change 1970-80	1990	Percent change 1980-90	Percent change 1960-90
Michigan	7,823,194	8,645,000	10.50	9,868,000	14.15	11,233,000	13.83	43.58
Allegan County	57,729	59,902	3.76	65,720	9.71	72,099	9.71	24.89
Allegan Area	7,226	7,394	2.38	7,942	7.35	8,648	8.89	19.68
Allegan	4,822	4,848	.54	5,009	3.32	5,272	5.25	9.91
Allegan Township	2,404	2,550	6.07	2,933	15.0	3,376	15.10	40.43

SOURCE: Michigan and County Projections to 1980 by Population Studies Center, University of Michigan, 1966. Preliminary Population Projections for Small Areas in Michigan, State Resource Planning Program, Michigan Department of Commerce, 1966. Planning Division, Michigan Department of State Highways

LAND USE

Graphic depiction of land use is one way that the spatial distribution of population may be portrayed. Various types of land use generate differing traffic volumes and, to an extent, determine direction of traffic flow. Commercial land use usually generates the greatest amount of traffic, followed by industrial, residential and public and semipublic uses, in that order. Analysis and projection of land use is an important aspect of highway planning because of the traffic generation characteristics of the different land uses, and because highways encourage development of vacant land and intensify the use of adjacent developed land. Map 2 portrays existing land use for the Allegan area.

EXISTING LAND USE

Commercial development is concentrated in the Allegan central business district with strip commercial located along M-89 on the southeast side of Allegan and M-40/M-89 on the western side. Off-street parking facilities have been built to strengthen the attraction of the central business district.

Industrial land use is located on the north and southeast fringes of the central business district. In the northeastern section of the city, industry is scattered along the Chesapeake and Ohio and New York Central railway lines.

Residential land use is dispersed throughout the city, with concentrations in the northeast, west and southeast sections. Concentrations of fringe residential development are located westward along M-40/M-89 and southeast along M-89.

Important public and semipublic uses in Allegan include the county building, fire station, hospital, schools, parks and Allegan County Fairgrounds. Important land uses in this category outside the city limits are the high school on the west side, the airport on the east side, the county hospital on the south side of Dumont Lake, Allegan State Game Area and open land owned by Consumers Power Company. These land uses are not large traffic generators but are important in community development and require consideration in highway planning.

Map 3 shows the location of subdivision plats

filed during the past 25 years in the Allegan area. The plat locations emphasize that growth is in the immediate vicinity of the City of Allegan. Concentrations of residential plats are located along the western and southern sides of Allegan.

LAND USE DEVELOPMENT FACTORS

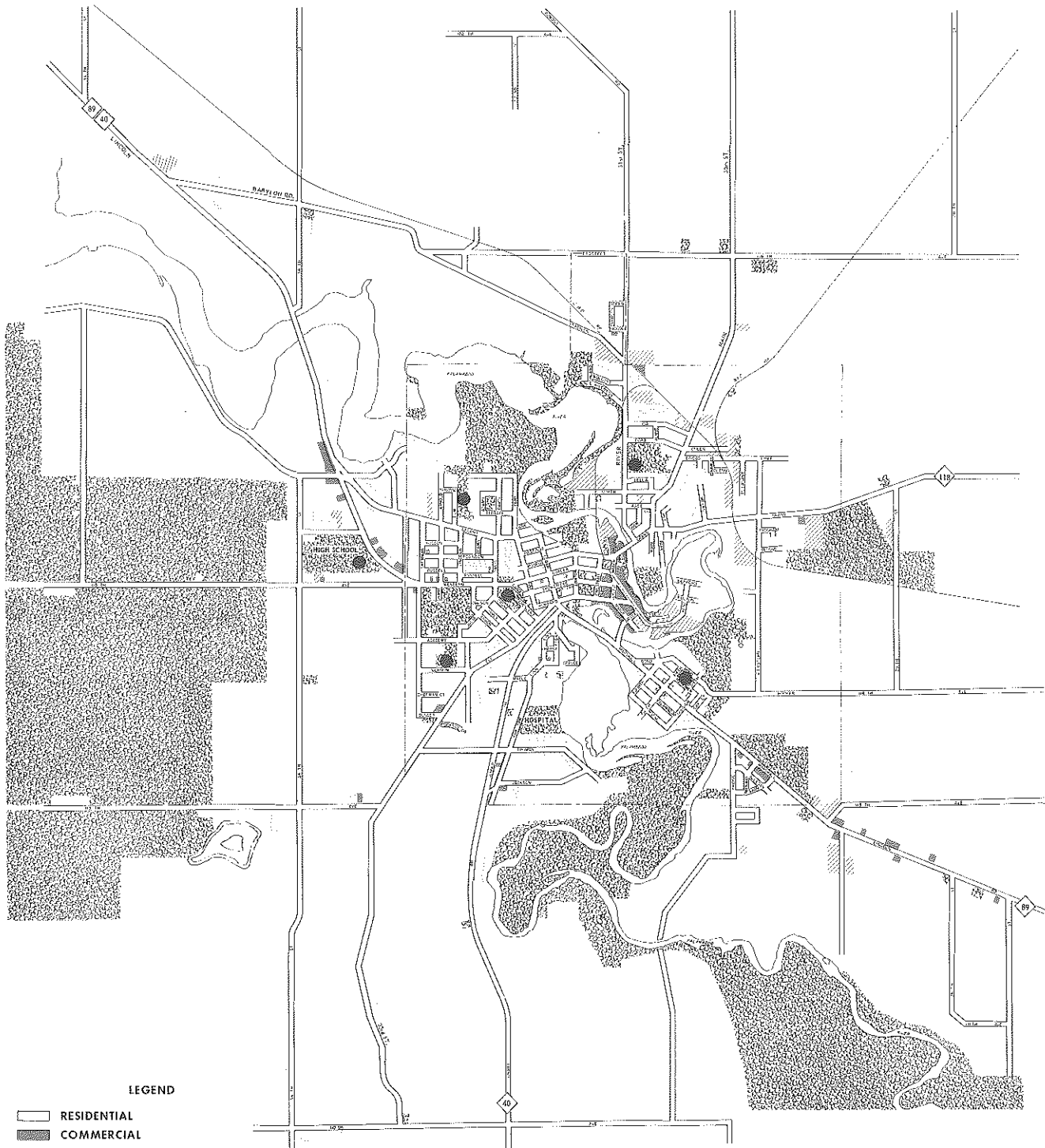
Many factors influencing land use development need to be considered in forecasting future land use. These include topography, transportation routes, utilities and community controls. Community controls include the use of the comprehensive plan, implemented by zoning and subdivision regulations.

Topography in the Allegan area presents problems for the expansion of urban development. The Kalamazoo River runs through the center of the city. Elevations along the river range from 615 feet in the northwest portion of the city to 765 feet in the southwest. Large changes in elevation occur along the river and along a tributary stream running southeast from the city. Another stream runs southwest from the city. This unique topography has created problems in making water and sewer extensions, and is partially responsible for the odd street arrangement of the original part of town. Streets for the original town were laid out parallel to the river regardless of the topography.







Public improvements, including utilities and transportation routes, are means of controlling future land development. Transportation routes are important because land adjacent to highways and rail lines are prime areas for urban expansion. Transportation arteries also encourage land development by providing access to previously inaccessible land. Therefore, major consideration needs to be given to community development plans when preparing a highway plan.

Utilities, including water and sewer, are essential to intensive urban expansion, particularly for commercial and industrial development. Consultants for the Allegan area have prepared a preliminary planning report on the water and sewer system. The master plan for the water distribution system has a basic framework on which future water pipelines can be constructed

EXISTING LAND USE



LEGEND

-  RESIDENTIAL
-  COMMERCIAL
-  INDUSTRIAL
-  PUBLIC AND SEMI PUBLIC
-  AGRICULTURE AND OTHER OPEN LAND
-  SCHOOL

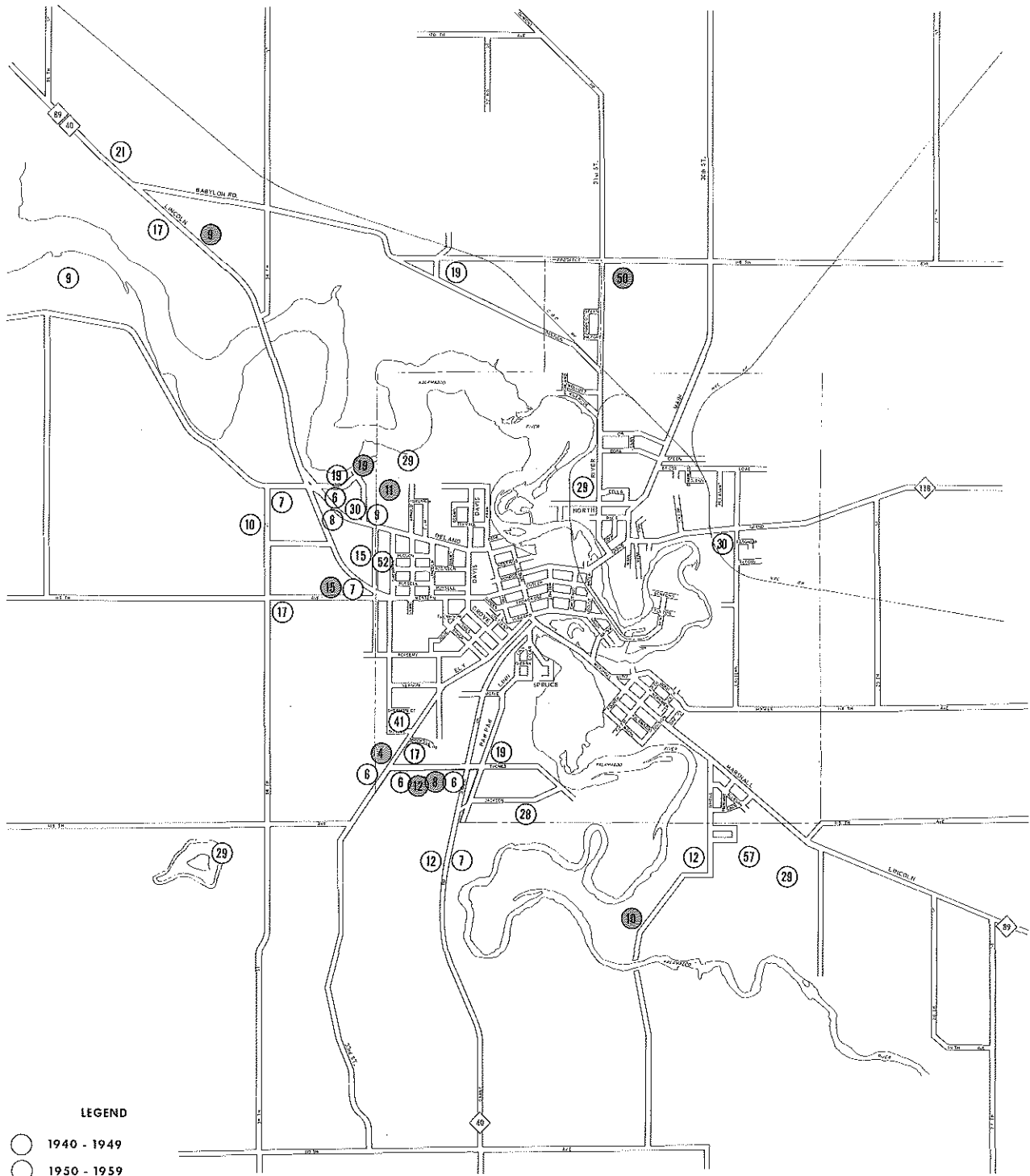
ALLEGAN STATE HIGHWAY PLAN



SOURCE : SCOTT, BAGBY AND ASSOCIATES
 PLANNING DIVISION
 MICHIGAN DEPARTMENT OF STATE HIGHWAYS

PREPARED BY THE URBAN PLANNING SECTION
 PLANNING DIVISION
 MICHIGAN DEPARTMENT OF STATE HIGHWAYS

SUBDIVISION PLAT TRENDS



- LEGEND**
- 1940 - 1949
 - ◐ 1950 - 1959
 - ◑ 1960 - 1965
 - ⊙ NUMBER OF PLATTED LOTS

ALLEGAN STATE HIGHWAY PLAN



0 1000 2000 3000
SCALE IN FEET

SOURCE : PLAT SECTION
MICHIGAN DEPARTMENT OF TREASURY

PREPARED BY THE URBAN PLANNING SECTION
PLANNING DIVISION
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

as the community develops and requires further services. The plan recommends extensions in the area around the high school on the west side of the city, a section in the southwest part of the city, an additional section in the northeast part of the area and a line along the east side of the city. Other recommendations include treatment to improve the water quality and enlargement of some mains within the city to improve service in commercial and industrial concentrations.

The sanitary sewer system plan contains proposals for extensions in the same approximate areas as the water distribution system. Since the sewer plant is in good physical condition, it is estimated that it will meet the needs of the community for many years. Additional community growth can be met by expansion of the proposed system.

The Allegan area master plan, completed in 1963, is being used as a guide for area development. The urban service area plan portrayed in it was used as the basis for the preliminary water and sewer study. A long-range development plan recommended in the master plan is shown on Map 4. Other proposals included a revised zoning ordinance and subdivision regulations.

The zoning ordinance guides urban expansion through controlling use, height, bulk and density of land development. It is the legal means for implementing the land use plan. The City of Allegan adopted a zoning ordinance and map in 1949 and no major revision has been made to it since that time. Master plan proposals call for a new zoning ordinance completely revising

the old one and including suggestions for areas peripheral to the city. Utilities can be extended or not extended outside the city to encourage adherence to the recommended zoning pattern.

Subdivision regulations provide a desirable pattern of new residential land by controlling lot sizes and street alignment. The subdivision regulations proposed in the master plan are designed with a sliding scale of requirements to meet the varying needs of the Allegan area.

FUTURE LAND USE

Based on past trends and future estimates concerning the economic base of the area, population, land use, areas available for growth, and information in the Allegan Master Plan; it is estimated that residential growth will occur most rapidly on the western side of Allegan in Allegan Township. Future commercial development in Allegan will be intensified in the central business district with additional areas of commercial use locating along M-89 southeast, M-40/M-89 west and M-118 east. Industry will concentrate in the northeast section and the two areas north and southeast of the central business district (see Map 4).

With a 1,422 increase in population expected by 1990 in the Allegan area (City of Allegan and Allegan Township), the following approximate additional acreage of land would be needed: residential, 114; commercial, 4; industry, 8; public and semipublic, 66; and transportation facilities, 113, for a total of approximately 305 acres. These computations are based on average acreage requirements for communities of similar size (see Table 7).

TABLE 7 LAND USE ACREAGE PER 100 PERSONS

Land Use	City of Allegan	Average City - 5,000 to 10,000
Residential	8.75	8.04
Commercial	0.57	0.31
Industrial	1.55	0.53
Public and Semipublic	9.79	4.62
Streets and Railroad	5.78	7.93

SOURCE: Land Use in American Cities, Harland Bartholomew, 1955.
Allegan Master Plan, Scott Bagby and Associates, 1963.

FUTURE LAND USE



LEGEND

- RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- PUBLIC AND SEMI PUBLIC
- AGRICULTURE AND OTHER OPEN LAND
- SCHOOL

ALLEGAN STATE HIGHWAY PLAN



SOURCE :
SCOTT, BAGBY AND ASSOCIATES

PREPARED BY THE URBAN PLANNING SECTION
PLANNING DIVISION
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

TRANSPORTATION

It is estimated that approximately 37 percent of additional land needed for future population growth will be required for transportation facilities. Consideration of these facilities is a necessity in formulating a sound highway plan.

TRANSPORTATION FACILITIES

Transportation facilities in Allegan include rail, motor freight, air, parking spaces and the street system. Two railroads, the Chesapeake and Ohio and the New York Central, serve the Allegan area for freight service only. Rail service is enhanced by having connections to both the Chicago and Detroit metropolitan areas. Railway tracks cross M-118 at grade in two locations. These present little inconvenience now, and if the relatively low volume of rail traffic continues, there will be no problem in the future.

Eight truck lines serve the Allegan area, but only one firm has terminal facilities located within Allegan. This firm averages one to two trips per day to Chicago.

Neither local nor intercity public transit is available in Allegan. One taxi company provides the only means of public transportation.

The local airport has facilities suitable to handle small aircraft. If future growth creates enough demand for commercial air transportation, land area is available for necessary expansion of facilities. This is not likely with commercial air service available in Kalamazoo and Grand Rapids, 30 miles to the south and north respectively. The Michigan Department of Commerce proposes that Padgham Field continue to be used for general aviation on a small scale.

Street parking is permitted on most of the central area thoroughfares. The use of parking meters encourages vehicle turnover in the central business district. Two municipal off-street parking lots, one county and two private, are available in the central area to supplement the on-street parking. Plans are under way to construct three additional municipal off-street parking lots. If on-street parking is removed concurrently, these additional lots would immensely help internal traffic problems.

Proper integration of the highway and major street system is important for highway planning. Better service to major traffic attractors is desirable and the two systems should supplement each other.

LOCAL STREETS

The Kalamazoo River and adjacent topography partially explain the odd arrangement of the local street system in the original part of the city. When the first street system was laid out, right-of-way and continuity were considered adequate. However, due to the topography, the river, and unplanned urban growth, street continuity has become an increasingly serious problem.

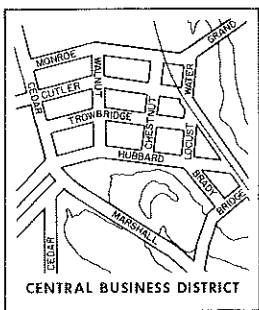
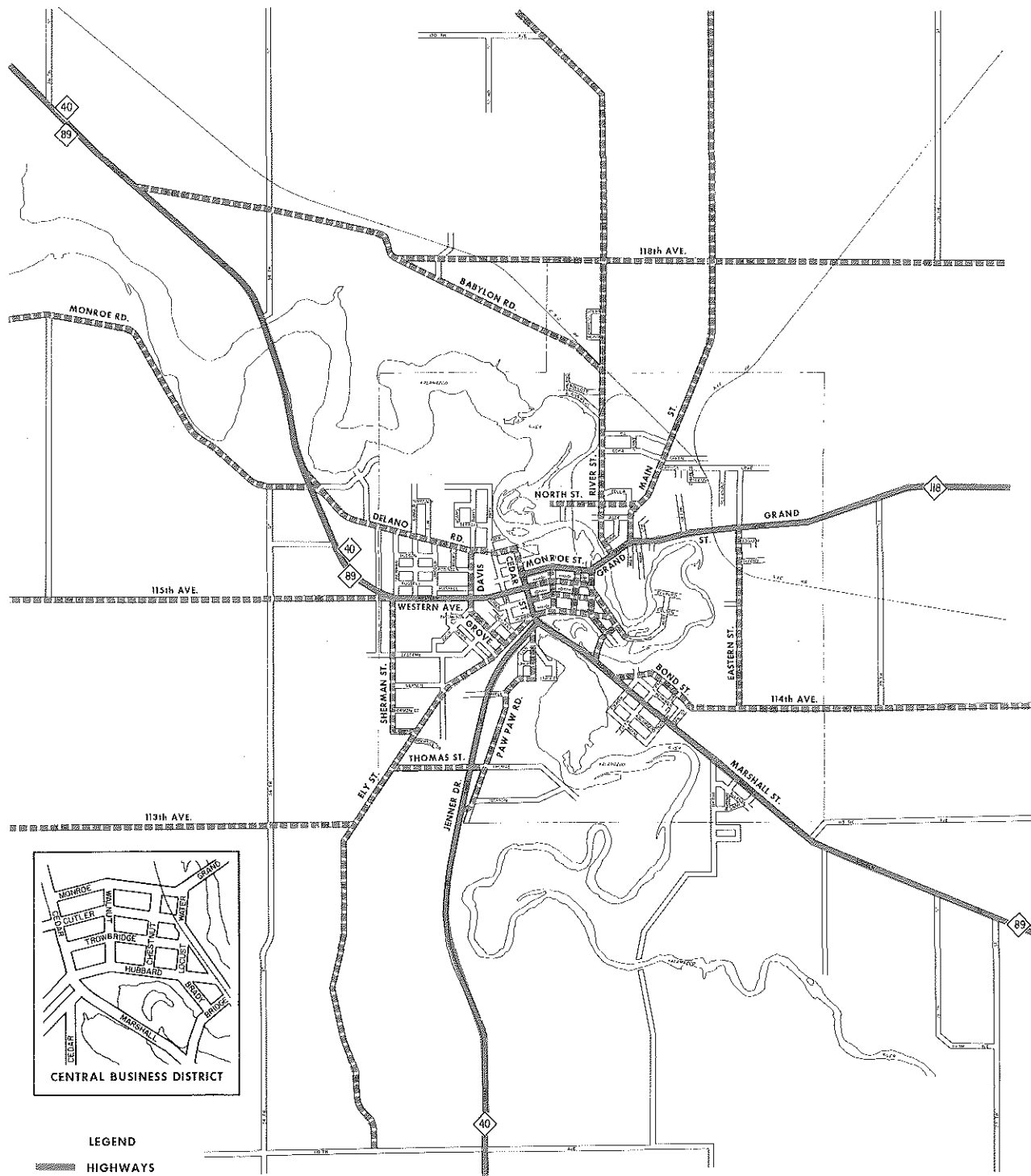
Map 5 shows the existing highway and major street system. Main Street-30th Street, River Street-31st Street, Babylon Road, Delano Road and Ely Street-33rd Street connect the rural areas surrounding Allegan with the city's major street system. All streets within the central business district area are considered major or collector streets and serve central commercial development and the adjacent industrial areas. North Street, in the north-central portion of the city, serves as a major street between Main and River for the industrial area at its west end. Grove and Davis Streets provide service to the residential area on the west side with the junior high school as a focal point. The western end of Western Avenue (M-40/M-89) serves the high school area. Paw Paw Road, Linn and Spruce Streets serve the southern residential areas and act as collectors to serve the hospital.

A one-way street system is being used within the central business district to improve traffic flow and circulation. Cutler Street is one-way east from Cedar Street to Water Street, Trowbridge Street is one-way west from Chestnut Street to Cedar Street, and Hubbard Street is one-way east between Cedar Street and Walnut Street (see Map 5).

STATE HIGHWAYS

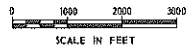
Three state highways provide service to the Allegan area: M-40, a south-northwest route;

HIGHWAY AND MAJOR STREET SYSTEM



- LEGEND**
- HIGHWAYS
 - MAJOR STREETS

ALLEGAN STATE HIGHWAY PLAN



SOURCE: PLANNING DIVISION
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

PREPARED BY THE URBAN PLANNING SECTION
PLANNING DIVISION
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

M-89, a west-southeast route; and M-118, an east-west route. M-40 travels north from Niles through Allegan to Holland. M-89 travels north-west from M-96 near Battle Creek through Plainwell, Otsego and Allegan to I-196/US-31 along the coast of Lake Michigan. M-118 is a spur running west from US-131, which is the major north-south route between Grand Rapids and Kalamazoo. All three state highways converge within Allegan creating traffic problems on the city's out-dated street system. M-40 connects with M-89 in the vicinity of Hubbard and Cedar Streets, while M-118 terminates in Allegan by connecting with M-40 and M-89 at the intersection of Western Avenue and Cedar Street.

TRAFFIC ACCIDENT ANALYSIS

The Traffic Analysis Unit of the Michigan Department of State Highways has tabulated a total of 43 accidents involving state highways in the City of Allegan during 1966. Turning movements to and from the three state highways within the city caused 51 percent of the accidents. Fifteen accidents were recorded along Western Avenue (M-40/M-89) from Sherman Street to Davis Street while 14 accidents were recorded along Cedar Street (M-40/M-89/M-118) from the Jenner Street (M-40)—Marshall Street (M-89) intersection to the Monroe Street/Cedar Street intersection. Eleven accidents were recorded on Monroe Street and Grand Street (M-118) and three accidents along Jenner Drive (M-40). No accidents were recorded along Marshall Street (M-89).

RIGHTS-OF-WAY AND PAVEMENT WIDTHS

The Allegan area state highway system totals approximately 11.7 miles, of which 4.4 miles are within the city. Map 6 shows existing rights-of-way and pavement widths for the highway system. Rights-of-way outside the City of Allegan are all 120 feet or over, with the exception of a 100-foot right-of-way along M-40/M-89 from the western city limits to Monroe Road. Within the city, right-of-way varies from 66 to 160 feet and over. The lesser rights-of-way exist in the central area of the city, where highway improvements are needed but limited by the inadequacy of existing right-of-way widths.

Inadequate pavement width often limits the

carrying capacity of a highway system. Widths outside the city vary from 20 to 24 feet and all highways are two-lane routes. Inside the city limits, pavement width varies from 20 to 44 feet. All highway routes within the city are two-lane, with the exception of M-40/M-89 (Western Avenue) westward from Cedar Street, which is three lanes to Arbor Street, and the M-118 bridge across the Kalamazoo River, which is four lanes. Parking is allowed on most of the highway system within the City of Allegan and is causing critical capacity problems on M-118 from the east city limits to River Street. All parking removal and/or additional width may be needed to carry future traffic volumes in many sections of the highway system.

SUFFICIENCY RATINGS

The Programming Division of the Michigan Department of State Highways annually prepares ratings for all Michigan highways, based on such factors as capacity, surface condition, base condition and safety. These sufficiency ratings indicate the physical adequacy of the highways on the state highway system. The following information is taken from the 1967 sufficiency rating of Michigan highways.

M-40 is rated critical in surface condition from the south city limits to the junction with M-89, and from the M-118/M-40/M-89 intersection northwesterly to a point beyond the limits of the study area. M-40's safety condition is also considered critical from the south city limits through the junction with M-89 and M-118 to the west city limits.

M-89 is rated critical in surface, base, and safety from just northwest of Bridge Road to the junction with M-40.

M-118 is rated critical in surface, base, safety and capacity from the east city limits to River Street and is considered critical in safety from there to the junction with M-40/M-89. The critical rating in capacity is due to on-street parking.

Sufficiency ratings of the same type are used for bridges on the state highway system. According to 1967 ratings, there are three bridges in this category within the Allegan area; all rated adequate or better. The bridge on M-40/M-89 in the northwest corner of the Allegan area was

built in 1938. Within the city limits, the bridge on M-89 was built in 1947 while the bridge on M-118 was built in 1955. These sufficiency reports for highways and bridges emphasize that problem areas exist primarily in the central portion of the Allegan area.

Over the past years, to meet increasing traffic needs, the Michigan Department of State High-

ways has built two bridges over the Kalamazoo River and has rerouted traffic to avoid the central business district. M-40 has also been relocated to provide better alignment. An analysis of the existing highway and street system shows, however, deficiencies still exist in street continuity and the convergence of the three state highways results in intersection problems that will need correction. A study of existing traffic and travel patterns helps pinpoint problem areas.

EXISTING TRAFFIC AND TRAVEL PATTERNS

Existing traffic on the Allegan area highway and street system is the result of the movement of people and goods within the area and between the Allegan area and external points. A survey of existing traffic provides basic data upon which projections can be based and future highway needs and requirements can be determined. A survey for the Allegan area was conducted during the spring and summer of 1961 by Michigan Department of State Highways. The traffic survey consisted of determining the amount and the origins and destinations of traffic within and moving through the Allegan area.

Trip information collected in the survey was classified according to the locations of a trip's origin and destination. Trips with both terminals in the study area were classified as internal trips, while trips with both terminals outside of the study area were classified as through trips. Trips that had one terminal in the study area and one terminal outside of the study area were classified as terminal trips.

THROUGH TRAFFIC

Through traffic volume is compared on Map 7 to traffic having a terminal in the Allegan area for an average weekday during the period of the survey. Of a total of 11,292 vehicles crossing the boundary of the Allegan traffic survey area on state highways, approximately 46 percent were through trips, while the remaining 54 percent had origins or destinations within the area. During 1955, the Michigan Department of State Highways conducted a minor origin-destination survey for Allegan. This survey showed that approximately 50 percent of the vehicles crossing the survey boundaries were through traffic.

A master street plan for the City of Allegan was prepared by consultants in 1958. Their survey showed that 51 percent of the vehicles crossing their study area boundary were through trips, while the remaining 49 percent were terminal trips. A comparison of 1955, 1958 and 1961 figures show that percentages of through and terminal traffic did not change significantly during the intervening years.

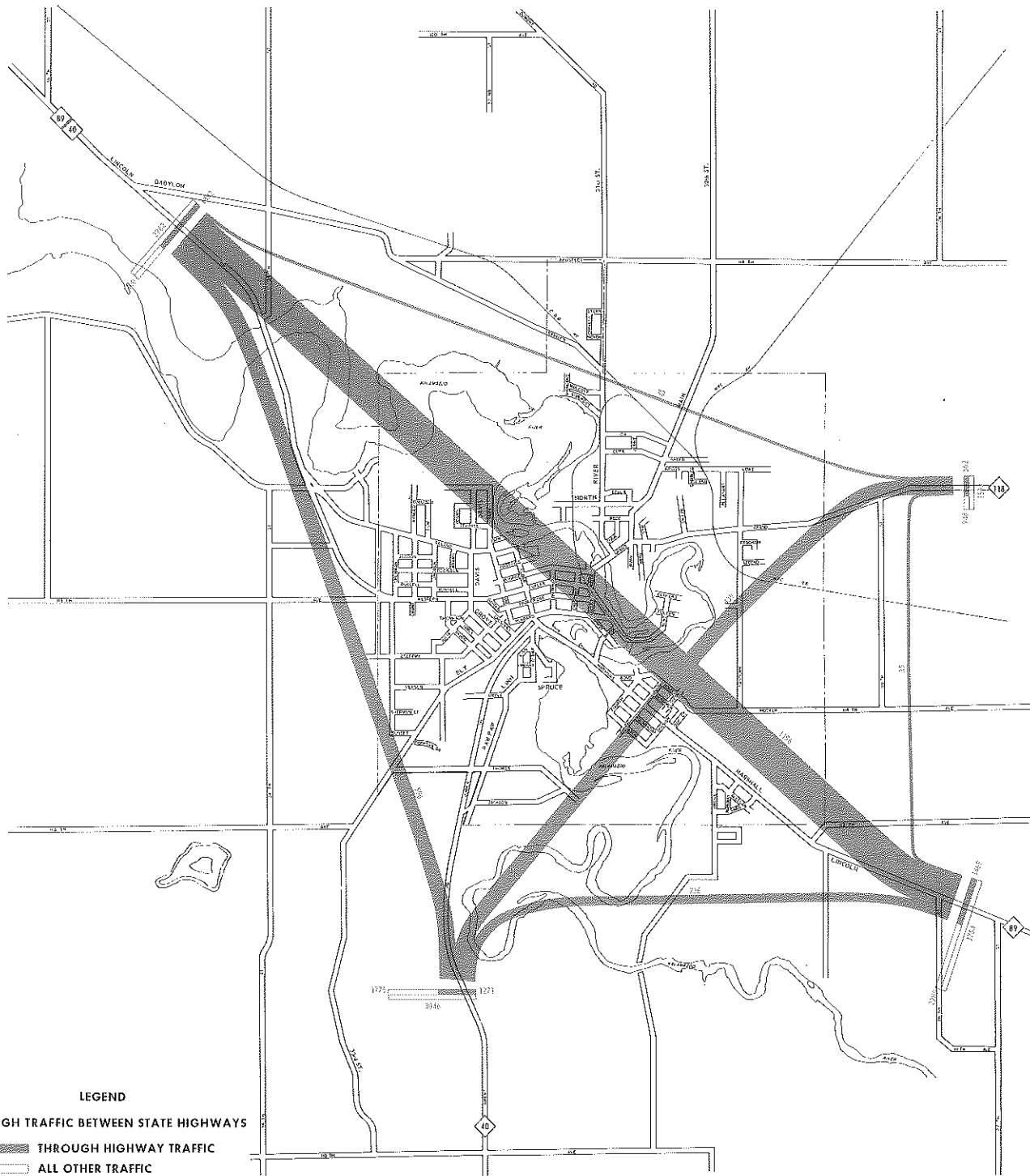
Map 7 illustrates again the majority of traffic entering or leaving the Allegan area had a local terminal. M-40/M-89 at the northwest limits, however, departed from this general tendency. This route had a total of 2,982 trips with 63.1 percent through trips and 36.9 percent terminal trips. M-89 from the southeast had 3,754 trips, with 39.1 percent through and 60.9 percent terminal. M-40 from the south had 3,046 trips, with 41.7 percent through and 58.3 percent terminal, while M-118 had 1,510 trips, of which 37.2 percent were through trips and 62.8 percent were terminal.

M-40/M-89 from the northwest had the greatest volume of through traffic followed by M-89 from the southeast, M-40 from the south and M-118 from the east. In the 1961 traffic study, a total of 5,184 trips entered and continued through the Allegan area on state highways. Of these 5,184 trips, 36.4 percent used M-40/M-89 to the northwest, 28.3 percent M-89 to the southeast 24.5 percent M-40 to the south and 10.8 percent M-118 to the east.

Traffic distribution figures for the three state highways in the Allegan area show that the largest flow of through traffic was between M-40/M-89 northwest and M-89 southeast. Next in order




THROUGH TRAFFIC

1961



LEGEND

THROUGH TRAFFIC BETWEEN STATE HIGHWAYS

-  THROUGH HIGHWAY TRAFFIC
-  ALL OTHER TRAFFIC
-  TOTAL TRAFFIC

ALLEGAN STATE HIGHWAY PLAN



SOURCE : TRAFFIC DIVISION
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

PREPARED BY THE URBAN PLANNING SECTION
PLANNING DIVISION
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

of volume was through traffic between M-40/M-89 northwest and M-40 south. Through vehicles between M-40 south and M-118 east were third in volume. The logical long distance path selected by most through traffic in southwestern Michigan would be along the interstate routes surrounding the Allegan area. The majority of through traffic in the Allegan area is attracted because of the diagonal arrangements of the highways in the area and the large recreational areas to the west.

TERMINAL TRAFFIC

A total of 8,026 vehicles made terminal trips, of which 6,108 used state highways. Maps 8 and 9 illustrate the principal desire lines for terminal trips in the Allegan area. All of the major traffic corridors involve state highways. Southeast M-89 was used by 37.4 percent of the terminal traffic, 29.1 percent used M-40 south, 18.0 percent traveled M-40/M-89 northwest and 15.5 percent used M-118 east.

Southeast M-89 had 2,285 trips with a terminal within the study area. As shown on Map 8, the central business district was a terminal for 16.9 percent of these vehicles, the public-residential area on the west side of the business district generated or attracted 7.6 percent, 5.3 percent had a terminal along the strip commercial on southeast M-89 and 4.3 percent were destined for or had an origin in the industrial area north of the central business district.

Principal zones of generation or attraction for M-40 south traffic are shown on Map 9. M-40 south had 1,775 terminal trips. The central business district was the terminal for 23.2 percent of these trips, while the industrial area north of the business district generated or attracted 7.4 percent and 9.9 percent were destined for or originated at the residential development in the south portion of the city.

Traffic on M-40/M-89 moving between the Allegan area and points northwest totaled 1,100 vehicles. The central business district was a terminal for 20.9 percent of these trips, 5.9 percent had a terminal in the industrial area north of the central business district, 6.9 percent were generated or attracted by the high school and the commercial strip on the northwest side and 9.4 percent had a terminal in the public-residential area on the west side of the business district.

M-118 carried 948 terminal trips (see Map 8). The central business district was again the main generator or attractor, accounting for 16.9 percent of this traffic. The industrial area north of the business district accounted for 8.2 percent, and 8.3 percent had a terminal in the public-residential area on the west side of the business district.

Those highways used most for terminal trips were southeast M-89 and south M-40, followed by northwest M-40/M-89 and M-118. In all cases, the central business district was the major traffic generator and attractor. Other important terminal points were the industrial area north of the business district, the public-residential area immediately west of the business district and the two commercial sections on M-40/M-89 in the northwest and M-89 in the southeast.

Map 10 illustrates that out of 8,026 terminal trips in the Allegan area, 1,792 or 22.3 percent had an origin or destination in the central business district. State highways were used by 66.4 percent of the central business district terminal trips.

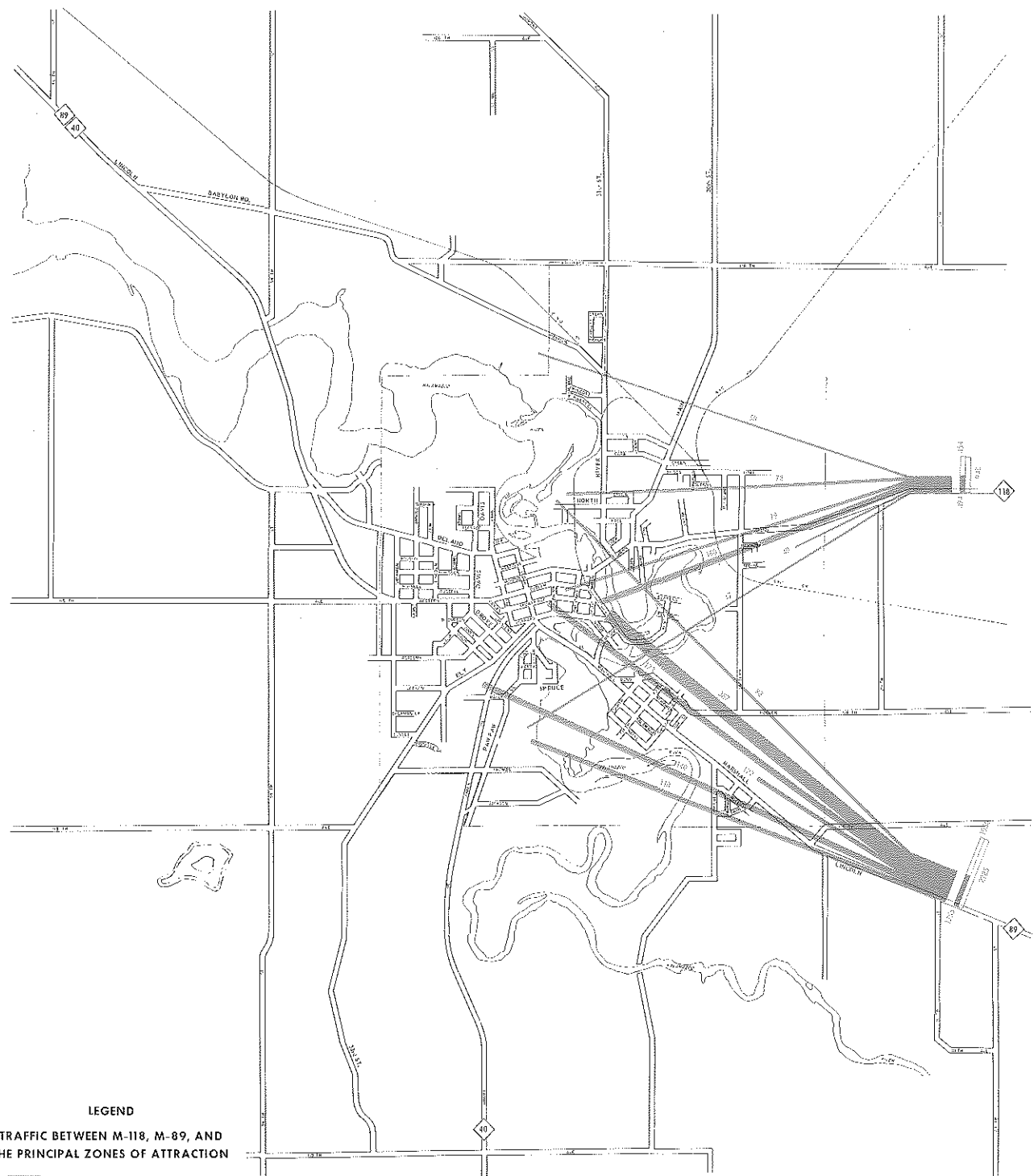
INTERNAL TRAFFIC

Statistics available in the Allegan survey trip tables show that there were 22,237 internal trips. The central business district generated or attracted 6,691 internal trips. Eight areas accounted for 52.4 percent of these trips (see Map 11). Figures in the trip tables show that the industrial area to the north of the central business district was a terminal for 497 internal trips, while the public-residential area adjacent to the business district had 1,553 internal trips. Totals in the Allegan trip tables show that an average of 33,529 daily trips were recorded in the 1961 Allegan Area Survey, two-thirds of which were internal traffic. The remaining one-third of the trips were either terminal or through traffic.

Since internal traffic patterns have a great influence on highway needs, this information is necessary to determine the amount of conflict between local and through traffic and the extent of local traffic on the highway system.




M-89 AND M-118 TERMINAL TRAFFIC

1961

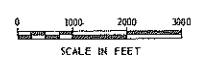


LEGEND

TRAFFIC BETWEEN M-118, M-89, AND THE PRINCIPAL ZONES OF ATTRACTION

-  TRIPS TO PRINCIPAL ZONES
-  TRIPS TO ALL OTHER ZONES
-  TOTAL TRIPS

A LLEGAN STATE HIGHWAY PLAN

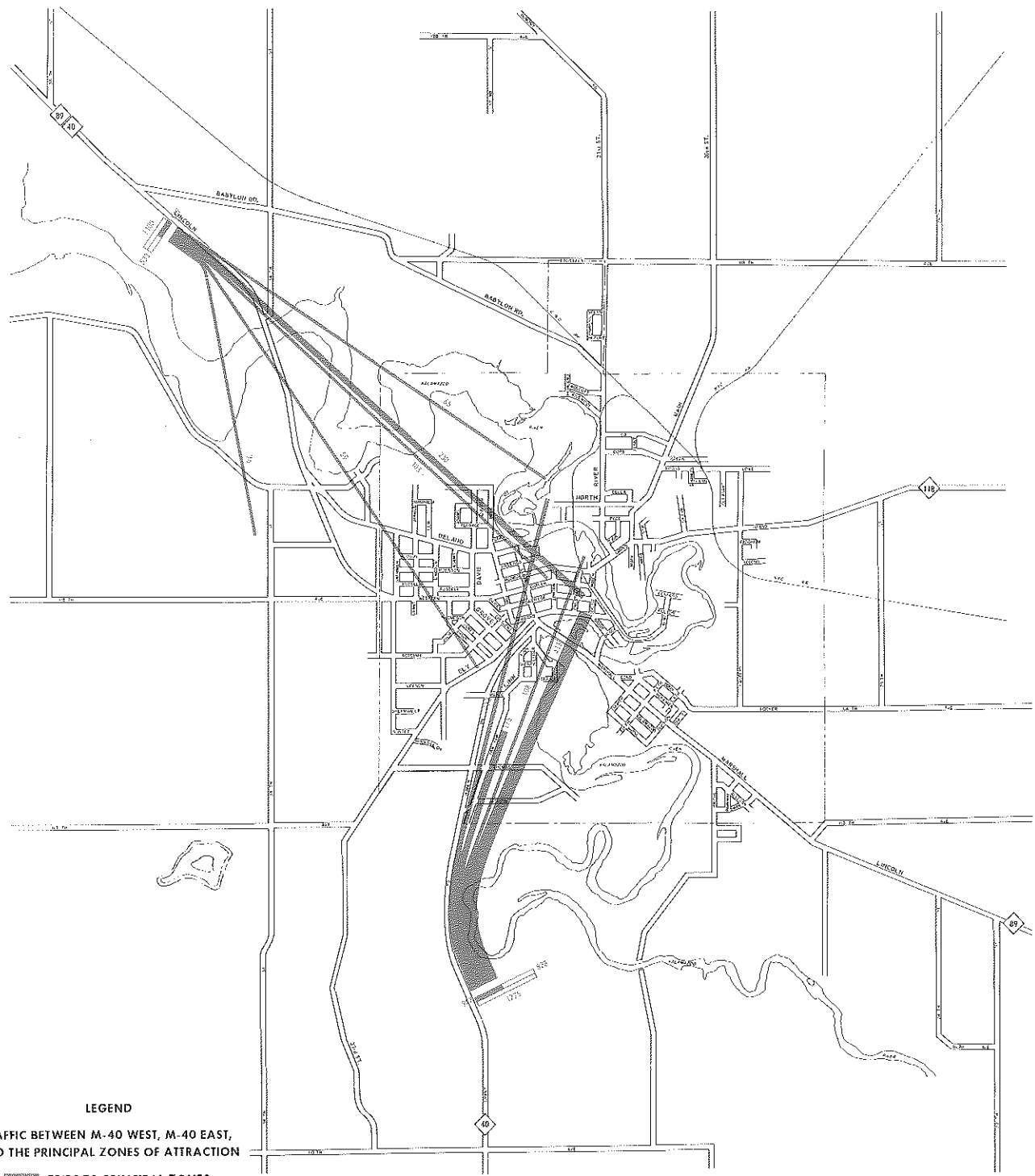


SOURCE : TRAFFIC DIVISION
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

PREPARED BY THE URBAN PLANNING SECTION
PLANNING DIVISION
MICHIGAN DEPARTMENT OF STATE HIGHWAYS




M-40 AND M-89 TERMINAL TRAFFIC

1961



LEGEND

TRAFFIC BETWEEN M-40 WEST, M-40 EAST,
AND THE PRINCIPAL ZONES OF ATTRACTION

-  TRIPS TO PRINCIPAL ZONES
-  TRIPS TO ALL OTHER ZONES
-  TOTAL TRIPS

ALLEGAN STATE HIGHWAY PLAN

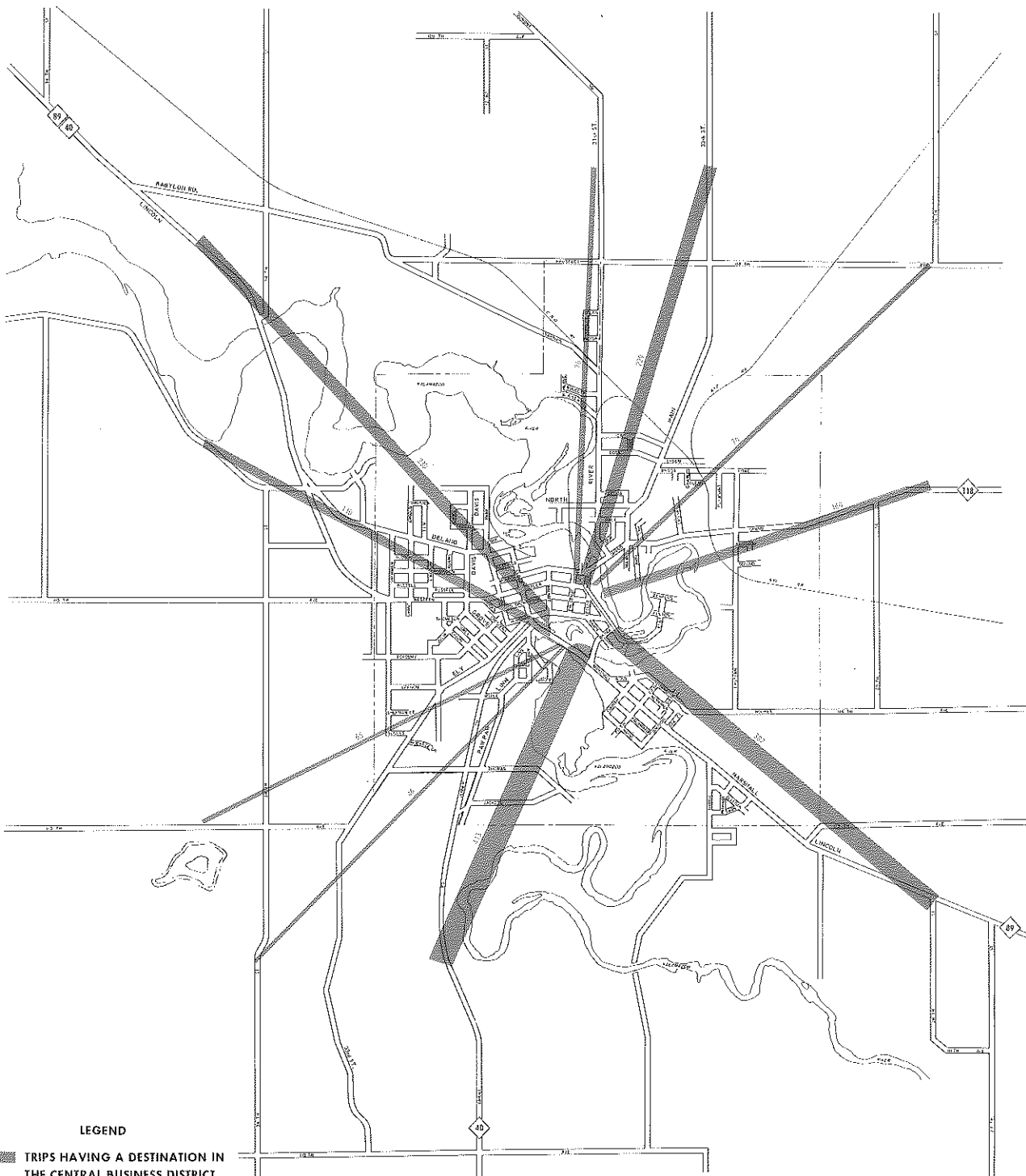


SOURCE : TRAFFIC DIVISION
MICHIGAN DEPARTMENT OF STATE HIGHWAYS


PREPARED BY THE URBAN PLANNING SECTION
PLANNING DIVISION
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

CENTRAL BUSINESS DISTRICT TERMINAL TRAFFIC

1961



LEGEND

 TRIPS HAVING A DESTINATION IN THE CENTRAL BUSINESS DISTRICT

A ALLEGAN STATE HIGHWAY PLAN



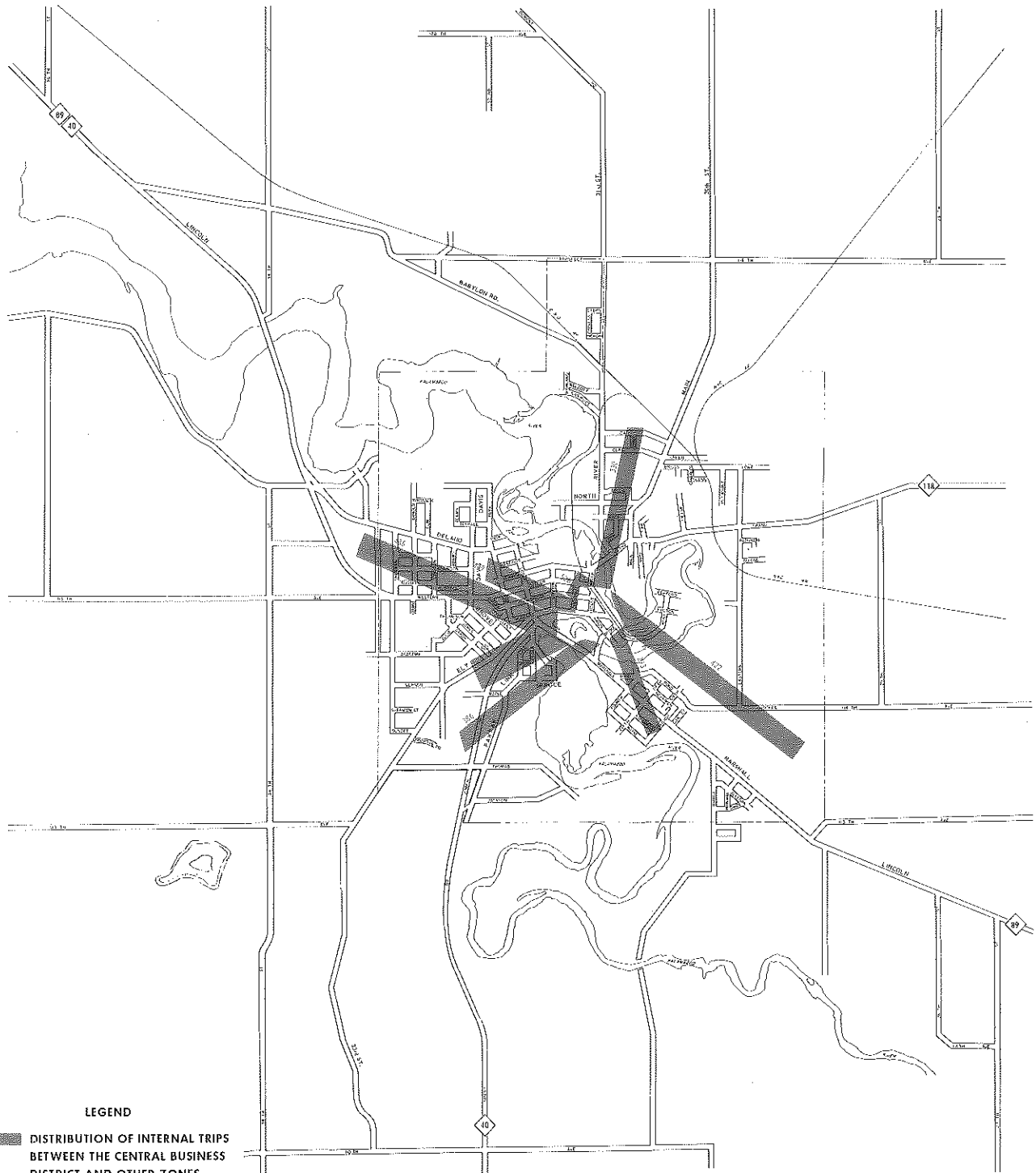
0 1000 2000 3000
SCALE IN FEET

SOURCE : TRAFFIC DIVISION
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

PREPARED BY THE URBAN PLANNING SECTION
PLANNING DIVISION
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

INTERNAL TRAFFIC DISTRIBUTION

1961



LEGEND

■ DISTRIBUTION OF INTERNAL TRIPS BETWEEN THE CENTRAL BUSINESS DISTRICT AND OTHER ZONES BY ORDER OF IMPORTANCE

A LLEGAN STATE HIGHWAY PLAN



0 1000 2000 3000
SCALE IN FEET

SOURCE : TRAFFIC DIVISION
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

PREPARED BY THE URBAN PLANNING SECTION
PLANNING DIVISION
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

VEHICLE REGISTRATION

Trends in vehicle registration may show the dependence upon private transportation and may reflect the amount of highway useage by local residents. Vehicle registrations (passenger and commercial) in Allegan County increased from 11,845 in 1940 to 31,414 in 1966; an increase of 165 percent. The number of vehicles per 1,000 persons for Allegan County is well above the Michigan average. In 1960, Allegan County had 465.1 vehicles (passenger and commercial) per 1000 population, while Michigan had 413.4.

TRAFFIC VOLUMES

Traffic on state highways in the Allegan area has increased at a significant rate since 1949 (see Table 8). However, the rate and volume of increase has been more gradual since 1960. For example, M-40 at the south city limits has increased 330 percent from 860 vehicles in 1949 to 3,700 in 1966, but only 23 percent since 1960 or from 3,000 vehicles in 1960 to 3,700 in 1966. Traffic on the other highway routes entering the city increased since 1960 at even lower rates; M-89 5 percent, M-40/M-89 17 percent and M-118 20 percent. The greatest volume increase in traffic on a state route since both 1949 and 1960 occurred along M-40/M-89 northwest of the city.

Map 12 depicts traffic flow on state highways and the major street system within the Allegan area during the traffic survey of 1961. The traffic figures represent an average weekday in June. Traffic increased on these routes toward the center of Allegan, until it reached a peak on Cedar (M-40/M-89), near Hubbard and Trowbridge Streets. Other large volumes of traffic are generated along Marshall, Monroe, Western and the northeastern end of Jenner Drive (M-40). These streets constitute the highway system within the City of Allegan.

Traffic counts taken in June, 1965, indicate that average daily traffic along the state highways within the area has increased by 1,000 to 1,500 vehicles since 1961. Average daily traffic is above 10,000 vehicles along Cedar Street (M-40/M-89), portions of Marshall Street (M-89) and the bridge between Monroe and Grand Streets (M-118).

The foregoing traffic volumes again illustrate that more serious problems could arise at the junction of state highways within the city. Knowledge of these traffic characteristics, desire patterns and volumes aids in understanding the needs and deficiencies of existing highway and street systems in the Allegan area.

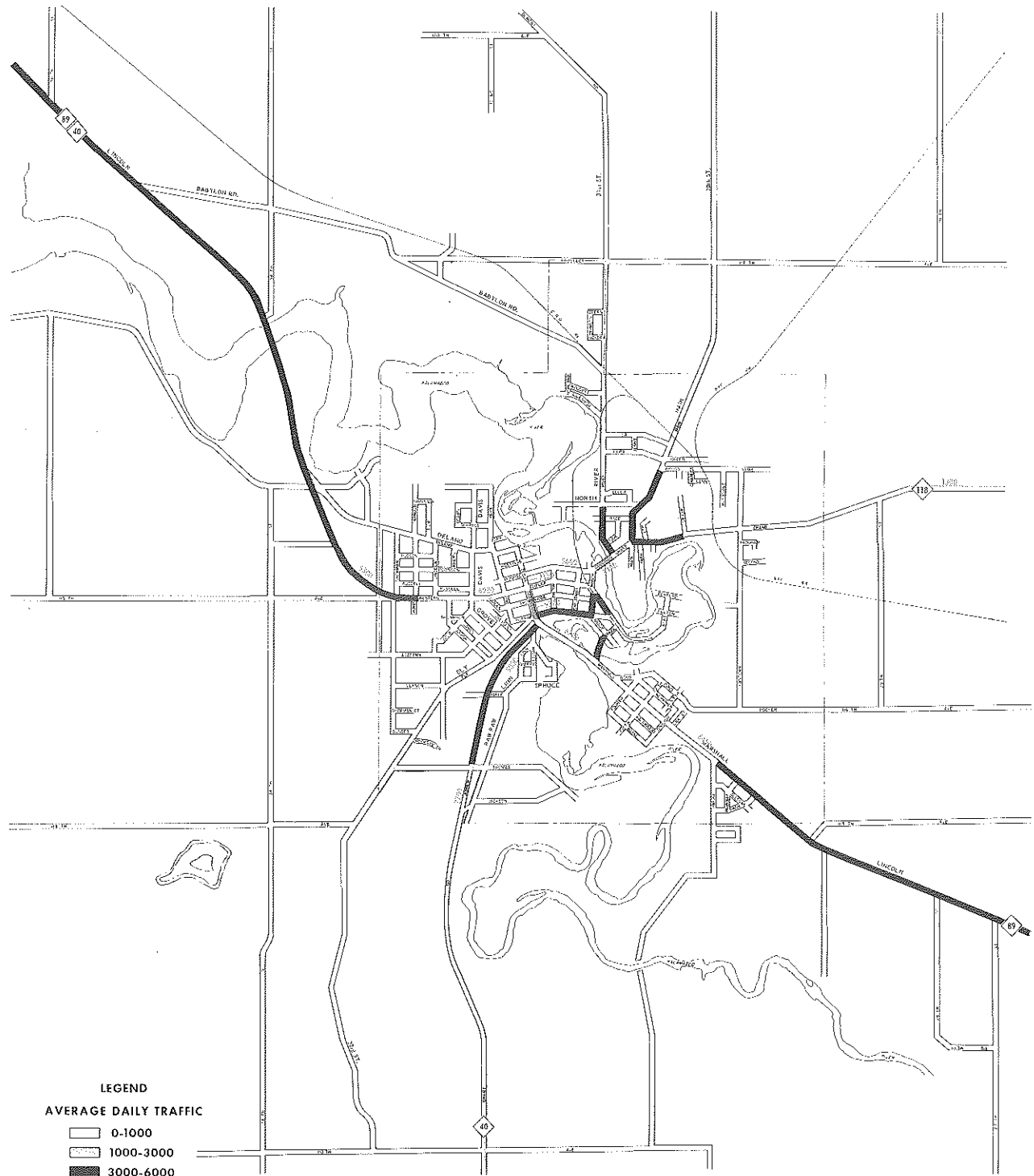
TABLE 8

AVERAGE 24-HOUR TRAFFIC FLOW

Route	Location	1949	1955	1960	1962	1964	1966
M-40	South of City Limits	860	1130	3000	3500	3500	3700
M-89	Southeast of City Limits	2430	4000	5500	5700	5700	5800
M-40/M-89	Northwest of City Limits	1130	3500	6000	5500	5500	7000
M-118	East of City Limits	570	1000	1500	1800	1800	1800

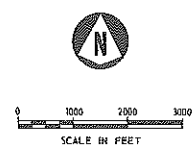
SOURCE: Michigan Department of State Highways, Traffic Division.

1961 TRAFFIC VOLUMES



LEGEND
AVERAGE DAILY TRAFFIC
 0-1000
 1000-3000
 3000-6000
 6000-8000
 OVER 8000

ALLEGAN STATE HIGHWAY PLAN



SOURCE: TRAFFIC DIVISION
 MICHIGAN DEPARTMENT OF STATE HIGHWAYS

PREPARED BY THE URBAN PLANNING SECTION
 PLANNING DIVISION
 MICHIGAN DEPARTMENT OF STATE HIGHWAYS

FUTURE TRAFFIC

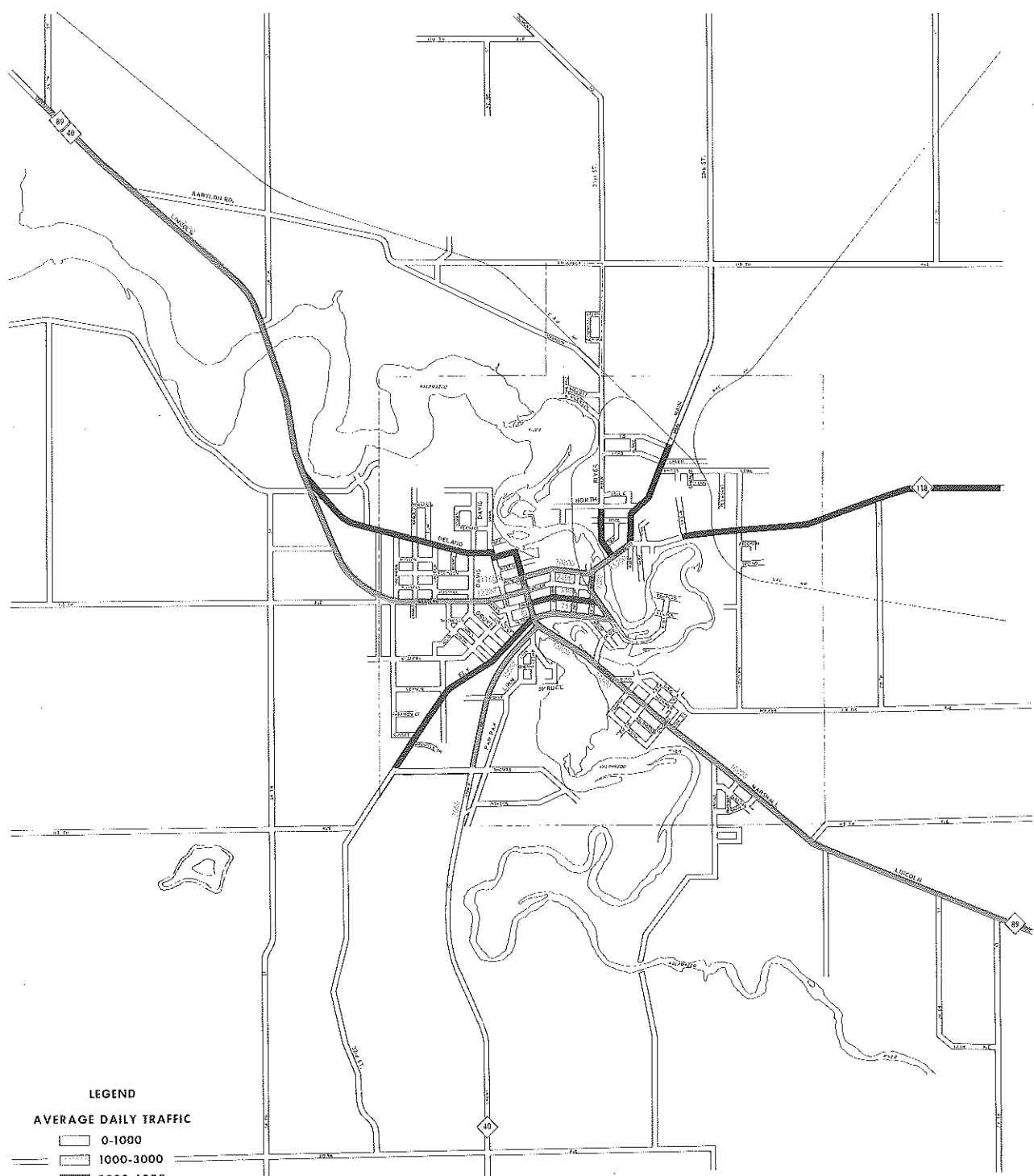
In planning highways for the Allegan area, consideration must be given to not only present traffic needs, but future requirements as well. Future traffic movement and volumes will be dependent upon the number and distribution of future population, number of vehicles and on land use patterns.

Traffic projections to 1990 for the highway system within Allegan have been estimated by the Traffic Division of the Michigan Department of State Highways (see Map 13). These estimates were determined from an analysis of traffic volume trends for each highway giving consideration to the socio-economic and land use factors mentioned above.

Percentage increases from 1961 to 1990, for traffic on the state highways, vary from 62 to 180. Largest increases in volume are expected to occur along M-89 and throughout the city. A peak of 19,600 average daily vehicles is projected along M-89 southeast of the Bridge Street intersection, with other high volumes of 18,400 and 18,000 on Cedar KM-40/M-89, between Hubbard and Cutler. Monroe Street (M-118) traffic is estimated to reach a projected 1990 peak of 15,200 just west of the Water Street intersection, while Jenner Drive (M-40) should have a peak of 10,000 just before intersecting with Marshall (M-89).

Major improvements on most sections of the highway system within Allegan would be necessary to accommodate these projected traffic volumes.

1990 TRAFFIC VOLUMES



LEGEND
AVERAGE DAILY TRAFFIC
 0-1000
 1000-3000
 3000-6000
 6000-8000
 OVER 8000

ALLEGHENY STATE HIGHWAY PLAN



0 1000 2000 3000
 SCALE IN FEET

SOURCE : TRAFFIC DIVISION
 MICHIGAN DEPARTMENT OF STATE HIGHWAYS

PREPARED BY THE URBAN PLANNING SECTION
 PLANNING DIVISION
 MICHIGAN DEPARTMENT OF STATE HIGHWAYS

ANALYSIS

Although the City of Allegan is not expected to grow much in the next 25 years, unless annexation takes place, the Allegan area is expected to show considerable growth. Population outside the present city limits will continue to use Allegan's retail, employment and public facilities and will require transportation facilities providing access to the center of the city. The state highways and major street system in the Allegan area should complement one another so that the major street system takes people where they need and want to go, and the highway system should be located to eliminate through traffic from areas of congestion and carry highway traffic to areas of important traffic generation.

A general objective of the Allegan area highway plan is to provide highway facilities of reasonable directness and continuity allowing for safe and efficient traffic flow. Another purpose of the study was to coordinate and improve overall internal traffic circulation in the Allegan area.

PLANNING PRINCIPLES - FACTORS

Planning Principles considered in the selection of the alternative highway systems for the Allegan area included the following:

1. Provision of adequate service to areas of major traffic generation.
2. Promotion of, and compatibility with, local plans for community development.
3. Promotion of economic expansion for the area.
4. Avoidance, where practical, of disruption to established residential areas, school attendance areas, and other cultural and civic facilities.

More specific factors included in determining alternatives were:

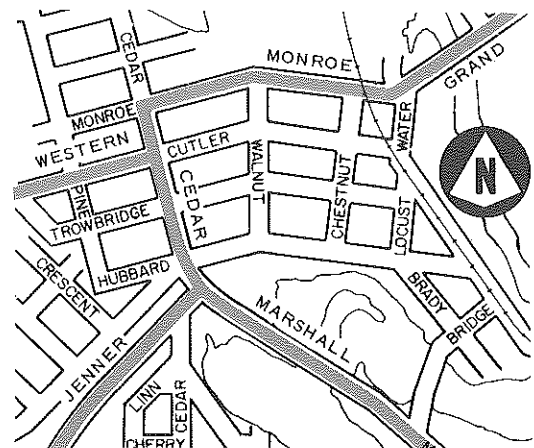
1. Elimination of abrupt turning movements, providing safety and continuity in the highway system.
2. Provision of capacity to meet future traffic needs and demands.
3. Integration with existing major street system.
4. Assurance that cost of implementation is commensurate with benefits to be derived.

Consideration of the foregoing planning principles and factors provides a means for a systematic approach to develop the Allegan highway plan. The advantages and disadvantages of the alternatives for the Allegan area were revealed through examining each alternative in relation to the preceding inventory and forecast of economics, population, land use, transportation facilities and traffic.

ALTERNATIVE 1

Alternative 1 - Utilize existing alignments of M-40, M-89 and M-118 with necessary improvements (see Map 14).

ALTERNATIVE 1



MAP 14

Advantages:

1. Access would be provided to, but not through, the central business district.
2. Adequate service would be given to traffic having an origin or destination within the city.

Disadvantages:

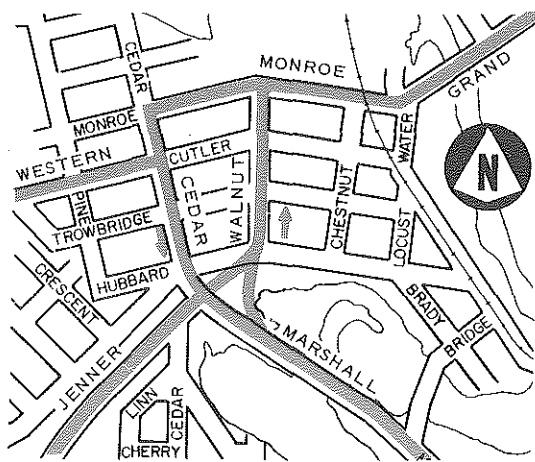
1. Intersection problems would not be solved where Marshall-Cedar (M-89), Jenner Drive (M-40) and Hubbard converge, and at Cedar Street and Western Avenue.
2. Abrupt turning movements would not be eliminated for through traffic on all highway routes within the city.

3. Additional right-of-way would be required and pavement widening would be needed in many sections of the highway system.

ALTERNATIVE 2

Alternative 2 – Extension of Walnut Street south with two connections at Marshall Street, one for northbound M-40 traffic and the other for northbound M-89 traffic. Walnut would become one-way north, from Marshall Street to Monroe Street (see Map 15).

ALTERNATIVE 2



MAP 15

Advantages:

1. Access would be improved to, but not through, the central business district.
2. Intersection problem where Marshall-Cedar (M-89), Jenner Drive (M-40) and Hubbard converge would be solved and would decrease the severity of the problem at Cedar Street and Western Avenue.
3. Service would be increased for traffic having origins and destinations within the city.
4. Probability of having to widen existing highways would be decreased.
5. Traffic capacity would be increased through the use of a one-way pair highway system.
6. Existing one-way system would be complemented.

Disadvantages:

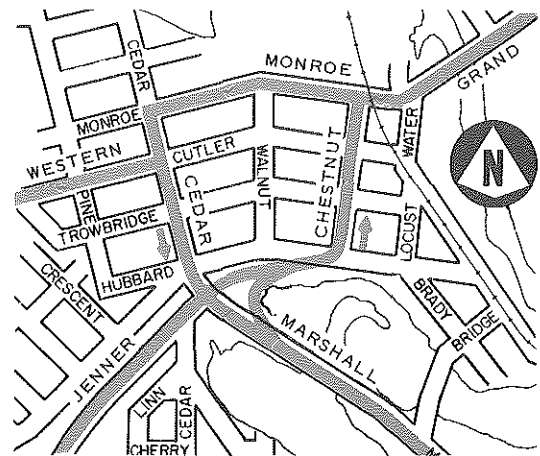
1. Turning movements would be increased

for through traffic, with a circuitous route involving adverse distance for traffic moving between the northwest and the south and southeast.

2. High construction costs would result due to topography and backwater of the Kalamazoo River.
3. Several public and residential buildings would have to be removed.
4. Through traffic would not be eliminated and would bring this traffic closer to the central business district.

Modification of a proposal recommended in the Allegan master plan would have this same type of system. One modification would be the extension of Chestnut rather than Walnut Street (see Map 16). The same advantages and disadvantages would apply to this proposal as for the Walnut Street extension.

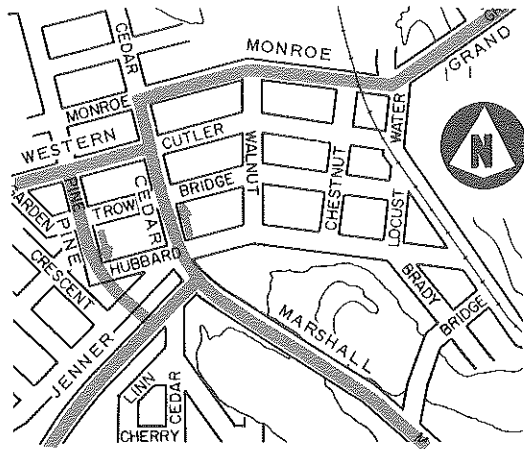
ALTERNATIVE 2A



MAP 16

Another proposal would be extension of Pine Street into Marshall Street rather than Walnut (see Map 17). Again, the same advantages and disadvantages would apply. However, more residential area would be traversed by this proposal than by the other two.

ALTERNATIVE 2B

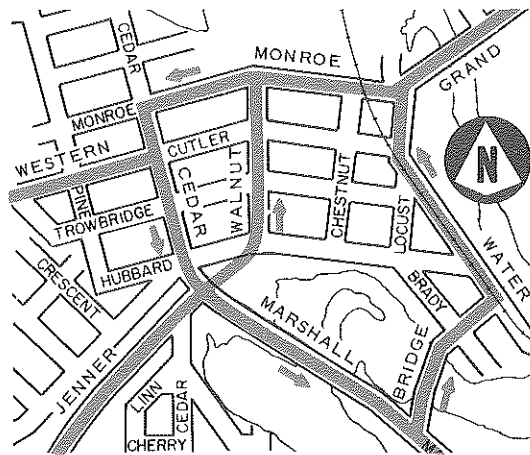


MAP 17

ALTERNATIVE 3

Alternative 3 – Construction of a new two-way bridge at Bridge Street, incorporating a one-way street system north on Water Street and south on Cedar Street and Marshall Street. This alternative would also utilize an extension of Walnut Street to M-40 with Walnut one-way north. This alternative was recommended in a master street plan completed in 1958 (see Map 18).

ALTERNATIVE 3



MAP 18

Advantages:

1. Direct access would be provided to the central business district and the industrial area on the south side of it.
2. Intersection problem where Marshall-Cedar (M-89), Jenner Drive (M-40) and Hubbard converge would be solved and would decrease the severity of the problem at Cedar and Western Avenue.
3. Traffic capacity would be increased with a one-way street system.
4. Probability of having to widen existing highways would be decreased.
5. Service given traffic having origins and destinations within the city would be increased.
6. Existing one-way system would be complemented.

Disadvantages:

1. Excessive cost of constructing a new bridge and the Walnut Street extension.
2. Through traffic traveling north on M-89 would be forced through the central business district, increasing the heavy traffic movements there.
3. Circuitous routing would be created, requiring an increase in abrupt turning movements.
4. Severity of an intersection problem at Water and Monroe Streets would be increased.
5. Adverse driving distance would be created for through traffic.

ALTERNATIVE 4

Alternative 4 – Extension of Monroe to connect with Western Avenue using Monroe Street, Western Avenue and Cutler Street as a one-way highway pair (see Map 19).

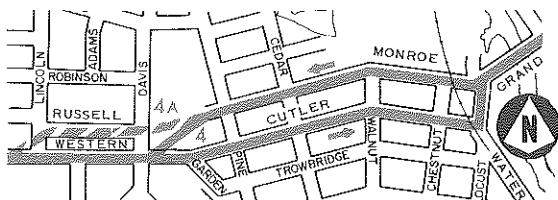
Advantages:

1. Street continuity would be improved and alignment straightened for east-west traffic.
2. Intersection problems at Cedar Street and Western Avenue and at Monroe and Water Streets would be alleviated.
3. Highway capacity would be increased by utilizing one-way pairs in the highway system.
4. Probability of having to widen existing highways would be decreased.
5. Existing one-way street system would be complemented and extended.

Disadvantages:

1. High construction cost would be required due to topography.
2. Residential area previously unexposed to state highway traffic would be traversed.
3. Elimination of several residences would be required.

ALTERNATIVES 4 AND 4A



MAP 19

Two proposals have been made for the extension of Monroe Street to Western Avenue. The master plan recommends connecting with Western Avenue midway between Davis and Pine Streets and the other proposal involves connecting in the vicinity of Lincoln Street. Both proposals have the same advantages and disadvantages.

ALTERNATIVE 5

Alternative 5 – A bypass from the southwest connecting M-40 and M-89 and passing on the western side of the city.

Advantages:

1. A direct, safe route would be provided for through traffic.
2. Traffic problems within the city would be alleviated by removing through traffic from the central area.
3. Existing or proposed residential and urban development facilities would not be disturbed.
4. Bypass corridor would be adjacent to the southern and western urban boundaries as anticipated by the master plan.

Disadvantages:

1. Would require more new construction than other alternatives.
2. Through traffic volumes would not warrant such construction within the next 20 years.

EVALUATION AND RECOMMENDATION

Advantages and disadvantages of the various alternatives were drawn from the foregoing inventory, forecast and analysis of information relating to highway needs in Allegan. Recommendations contained in this section are based on these points and put forth as possible solutions.

Turning movements on state highways M-40, M-89 and M-118 within the City of Allegan limit capacity and create safety hazards. Traffic volumes are approaching practical capacities of highways, which are limited by existing pavement width. Existing narrow rights-of-way limit highway improvements in many other sections. Other factors that hinder improvement on the existing system include physical features, such as topography, the Kalamazoo River and man-made structures.

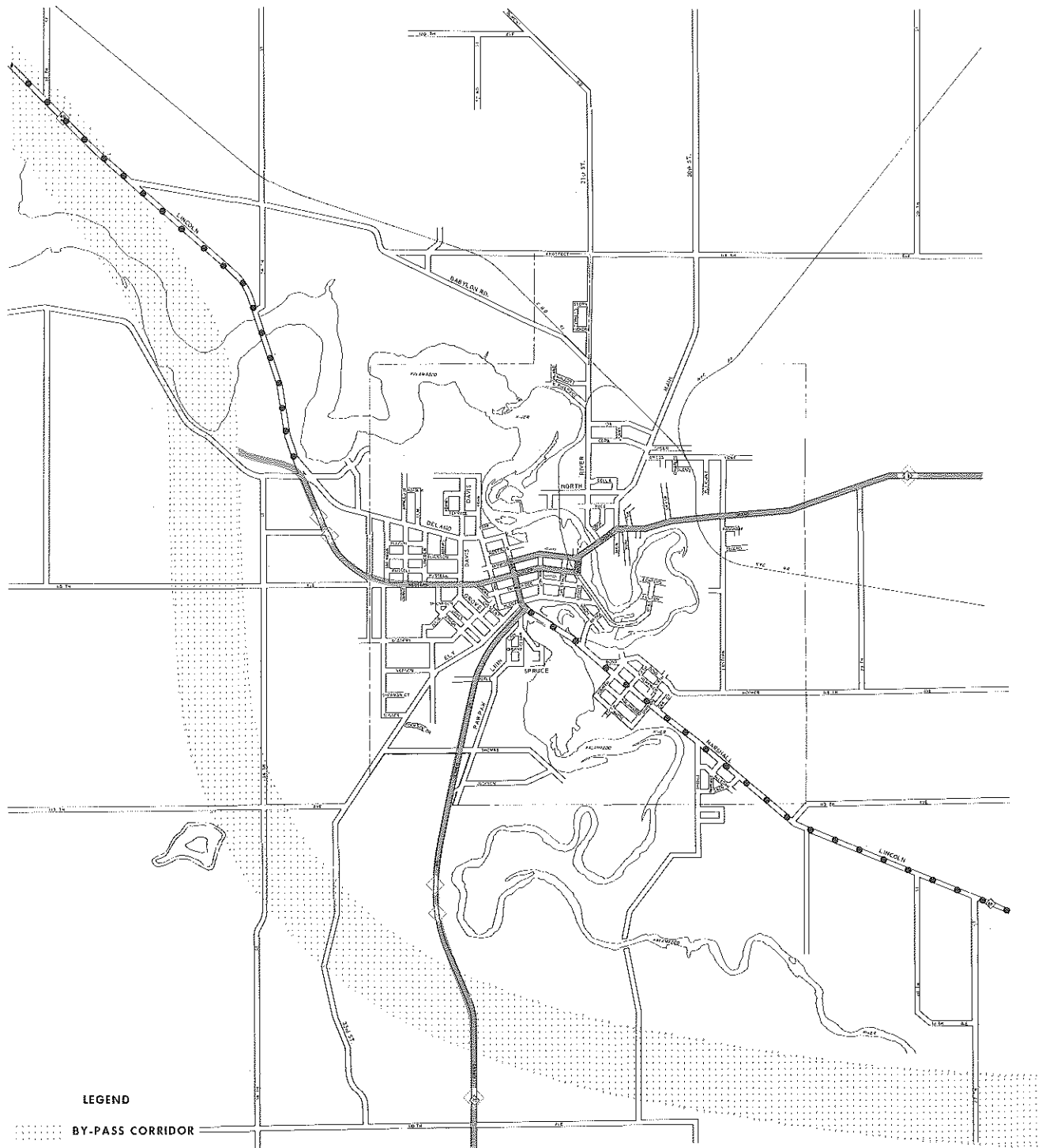
The highway plan recommended for the Allegan area follows:

1. Improve highway routes within the city.
2. As a long-range proposal, a bypass connecting M-40 and M-89 in a corridor to the south and west of the City of Allegan should be considered (see Map 20).

Existing routes for M-40 and M-89 should be improved on existing alignments (Alternative 1), if possible, to handle projected traffic volumes and to solve intersection problems at Jenner (M-40), Cedar-Marshall (M-40/M-89) and Hubbard, and at Western-Cutler and Cedar (M-40/M-89 and M-118). Next in preference for improvement, if the preceding alternative could not be used, would be the use of one-way streets. First choice would be Pine and Center (Alternative 2B); second choice, Walnut and Cedar (Alternative 2); and the third choice would be Chestnut and Cedar (Alternative 2A).

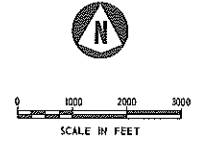
M-118 completes highway circulation in the Allegan area by permitting access from the east. It would continue to terminate at the intersection with M-40/M-89 within the city. M-118 should be improved on existing alignment to handle projected traffic, and solutions should be found for the intersection at Water and Grand-Monroe (M-118). A second alternative for M-118 would be a one-way system using Monroe and Cutler between Cedar and Water.

LONG RANGE HIGHWAY PROPOSALS



- LEGEND**
-  BY-PASS CORRIDOR
 -  HIGHWAY SYSTEM
 -  HIGHWAY DELETION

ALLEGHENY STATE HIGHWAY PLAN



SOURCE: URBAN PLANNING SECTION
 PLANNING DIVISION
 MICHIGAN DEPARTMENT OF STATE HIGHWAYS

PREPARED BY THE URBAN PLANNING SECTION
 PLANNING DIVISION
 MICHIGAN DEPARTMENT OF STATE HIGHWAYS

Alternative 1, while improving the existing system and adequately serving traffic movements within the city, does not conform to local community plans for major street improvements. Alternative 2 conforms to local development objectives. However, this alternative and its two modifications, Alternative 2A and 2B, would be significantly more expensive to implement and would either move highway traffic closer to the central commercial area or traverse additional residential land area. Alternative 3 partially conforms to local street development plans whereas Alternatives 4 and 4A, as long range proposals, conform completely.

The preferences for improvement are based on the previous stated planning principles and factors. Also, choices were rated on the basis of the amount of conformity to community planning goals and principles, the degree to which alternatives would facilitate traffic flow on state highways within the community, and the degree of feasibility in view of financial considerations.

As a long-range proposal, a bypass in a corridor to the south and west of the city would satisfy through traffic desires and needs and promote community development goals and objectives. The greatest percentage of through trips were between the northwest and southeast portions of the area, followed by movement between northwest and south. Community growth appears to be to the south and west. It would be served by the proposed bypass, which also has been recommended by the Allegan master plan in the same corridor. Elimination of through traffic would alleviate internal traffic congestion.

The Planning Division of the Michigan Department of State Highways has developed this plan in relation to existing and anticipated community needs, as well as local community development goals. These recommendations are intended for use as a guide. Implementation is dependent upon timing of community development and needs, traffic volumes, availability of finances and joint community and Department of State Highways agreement.

OFFICE MEMORANDUM



MICHIGAN
DEPARTMENT OF STATE HIGHWAYS

July 21, 1967

File: 03071 (1)
03072 (1)
03041 (1)
03023 (1)

To: R. S. Boatman, Director
Planning Division

From: H. H. Cooper, Director
Traffic Division

Subject: Traffic Division Critique of Allegan State Highway Plan

We have reviewed the proposed Allegan State Highway Plan prepared by the Planning Division. The subject report indicates that deficiencies exist in trunkline continuity encouraging intersectional problems associated with turning movement volumes.

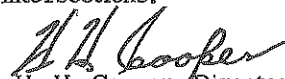
A review of accident experience along the trunkline system in Allegan revealed that the following intersections were the highest accident locations in the city:

	<u>1966 Accidents</u>
M-40, M-89 (Western) at M-118 (Cedar)	10
M-40 (Jenner) at M-89 (Marshall)	8
M-118 (Monroe at Cedar)	4

The remaining intersections had three or less accidents. Very few accidents involving parked or parking vehicles occurred on the trunkline system within the city limits.

Analysis of the O-D volume counts on a citywide basis indicated moderate volumes on M-40, M-89 (Cedar St.) and sections of M-118 (Grand St.) at the river crossing, M-89 (Marshall St.) south of Bridge Street, and M-40, M-89 (Western). Capacity restrictions will undoubtedly occur first at the major intersections due to the delay attributable to turning and crossing conflicts. Significant road user benefits could be obtained from future improvements to the three intersections previously mentioned. Additional benefits can be realized by widening the heavier-volume sections of the system which now have narrow pavements.

We, therefore, recommend Alternative #1 - retaining the existing system with extensive improvements to the major intersections and widening where necessary. However, consideration should be given to additional review and analysis of the local arterial system, particularly in the outskirts of the community. It would appear that many trips with origins and destinations removed from the CBD are now required to travel on the trunkline system through an area of concentrated traffic. Development of a local perimeter or inner circumferential route could remove a significant volume of traffic from the major intersections and trunkline system. The reduction of turning movements would be very beneficial to operation at the major intersections.


H. H. Cooper, Director
Traffic Division

TD--HHC:DK:cb

cc: E. H. Miller

City of Allegan

COUNCIL - MANAGER GOVERNMENT

Office of
City Manager

Allegan, Michigan

Councilman Malila offered the following resolution, and moved its adoption, supported by Councilman Smith:

WHEREAS, The Planning Division of the Office of Planning of the Michigan Department of State Highways has the responsibility of preparing, in cooperation with local officials, a highway plan, which represents the level of agreement attained on long-range planning objectives; and

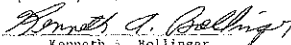
WHEREAS, The Allegan City Council and representatives of the Office of Planning have cooperatively analyzed the prepared highway plan;

NOW, THEREFORE, BE IT RESOLVED, That the plan entitled "Allegan State Highway Plan," as presented, is consistent with and compatible with the planning and development objectives of the City of Allegan; and

BE IT FURTHER RESOLVED, That the said highway plan as cooperatively developed and presented herewith be approved for presentation to the Michigan Department of State Highways for programming.

Yeas: Mayor Wolfe; Councilmen Forster, Malila and Smith;
Nays: None;
Absent: Councilman Hoffman.
The resolution was adopted.

I hereby certify that the foregoing is a true and correct copy of a resolution made and adopted at a special meeting of the Allegan City Council on the 27th day of September, 1967.


Kenneth A. Bollinger
City Clerk
City of Allegan, Michigan

City of Allegan

COUNCIL - MANAGER GOVERNMENT

Office of
City Manager

Allegan, Michigan

It was moved by John Young, supported by John Katherler, that the following resolution be adopted by the Planning Commission:

WHEREAS, The City of Allegan has a Planning Commission "duly constituted according to existing planning enabling legislation," which Planning Commission has been given the responsibility for the preparation of a Master Plan for the City; and

WHEREAS, The Planning Commission, in pursuance of this delegated responsibility, has caused to be made comprehensive studies of existing conditions and development trends and, on the basis of these studies, made estimates of the future development of the community, part or parts of which have been adopted as elements of a Master Plan of community development; and

WHEREAS, The Planning Division of the Office of Planning of the Michigan Department of State Highways has the responsibility of preparing, in cooperation with local planners, a highway plan, which represents the level of agreement attained on long-range planning objectives; and


WHEREAS, The City Planning Commission and representatives of the Planning Division have cooperatively studied this problem and have prepared such a highway plan;

NOW, THEREFORE, BE IT RESOLVED, That the plan entitled, "Allegan State Highway Plan," as presented, is consistent and compatible with the planning and development objectives of the City of Allegan; and

BE IT FURTHER RESOLVED, That the said highway plan as cooperatively developed and presented herewith be approved for presentation to the Department of State Highways for programming.

Yeas: Chairman Curlin; Huff, Katherler, Mahar and Young, and Smith;
Nays: None;
Absent: Dillingham and James.
The resolution was adopted.

I hereby certify that the foregoing is a true and correct copy of a resolution made and adopted by the Allegan City Planning Commission at a special meeting held on the 27th day of September, 1967.


Kenneth A. Bollinger
City Clerk