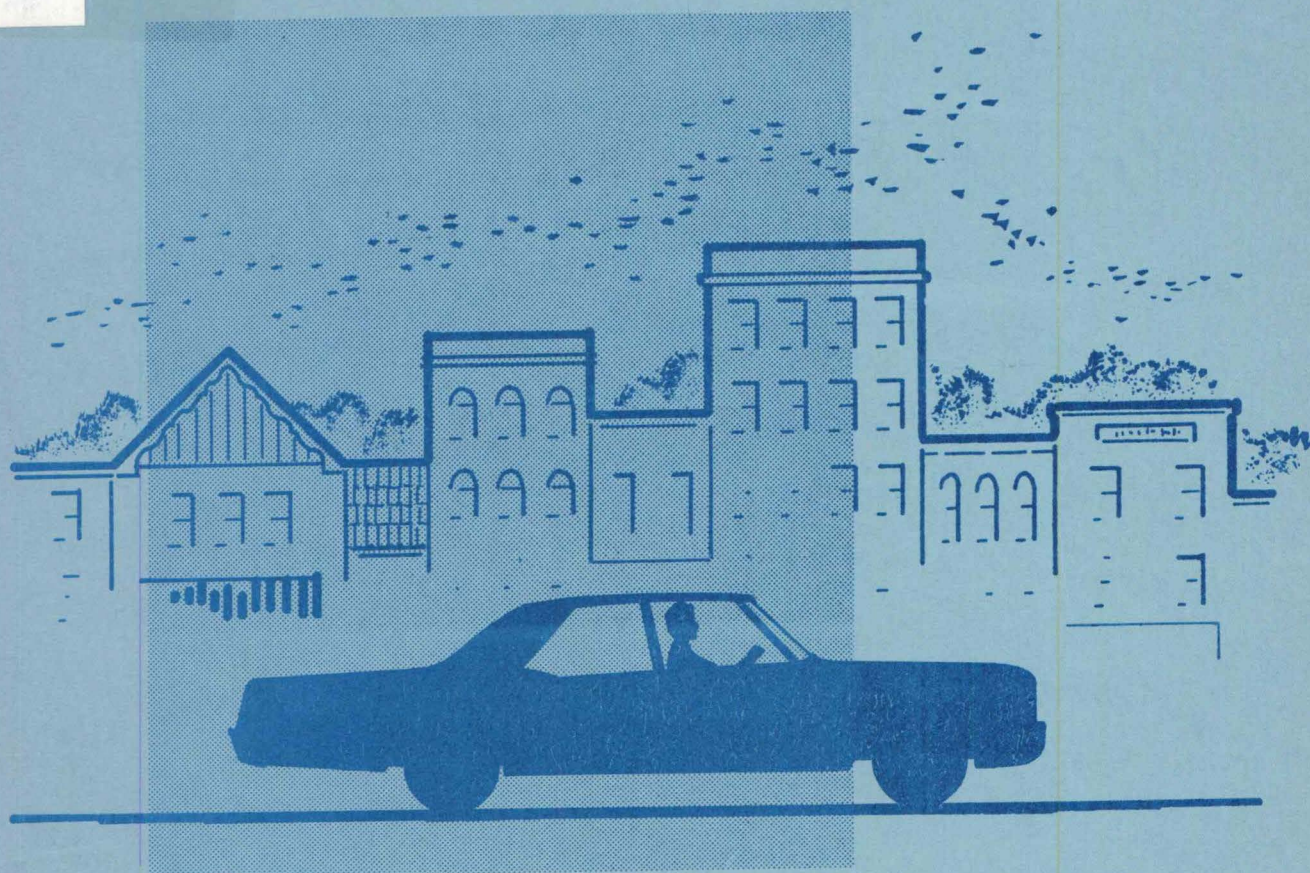


SHELDON

Iowa

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ORIGIN AND DESTINATION



TRAFFIC REPORT

June of 1970

STATE OF IOWA

SHELDON

ORIGIN AND DESTINATION
TRAFFIC REPORT

DATA GATHERED JUNE 1970

PUBLISHED MARCH 1971

PREPARED BY

HIGHWAY PLANNING SURVEYS DEPARTMENT
DIVISION OF PLANNING
IOWA STATE HIGHWAY COMMISSION

IN COOPERATION WITH THE
UNITED STATES DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

Reproduction Cost \$3.42

INTRODUCTION

This report is a summary of data gathered during an external origin and destination traffic survey made in Sheldon in June, 1970. The survey, conducted in cooperation with the Federal Highway Administration, was made to determine the total number and type of vehicles entering or leaving the study area and to gather specific origin/destination data from a representative sample of vehicle operators.

This summary is intended to present the data in a manner which will implement the determination of traffic needs and provide a sound basis for street and highway planning.

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DEFINITIONS OF TECHNICAL TERMS

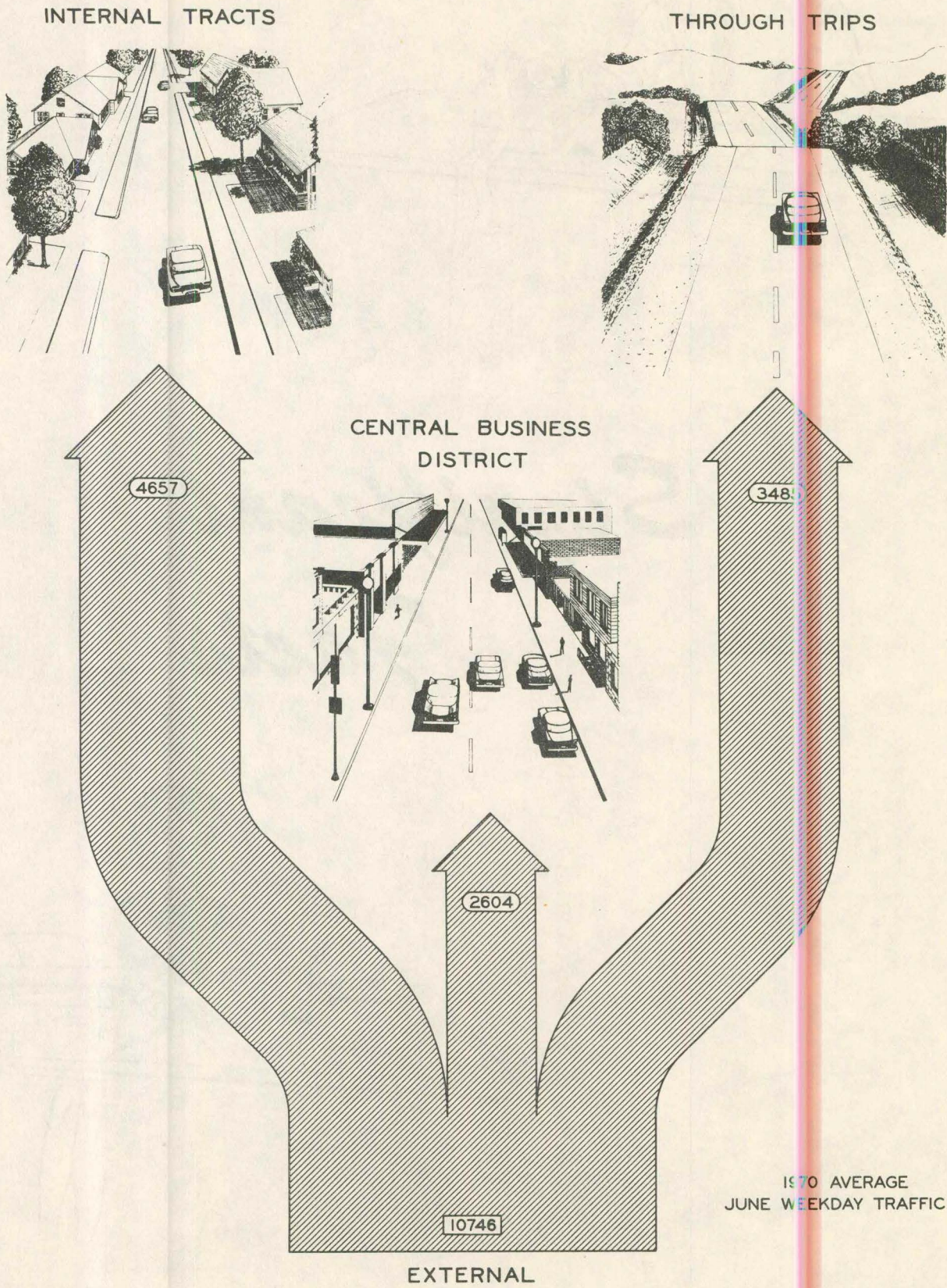
Study Area	The area enclosed by a cordon line of interview stations
Cordon Line	A hypothetical line determined by the location of traffic interview stations and used to delimit the area under study
Interview Station	A location at which vehicle drivers are stopped and interviewed
Code Station	A location on a street or highway at the point where it crosses the cordon line and at which traffic is counted but not interviewed
Central Business District	The major business district of a city
Origin	The location from which a driver started a trip
Destination	The location at which a trip was ended
Trip	The one-way travel between a point of origin and a point of destination
Internal Trip	A trip having both origin and destination within the study area
External Local Trip	A trip having either origin or destination within the study area and which passed through only one interview station in the cordon line enroute to its destination
External Through Trip	A trip having neither origin nor destination within the study area but which passed through it enroute to its destination
Traffic	The total number of vehicles passing a given point
Desire Line	A straight line between the point of origin and point of destination without regard to routes of travel



Significant Facts



FIGURE I-I
DISTRIBUTION OF TRIPS
SHELDON STUDY AREA



SUMMARY

The chart at left graphically illustrates some of the more significant traffic volumes derived from the Sheldon origin and destination traffic survey. An average of 10,746 trips per day passed through the external cordon line of interview stations surrounding the study area during the survey period.

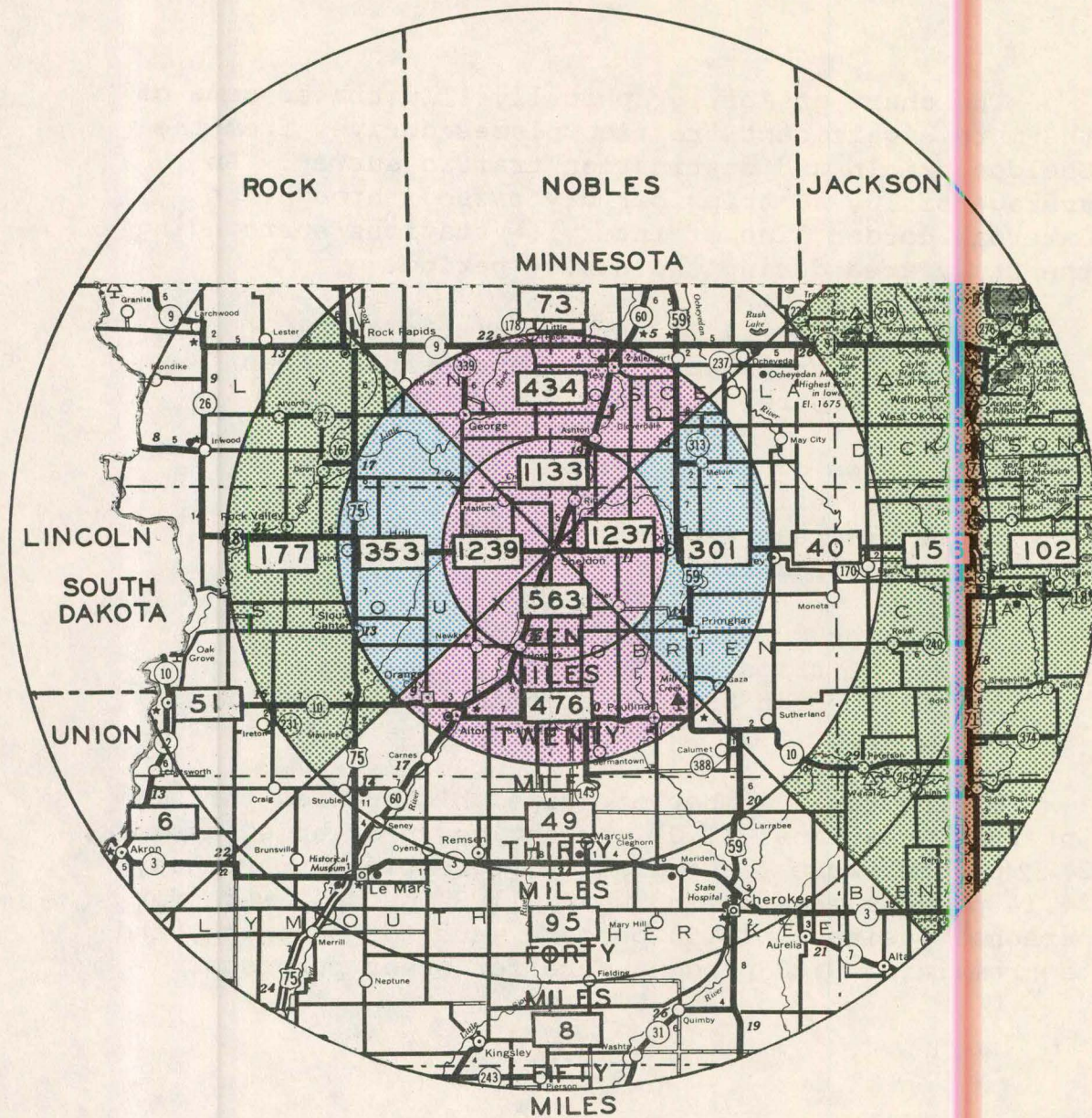
2604 trips or 24.23 percent of the total number of trips were between external areas and the central business district.

4657 trips or 43.34 percent of the total number of trips were between external and internal areas exclusive of the central business district.

3485 trips or 32.43 percent of the total number of trips were through trips which passed through Sheldon enroute to another destination.

Of the total number of trips which passed through interview stations, 11.09 percent began or ended at work, 27.62 percent were for social or recreational purposes, 24.14 percent were during work, 11.82 percent were for personal business, 15.50 percent were for shopping, and the remaining 9.83 percent were for other purposes.

FIGURE 1-2 REGIONAL INFLUENCE OF THE SHELDON STUDY AREA



- 0 TO 100 TRIPS
- 100 TO 200 TRIPS
- 200 TO 400 TRIPS
- 400 AND OVER

1970 AVERAGE JUNE
WEEKDAY TRAFFIC

Table 1-1

Regional Influence of the Sheldon Study Area

1970 Average June Weekday Traffic

	Miles From Study Area	Number of Trips	Percent of Total Trips Within a Fifty-Mile Radius
North	0 - 10	1133	17.45
	10 - 20	434	6.68
	20 - 30	73	1.13
	30 - 40	--	--
	40 - 50	--	--
North Total		1640	25.26
East	0 - 10	1237	19.05
	10 - 20	301	4.64
	20 - 30	40	.62
	30 - 40	156	2.40
	40 - 50	102	1.57
East Total		1836	28.28
West	0 - 10	1239	19.08
	10 - 20	353	5.44
	20 - 30	177	2.73
	30 - 40	51	.78
	40 - 50	6	.09
West Total		1826	28.12
South	0 - 10	563	8.67
	10 - 20	476	7.33
	20 - 30	49	.76
	30 - 40	95	1.46
	40 - 50	8	.12
South Total		1191	18.34
Grand Total		6493	100.00

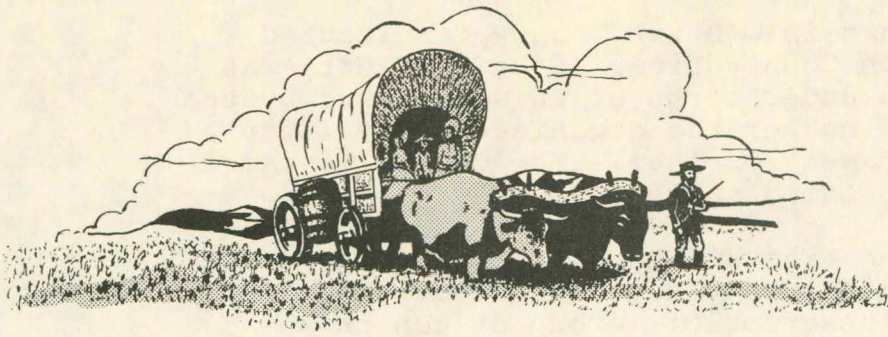
Table 1-2

Sheldon Study Area
Vehicle Type Summary

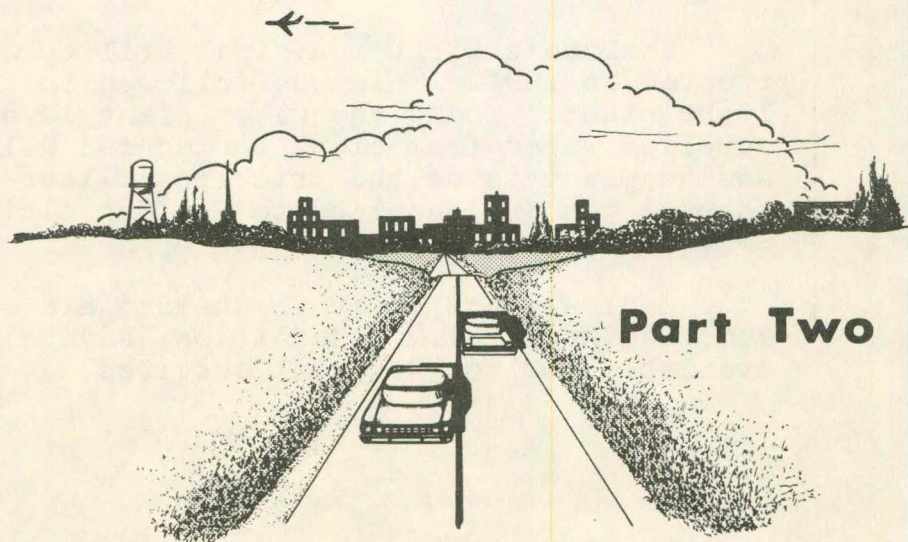
1970 Average June Weekday Traffic

Station	Location	Passenger Cars	Pickups and Panels	Single Unit Trucks	Truck Combi- nations	Total
701	Iowa 60 North	2138	290	189	325	2942
702	Local Road North	102	29	4	--	135
704	U.S. 18 East	2732	342	380	234	3688
708	Iowa 60 South	2551	340	249	407	3547
710	U.S. 18 West	2528	309	227	161	3225
711	Co. Rd. L-26 North	440	86	137	4	667
Grand Total		10,491	1396	1186	1131	14,204

The totals shown above include the duplication
of those trips which passed entirely through the
study area and were, therefore, interviewed twice.



History and Development



Part Two

History

Sheldon, the largest town in O'Brien County, is located directly on the Sioux-O'Brien County Line. O'Brien County was officially organized in 1860 under terms of an act passed by the 1850 General Assembly providing for the organization of fifty new counties and providing names for them. The County is named after John Smith O'Brien, an Irish patriot.

The first settler in the area was Hannibal Waterman. Although no imputations of dishonesty have been made about Waterman, he was used by an unscrupulous group of men in the early days of the county to misappropriate county funds. These men elected themselves to county office and proceeded to bleed county funds into their own pocket. By 1908, when other residents of the county took action against them, the county was more than \$230,000 in debt, a sizable sum in those days.

Sheldon was first laid out in 1872 by the Sioux City and St. Paul Railroad and named for Israel Sheldon, a stockholder in the company. The first plat was filed in 1873 by railroad officials. The town was made an official post office in 1872, with A.J. Brock serving as the first postmaster. When the town was incorporated in 1876, H.B. Wyman was elected as Sheldon's first mayor. Sheldon became a city of the second class in 1893.

No sooner had Sheldon been incorporated than the town became involved in the county seat controversy which had been going on for some years. No fewer than four towns, Sheldon, Sanborn, Old O'Brien and Primghar were contesting the location of the seat of justice, originally located at Primghar. So heated was the battle and so desirous of the prize were the towns, that Sanborn, so it is said, considered a scheme to incorporate all the land between Sanborn and Primghar and then move the courthouse to the other end of the town. In spite of all the battling Primghar's central location in the county won the day and the county seat was not moved.

The first school in Sheldon was begun in 1873. The Sheldon school system now has two elementary schools, a junior high school, a senior high school, two parochial schools and the Northwest Iowa Area Vocational School. The schools are fully accredited and offer a full range of curricular and extra-curricular activities.

Sheldon's first municipal utility was the water works, constructed in 1894. This was followed in the early 1900's by an electric light plant. Today the water plant is still municipally owned and supplies water from eight spring-fed wells and a deep well. The sewage plant is of the trickling filter type. Electricity and natural gas are supplied to Sheldon citizens by the Iowa Public Service Co.

Medical facilities in Sheldon are supplied by the Community Memorial Hospital. In addition, several private practitioners are available for non-hospital services.

Police protection in Sheldon is provided 24 hours a day by five full-time police officers. Police equipment includes two radio-equipped squad cars and short wave equipment.

A volunteer fire department of nineteen men provides fire protection. Fire equipment includes four fire trucks, two of which can be used for rural fire fighting, a rescue truck, equipped with resuscitator, and other pieces of specialized fire fighting equipment.

News media in Sheldon consist of two newspapers and a radio station. The Sheldon Mail, founded in 1873 by Col. L.B. Raymond, is published on Wednesday, and the Sheldon Monday comes out each Monday. The radio station, KIWA, broadcasts on the AM band at 1550 KHz.

Located in a primarily agricultural area, Sheldon has several agriculture related industries. Chief among these is the processing of soybeans into oil and meal. Another industry of this type is alfalfa drying and pelleting. Other industries in Sheldon include work clothing, cement products, sheet metal products, salad dressing, burial vaults and flour.

Railroad freight transportation is readily available in Sheldon. North-south service is supplied by the Chicago and Northwestern with four trains daily. East-west service is supplied by two railroads, the Illinois Central and the Milwaukee, with two daily trains each.

Sheldon is served by U.S. Highway 18 to the east and west and Iowa Highway 60 to the north and south. Two bus companies and several trucking companies provide highway passenger and freight service.

Population Trends
Sheldon Population

Table 2-1

Census Year	Sheldon Population	Volume Increase or Decrease	Percent Change 10-year Period
1900	2,282	--	--
1910	2,941	659	28.88
1920	3,488	547	18.60
1930	3,320	-168	-4.82
1940	3,768	448	13.49
1950	4,001	233	6.18
1960	4,251	250	6.25
1970	4,535	284	6.68

O'Brien County Population

Table 2-2

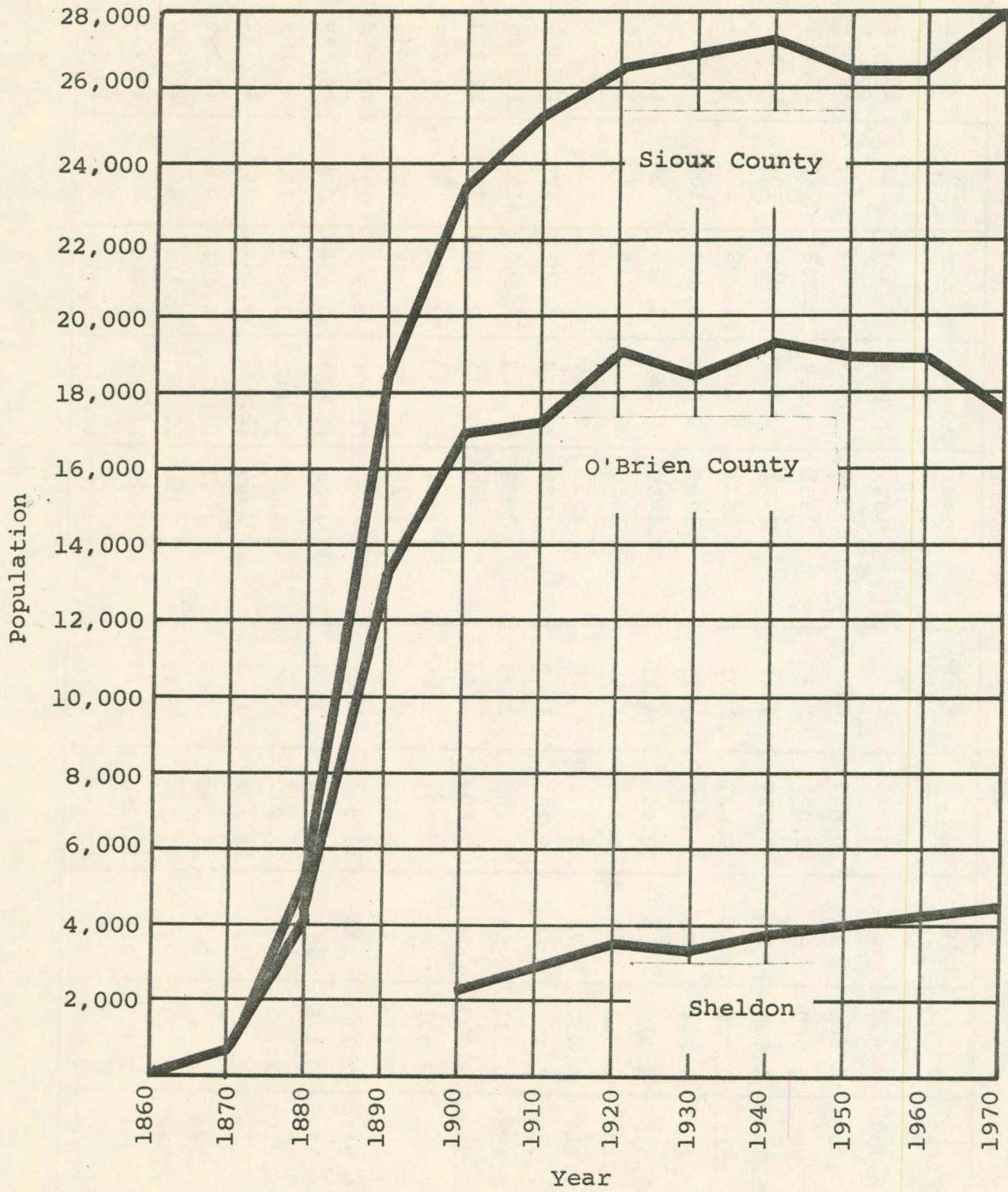
Census Year	O'Brien Co. Population	Volume Increase or Decrease	Percent Change 10-year Period
1860	8	--	--
1870	715	707	8,837.50
1880	4,155	3,440	481.12
1890	13,060	8,905	214.32
1900	16,985	3,925	30.05
1910	17,262	277	1.63
1920	19,051	1,789	10.36
1930	18,409	-642	-3.37
1940	19,293	884	4.80
1950	18,970	-323	-1.67
1960	18,840	-130	.69
1970	17,522	-1,318	-7.00

Sioux County Population

Table 2-3

Census Year	Sioux Co. Population	Volume Increase or Decrease	Percent Change 10-year Period
1860	10	--	--
1870	576	566	5,660.00
1880	5,426	4,850	842.01
1890	18,370	12,944	233.56
1900	23,337	4,697	25.57
1910	25,248	1,911	8.19
1920	26,458	1,210	4.79
1930	26,806	348	1.32
1940	27,209	403	1.50
1950	26,381	-828	-3.04
1960	26,375	-6	.02
1970	27,996	1,621	6.15

Figure 2-1
Population Trends



Motor Vehicle Registration in O'Brien and Sioux Counties
1949 - 1970

O'Brien County

Table 2-4

Year	Autos	Trucks	Motor-cycles	Total	Percent Change
1949	6,751	1,492	67	8,310	--
1950	7,205	1,586	76	8,867	6.70
1951	7,266	1,669	87	9,022	1.75
1952	6,968	1,684	87	8,739	-3.14
1953	7,013	1,749	65	8,827	1.01
1954	7,219	1,834	64	9,117	3.29
1955	7,475	1,916	64	9,455	3.71
1956	7,286	1,963	69	9,318	-1.45
1957	7,214	1,967	72	9,253	-.70
1958	7,339	1,980	66	9,385	1.43
1959	7,488	2,011	67	9,566	1.93
1960	7,515	2,009	80	9,604	.40
1961	7,691	2,001	89	9,781	1.84
1962	7,885	2,112	97	10,094	3.20
1963	8,016	2,131	114	10,261	1.65
1964	8,171	2,175	155	10,501	2.34
1965	8,510	2,295	207	11,012	4.87
1966	8,609	2,323	249	11,181	1.53
1967	8,594	2,327	269	11,190	.08
1968	8,576	2,401	272	11,249	.53
1969	8,591	2,371	302	11,264	.13
1970	8,696	2,440	371	11,507	2.16

Sioux County

Table 2-5

Year	Autos	Trucks	Motor-cycles	Total	Percent Change
1949	8,885	1,931	89	10,905	--
1950	9,307	2,095	101	11,503	5.48
1951	9,364	2,236	97	11,697	1.69
1952	9,130	2,226	104	11,460	-2.03
1953	9,254	2,298	102	11,654	1.69
1954	9,549	2,451	101	12,101	3.84
1955	9,743	2,518	98	12,359	2.13
1956	9,531	2,515	112	12,158	-1.63
1957	9,616	2,553	106	12,275	.96
1958	9,834	2,601	125	12,560	2.32
1959	10,123	2,650	133	12,906	2.75
1960	10,111	2,710	158	12,979	.57
1961	10,290	2,788	166	13,244	2.04
1962	10,846	2,914	174	13,934	5.21
1963	11,106	2,973	177	14,256	2.31
1964	11,281	3,039	209	14,529	1.91
1965	11,680	3,194	293	15,167	4.39
1966	12,073	3,344	355	15,772	3.99
1967	12,274	3,474	408	16,156	2.43
1968	12,383	3,711	444	16,538	2.36
1969	12,788	3,869	476	17,133	3.47
1970	12,937	3,947	591	17,475	2.00

Figure 2-2
 Motor Vehicle Registration in O'Brien and Sioux Counties
 1949 - 1970

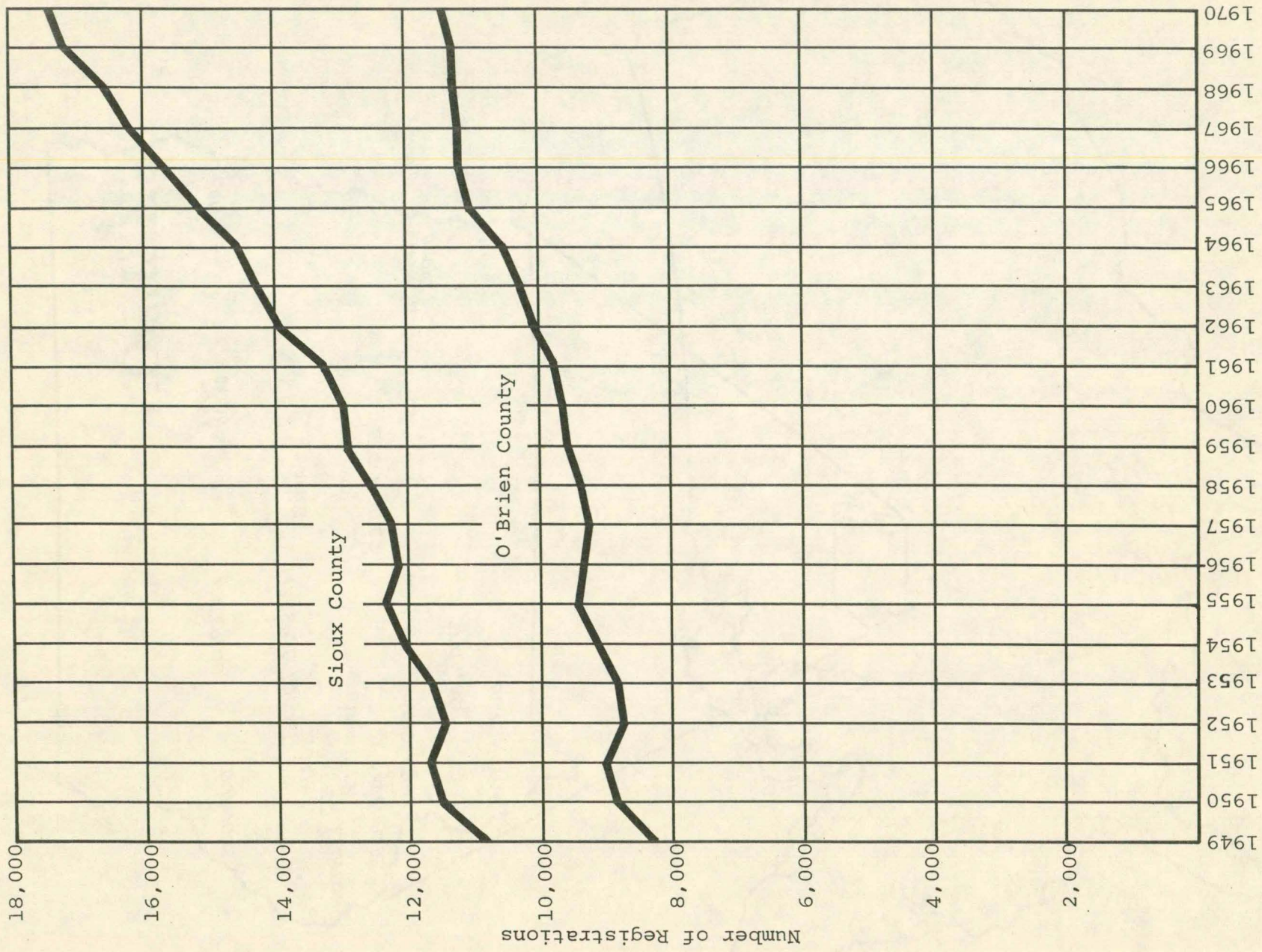
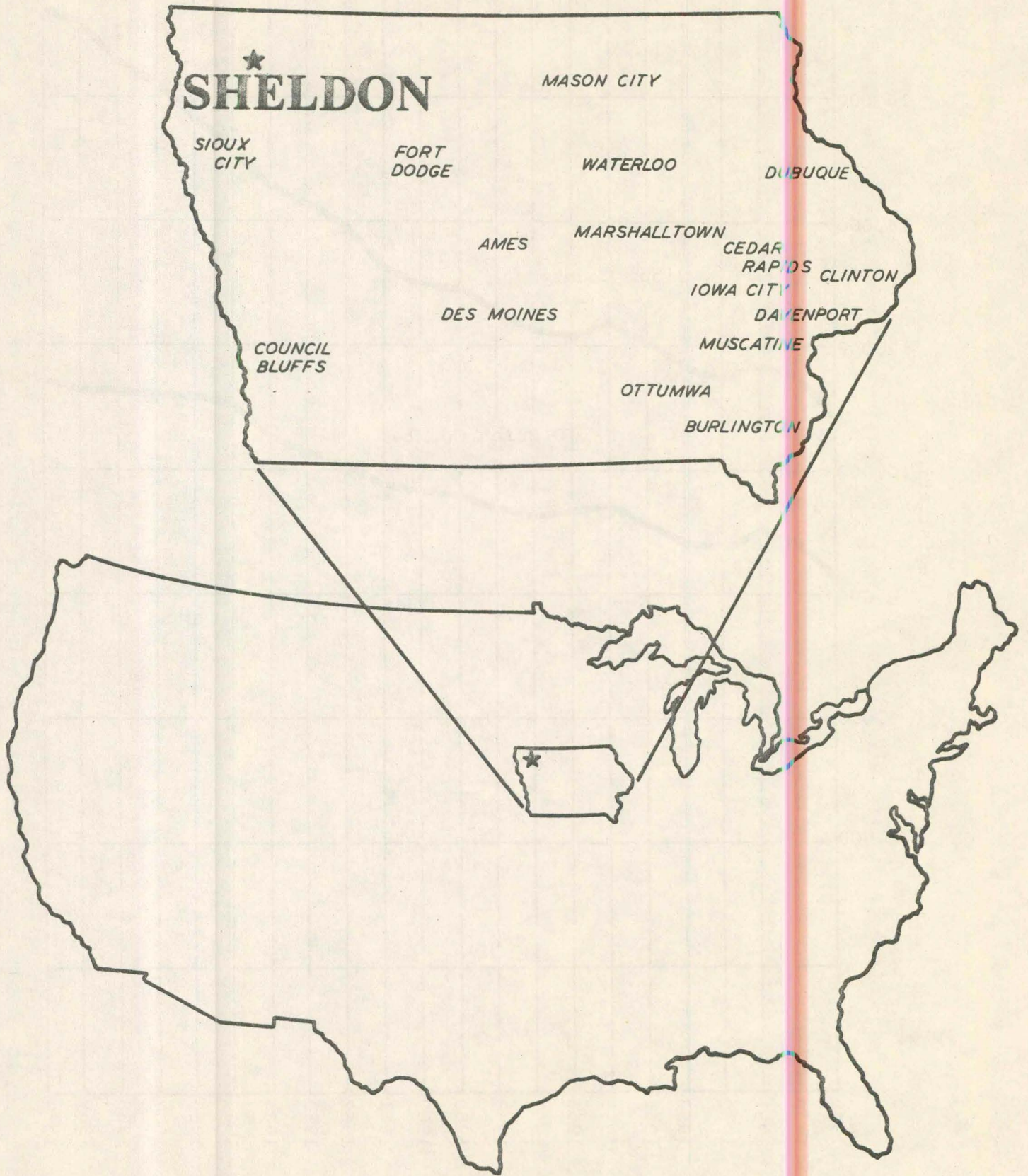
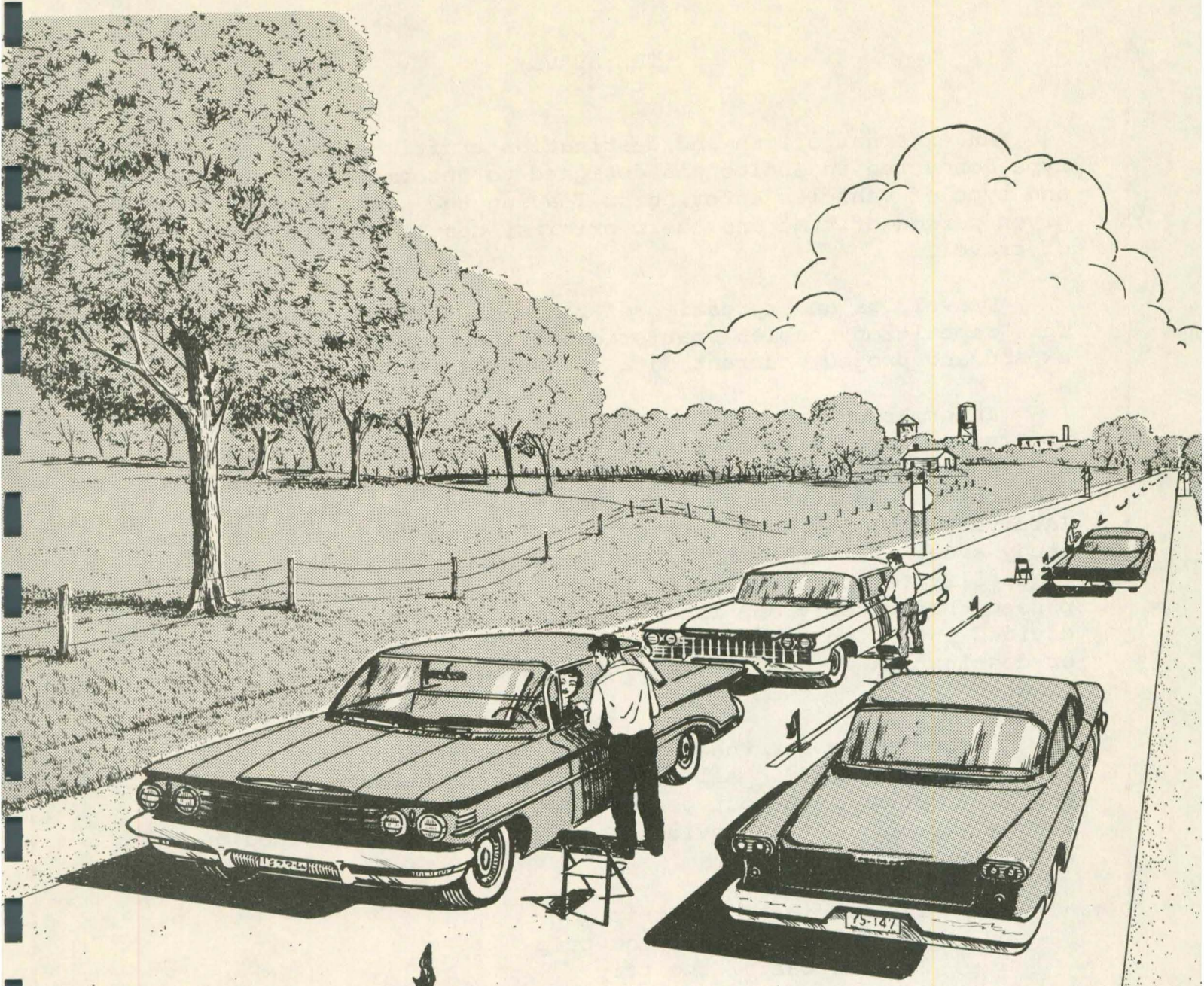


FIGURE 2-3
STUDY AREA POSITION





Survey

Procedures

Part Three

THE SURVEY

An external origin and destination traffic survey, of the type conducted in Sheldon, is designed to determine the number and type of vehicles entering or leaving the study area in a given period of time and their origins, destinations, and purposes of travel.

Travel, as an expression of behavior, tends to be repetitive. This repetition enables statisticians and highway planners to expand and project current data to predict future needs.

Information upon which to base an analysis is gathered by interviewing vehicle drivers at strategically located interview stations. A cordon line composed of interview stations and code stations was located around the perimeter of the study area. Interview stations were located on all major roads entering the study area. All other roads were assigned station code numbers to facilitate organization of interview data for trips which passed through only one interview station. The study area was divided into nine tracts and all trips which had either origin or destination within the study area were traced to one of these tracts.

Interviewing for the Sheldon survey was done between June 18 and 24, 1970. All vehicles passing through interview stations during a 15-hour period from 6 a.m. to 9 p.m. were stopped briefly for interviews. Information was recorded on the following items:

1. Origin of the trip
2. Destination of the trip
3. Purpose of the trip
4. Location where vehicle was normally parked or garaged
5. Place of registration
6. Direction of travel
7. Number of occupants

Mechanical traffic recorders placed at each interview station were operated continuously for five weekdays including the day on which interviewing was done. Manual vehicle classification counts were also taken. Data from both types of counts was used to expand the interview data to 24-hour average June weekday traffic.

At the conclusion of field work, trip data was coded and punched on tabulation cards. The cards were then computer sorted and tabulated according to tract of origin or destination and the station or stations through which each trip passed.

In an external survey of this type, all trips are placed into two main categories, "external local trips" and "external through trips." External local trips have only one terminal (either origin or destination) within the study area and pass through only one interview station enroute to their destination. External through trips have neither origin nor destination within the study area, but pass through it enroute to their destination. These trips must cross the cordon line at least twice.

Traffic flow charts indicating trip termini by tract of origin/destination are included in this report along with desire line charts showing desired routes of travel in straight lines between interview stations and internal tracts.

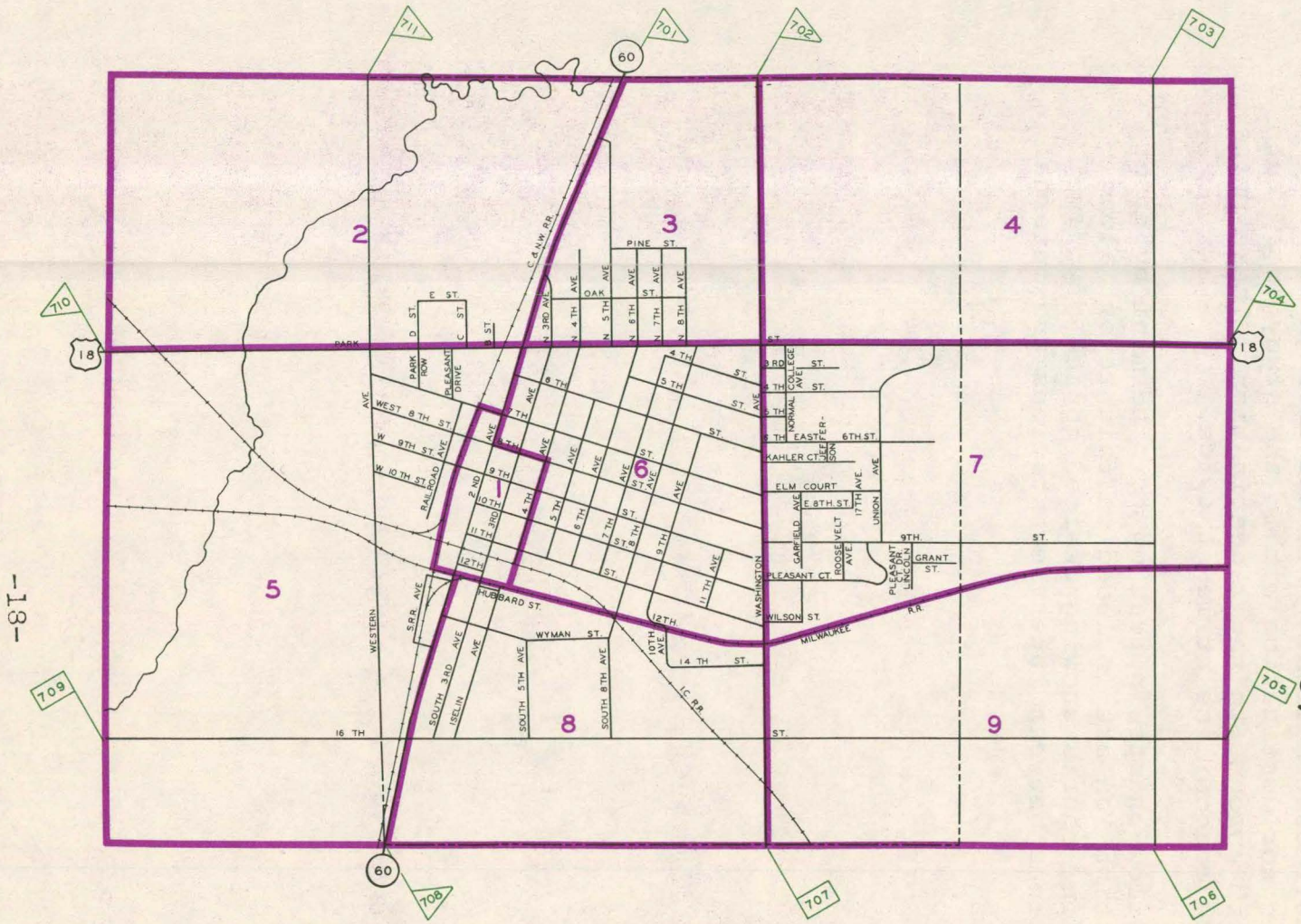


FIGURE 3-1
TRACT MAP
OF THE
SHELDON
STUDY AREA

JUNE 1970

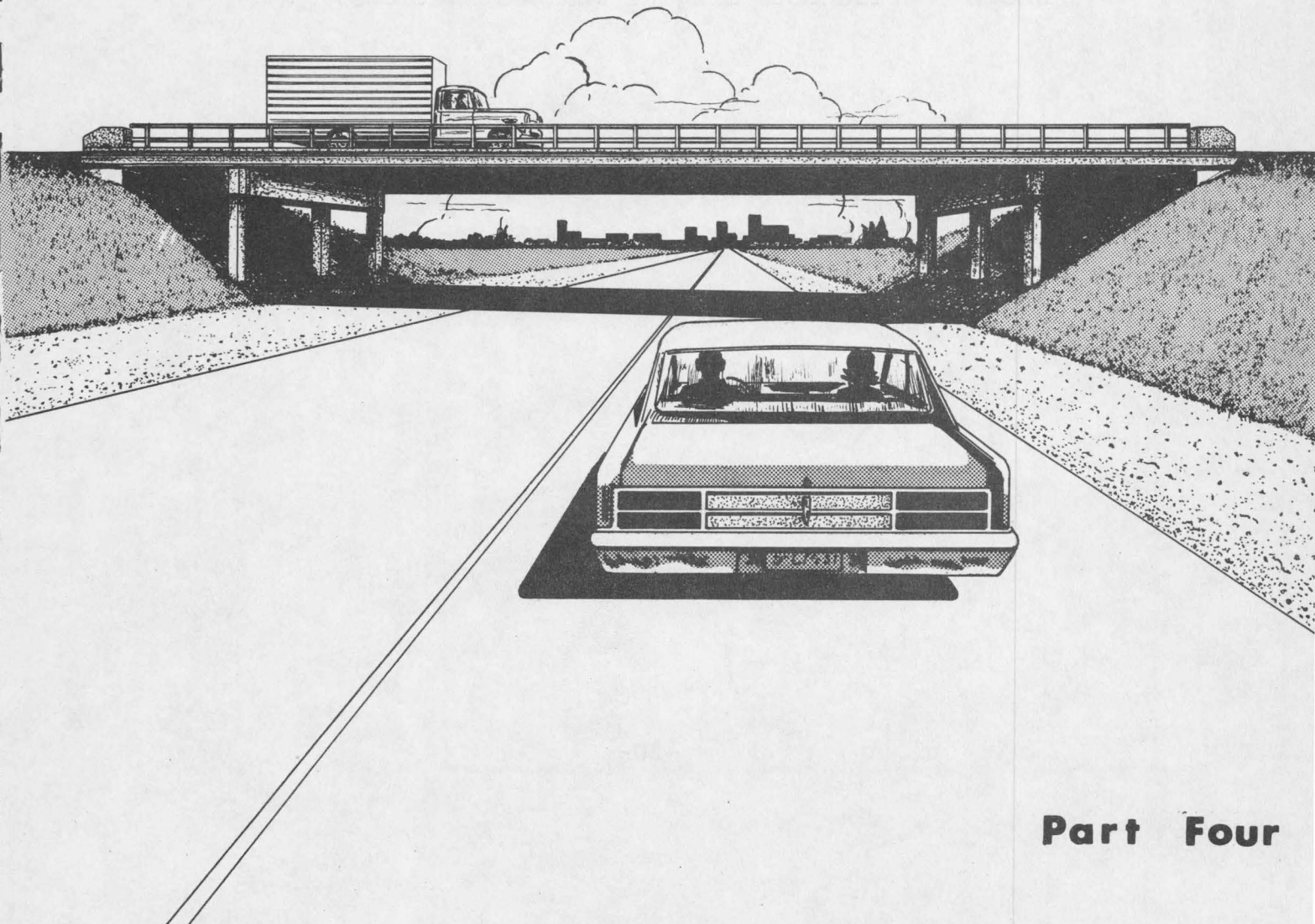
-18-

LEGEND

- TRACT NUMBER
- TRACT BOUNDARY LINE 2
- INTERVIEW STATION LOCATIONS
- CORPORATION LINE
- CODE STATIONS

Traffic

Movements



Part Four

TRAFFIC FLOW CHARTS

The following traffic flow charts illustrate the internal dispersion of trips between points of origin and/or destination through the stations indicated. These charts are not intended to show exact routes, but rather to show trip volume by tract of origin or destination and the number of trips passing through each external interview station. Trip origins and destinations are not differentiated and the tract or station totals shown include both origins and destinations.

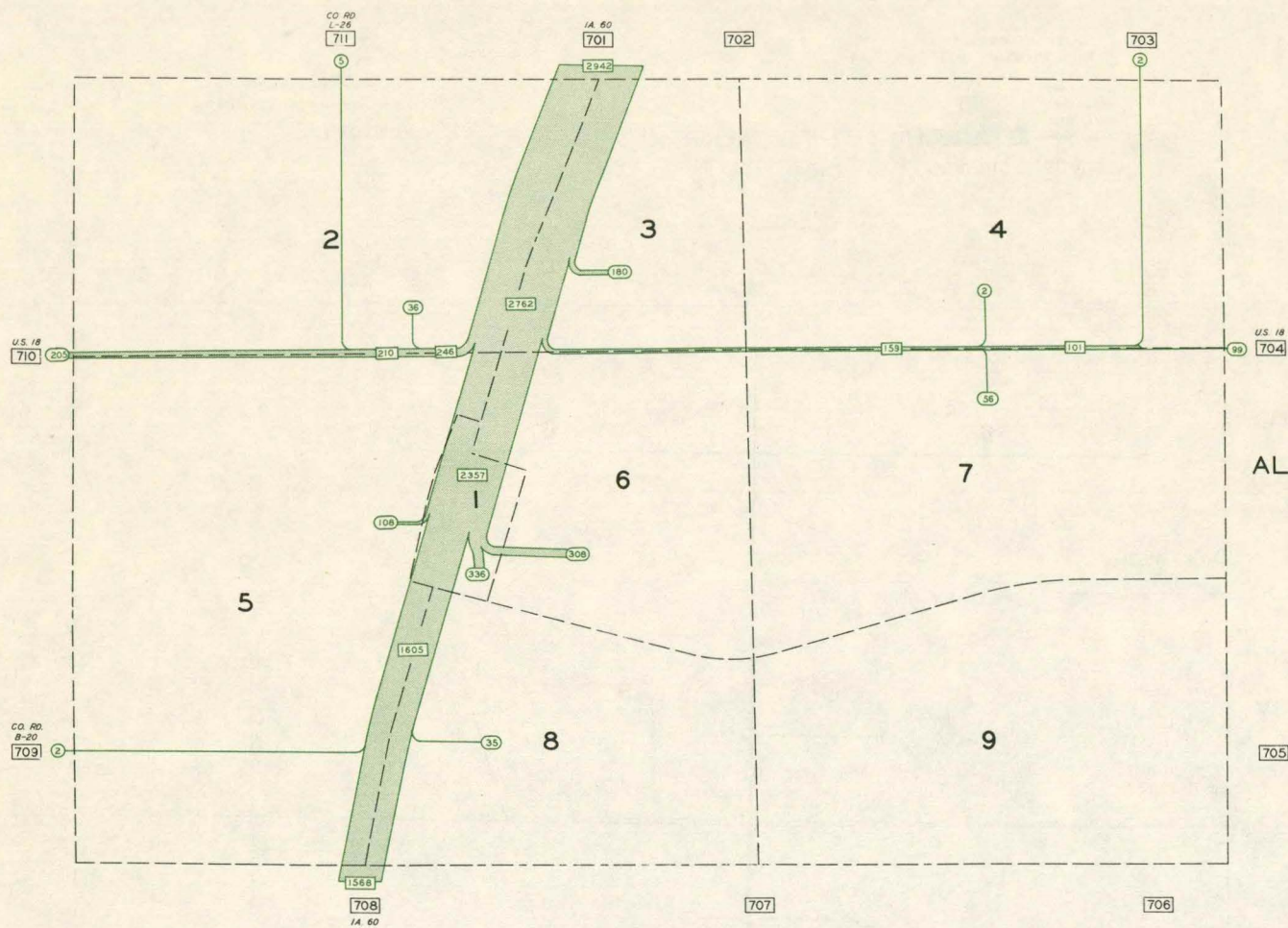
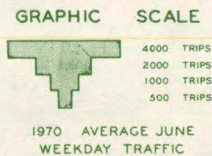


FIGURE 4-1
 INTERNAL DISPERSION OF
 ALL VEHICULAR TRIPS PASSING THROUGH
 STATION 701-IOWA 60 NORTH
 OF THE
 SHELDON STUDY AREA
 (ALL TRIPS BY DRIVERS OF AUTOS, TRUCKS, TAXIS, AND BUSES)

LEGEND
 TRACT BOUNDARY LINE - - - - -
 CORPORATION LINE - - - - -



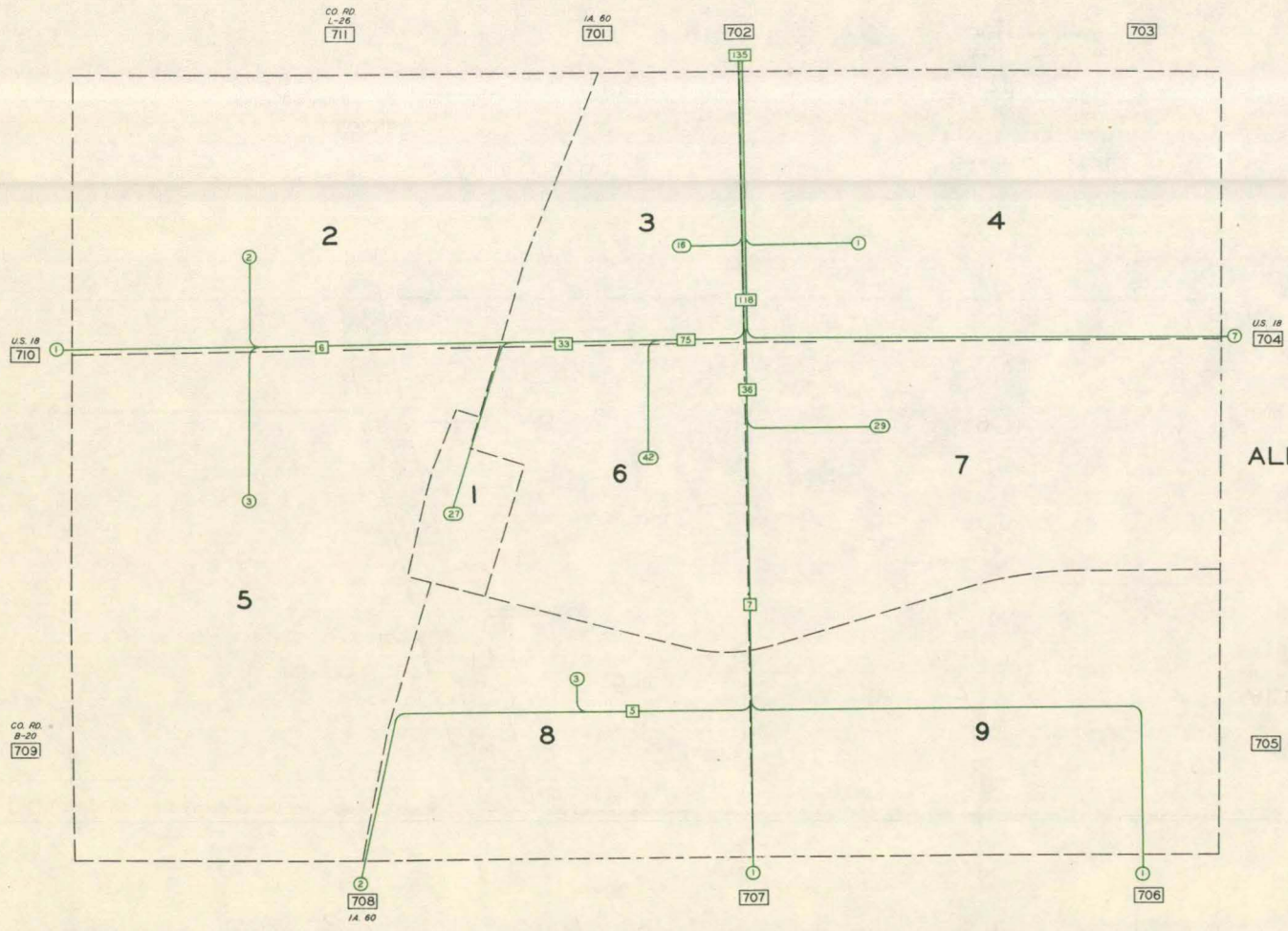
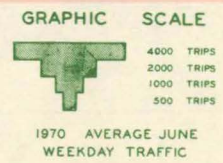


FIGURE 4-2
 INTERNAL DISPERSION OF
 ALL VEHICULAR TRIPS PASSING THROUGH
 STATION 702-LOCAL ROAD NORTH
 OF THE
SHELDON STUDY AREA
 (ALL TRIPS BY DRIVERS OF AUTOS, TRUCKS, TAXIS, AND BUSES)

LEGEND
 TRACT BOUNDARY LINE ———
 CORPORATION LINE ———



-2.3-

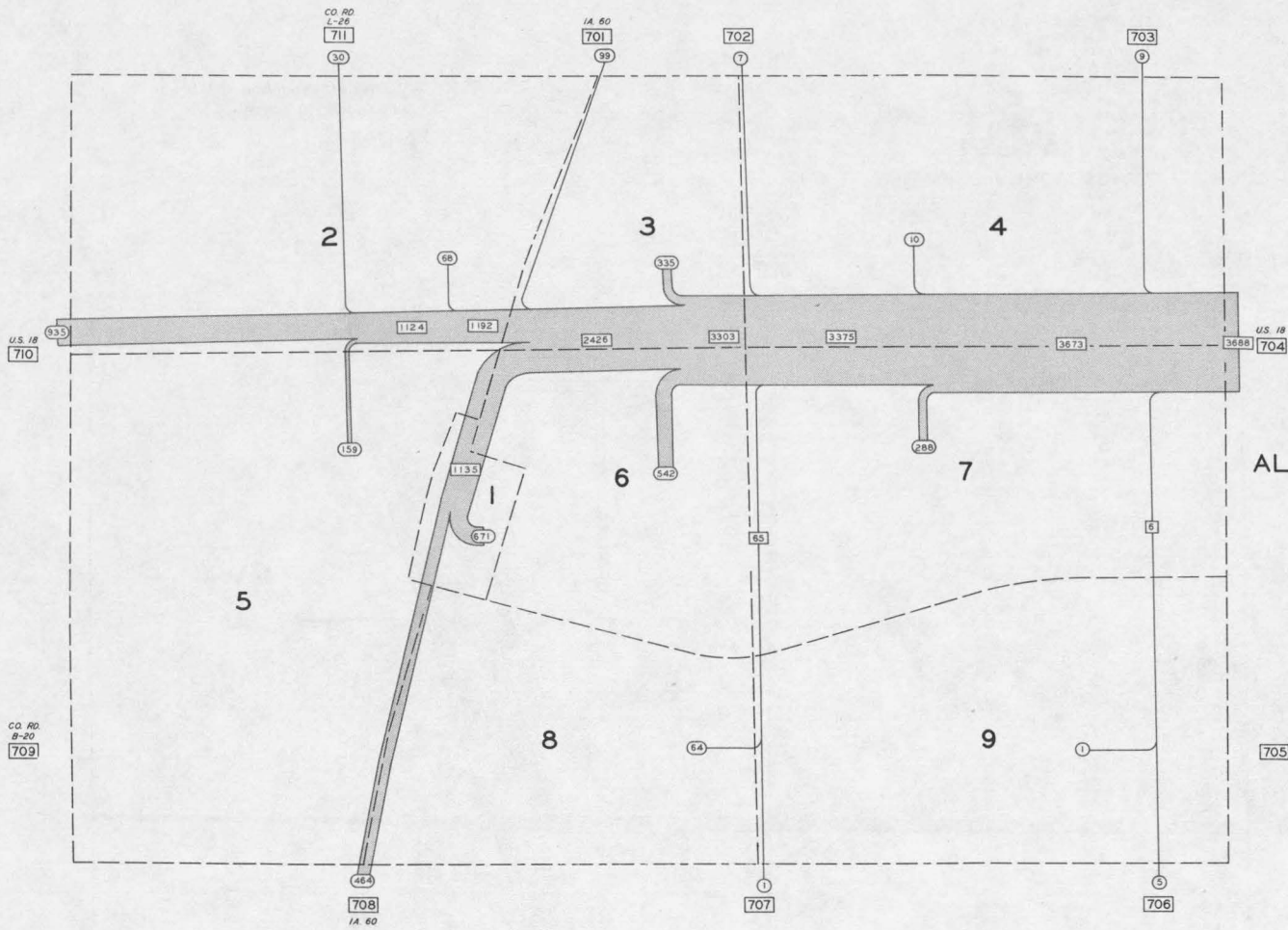
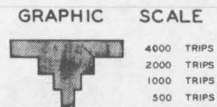


FIGURE 4-3
 INTERNAL DISPERSION OF
 ALL VEHICULAR TRIPS PASSING THROUGH
 STATION 704 - U.S. 18 EAST
 OF THE
 SHELDON STUDY AREA
 (ALL TRIPS BY DRIVERS OF AUTOS, TRUCKS, TAXIS, AND BUSES)

LEGEND
 TRACT BOUNDARY LINE - - - - -
 CORPORATION LINE - - - - -



1970 AVERAGE JUNE
 WEEKDAY TRAFFIC



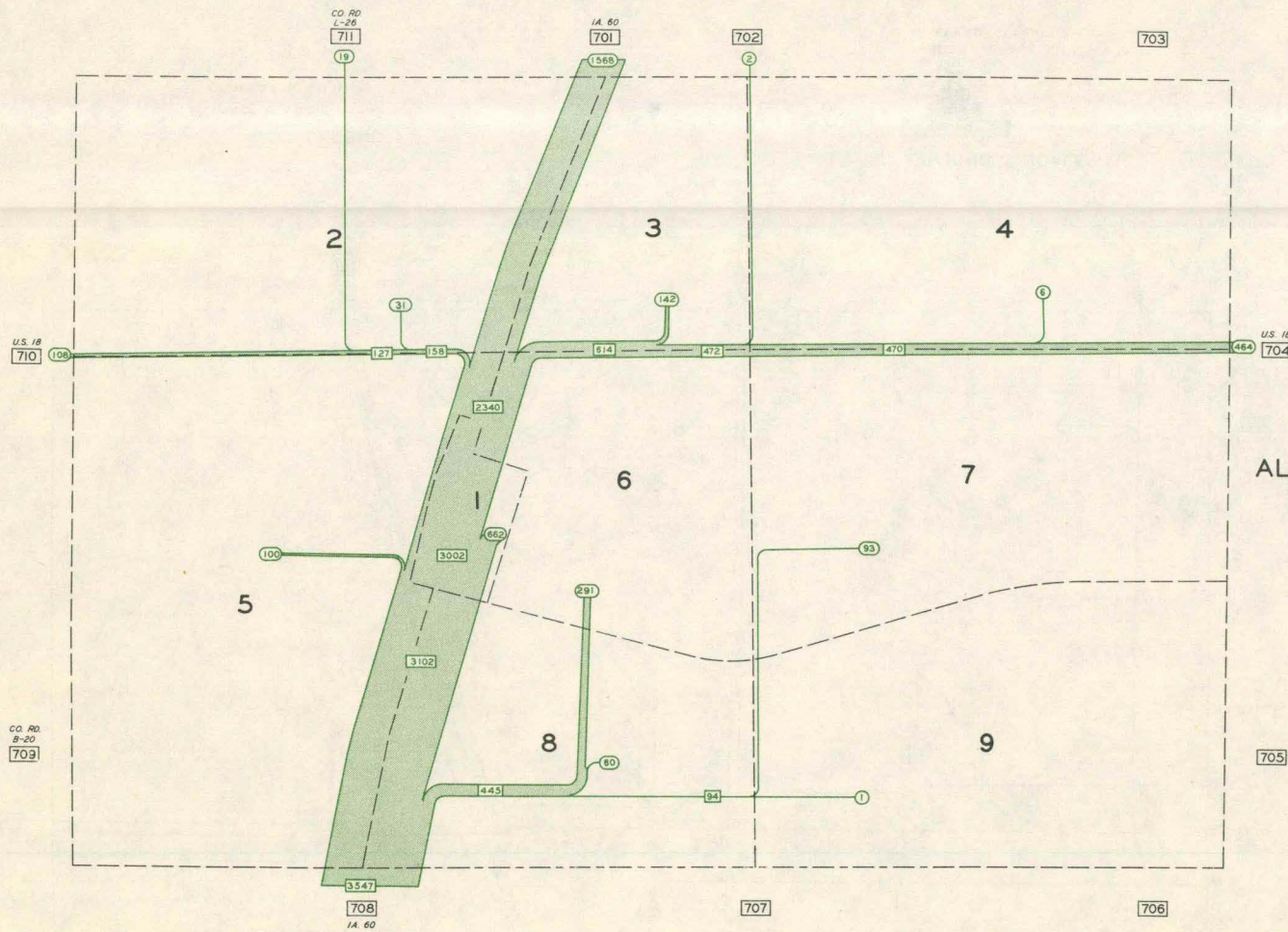


FIGURE 4-4
INTERNAL DISPERSION OF
ALL VEHICULAR TRIPS PASSING THROUGH
STATION 708 - IOWA 60 SOUTH
OF THE
SHELDON STUDY AREA
(ALL TRIPS BY DRIVERS OF AUTOS, TRUCKS, TAXIS, AND BUSES)

LEGEND
TRACT BOUNDARY LINE ---
CORPORATION LINE ---

GRAPHIC SCALE



1970 AVERAGE JUNE
WEEKDAY TRAFFIC

-25-

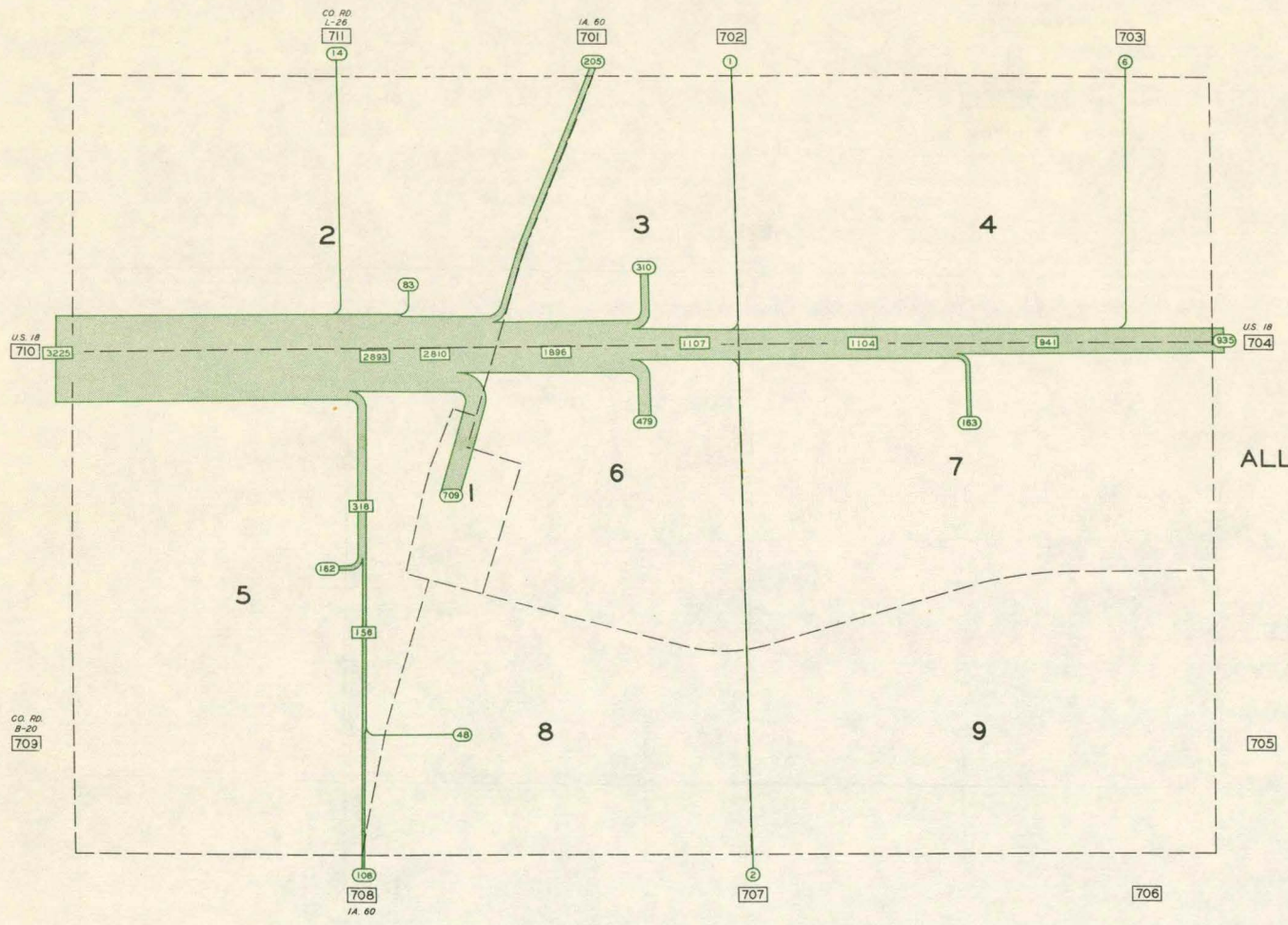
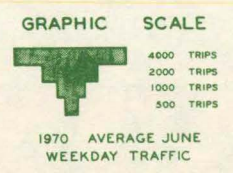


FIGURE 4-5
 INTERNAL DISPERSION OF
 ALL VEHICULAR TRIPS PASSING THROUGH
 STATION 710-U.S. 18 WEST
 OF THE
 SHELDON STUDY AREA
 (ALL TRIPS BY DRIVERS OF AUTOS, TRUCKS, TAXIS, AND BUSES)

LEGEND
 TRACT BOUNDARY LINE - - - - -
 CORPORATION LINE - . - . -



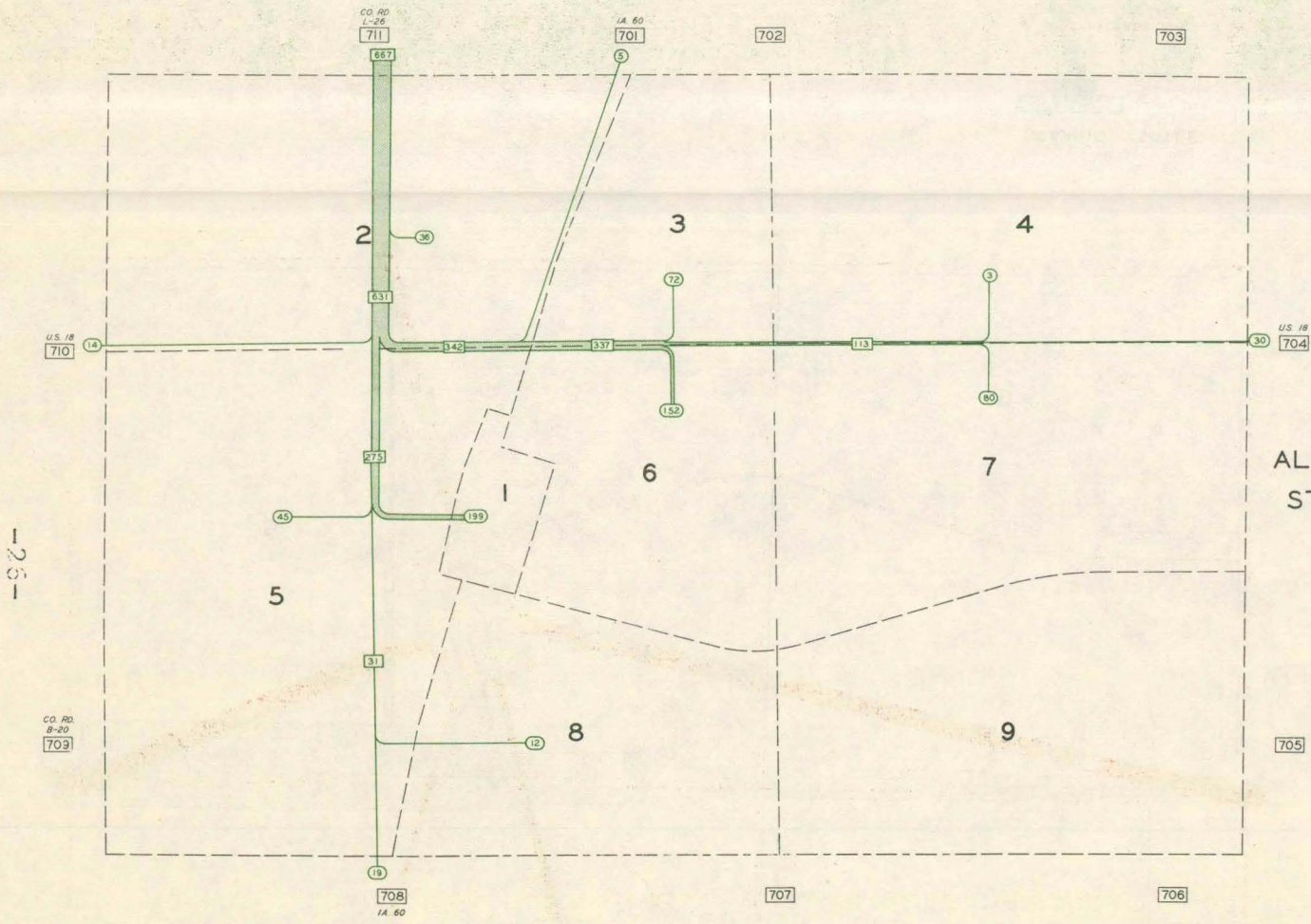



FIGURE 4-6
 INTERNAL DISPERSION OF
 ALL VEHICULAR TRIPS PASSING THROUGH
 STATION 711-COUNTY RD. L-26 NORTH
 OF THE
SHELDON STUDY AREA
 (ALL TRIPS BY DRIVERS OF AUTOS, TRUCKS, TAXIS, AND BUSES)

-25-

LEGEND
 TRACT BOUNDARY LINE - - - - -
 CORPORATION LINE - - - - -

GRAPHIC SCALE

 4000 TRIPS
 2000 TRIPS
 1000 TRIPS
 500 TRIPS
 1970 AVERAGE JUNE
 WEEKDAY TRAFFIC

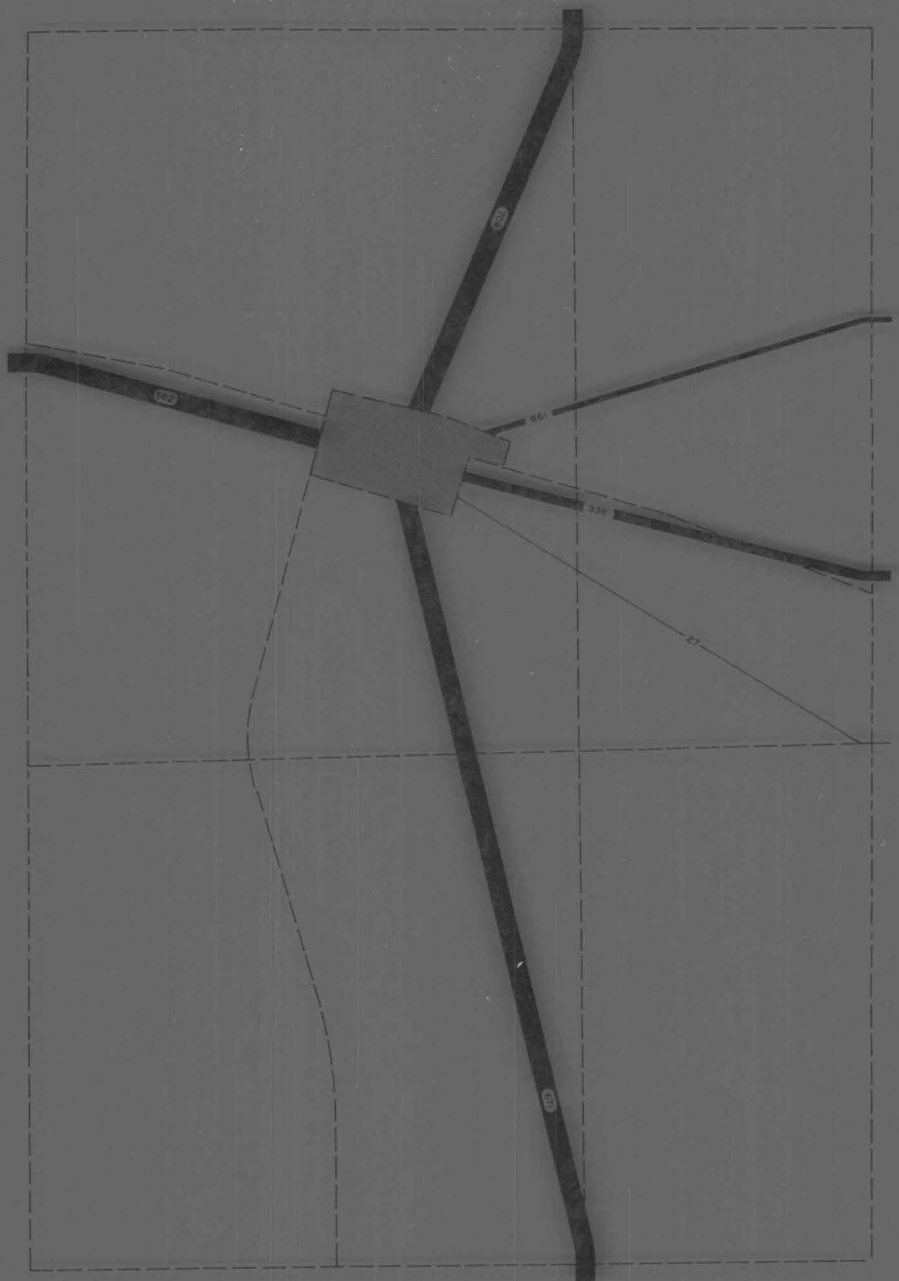


FIGURE 4-7

THE CENTRAL BUSINESS DISTRICT

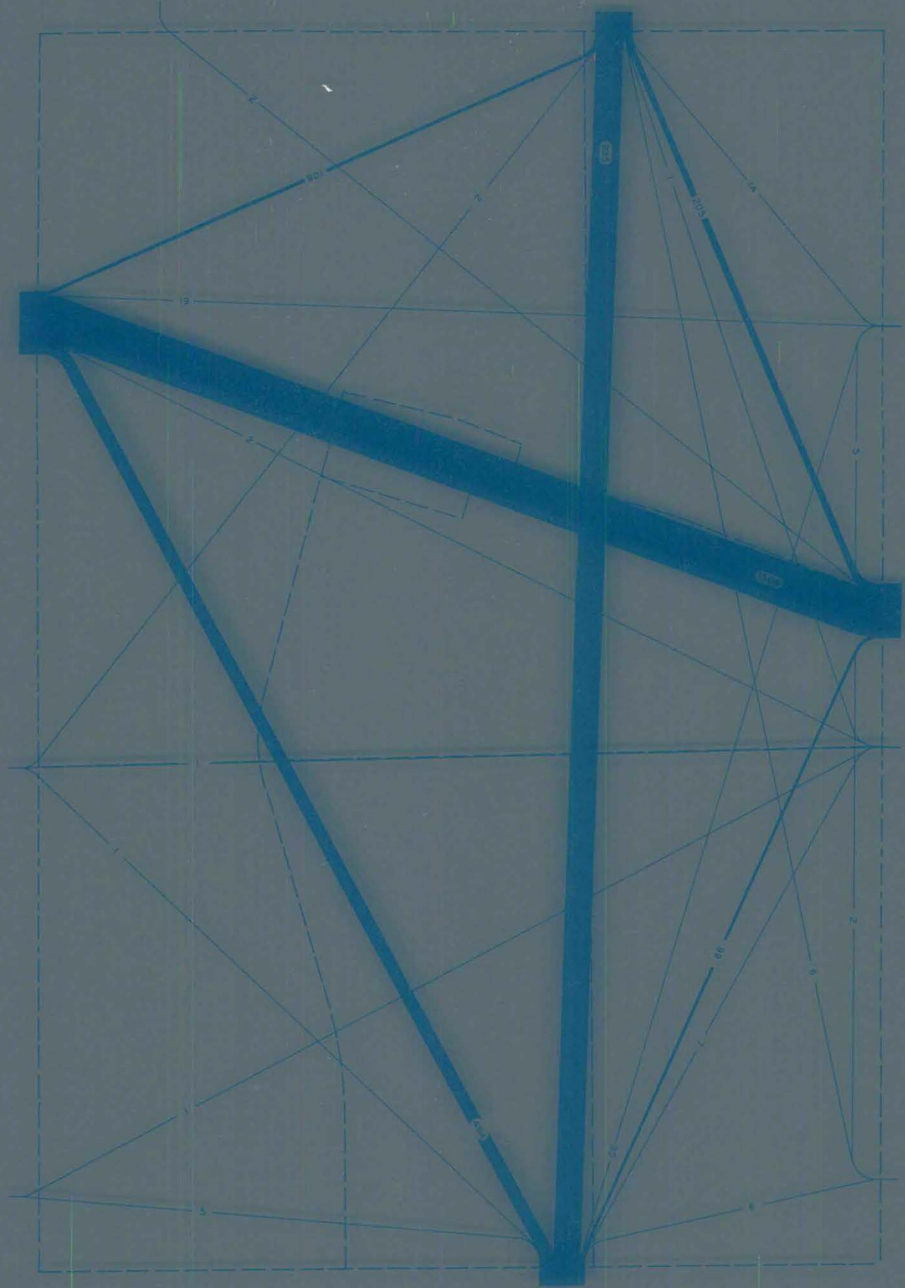


FIGURE 4-8

OTHER EXTERNAL ENTRANCES

-27-

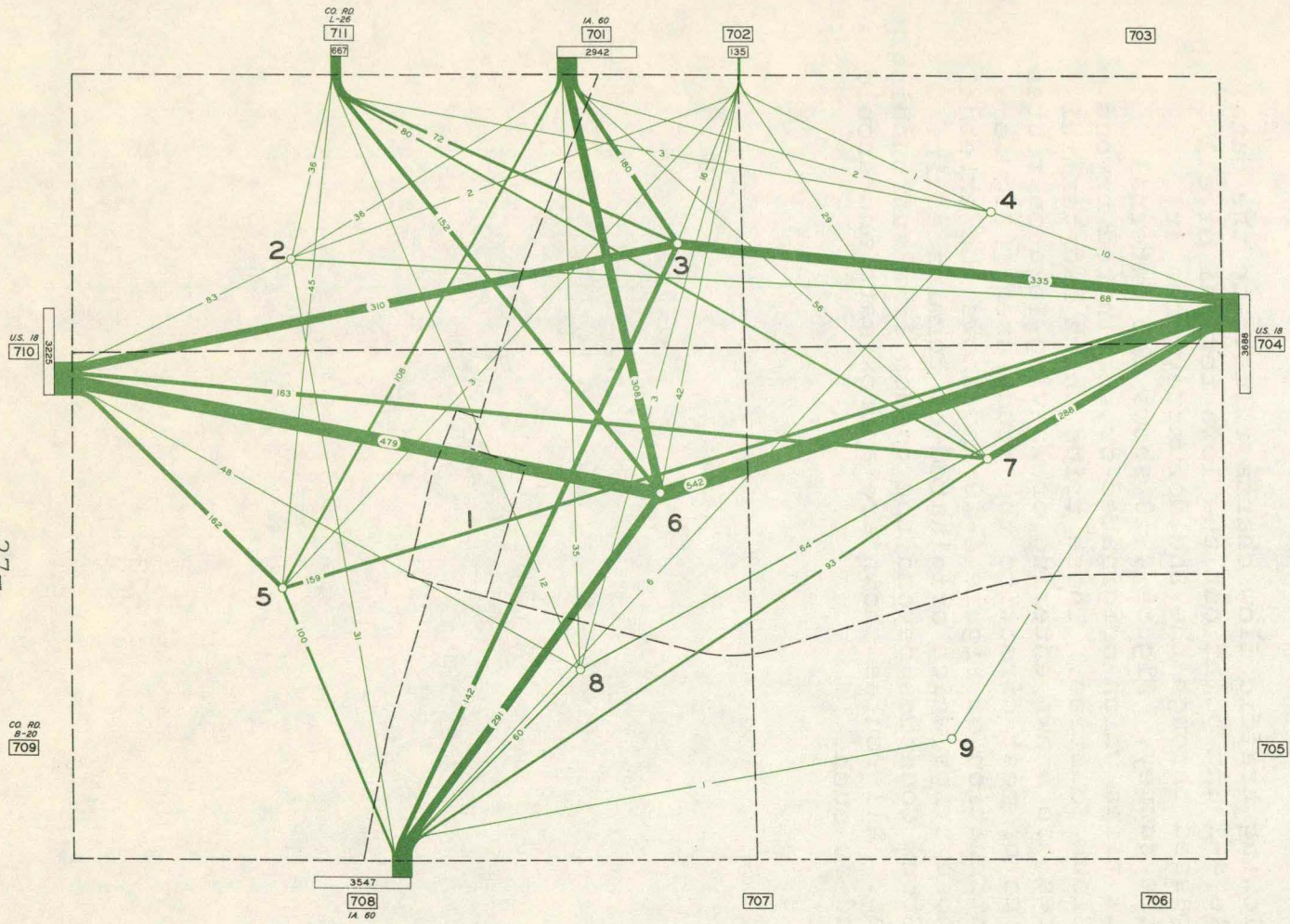
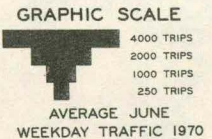


FIGURE 4-9
 DESIRE LINES OF TRAVEL OF TRIPS
 TO OR FROM
 EXTERNAL ENTRANCES OF THE
 SHELDON STUDY AREA
 AND
 INTERNAL TRACTS



LEGEND

TRACT BOUNDARY LINE - - - - -
 CORPORATION LINE - . - . - .

EXTERNAL TRIP TERMINI

Table 4-1 on the adjoining page shows a tabulation of the number and percent of those trips which had termini in O'Brien and Sioux Counties, rural areas adjacent to the study area, other counties in Iowa, and other states.

The following traffic flow charts illustrate the data shown in Table 4-1 and point out the Iowa termini of all trips which passed through the Sheldon study area at the time of the survey. Figure 4-10 shows the external termini of all trips which originated or terminated beyond O'Brien and Sioux Counties. Those trips which had termini in other states are shown entering or leaving Iowa on routes which appear to be most direct to the study area. Figure 4-11 is a continuation of Figure 4-10 and shows the external termini of those trips which originated or terminated in O'Brien and Sioux Counties beyond the cordon line surrounding the study area. All routes shown are approximate and should be interpreted as such.

Table 4-1
 Summary of Trips Entering or Leaving
 The Sheldon Study Area

1970 Average June Weekday Traffic

Origin or Destination	Station Location		Iowa 60 North		Local Road North		U.S. 18 East		Iowa 60 South		U.S. 18 West		Co. Rd. L-26 North	
	Station 701		Station 702		Station 704		Station 708		Station 710		Station 711			
	Vol.	%	Vol.	%	Vol.	%	Vol.	%	Vol.	%	Vol.	%	Vol.	%
Archer	1	.03					173	4.69	6	.17				
Calumet							3	.08						
Gaza							2	.05	1	.03				
Hartley	5	.17					240	6.51						
Paullina	3	.11					56	1.52	27	.76				
Primghar							128	29.12	2	.06				
Sanborn	4	.14					1074	3.47						
Sutherland							37	1.00	1	.03				
Alton							1	.03	187	5.27	9	.28		
Boyden	1	.03							6	.17	764	23.69	2	.30
Chatsworth									1	.03				
Granville							8	.22	91	2.57	1	.03		
Hawarden									32	.90	10	.31		
Hospers							11	.30	442	12.46	13	.40		
Hull	1	.03							4	.11	345	10.70	2	.30
Ireton							2	.05	22	.62	1	.03		
Matlock	4	.14	3	2.22							116	3.60	75	11.25
Maurice									3	.08	1	.03		
Orange City							2	.05	332	9.36	60	1.86		
Perkins											1	.03		
Rock Valley	1	.03	1	.74					3	.08	171	5.30		
Sioux Center	1	.03					1	.03	59	1.67	225	6.98		
Total to Towns	21	.71	4	2.96			1738	47.12	1219	34.37	1717	53.24	79	11.85
Rural O'Brien & Sioux Co.	279	9.49	65	48.15			395	10.71	299	8.43	631	19.57	472	70.76
Other Counties	1363	46.33	61	45.19			1467	39.78	1362	38.40	391	12.12	110	16.49
Other States	1279	43.47	5	3.70			88	2.39	667	18.80	486	15.07	6	.90
Grand Total	2942	100.00	135	100.00			3688	100.00	3547	100.00	3225	100.00	667	100.00

FIGURE 4-10
DISPERSION OF EXTERNAL TRIPS
BETWEEN THE SHELDON STUDY AREA
AND POINTS IN IOWA BEYOND O'BRIEN AND SIOUX COUNTIES

ALL TRIPS BY DRIVERS OF AUTOS, TRUCKS, TAXIS, AND BUSES

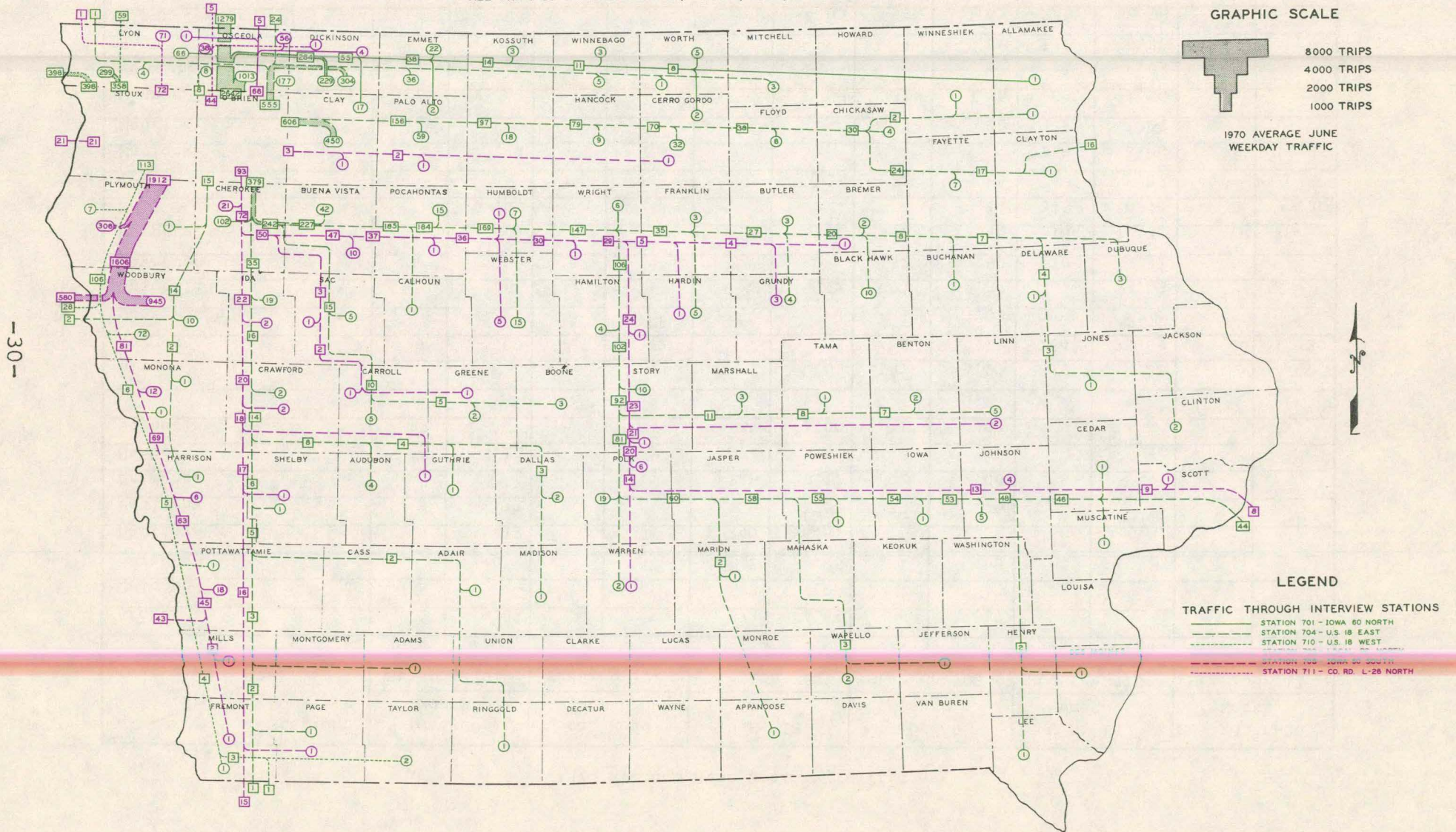
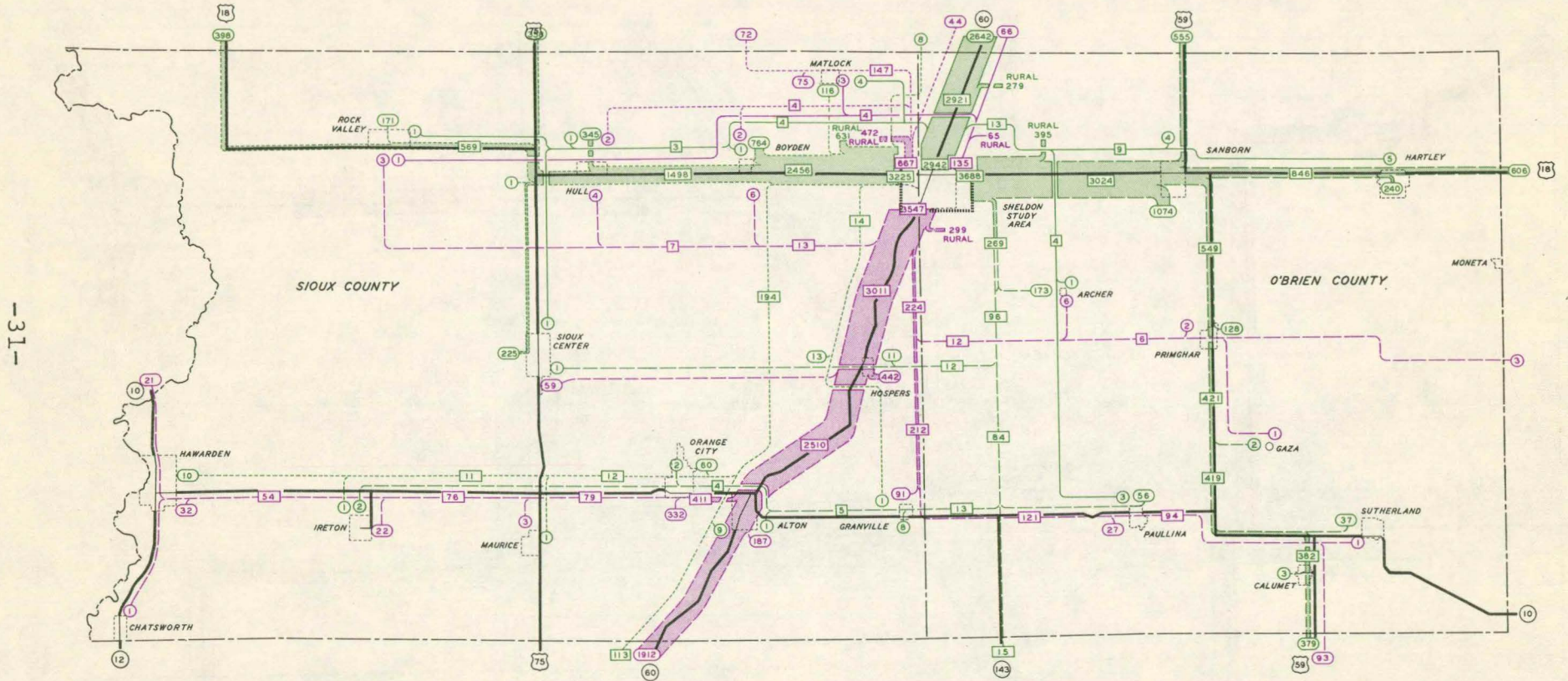


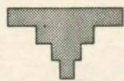
FIGURE 4-11
DISPERSION OF EXTERNAL TRIPS
BETWEEN THE SHELDON STUDY AREA
AND POINTS WITHIN O'BRIEN AND SIOUX COUNTIES

ALL TRIPS BY DRIVERS OF AUTOS, TRUCKS, TAXIS, AND BUSES



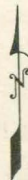
-31-

GRAPHIC SCALE



8000 TRIPS
4000 TRIPS
2000 TRIPS
1000 TRIPS

1970 AVERAGE JUNE
WEEKDAY TRAFFIC



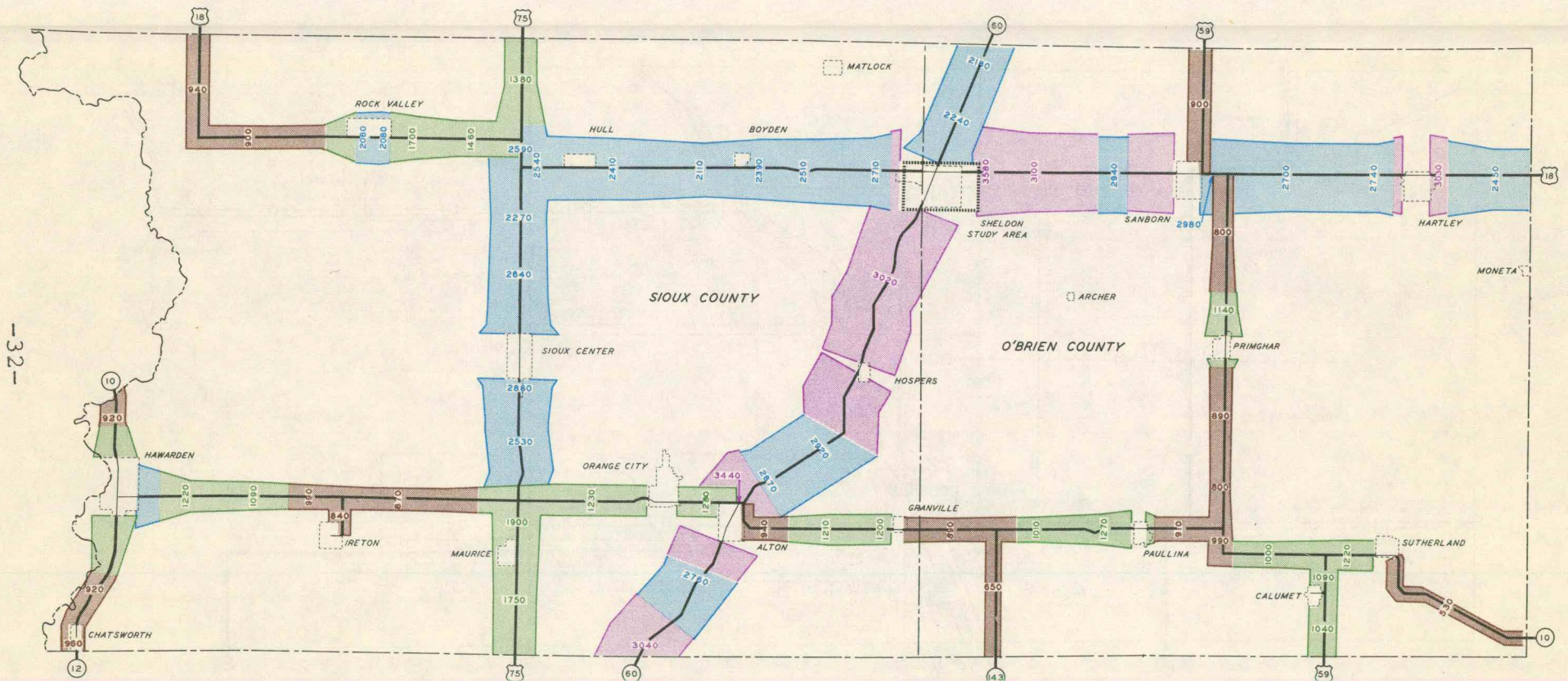
LEGEND

TRAFFIC THROUGH INTERVIEW STATIONS

- STATION 701 - IOWA 60 NORTH
- - - STATION 704 - U.S. 18 EAST
- STATION 710 - U.S. 18 WEST
- STATION 702 - LOCAL ROAD NORTH
- STATION 708 - IOWA 60 SOUTH
- - - STATION 711 - COUNTY ROAD L-26 NORTH

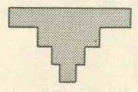
- CORPORATION LINE
- CORDON LINE

FIGURE 4-12
 TRAFFIC VOLUMES ON
 RURAL PRIMARY HIGHWAYS
 IN O'BRIEN AND SIOUX COUNTIES



-32-

GRAPHIC SCALE



4000 TRIPS
 2000 TRIPS
 1000 TRIPS
 500 TRIPS

AVERAGE ANNUAL
 DAILY TRAFFIC 1970



LEGEND

- 0 TO 1000 TRIPS
- 1000 TO 2000 TRIPS
- 2000 TO 3000 TRIPS
- 3000 TRIPS AND OVER

CORPORATION LINE - - - - -
 CORDON LINE ·······

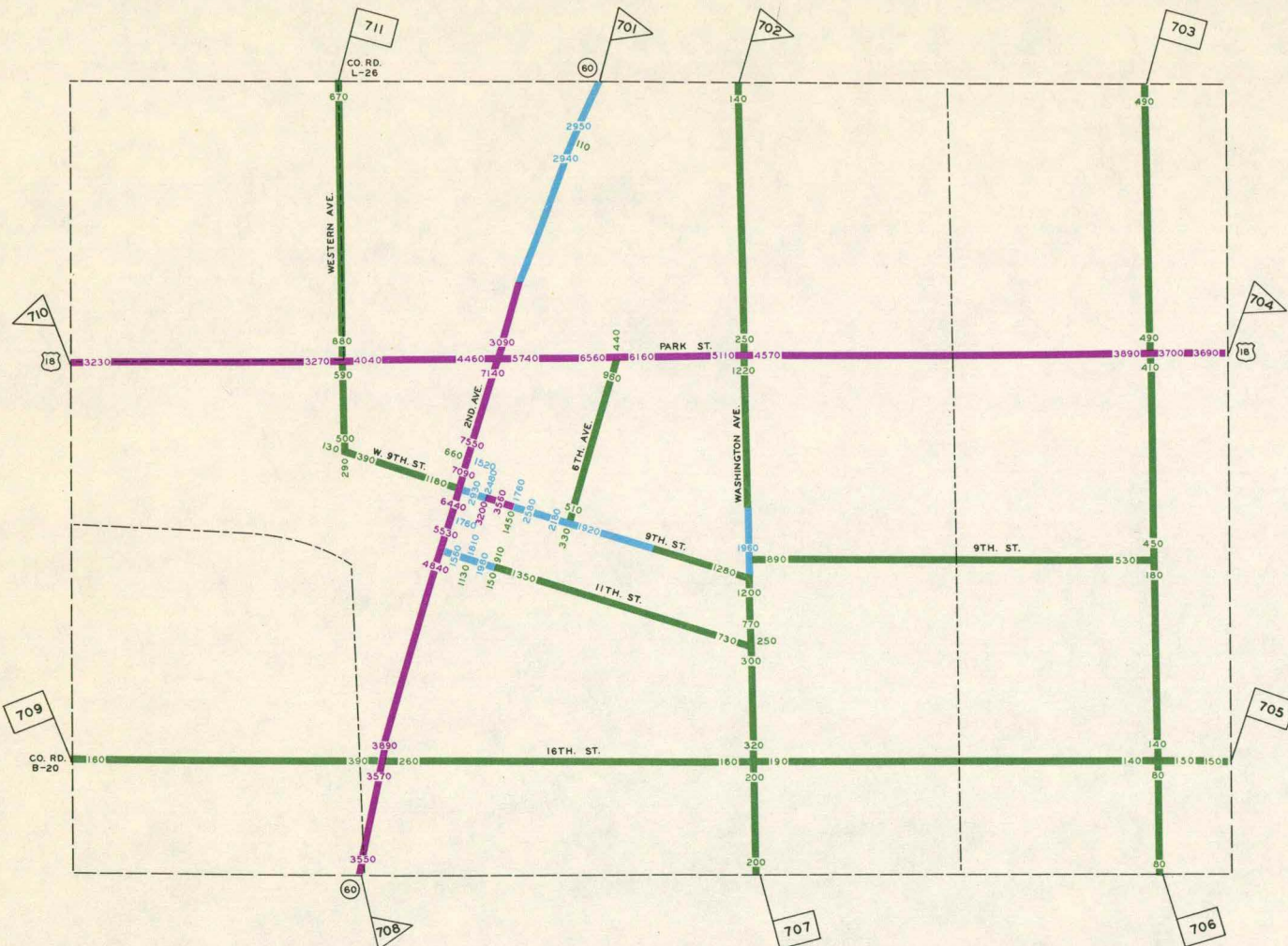
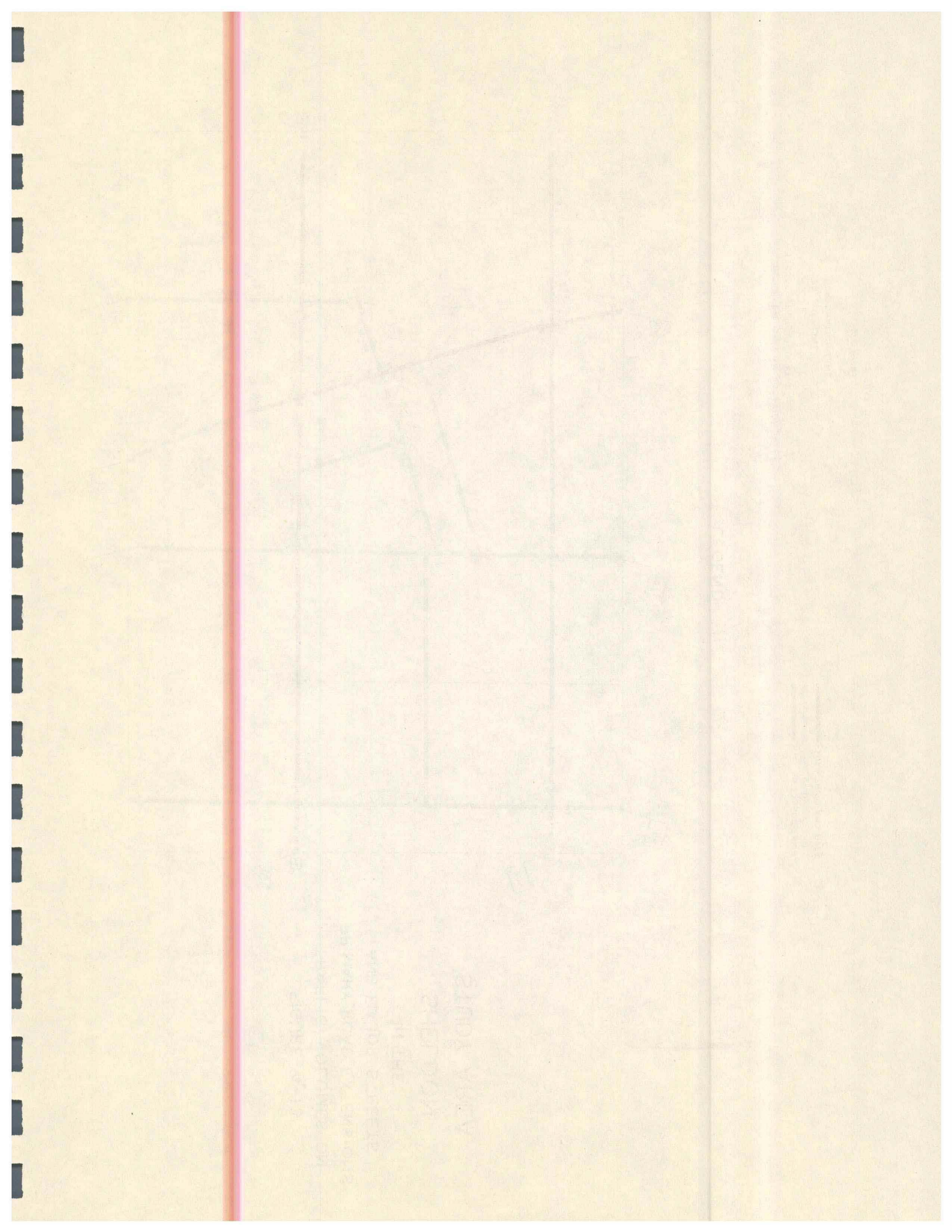


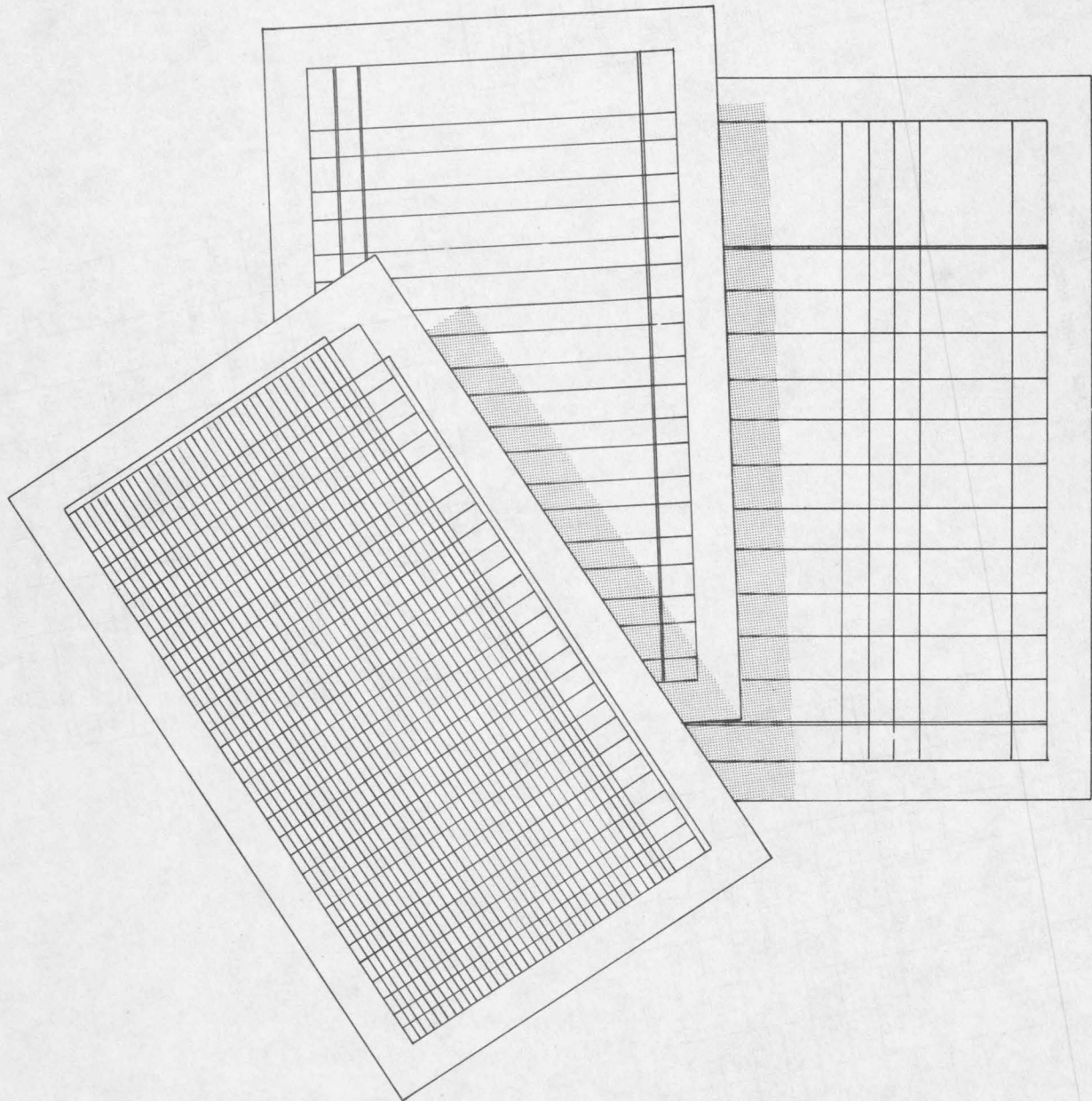
FIGURE 4-13
 TRAFFIC VOLUMES ON
 PRIMARY ROAD EXTENSIONS
 AND MAJOR STREETS
 IN THE
 SHELDON
 STUDY AREA

LEGEND

- INTERVIEW STATION LOCATION
- CODE STATION LOCATION
- CORDON LINE
- CORPORATION LINE
- 1970 AVERAGE JUNE WEEKDAY TRAFFIC
- 0 TO 1500 TRIPS
- 1500 TO 3000 TRIPS
- 3000 TRIPS AND OVER



Appendix



SHELDON STUDY AREA
TRIP PURPOSE OF EXTERNAL TRIPS
ALL VEHICLE TRIPS
1970 AVERAGE JUNE WEEKDAY TRAFFIC

External Local Trips

Table B-2a (1)

Station Trip Purpose	701	702	704	708	710	711	Total Traffic
	Iowa 60 North	Local Road North	U.S. 18 East	Iowa 60 South	U.S. 18 West	Co. Rd. L-26 North	
Work	139	20	274	170	276	103	982
Personal Business	133	7	240	209	210	73	872
During Work	234	22	460	304	391	171	1582
Medical or Dental	23	2	76	48	60	2	211
School	23	1	35	22	168	4	253
Social or Recreation	221	47	490	166	333	88	1345
Eat	29	3	51	41	57	26	207
Shop	220	15	474	398	420	87	1614
Serve Passengers	39	6	38	28	39	45	195
Total Traffic	1061	123	2138	1386	1954	599	7261

External Through Trips

Table B-2a (2)

Station Trip Purpose	701	702	704	708	710	711	Total Traffic
	Iowa 60 North	Local Road North	U.S. 18 East	Iowa 60 South	U.S. 18 West	Co. Rd. L-26 North	
Work	85	3	119	79	124	8	418
Personal Business	202	2	189	248	144	7	792
During Work	553	4	445	656	333	25	2016
Medical or Dental	9	--	11	12	6	1	39
School	28	--	53	44	98	4	227
Social or Recreation	943	3	685	1051	532	18	3232
Eat	15	--	7	16	7	1	46
Shop	25	--	27	35	13	3	103
Serve Passengers	21	--	14	20	14	1	70
Total Traffic	1881	12	1550	2161	1271	68	6943

Summary - All External Trips

Table B-2a (3)

Station Trip Purpose	701	702	704	708	710	711	Total Traffic
	Iowa 60 North	Local Road North	U.S. 18 East	Iowa 60 South	U.S. 18 West	Co. Rd. L-26 North	
Work	224	23	393	249	400	111	1400
Personal Business	335	9	429	457	354	80	1664
During Work	787	26	905	960	724	196	3598
Medical or Dental	32	2	87	60	66	3	250
School	51	1	88	66	266	8	480
Social or Recreation	1164	50	1175	1217	865	106	4577
Eat	44	3	58	57	64	27	253
Shop	245	15	501	433	433	90	1717
Serve Passengers	60	6	52	48	53	46	265
Total Traffic	2942	135	3688	3547	3225	667	14,204

SHELDON STUDY AREA
AVERAGE CAR OCCUPANCY BY TRIP PURPOSE
1970 AVERAGE JUNE WEEKDAY TRAFFIC

External Local Trips

Table B-3a(1)

Trip Purpose Origin	Trip Purpose - Destination										Average Occupancy
	Work	Personal Business	During Work	Medical or Dental	School	Social or Recreation	Eat	Shop	Serve Pass.	Home	
Work		2.864	1.263		1.000	1.194	1.659	2.046	1.000	1.224	1.291
Personal Business	1.176	1.697		1.449	1.000	2.388		1.925	2.000	1.631	1.694
During Work	1.000	2.000	1.231		3.483	1.000		1.000		1.149	1.241
Medical or Dental	2.000	1.563		2.000		2.606				2.111	2.112
School	1.615	1.440	1.000		3.516	6.480	2.153	2.497		1.372	1.904
Social or Recreation	1.000	1.837			3.448	2.451	2.118	2.564	2.654	2.293	2.313
Eat	1.148	2.090			1.403	2.417		2.332	1.000	2.110	2.052
Shop	1.388	2.475	1.000			2.392		2.300	4.538	2.195	2.225
Serve Passengers		2.257		2.000		2.000	3.000	3.000	1.500	2.639	2.572
Home	1.245	1.728	1.097	1.941	1.387	2.358	2.063	2.171	2.705		1.990
Average Occupancy	1.247	1.802	1.226	1.932	1.745	2.373	2.015	2.181	2.653	1.915	1.933

External Through Trips

Table B-3a(2)

Trip Purpose Origin	Trip Purpose - Destination										Average Occupancy		
	Work	Personal Business	During Work	Medical or Dental	School	Social or Recreation	Eat	Shop	Serve Pass.	Home			
Work	1.000	1.000	1.000							1.000	2.000	1.744	1.675
Personal Business	1.000	1.270			1.000	2.195	3.000	1.000				1.875	1.871
During Work			1.249									1.192	1.245
Medical or Dental												2.607	2.607
School	1.000	1.000	2.000		5.001						3.000	1.596	1.712
Social or Recreation	1.000	2.866			2.000	2.726	2.691	2.903				2.750	2.741
Eat		2.169			2.604	2.963		2.000				2.831	2.784
Shop		3.968										2.592	2.852
Serve Passengers						3.090					4.528	2.178	2.419
Home	1.852	1.981	1.000	1.986	1.568	2.865	2.627	2.532	3.091				2.565
Average Occupancy	1.812	2.017	1.241	1.986	1.689	2.829	2.516	2.483	3.111	2.424			2.399

Summary - All External Trips

Table B-3a(3)

Trip Purpose Origin	Trip Purpose - Destination										Average Occupancy
	Work	Personal Business	During Work	Medical or Dental	School	Social or Recreation	Eat	Shop	Serve Pass.	Home	
Work	1.000	2.538	1.228		1.000	1.179	1.670	2.046	1.172	1.305	1.346
Personal Business	1.164	1.564		1.449	1.000	2.314	3.000	1.874	2.000	1.705	1.746
During Work	1.000	2.000	1.238		3.483	1.000		1.000		1.165	1.243
Medical or Dental	2.000	1.563		2.000		2.606				2.159	2.156
School	1.566	1.415	1.357		3.645	6.480	2.153	2.497	3.000	1.445	1.857
Social or Recreation	1.000	2.193			3.210	2.651	2.267	2.590	2.654	2.572	2.575
Eat	1.148	2.112			1.584	2.645		2.241	1.000	2.178	2.216
Shop	1.388	2.734	1.000			2.474	1.000	2.300	4.538	2.209	2.254
Serve Passengers		2.257		2.000		2.533	3.000	3.000	2.183	2.556	2.547
Home	1.329	1.813	1.064	1.944	1.453	2.614	2.105	2.180	2.760		2.176
Average Occupancy	1.322	1.870	1.232	1.936	1.728	2.604	2.057	2.189	2.716	2.064	2.076

TABLE E-1

SHELDON STUDY AREA
DIRECTIONAL TRIPS BETWEEN STATIONS AND TRACTS
1970 AVERAGE JUNE WEEKDAY TRAFFIC

VEHICLE TRIPS							VEHICLE TRIPS						
From	To	Auto	Pickup and Panel	Single Unit & Bus	Semi Truck	Total	From	To	Auto	Pickup and Panel	Single Unit & Bus	Semi Truck	Total
1	701	122	24	18	8	172	1	711	49	12	30		91
2	701	17	1	6		24	2	711	8	6			14
3	701	97	10	8	2	117	3	711	28	5	1		34
5	701	44	9	9	3	65	4	711	1				1
6	701	132	19	8		159	5	711	13	5	4		22
7	701	23	3		2	28	6	711	58	6			64
8	701	13	4			17	7	711	16	5	19		40
Cl. 2	Total	448	70	49	15	582	8	711	5		1		6
1	702	3	2			5	Cl. 2	Total	178	39	55		272
2	702	1				1	701	1	116	14	24	10	164
3	702	4	1			5	701	2	7	3	2		12
5	702	1				1	701	3	44	13	4	2	63
6	702	7				7	701	4	2				2
7	702	11	6			17	701	5	34	8	1		43
8	702	1	1			1	701	6	126	16	4	3	149
Cl. 2	Total	27	10			37	701	7	23	4	1		28
1	704	214	22	45	18	299	701	8	10	1	5	2	18
2	704	20	8	1	4	33	Cl. 3	Total	362	59	41	17	479
3	704	161	13	3		177	702	1	17	3	2		22
4	704	4		2		6	702	2			1		1
5	704	57	12	12	1	82	702	3	9	2			11
6	704	241	17	10	7	275	702	4		1			1
7	704	90	7	53	1	151	702	5	2				2
8	704	25	3		1	29	702	6	32	3			35
9	704	1				1	702	7	8	4			12
Cl. 2	Total	813	82	126	32	1053	702	8	1	1			2
1	708	225	31	31	17	304	Cl. 3	Total	69	14	3		86
2	708	11	2		1	14	704	1	260	42	48	22	372
3	708	63	7	6	1	77	704	2	22	10	3		35
4	708	1	3			4	704	3	140	11	7		158
5	708	36	10	6		52	704	4		2	2		4
6	708	132	21	7	9	169	704	5	58	7	8	4	77
7	708	45	5		3	53	704	6	227	22	14	4	267
8	708	18	5	3	2	28	704	7	79	5	53		137
9	708	1				1	704	8	29	3	3		35
Cl. 2	Total	532	84	53	33	702	Cl. 3	Total	815	102	138	30	1085
1	710	235	44	43	7	329	708	1	278	27	35	18	358
2	710	29	8	5		42	708	2	12	2	1	2	17
3	710	150	6	5	2	163	708	3	47	7	5	6	65
5	710	66	11	3	4	84	708	4		2			2
6	710	191	14	4	6	215	708	5	30	10	7	1	48
7	710	66	10	4		80	708	6	92	16	8	6	122
8	710	20	1	2		23	708	7	31	5	4		40
Cl. 2	Total	757	94	66	19	936	708	8	21	6	2	3	32
							Cl. 3	Total	511	75	62	36	684

VEHICLE TRIPS						
From	To	Auto	Pickup and Panel	Single Unit & Bus	Semi Truck	Total
710	1	274	34	51	21	380
710	2	31	3	7		41
710	3	130	11	6		147
710	5	58	8	12		78
710	6	238	17	4	5	264
710	7	76	4	3		83
710	8	25				25
Cl. 3	Total	832	77	83	26	1018
711	1	63	14	31		108
711	2	13	9			22
711	3	33	4	1		38
711	4	2				2
711	5	14	3	6		23
711	6	80	5	3		88
711	7	11	3	26		40
711	8	5	1			6
Cl. 3	Total	221	39	67		327
701	703	1				1
701	704	37	5	1	8	51
701	708	567	62	35	138	802
701	709	1				1
701	710	73	15	8	7	103
701	711	2		1		3
703	701	1				1
704	701	31	5	6	6	48
708	701	538	61	44	123	766
709	701	1				1
710	701	76	12	3	11	102
711	701	1		1		2
Cl. 4	Total	1328	161	99	293	1881
702	704	2	2	1		5
702	707		1			1
702	708	1				1
702	710	1				1
704	702	1	1			2
706	702		1			1
708	702	1				1
Cl. 4	Total	6	5	1		12
704	701	31	5	6	6	48
704	702	1	1			2
704	703	5				5
704	706	2			1	3
704	707	1				1

VEHICLE TRIPS						
From	To	Auto	Pickup and Panel	Single Unit & Bus	Semi Truck	Total
704	708	150	23	24	37	234
704	710	346	50	20	43	459
704	711	10	1	6		17
701	704	37	5	1	8	51
702	704	2	2	1		5
703	704	4				4
706	704	1		1		2
708	704	160	22	17	31	230
710	704	348	47	35	46	476
711	704	6	2	5		13
Cl. 4	Total	1104	158	116	172	1550
708	701	538	61	44	123	766
708	702	1				1
708	704	160	22	17	31	230
708	710	47	7	9	2	65
708	711	5	1	1	1	8
701	708	567	62	35	138	802
702	708	1				1
704	708	150	23	24	37	234
710	708	31	4	3	5	43
711	708	8	1	1	1	11
Cl. 4	Total	1508	181	134	338	2161
710	701	76	12	3	11	102
710	703	6				6
710	704	348	47	35	46	476
710	707	2				2
710	708	31	4	3	5	43
710	711	5	1		1	7
701	710	73	15	8	7	103
702	710	1				1
704	710	346	50	20	43	459
708	710	47	7	9	2	65
711	710	4	2		1	7
Cl. 4	Total	939	138	78	116	1271
711	701	1		1		2
711	704	6	2	5		13
711	708	8	1	1	1	11
711	710	4	2		1	7
701	711	2		1		3
704	711	10	1	6		17
708	711	5	1	1	1	8
710	711	5	1		1	7
Cl. 4	Total	41	8	15	4	68

TABLE E-2

SHELDON STUDY AREA
NONDIRECTIONAL TRIPS BETWEEN STATIONS AND TRACTS
1970 AVERAGE JUNE WEEKDAY TRAFFIC

VEHICLE TRIPS							VEHICLE TRIPS						
Between		Auto	Pickup and Panel	Single Unit & Bus	Semi Truck	Total	Between		Auto	Pickup and Panel	Single Unit & Bus	Semi Truck	Total
701	1	238	38	42	18	336	710	1	509	78	94	28	709
701	2	24	4	8		36	710	2	60	11	12		83
701	3	141	23	12	4	180	710	3	280	17	11	2	310
701	4	2				2	710	5	124	19	15	4	162
701	5	78	17	10	3	108	710	6	429	31	8	11	479
701	6	258	35	12	3	308	710	7	142	14	7		163
701	7	46	7	1	2	56	710	8	45	1	2		48
701	8	23	5	5	2	35	Cl.2&3 Total		1589	171	149	45	1954
Cl.2&3	Total	810	129	90	32	1061							
702	1	20	5	2		27	711	1	112	26	61		199
702	2	1		1		2	711	2	21	15			36
702	3	13	3			16	711	3	61	9	2		72
702	4		1			1	711	4	3				3
702	5	3				3	711	5	27	8	10		45
702	6	39	3			42	711	6	138	11	3		152
702	7	19	10			29	711	7	27	8	45		80
702	8	1	2			3	711	8	10	1	1		12
Cl.2&3	Total	96	24	3		123	Cl.2&3 Total		399	78	122		599
704	1	474	64	93	40	671	701	703	2				2
704	2	42	18	4	4	68	701	704	68	10	7	14	99
704	3	301	24	10		335	701	708	1105	123	79	261	1568
704	4	4	2	4		10	701	709	1	1			2
704	5	115	19	20	5	159	701	710	149	27	11	18	205
704	6	468	39	24	11	542	701	711	3		2		5
704	7	169	12	106	1	288	Cl. 4 Total		1328	161	99	293	1881
704	8	54	6	3	1	64	Cl.2&3 Total		810	129	90	32	1061
704	9	1				1	701 Total		2138	290	189	325	2942
Cl.2&3	Total	1628	184	264	62	2138							
708	1	503	58	66	35	662	702	704	3	3	1		7
708	2	23	4	1	3	31	702	706		1			1
708	3	110	14	11	7	142	702	707		1			1
708	4	1	5			6	702	708	2				2
708	5	66	20	13	1	100	702	710	1				1
708	6	224	37	15	15	291	Cl. 4 Total		6	5	1		12
708	7	76	10	4	3	93	Cl.2&3 Total		96	24	3		123
708	8	39	11	5	5	60	702 Total		102	29	4		135
708	9	1				1							
Cl.2&3	Total	1043	159	115	69	1386							

VEHICLE TRIPS						
Between	Auto	Pickup and Panel	Single Unit & Bus	Semi Truck	Total	
704	701	68	10	7	14	99
704	702	3	3	1		7
704	703	9				9
704	706	3		1	1	5
704	707	1				1
704	708	310	45	41	68	464
704	710	694	97	55	89	935
704	711	16	3	11		30
Cl. 4	Total	1104	158	116	172	1550
Cl.2&3	Total	1628	184	264	62	2138
704	Total	2732	342	380	234	3688
708	701	1105	123	79	261	1568
708	702	2				2
708	704	310	45	41	68	464
708	710	78	11	12	7	108
708	711	13	2	2	2	19
Cl. 4	Total	1508	181	134	338	2161
Cl.2&3	Total	1043	159	115	69	1386
708	Total	2551	340	249	407	3547

VEHICLE TRIPS						
Between	Auto	Pickup and Panel	Single Unit & Bus	Semi Truck	Total	
710	701	149	27	11	18	205
710	702	1				1
710	703	6				6
710	704	694	97	55	89	935
710	707	2				2
710	708	78	11	12	7	108
710	711	9	3		2	14
Cl. 4	Total	939	138	78	116	1271
Cl.2&3	Total	1589	171	149	45	1954
710	Total	2528	309	227	161	3225
711	701	3		2		5
711	704	16	3	11		30
711	708	13	2	2	2	19
711	710	9	3		2	14
Cl. 4	Total	41	8	15	4	68
Cl.2&3	Total	399	78	122		599
711	Total	440	86	137	4	667

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