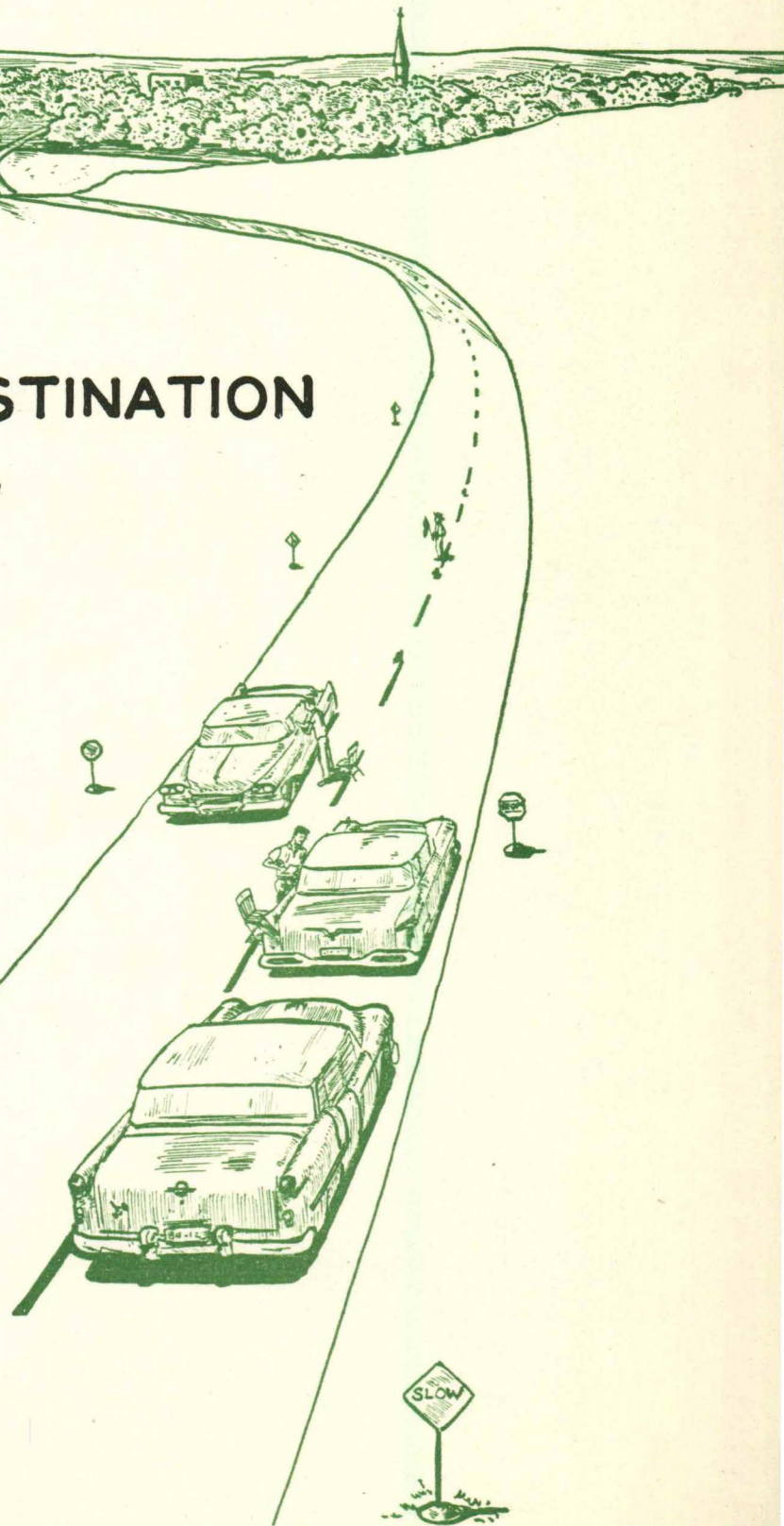


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# HAMPTON

## ORIGIN AND DESTINATION STUDY

INTERVIEW  
STATION



Hampton Corporate Area  
Origin and Destination  
Traffic Survey

April 1959

Prepared By  
Highway Planning Section  
Safety and Traffic Department  
Iowa State Highway Commission  
In Cooperation With the  
United States Bureau of Public Roads



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## DEFINITIONS

### Urban Area

An area including and adjacent to a municipality or other urban place of 5,000 or more population as shown by the latest available census.

### Corporation Line

A hypothetical line delimiting the municipal area and often called the City Limits.

### Urban or Corporate Area Traffic Survey

A survey of highway travel designed to collect detailed information concerning trip origins and destinations within a selected urban or corporate area.

### External Survey

A study in which trip data is obtained by interviewing motor vehicle operators intercepted at external stations.

### External Station

An interview point located on a principal rural highway which crosses the corporation or urban area line. It is always set up outside of the urban or corporate area, but as close as is practical and possible to the line delimiting this area.

### Tract

One of the several homogeneous sections into which the study area is divided.

### Central Business District (CBD)

The section containing the concentrated commercial and retail business center, in most cases, tract 001.



Trip

A one-way journey between a point of origin and a point of destination.

Origin

The stated beginning point of a single trip.

Destination

The stated terminating point of a single trip.

External Local Trip

A trip with either the point of origin or the point of destination located within the corporate limits, the performance of which trip involves travel through an external interview station.

External Through Trip

A trip with both points of origin and destination located outside the corporate limits, the performance of which trip involves travel through an external interview station and into, through, and out of the corporate or urban area.

Duplicated Through Trips (Duplicates)

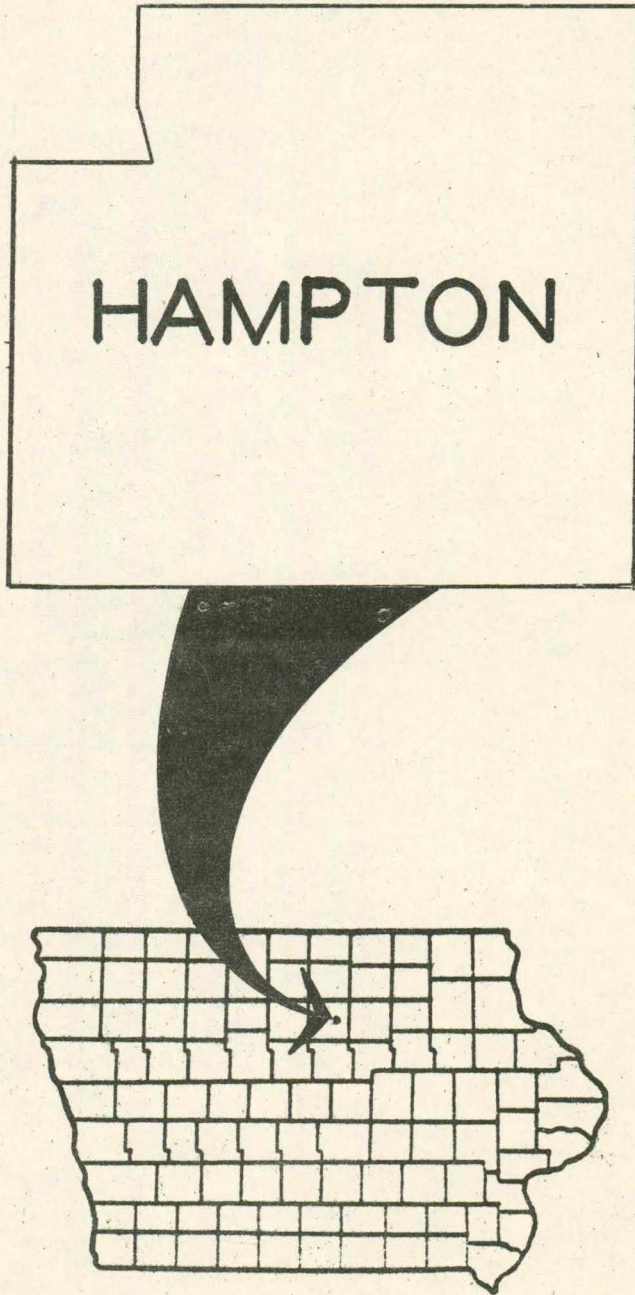
Trips traveling completely across the urban or corporate area, and thereby passing through two interview stations.

Average Weekday

This includes Monday through Friday inclusive.



PART I  
SUMMARY





This report of the Hampton Corporate Area Traffic Survey describes briefly the characteristics of the corporate area pertinent to the local problem of highway transportation and presents and analyzes the data gathered in the survey. All trip data obtained in the survey are presented in terms of the number of trips per day. They are classified by the origins and destinations of these trips and by the areas within the city, to which and from which they were made. The only information obtained was from those trips crossing the city limits, and this was done by maintaining roadside interview stations at the entrances of the principal rural highways into the city. These trips, for which the data were obtained, may be defined as "rural trips." Knowledge of the number of "urban trips" or "intra-city trips" is not available in this external type survey.

For this particular study, information was gathered by interviewing 89.21 per cent of the average weekday traffic. After the expansion of this information it was found that for an average weekday in August 1958, a total of 7,911 trips crossed the Hampton city limits. Out of this total, 42.48 per cent were classified as external through trips. These were divided into two groups. External through trips which passed via the central business district accounted for 17.00 per cent. The remaining 25.48 per cent, which were also external through trips, traveled without passing via the central business district.

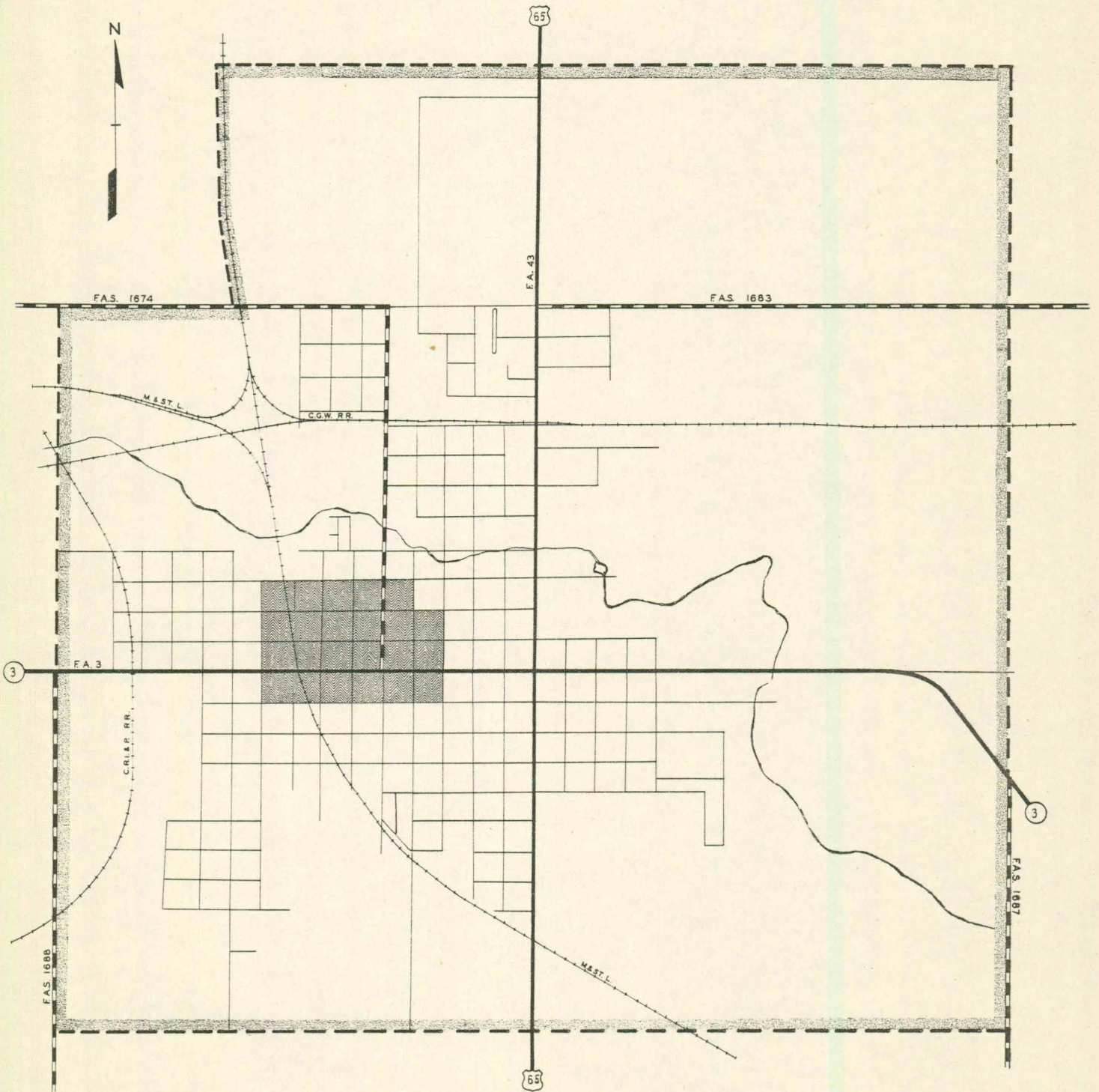
Of all trips passing through the interview stations 32.10 per cent had termini in the central business district. However, another 12.06 per cent of the total had termini in the residential and intermediate



areas between the station and the central business district. In addition to this, 8.63 per cent of the total trips passing through the interview stations had routes via and termini beyond the central business district. The final consideration is given to the 374 trips, or 4.73 per cent of the total number of trips which passed through the stations, with routes not via but termini beyond the central business district.



PART II  
HISTORY AND CHARACTERISTICS  
CITY OF HAMPTON





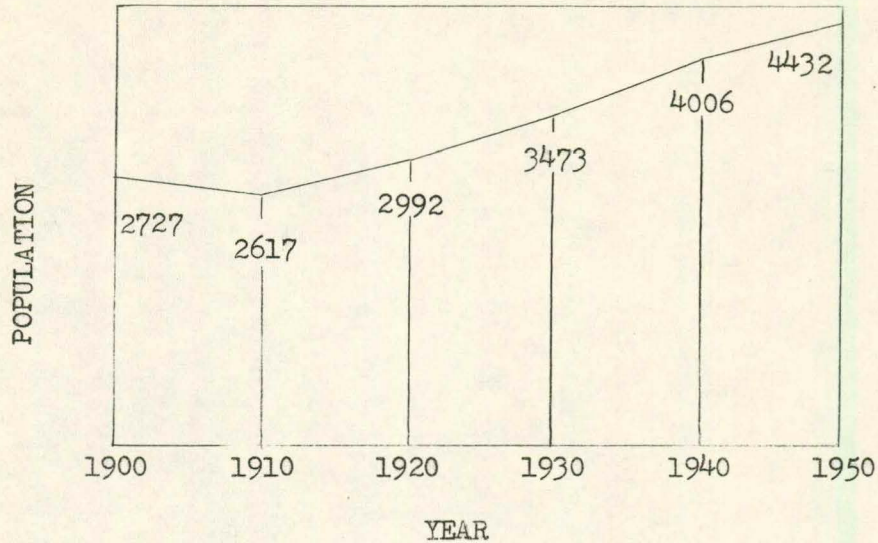
## A. HISTORY

The town of Benjamin was founded in 1855 by Job Garner and George Ryan. They erected log homes and platted the original town boundaries. Garner selected the name for the community. The first commercial building erected in the settlement was a story and a half log structure used as a community trading post. T. T. Rawson and Frank Geiger operated this store and sold groceries, dry goods, and hardware to the settlers in the area. Another early venture in the community was a sawmill, which had a capacity of 3,000 board feet per day. In 1856, the community was selected to be the county seat of Franklin County. To avoid confusion with another town in Iowa named Benjamin, R. F. Piatt induced Judge Reeve to change the town's name to Hampton.

Dr. Guthrie was the first physician in Hampton. He began his practice in 1856 and also operated a small hotel. The following year a post office was established, and Robert F. Piatt was the first postmaster. Hampton's first school building was erected in 1857, and another was built the following year in order to provide adequate facilities. The town was incorporated in 1871, and William Raymond was Hampton's first mayor. Ten years later, in 1881, the Earl Ferris Nursery was founded in the community. A two-story school building was constructed in 1892 only to be destroyed by fire the following year. A replacement building was erected in 1894. By 1900 there were 2,727 residents living in Hampton. Population trends since then are illustrated in the following figure.



## HAMPTON POPULATION TRENDS



### B. CHARACTERISTICS

Hampton is located in north central Iowa in the third tier of counties south of the Iowa-Minnesota border and in the fifth tier west of the Mississippi River. The city is situated on level terrain.

The incorporated area of Hampton nearly covers an area two miles square and the central business district is in the west central part of the city. Service and retail establishments and wholesale firms predominate this area. Nursery stock from Hampton is marketed throughout the United States.

The Chicago and Great Western Railroad, one of three serving Hampton, runs east and west across the north half of the city. The Minneapolis and St. Louis Railroad passes diagonally across the south-



west half of the city and through the west end of the central business district, while the Chicago, Rock Island, and Pacific Railroad operates in the extreme western part of the city.

Ia. 3 runs east and west across Hampton near the center of the city and passes through the central business district. U.S. 65 bisects the municipality into east and west segments and intersects Ia. 3 near the middle of Hampton.







A. INTRODUCTION

Part III of this report describes briefly the purposes and objectives, procedures, and findings of the Hampton Corporate Area Traffic Survey. Summaries and illustrations of the significant data classifications are included. All information was collected during the period of August 25 to 28, 1958, inclusive. It is reported in terms of the number of trips daily on an average August weekday in 1958 and classified by trip origins and destinations.

B. PURPOSES AND OBJECTIVES

The purposes of this survey were to determine the origin, destination, and number of daily trips into, out of, and through the corporate area. Ultimate objectives were to assemble and present, as clearly as possible, the traffic patterns and volumes as they exist. This presentation reveals the amount of street congestion which may be attributed to through highway travelers, and the exact routes by which these travelers enter and exit the corporate area. It will also assist city officials and highway administrators in determining the location and type of street or highway improvements necessary to alleviate particular traffic problems.

C. PROCEDURES

The data for the determination of the origin and destination of all trips were gathered through roadside interviews of motor vehicle operators. These interviews were obtained at the external stations located on each rural road entrance to the city. All vehicles were stopped as they passed through the station and the motor vehicle



operator was asked the purpose, origin, and destination of this particular trip. The interviewers also recorded for each vehicle, from visual inspection, other data such as the type, the place of registration, and the number of passengers.

Each interview station was operated for 16 hours starting at 6 AM and ending 10 PM. This scheme of operation provided for coverage of all but a small portion of the trips passing through each station in the twenty-four hour day. This small portion of traffic was accounted for by portable automatic traffic recorders which were operated continuously at each station for the entire period of the survey. Factors obtained by using these recorder tapes provided means for converting all of the data to average twenty-four hour weekday values. The information gathered was then coded and punched on I.B.M. cards to expedite tabulation.

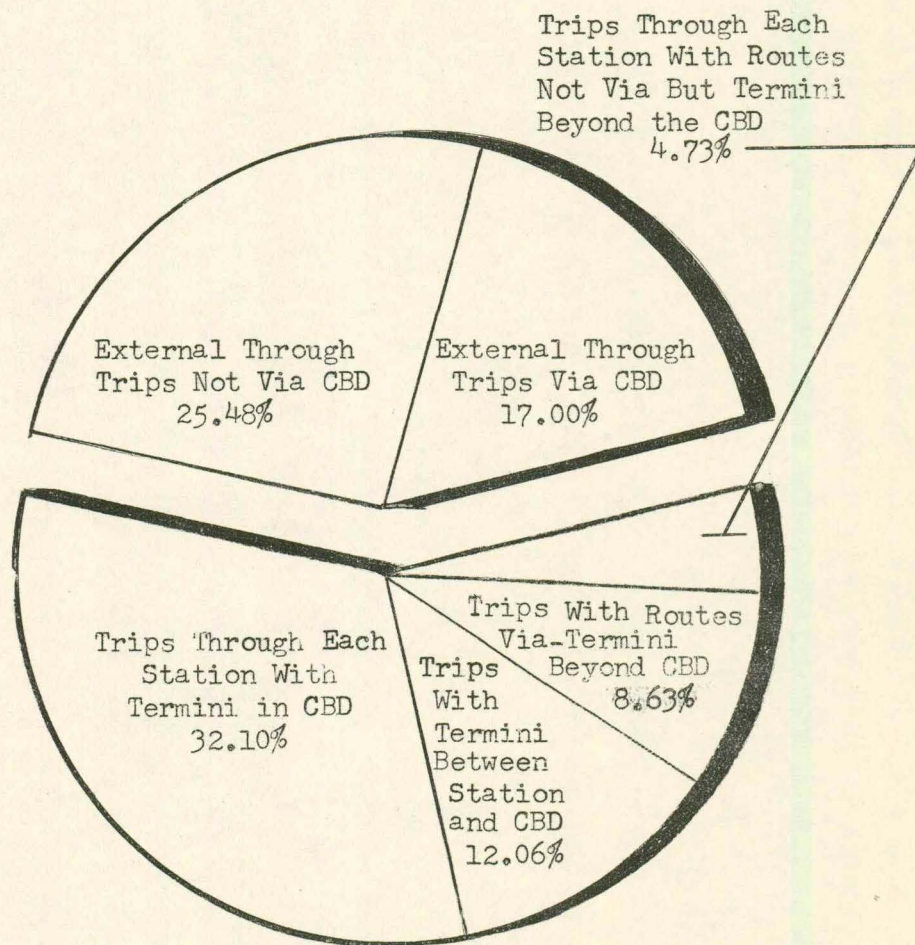
#### D. FINDINGS

Most of the significant findings of this survey have been summarized in the ensuing tables and charts. Any other combinations of related material may be found by referring to the trip tabulation sheet in the appendix.

Three traffic flow diagrams will be found in appropriate locations throughout the presentation of the findings. The first one encountered merely gives a pictorial view of the entire traffic pattern within the area. A traffic flow map depicting all external through trips will be found next, immediately following the external through trip tables. The third and final flow diagram is found following the group of tables relating all of the external local trips to their termini.



The following illustration represents a net total trip summarization and percentage distribution of the termini for all trips passing through the external interview stations on an average weekday in August 1958. It should be noted that the few external through trips having termini on non-primary rural roads, as listed on the trip tabulation sheet in the appendix, are all included with the external local trips.



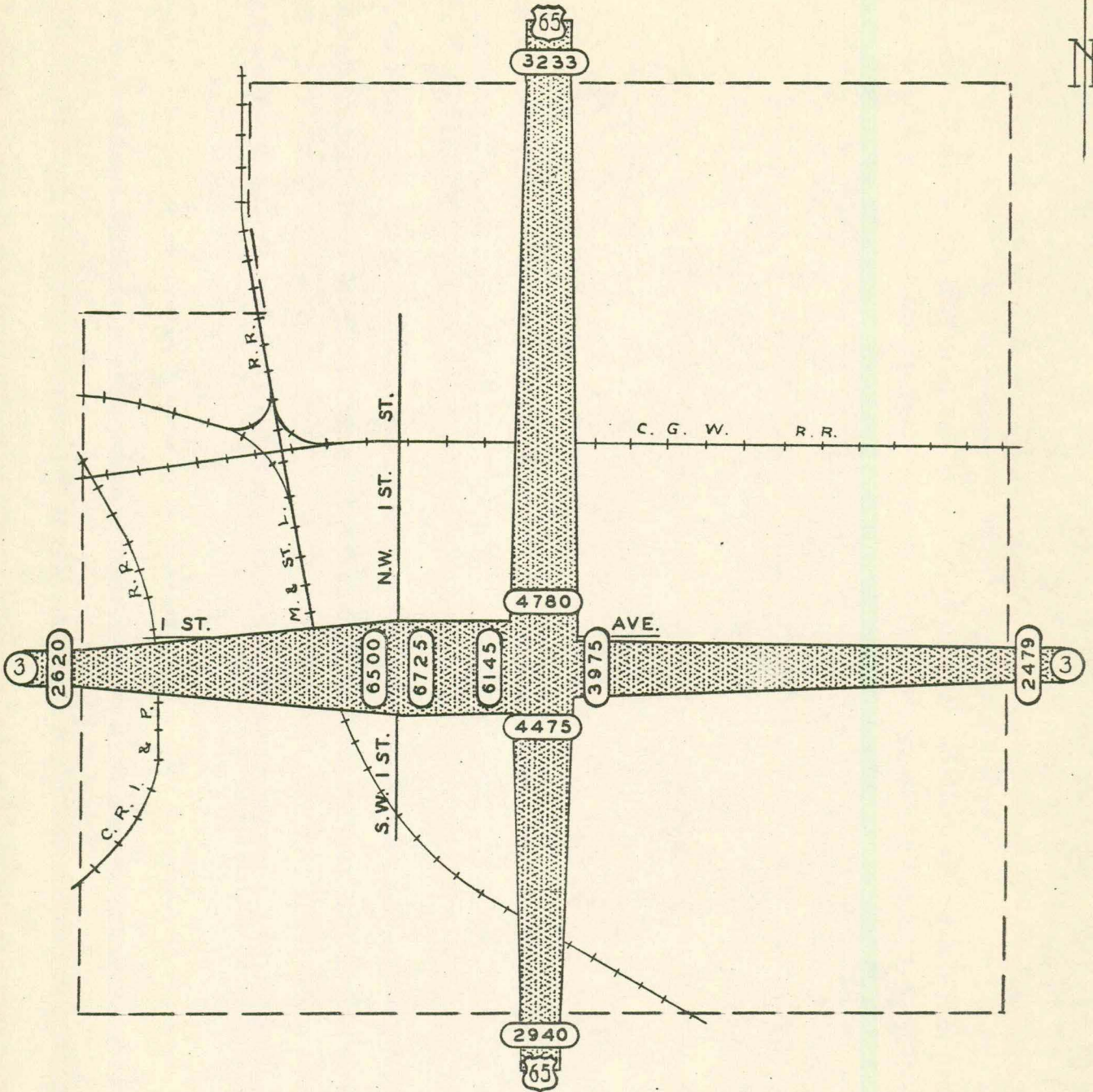


1. Traffic and Interview Summary:

By using the previously explained procedures, the information in the following table was obtained. The external stations are listed with the total traffic passing each station, the total number of interviews taken at each station, and the per cent that this interview figure is of the total traffic figure. This information is all based on the flow of traffic for an average weekday in August 1958.

External Station Locations	Average Weekday Traffic-Aug 1958				No. of Inter- views Taken	Per Cent Inter- viewed
	Passenger Cars and Pick-Ups	Single Unit Trucks	Truck Combi- nations	Total		
US 65 N	2,744	272	217	3,233	2,710	83.82
Ia 3 E	2,172	191	116	2,479	2,307	93.06
US 65 S	2,508	227	205	2,940	2,623	89.22
Ia 3 W	2,321	196	103	2,620	2,416	92.21
Total	9,745	886	641	11,272	10,056	89.21





TRAFFIC FLOW MAP  
 CITY OF HAMPTON  
 FRANKLIN COUNTY  
 AVERAGE WEEK DAY TRAFFIC AUGUST-1958



2. External Through Trips Via  
the Central Business District:

Table 2 presents a very good comparison between the total trips passing through each external station and the number or per cent of these trips which pass directly through the corporate area via the central business district. This same relationship is again presented both numerically and on a percentage basis for the summation of all trips through all stations. From this presentation it is shown in the following table that 1,345 trips, or 17.00 per cent of the total trips passing through all external stations, were external through trips traveling via the central business district.

External Station Location	Total Trips Through Station	Through Trips Via the CBD	
		Number	Per Cent of Total
US 65 N	3,233	242	7.49
Ia 3 E	2,479	889	35.86
US 65 S	2,940	214	7.28
Ia 3 W	2,620	1,345	51.33
Less Duplicates	3,361	1,345	40.02
Total	7,911	1,345	17.00



3. External Through Trips Not  
Via the Central Business District:

The following table reveals the exact relationship between all trips passing through each external station and the percentage of these trips which pass directly on through and out of the corporate area, but not via the central business district. This same comparison is also presented for the total of all external through trips passing through all external stations. From Table 3 it is then noted that this figure is 25.48 per cent.

Table 3 External Through Trips Not Via the Central Business District on an Average Weekday in August 1958			
External Station Location	Total Trips Through Station	Through Trips Not Via the CBD	
		Number	Per Cent of Total
US 65 N	3,233	1,813	56.08
Ia 3 E	2,479	542	21.86
US 65 S	2,940	1,677	57.04
Ia 3 W	2,620	-----	-----
Less Duplicates	3,361	2,016	59.98
Total	7,911	2,016	25.48



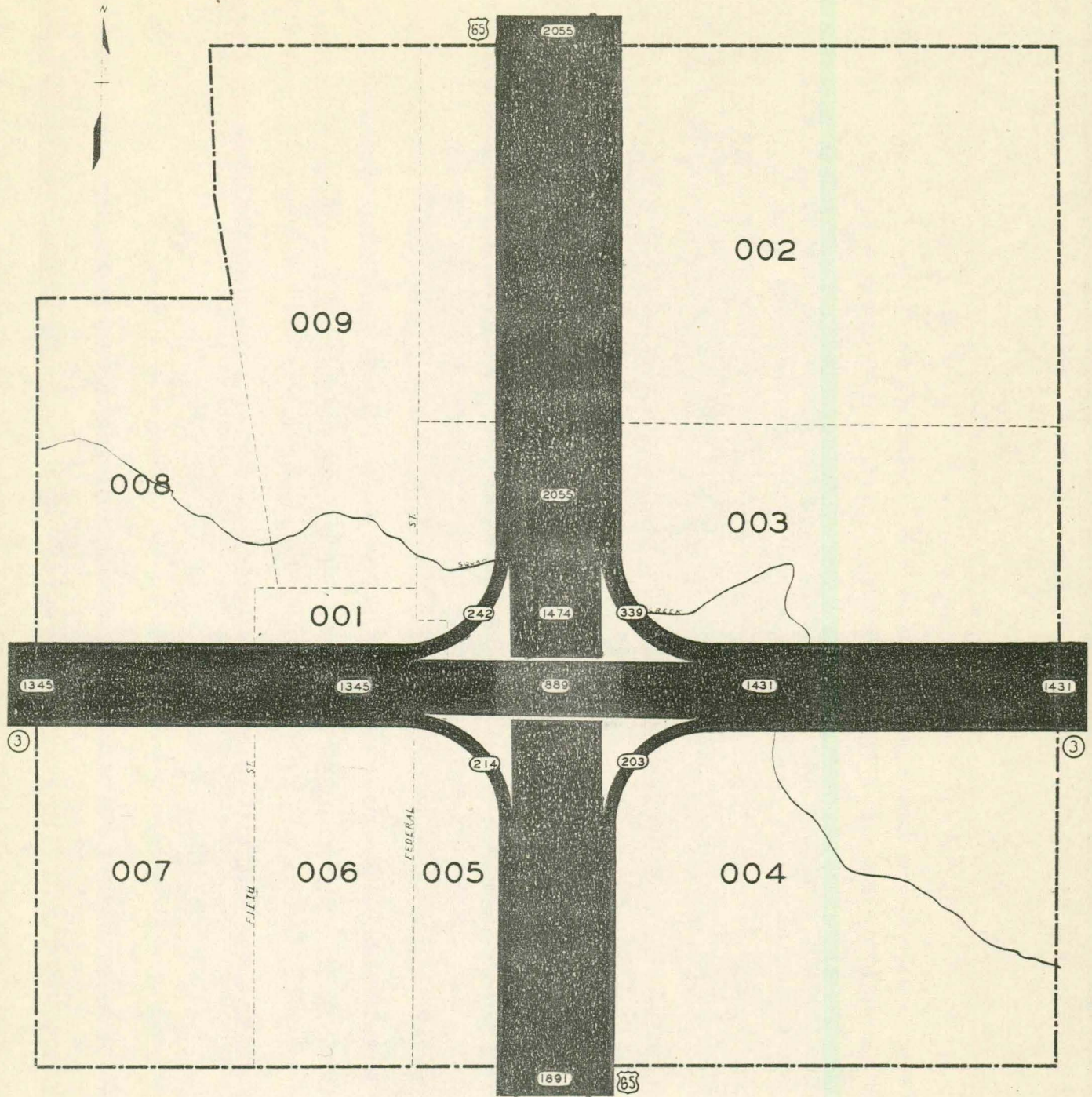


CHART NO. I  
 ORIGIN OR DESTINATION OF TRIPS  
 BETWEEN PRIMARY ROAD ENTRANCES  
 IN THE CITY  
 OF  
 HAMPTON

AUGUST AVERAGE WEEKDAY TRAFFIC—1958



4. Trips Through Each Station With  
Termini in the Central Business District:

Table 4 compares the total trips passing through each station with the percentage of these respective trips having termini in the central business district. It also relates the total of all trips passing through all of the stations to the number of these same trips having termini in the central business district. On this comparative basis 32.10 per cent of the total trips passing through all external stations fall into the above explained category.

Table 4 Trips Through Each Station With Termini in the Central Business District on an Average Weekday in August 1958			
External Station Location	Total Trips Through Station	Termini in the CBD	
		Number	Per Cent of Total
US 65 N	3,233	602	18.62
Ia 3 E	2,479	539	21.74
US 65 S	2,940	676	22.99
Ia 3 W	2,620	722	27.56
Less Duplicates	3,361	---	-----
Total	7,911	2,539	32.10



5. Trips Through Each Station With Termini  
Between the Station and the Central Business District:

The information contained in Table 5 reveals a comparison of the total trips passing through each station and the percentage of these trips having termini in the residential and intermediate areas between that station and the central business district. In addition to this, the summation of the total trips passing through all of the external stations is compared to the percentage basis. As can be seen from the table, 954 trips, or 12.06 per cent of the total trips passing through all of the external stations, had termini in the residential and intermediate areas between the stations and the central business district.

Table 5 Trips Through Each Station With Termini Between the Station and the Central Business District on an Average Weekday in August 1958			
External Station Location	Total Trips Through Station	Termini Between Station and CBD	
		Number	Per Cent of Total
US 65 N	3,233	275	8.50
Ia 3 E	2,479	366	14.77
US 65 S	2,940	187	6.36
Ia 3 W	2,620	126	4.81
Less Duplicates	3,361	---	-----
Total	7,911	954	12.06



6. Trips Through Each Station With Routes Via  
and Termini Beyond the Central Business District:

In Table 6 a comparison is made between the total trips passing through each external station, and the number and percentage of these trips which pass directly via and have their termini beyond the central business district. It can also be seen from the following table that 683 trips, or 8.63 per cent of all trips passing through all stations, travel directly via the central business district and have their termini beyond it. These comparisons are made both numerically and on a percentage basis for all of the routes listed.

Table 6 Trips Through Each Station With Routes Via and Termini Beyond the Central Business District on an Average Weekday in August 1958			
External Station Location	Total Trips Through Station	Route Via-Termini Beyond CBD	
		Number	Per Cent of Total
US 65 N	3,233	132	4.08
Ia 3 E	2,479	76	3.07
US 65 S	2,940	48	1.63
Ia 3 W	2,620	427	16.30
Less Duplicates	3,361	---	-----
Total	7,911	683	8.63



7. Trips Through Each Station With Routes Not  
Via but Termini Beyond the Central Business District:

The following table reveals the exact relationship between all trips passing through all external stations, and the percentage of these trips which had termini beyond but routes not via the central business district. As can be seen below, 374 trips, or 4.73 per cent of the total trips passing through all of the external stations, fall into the above category. This same comparison for each individual station is also clearly presented in the table.

External Station Location	Total Trips Through Station	Route Not Via--Termini Beyond CBD	
		Number	Per Cent of Total
US 65 N	3,233	169	5.23
Ia 3 E	2,479	67	2.70
US 65 S	2,940	138	4.70
Ia 3 W	2,620	---	---
Less Duplicates	3,361	---	---
Total	7,911	374	4.73



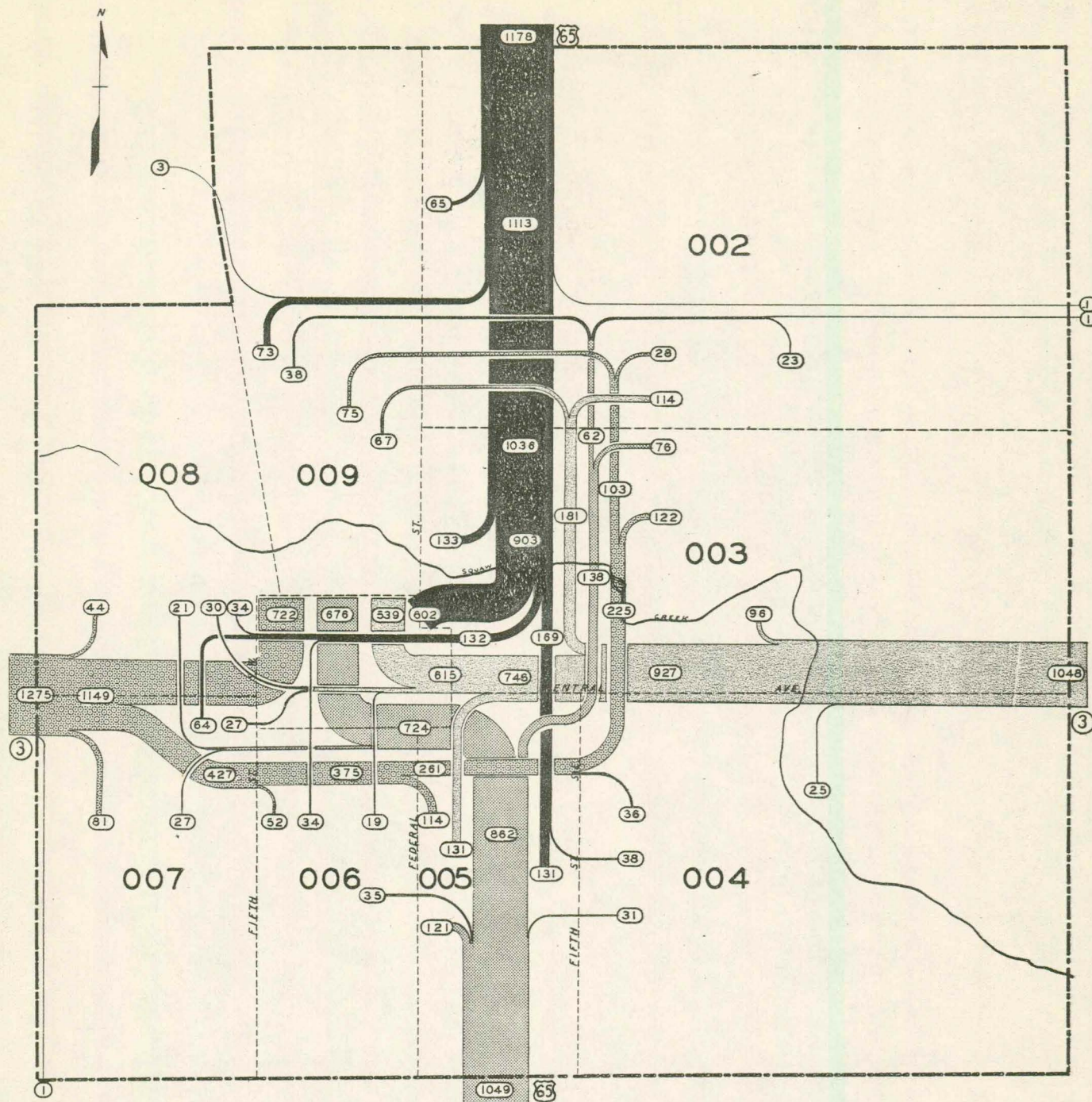
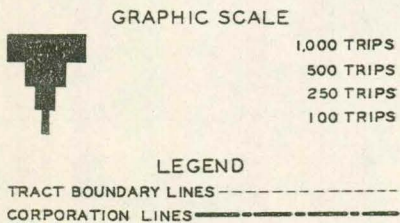


CHART NO. 2  
 ORIGIN OR DESTINATION OF TRIPS  
 BETWEEN PRIMARY ROAD ENTRANCES  
 AND  
 ALL TRACTS WITHIN THE CITY  
 OF  
 HAMPTON

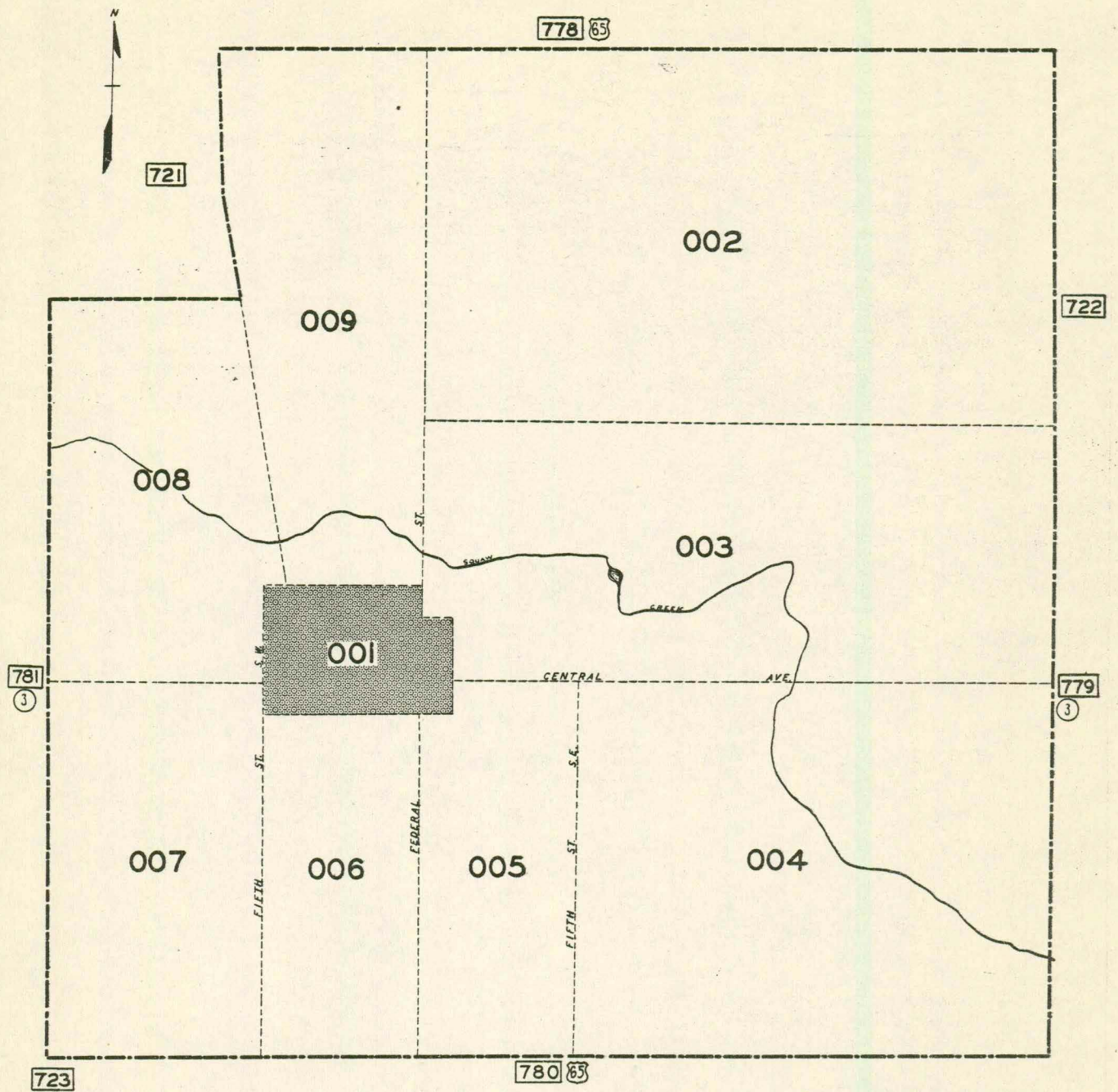
AUGUST AVERAGE WEEKDAY TRAFFIC 1958





A P P E N D I X





LEGEND

TRACT BOUNDARY LINES - - - - -

CORPORATION LINES - - - - -

EXTERNAL STATIONS - - - - - 721

CENTRAL BUSINESS DISTRICT - - - - -

TRACT MAP  
OF  
CITY OF HAMPTON  
WITH  
EXTERNAL STATIONS



1958 Hampton Origin and Destination  
 Total Trips Through Stations Located on  
 U.S. 65 N., Ia. 3 E., U.S. 65 S., and Ia. 3 W.  
 Average Weekday Traffic in August

		Hampton Urban Area									External Area								External Total	GRAND TOTAL	
		Central Business District	Northeast	East	Southeast	South, Southeast	South	Southwest	Northwest	North	Hampton Total	F.M. F.A.S. 1674	F.M. F.A.S. 1683	F.M. F.A.S. 1688 & Local Rd. SW	U.S. 65 N.	Ia. 3 E.	U.S. 65 S.	Ia. 3 W.	External Total	GRAND TOTAL	
		Tract	001	002	003	004	005	006	007	008	009	721	722	723	778	779	780	781	External Total	GRAND TOTAL	
Hampton Urban Area	Tract	Trip Origin									Trip Destination										
		001	Central Business District																		
	002	Northeast													309	271	343	347	1270	1270	
	003	East													31	57	13	14	115	115	
	004	Southeast													70	53	38	59	220	220	
	005	South, Southeast													23	14	20	19	76	76	
	006	South													62	56	64	54	236	236	
	007	Southwest													18	10	20	27	75	75	
	008	Northwest													27	18	13	45	103	103	
	009	North													15	13	14	18	60	60	
		Hampton Total													32	34	22	35	123	123	
															587	526	547	618	2278	2278	
External Area	721	F.M. F.A.S. 1674																			
	722	F.M. F.A.S. 1683																			
	723	F.M. F.A.S. 1688 and Local Road E. & W.																			
	778	U.S. 65 N.	293	34	63	15	69	16	37	19	41	587	3	1							
	779	Ia. 3 E.	268	57	43	11	75	9	9	17	33	522				145	194	759	124	1081	1668
	780	U.S. 65 S.	333	10	38	11	57	15	14	7	16	501		1		715	107		114	937	1438
	781	Ia. 3 W.	375	14	63	17	60	25	36	26	40	656			1	118	426	100		645	1301
	External Total	1269	115	207	54	261	65	96	69	130	2266	3	2	1	978	727	955	701	3367	5633	
	GRAND TOTAL	1269	115	207	54	261	65	96	69	130	2266	3	2	1	1565	1253	1502	1319	5645	7911	



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