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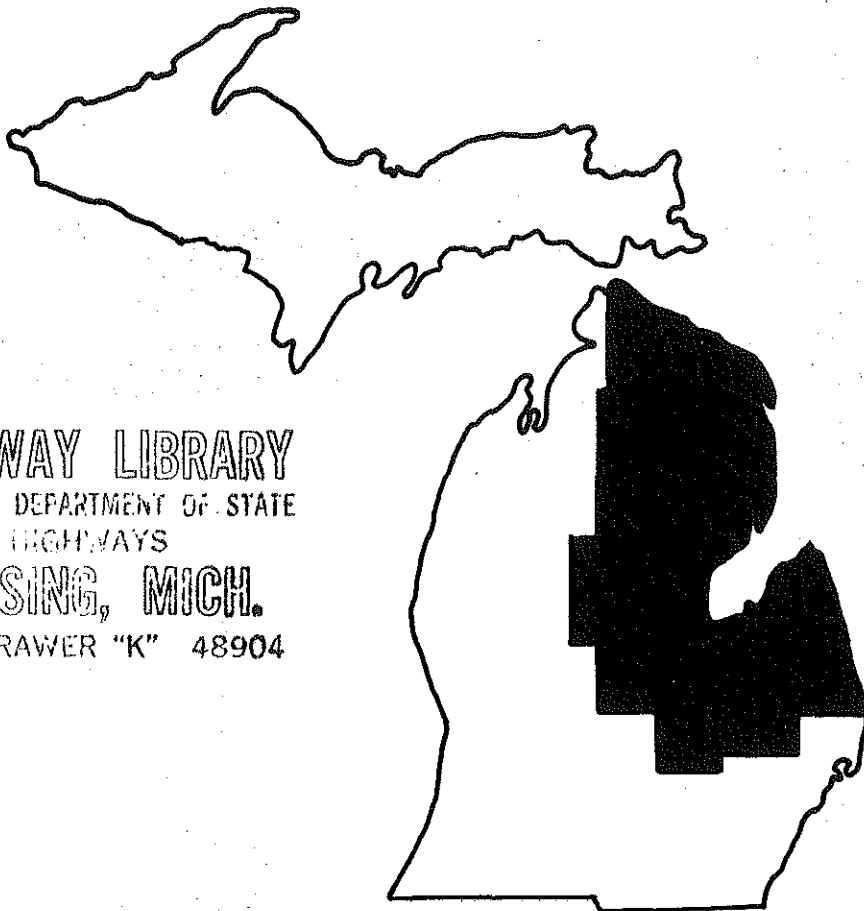
# MICHIGAN DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION

ROGERS CITY 1972  
EXTERNAL  
ORIGIN DESTINATION  
SURVEY

FACTUAL DATA REPORT

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**MICHIGAN DEPARTMENT  
OF  
STATE HIGHWAYS AND TRANSPORTATION**

**ROGERS CITY 1972  
EXTERNAL  
ORIGIN DESTINATION  
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DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION

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JOHN P. WOODFORD, DIRECTOR

Sam F. Cryderman  
Deputy Director  
Bureau of Transportation Planning  
Michigan Department of State Highways  
and Transportation  
Lansing, Michigan

Dear Mr. Cryderman:

Documented in this report are the results of the 1972 Rogers City External Origin Destination Survey. Included are tables, maps and summaries of the data obtained during the study.

This report was prepared by Transportation Analyst Robert M. Kirkbride with the assistance of Michael DeMott. Both are under the supervision of Maynard Christensen of the East Section.

Sincerely,

A handwritten signature in cursive script that reads "K E Bushnell".

K. E. Bushnell, Administrator  
Multi-Regional Planning Division



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## Survey Area

Rogers City, the county seat of Presque Isle County, is located in the northeast portion of lower Michigan approximately 270 miles from Detroit and less than 60 miles from the Straits of Mackinaw.

The economy of this city of about 4,300 centers around U.S. Steel Corporation's limestone quarry and Great Lakes fleet of vessels. Additionally, due to the large tracts of forested land, the many lakes, streams, beaches, and parks in Presque Isle County tourism contributes significantly to the total economic picture.

Two state trunkline facilities which serve the area are M-68 and US-23. The latter roadway is by far the most important, providing access to Cheboygan, Mackinaw City and the Upper Peninsula to the north and to the more populous urban areas to the south.

# PRESQUE ISLE COUNTY

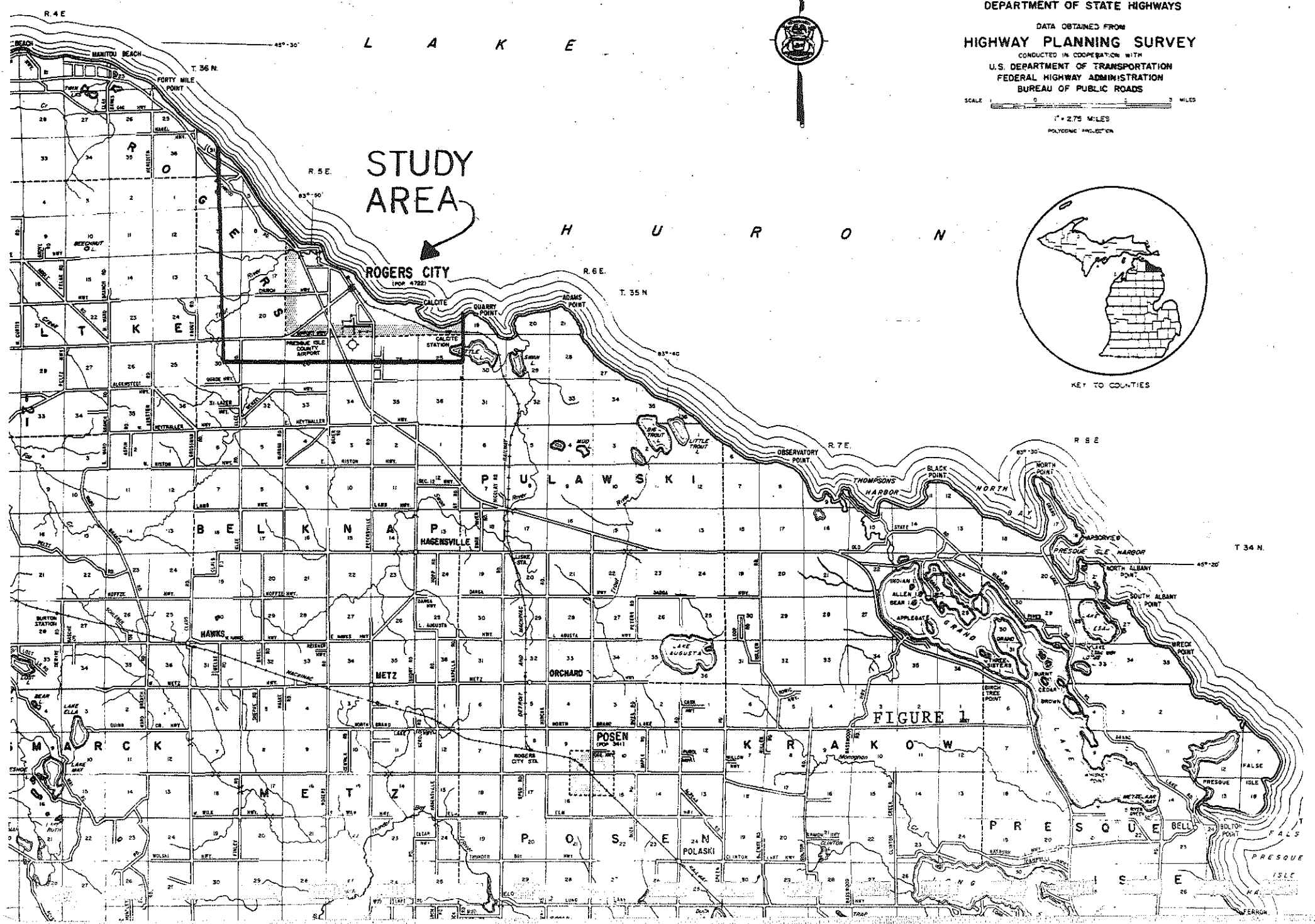
MICHIGAN  
STATE HIGHWAY COMMISSION  
DEPARTMENT OF STATE HIGHWAYS

DATA OBTAINED FROM  
**HIGHWAY PLANNING SURVEY**  
CONDUCTED IN COOPERATION WITH  
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
BUREAU OF PUBLIC ROADS

SCALE 1" = 2.75 MILES  
POLYCONIC PROJECTION



KEY TO COUNTIES



**STUDY AREA**

**ROGERS CITY**  
(POP. 4722)

FIGURE 1



## TERMINOLOGY AND DEFINITIONS

<b>Cordon Line</b>	An imaginary line around the area under study.
<b>External Station</b>	A point on a highway at the limits of the study area (Cordon Line) where drivers of vehicles are stopped and interviewed.
<b>Study Area</b>	The area enclosed by the Cordon Line.
<b>Origin</b>	The place where a trip begins.
<b>Destination</b>	The place where a trip ends.
<b>Origin-Destination Zone</b>	(Analysis Zone) a basic subdivision of the study area having a single or dominant land use, designated as such for purposes of tabulation and analysis.
<b>Trip</b>	One-way travel between an origin and destination.
<b>Terminal Trip</b>	A trip with one end outside the study area and the other end inside the study area. (Beginning or ending at one of the internal analysis zones.)
<b>Through Trip</b>	A trip passing through the study area. (Both ends of the trip outside the cordon line.)

## FIELD PROCEDURE

Field work for the Rogers City External Origin Destination Survey was conducted during July, 1972. The purpose of the survey was to gather data regarding the movement of individuals by motor vehicle through, into, and out of the study area.

Interview stations were established on all important routes leading into Rogers City. In all, five stations were operated. Each station was operated for fourteen hours. During the hours of operation, vehicles were stopped and drivers interviewed regarding the origin, destination and purpose of the trip. Manual Vehicle Classification counts were taken in conjunction with interviews and the remainder of a 24 hour day.

Both inbound and outbound vehicles were interviewed and responses recorded at each station for each hour period by direction.

In addition the study area was sub-divided into analyses zones based generally on homogenous land uses. Each trip inbound or outbound from these zones was recorded according to a previously assigned unique abbreviation.

Sample interview forms for both interviews and Manual Vehicle Classification appear in Appendix B.

TABLE 1

ROGERS CITY

EXTERNAL ORIGIN DESTINATION SURVEY

EXTERNAL STATIONS

STATION NO.	LOCATION
1	US-23 NW, .1 MILE E. OF BIRCHWOOD RD. S. JCT.
2	US-23BR, S. OF ROGERS CITY S. CITY LIMITS
3	US-23 S, .4 MILE SE OF CO. RD. 451
4	CO. RD. NO. 451, .5 MILE S. OF AIRPORT HIGHWAY
5	M-68, .3 MILE E. OF KLEE RD.

FIGURE 2

ROGERS CITY

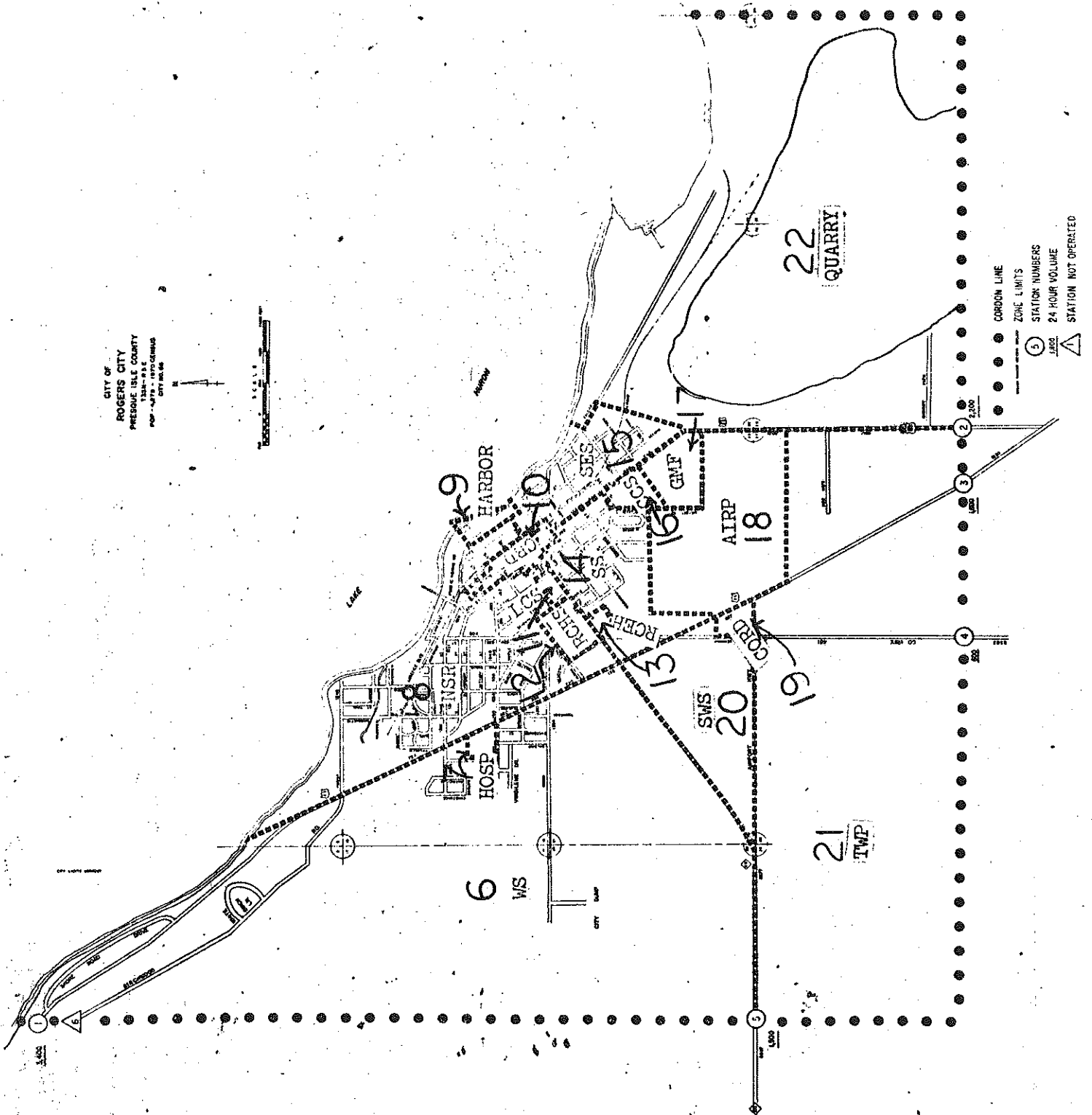
EXTERNAL ORIGIN DESTINATION SURVEY

ANALYSIS ZONES

<u>ZONE NO.</u>	<u>ABBREVIATION</u>	<u>DESCRIPTION</u>
6	WS	WEST SIDE RESIDENTIAL
7	HOSP	ROGERS CITY HOSPITAL
8	NSR	NORTHSIDE RESIDENTIAL AREA
9	HARBOR	HARBOR
10	CBD	CENTRAL BUSINESS DISTRICT
11	LCS	LUTHERAN CHURCH & SCHOOL
12	RCHS	ROGERS CITY HIGH SCHOOL
13	RCEH	ROGERS CITY ELDERLY HOUSING
14	SS	SOUTHSIDE RESIDENTIAL
15	SES	SOUTHEAST SIDE RESIDENTIAL
16	CCS	CATHOLIC CHURCH & SCHOOL
17	GMF	GILPIN MEMORIAL FIELD
18	AIRP	AIRPORT
19	CORD	PRESQUE ISLE COUNTY ROAD COMMISSION
20	SWS	SOUTHWEST SIDE RESIDENTIAL
21	TWP	BELKNAP TOWNSHIP
22	QUARRY	LIME STONE QUARRY

FIGURE 2

INTERNAL ANALYSIS ZONES



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## ALL STATIONS

Interviews were conducted for the Rogers City External Origin Destination Survey on a July 1972 weekday. A total of 9455 vehicles passed through all stations. Of this number 7090 were stopped and interviewed yielding an area-wide interview rate of 74.9%. Due to conventions of computer programs used to process and expand interview data, as explained in footnotes to Table 3, trips as discussed in ensuing paragraphs will be slightly understated.

After expansion, for all stations there were 9336 vehicle trips. As can be seen in Table 3, the four state trunkline stations (1, 2, 3, and 5), accounted for 87.3% of all trips. The one county road station accounted for the remainder.

Traffic was categorized as terminal or through, with the former constituting 65.46% of the total and the latter 34.54%. However, since a through trip is counted both at the station of entrance and exit, in order to determine actual trips it was necessary to half-factor all through trips to adjust for this double counting. When considered in this light, terminal trips accounted for 79.12% and through trips 20.88%.

Nearly 59% of all station terminal trips interchanged with one of two internal analysis zones. Zone 10 (CBD) accounted for 35.35%, and Zone 8 (NSR) 23.49%. Zone 22 (QUARRY), a major employment area, contributed 9.99%. Table 4 presents a list of all station terminal trips by zone with Figure 3 displaying the study area with terminal trips superimposed

Table 5 which shows the lengths of all trips determined through the survey, indicates that 40.35% of all trips were within, 20 minutes of the study area. More than 70% of all trips have a duration of 1 hour or less. The longest trip was 15 hours 30 minutes with the average trip length at 1 hour 27 minutes.

The distribution of all trip ends by county is presented as Figure 4. Nearly every county had some impact on trips passing through the Rogers City Stations. However, Cheboygan, Presque Isle and Alpena Counties combined accounted for 83.72% of all trip ends. Presque Isle County alone accounted for 67.1%. The bulk of the remaining trip ends were concentrated in the southern Upper Peninsula, along Lake Huron and in the urbanized counties to the southeast.

Figure 5 presents a schematic display of 24 hour traffic counts conducted inside the study area during the survey period.

TABLE 3

ROGERS CITY  
TOTAL STATION TRIPS

Station	24-Hour <sup>1</sup> Traffic Counts	14-Hour Interviews	Percent Interviewed	Vehicle <sup>2</sup> Trips	Percent of Total Traffic
1	2127	1635	76.9	2092	22.41
2	1896	1379	72.7	1849	19.81
3	2330	1643	70.5	2362	25.30
4	1237	992	80.2	1186	12.70
5	1865	1441	77.3	1847	19.78
Total	9455	7090	74.9	9336	100.00

Station	Vehicle Trips	Terminal Trips	Percent of Total	Through Trips	Percent of Total
1	2092	942	45.08	1149	54.92
2	1849	1774	95.94	75	4.06
3	2362	940	39.80	1422	60.20
4	1186	1065	89.80	121	10.20
5	1847	1389	75.20	458	24.80
Total Vehicle Trips	9336	6111	65.46	3225	34.54
Trips	7724	6111	79.12	1613 <sup>3</sup>	20.88

<sup>1</sup>Motorcycles and buses, although counted, were not interviewed and do not appear in vehicle trips. Therefore, they were removed from this column. Listed below are the totals of these vehicle types counted at each station.

Station	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>Total</u>
	37	28	12	10	21	108

<sup>2</sup>Due to the conventions of certain computer programs, expanded vehicle trips do not necessarily correspond exactly with 24-hour traffic counts.

<sup>3</sup>A through trip is counted both at the station of entrance and exit. To adjust for this double counting it was necessary to half-factor through trip records.



TABLE 4

## TOTAL STATION

TERMINAL TRIPS

<u>Zone</u>	<u>Origin</u>	<u>Destination</u>	<u>Total</u>	<u>Percent of Total</u>
6	208	211	419	6.83
7	111	146	257	4.19
8	726	714	1440	23.49
9	31	68	99	1.61
10	1082	1086	2168	35.35
11	3	6	9	.15
12	28	41	69	1.12
13	19	10	29	.47
14	174	154	328	5.35
15	271	242	513	8.36
16	9	6	15	.24
17	1	7	8	.13
18	3	5	8	.13
19	41	64	105	1.71
20	2	3	5	.08
21	20	29	49	.80
22	256	357	613	9.99
TOTAL	2985	3149	6134	100.00

ALL STATION TERMINAL TRIPS

FIGURE 3

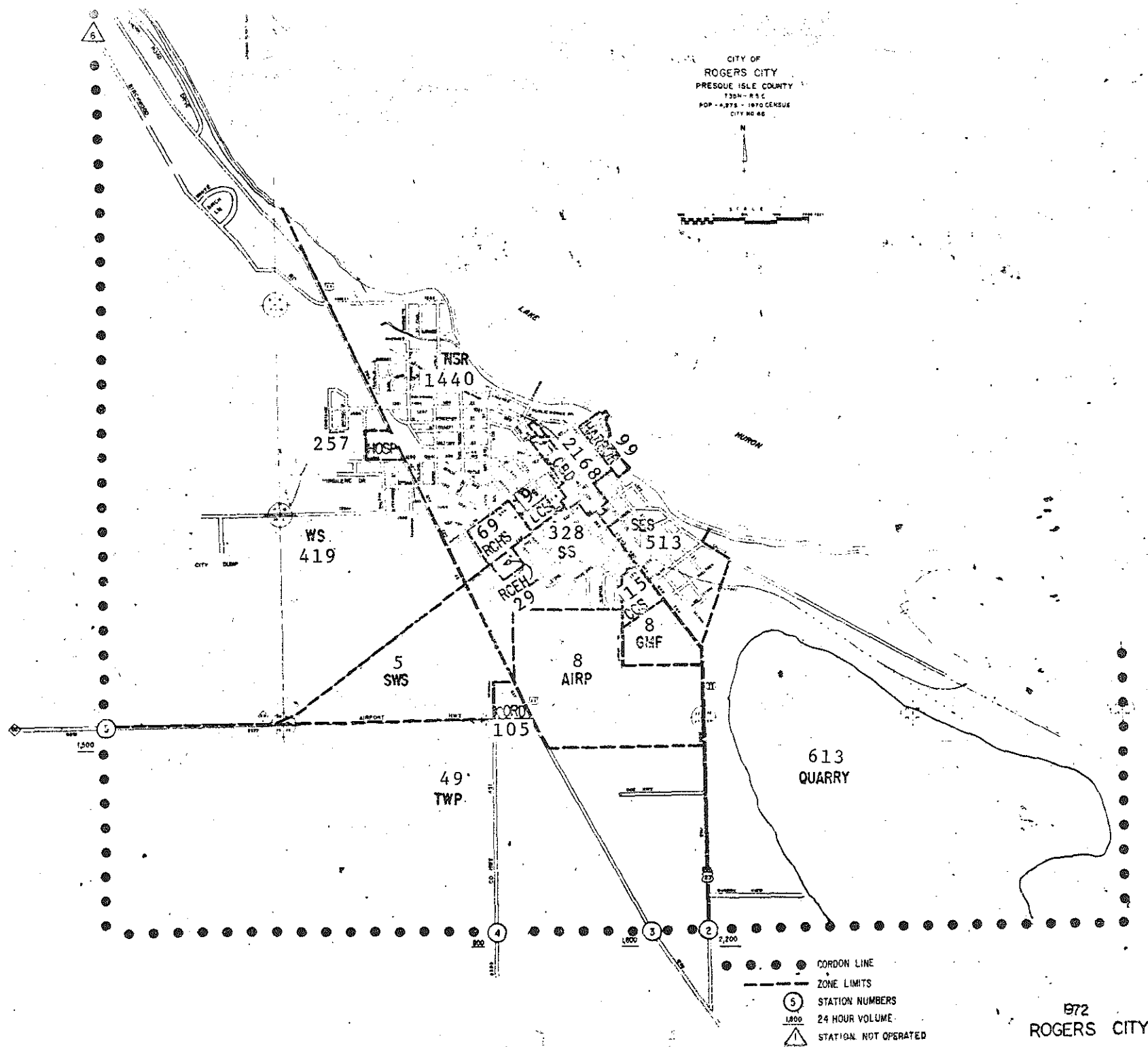


TABLE 5

## ALL STATIONS

TRIP LENGTHS

<u>Minutes</u>	<u>Trips</u>	<u>Percent of Total</u>
1 - 20	3164	40.35
20 - 40	779	9.94
40 - 60	1608	20.51
60 - 90	456	5.82
90 - 120	342	4.36
120 - 180	370	4.72
180 - 240	300	3.83
240 - 300	243	3.10
300 - 950	579	7.37
TOTAL	7841	100.00

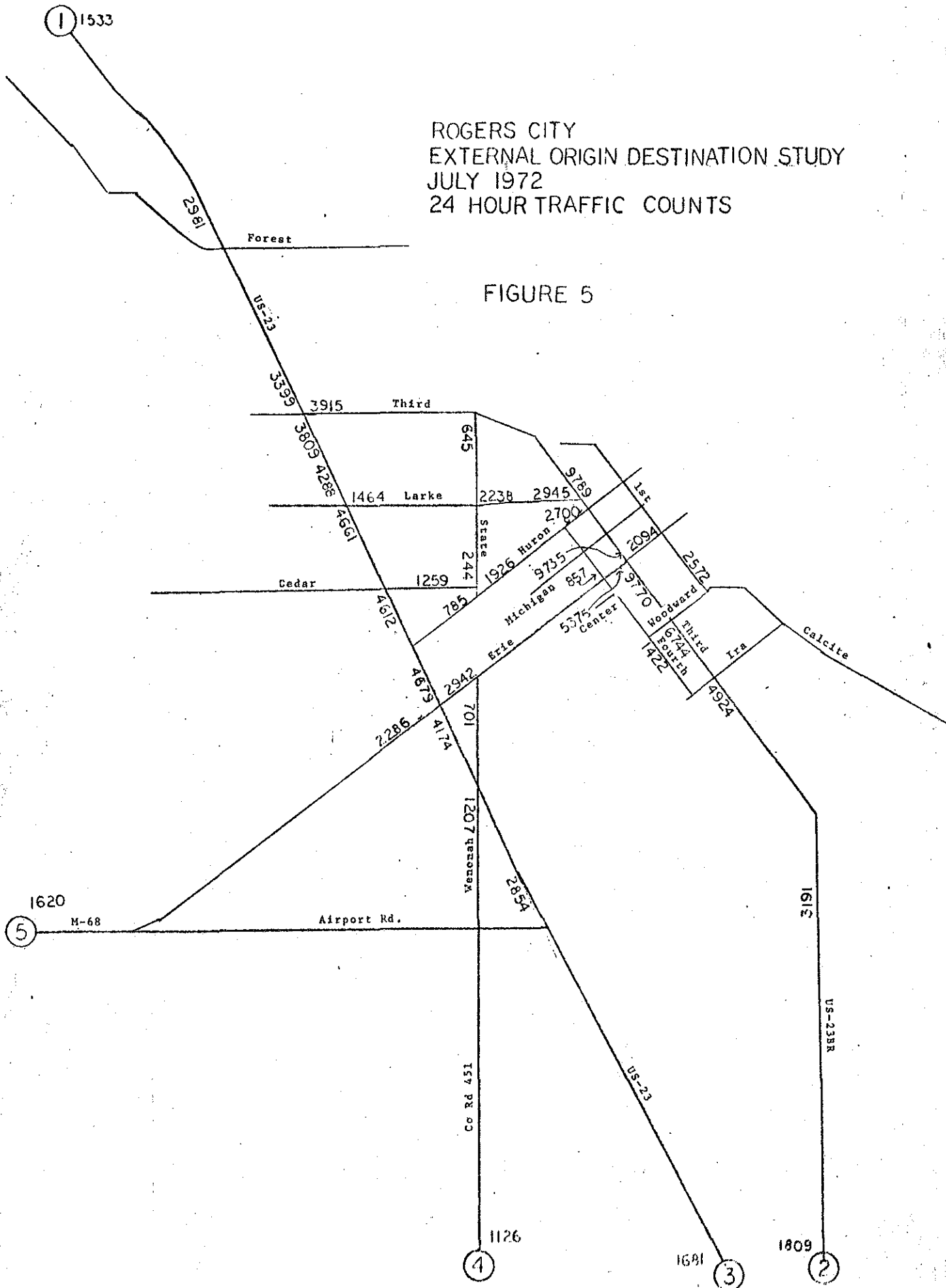
Longest Trip Length = 15 Hours 50 Minutes

Average Trip Length = 1 Hour 27 Minutes



ROGERS CITY  
 EXTERNAL ORIGIN DESTINATION STUDY  
 JULY 1972  
 24 HOUR TRAFFIC COUNTS

FIGURE 5



## STATION 1

Station 1 was located on US-23 northwest of Rogers City east of the south junction of Birchwood road. Vehicle trips passing through the station (2092) represented 22.41% of all station traffic. Traffic was classified as terminal or through with the former constituting 45.08% of the total and the latter 54.92%. When compared to all station terminal and through trips, the station represents 15.43% of total terminal traffic and 35.63% of total through traffic.

A further cross-tabulation by vehicle type and trip purpose was developed. Table 6 presents the results of this analysis. Over 88% of the trips passing through the station were made by passenger car or panel or pick-up truck. The former constituted 79.55% and the latter 8.96%. Vacation trips at 37.26% was the largest trip purpose category. Work and shopping followed at 20.87% and 19.63%. Over 86% of all vacation trips were through in nature.

By definition terminal trips have one end inside the study area. Two internal zones accounted for 65.9% of this kind of trip. Zone 10 (CBD) contributed 39.66% and Zone 8 (NSR) 26.24%. This information as well as other terminal trip interchanges is presented in Table 7 and graphically shown in Figure 6.

Nearly 89% of the through trips at the station either entered or exited the study area via the US-23 station (No. 3) southeast of Rogers City. Table 8 lists all through trips at the station and, in addition to the above, indicates that station 5 (M-68) west of the city was the next most significant interchange at 5.05%. These interchanges are graphically displayed in Figure 7.

Utilizing data from the study and the Statewide Traffic Forecast Model it was possible to compute the lengths of all trips passing through the station. The results of these computations are presented in Table 9. As can be seen, 27.22% of the trips had a duration of 20 minutes or less with more than 41% occurring within an hour. The longest trip was determined to be 15 hours 50 minutes with the average trip length 2 hours 33 minutes.

A county outline map of Michigan is provided as Figure 8 showing the distribution of origin and destination ends of trips at the station. Nearly 74% of all trip ends are concentrated in the Cheboygon, Presque Isle, and Alpena County areas. Almost 10% are attributable to the Upper Peninsula and 2.42% were out-of-state. The remainder were primarily concentrated in the eastern and southeastern, counties of the state.

TABLE 6

## STATION 1

## TRIPS BY VEHICLE TYPE AND PURPOSE

<u>Vehicle Type</u>	<u>Vehicles</u>	<u>Percent of Total</u>	<u>Terminal Trips</u>	<u>%</u>	<u>Through</u>	<u>%</u>
Passenger Car	1664	79.55	808	48.56	856	51.44
Passenger Car with Trailer	130	6.23	9	6.92	121	93.08
Panel or Pickup	187	8.96	102	54.55	85	45.45
Panel or Pickup with Trailer	19	.93	4	21.05	15	78.95
Other Single Unit Trucks	60	2.82	14	23.33	46	76.67
Combinations and Trucks with Trailers	32	1.51	6	18.75	26	81.25
TOTAL	2092	100.00	943	45.08	1149	54.92

<u>Trip Purpose</u>	<u>Vehicles</u>	<u>Percent of Total</u>	<u>Terminal Trips</u>	<u>%</u>	<u>Through</u>	<u>%</u>
Work	437	20.87	243	55.61	194	44.39
Personal Business	143	6.83	83	58.04	60	41.96
Shopping	257	12.31	232	90.27	25	9.73
Vacation	779	37.26	108	13.86	671	86.14
Other Soc.-Rec.	411	19.63	230	55.96	181	44.04
All Other	65	3.10	47	72.31	18	27.69
TOTAL	2092	100.00	943	45.08	1149	54.92

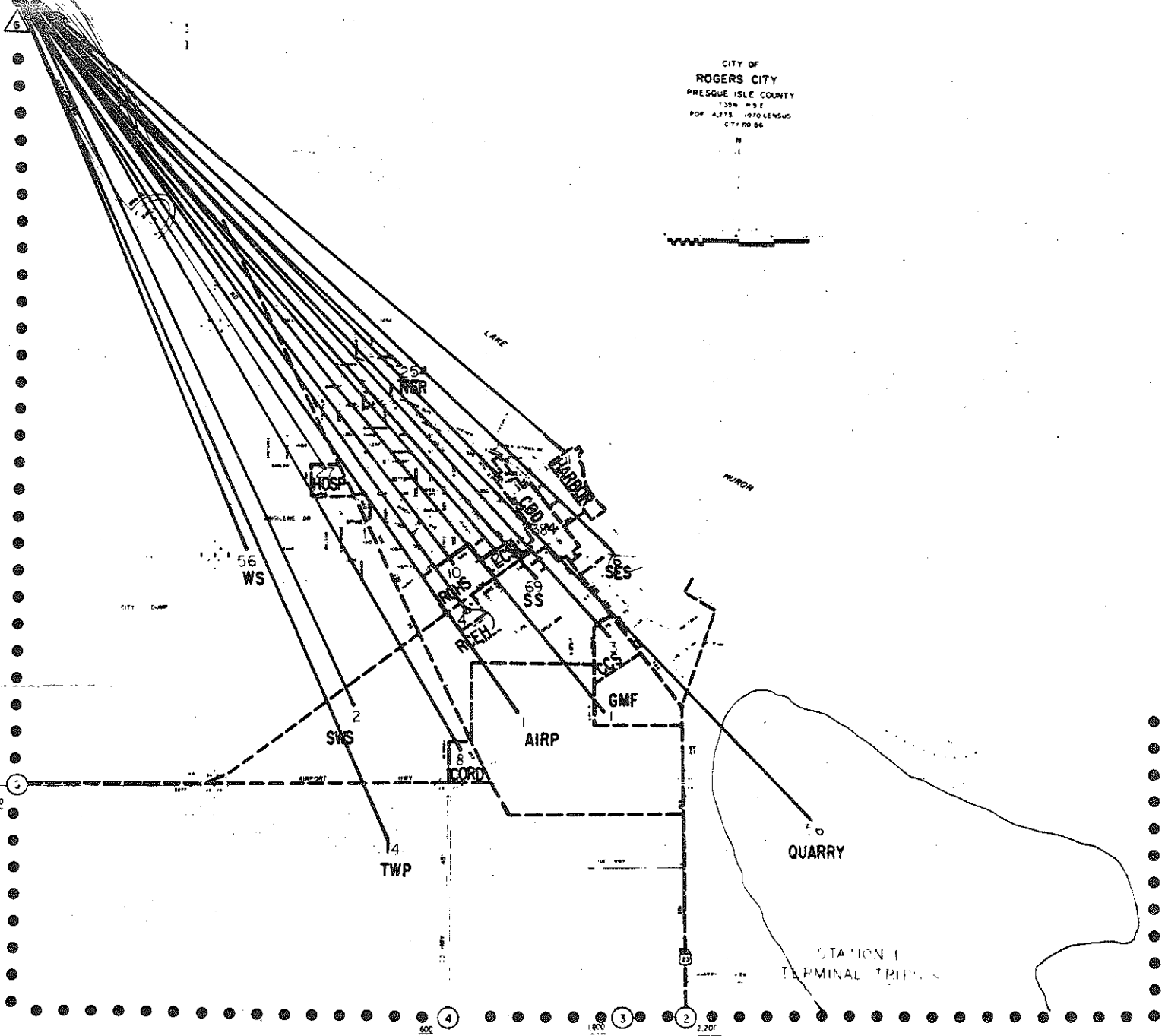


TABLE 7  
STATION 1

TERMINAL TRIPS

ZONE	ORIGINS	DESTINATIONS	TOTAL	PERCENT OF TOTAL
6	30	26	56	5.79
7	9	18	27	2.79
8	124	130	254	26.24
9	3	8	11	1.14
10	197	187	384	39.66
11	1	1	2	.21
12	4	6	10	1.03
13	3	1	4	.41
14	33	36	69	7.13
15	41	35	76	7.05
16	3	0	3	.31
17	0	1	1	.10
18	0	1	1	.10
19	2	6	8	.83
20	2	0	2	.21
21	0	4	4	.41
22	22	34	56	5.79
TOTAL	474	494	968	100.0

CITY OF  
 ROGERS CITY  
 PRESQUE ISLE COUNTY  
 1354 H.S.E.  
 POP. 4,675 1970 CENSUS  
 CITY NO. 86



- ● ● ● CORDON LINE
- ZONE LIMITS
- ⑤ STATION NUMBERS
- 1,800 24 HOUR VOLUME
- ▲ STATION NOT OPERATED

FIGURE 6

972  
 ROGERS CITY

TABLE 8  
STATION 1

THROUGH TRIPS

<u>Station</u>	<u>Trips</u>	<u>Percent of Total</u>
2	41	3.57
3	1021	88.86
4	29	2.52
5	58	5.05
TOTAL	1149	100.00

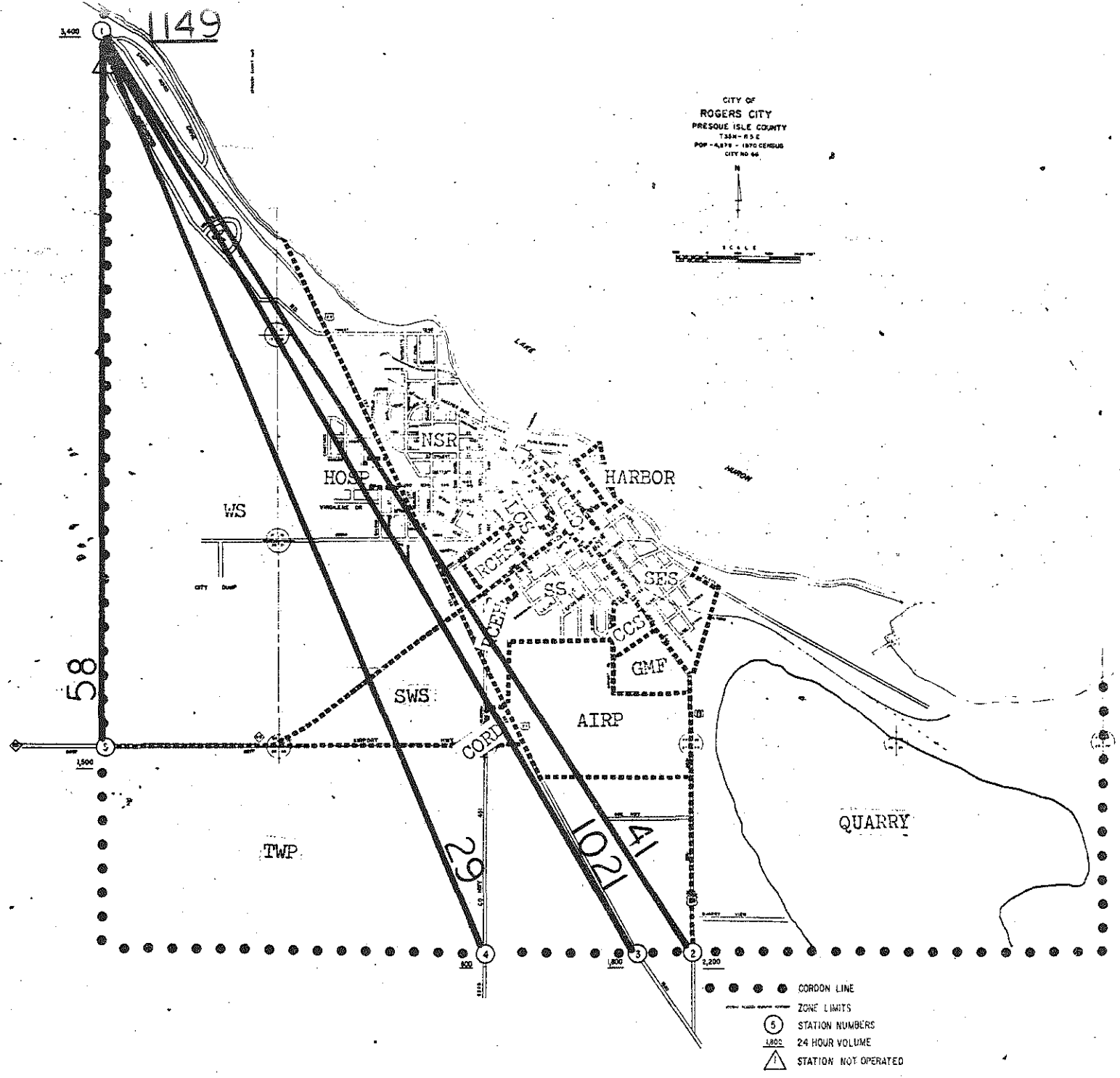


FIGURE 7  
STATION 1  
THROUGH TRIPS

TABLE 9  
STATION 1

US-23, 1 MILE E. OF S. JCT. BIRCHWOOD ROAD

<u>Minutes</u>	<u>Trips</u>	<u>Percent of Total</u>
0 - 20	552	27.22
20 - 40	242	11.93
40 - 60	54	2.66
60 - 90	185	9.12
90 - 120	153	7.55
120 - 180	181	8.93
180 - 240	162	7.99
240 - 300	140	6.90
300 - 360	172	8.48
360 - 950	187	9.22
TOTAL	2028	100.00

Longest Trip Length = 15 hrs. 50 mins.      Average Trip Length = 2 hrs. 33 mins.



## STATION 2

Station 2 was located on US-23BR south of the city. Vehicle trips passing through the station (1849) represented 19.81% of all station traffic. Traffic was classified as terminal or through with the former constituting 95.94% and the latter only 4.06%. When compared to all station terminal and through trips, the station represents 29.03% of total terminal traffic and 2.33% of through traffic.

A further cross-tabulation by vehicle type and trip purpose was developed. Table 10 presents the results of this analysis. Over 95% of the trips passing through the station were made by passenger car or panel or pick-up truck. The former constituted 83.02% and the latter 12.42%. Work trips at 34.74% was the largest trip purpose category. Other Social-Recreation, shopping and vacation followed at 26.21%, 16.52%, and 10.85%, respectively.

By definition terminal trips have one end inside the study area. Four internal zones combined accounted for nearly 85% of the terminal trips at the station. As can be seen in Table 11, Zone 10 (CBD) contributed the greatest at 35.52%, Zone 22 (QUARRY) 18.44%, Zone 8 (NSR) 17.09%, and Zone 15 (SES) 13.71%. These interchanges are also graphically displayed in Figure 7.

Through trips at this location are rather insignificant comprising only 2.33% of all station through trips. Table 12 presents a list of the through trips by station of entrance or exit. Of the 75 identified 63 interchanged with station 1. These interchanges are illustrated in Figure 8.

Utilizing data from the study and the Statewide Traffic Forecast Model it was possible to compute the lengths of trips passing through the station. The results of these computations are presented in Table 13. As can be seen, 37.3% of the trips had a duration of 20 minutes or less with nearly 86% occurring within an hour. The longest trip was determined to be 7 hours 40 minutes with the average trip length at 1 hour 5 minutes.

A county outline map of Michigan is provided as Figure 11 showing the distribution of origin and destination ends of trips passing through the station. Almost 93% of the trip ends are concentrated in either Presque Isle or Alpena Counties. Presque Isle County alone accounted for 82.47%. An examination of Figure 11 will reveal that the remaining ends are generally located on the eastern side of the state.



## TRIPS BY VEHICLE TYPE AND PURPOSE

<u>Vehicle Type</u>	<u>Vehicles</u>	<u>Percent of Total</u>	<u>Terminal Trips</u>	<u>%</u>	<u>Through</u>	<u>%</u>
Passenger Car	1535	83.02	1470	95.77	65	4.23
Passenger Car with Trailer	30	1.64	21	70.00	9	30.00
Panel or Pickup	230	12.42	229	99.57	1	.43
Panel or Pickup with Trailer	6	.30	6	100.00	0	0
Other Single Unit Trucks	32	1.73	32	100.00	0	0
Combinations and Trucks with Trailers	16	.89	16	100.00	0	0
<b>TOTAL</b>	<b>1849</b>	<b>100.00</b>	<b>1774</b>	<b>95.94</b>	<b>75</b>	<b>4.06</b>

<u>Trip Purpose</u>	<u>Vehicles</u>	<u>Percent of Total</u>	<u>Terminal Trips</u>	<u>%</u>	<u>Through</u>	<u>%</u>
Work	642	34.74	635	98.91	7	1.09
Personal Business	94	5.08	93	98.94	1	1.06
Shopping	305	16.52	299	98.03	6	1.97
Vacation	201	10.85	154	76.62	47	23.38
Other Soc.-Rec.	485	26.21	471	97.11	14	2.89
All Other	122	6.59	122	100.00	0	0
<b>TOTAL</b>	<b>1849</b>	<b>100.00</b>	<b>1774</b>	<b>95.94</b>	<b>75</b>	<b>4.06</b>

TABLE 11  
STATION 2

TERMINAL TRIPS

ZONE	ORIGINS	DESTINATIONS	TOTAL	PERCENT OF TOTAL
6	21	16	37	2.09
7	11	3	14	.79
8	158	145	303	17.09
9	13	27	40	2.26
10	332	298	630	35.52
11	0	0	0	0
12	7	4	11	.62
13	1	1	2	.11
14	78	50	128	7.22
15	127	116	243	13.71
16	5	4	9	.51
17	1	6	7	.39
18	0	1	1	.06
19	1	0	1	.06
20	0	0	0	0
21	10	10	20	1.13
22	120	207	327	18.44
TOTAL	885	888	1773	100.0

CITY OF  
 ROGERS CITY  
 PRESQUE ISLE COUNTY  
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 POP. 4,275 - 1970 CENSUS  
 CITY NO. 66

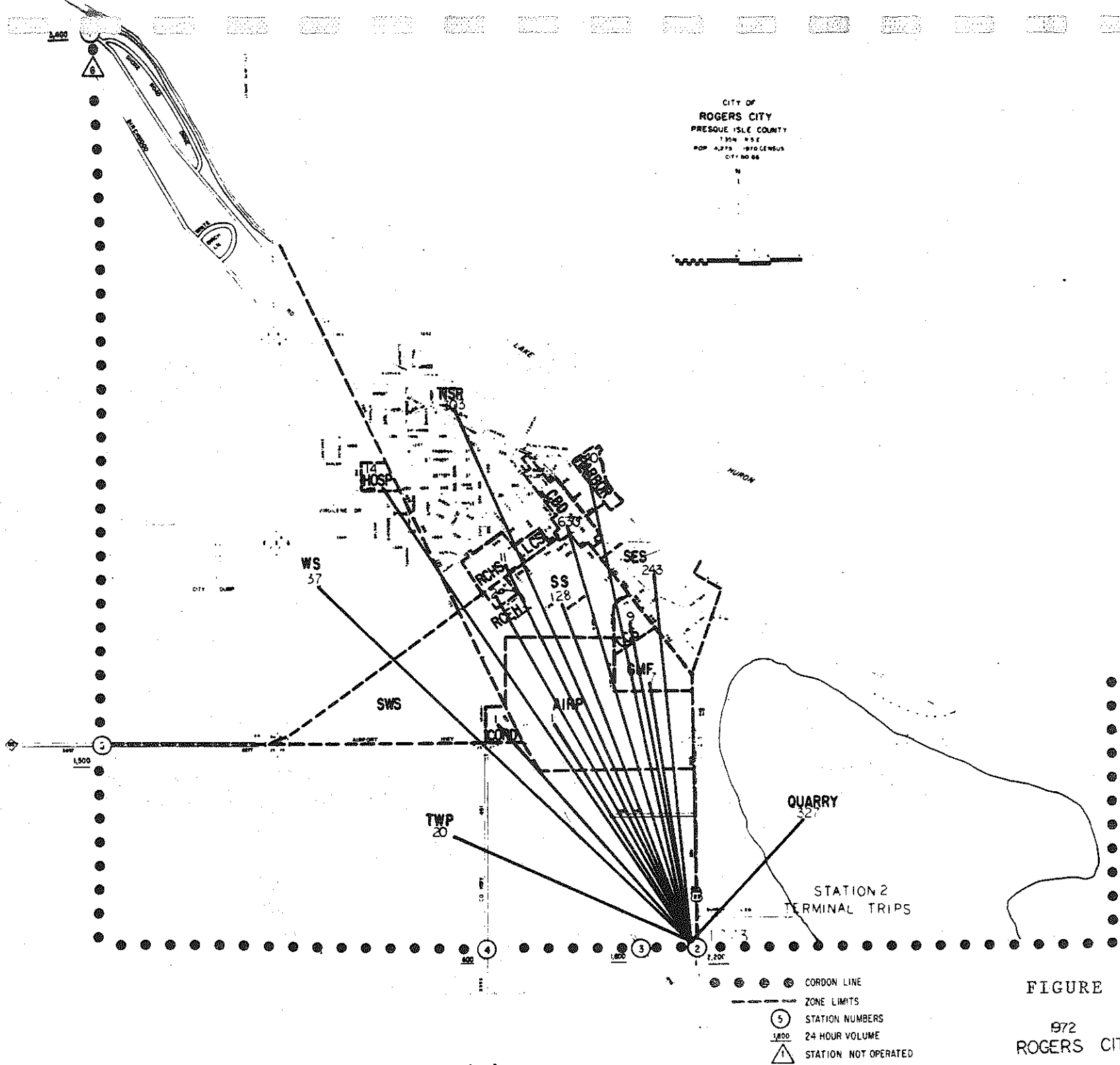


FIGURE 9

1972  
ROGERS CITY

TABLE 12  
STATION 2

THROUGH TRIPS

<u>Station</u>	<u>Trips</u>	<u>Percent of Total</u>
1	63	84.0
4	3	4.0
5	9	12.0
TOTAL	75	100.0

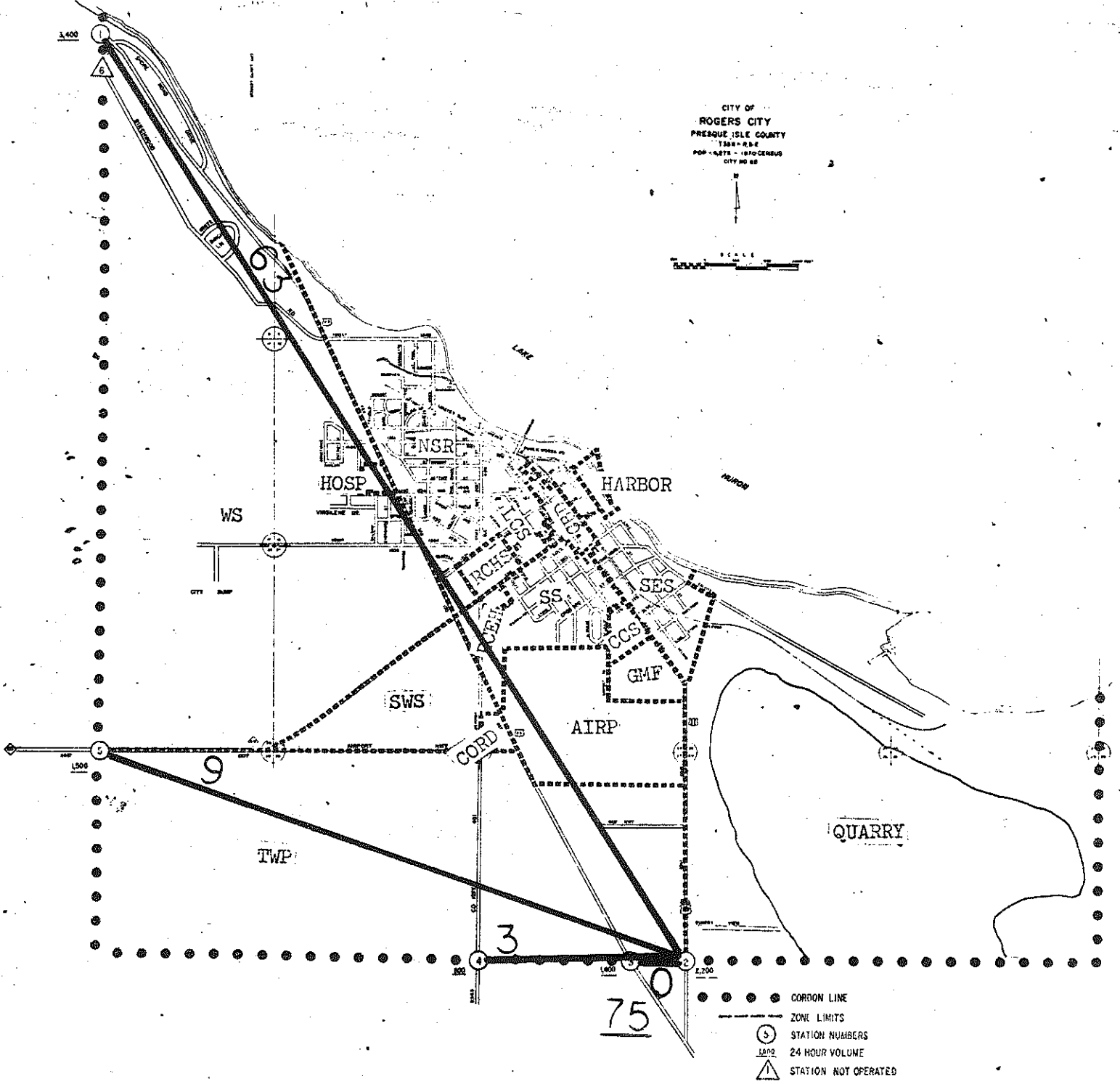


FIGURE 10  
THROUGH TRIPS  
STATION 2

TABLE 13

STATION 2

US-23BR, S. OF ROGERS CITY S. CITY LIMIT

<u>Minutes</u>	<u>Trips</u>	<u>Percent of Total</u>
0 - 20	684	37.30
20 - 40	3	.16
40 - 60	887	48.36
60 - 90	21	1.15
90 - 120	54	2.94
120 - 460	185	10.09
TOTAL	1834	100.00

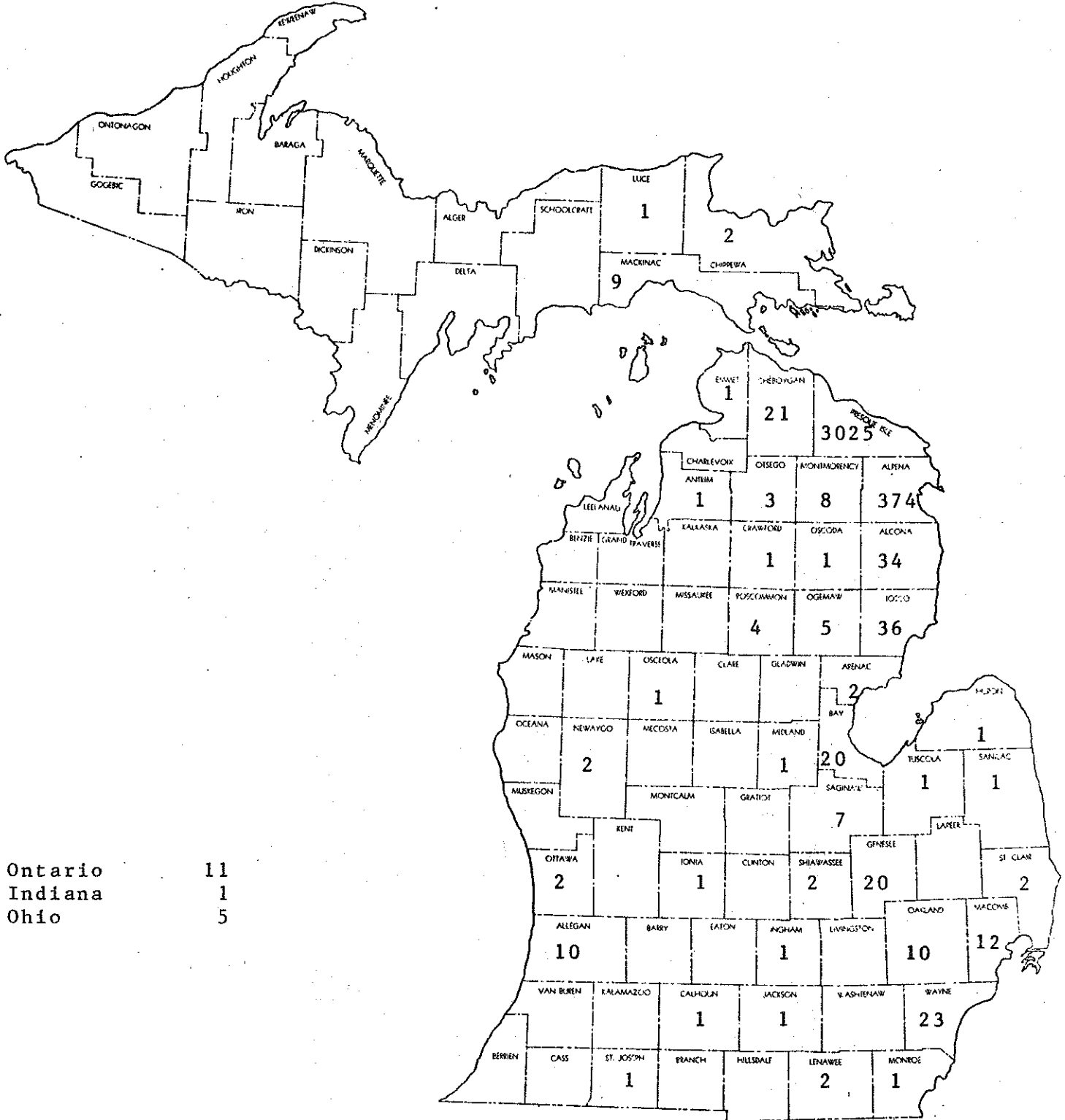
Longest Trip Length = 7 hrs. 40 mins.      Average Trip Length = 1 hr. 5 mins.

ROGERS CITY EXTERNAL ORIGIN DESTINATION SURVEY

Distribution of Trip Ends by County

STATION 2

US-23BR, South of Rogers City-South City Limits



Total Trip Ends 3668

Total Trips 1834

FIGURE 11

### STATION 3

Station 3 was located on US-23 southeast of Rogers City and southeast of County Road 451. Vehicle trips passing through the station (2363) represented 25.3% of all station traffic. Traffic was classified as terminal or through with the former constituting 39.82% and the latter 60.18%. When compared to all station terminal and through trips, the station represents 15.4% of total terminal traffic and 44.09% of total through traffic.

A further cross-tabulation by vehicle type and trip purpose was developed. Table 14 presents the results of this analysis. Nearly 87% of the trips passing through the station were made by passenger car or panel or pick-up truck. The former constituted 76.27% and the latter 10.71%. Vacation trips at 34.48% was the largest trip purpose category. Work and Other Social-Recreation followed at 28.32% and 16.82%. Almost 96% of the vacation trips were through in nature.

By definition terminal trips have one end inside the study area. Four of the internal zones were responsible for 77.75% of these trips. Zone 8 (NSR) accounted for 29.56%, Zone 10 (CBD) 23.72%, Zone 6 (WS) 13.94%, and Zone 7 (HOSP) 10.53%. This information as well as all other terminal trips by zone is presented in Table 15 and graphically displayed in Figure 12.

The primary interchange of through trips at this location occurred with the other US-23 station (No.1). More than 80% entered or exited the study area at station 1. As indicated in Table 16, the only other significant interchange occurred with



station 5 (M-68) with 18.99% of station 3 through trips entering or leaving the area. Figure 13 graphically presents these interchanges.

Utilizing data from the study and the Statewide Traffic Forecast Model, it was possible to determine lengths of trips at the station. The results of these computations are presented in Table 17. As can be seen, 14.23% of the trips had a duration of 20 minutes or less with 41.96% occurring within an hour of the station. The longest trip was determined to be 15 hours 10 minutes and the average trip length was 2 hours 3 minutes.

A county outline map of Michigan is provided as Figure 14, showing the distribution of origin and destination ends of trips passing through station 3. Nearly 74% of all trip ends are concentrated in Cheboygan, Presque Isle, and Alpena Counties. Presque Isle County alone accounted for 44.44%. An additional 8.16% is attributable to the Upper Peninsula with a little over 2% being out of state. The remaining ends are generally located in the eastern half of the Lower Peninsula.

TABLE 14

## STATION 3

## TRIPS BY VEHICLE TYPE AND PURPOSE

<u>Vehicle Type</u>	<u>Vehicles</u>	<u>Percent of Total</u>	<u>Terminal Trips</u>	<u>%</u>	<u>Through</u>	<u>%</u>
Passenger Car	1802	76.27	732	40.62	1070	59.38
Passenger Car with Trailer	133	5.65	11	8.27	122	91.73
Panel or Pickup	253	10.71	154	60.87	99	39.13
Panel or Pickup with Trailer	27	1.13	2	7.41	25	92.59
Other Single Unit Trucks	81	3.43	30	37.04	51	62.96
Combinations and Trucks with Trailers	67	2.82	12	17.91	55	82.09
TOTAL	2363	100.00	941	39.82	1422	60.18

<u>Trip Purpose</u>	<u>Vehicles</u>	<u>Percent of Total</u>	<u>Terminal Trips</u>	<u>%</u>	<u>Through</u>	<u>%</u>
Work	669	28.32	379	56.65	290	43.35
Personal Business	141	5.96	79	56.03	62	43.97
Shopping	203	8.57	160	78.82	43	21.18
Vacation	815	34.48	33	4.05	782	95.95
Other Soc.-Rec.	397	16.82	197	49.62	200	50.38
All Other	138	5.04	93	67.39	45	32.61
TOTAL	2363	100.00	941	39.82	1422	60.18

TABLE 15

## STATION 3

## TERMINAL TRIPS

ZONE	ORIGINS	DESTINATIONS	TOTAL	PERCENT OF TOTAL
6	70	61	131	13.94
7	40	59	99	10.53
8	135	143	278	29.56
9	3	3	6	.64
10	119	104	223	23.72
11	0	3	3	.32
12	7	13	20	2.13
13	6	7	13	1.38
14	22	23	45	4.79
15	26	26	52	5.53
16	0	1	1	.11
17	0	0	0	0
18	2	2	4	.43
19	12	22	34	3.62
20	0	3	3	.32
21	6	2	8	.85
22	11	9	20	2.13
TOTAL	459	481	940	100.0

CITY OF  
 ROGERS CITY  
 PRESQUE ISLE COUNTY  
 1304 - R 5 E  
 POP. 4,778 1970 CENSUS  
 CITY NO. 04



-38-

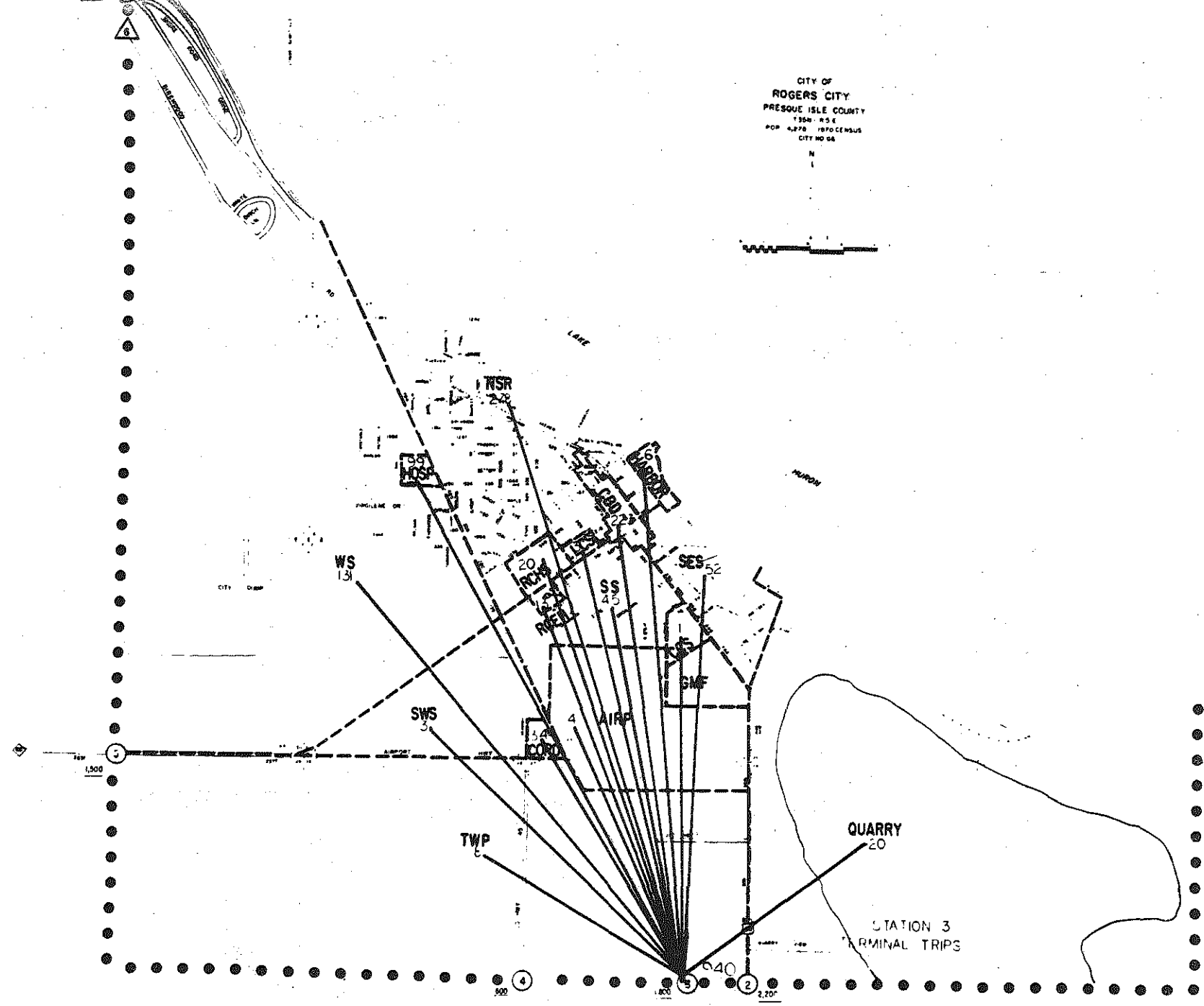


Figure 12

972  
 ROGERS CITY

TABLE 16

STATION 3

THROUGH TRIPS

<u>Station</u>	<u>Trips</u>	<u>Percent of Total</u>
1	1145	80.52
2	3	.21
4	4	.28
5	<u>270</u>	<u>18.99</u>
TOTAL	1422	100.00

FIGURE 13  
STATION 3  
THROUGH TRIPS

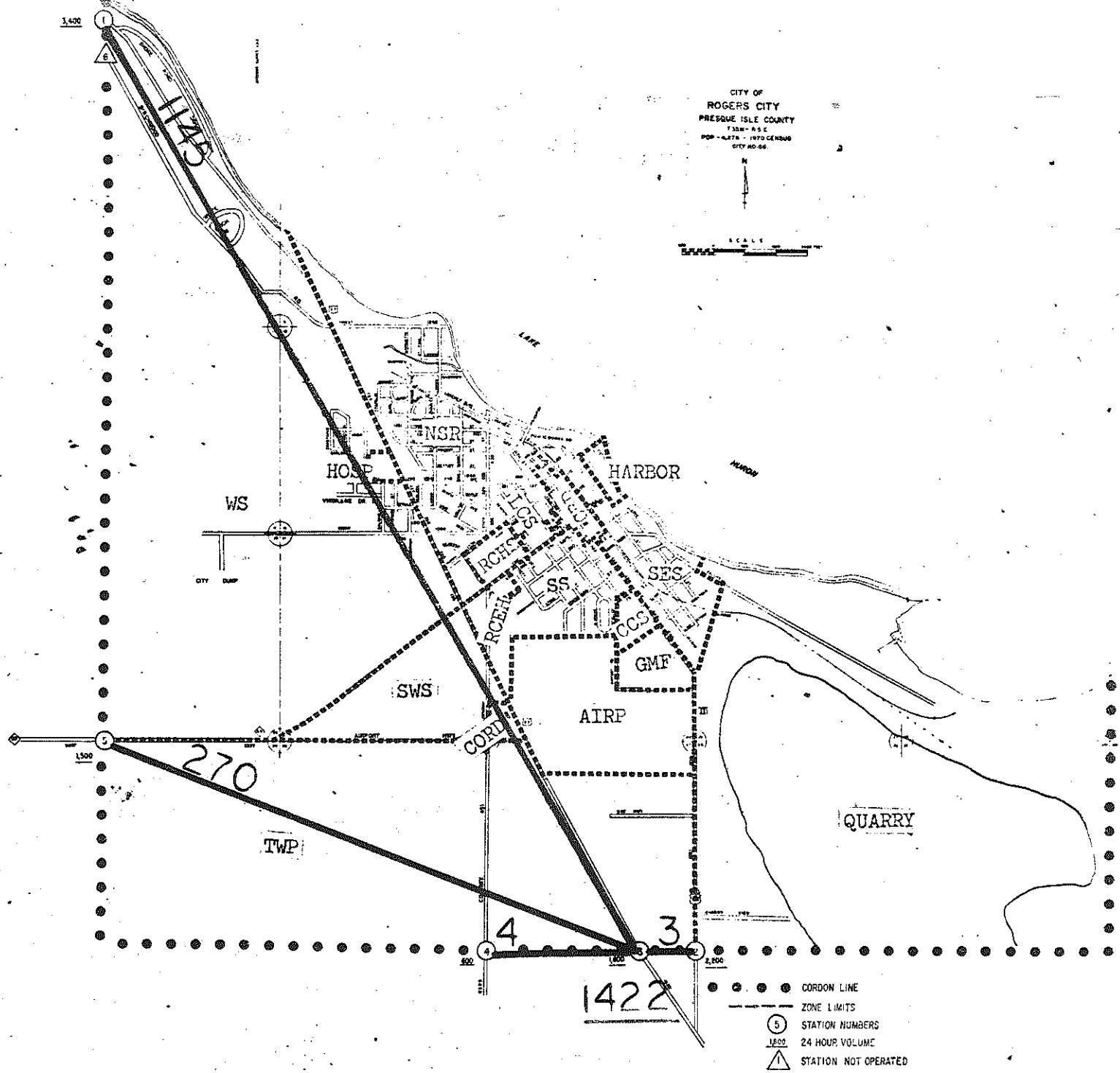


TABLE 17

STATION 3  
 US-23, .4 mile SE of Co. Rd. 451

TRIP LENGTHS

<u>Minutes</u>	<u>Trips</u>	<u>Percent of Total</u>
0-20	334	14.23
20-40	13	.55
40-60	638	27.18
60-90	130	5.54
90-120	188	8.01
120-180	308	13.12
180-240	237	10.10
240-300	167	7.12
300-360	160	6.82
360-910	<u>172</u>	<u>7.33</u>
	2347	100.00

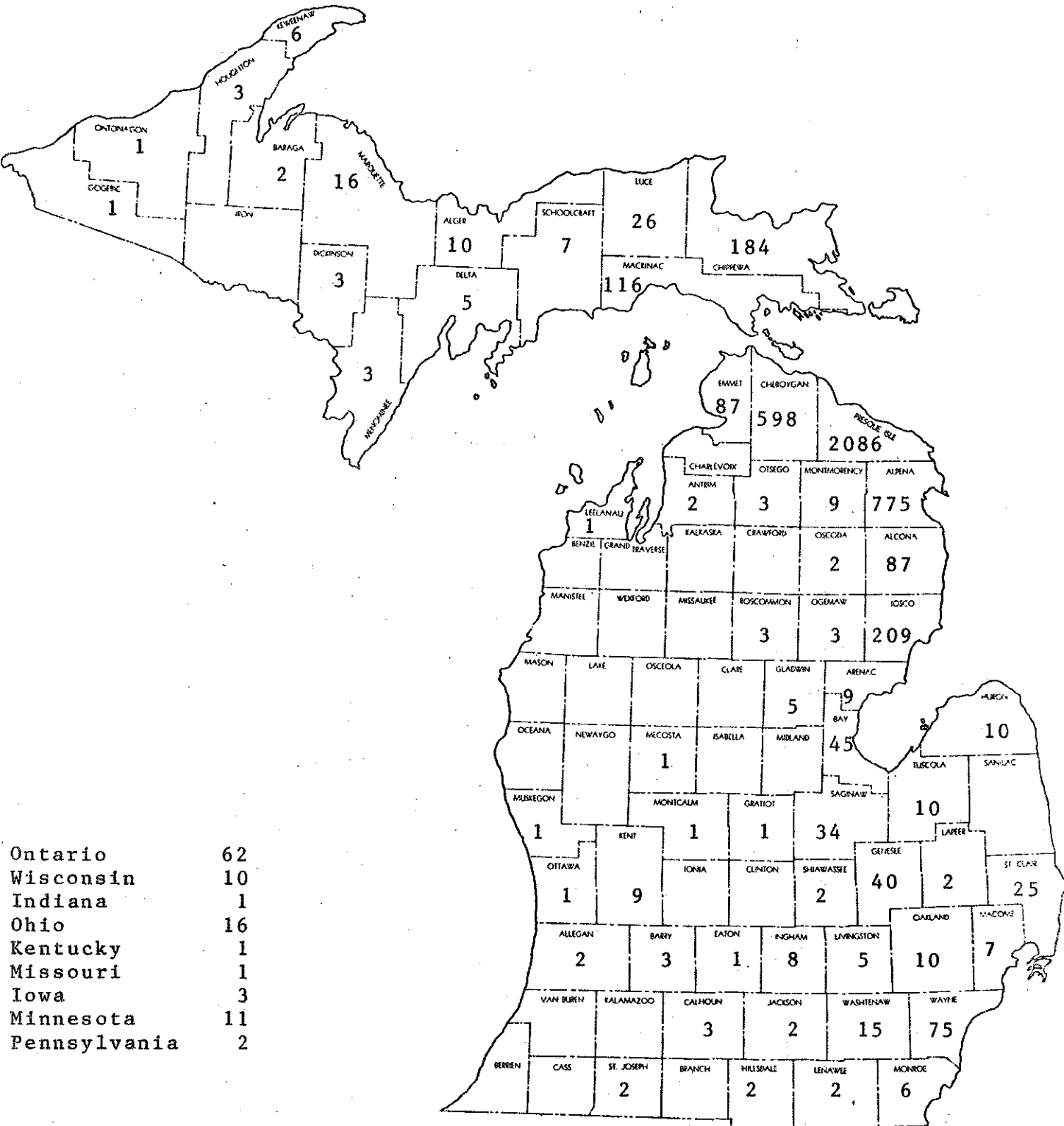
Longest trip Length = 15 hrs. 10 mins. Average Trip Length = 2 hrs. 31 mins.

ROGERS CITY EXTERNAL ORIGIN DESTINATION SURVEY

Distribution of Trip Ends by County

STATION 3

US-23 South, Southeast of County Road 451



Total Trips 2347

Total Trip Ends 4694

Figure 14



#### STATION 4

Station 4 was located on County Road 451 south of Rogers City and south of Airport Highway. Vehicle trips passing through the station (1186) represented 12.70% of all station traffic. Traffic was classified as terminal or through with the former constituting 89.8% of the total and the latter 10.2%. When compared to all station terminal and through trips, the station represents 17.43% of total terminal traffic and 3.75% of total through traffic.

A further cross-tabulation by vehicle type and trip purpose was developed. Table 18 presents the results of this analysis. Nearly 95% of the trips passing through the station were made by passenger car or panel or pick-up truck. The former constituted 81.44 and the latter 13.45%. Work trips at 32.36% was the largest trip purpose category. Other Social-Recreation and shopping followed at 24.95% and 23.93%.

By definition terminal trips have one end inside the study area. Two internal zones accounted for 64.5% of this kind of trip. Zone 10 (CBD) contributed 40.74% and Zone 8 (NSR) 23.76%. This information as well as other terminal trip interchanges is presented in Table 19 and graphically shown in Figure 15.

Over 89% of all through vehicles at the station either entered or exited the study area at Station 1 (US-23 NW) or Station 5 (M-68). The former accounted for 47.94% and the latter 41.32%. Table 20 lists these trips as well as all other Station 4 through trips. Figure 15 illustrates these interchanges graphically.

Utilizing data from the study and the Statewide Traffic Forecast Model it was possible to compute the lengths of all trips passing through the station. The results of these computations are presented in Table 21. As can be seen, 80.56% of the trips had a duration of 20 minutes or less with nearly 88% occurring within an hour. The longest trip was determined to be 9 hours 20 minutes with the average trip length 36 minutes.

A county outline map of Michigan is provided as Figure 17 showing the distribution of origin and destination ends of trips at the station. Nearly 93% of all trip ends are concentrated in Presque Isle County. Montmorency County accounted for 3.78%. The remaining trip ends are widely scattered throughout the state.

## TABLE 18

## STATION 4

## TRIPS BY VEHICLE TYPE AND PURPOSE

<u>Vehicle Type</u>	<u>Vehicles</u>	<u>Percent of Total</u>	<u>Terminal Trips</u>	<u>%</u>	<u>Through</u>	<u>%</u>
Passenger Car	966	81.44	882	91.30	84	8.70
Passenger Car with Trailer	6	.48	6	100.00	0	0.00
Panel or Pickup	159	13.45	140	88.05	19	11.95
Panel or Pickup with Trailer	1	.09	0	0.00	1	100.00
Other Single Unit Trucks	43	3.62	36	83.72	7	16.28
Combinations and Trucks with Trailers	<u>11</u>	<u>.93</u>	<u>1</u>	<u>9.09</u>	<u>10</u>	<u>90.91</u>
TOTAL	1186	100.00	1065	89.80	121	10.20

<u>Trip Purpose</u>	<u>Vehicles</u>	<u>Percent of Total</u>	<u>Terminal Trips</u>	<u>%</u>	<u>Through</u>	<u>%</u>
Work	384	32.36	324	84.38	60	15.62
Personal Business	92	7.78	89	96.74	3	3.26
Shopping	284	23.93	284	100.00	0	0.00
Vacation	24	2.00	12	50.00	12	50.00
Other Soc.-Rec.	296	24.95	256	86.49	40	13.51
All Other	<u>106</u>	<u>8.98</u>	<u>100</u>	<u>94.34</u>	<u>6</u>	<u>5.66</u>
TOTAL	1186	100.00	1065	89.80	121	10.20

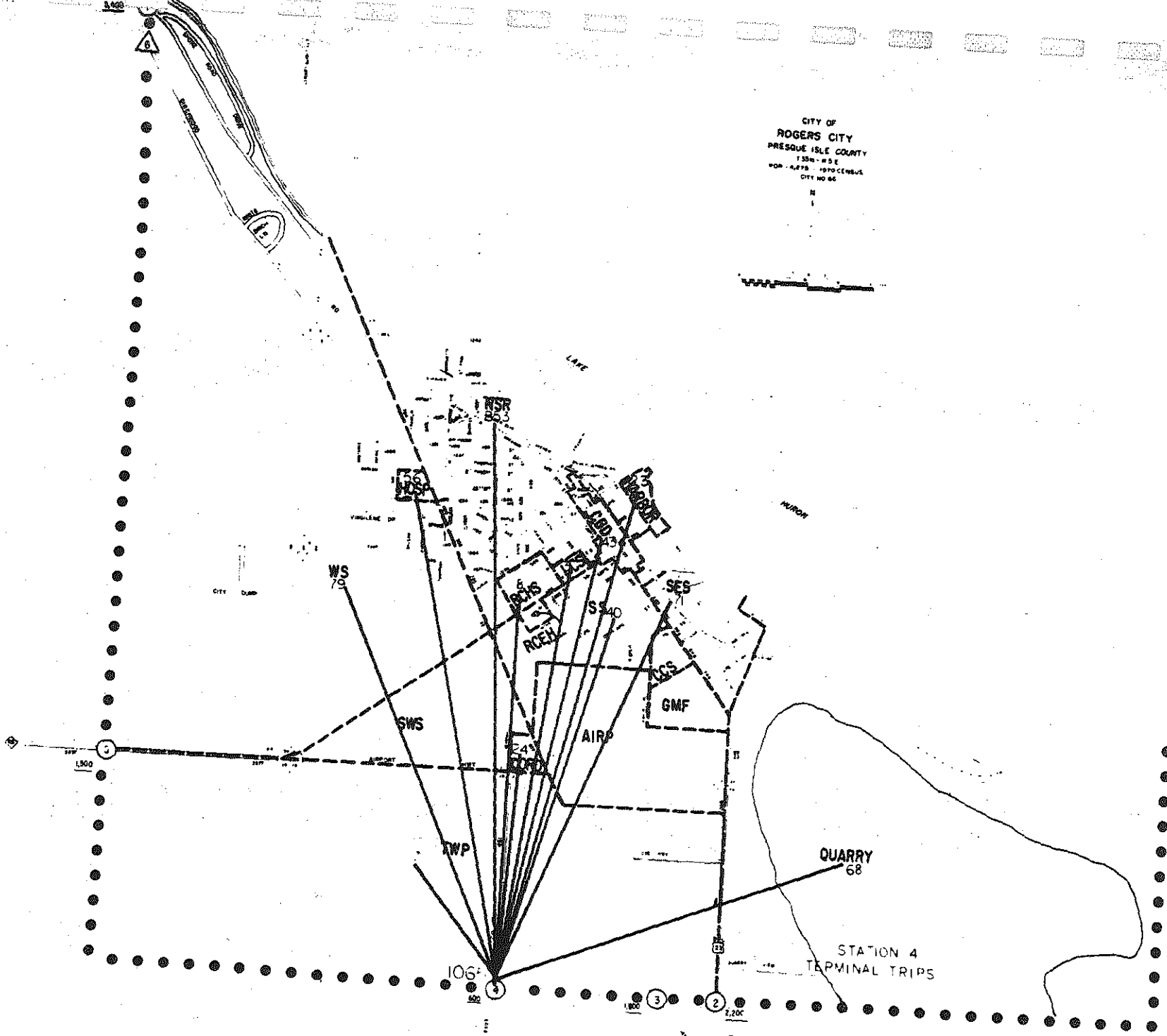
TABLE 19

## STATION 4

## TERMINAL TRIPS

ZONE	ORIGINS	DESTINATIONS	TOTAL	PERCENT OF TOTAL
6	34	45	79	7.42
7	24	32	56	5.26
8	119	134	253	23.76
9	8	15	23	2.16
10	187	247	434	40.74
11	1	2	3	.28
12	3	5	8	.75
13	0	0	0	0
14	27	13	40	3.76
15	35	36	71	6.67
16	0	0	0	0
17	0	0	0	0
18	0	0	0	0
19	11	13	24	2.25
20	0	0	0	0
21	3	4	7	.66
22	38	29	67	6.29
<b>TOTAL</b>	<b>490</b>	<b>575</b>	<b>1065</b>	<b>100.0</b>

CITY OF  
 ROGERS CITY  
 PRESQUE ISLE COUNTY  
 1970-71  
 FOR 1970 CENSUS  
 CITY NO 86



- CORDON LINE
- ZONE LIMITS
- ⑤ STATION NUMBERS
- 1800 24 HOUR VOLUME
- △ STATION NOT OPERATED

Figure 15

1972  
 ROGERS CITY

-47-

TABLE 20

STATION 4

THROUGH TRIPS

<u>Station</u>	<u>Trips</u>	<u>Percent of Total</u>
1	58	47.94
2	2	1.65
3	11	9.09
5	50	41.32
<b>TOTAL</b>	<b>121</b>	<b>100.00</b>

FIGURE 16  
 STATION 4  
 THROUGH TRIPS

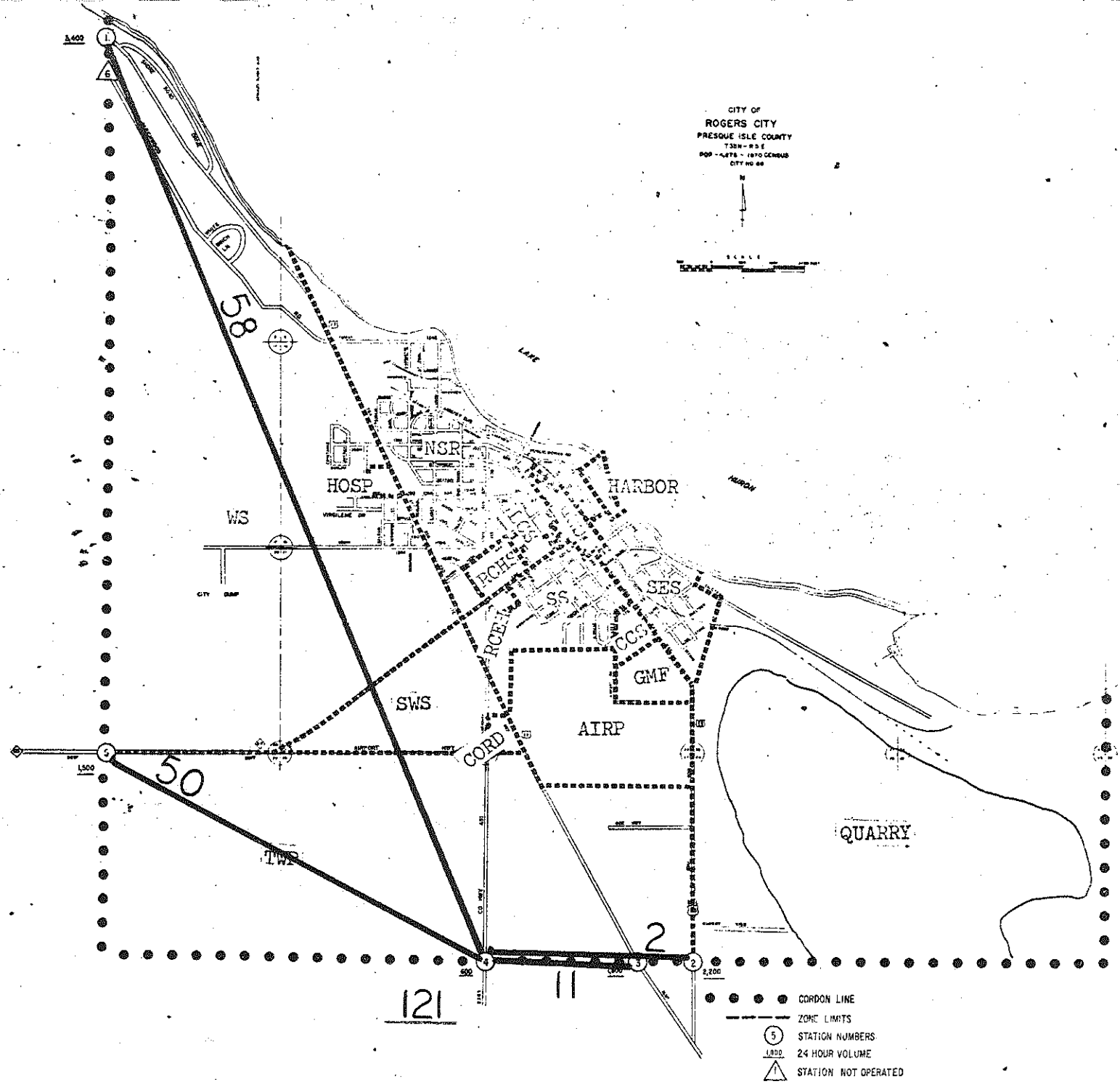


TABLE 21

STATION 4

County Rd. 451, .5 Mile S. of Airport

TRIP LENGTHS

<u>Minutes</u>	<u>Trips</u>	<u>Percent of Total</u>
0-20	949	80.56
20-40	43	3.65
40-60	43	3.65
60-90	88	7.47
90-560	55	4.67
	<hr/>	<hr/>
TOTAL	1178	100.00

Longest Trip Length = 9 Hours 20 Minutes

Average Trip Length = 36 Minutes





## STATION 5

Station 5 was located on M-68 west of Rogers City and east of Klee Road. Vehicle trips passing through the station (1847) represented 19.78% of all station traffic. Traffic was classified as terminal or through with the former constituting 75.2% of the total and the latter 24.8%. When compared to all station terminal and through trips, the station represents 22.73% of total terminal traffic and 14.2% of total through traffic.

A further cross-tabulation by vehicle type and trip purpose was developed. Table 22 presents the results of this analysis. Over 88% of the trips passing through the station were made by passenger car or panel or pick-up truck. The former constituted 76.3% and the latter 12.48%. Work trips at 38.33% was the largest trip purpose category. Shopping, Other Social-Recreation, and Vacation followed at 18.41%, 18.17% and 11.03% respectively.

By definition terminal trips have one end inside the study area. Two internal zones accounted for 61.18% of this kind of trip. Zone 10 (CBD) contributed 35.82% and Zone 8 (NSR) 25.36%. This information as well as other terminal trip interchanges is presented in Table 23 and graphically shown in Figure 18.

Over 83% of the through trips at the station either entered or exited the study area via the US-23 station (No. 3) southeast of Rogers City. Table 24 lists all through trips at the station and, in addition to the above, indicates that station 1 (US-23)

northwest of the city was the next most significant interchange at 14.41%. These interchanges are graphically displaced in Figure 19.

Utilizing data from the study and the Statewide Traffic Forecast Model it was possible to compute the lengths of all trips passing through the station. The results of these computations are presented in Table 25. As can be seen, 38.55% of the trips had a duration of 20 minutes or less with more than 72% occurring within an hour. The longest trip was determined to be 9 hours, with the average trip length 61 minutes.

A county outline map of Michigan is provided as figure 20 showing the distribution of origin and destination ends of trips at the station. Over 91% of all trip ends are concentrated in the Cheboygan, Presque Isle, and Alpena County areas. Presque Isle County alone accounts for 81.49%. The only other significant concentration occurred in Emmet County which accounted for nearly 3%. The remaining ends were widely scattered throughout the state.

TABLE 22

## STATION 5

## TRIPS BY VEHICLE TYPE AND PURPOSE

<u>Vehicle Type</u>	<u>Vehicles</u>	<u>Percent of Total</u>	<u>Terminal Trips</u>	<u>%</u>	<u>Through</u>	<u>%</u>
Passenger Car	1409	76.30	1092	77.50	317	22.50
Passenger Car with Trailer	45	2.41	10	22.22	35	77.78
Panel or Pickup	230	12.48	197	85.65	33	14.35
Panel or Pickup with Trailer	9	.47	4	44.44	5	55.56
Other Single Unit Trucks	98	5.31	54	55.10	44	44.90
Combinations and Trucks with Trailers	56	3.04	32	57.14	24	42.86
<b>TOTAL</b>	1847	100.00	1389	75.20	458	24.80

<u>Trip Purpose</u>	<u>Vehicles</u>	<u>Percent of Total</u>	<u>Terminal Trips</u>	<u>%</u>	<u>Through</u>	<u>%</u>
Work	707	38.33	529	74.82	178	25.18
Personal Business	128	6.91	109	85.16	19	14.84
Shopping	340	18.41	309	90.88	31	9.12
Vacation	204	11.03	77	37.75	727	62.25
Other Soc.-Rec.	336	18.17	247	73.51	89	26.49
All Other	132	7.14	118	89.39	14	10.61
<b>TOTAL</b>	1847	100.00	1389	75.20	458	24.80

TABLE 23

## STATION 5

## TERMINAL TRIPS

ZONE	ORIGINS	DESTINATIONS	TOTAL	PERCENT OF TOTAL
6	53	63	116	8.36
7	27	34	61	4.39
8	190	162	352	25.36
9	4	15	19	1.37
10	247	250	497	35.82
11	1	0	1	.07
12	7	13	20	1.44
13	9	1	10	.72
14	14	32	46	3.31
15	42	29	71	5.12
16	1	1	2	.14
17	0	0	0	0
18	1	1	2	.14
19	15	23	38	2.74
20	0	0	0	0
21	1	9	10	.72
22	65	78	143	10.30
TOTAL	677	711	1388	100.0

CITY OF  
 ROGERS CITY  
 PRESQUE ISLE COUNTY  
 1934 1937  
 POP. 4,275 1871128 BUS  
 CITY NO 66

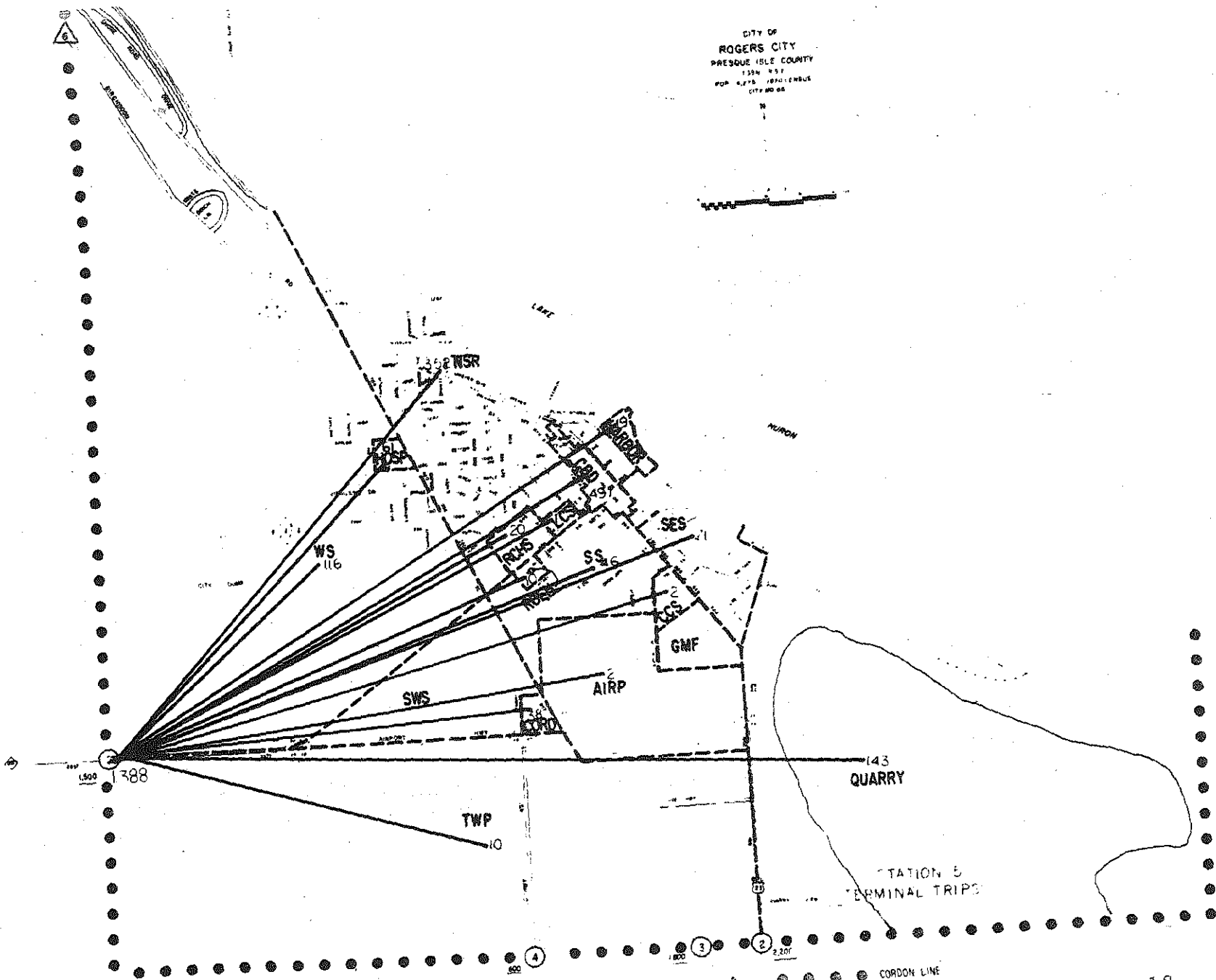


Figure 18  
 572  
 ROGERS CITY

- CORDON LINE
- - - ZONE LIMITS
- STATION NUMBERS
- △ 24 HOUR VOLUME
- △ / STATION NOT OPERATED

TABLE 24

STATION 5

THROUGH TRIPS

<u>Station.</u>	<u>Trips</u>	<u>Percent of Total</u>
1	66	14.41
3	382	83.41
4	10	2.18
<b>TOTAL</b>	<b>458</b>	<b>100.00</b>

FIGURE 19  
STATION 5  
THROUGH TRIPPS

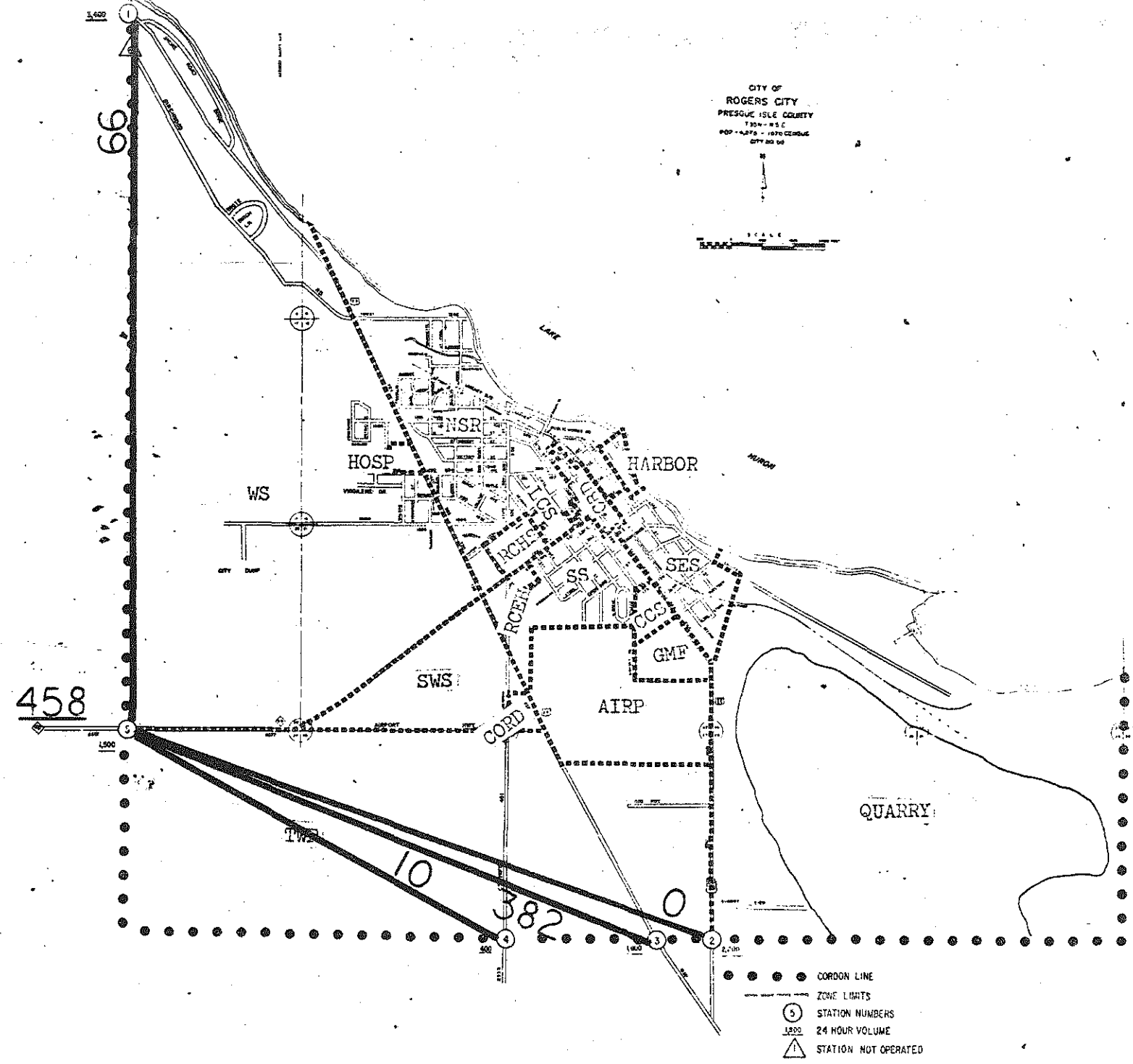




TABLE 25

STATION 5

M-68, .3 Mile E. of Klee Road

TRIP LENGTHS

<u>Minutes</u>	<u>Trips</u>	<u>Percent of Total</u>
0-20	704	38.55
20-40	522	28.59
40-60	92	5.04
60-90	188	10.30
90-120	117	6.41
120-180	105	5.75
180-540	98	5.36
TOTAL	1826	100.00

Longest Trip Length = 9 Hours

Average Trip Length = 61 Minutes



APPENDIX A

USE OF TABLES AND CHARTS

## USE OF GENERAL PURPOSE SUMMARY TABLES

The tables on the following pages show the distribution of trips passing through the station by vehicle type and trip purpose. The vehicle type codes are:

- 1 = Passenger car without trailer
- 2 = Passenger car with trailer
- 3 = Panel or pickup truck without trailer
- 4 = Panel or pickup with trailer
- 5 = Other (larger) single unit trucks
- 6 = Truck combinations
- 7 = Busses
- 8 = Motorcycles

The trip purpose codes are:

- 1 = Work
- 2 = Personal business
- 3 = Shopping
- 4 = Vacation
- 5 = Other social recreation
- 6 = All other

The sample cell outlined represents 1968.70 trips which were shopping (3) trips made by passenger cars (1). This first figure in each cell will always be the raw number of trips. The second figure indicates that 94.76 percent of the trips with trip purpose 3 were passenger cars. The third figure indicates that 18.51 percent of the trips made by type 1 vehicles were shopping trips.

The last figure in the cell indicates that 15.91 percent of all trips in the table are of this type (i.e., vehicle type = 1 and trip purpose = 3). The row total at the right shows that 2077.51 trips, or 16.79 percent were shopping trips. The column total at the bottom shows that 10634.44 trips, or 85.96 percent were passenger cars. The total number of trips (12371.82) in this table is indicated at the lower right. There will be tables for each station for through, terminal and total trips.



STATION NUMBER = 1

EXIT-ENT STATION = 01 TO 05

VEHICLE TYPE

RANGES		1	2	3	4	5	6	7	8	TOTAL TOT X
		1	2	3	4	5	6	7	8	
1	1	110.35	3.43	36.99	0.00	18.62	24.35	0.00	0.00	193.74
	ROW X	56.96	1.77	19.09	0.00	9.61	12.57	0.00	0.00	16.86
	COL X	12.89	2.83	43.44	0.00	40.85	95.64	0.00	0.00	
	TOT X	9.60	0.30	3.22	0.00	1.62	2.12	0.00	0.00	
R	2	55.23	1.14	3.92	0.00	0.00	0.00	0.00	0.00	60.33
	ROW X	91.55	1.96	6.50	0.00	0.00	0.00	0.00	0.00	5.25
	COL X	6.45	0.97	4.60	0.00	0.00	0.00	0.00	0.00	
	TOT X	4.80	0.10	0.34	0.00	0.00	0.00	0.00	0.00	
P	3	20.40	0.99	3.36	0.00	0.00	0.00	0.00	0.00	24.75
	ROW X	87.42	4.00	13.58	0.00	0.00	0.00	0.00	0.00	2.15
	COL X	2.38	0.82	3.95	0.00	0.00	0.00	0.00	0.00	
	TOT X	1.77	0.09	0.29	0.00	0.00	0.00	0.00	0.00	
U	4	486.46	114.61	29.93	15.49	24.74	0.00	0.00	0.00	671.23
	ROW X	72.47	17.07	4.46	2.31	3.69	0.00	0.00	0.00	58.40
	COL X	56.80	94.41	35.15	100.00	54.28	0.00	0.00	0.00	
	TOT X	42.32	9.97	2.60	1.35	2.15	0.00	0.00	0.00	
O	5	165.94	1.18	10.95	0.00	2.22	1.11	0.00	0.00	181.40
	ROW X	91.48	0.65	6.04	0.00	1.22	0.61	0.00	0.00	15.78
	COL X	19.38	0.97	12.86	0.00	4.87	4.36	0.00	0.00	
	TOT X	14.44	0.10	0.95	0.00	0.19	0.10	0.00	0.00	
E	6	18.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.00
	ROW X	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
	COL X	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	TOT X	1.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
-----										
	TOTAL	856.38	121.39	85.15	15.49	45.58	25.46	0.00	0.00	1149.45
	TOT X	74.50	10.56	7.41	1.35	3.97	2.21	0.00	0.00	

STATION 1  
THROUGH TRIPS

A-6



STATION NUMBER = 1  
 EXIT-ENT STATION = TO  
 VEHICLE TYPE

RANGES		1	2	3	4	5	6	7	8	TOTAL
		1	2	3	4	5	6	7	8	TOT %
1	1	163.85	2.37	58.11	0.00	12.39	6.23	0.00	0.00	242.95
	ROW %	67.44	0.98	23.92	0.00	5.10	2.56	0.00	0.00	75.77
	COL %	20.28	26.75	56.84	0.00	91.78	100.00	0.00	0.00	
T	TOT %	17.38	0.25	6.16	0.00	1.31	0.66	0.00	0.00	
R	2	74.80	1.18	6.62	0.00	0.00	0.00	0.00	0.00	82.60
	ROW %	90.56	1.43	8.01	0.00	0.00	0.00	0.00	0.00	8.76
I	COL %	9.26	13.32	6.47	0.00	0.00	0.00	0.00	0.00	
P	TOT %	7.93	0.13	0.70	0.00	0.00	0.00	0.00	0.00	
P	3	221.81	0.00	9.81	0.00	1.11	0.00	0.00	0.00	232.73
	ROW %	95.31	0.00	4.22	0.00	0.48	0.00	0.00	0.00	24.68
	COL %	27.45	0.00	9.60	0.00	8.22	0.00	0.00	0.00	
P	TOT %	23.53	0.00	1.04	0.00	0.12	0.00	0.00	0.00	
U	4	97.70	2.47	4.21	3.98	0.00	0.00	0.00	0.00	108.36
	ROW %	90.16	2.28	3.89	3.67	0.00	0.00	0.00	0.00	11.49
R	COL %	12.09	27.88	4.12	100.00	0.00	0.00	0.00	0.00	
P	TOT %	10.36	0.26	0.45	0.42	0.00	0.00	0.00	0.00	
O	5	208.54	1.52	19.23	0.00	0.00	0.00	0.00	0.00	229.29
	ROW %	90.95	0.66	8.39	0.00	0.00	0.00	0.00	0.00	24.32
	COL %	25.81	17.16	18.81	0.00	0.00	0.00	0.00	0.00	
S	TOT %	22.12	0.16	2.04	0.00	0.00	0.00	0.00	0.00	
E	6	41.29	1.32	4.26	0.00	0.00	0.00	0.00	0.00	46.87
	ROW %	88.09	2.82	9.09	0.00	0.00	0.00	0.00	0.00	8.97
	COL %	5.11	14.90	4.17	0.00	0.00	0.00	0.00	0.00	
	TOT %	4.38	0.14	0.45	0.00	0.00	0.00	0.00	0.00	
-----										
TOTAL		807.99	8.86	102.24	3.98	13.50	6.23	0.00	0.00	942.80
TOT %		85.70	0.94	10.84	0.42	1.43	0.66	0.00	0.00	

STATION 1  
 TERMINAL TRIPS

A-7

STATION NUMBER = 1  
 EXIT-ENT STATION = 01 TO  
 VEHICLE TYPE

RANGES		1	2	3	4	5	6	7	8	TOTAL
		1	2	3	4	5	6	7	8	TOT X
1	1	274.20	5.40	95.10	0.00	31.01	30.58	0.00	0.00	436.69
	ROW X	62.79	1.33	21.78	0.00	7.10	7.00	0.00	0.00	20.87
	COL X	16.47	4.45	50.75	0.00	52.49	96.50	0.00	0.00	
T	TOT X	13.11	0.28	4.55	0.00	1.48	1.46	0.00	0.00	
R	2	130.03	2.36	10.54	0.00	0.00	0.00	0.00	0.00	142.93
	ROW X	90.97	1.65	7.37	0.00	0.00	0.00	0.00	0.00	6.83
I	COL X	7.81	1.81	5.62	0.00	0.00	0.00	0.00	0.00	
P	TOT X	6.21	0.11	0.50	0.00	0.00	0.00	0.00	0.00	
P	3	242.21	0.99	13.17	0.00	1.11	0.00	0.00	0.00	257.48
	ROW X	94.07	0.38	5.11	0.00	0.43	0.00	0.00	0.00	12.31
	COL X	14.55	0.76	7.03	0.00	1.88	0.00	0.00	0.00	
P	TOT X	11.58	0.05	0.63	0.00	0.05	0.00	0.00	0.00	
U	4	584.16	117.08	34.14	19.47	24.74	0.00	0.00	0.00	779.59
	ROW X	74.93	15.02	4.38	2.50	3.17	0.00	0.00	0.00	37.26
R	COL X	35.10	89.89	18.22	100.00	41.88	0.00	0.00	0.00	
P	TOT X	27.92	5.60	1.63	0.93	1.18	0.00	0.00	0.00	
O	5	374.48	2.70	30.18	0.00	2.22	1.11	0.00	0.00	410.69
	ROW X	91.18	0.66	7.35	0.00	0.54	0.27	0.00	0.00	19.63
S	COL X	22.50	2.07	16.11	0.00	3.76	3.50	0.00	0.00	
S	TOT X	17.90	0.13	1.44	0.00	0.11	0.05	0.00	0.00	
E	6	59.29	1.32	4.26	0.00	0.00	0.00	0.00	0.00	64.87
	ROW X	91.40	2.03	6.57	0.00	0.00	0.00	0.00	0.00	3.16
	COL X	3.56	1.01	2.27	0.00	0.00	0.00	0.00	0.00	
	TOT X	2.83	0.04	0.20	0.00	0.00	0.00	0.00	0.00	
-----										
TOTAL		1664.37	130.25	187.39	19.47	59.08	31.69	0.00	0.00	2092.25
TOT X		79.55	6.23	8.96	0.93	2.82	1.51	0.00	0.00	

STATION 1  
 TOTAL TRIPS

A-8

STATION NUMBER = 2  
 EXIT-ENT STATION = 01 TO 05  
 VEHICLE TYPE

RANGES		1	2	3	4	5	6	7	8	TOTAL TOT %
		1	2	3	4	5	6	7	8	
1	1	5.88	0.00	1.26	0.00	0.00	0.00	0.00	0.00	7.14
	ROW %	82.35	0.00	17.65	0.00	0.00	0.00	0.00	0.00	9.50
	COL %	9.06	0.00	100.00	0.00	0.00	0.00	0.00	0.00	
T	TOT %	7.83	0.00	1.68	0.00	0.00	0.00	0.00	0.00	
R	2	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.45
	ROW %	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.93
I	COL %	2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
P	TOT %	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
P	3	5.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.70
	ROW %	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.59
	COL %	8.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
P	TOT %	7.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
U	4	37.60	8.97	0.00	0.00	0.00	0.00	0.00	0.00	46.57
	ROW %	80.74	19.26	0.00	0.00	0.00	0.00	0.00	0.00	61.99
R	COL %	57.94	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
P	TOT %	50.05	11.94	0.00	0.00	0.00	0.00	0.00	0.00	
O	5	14.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.27
	ROW %	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.99
	COL %	21.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
S	TOT %	18.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
-----										
TOTAL		64.90	8.97	1.26	0.00	0.00	0.00	0.00	0.00	75.13
TOT %		86.38	11.94	1.68	0.00	0.00	0.00	0.00	0.00	

A-9

STATION NUMBER = 2

EXIT-ENT STATION = TO

VEHICLE TYPE

RANGES	1	2	3	4	5	6	7	8	TOTAL
	1	2	3	4	5	6	7	8	TOT %
1 1	417.19	6.29	167.06	1.22	28.00	14.00	1.50	0.00	635.26
ROW %	65.67	0.99	26.30	0.19	4.41	2.20	0.24	0.00	35.81
COL %	28.38	29.34	73.16	22.14	67.50	93.33	100.00	0.00	
T TOT %	23.52	0.35	9.42	0.07	1.58	0.79	0.08	0.00	
R 2	82.01	2.93	7.54	0.00	0.00	0.00	0.00	0.00	92.48
ROW %	88.48	3.17	8.15	0.00	0.00	0.00	0.00	0.00	5.21
I COL %	5.58	13.67	3.30	0.00	0.00	0.00	0.00	0.00	
P TOT %	4.62	0.17	0.43	0.00	0.00	0.00	0.00	0.00	
3	277.89	2.48	18.39	0.00	1.00	0.00	0.00	0.00	299.76
ROW %	92.70	0.83	6.13	0.00	0.33	0.00	0.00	0.00	16.90
COL %	18.90	11.57	8.05	0.00	3.13	0.00	0.00	0.00	
P TOT %	15.67	0.14	1.04	0.00	0.06	0.00	0.00	0.00	
U 4	136.61	8.52	5.01	0.00	3.00	1.00	0.00	0.00	154.14
ROW %	88.63	5.53	3.25	0.00	1.95	0.65	0.00	0.00	8.69
R COL %	9.29	39.74	2.19	0.00	9.36	6.67	0.00	0.00	
P TOT %	7.70	0.48	0.28	0.00	0.17	0.06	0.00	0.00	
5	444.78	1.22	21.92	2.42	0.00	0.00	0.00	0.00	470.34
ROW %	94.57	0.26	4.66	0.51	0.00	0.00	0.00	0.00	26.51
COL %	30.26	5.69	9.60	43.92	0.00	0.00	0.00	0.00	
S TOT %	25.07	0.07	1.24	0.14	0.00	0.00	0.00	0.00	
E 6	111.59	0.00	8.44	1.87	0.00	0.00	0.00	0.00	121.90
ROW %	91.54	0.00	6.92	1.53	0.00	0.00	0.00	0.00	6.87
COL %	7.59	0.00	3.70	33.94	0.00	0.00	0.00	0.00	
TOT %	6.29	0.00	0.48	0.11	0.00	0.00	0.00	0.00	
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TOTAL	1470.07	21.44	228.36	5.51	32.00	15.00	1.50	0.00	1773.88
TOT %	82.87	1.21	12.87	0.31	1.80	0.85	0.08	0.00	

STATION 2  
TERMINAL TRIPS

A-10

ROGERS CITY EXTERNAL O D GENERAL PURPOSE SUMMARY

STATION NUMBER = 2

EXIT-ENT STATION = 01 TO

VEHICLE TYPE

RANGES	1	2	3	4	5	6	7	8	TOTAL TOT X
	1	2	3	4	5	6	7	8	
1 1	423.07	6.29	168.32	1.22	28.00	14.00	1.50	0.00	642.40
ROW X	65.86	0.98	26.20	0.19	4.36	2.18	0.23	0.00	34.74
COL X	27.56	20.68	73.30	22.14	87.50	93.33	100.00	0.00	
T TOT X	27.88	0.34	9.10	0.07	1.51	0.76	0.08	0.00	
R 2 2	83.46	2.93	7.54	0.00	0.00	0.00	0.00	0.00	93.93
ROW X	88.45	3.12	8.03	0.00	0.00	0.00	0.00	0.00	5.00
I COL X	5.44	9.63	3.28	0.00	0.00	0.00	0.00	0.00	
P TOT X	4.51	0.16	0.41	0.00	0.00	0.00	0.00	0.00	
3 3	283.59	2.48	18.39	0.00	1.00	0.00	0.00	0.00	305.26
ROW X	92.84	0.81	6.02	0.00	0.33	0.00	0.00	0.00	16.32
COL X	18.48	8.16	8.01	0.00	3.13	0.00	0.00	0.00	
P TOT X	15.34	0.13	0.99	0.00	0.05	0.00	0.00	0.00	
U 4 4	174.21	17.49	5.01	0.00	3.00	1.00	0.00	0.00	200.71
ROW X	86.80	8.71	2.50	0.00	1.49	0.50	0.00	0.00	10.85
R COL X	11.35	57.51	2.18	0.00	9.38	6.67	0.00	0.00	
P TOT X	9.42	0.95	0.27	0.00	0.16	0.05	0.00	0.00	
5 5	459.05	1.22	21.92	2.42	0.00	0.00	0.00	0.00	484.61
ROW X	94.73	0.25	4.52	0.50	0.00	0.00	0.00	0.00	26.21
COL X	29.91	4.01	9.55	43.92	0.00	0.00	0.00	0.00	
S TOT X	24.83	0.07	1.19	0.13	0.00	0.00	0.00	0.00	
E 6 6	111.59	0.00	8.44	1.87	0.00	0.00	0.00	0.00	121.90
ROW X	91.54	0.00	6.92	1.53	0.00	0.00	0.00	0.00	6.59
COL X	7.27	0.00	3.68	33.94	0.00	0.00	0.00	0.00	
TOT X	6.04	0.00	0.46	0.10	0.00	0.00	0.00	0.00	
-----									
TOTAL	1534.97	30.41	229.62	5.51	32.00	15.00	1.50	0.00	1849.01
TOT X	83.02	1.64	12.42	0.30	1.73	0.81	0.08	0.00	

A-11

STATION 2  
TOTAL TRIPS

STATION NUMBER = 3  
 EXIT-ENT STATION = 01 TO 05  
 VEHICLE TYPE

RANGES		1	2	3	4	5	6	7	8	TOTAL TOT %
		1	2	3	4	5	6	7	8	
1	1	152.05	1.72	58.14	4.86	29.68	43.69	0.00	0.00	290.10
	ROW %	57.41	0.59	20.04	1.68	10.22	15.06	0.00	0.00	20.40
	COL %	14.22	1.41	58.45	19.12	57.78	79.74	0.00	0.00	
	TOT %	10.49	0.12	4.09	0.34	2.08	3.07	0.00	0.00	
2	2	54.68	1.39	4.57	0.00	1.11	0.00	0.00	0.00	61.75
	ROW %	88.55	2.25	7.40	0.00	1.80	0.00	0.00	0.00	4.34
	COL %	5.11	1.14	4.59	0.00	2.16	0.00	0.00	0.00	
	TOT %	3.84	0.10	0.32	0.00	0.08	0.00	0.00	0.00	
3	3	37.09	0.00	4.40	0.00	0.00	1.11	0.00	0.00	42.60
	ROW %	87.07	0.00	10.33	0.00	0.00	2.61	0.00	0.00	3.00
	COL %	3.47	0.00	4.42	0.00	0.00	2.03	0.00	0.00	
	TOT %	2.61	0.00	0.31	0.00	0.00	0.08	0.00	0.00	
4	4	612.57	106.62	18.84	17.78	17.77	8.88	0.00	0.00	782.46
	ROW %	78.29	13.63	2.41	2.27	2.27	1.13	0.00	0.00	55.01
	COL %	57.28	87.52	18.94	69.94	34.64	16.21	0.00	0.00	
	TOT %	43.07	7.50	1.32	1.25	1.25	0.62	0.00	0.00	
5	5	174.41	10.56	11.07	2.78	0.00	1.11	0.00	0.00	199.93
	ROW %	87.24	5.28	5.54	1.39	0.00	0.56	0.00	0.00	14.06
	COL %	16.31	8.67	11.13	10.94	0.00	2.03	0.00	0.00	
	TOT %	12.26	0.74	0.78	0.20	0.00	0.08	0.00	0.00	
6	6	38.72	1.54	2.45	0.00	2.78	0.00	0.00	0.00	45.49
	ROW %	85.12	3.39	5.39	0.00	6.11	0.00	0.00	0.00	3.20
	COL %	3.62	1.26	2.46	0.00	5.42	0.00	0.00	0.00	
	TOT %	2.72	0.11	0.17	0.00	0.20	0.00	0.00	0.00	
-----										
TOTAL		1069.52	121.83	99.47	25.42	51.30	54.79	0.00	0.00	1422.33
TOT %		75.19	8.57	6.99	1.79	3.61	3.85	0.00	0.00	

STATION 3  
 THROUGH TRIPS

A-12

ROGERS CITY EXTERNAL O D GENERAL PURPOSE SUMMARY

STATION NUMBER \* 3  
 EXIT-ENT STATION \* TO  
 VEHICLE TYPE

RANGES	1	2	3	4	5	6	7	8	TOTAL TOT X
	1	2	3	4	5	6	7	8	
I 1	239.42	1.30	95.66	1.27	29.64	11.86	0.00	0.00	379.15
ROW X	63.15	0.34	25.23	0.33	7.82	3.13	0.00	0.00	80.32
COL X	37.49	11.16	62.29	100.00	100.00	100.00	0.00	0.00	
T TOT X	25.46	0.14	16.17	0.14	3.15	1.26	0.00	0.00	
R 2	59.73	1.69	17.61	0.00	0.00	0.00	0.00	0.00	79.03
ROW X	75.58	2.14	22.28	0.00	0.00	0.00	0.00	0.00	8.40
I COL X	8.15	14.51	11.47	0.00	0.00	0.00	0.00	0.00	
T TOT X	6.35	0.18	1.87	0.00	0.00	0.00	0.00	0.00	
P 3	139.91	1.22	18.85	0.00	0.00	0.00	0.00	0.00	159.98
ROW X	87.45	0.76	11.78	0.00	0.00	0.00	0.00	0.00	17.01
COL X	19.10	10.47	12.28	0.00	0.00	0.00	0.00	0.00	
P TOT X	14.88	0.13	2.00	0.00	0.00	0.00	0.00	0.00	
U 4	25.04	6.14	1.10	0.00	0.00	0.00	0.00	0.00	32.28
ROW X	77.57	19.02	3.41	0.00	0.00	0.00	0.00	0.00	3.43
R COL X	3.42	52.70	0.72	0.00	0.00	0.00	0.00	0.00	
T TOT X	2.66	0.65	0.12	0.00	0.00	0.00	0.00	0.00	
P 5	187.42	1.30	8.66	0.00	0.00	0.00	0.00	0.00	197.38
ROW X	94.95	0.66	4.39	0.00	0.00	0.00	0.00	0.00	20.99
COL X	25.59	11.16	5.64	0.00	0.00	0.00	0.00	0.00	
S TOT X	19.93	0.14	0.92	0.00	0.00	0.00	0.00	0.00	
E 6	80.93	0.00	11.68	0.00	0.00	0.00	0.00	0.00	92.61
ROW X	87.39	0.00	12.61	0.00	0.00	0.00	0.00	0.00	9.85
COL X	11.05	0.00	7.61	0.00	0.00	0.00	0.00	0.00	
T TOT X	8.61	0.00	1.24	0.00	0.00	0.00	0.00	0.00	
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TOTAL	732.45	11.65	153.56	1.27	29.64	11.86	0.00	0.00	940.43
TOT X	77.88	1.24	16.33	0.14	3.15	1.26	0.00	0.00	

A-13

HIGHWAY LIBRARY  
 MICHIGAN DEPARTMENT OF STATE  
 HIGHWAYS  
 LANSING, MICH.  
 P. O. DRAWER "K" 48904  
 STATION 3  
 TERMINAL TRIPS

STATION NUMBER = 3

EXIT-ENT STATION = 01 TO

VEHICLE TYPE

RANGES		1	2	3	4	5	6	7	8	TOTAL
		1	2	3	4	5	6	7	8	TOT %
1	1	391.47	3.02	153.80	6.13	59.28	55.55	0.00	0.00	669.25
	ROW %	58.49	0.45	22.98	0.92	8.86	8.30	0.00	0.00	28.32
	COL %	21.72	2.26	60.78	22.97	73.24	83.35	0.00	0.00	
T	TOT %	16.57	0.13	6.51	0.26	2.51	2.35	0.00	0.00	
R	2	114.41	3.04	22.18	0.00	1.11	0.00	0.00	0.00	140.78
	ROW %	81.27	2.19	15.76	0.00	0.79	0.00	0.00	0.00	5.96
I	COL %	6.35	2.31	8.77	0.00	1.37	0.00	0.00	0.00	
P	TOT %	4.84	0.13	0.94	0.00	0.05	0.00	0.00	0.00	
P	3	177.00	1.22	23.25	0.00	0.00	1.11	0.00	0.00	202.58
	ROW %	87.37	0.60	11.48	0.00	0.00	0.55	0.00	0.00	8.97
	COL %	9.82	0.91	9.19	0.00	0.00	1.67	0.00	0.00	
P	TOT %	7.49	0.05	0.98	0.00	0.00	0.05	0.00	0.00	
U	4	637.61	112.76	19.94	17.78	17.77	8.88	0.00	0.00	814.74
	ROW %	78.26	13.84	2.45	2.18	2.18	1.09	0.00	0.00	34.48
R	COL %	35.38	84.48	7.88	66.62	21.95	13.32	0.00	0.00	
P	TOT %	26.99	4.77	0.84	0.75	0.75	0.38	0.00	0.00	
O	5	361.83	11.86	19.73	2.78	0.00	1.11	0.00	0.00	397.31
	ROW %	91.07	2.99	4.97	0.70	0.00	0.28	0.00	0.00	16.82
	COL %	20.08	8.89	7.80	10.42	0.00	1.67	0.00	0.00	
S	TOT %	15.31	0.50	0.84	0.12	0.00	0.05	0.00	0.00	
E	6	119.65	1.54	14.13	0.00	2.78	0.00	0.00	0.00	138.10
	ROW %	86.64	1.12	10.23	0.00	2.01	0.00	0.00	0.00	5.84
	COL %	6.64	1.15	5.58	0.00	3.43	0.00	0.00	0.00	
	TOT %	5.06	0.07	0.60	0.00	0.12	0.00	0.00	0.00	
-----										
TOTAL		1801.97	133.48	253.03	26.69	80.94	66.65	0.00	0.00	2362.76
TOT %		76.27	5.65	10.71	1.13	3.43	2.82	0.00	0.00	

A-14



ROGERS CITY EXTERNAL O D GENERAL PURPOSE SUMMARY

STATION NUMBER = 4

EXIT-ENT STATION = 01 TO 05

VEHICLE TYPE

RANGES	1	2	3	4	5	6	7	8	TOTAL
	1	2	3	4	5	6	7	8	TOT %
1 1	32.23	0.00	10.42	0.00	7.00	10.00	0.00	0.00	59.65
ROW %	54.03	0.00	17.47	0.00	11.74	16.76	0.00	0.00	49.16
COL %	38.28	0.00	54.55	0.00	100.00	100.00	0.00	0.00	
T TOT %	26.56	0.00	8.59	0.00	5.77	8.24	0.00	0.00	
R 2 2	1.39	0.00	2.22	0.00	0.00	0.00	0.00	0.00	3.61
ROW %	38.90	0.00	61.50	0.00	0.00	0.00	0.00	0.00	2.98
COL %	1.65	0.00	11.62	0.00	0.00	0.00	0.00	0.00	
T TOT %	1.15	0.00	1.83	0.00	0.00	0.00	0.00	0.00	
P 4 4	9.58	0.00	1.05	1.05	0.00	0.00	0.00	0.00	11.68
ROW %	82.02	0.00	8.99	8.99	0.00	0.00	0.00	0.00	9.63
COL %	11.38	0.00	5.50	100.00	0.00	0.00	0.00	0.00	
T TOT %	7.90	0.00	0.87	0.87	0.00	0.00	0.00	0.00	
U 5 5	34.19	0.00	5.41	0.00	0.00	0.00	0.00	0.00	39.60
ROW %	86.34	0.00	13.66	0.00	0.00	0.00	0.00	0.00	32.64
COL %	40.61	0.00	28.32	0.00	0.00	0.00	0.00	0.00	
T TOT %	28.18	0.00	4.46	0.00	0.00	0.00	0.00	0.00	
O 6 6	6.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.80
ROW %	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.60
COL %	8.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
S TOT %	5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
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TOTAL	84.19	0.00	19.10	1.05	7.00	10.00	0.00	0.00	121.34
TOT %	69.38	0.00	15.74	0.87	5.77	8.24	0.00	0.00	

A-15

STATION NUMBER = 4

EXIT-ENT STATION = TO

VEHICLE TYPE

RANGES	1	2	3	4	5	6	7	8	TOTAL
	1	2	3	4	5	6	7	8	TOT %
1 1	209.52	1.05	77.70	0.00	35.00	1.00	0.00	0.00	324.27
ROW %	64.61	0.32	23.96	0.00	10.79	0.31	0.00	0.00	30.44
COL %	23.75	18.62	55.31	0.00	97.22	100.00	0.00	0.00	
T TOT %	19.67	0.10	7.29	0.00	3.29	0.09	0.00	0.00	
R 2 2	80.47	0.00	8.23	0.00	0.00	0.00	0.00	0.00	88.70
ROW %	90.72	0.00	9.28	0.00	0.00	0.00	0.00	0.00	8.33
I COL %	9.12	0.00	5.86	0.00	0.00	0.00	0.00	0.00	
P TOT %	7.55	0.00	0.77	0.00	0.00	0.00	0.00	0.00	
3 3	257.36	2.23	23.38	0.00	1.00	0.00	0.00	0.00	283.97
ROW %	90.43	0.79	8.23	0.00	0.35	0.00	0.00	0.00	26.66
COL %	29.18	39.54	16.64	0.00	2.78	0.00	0.00	0.00	
P TOT %	24.16	0.21	2.19	0.00	0.09	0.00	0.00	0.00	
U 4 4	10.52	0.00	1.13	0.00	0.00	0.00	0.00	0.00	12.05
ROW %	90.42	0.00	9.38	0.00	0.00	0.00	0.00	0.00	1.13
R COL %	1.24	0.00	0.80	0.00	0.00	0.00	0.00	0.00	
P TOT %	1.03	0.00	0.11	0.00	0.00	0.00	0.00	0.00	
5 5	239.20	0.00	17.24	0.00	0.00	0.00	0.00	0.00	256.44
ROW %	93.28	0.00	6.72	0.00	0.00	0.00	0.00	0.00	24.07
COL %	27.12	0.00	12.27	0.00	0.00	0.00	0.00	0.00	
S TOT %	22.86	0.00	1.62	0.00	0.00	0.00	0.00	0.00	
E 6 6	84.43	2.36	12.80	0.00	0.00	0.00	0.00	0.00	99.79
ROW %	84.81	2.36	12.83	0.00	0.00	0.00	0.00	0.00	9.37
COL %	9.59	41.84	9.11	0.00	0.00	0.00	0.00	0.00	
TOT %	7.94	0.22	1.20	0.00	0.00	0.00	0.00	0.00	
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TOTAL	882.10	5.64	140.48	0.00	36.00	1.00	0.00	0.00	1065.22
TOT %	82.81	0.53	13.19	0.00	3.38	0.09	0.00	0.00	

A-16

STATION NUMBER 4  
 EXIT-ENT STATION 01 TO  
 VEHICLE TYPE

RANGES	1	2	3	4	5	6	7	8	TOTAL TOT %
	1	2	3	4	5	6	7	8	
1 1	241.75	1.05	88.12	0.00	42.00	11.00	0.00	0.00	383.92
ROW X	62.97	0.27	22.95	0.00	10.94	2.87	0.00	0.00	32.36
COL X	25.02	18.62	55.22	0.00	97.67	100.00	0.00	0.00	
T TOT X	20.37	0.09	7.43	0.00	3.54	0.93	0.00	0.00	
R 2	81.86	0.00	10.45	0.00	0.00	0.00	0.00	0.00	92.31
ROW X	88.68	0.00	11.32	0.00	0.00	0.00	0.00	0.00	7.78
I COL X	8.47	0.00	6.55	0.00	0.00	0.00	0.00	0.00	
P TOT X	6.90	0.00	0.88	0.00	0.00	0.00	0.00	0.00	
3	257.36	2.23	23.38	0.00	1.00	0.00	0.00	0.00	283.97
ROW X	90.63	0.79	8.23	0.00	0.35	0.00	0.00	0.00	23.93
COL X	26.63	39.54	14.65	0.00	2.33	0.00	0.00	0.00	
P TOT X	21.69	0.19	1.97	0.00	0.08	0.00	0.00	0.00	
U 4	20.50	0.00	2.18	1.05	0.00	0.00	0.00	0.00	23.73
ROW X	84.39	0.00	9.19	4.42	0.00	0.00	0.00	0.00	2.00
R COL X	2.12	0.00	1.37	100.00	0.00	0.00	0.00	0.00	
P TOT X	1.73	0.00	0.18	0.09	0.00	0.00	0.00	0.00	
S 5	273.39	0.00	22.65	0.00	0.00	0.00	0.00	0.00	296.04
ROW X	92.35	0.00	7.65	0.00	0.00	0.00	0.00	0.00	24.95
COL X	24.29	0.00	14.19	0.00	0.00	0.00	0.00	0.00	
S TOT X	23.04	0.00	1.91	0.00	0.00	0.00	0.00	0.00	
E 6	91.43	2.36	12.80	0.00	0.00	0.00	0.00	0.00	106.59
ROW X	85.78	2.21	12.01	0.00	0.00	0.00	0.00	0.00	8.98
COL X	9.46	41.84	8.02	0.00	0.00	0.00	0.00	0.00	
TOT X	7.71	0.20	1.08	0.00	0.00	0.00	0.00	0.00	
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TOTAL	966.29	5.64	159.58	1.05	43.00	11.00	0.00	0.00	1186.56
TOT X	81.44	0.48	13.45	0.09	3.62	0.93	0.00	0.00	

A-17

STATION 4  
 TOTAL TRIPS

STATION NUMBER = 5

EXIT-ENT STATION = 01 TO 05

VEHICLE TYPE

RANGES	1	2	3	4	5	6	7	8	TOTAL TOT %
	1	2	3	4	5	6	7	8	
1 1	97.51	0.00	27.40	0.00	32.71	20.01	0.00	0.00	177.63
ROW %	54.90	0.00	15.43	0.00	18.41	11.26	0.00	0.00	38.61
COL %	30.73	0.00	81.96	0.00	73.85	86.40	0.00	0.00	
T TOT %	21.30	0.00	5.99	0.00	7.15	4.37	0.00	0.00	
R 2 2	15.14	0.00	1.30	0.00	1.65	1.05	0.00	0.00	19.14
ROW %	79.10	0.00	6.79	0.00	8.62	5.49	0.00	0.00	4.18
I COL %	4.77	0.00	3.89	0.00	3.73	4.53	0.00	0.00	
P TOT %	3.31	0.00	0.28	0.00	0.36	0.23	0.00	0.00	
P 3 3	29.20	1.04	0.00	0.00	1.05	0.00	0.00	0.00	31.29
ROW %	93.32	3.32	0.00	0.00	3.36	0.00	0.00	0.00	6.88
COL %	9.20	2.99	0.00	0.00	2.37	0.00	0.00	0.00	
P TOT %	6.38	0.23	0.00	0.00	0.23	0.00	0.00	0.00	
U 4 4	79.43	30.49	2.32	3.63	8.88	2.10	0.00	0.00	126.85
ROW %	62.62	24.04	1.83	2.86	7.00	1.66	0.00	0.00	27.71
R COL %	25.03	87.67	6.94	76.58	20.05	9.07	0.00	0.00	
P TOT %	17.35	6.66	0.51	0.79	1.94	0.46	0.00	0.00	
O 5 5	84.31	2.12	1.30	1.11	0.00	0.00	0.00	0.00	88.84
ROW %	94.90	2.39	1.46	1.25	0.00	0.00	0.00	0.00	19.41
S COL %	26.57	6.10	3.89	23.42	0.00	0.00	0.00	0.00	
S TOT %	18.42	0.46	0.28	0.24	0.00	0.00	0.00	0.00	
E 6 6	11.73	1.13	1.11	0.00	0.00	0.00	0.00	0.00	13.97
ROW %	83.97	8.09	7.95	0.00	0.00	0.00	0.00	0.00	3.05
COL %	3.70	3.25	3.32	0.00	0.00	0.00	0.00	0.00	
TOT %	2.56	0.25	0.24	0.00	0.00	0.00	0.00	0.00	
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TOTAL	317.32	34.78	33.43	4.74	44.29	23.16	0.00	0.00	457.72
TOT %	69.33	7.60	7.30	1.04	9.68	5.06	0.00	0.00	

81-V

STATION 5  
THROUGH TRIPS

DATE TIME FROM TO VEHICLE TYPE TRIP NO. TOTAL TRIPS

STATION NUMBER = 5

EXIT-ENT STATION = TO

VEHICLE TYPE

RANGES		1	2	3	4	5	6	7	8	TOTAL
		1	2	3	4	5	6	7	8	TOT %
1	1	326.62	3.03	116.27	3.86	46.78	32.96	0.00	0.00	930.42
	ROW %	61.58	0.74	21.92	0.73	8.82	6.21	0.00	0.00	38.18
	COL %	29.91	40.56	59.01	100.00	86.98	100.00	0.00	0.00	
T	TOT %	21.51	0.28	8.37	0.28	3.37	2.37	0.00	0.00	
R	2	88.46	0.00	14.26	0.00	3.75	0.00	0.00	0.00	108.57
	ROW %	81.47	0.00	14.98	0.00	3.45	0.00	0.00	0.00	7.81
I	COL %	8.11	0.00	8.25	0.00	6.97	0.00	0.00	0.00	
P	TOT %	6.37	0.00	1.17	0.00	0.27	0.00	0.00	0.00	
P	3	272.27	0.00	35.52	0.00	1.05	0.00	0.00	0.00	308.84
	ROW %	88.16	0.00	11.50	0.00	0.34	0.00	0.00	0.00	22.23
	COL %	24.93	0.00	18.03	0.00	1.95	0.00	0.00	0.00	
P	TOT %	19.60	0.00	2.56	0.00	0.08	0.00	0.00	0.00	
U	4	70.35	4.06	2.52	0.00	0.00	0.00	0.00	0.00	76.93
	ROW %	91.45	5.28	3.28	0.00	0.00	0.00	0.00	0.00	5.58
R	COL %	6.84	41.90	1.28	0.00	0.00	0.00	0.00	0.00	
P	TOT %	5.06	0.29	0.18	0.00	0.00	0.00	0.00	0.00	
O	5	231.12	1.70	13.93	0.00	0.00	0.00	0.00	0.00	246.75
	ROW %	93.47	0.69	5.65	0.00	0.00	0.00	0.00	0.00	17.76
	COL %	21.16	17.54	7.07	0.00	0.00	0.00	0.00	0.00	
S	TOT %	16.64	0.12	1.00	0.00	0.00	0.00	0.00	0.00	
E	6	103.09	0.00	12.54	0.00	2.20	0.00	0.00	0.00	117.83
	ROW %	87.49	0.00	10.64	0.00	1.87	0.00	0.00	0.00	8.88
	COL %	9.44	0.00	6.36	0.00	4.09	0.00	0.00	0.00	
	TOT %	7.82	0.00	0.90	0.00	0.16	0.00	0.00	0.00	
-----										
TOTAL		1092.01	9.69	197.04	3.86	53.78	32.96	0.00	0.00	1389.34
TOT %		78.60	0.70	14.18	0.28	3.87	2.37	0.00	0.00	

6T-V

ROGERS CITY EXTERNAL O D GENERAL PURPOSE SUMMARY

STATION NUMBER = 5  
 EXIT-ENT STATION = 01 TO  
 VEHICLE TYPE

RANGES	1	2	3	4	5	6	7	8	TOTAL TOT X
	1	2	3	4	5	6	7	8	
1 1	424.13	3.93	143.67	3.86	79.49	52.97	0.00	0.00	708.05
ROW X	59.90	0.56	20.29	0.55	11.23	7.48	0.00	0.00	38.33
COL X	30.09	8.84	62.34	44.88	81.05	94.39	0.00	0.00	
T TOT X	22.96	0.21	7.78	0.21	4.30	2.87	0.00	0.00	
R 2 2	103.70	0.00	17.56	0.00	5.40	1.05	0.00	0.00	127.71
ROW X	81.20	0.00	13.75	0.00	4.23	0.82	0.00	0.00	6.91
I COL X	7.36	0.00	7.62	0.00	5.51	1.87	0.00	0.00	
P TOT X	5.61	0.00	0.95	0.00	0.29	0.06	0.00	0.00	
3 3	301.47	1.04	35.52	0.00	2.10	0.00	0.00	0.00	340.13
ROW X	88.63	0.31	10.44	0.00	0.62	0.00	0.00	0.00	18.41
COL X	21.39	2.34	15.41	0.00	2.14	0.00	0.00	0.00	
P TOT X	16.32	0.06	1.92	0.00	0.11	0.00	0.00	0.00	
U 4 4	149.78	34.55	4.84	3.63	8.88	2.10	0.00	0.00	203.78
ROW X	73.50	16.95	2.38	1.78	4.36	1.03	0.00	0.00	11.03
R COL X	10.63	77.69	2.10	42.21	9.05	3.74	0.00	0.00	
P TOT X	8.11	1.87	0.26	0.20	0.48	0.11	0.00	0.00	
5 5	315.43	3.82	15.23	1.11	0.00	0.00	0.00	0.00	335.59
O ROW X	93.99	1.14	4.54	0.33	0.00	0.00	0.00	0.00	18.17
COL X	22.38	8.59	6.61	12.91	0.00	0.00	0.00	0.00	
S TOT X	17.08	0.21	0.82	0.06	0.00	0.00	0.00	0.00	
E 6 6	114.82	1.13	13.65	0.00	2.20	0.00	0.00	0.00	131.80
ROW X	87.12	0.84	10.36	0.00	1.67	0.00	0.00	0.00	7.14
COL X	8.15	2.54	5.92	0.00	2.24	0.00	0.00	0.00	
TOT X	6.22	0.06	0.74	0.00	0.12	0.00	0.00	0.00	
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TOTAL	1409.33	44.47	230.47	8.60	98.07	56.12	0.00	0.00	1847.06
TOT X	76.30	2.41	12.48	0.47	5.31	3.04	0.00	0.00	

A-20

FORM NUMBER = 6

EXIT-ENT STATION = 01 TO 05

VEHICLE TYPE

RANGES	1	2	3	4	5	6	7	8	TOTAL TOT X	
	1	2	3	4	5	6	7	8		
T	1	203.01	2.58	58.42	2.44	44.23	49.29	0.00	0.00	369.97
	1	54.87	0.70	18.49	0.56	11.96	13.32	0.00	0.00	22.15
		16.26	1.76	56.46	10.43	59.34	86.43	0.00	0.00	
R		12.16	0.15	4.10	0.15	2.65	2.95	0.00	0.00	
I	2	68.49	1.29	6.57	0.00	1.39	0.53	0.00	0.00	78.27
	2	87.50	1.65	8.39	0.00	1.78	0.68	0.00	0.00	4.69
P		5.49	0.88	5.42	0.00	1.86	0.93	0.00	0.00	
		4.10	0.08	0.39	0.00	0.08	0.03	0.00	0.00	
P	3	50.00	1.02	3.88	0.00	0.53	0.56	0.00	0.00	55.99
	3	89.30	1.82	6.93	0.00	0.95	1.00	0.00	0.00	3.35
		4.01	0.70	3.20	0.00	0.71	0.98	0.00	0.00	
U		2.99	0.06	0.23	0.00	0.03	0.03	0.00	0.00	
R	4	619.08	133.55	26.12	19.00	25.88	5.53	0.00	0.00	829.16
	4	74.66	16.11	3.15	2.29	3.12	0.67	0.00	0.00	49.55
P		48.64	91.02	21.55	81.20	34.72	9.70	0.00	0.00	
		37.07	8.00	1.56	1.14	1.55	0.33	0.00	0.00	
O	5	268.16	6.94	14.41	1.96	1.12	1.12	0.00	0.00	293.78
	5	91.30	2.36	4.91	0.67	0.38	0.38	0.00	0.00	17.59
		21.50	4.73	11.89	8.38	1.50	1.96	0.00	0.00	
E		16.06	0.42	0.86	0.12	0.07	0.07	0.00	0.00	
	6	38.34	1.34	1.79	0.00	1.39	0.00	0.00	0.00	42.86
	6	89.45	3.13	4.18	0.00	3.24	0.00	0.00	0.00	2.57
		3.07	0.91	1.48	0.00	1.86	0.00	0.00	0.00	
		2.30	0.08	0.11	0.00	0.08	0.00	0.00	0.00	
<hr/>										
TOTAL		1247.08	146.72	121.19	23.40	74.54	57.03	0.00	0.00	1669.96
TOT X		74.68	8.79	7.26	1.40	4.46	3.42	0.00	0.00	

ALL STATIONS  
THROUGH TRIPS

RUGERS CITY TOTAL AREA GENERAL PURPOSE SUMMARY

FORM NUMBER = 6

EXIT-ENT STATION = TO

VEHICLE TYPE

RANGES		1	2	3	4	5	6	7	8	TOTAL TDT %
		1	2	3	4	5	6	7	8	
T	1	1353.24	14.04	514.80	6.35	151.81	66.05	1.50	0.00	2108.69
	1	64.17	0.71	24.41	0.30	7.20	3.13	0.07	0.00	34.57
		27.21	26.38	62.69	43.43	92.05	98.51	100.00	0.00	
R		22.19	0.24	8.44	0.10	2.49	1.08	0.02	0.00	
I	2	384.13	5.80	56.26	0.00	3.75	0.00	0.00	0.00	449.94
	2	85.37	1.29	12.50	0.00	0.83	0.00	0.00	0.00	7.38
		7.72	10.24	6.85	0.00	2.27	0.00	0.00	0.00	
P		6.30	0.10	0.92	0.00	0.06	0.00	0.00	0.00	
P	3	1166.99	5.93	105.95	0.00	4.16	0.00	0.00	0.00	1283.03
	3	90.96	0.46	8.26	0.00	0.32	0.00	0.00	0.00	21.03
		23.46	10.47	12.90	0.00	2.52	0.00	0.00	0.00	
U		19.13	0.10	1.74	0.00	0.07	0.00	0.00	0.00	
R	4	340.62	21.19	13.97	3.98	3.00	1.00	0.00	0.00	383.76
	4	88.76	5.52	3.64	1.04	0.78	0.26	0.00	0.00	6.29
		6.85	37.42	1.70	27.22	1.52	1.49	0.00	0.00	
O		5.58	0.35	0.23	0.07	0.05	0.02	0.00	0.00	
S	5	1307.83	5.09	80.43	2.42	0.00	0.00	0.00	0.00	1395.77
	5	93.70	0.36	5.76	0.17	0.00	0.00	0.00	0.00	22.68
		26.29	8.99	9.80	16.55	0.00	0.00	0.00	0.00	
E		21.44	0.08	1.32	0.04	0.00	0.00	0.00	0.00	
	6	420.92	3.68	49.72	1.87	2.20	0.00	0.00	0.00	478.39
	6	87.99	0.77	10.39	0.39	0.46	0.00	0.00	0.00	7.64
		8.46	6.50	6.06	12.79	1.33	0.00	0.00	0.00	
		6.90	0.06	0.82	0.03	0.04	0.00	0.00	0.00	
TOTAL		4973.73	56.63	821.13	14.62	164.92	67.05	1.50	0.00	6099.58
TOT %		81.54	0.93	13.46	0.24	2.70	1.10	0.02	0.00	

ALL STATIONS  
TERMINAL TRIPS



FORM NUMBER = 6

EXIT-ENT STATION = 01 TO

VEHICLE TYPE

RANGES	1	2	3	4	5	6	7	8	TOTAL TOT %	
	1	2	3	4	5	6	7	8		
T	1	1556.25	17.52	533.22	8.79	196.04	115.34	1.50	0.00	2478.66
	1	62.79	0.71	23.53	0.35	7.91	4.65	0.06	0.00	31.90
		25.02	8.62	61.89	23.12	81.87	92.96	100.00	0.00	
R		20.03	0.23	7.51	0.11	2.52	1.48	0.02	0.00	
I	2	452.62	7.09	62.83	0.00	5.14	0.53	0.00	0.00	528.21
	2	85.69	1.34	11.89	0.00	0.97	0.10	0.00	0.00	6.80
P		7.28	3.49	6.67	0.00	2.15	0.43	0.00	0.00	
		5.83	0.09	0.81	0.00	0.07	0.01	0.00	0.00	
P	3	1216.99	6.95	109.83	0.00	4.69	0.56	0.00	0.00	1339.02
	3	90.89	0.52	8.20	0.00	0.35	0.04	0.00	0.00	17.23
		19.56	3.42	11.66	0.00	1.96	0.45	0.00	0.00	
U		15.60	0.09	1.41	0.00	0.06	0.01	0.00	0.00	
R	4	959.70	154.74	40.09	22.98	28.88	6.53	0.00	0.00	1212.92
	4	79.12	12.76	3.31	1.69	2.38	0.54	0.00	0.00	15.61
P		15.43	76.10	4.25	60.44	12.06	5.26	0.00	0.00	
		12.35	1.99	0.52	0.30	0.37	0.08	0.00	0.00	
S	5	1575.99	12.03	94.84	4.36	1.12	1.12	0.00	0.00	1689.48
	5	93.28	0.71	5.61	0.26	0.07	0.07	0.00	0.00	21.74
		25.33	5.92	10.06	11.52	0.47	0.90	0.00	0.00	
E		20.28	0.15	1.22	0.06	0.01	0.01	0.00	0.00	
	6	459.26	5.02	51.51	1.87	3.59	0.00	0.00	0.00	521.25
	6	88.11	0.96	9.88	0.36	0.69	0.00	0.00	0.00	6.71
		7.38	2.47	5.47	4.92	1.50	0.00	0.00	0.00	
		5.91	0.06	0.66	0.02	0.05	0.00	0.00	0.00	
-----										
TOTAL		6220.81	203.35	942.32	38.02	239.46	124.08	1.50	0.00	7769.54
TOT %		80.07	2.62	12.13	0.49	3.08	1.60	0.02	0.00	

## USE OF TRIP LENGTH FREQUENCY DISTRIBUTIONS

A portion of a trip length frequency distribution graph is on the following page. The vertical axis represents travel time in tens of minutes while the horizontal axis is the percent of trips traveling this particular length of time. For example, 3299 trips or 42.645 percent of the total were approximately 30 minutes or less is 375.866.

Statistical information such as mean and standard deviation are printed at the end of each table. A similar graph for each station will be presented.

0 3 6 9 12 15 18 21 24 27 30 33 36 39 42 45 48 51 54 57 60

	P.C.	CUM.	ACTI
1.....	30,326	30,326	2
2.....	2,896	33,221	
3.....	42,645	75,866	3
4.....	7,497	83,363	
5.....	3,270	86,634	
6.....	3,775	90,408	
7...	0,982	91,391	
8...	1,370	92,761	
9..	0,776	93,537	
10...	2,081	95,618	
11..	0,375	95,993	
12..	0,388	96,381	
13..	0,608	96,988	
14..	0,543	97,531	
15..	0,336	97,867	
16..	0,168	98,035	
17..	0,297	98,332	
18..	0,155	98,488	
19..	0,090	98,578	
20..	0,194	98,772	
21..	0,220	98,992	
22..	0,271	99,263	
23..	0,426	99,689	
24..	0,052	99,741	
25..	0,052	99,792	
26..	0,000	99,792	
27..	0,026	99,818	
28..	0,039	99,857	
29..	0,000	99,857	
30..	0,026	99,883	
31..	0,026	99,909	
32..	0,013	99,922	
33..	0,039	99,960	
34..	0,000	99,960	
35..	0,000	99,960	
36..	0,026	99,986	
37..	0,000	99,986	
38..	0,065	99,651	
39..	0,000	99,651	
40..	0,013	99,664	
41..	0,000	99,664	
42..	0,000	99,664	
43..	0,026	99,690	
44..	0,000	99,690	
45..	0,026	99,716	
46..	0,039	99,754	
47..	0,000	99,754	
48..	0,052	99,806	
49..	0,000	99,806	
50..	0,000	99,806	
51..	0,000	99,806	
52..	0,000	99,806	
53..	0,000	99,806	
54..	0,000	99,806	
55..	0,000	99,806	
56..	0,000	99,806	
57..	0,000	99,806	
58..	0,000	99,806	
59..	0,000	99,806	

TRIP LENGTH FREQUENCY DISTRIBUTION

2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40

	P.C.	CUM.	ACTUA
1.	0.000	0.000	
2.....	27.219	27.219	55
3.	0.000	27.219	
4.....	11.933	39.152	24
5.....	0.986	40.138	2
6.....	1.677	41.815	1
7.....	6.410	48.225	13
8.....	2.515	50.740	5
9.....	0.197	50.937	
10.....	2.170	53.107	4
11.....	4.882	57.988	9
12..	0.493	58.481	1
13..	0.493	58.974	1
14.....	3.501	62.475	7
15.	0.099	62.574	
16..	0.296	62.870	
17..	0.542	63.412	1
18.....	3.994	67.406	8
19.....	1.036	68.442	2
20....	0.789	69.231	1
21.....	1.529	70.759	3
22....	0.986	71.746	2
23.....	3.008	74.753	6
24....	0.641	75.394	1
25.....	1.479	76.874	3
26....	0.690	77.564	1
27.....	1.726	79.290	1
28.....	1.233	80.523	2
29....	0.690	81.213	1
30.....	1.085	82.298	2
31.....	1.479	83.777	3
32.....	1.036	84.813	2
33.....	1.972	86.785	4
34..	0.592	87.377	1
35.....	2.120	89.497	4
36....	1.282	90.779	2
37..	0.345	91.124	
38..	0.592	91.716	1
39.....	1.183	92.899	2
40..	0.296	93.195	
41..	0.345	93.540	
42..	0.296	93.836	
43....	0.740	94.576	1
44.	0.099	94.675	
45..	0.247	94.921	
46..	0.582	95.464	1
47..	0.444	95.907	
48.	0.197	96.105	
49.	0.000	96.105	
50..	0.247	96.351	
51.	0.000	96.351	
52..	0.247	96.598	
53.	0.099	96.696	
54.	0.099	96.795	
55.	0.148	96.943	
56.	0.197	97.140	
57.	0.049	97.189	
58.	0.148	97.337	24
59.	0.049	97.387	
60.	0.000	97.387	
61.	0.000	97.387	

Apr 26

STATION 1

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A-27

REMAINING VALUES ARE ALL ZERO  
 NUMBER OF OBSERVATIONS = 2028      SUM = 31065.      MFAN = 15.318      VAR = 255.639      SD = 15.96

TOTAL TRIPS OVER MAXP = 0  
 TOTAL TRIPS OVER 255 = 0  
 VOLUME TABLE NUMBER = 201  
 SKIM TREE NUMBER = 101

2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40

	P.C.	CUM.	ACTU
1.	0.000	0.000	
2.....	37.296	37.296	6
3.	0.000	37.296	
4.	0.164	37.459	
5.....	30.098	67.557	5
6.....	18.266	85.823	3
7.	0.000	85.823	
8...	0.981	86.805	
9.	0.164	86.968	
10.....	1.799	88.768	
11.	0.164	88.931	
12...	0.981	89.913	
13...	0.709	90.622	
14..	0.327	90.949	
15..	0.273	91.221	
16..	0.218	91.439	
17.	0.109	91.549	
18..	0.327	91.876	
19.	0.000	91.876	
20.	0.164	92.039	
21....	1.091	93.130	
22..	0.273	93.402	
23..	0.382	93.784	
24.	0.000	93.784	
25....	1.091	94.875	
26.	0.109	94.984	
27.	0.109	95.093	
28..	0.273	95.365	
29..	0.327	95.692	
30..	0.218	95.911	
31.	0.109	96.020	
32....	1.091	97.110	
33...	0.709	97.819	
34.	0.164	97.983	
35..	0.491	98.473	
36.	0.055	98.528	
37.	0.109	98.637	
38.	0.000	98.637	
39.	0.164	98.800	
40...	0.709	99.509	
41.	0.000	99.509	
42.	0.164	99.673	
43.	0.000	99.673	
44.	0.000	99.673	
45..	0.218	99.891	
46.	0.109	100.000	

REMAINING VALUES ARE ALL ZERO  
 NUMBER OF OBSERVATIONS = 1834      SUM = 11918.      MEAN = 6.498      VAR = 59.423      SD = 7.70

TOTAL TRIPS OVER MAXP = 0  
 TOTAL TRIPS OVER 255 = 0  
 VOLUME TABLE NUMBER = 202  
 SKIM TREE NUMBER = 101

	P.C.	CUM.	ACTUAL
1.	0.000	0.000	
2.	14.231	14.231	32
3.	0.000	14.231	
4....	0.554	14.785	
5.	17.682	32.467	41
6.	9.501	41.968	21
7....	0.597	42.565	
8.	4.900	47.465	11
9.	0.043	47.507	
10.....	1.875	49.382	
11.....	5.624	55.006	12
12....	0.511	55.518	
13.....	2.940	58.458	
14.....	5.539	63.997	11
15....	0.426	64.423	
16..	0.298	64.721	
17....	0.597	65.317	1
18.....	3.323	68.641	7
19..	0.256	68.896	
20.....	1.790	70.686	4
21.....	2.514	73.200	5
22.....	1.278	74.478	3
23.....	3.664	78.142	6
24....	0.597	78.739	1
25.....	0.895	79.634	2
26.....	1.406	81.040	1
27.....	1.619	82.659	1
28.....	1.406	84.065	1
29....	0.511	84.576	1
30.....	1.278	85.854	1
31.....	1.236	87.090	2
32.....	1.534	88.624	3
33.....	1.321	89.945	3
34.....	0.852	90.797	2
35.....	1.150	91.947	2
36.....	0.724	92.671	1
37..	0.170	92.842	
38....	0.469	93.311	1
39....	0.469	93.779	1
40....	0.597	94.376	1
41....	0.469	94.844	1
42....	0.469	95.313	1
43....	0.469	95.782	1
44.	0.043	95.824	
45....	0.426	96.251	1
46....	0.639	96.890	1
47....	0.383	97.273	
48.	0.085	97.358	
49..	0.256	97.614	
50....	0.383	97.997	
51.	0.000	97.997	
52.	0.000	97.997	
53.	0.000	97.997	
54..	0.170	98.168	
55.	0.043	98.210	
56.	0.000	98.210	
57..	0.128	98.338	
58.	0.085	98.424	
59.	0.043	98.466	
60..	0.170	98.637	
61.	0.000	98.637	

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0.170 99.361  
0.085 99.446  
0.000 99.446  
0.085 99.531  
0.000 99.531  
0.128 99.659  
0.213 99.872  
0.085 99.957  
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0.043 100.000

REMAINING VALUES ARE ALL ZERO  
NUMBER OF OBSERVATIONS 2347

SUM 95522.

MFAN 15.135

VAR 197.738

SD 14.00

TOTAL TRIPS OVER MAXP = 0  
TOTAL TRIPS OVER 255 = 0  
VOLUME TABLE NUMBER = 203  
SKIM TREE NUMBER = 101

A-30



	P.C.	CUM.	ACTUAL
1.	0.000	0.000	
2.	80.560	80.560	98
3.	0.000	80.560	
4.	3.650	84.211	8
5.	2.122	86.333	2
6.	1.528	87.861	1
7.	0.255	88.115	
8.	7.216	95.331	8
9.	0.000	95.331	
10.	0.849	96.180	1
11.	0.085	96.265	
12.	0.170	96.435	
13.	0.085	96.520	
14.	0.085	96.604	
15.	0.085	96.689	
16.	0.000	96.689	
17.	0.000	96.689	
18.	0.170	96.859	
19.	0.085	96.944	
20.	0.170	97.114	
21.	0.170	97.284	
22.	0.340	97.623	
23.	0.679	98.302	
24.	0.000	98.302	
25.	0.170	98.472	
26.	0.000	98.472	
27.	0.000	98.472	
28.	0.170	98.642	
29.	0.000	98.642	
30.	0.085	98.727	
31.	0.085	98.812	
32.	0.255	99.066	
33.	0.594	99.660	
34.	0.170	99.830	
35.	0.000	99.830	
36.	0.000	99.830	
37.	0.000	99.830	
38.	0.000	99.830	
39.	0.000	99.830	
40.	0.085	99.915	
41.	0.000	99.915	
42.	0.000	99.915	
43.	0.000	99.915	
44.	0.000	99.915	
45.	0.000	99.915	
46.	0.000	99.915	
47.	0.000	99.915	
48.	0.000	99.915	
49.	0.000	99.915	
50.	0.000	99.915	
51.	0.000	99.915	
52.	0.000	99.915	
53.	0.000	99.915	
54.	0.000	99.915	
55.	0.000	99.915	
56.	0.085	100.000	

STATION 4

REMAINING VALUES ARE ALL ZERO  
 NUMBER OF OBSERVATIONS = 1170      SUM = 4248.      MEAN = 3.606      VAR = 24.877      SD = 4.98

A-31

	P.C.	CUM.	ACTUAL
1.	0.000	0.000	
2.	38.554	38.554	70
3.	0.055	38.609	
4.	28.532	67.141	52
5.	1.862	69.003	3
6.	3.176	72.180	5
7.	0.931	73.111	1
8.	7.996	81.106	14
9.	1.369	82.475	2
10.	4.272	86.747	7
11.	0.821	87.568	1
12.	1.314	88.883	2
13.	2.903	91.785	3
14.	0.602	92.388	1
15.	0.164	92.552	
16.	0.110	92.662	
17.	0.383	93.045	
18.	1.585	94.633	2
19.	0.383	95.016	
20.	0.219	95.235	
21.	0.657	95.893	1
22.	0.219	96.112	
23.	0.493	96.605	
24.	0.055	96.659	
25.	0.274	96.933	
26.	0.110	97.043	
27.	0.329	97.371	
28.	0.329	97.700	
29.	0.110	97.809	
30.	0.219	98.028	
31.	0.164	98.193	
32.	0.164	98.357	
33.	0.602	98.959	1
34.	0.110	99.069	
35.	0.219	99.288	
36.	0.055	99.343	
37.	0.000	99.343	
38.	0.000	99.343	
39.	0.055	99.398	
40.	0.164	99.562	
41.	0.000	99.562	
42.	0.055	99.617	
43.	0.000	99.617	
44.	0.000	99.617	
45.	0.055	99.671	
46.	0.000	99.671	
47.	0.000	99.671	
48.	0.055	99.726	
49.	0.110	99.836	
50.	0.000	99.836	
51.	0.000	99.836	
52.	0.000	99.836	
53.	0.110	99.945	2
54.	0.055	100.000	1

A-32

STATION 5

REMAINING VALUES ARE ALL ZERO  
 NUMBER OF OBSERVATIONS= 1826      SUM= 11186.      MEAN= 6.099      VAR= 65.399      SD= 8.0738

TOTAL TRIPS OVER MAXP    0  
 TOTAL TRIPS OVER 255    0  
 VOLUME TABLE NUMBER    205

0 3 6 9 12 15 18 21 24 27 30 33 36 39 42 45 48 51 54 57 60

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P.C.	CUM.	ACTUAL
0.000	0.000	0
40.352	40.352	3184
0.013	40.365	1
9.922	50.287	778
12.728	63.015	998
7.780	70.795	610
1.862	72.657	146
3.558	76.215	279
0.395	76.610	31
2.219	78.829	174
1.530	80.360	120
0.612	80.972	48
1.084	82.056	85
1.454	83.510	114
0.204	83.714	16
0.204	83.918	16
0.319	84.237	25
1.454	85.691	114
0.395	86.086	31
0.459	86.545	36
1.000	87.545	79
0.523	88.068	41
1.237	89.305	97
0.204	89.509	16
0.727	90.236	57
0.370	90.606	29
0.612	91.218	48
0.574	91.792	45
0.306	92.098	24
0.510	92.608	40
0.497	93.105	39
0.803	93.908	69
0.931	94.839	73
0.383	95.222	30
0.689	95.911	54
0.383	96.294	30
0.153	96.447	12
0.179	96.626	14
0.344	96.970	27
0.421	97.391	34
0.179	97.570	14
0.191	97.761	13
0.217	97.978	13
0.038	98.016	3
0.153	98.169	12
0.230	98.400	16
0.153	98.553	12
0.089	98.642	7
0.064	98.706	5
0.102	98.808	8
0.000	98.808	0
0.051	98.859	4
0.038	98.897	3
0.077	98.974	6
0.051	99.025	4
0.084	99.109	5
0.038	99.147	3
0.026	99.173	2
0.026	99.199	2
0.064	99.263	5

ALL STATIONS

A-35

65. 8888AM  
 67.  
 68. ZONES = 547  
 69. ZERU = 1  
 70. MAXP = 255  
 71. PGMAX = 255  
 72. DELTA = 10  
 73. DZMIN = 1  
 74. DZMAX = 547  
 75. DIST 1 SKIM TREE NO. 101 TRIP TABLE NO. 201

76.  
 78.  
 79.  
 80.  
 81. ION  
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 83. INTRA = F  
 84. IGNDWE = F  
 85. PICK = F

86.  
 88.  
 89.  
 90.  
 91.  
 92. SELECT  
 93.  
 94.  
 95.00 1) = 547

REMAINING VALUES ARE ALL ZERO  
 NUMBER OF OBSERVATIONS = 7841

SUM = 68180. MEAN = 8.695 VAR = 134.313 SD = 11.589

TOTAL TRIPS OVER MAXP = 0  
 TOTAL TRIPS OVER 255 = 0  
 VOLUME TABLE NUMBER = 201  
 SKIM TREE NUMBER = 101

0.000 99.999 1  
 0.051 99.952 2  
 0.038 99.910 3  
 0.051 99.861 4  
 0.000 99.861 0  
 0.013 99.854 1  
 0.026 99.829 2  
 0.026 99.805 2  
 0.051 99.656 4  
 0.038 99.694 3  
 0.000 99.694 0  
 0.013 99.707 1  
 0.051 99.758 4  
 0.064 99.821 5  
 0.000 99.821 0  
 0.013 99.834 1  
 0.000 99.834 0  
 0.038 99.872 3  
 0.051 99.923 4  
 0.013 99.936 1  
 0.000 99.936 0  
 0.000 99.936 0  
 0.026 99.962 2  
 0.000 99.962 0  
 0.000 99.962 0  
 0.000 99.962 0  
 0.013 99.974 1  
 0.000 99.974 0  
 0.013 99.987 1  
 0.000 99.987 0  
 0.013 100.000 1

APPENDIX B

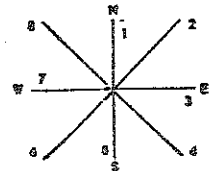
SINGLE STATION RURAL O-D STUDY

STATE OF MICHIGAN  
 DEPARTMENT OF STATE HIGHWAYS  
 TRANSPORTATION AND PLANNING

STA. LOCATION AND NUMBER

FORM NUMBER	6	COUNTY NUMBER		STATEWIDE NUMBER		HOUR PERIOD ENDING		* DIRECTION		DAY ** OF TRAVEL		MO.		DATE																																			
	1		2 3		4 5 6 7		8 9		10		11		12 13		14 15																																		
INTERVIEW NUMBER	VEH. TYPE	NO. IN VEH.	ORIGIN Where did this trip begin?														DESTINATION Where will this trip end?														WHERE IS VEHICLE GARAGED	TRIP PURPOSE	ROUTE OF EXIT OR ENT.																
			Co. or State														Co. or State														0 0 0																		
																															0 0 0																		
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16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67

- VEHICLE TYPE**
- PASSENGER CAR WITHOUT A TRAILER
  - PASSENGER CAR WITH A TRAILER
  - PANEL OR PICK-UP WITHOUT A TRAILER
  - PANEL OR PICK-UP WITH A TRAILER
  - OTHER SINGLE UNIT TRUCKS
  - COMBINATIONS & TRUCKS WITH TRAILERS



- DAY OF TRAVEL \*\***
- |           |   |          |   |
|-----------|---|----------|---|
| SUNDAY    | 1 | THURSDAY | 5 |
| MONDAY    | 2 | FRIDAY   | 6 |
| TUESDAY   | 3 | SATURDAY | 7 |
| WEDNESDAY | 4 |          |   |

- GARAGED**
- ORIGIN
  - DESTINATION
  - OTHER

- TRIP PURPOSE**
- WORK
  - PERS. BUSINESS
  - SHOPPING
  - VACATION
  - OTHER SOC. OR REC.
  - ALL OTHER

# SINGLE STATION RURAL O-D STUDY

STATE OF MICHIGAN  
DEPARTMENT OF STATE HIGHWAYS  
TRANSPORTATION AND PLANNING

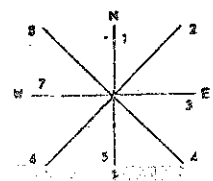
STA. LOCATION AND NUMBER

FORM NUMBER  COUNTY NUMBER  STATEWIDE NUMBER  HOUR PERIOD ENDING  DIRECTION  DAY \*\* OF TRAVEL  MO.  DATE

INTERVIEW NUMBER	VEH. TYPE	NO. IN VEH.	ORIGIN Where did this trip begin?  Co. or State	DESTINATION Where will this trip end?  Co. or State	WHERE IS VEHICLE GARAGED	TRIP PURPOSE	ROUTE OF EXIT OR ENT.
					0 0 0		
					0 0 0		
B-2					0 0 0		
					0 0 0		
					0 0 0		
					0 0 0		
					0 0 0		

16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67

- VEHICLE TYPE**
- PASSENGER CAR WITHOUT A TRAILER
  - PASSENGER CAR WITH A TRAILER
  - PANEL OR PICK-UP WITHOUT A TRAILER
  - PANEL OR PICK-UP WITH A TRAILER
  - OTHER SINGLE UNIT TRUCKS
  - TRUCKS WITH TRAILERS



- DAY OF TRAVEL \*\***
- |           |   |          |   |
|-----------|---|----------|---|
| SUNDAY    | 1 | THURSDAY | 5 |
| MONDAY    | 2 | FRIDAY   | 6 |
| TUESDAY   | 3 | SATURDAY | 7 |
| WEDNESDAY | 4 |          |   |

- GARAGED**
- ORIGIN
  - DESTINATION
  - OTHER

- TRIP PURPOSE**
- WORK
  - PERS. BUSINESS
  - SHOPPING
  - VACATION
  - OTHER SOC. OR REC.
  - OTHER